Annual Report Format

National Pollutant Discharge Elimination System Stormwater Program

MS4 Annual Report Format

Check box if you are submitting an individual Annual Report with one or more cooperative program elements. ☒

Check box if you are submitting an individual Annual Report with individual program elements only. ☐

Check box if this is a new name, address, etc. ☐

1. MS4(s) Information

NMR04A014 City of Albuquerque
Name of MS4

Kathleen | Verhage | Senior Engineer
Name of Contact Person (First) (Last) (Title)

(505) 768-3654 | kverhage@cabq.gov
Telephone (including area code) E-mail

PO Box 1293, City of Albuquerque, Dept of Municipal Development, Attn: Kathy Verhage Rm 301
Mailing Address

Albuquerque | NM | 87103
City State ZIP code

What size population does your MS4(s) serve? 546,000 NPDES number

What is the reporting period for this report? (mm/dd/yyyy) From Jul 1, 2019 to Jun 30, 2020

2. Water Quality Priorities

A. Does your MS4(s) discharge to waters listed as impaired on a state 303(d) list? ☒ Yes ☐ No

B. If yes, identify each impaired water, the impairment, whether a TMDL has been approved by EPA for each, and whether the TMDL assigns a wasteload allocation to your MS4(s). Use a new line for each impairment, and attach additional pages as necessary.

Impaired Water	Impairment	Approved TMDL		TMDL assigns WLA to MS4	
Middle Rio Grande	E-coli	☒ Yes	☐ No	☒ Yes	☐ No
Middle Rio Grande	Temperature	☐ Yes	☒ No	☐ Yes	☐ No
Middle Rio Grande	Polychlorinated Biphenyls in Fi	☐ Yes	☒ No	☐ Yes	☐ No
Middle Rio Grande	Dissolved Oxygen	☐ Yes	☒ No	☐ Yes	☐ No

2. B. Continued

Impaired Water	Impairment	Approved TMDL		TMDL assigns WLA to MS4	
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No

C. What specific sources contributing to the impairment(s) are you targeting in your stormwater program?

Pet waste, household hazardous waste, trash and debris (including natural vegetation), sediments, automotive fluids and detergents. A "floatables study" and microbial source testing have been performed. Birds are primary source of E-

D. Do you discharge to any high-quality waters (e.g., Tier 2, Tier 3, outstanding natural resource waters, or other state or federal designation)? ☐ Yes ☒ No

E. Are you implementing additional specific provisions to ensure their continued integrity? ☐ Yes ☒ No

3. Public Education and Public Participation

A. Is your public education program targeting specific pollutants and sources of those pollutants? ☒ Yes ☐ No

B. If yes, what are the specific sources and/or pollutants addressed by your public education program?

Our public education program targets pet waste, household hazardous waste, trash and debris (including natural vegetation), sediments, automotive fluids, detergents, fertilizers, pesticides

C. Note specific successful outcome(s) (e.g., quantified reduction in fertilizer use; NOT tasks, events, publications) fully or partially attributable to your public education program during this reporting period.

Survey showed that over 90% of individuals understood the importance of pollution prevention and valued improved stormwater quality. One household hazardous recycling event resulted in the participation of 538 residents. See

D. Do you have an advisory committee or other body comprised of the public and other stakeholders that provides regular input on your stormwater program? ☒ Yes ☐ No

4. Construction

A. Do you have an ordinance or other regulatory mechanism stipulating:

Erosion and sediment control requirements? ☒ Yes ☐ No

Other construction waste control requirements? ☒ Yes ☐ No

Requirement to submit construction plans for review? ☒ Yes ☐ No

MS4 enforcement authority? ☒ Yes ☐ No

B. Do you have written procedures for:

Reviewing construction plans? ☒ Yes ☐ No

Performing inspections? ☒ Yes ☐ No

Responding to violations? ☒ Yes ☐ No

C. Identify the number of active construction sites ≥ 1 acre in operation in your jurisdiction at any time during the reporting period. 141

D. How many of the sites identified in 4.C did you inspect during this reporting period? 141

E. Describe, on average, the frequency with which your program conducts construction site inspections.

Regular inspections occur every 30 to 60 days for active sites and every 60 to 90 days for residential subdivisions. Follow-up inspections occur every 7 to 10 days until violation is resolved. On average, 14 inspections per week are

F. Do you prioritize certain construction sites for more frequent inspections? ☒ Yes ☐ No

If Yes, based on what criteria? Sites with violations are prioritized until compliance is achieved.

G. Identify which of the following types of enforcement actions you used during the reporting period for construction activities, indicate the number of actions, or note those for which you do not have authority:

☒ Yes	Notice of violation	36	No Authority	☐
☒ Yes	Administrative fines	13	No Authority	☐
☐ Yes	Stop Work Orders		No Authority	☒
☒ Yes	Civil penalties	0	No Authority	☐
☐ Yes	Criminal actions		No Authority	☒
☐ Yes	Administrative orders		No Authority	☒
☒ Yes	Other	Second notice of violation		

H. Do you use an electronic tool (e.g., GIS, data base, spreadsheet) to track the locations, inspection results, and enforcement actions of active construction sites in your jurisdiction? ☒ Yes ☐ No

I. What are the 3 most common types of violations documented during this reporting period?

1. Sediment BMPs missing, require maintenance, or not installed (89) ; 2. Track-out, sediment in street or offsite, vehicle tracking control requires maintenance, or no vehicle tracking control (75); 3. No self-inspection reports (47)

J. How often do municipal employees receive training on the construction program? Annually

5. Illicit Discharge Elimination

A. Have you completed a map of all outfalls and receiving waters of your storm sewer system? ☒ Yes ☐ No

B. Have you completed a map of all storm drain pipes and other conveyances in the storm sewer system? ☒ Yes ☐ No

C. Identify the number of outfalls in your storm sewer system. 39 (see Item 10)

D. Do you have documented procedures, including frequency, for screening outfalls? ☒ Yes ☐ No

E. Of the outfalls identified in 5.C, how many were screened for dry weather discharges during this reporting period?

39

F. Of the outfalls identified in 5.C, how many have been screened for dry weather discharges at any time since you obtained MS4 permit coverage? see Item 10

G. What is your frequency for screening outfalls for illicit discharges? Describe any variation based on size/type.

Complaints regarding spills are investigated immediately (see item 10). The 39 Dry Weather Screening outfalls are screened annually during the Dry Season--typically sometime in November through March (see item 10 for more

H. Do you have an ordinance or other regulatory mechanism that effectively prohibits illicit discharges? ☒ Yes ☐ No

I. Do you have an ordinance or other regulatory mechanism that provides authority for you to take enforcement action and/or recover costs for addressing illicit discharges? ☒ Yes ☐ No

J. During this reporting period, how many illicit discharges/illegal connections have you discovered? see item 10

K. Of those illicit discharges/illegal connections that have been discovered or reported, how many have been eliminated? All Complai

L. How often do municipal employees receive training on the illicit discharge program? Annually (appropriate d

6. Stormwater Management for Municipal Operations

A. Have stormwater pollution prevention plans (or an equivalent plan) been developed for:

All public parks, ball fields, other recreational facilities and other open spaces	☐ Yes	☒ No
All municipal construction activities, including those disturbing less than 1 acre	☐ Yes	☒ No
All municipal turf grass/landscape management activities	☒ Yes	☐ No
All municipal vehicle fueling, operation and maintenance activities	☒ Yes	☐ No
All municipal maintenance yards	☒ Yes	☐ No
All municipal waste handling and disposal areas	☒ Yes	☐ No

Other: All COA golf courses have SWPPPs for their operations. General Parks and Open Spaces do not.

B. Are stormwater inspections conducted at these facilities? ☒ Yes ☐ No

C. If Yes, at what frequency are inspections conducted? It depends. See It

D. List activities for which operating procedures or management practices specific to stormwater management have been developed (e.g., road repairs, catch basin cleaning).

Construction activities, detention pond cleaning, storm inlet and drain cleaning, fueling operations, storage of hazardous and non-hazardous materials, general good housekeeping operations, landfill operations

E. Do you prioritize certain municipal activities and/or facilities for more frequent inspection? ☒ Yes ☐ No

F. If Yes, which activities and/or facilities receive most frequent inspections?

Most frequent inspections occur at facilities that require a Multi Sector General Permit (Landfill and Transit). Good Housekeeping inspections are performed at general maintenance facilities quarterly and monthly if the facility has had

G. Do all municipal employees and contractors overseeing planning and implementation of stormwater-related activities receive comprehensive training on stormwater management? ☒ Yes ☐ No

H. If yes, do you also provide regular updates and refreshers? ☒ Yes ☐ No

I. If so, how frequently and/or under what circumstances?

Annual refreshers are provided. In addition, training materials have been provided to supervisors to be used when staff turns over and new employees are hired. On the spot training also occurs during inspections, as needed.

7. Long-term (Post-Construction) Stormwater Measures

A. Do you have an ordinance or other regulatory mechanism to require:

Site plan reviews for stormwater/water quality of all new and re-development projects?	☒ Yes	☐ No
Long-term operation and maintenance of stormwater management controls?	☐ Yes	☒ No
Retrofitting to incorporate long-term stormwater management controls?	☐ Yes	☒ No

B. If you have retrofit requirements, what are the circumstances/criteria?

None required at this time.

C What are your criteria for determining which new/re-development stormwater plans you will review (e.g., all projects, projects disturbing greater than one acre, etc.)?

Per COA ordinance the following projects are reviewed: 1. more than 500 cu yard earthwork or more than 1 ac disturbed; 2. Buildings 1000 sq ft or more; 3. Paving 10,000 sq ft or more; 4. any fill placed in a floodplain.

D. Do you require water quality or quantity design standards or performance standards, either directly or by reference to a state or other standard, be met for new development and re-development? ☒ Yes ☐ No

E. Do these performance or design standards require that pre-development hydrology be met for:

Flow volumes	☐ Yes	☒ No
Peak discharge rates	☐ Yes	☒ No
Discharge frequency	☐ Yes	☒ No
Flow duration	☐ Yes	☒ No

F. Please provide the URL/reference where all post-construction stormwater management standards can be found.

https://codelibrary.amlegal.com/codes/albuquerque/latest/overview

G. How many development and redevelopment project plans were reviewed during the reporting period to assess impacts to water quality and receiving stream protection? 732

H. How many of the plans identified in 7.G were approved? 584

I. How many privately owned permanent stormwater management practices/facilities were inspected during the reporting period? 174

J. How many of the practices/facilities identified in I were found to have inadequate maintenance? 8

K. How long do you give operators to remedy any operation and maintenance deficiencies identified during inspections? 30 days

L. Do you have authority to take enforcement action for failure to properly operate and maintain stormwater practices/facilities? ☒ Yes ☐ No

M. How many formal enforcement actions (i.e., more than a verbal or written warning) were taken for failure to adequately operate and/or maintain stormwater management practices? 0

N. Do you use an electronic tool (e.g., GIS, database, spreadsheet) to track post-construction BMPs, inspections and maintenance? ☒ Yes ☐ No

O. Do all municipal departments and/or staff (as relevant) have access to this tracking system? ☒ Yes ☐ No

P. How often do municipal employees receive training on the post-construction program? Planning - Month

8. Program Resources

A. What was the annual expenditure to implement MS4 permit requirements this reporting period? $8.1 Million

B. What is next year's budget for implementing the requirements of your MS4 NPDES permit? $8.1 Million

C. This year what is/are your source(s) of funding for the stormwater program, and annual revenue (amount or percentage) derived from each?

Source:	G.O. Bonds (NPDES, Water Quality Compliance)	Amount $	1.0 Milli	OR %
Source:	General Funds (Arroyo and Street Maintenance)	Amount $	3.8 Milli	OR %
Source:	Customer Billing (Household Hazardous Waste, G	Amount $	3.3 Milli	OR %

D. How many FTEs does your municipality devote to the stormwater program (specifically for implementing the stormwater program; not municipal employees with other primary responsibilities)? 20 see

E. Do you share program implementation responsibilities with any other entities? ☒ Yes ☐ No

Entity	Activity/Task/Responsibility	Your Oversight/Accountability Mechanism
AMAFCA, SCAFC.	Sampling and Monitoring Wet Weather	Memo of Understanding
AMAFCA, SCAFC.	Education and Outreach	Memo of Understanding
AMAFCA, SCAFC.	General Watershed Based Permit Imple	Memo of Understanding

9. Evaluating/Measuring Progress

A. What indicators do you use to evaluate the overall effectiveness of your stormwater management program, how long have you been tracking them, and at what frequency? These are not measurable goals for individual management practices or tasks, but large-scale or long-term metrics for the overall program, such as macroinvertebrate community indices, measures of effective impervious cover in the watershed, indicators of in-stream hydrologic stability, etc.

Indicator	Began Tracking (year)	Frequency	Number of Locations
Example: E. coli	2003	Weekly April–September	20
Industrial Inspections	2014	Once per permit term as require	23 locations
Student and General Public Education anc	2006	Reporting annually; events held	Varies
Dry Weather Screening	2003	Annually	39 locations
Good Housekeeping Inspections	2012	Quarterly to Monthly (if needed)	40 locations
Post Construction Inspections by Storm Dı	2019	Once every 5 years per Drainage	26 locations insp

B. What environmental quality trends have you documented over the duration of your stormwater program? Reports or summaries can be attached electronically, or provide the URL to where they may be found on the Web.

https://www.cabq.gov/municipaldevelopment/our-department/engineering/storm-water-management/municipal-separate-storm-sewer-system-ms4-permit.

10. Additional Information

Please attach any additional information on the performance of your MS4 program, including information required in Parts I.C, I.D, and III.B. If providing clarification to any of the questions above, please provide the question number (e.g., 2C) in your response.

Certification Statement and Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

☒ Yes ☐ No

Federal regulations require this application to be signed as follows: **For a municipal, State, Federal, or other public facility**: by either a principal executive or ranking elected official.

Signature Sarita Nair Digitally signed by Sarita Nair DN: cn=Sarita Nair, o=City of Albuquerque, ou=Mayor's Office, email=snair@cabq.gov, c=US Date: 2020.11.20 15:28:48 -07'00'

Chief Administrative Officer — Name of Certifying Official, Title

11/20/20 — Date (mm/dd/yyyy)

CITY OF ALBUQUERQUE

Annual Report for Fiscal Year 2020 (FY20)

July 1, 2019 to June 30, 2020

NPDES PERMIT NMR04A000, Effective Date December 22, 2014

eNOI Application Date June 21, 2015

ITEM 10 Additional Information

I.C. Special Conditions

1. Compliance with Water Quality Standards

d. Dissolved Oxygen (DO): The Arroyo Metropolitan Flood Control Authority (AMAFCA) continues to monitor the DO in the Rio Grande

e. Polychlorinated Biphenyls (PCBs): The COA began a sediment assessment study in FY16 which was completed in FY17 with a final letter report submitted in FY18 on July 10, 2017. Under this study, soil samples were taken from the 5 outfall locations monitored under the former Phase 1 permit NMS000101 as well as from up and down stream locations along the Rio Grande. These samples were analyzed for PCBs using the Aroclor method. Detection of PCBs at any of these location resulted in further sampling and analysis of upstream areas. Twelve locations were ultimately screened for both PCBs and select metals in the Phase II Assessment based upon the results of the original study. The Synthetic Precipitation Leaching Procedure (SPLP) was used to analyze the following metals: aluminum, cadmium, chromium, lead, nickel, and zinc. No PCBs were found in any of the sediment samples at concentrations above the detection limits that ranged from 0.019 to 0.2 milligrams per kilogram (mg/kg) for the six aroclors analyzed. Both studies are available in the FY17 Annual Report under Attachment 1. The Phase II Assessment was also included in the FY18 Annual Report under Attachment 1. As discussed in the Progress Evaluation Report for the Sediment Pollutant Load Reduction Strategy, submitted last year in FY19 under Attachment 1, recent investigations did not identify any sources of PCBs in the Albuquerque metropolitan area that represent a continuing impact to the waters of the Rio Grande.

f. Temperature: AMAFCA continues to monitor temperature in the Rio Grande and at the North Diversion Channel through the deployment of sondes. Analysis of stormwater flows for temperature under the former Phase 1 permit indicates no contribution to temperature exceedances in the Middle Rio Grande and continues to indicate no contribution to any potential temperature exceedances.

2. Discharges to Impaired Waters with and without approved TMDLs

b(i)(c)B: The Monitoring Cooperative successfully implemented the sampling plan approved in the summer of 2016 and over the course of the permit term, submitted the results of 7 storm events collected from 2 locations in the Rio Grande at the northern or

upstream (Angostura Diversion Dam) and at the southern or downstream (Isleta Diversion Dam) boundaries of the watershed as required by the Watershed Based Permit (WBP). Samples from 4 events during the wet season and 3 events during the dry season were collected meeting the WBP sampling criteria of 7 samples with 3 events from the wet season and 2 events from the dry season. Results from the WBP required sampling events were provided in the FY17, FY18, and FY19 Annual reports as well as submitted electronically into EPA's NetDMR system.

The WBP expired on December 19, 2019 and has been administratively continued. A letter submitted to the EPA by the Middle Rio Grande Technical Advisory Group discusses its members' intent to continue operations under coverage of the administratively extended permit (see Attachment 1). Although no additional monitoring is required during the period of administrative continuance, agencies participating in the Monitoring Cooperative have continued to fund sampling efforts. However, because of a combination of drought conditions and timing of storm events such that a bacterial sample could not be collected and meet hold times, no samples were collected and analyzed during FY20.

The COA continues its work to reduce e-coli loads through the pet waste education and outreach program. Dog waste had been estimated to contribute about 22% of the fecal coliform bacteria to the Middle Rio Grande watershed in a microbial source tracking (MST) study completed in 2004. A new MST that uses quantitative polymerase chain reaction (qPCR) analysis and fecal indicator bacteria (FIB) by E. coli enumeration was scoped and commissioned by the COA in FY17 at an estimated cost of $250,000. The Quality Assurance Program Plan (QAPP) and sampling and analysis plan (SAP) were prepared in FY17 and sample collection and analysis were completed in FY19. The results of this study indicated the presence of moderate canine markers in channels, drains, and arroyos in the northeast and northwest parts of the watershed. Weak human markers were also indicated near some of the bridges as well as downstream of the sanitary reclamation facility. Continued examination of these sources are underway. A copy of the finalized report is provided in Attachment 2 Completion Report for Microbial Source Tracking Program.

Finally, the Middle Rio Grande Storm Water Quality Team (MRGSWQT), of which the COA is a member, funded additional years of dry weather E.coli data collection by college students as part of the Bosque Ecosystem Monitoring Program (BEMP) to better understand the baseline concentration of E.coli prior to storm events. The MRGSWQT also funded a master student's thesis that studied the variability of E.coli concentrations in a water column compared to the juxtaposed sediment. The results of this study, completed in FY19, indicate that E.coli are harbored in riverbed sediments, and that trends in sediment concentrations and corresponding loadings of E.coli in river water are irregular. The net direction of E.coli transfer (river water to sediment or sediment to water) is unknown.

b(i)(e)A,C,D,E: The COA continues to work with the Albuquerque Bernalillo County Water Utility Authority (WUA) to make improvements to its pump and lift stations. The WUA provides the COA and AMAFCA with copies of Discharge Monitoring Reports (DMRs) each month that report sanitary overflows, should any have occurred, and

corresponding disinfection and clean-up efforts. No illegal cross connections were reported during FY20.

b(i)(e)C: The Environmental Health Department continues to work with restaurants to reduce waste sources of bacteria from grease traps.

b(i)(e)D. The storm drainage department continues to work with BioPark staff in an effort to ensure that bacteria from animal waste are not discharged to the MS4.

b(i)(e)E. The COA contributes funding to and participates as a founding member of the Storm Water Quality Team. The Team continues education and outreach efforts to educate residents on the effects of bacteria associated with improper pet waste disposal. The COA also works with both the Team and the WUA to educate the public with regards to proper oil and grease disposal and the potential for sanitary overflows due to clogged plumbing.

b(iii)(c): The COA continues to work with Bernalillo County (BernCo) and the NM Department of Transportation (NMDOT) on a joint sampling program in the Tijeras Arroyo. A total maximum daily load for nutrients was approved by the Water Quality Control Commission on September 12, 2017. As a result the COA has begun to develop Best Management Practices (BMPs) to minimize impacts, if any, due to potential contributions from the urbanized area that makes up about 1% of the watershed.

In addition, during the late spring of FY18, the COA began work on a joint funding agreement (JFA) with the Ciudad Soil Water and Conservation District for the preparation of a Watershed Based Plan for the Upper Tijeras Arroyo. The JFA was signed in September 2018 and a request for proposals to prepare the plan was issued in early 2019. The winning proposal was selected in February 2019 and was provided in the FY19 Annual Report under Attachment 5. Work in progress includes the identification of potential sources, development of input parameters for the Spreadsheet Tool for Estimation of Pollutant Load (STEPL), and solicitation of stakeholder input.

The COA Open Space Department created a Tijeras Arroyo Bio-Zone Resource Management Plan for a 3.7 mile stretch of the arroyo along Tijeras Creek in 2014 with a goal of conserving native vegetation and wildlife habitat and restoring vegetation and wildlife where feasible. The COA is actively working on purchasing property (about 46 acres) in the arroyo for this purpose.

3. Endangered Species Act (ESA) Requirements

a(i) AMAFCA has filled in the low lying area between the discharge point of the North Diversion Channel (NDC) and the Rio Grande. This area was prone to stagnation and had the potential to develop low DO which could be flushed into the Rio Grande during storm events. AMAFCA continues to monitor this area for DO. The COA continues to install water quality features, such as trash racks and water quality manholes in efforts to collect and reduce trash and debris that contribute to the DO problem.

a(ii) AMAFCA has submitted a revised strategy for reduction of pollutants contributed by the embayment. As stated above, the embayment has been filled in. Annual Incident Take Reports are submitted by AMAFCA to the EPA and Fish and Wildlife Service (FWS).

b(i) See also item 1.e. The COA performed two Sediment Assessment Studies that included an analysis of PCBs and SPLP metals in soils. The first, finalized in October

2016 assessed sediments from 5 major outfall locations. The second, completed in July 2017, further examined potential upstream sources, if any. No PCBs were reported. Metals in general, with the exceptions of Aluminum (Al) and Zinc (Zn) were present at concentrations below detection limits. Detected Al concentrations ranged from 1.9 to 11 mg/L. Detected Zn concentrations ranged from 0.022 to 0.048 mg/L. The Phase II assessment was provided in the FY18 Annual Report under Attachment 1. The Phase I Assessment was included in the FY17 Annual Report under Attachment 1.

b(iv) A Progress Evaluation Report for the Sediment Pollutant Load Reduction Strategy was submitted in the FY19 Annual Report under Attachment 1. This report was prepared using the results of several previous studies submitted by the COA including data from the Sediment Assessments as well as the USGS Summary of Urban Stormwater Quality In Albuquerque, 2003-2012. Additional data, provided by Bernalillo County, Southern Sandoval County Arroyo Flood Control Authority (SSAFCA) and AMAFCA, was used to provide baseline sediment loading and relative potential for contamination by these sediments from urban activities for areas draining to the Rio Grande. The results of this study pinpointed areas of highest sediment discharge into the Rio Grande during the permit period, which included the North Diversion Channel and Tijeras Arroyo. Although many BMPs, such as ponds, trash racks, and other water quality structures are already in place to reduce pollutants and sediment loads to these drainages, additional projects to improve water quality will continue to be implemented.

I.D. Stormwater Management Program (SWMP)

A copy of the updated SWMP adapted for compliance under NMR04A000 was included with the first full Annual Report on December 1, 2016. A subsequent update was prepared and submitted in FY19, year 4 of the permit cycle, per requirements (page 7 of Part III, Section B). A copy of the SWMP is available on the COA's DMD MS4 webpage: http://www.cabq.gov/municipaldevelopment/documents/swmp-11-24-2019-submitted.pdf. Copies are also available on compact disks that can be mailed to regulators, stakeholders, and others upon request.

5b. Post-Construction Stormwater Management in New Development and Redevelopment

(i) and 7.E (Annual Report Format) The Planning Hydrology Department reviews plans for new development and redevelopment projects that address storm water runoff when one acre or more are disturbed. The allowable discharge is determined on a site by site basis and is determined by AMAFCA's Drainage Management Plans that allow free discharge in some locations and 0.1 cubic foot per second per acre (cfs/ac) in others based upon downstream capacity, not on historic flows.

(ii)(a) Fourteen structural stormwater quality features have been installed since the WBP effective date of December 22, 2014. A listing, map, and description of all features are included in Attachment 3 of this report. Of particular note for FY20 is a joint water quality project between the COA and AMAFCA currently under construction. Channel improvements to the Lower Bear Canyon Tributary began in July 2020 and are expected to be complete in December 2020. This project is expected to increase the efficiency of the storm drainage system in the Bear Arroyo watershed and provide a regional water

quality structure to collect trash and debris before discharging into the NDC and ultimately into the Rio Grande.

(ii)(b) An ordinance increasing the volume of capture of the 80th and 90th percentile storm events and supplying provisions for inspection of post construction stormwater controls and enforcement to ensure compliance was introduced to City Council on January 3, 2018, passed on September 17, 2018, and sent to the Mayor for signature on September 25, 2018. Click on the following link for an electronic copy of the ordinance.

https://codelibrary.amlegal.com/codes/albuquerque/latest/albuquerque_nm/0-0-0-19774#JD_Chapter14Article5Part2

(ii)(c) Prior to private development construction, Planning Hydrology staff review and approve BMPs designed to capture the 80th and 90th percentile storm events. Inspectors from the Storm Drainage Section perform inspections of these features every 5 years to ensure proper maintenance. This year 26 inspections of private facilities were conducted by Storm Drainage inspectors and 148 inspections were performed by Planning Hydrology personnel.

(vi) Approximately 218 acres of impervious area (IA) was added to the Albuquerque Metropolitan area in FY20. See Attachment 4 for a listing. Of this area, roughly 95% drains to first flush ponds and regional features which collect dirt, debris, and trash. Therefore the directly connected impervious area (DCIA) added in FY20 was 218 acres minus 202 acres for a total of 16 acres. The methodology for estimating impervious area is based on land use codes and was sent to EPA in the 2013 Annual Report under the former Phase 1 permit NMS000101.

(vii) The COA's Master Drainage Plan provides a ranking of MS4-owned properties for flood control projects including retrofits.

5c. Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations

(i)(a) Storm Drainage Inspection staff work with maintenance personnel to ensure adequate training is provided. Annual training of maintenance staff is conducted. In addition, inspections of maintenance facilities is performed quarterly at a minimum. Inspection staff conducted 136 Good Housekeeping inspections at COA facilities in FY19.

5d. Industrial and High Risk Runoff

(vi) In FY20, 13 industrial and high risk inspections of private facilities that require a Multi Sector General Permit (MSGP) were performed by COA in-house inspectors. Most of the facilities requiring inspection were visited from FY17 through FY19.

5e. Illicit Discharges and Improper Disposal

(i)e, ii The COA implemented a 311 complaint system to report illicit discharges in the mid-2000s. See Attachment 5 for a map showing the locations of discharges and associated inspection forms reported via this system in FY20.

(iv)A,C The Storm Drainage Section of the Department of Municipal Development (DMD) coordinated with the Solid Waste Department (SWD) to host one Household Hazardous Waste (HHW) recycling event in FY20. 538 residents participated in the event, held on August 24, 2019, during which approximately 31,500 pounds (lbs) of materials were collected or 58.5 lbs/customer.

In addition, more than 2460 participants disposed of almost 419,000 lbs of HHW throughout FY20 at the HHW collection center run by a contractor on behalf of the COA SWD. About 345,000 lbs or 82 percent of the material collected was reused or recycled. See Attachment 6 for reports related to HHW collection.

(vii) In addition to utilizing the 311 complaint system to pinpoint illicit discharges, the COA implemented an Illicit Discharge Detection and Elimination (IDDE) inspection program in FY16 in order to mitigate the influence of discharges with lower risk but higher likelihood of occurrence. At the onset of the program, a local environmental consulting firm was hired to supply staff to perform these inspections. The COA hired an inspector supervisor and 3 inspectors as permanent employees in FY17 to assist in IDDE inspection and data tracking efforts in future years. In late FY18, COA inspectors took over the IDDE inspection program.

5f. Control of Floatables Discharges

(iii). Street Sweeping crews picked up more than 7200 cubic yards (6060 tons) of dirt and debris from 44,900 miles of COA Right of Way in FY20. Dirt comprises about 65% of the material picked up by street sweepers with debris making up the remaining 35%. Of the debris, roughly 70% is vegetation. The remaining waste is comprised of plastics (bottles, bags, containers/lids) at 15%, paper and cardboard at 10%, and metal at 5%.

In addition, Arroyo Maintenance cleaned 3030 cubic yards of dirt, trash, debris, and vegetation from the storm drain system during FY20.

5f. Control of Floatables Discharges

III.A. Monitoring and Assessment

1. Wet Weather Reporting: The COA participates in the Middle Rio Grande Compliance Monitoring Cooperative (CMC). In June 2016, the CMC submitted a sampling and analysis plan to EPA Region 6 in June 2016 for approval. Permit requirements called for the submission of 7 samples by the end of the permit term. The CMC collected compliance samples through the rest of the permit term and in FY19 collected the one remaining sample required by the permit. The permit expired on December 19, 2019 and no further sample collection efforts are required. However, as a good faith effort, the COA and other CMC members have continued to fund sampling efforts during this period of administrative continuance. Because of drought and timing of rain events that violated hold time criteria for E.coli analysis, no wet weather samples were collected in FY20.

2. Dry Weather Reporting: Dry weather screening is performed at 40 locations (25 direct discharge points to the Rio Grande and an additional 15 locations to assess subwatersheds). See Attachment 7 for results.

3. Floatables Reporting: See item 5f above. In addition an estimated 15 cubic yards of floatables were removed from the Barelas Pump Station in FY20, the COA's selected floatables monitoring location. AMAFCA provides the information on floatables monitoring in the NDC.

4. Industrial and High Risk Reporting: The COA's landfills are located outside of the MS4 and drain to the Rio Puerco rather than the Rio Grande. Nonetheless, the landfills are permitted under the federal MSGP.

4.b COA's transfer stations, solid waste station at Pino Yards, transit stations, and fueling facilities, all located within the MS4, are classed as sector P and require quarterly visual monitoring only. Because of sporadic localized events that often occur during evening, weekends and other non-work hours, it is often difficult to obtain results. Nonetheless quarterly visual inspections are completed when possible. See Attachment 8 for the visual quarterly monitoring results.

ADDITIONAL INFORMATION TO SUPPLEMENT REPORT FORM

Item 3. Public Participation and Education

C. The COA Storm Drainage staff participate in and contributed $12,000 in dues to the MRGSWQT in FY20. Outreach activities performed by the 9 agencies that comprise the MRGSWQT are provided in the Outcomes Report in Attachment 9.

Because of the COVID-19 outbreak, the open space clean up events along the trails and Rio Grande were not held this year. Outreach has occurred along the trails by staff encouraging visitors to keep the areas clean and free from trash. Staff members also planted 785 cottonwood and 96 willow in the bosque with the help of 740 youth and 237 adults during FY20.

The Storm Drainage Section also provided monetary support to The Nature Conservancy ($138,000) from FY15 through FY19 in their efforts to promote public education in the schools and in the adult community in the area of watershed health. Through these efforts, green infrastructure and gardens were established at several elementary and junior high schools throughout the metropolitan area. In addition, several workshops and field trips at area schools were conducted that promoted the importance and interconnection of the quality of stormwater runoff with that of the Rio Grande.

Item 5. Illicit Discharges

C. There are 21 direct discharge points to the Rio Grande. Assessment of industrial and commercial development within subwatersheds of the Albuquerque Metropolitan area has led to the selection of 16 additional dry weather screening locations in channels and arroyos. In total, 39 locations have been selected for dry weather screening. See Attachment 6, Dry Weather Screening for the results.

J. During the reporting period from July 1, 2019 through June 30, 2020, 121 improper discharge related complaints were reported to the 311 system and investigated by a City storm drainage engineer or inspector. See Attachment 4 for a map indicating location and type of discharge. No cross connections were detected during FY20.

Item 8. Program Resources

D. 20 full time employees that perform work related to the COA's MS4 include: 10 Arroyo/Storm Drainage Maintenance personnel, 8 Storm Drainage Design/NPDES personnel (Section Manager, 3 engineers, 1 supervisor inspector, and 3 inspectors), and 1 Stormwater Quality Engineer and 1 Construction Inspector in the Planning Hydrology Department.

In addition to FTE's employed by the COA, the Storm Drainage Section budgets and spends approximately $200,000 per year on consultants hired solely to perform NPDES permit compliance tasks. This is the equivalent of 2 FTE's. The Clean City Solid Waste program also employs 70 FTEs and uses 80 contractor positions to collect and dispose of trash that would otherwise make its way into the COA's MS4. Additionally, 20 employees in Street Maintenance perform street sweeping in support of dirt and debris removal efforts.

Finally, Parks and Open Space personnel conduct restoration projects, host citizen clean up days, and perform education and outreach related to stormwater quality. Also, Parks design project managers continue to work on the installation of green stormwater infrastructure in our City parks, such as native plantings, permeable paving, and bioswales.

Attachment 1

Administrative Continuance

Under Permit NMR04A000

Ronald D. Brown, Chair
Bruce M. Thomson, P.E., Vice Chair
Deborah L. Stover, Secretary-Treasurer
Tim Eichenberg, Assistant Secretary-Treasurer
Cynthia D. Borrego, Director

Jerry M. Lovato, P.E.
Executive Engineer

Albuquerque
Metropolitan
Arroyo
Flood
Control
Authority
2600 Prospect N.E., Albuquerque, NM 87107
Phone: (505) 884-2215 Fax: (505) 884-0214
Website: www.amafca.org

October 15, 2019

Mr. Robert Houston
Chief, Special Projects Section
U.S. Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270

RE: NPDES Permit No. NMR04A000 Administrative Continuance – Duty to Re-Apply

Dear Mr. Houston:

This correspondence serves as a written notification that the members copied below of the Middle Rio Grande Technical Advisory Group (TAG) will continue to operate and discharge into the Rio Grande under the coverage and the conditions set forth in NPDES Permit No. NMR04A000 (Permit), after December 19, 2019, based on Permit language in Part IV:V and required notification in Part IV:C.

On June 27, 2019 the Middle Rio Grande TAG MS4 permittees met with and were informed by EPA Region 6 staff Brent Larson & Maria Martinez that the Permit, which expires on December 19, 2019, would likely go into administrative continuance. As EPA staff explained during the meeting, EPA is not required to issue a public notice related to the administrative continuance and the current permittees do not need to complete any actions or submit renewal applications to have continued coverage under the current Permit.

This guidance from EPA was confirmed in the Permit, in Part IV:V. CONTINUATION OF THE EXPIRED GENERAL PERMIT. *If this Permit is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedures Act and remain in force and effect. Any permittee who was granted permit coverage prior to the expiration date will automatically remain covered by the continued Permit until the earlier of:*

1. *Reissuance or replacement of this Permit, at which time the permittee must comply with the Notice of Intent conditions of the new permit to maintain authorization to discharge; or*
2. *Issuance of an individual permit for your discharges; or*
3. *A formal permit decision by the permitting authority not to reissue this general Permit, at which time the permittee must seek coverage under an alternative general permit or an individual permit.*

Closer review of the Permit noted the language in Part IV:C: DUTY TO REAPPLY. *If the permittee wishes to continue an activity regulated by this Permit after the Permit expiration date, the permittee must apply for and obtain a new permit. The application shall be submitted at least 180 days prior to expiration of this permit. The EPA may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be governed by regulations promulgated at 40 CFR § 122.6 and any subsequent amendments.* It is unclear from the Permit language in Part IV: C, if this section applies to permits that are administratively continued.

This letter is to inform EPA that, based on the provided guidance from EPA and the MS4 Permit language in Part IV:V, members of the Middle Rio Grande TAG will continue to operate with coverage under the current MS4 Permit when the Permit is administratively continued on December 19, 2019. If these assumptions are incorrect or if an application is required for continued coverage under MS4 Permit NMR04A000, please let us know as soon as possible.

We appreciate your attention to this matter. Please contact me if you have any questions.

Sincerely,
Middle Rio Grande TAG

Patrick Chavez, PE
AMAFCA Storm Water Quality Engineer and TAG Member

TAG Members Included and Copied:

Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA)
City of Rio Rancho
Sandia National Labs (operated by NTESS for US DOE)
Bernalillo County
Kirtland Air Force Base
Village of Los Ranchos
Eastern Sandoval County Arroyo Flood Control Authority (ESCACA)
Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA)
City of Albuquerque
Village of Corrales
Sandoval County
Town of Bernalillo
New Mexico Department of Transportation (NMDOT)
University of New Mexico

Attachment 2

Completion Report for the

Microbial Source Tracking Study

Completion Report for
Microbial Source Tracking Program
City of Albuquerque

Prepared for **City of Albuquerque, New Mexico**

May 4, 2020

Daniel B. Stephens & Associates, Inc.

6020 Academy NE, Suite 100 • Albuquerque, New Mexico 87109

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A Laboratory Analytical Reports

Completion Report
Microbial Source Tracking Program
City of Albuquerque

Daniel B. Stephens & Associates, Inc. (DBS&A) has prepared this report summarizing results of nine sampling events in 2018 and 2019 (Table 1) in support of the City of Albuquerque (COA) Microbial Source Tracking (MST) Program. The MST program, as described in the field sampling plan (DBS&A, 2018a), consists of water quality sampling at designated sites in the Albuquerque basin's stormwater drainage system during rain events (Figure 1). The stormwater drainage system includes the Rio Grande and the New Mexico Environment Department (NMED) 303(d)/305(b) stream segment Isleta Pueblo Boundary to Tijeras Arroyo (22105_50), which has impairment for E. coli noted in the U.S. Environmental Protection Agency (EPA) Clean Water Act 303(d) list.

1. Introduction

DBS&A prepared two previous letter reports summarizing results of two dry weather sampling events (DBS&A, 2018b) and six wet weather sampling events in 2018 (DBS&A, 2019). As discussed in the 2019 letter report, there are notable areas in the southern part of the study area with high levels of bacteria. Hence, the MST program was modified in March 2019 to (1) focus on the southern part of the watershed, specifically inputs into the Rio Grande above and within the NMED 303(d)/305(b) stream segment Isleta Pueblo Boundary to Tijeras Arroyo (22105_50) and (2) reduce the analytical suite to target only E. coli, human, canine and general *Bacteroidales*. Two additional Compliance Monitoring Cooperative (CMC) sampling locations (Rio Grande at Angostura Dam and Rio Grande at Isleta Dam) were also added to the program. These sites were sampled in March 2019 concurrently with a CMC sampling event.

Water quality samples were collected in accordance with special conditions (bacteria) monitoring in the watershed-based municipal separate storm sewer system (MS4) Permit (No. NMR04A000) (the Permit) (U.S. EPA, 2014). The Permit requires the co-permittees to include focused best management practices (BMPs) to reduce the impairment of the Rio

Grande by bacteria, and to monitor or assess progress in achieving goals and effectiveness of BMPs [Permit Part 1, Section C. Special Conditions subsection 2.b(f)]. The purpose of the MST program is to assess progress in achieving goals and the effectiveness of the City's BMPs to reduce the impairment of the Rio Grande by bacteria discharged in surface water. The majority of the City's BMPs are designed to reduce the addition of pet and human fecal waste to the stormwater conveyance system and subsequently to the Rio Grande.

This report discusses the results of (1) five sampling events throughout the full basin and (2) three southern focused sampling events that occurred in response to qualifying precipitation. Two dry weather sampling events were performed in April 2018 and May 2018 to (1) assess developed field and laboratory sampling protocols and (2) characterize sources causing high levels of bacteria in the Rio Grande. The results of the background field events were discussed in the August 2018 status report (DBS&A, 2018b). Table 2 summarizes the analytical results for each sample location, organized by sample location type. The MST program sample location types include (1) arroyos, (2) channels, (3) drains, (4) pump station, (5) Rio Grande, (6) wastewater treatment outfall, and (7) blanks. Table 3 summarizes the analytical data by sampling event and then by sample location type. Available instantaneous discharge data at the U.S. Geological Survey (USGS) gauge locations at sample collection are also included in Table 3.

2. qPCR Technology

The MST program consists of sample collection for quantitative polymerase chain reaction (qPCR) analysis and fecal indicator bacteria (FIB) by E. coli enumeration. qPCR methods are used to detect the presence of various microbial pathogens through the amplification of specific DNA sequences without culturing bacteria. This technique allows quantification of genetic markers that are specific to the host of the bacteria *Bacteroidales*. Members of the order *Bacteroidales* have been proposed as an alternative fecal indicator and source identifier due to their host specificity, broad geographic stability, and abundance in the gastrointestinal tract of warm-blooded animals. Bacteria typically comprise approximately one-third of human feces by weight, and *Bacteroidales* are estimated to comprise about 10 percent of fecal mass (Stephen and Cummings, 1980). qPCR-based methodologies have been designed to target specific

diagnostic sequences within the *Bacteroidales* 16S rRNA gene present in feces from different animals. Host-associated *Bacteroidales* genetic markers have been developed to identify pollution sources from human, dog, cattle, horse, swine, chicken, bird (avian), elk, and ruminants (Roslev and Bukh, 2011; Harwood et al., 2014). Several aspects of the qPCR testing method need be fully understood to understand the data:

- The determination of host contributions of FIB by qPCR analysis allows for the quantification of specific host inputs (e.g., human, bird). Each marker is strongly associated with, but not exclusive to, the source tested for. Each has some degree of non-specificity.

- Each marker constitutes a separate test, and the levels of the various markers within the same sample generally cannot be compared. Comparisons are difficult between species because (1) the copy number to fecal mass ratio differs among species, (2) detection limits differ among species, (3) and some assays cover multiple species (e.g., avian and ruminants). For example, if Sample A has an HF183 (human) result of 1,000 and an avian GFD result of 100, it is not valid to say that there is more human contamination than avian contamination in Sample A. However, if the difference is more than 3 orders of magnitudes, it is valid to assume that, for example, human fecal contamination is more prevalent than avian fecal contamination (Schriewer, 2020).

- Levels of the same marker in different samples can be compared. For example, if Sample A has an avian GFD result of 1,000 and Sample B has an avian GFD result of 10,000, it is valid to conclude that there is more avian fecal contamination in Sample B than in Sample A. If Site H sampled in January has an avian GFD result of 500 and when sampled in February has an avian GFD result of 10,000, it is valid to conclude that the level of avian fecal contamination is greater in February.

- The numbers and contributions of different gut bacteria vary greatly between each host individual and among host species. As a result, there is no fixed ratio of, for example E. coli to *Bacteroidales*, between individuals of one host species—much less across all host sources. Consequently, the majority of DNA copies being associated with a particular animal as the origin of fecal bacteria, does not necessarily equate to that

animal being the primary source of bacteria in the watershed. While having the majority of DNA copies matched to a particular source means that a source is active in the watershed, and likely more abundant than the others, it might not be appropriate to use the specific "percentages" or relative abundances of the different sources for quantitative analyses.

- qPCR assays cannot discriminate between live and dead DNA. Host-specific genetic signals are still measureable whether the bacterium is alive or dead. Hence, a portion of the human and canine assay in the Valle Del Oro and I-25 samples may be a result of discharge from the Southside Wastewater Reclamation Plant (SWRP) located upstream of the sample locations. The SWRP has E. coli permit effluent limits of 47 colony forming units per 100 milliliters (cfu/100 mL) monthly average and 88 cfu/100 mL daily maximum. According to SWRP operators, the plant employs Trojan UV3000PlusTM lamps that emit ultraviolet light (UV-C) radiation, which is effective for total disinfection and DNA degradation. However, it is possible that the UV light disinfection system at SWRP may not operate such that it degrades all DNA in the discharge.

- qPCR measures the concentration of DNA, which is likely related to, but not necessarily directly proportional to, the number of fecal bacteria cells present in the water sample.

3. Field Procedures

Field procedures include collection of water samples of 250 milliliters (mL) for qPCR analysis in sterile containers and transportation to the DBS&A filtration laboratory on ice within 2 hours. Samples of 100 mL were filtered through a 0.2-micron (µm) Supor funnel filter. The filters were kept on dry ice and shipped to the Weston Solutions (Weston) laboratory until DNA extraction was carried out. Water samples of 125 mL were collected for E. coli enumeration analysis in sterile containers with preservative and transported on ice to Hall Environmental Analysis Laboratory (HEAL) within 2 hours. DBS&A submitted field and laboratory method blanks to Weston for qPCR analysis. Four field blanks were collected and analyzed to determine if any conditions or processes have caused sample contamination. Five laboratory blanks were collected and analyzed to test the effectiveness of the prescribed sterile filtration procedure.

4. Results of Laboratory Analysis for 2018 Dry Weather Samples

The results of the laboratory analysis for the two dry weather sampling events are presented in Tables 2 and 3. Complete laboratory reports are provided in Appendix A. The results of the dry weather screening events were discussed in the August 2018 status report. The dry weather samples were collected from locations on the Rio Grande, the North Diversion Channel (NDC), and the Riverside Drain. The markers reported above laboratory detection limits in the 12 dry weather screening samples include the following:

- Avian marker reported in all 12 samples.
- Human marker reported in 7 of 12 samples.
- Ruminant marker reported in 2 of 12 surface water samples. Ruminating mammals include cattle, goats, sheep, giraffes, yaks, deer, and antelope.
- Canine marker reported in 4 of 12 surface water samples.
- Cow and horse markers were not reported in any of the surface water samples.
- No markers, E. coli, or general *Bacteroidales* were reported in the field and laboratory blanks.

5. Results of Laboratory Analysis for Wet Weather Samples

The results of the wet weather screening events are presented in Tables 2 and 3. Between July 2018 and January 2019, a total of 85 samples from designated sites throughout the Albuquerque basin's stormwater drainage system. The wet weather samples were collected from the Rio Grande, arroyo and distribution channels, drains, pump stations, and the SWRP. The reduction in the analytical suite to target just E. coli, human, canine, and general *Bacteroidales* started with the January 2019 sampling event. Hence, the removed markers (i.e., avian) are only reported in the previous 43 samples. In March 2019, the MST program was modified to focus on the southern part of the watershed. A total of 42 samples with the reduced analytical suite were collected after this modification.

The markers reported above laboratory detection limits in the wet weather screening samples include the following:

- Avian marker reported in 39 of 42 samples.
- Human marker reported in 57 of 85 samples.
- Ruminant marker reported in 12 of 42 surface water samples.
- Canine marker reported in 67 of 84 surface water samples.
- Cow markers were not reported in any of the surface water samples.
- General *Bacteroidales* values reported above laboratory detection limits ranged from 2,854 to 100,700,654 copies/100 mL. The highest values are reported for the Vito Romero Pump Station and Barelas Pump Station samples. These stations discharge to the Rio Grande in the southern part of watershed.

6. Results of Laboratory Analysis for 2019 Wet Weather Samples, Southern Part of Watershed

Based on results of the 2018 sampling events, the MST program was modified to focus on the southern part of the watershed. There are notable areas in the southern part of the study area with strong human markers, including areas serviced by the Barelas Pump Station and those drained by the South Diversion Channel (SDC). Moderate canine fecal sources were also reported in the southern part of the study area, including Barelas Pump Station and the San Jose Drain at Woodward.

The markers reported above laboratory detection limits in samples collected in the MST Program from the southern part of the watershed include the following:

- Human marker reported in 51 of 52 samples.
- Canine marker reported in 42 of 52 surface water samples.

7. Discharge Information

Sampling sites chosen include places where historical water quality sampling has been performed in previous MST programs and surface water gauge locations currently monitored by the USGS. Available instantaneous discharge data at the USGS gauge locations at sample collection are included in Table 3. The maximum discharge of the event and approximate location of sample collection on the hydrograph are also included in Table 3. Discharge data were available for approximately 30 percent of the samples.

The discharge information was compiled to examine the relationship between discharge and quantification of specific host inputs, specifically whether the data are representative of the storm event. Samples collected at the tail of the hydrograph may not contain the first flush, the initial surface runoff of a rainstorm. During this phase, water pollution entering storm drains in areas with high proportions of impervious surfaces is typically more concentrated compared to the remainder of the storm. Hence, values reported for samples collected at the tail of the hydrograph may underrepresent the bacterial load for the contributing area.

8. Data Interpretation

This section describes the range and spatial distribution of FIB and qPCR markers found in the watershed, including the avian, human, ruminant, and canine markers. The reported marker values are classified into weak, moderate, and strong categories. The level of marker varied by a factor of 10 among the three categories. Hence, the weak category contains values above reporting limits to 5,000 copies/100 mL, the moderate category consists of values from 5,000 to 50,000 copies/100 mL, and the strong category consists of values greater than 50,000 copies/ 100 mL. Proportional contribution of the markers is shown in Figures 2a through 2c. Samples with no markers detected (ND) and those reported below detection limit (BDL) are also shown. Figure 2a shows the proportional contribution of the markers in all program samples. Figure 2b shows the proportional contribution of the markers in wet weather program samples. Figure 2c shows the proportional contribution of the markers in wet and dry weather program samples collected in the southern part of the watershed.

Figures 3, 4, and 5 show the proportional contribution of all program markers for the channel/arroyos, drains, and Rio Grande, respectively. The spatial distribution of the reported markers for the dry and wet weather sampling is shown in Figures 6a through 12e. Only one horse marker was found in the study at the NDC at Edith, and cow markers were not reported above reporting limits in any of the wet weather samples.

8.1 Avian

Avian markers were reported in all 12 dry weather samples and in 40 of 43 wet weather samples (Tables 2 and 3). Of these 52 samples with reported avian markers, 13 were Rio Grande samples. Avian markers reported above detection limits were detected in 95 percent of all program samples (Figure 2a), 91 percent of samples from channels and arroyos (Figure 3), 100 percent of drain samples (Figure 4), and 93 percent of Rio Grande samples (Figure 5).

The spatial distribution of the reported avian markers is shown in Figure 6a for dry weather sampling and Figure 6b for wet weather sampling in July and October 2018. For markers, the weak category consists of values above reporting limits to 5,000 copies/100 mL, the moderate category consists of values from 5,000 to 50,000 copies/100 mL, and the strong category consists of values greater than 50,000 copies/100 mL. Moderate to strong levels of avian markers were reported in 64 percent of all program samples, 35 percent of samples from channels and arroyos, 80 percent of drain samples, and 93 percent of Rio Grande samples.

The highest avian marker value reported was 110,240 copies/100 mL collected at Atrisco Drain at Rio Bravo. Other high values were reported at San Antonio Arroyo (95,612 copies/100 mL) and Upper Corrales Riverside Drain (69,955 copies/100 mL). These samples were collected during the September 2018 event. The three locations where avian markers were reported below detection limits were (1) Rio Grande at Rio Bravo (September 2018), (2) Embudo at Monte Largo (October 2018), and (3) Tijeras at Four Hills (October 2018).

Avian markers were reported in the vast majority of samples, but the City's BMPs are not designed to reduce the addition of avian waste to the stormwater conveyance system and

subsequently to the Rio Grande. Hence, the MST Program was modified in 2019 and avian markers were removed from the analytical suite for all subsequent samples.

8.2 Human

Human markers were reported in 7 of 12 dry weather samples and 57 of 85 wet weather samples (Tables 2 and 3). Of these 64 samples with reported human markers above detection limits, 20 were Rio Grande samples. Human markers reported above detection limits were detected in 66 percent of all program samples (Figure 2a), 65 percent of samples from channels and arroyos (Figure 3), 44 percent of drain samples (Figure 4), and 75 percent of Rio Grande samples (Figure 5).

The spatial distribution of the reported human markers is shown in Figure 7a for dry weather sampling and Figure 7b for wet weather sampling in July and October 2018. The spatial distribution of the reported human markers for the four 2019 events is shown individually in Figures 7c through 7f. The markers were categorized as weak, moderate, or strong as detailed above. Moderate to strong levels of human markers were reported in 24 percent of all program samples, 10 percent of samples from channels and arroyos, 22 percent of drain samples, and 25 percent of Rio Grande samples.

The highest human marker value reported was 952,088 copies/100 mL collected at the Barelas Pump Station, located in the southern part of the watershed. Three of the four Barelas Pump Station samples had strong human marker values. Three other locations in the southern part of the watershed—Alameda Drain at Matthew, South Diversion Channel at Broadway and San Jose Drain at Woodward Ave—also had reported strong levels of human markers.

The highest human marker value reported in Rio Grande samples was 151,347 copies/100 mL collected at Rio Grande Downstream Tijeras/Albuquerque SWRP. A portion of the human and canine assay in this sample may be a result of discharge from the SWRP located upstream of the sample locations. This is also may be true for other Rio Grande stations located downstream of SWRP, such as Rio Grande at Isleta (45,385 copies/100 mL) and Rio Grande at VDO (10,996 copies/100 mL).

8.3 Canine

Canine markers were reported in 4 of 12 dry weather samples and 67 of 85 wet weather samples (Tables 2 and 3). Of these 71 samples with reported canine markers above detection limits, 15 were Rio Grande samples with weak values reported. Canine markers reported above detection limits were detected in 73 percent of all program samples (Figure 2a), 80 percent of samples from channels and arroyos (Figure 3), 78 percent of drain samples (Figure 4), and 44 percent of Rio Grande samples (Figure 5).

The spatial distribution of the reported canine markers is shown in Figure 8a for dry weather sampling and Figure 8b for wet weather sampling in July and October 2018. The spatial distribution of the reported canine markers for the four 2019 events is shown individually in Figures 8c through 8f. The markers were categorized as weak, moderate, or strong as detailed above. Moderate to strong levels of canine markers were reported in 44 percent of all program samples, 55 percent of samples from channels and arroyos, 67 percent of drain samples, and 11 percent of Rio Grande samples.

The two highest canine marker values reported were 559,935 and 807,703 copies/100 mL collected at San Jose Drain at Woodward Ave. Other high values were reported at Amole del Norte Channel above Amole Dam (303,454 copies/100 mL), Barelas Pump Station (140,515 copies/100 mL), Lower Pino Arroyo at Washington (107,518 copies/100 mL), Vito Romero Pump Station (92,104 copies/100 mL), and SDC outflow at Tijeras Arroyo (95,586 copies/100 mL).

8.4 Ruminants

Ruminant markers were reported in 2 of 12 dry weather samples and 12 of 43 wet weather samples (Tables 2 and 3). Of these 14 samples with reported ruminant markers above detection limits, 3 were Rio Grande samples. Ruminant markers reported above detection limits were detected in 25 percent of all program samples (Figure 2a), 9 percent of samples from channels and arroyos (Figure 3), 47 percent of drain samples (Figure 4), and 21 percent of Rio Grande samples (Figure 5).

The spatial distribution of the reported ruminant markers is displayed in Figure 9a for dry weather sampling and Figure 9b for wet weather sampling. The markers were categorized as weak, moderate, or strong as detailed above. Moderate to strong levels of ruminant markers were reported in 2 percent of all program samples, 0 percent of samples from channels and arroyos, 7 percent of drain samples, and 0 percent of Rio Grande samples.

The highest ruminant marker value reported was 38,575 copies/100 mL collected at Albuquerque Riverside Drain below NDC. The next highest value was 1,806 copies/100 mL at Tijeras Arroyo at Four Hills.

8.5 General Bacteroidales

Quantification of total *Bacteroidales* provides a general indicator of fecal contamination. General *Bacteroidales* markers were reported in all dry and wet weather samples (Tables 2 and 3). The spatial distribution of the reported *Bacteroidales* markers is shown in Figure 10a for dry weather sampling and Figure 10b for wet weather sampling in July and October 2018. The spatial distribution of the reported general *Bacteroidales* for the four 2019 events is shown individually in Figures 10c through 10f. For general *Bacteroidales* markers, the weak category consists of values above reporting limits to 500,000 copies/100 mL, the moderate category consists of values from 500,000 to 5,000,000 copies/100 mL, and the strong category consists of values greater than 5,000,000 copies/100 mL. The level of marker varies by a factor of 10 among the three categories.

Moderate to strong levels of general *Bacteroidales* markers were reported in 67 percent of all program samples, 40 percent of samples from channels and arroyos, 89 percent of drain samples, and 82 percent of Rio Grande samples. The values reported range from 2,854 copies/100 mL at Tijeras Arroyo near confluence with SDC to 100,700,654 copies/100 mL collected at Barelas Pump Station. The next highest values were 63,991,251 copies/100 mL at Vito Romero Pump Station, 47,043,417 copies/100 mL at Barelas Pump Station, and 37,115,165 copies/100 mL at San Jose Drain at Woodward Ave.

8.6 E. coli (FIB)

FIB E. coli was reported above detection limits in 12 of 12 dry weather samples and 52 of 55 wet weather samples (Tables 2 and 3). The spatial distribution of the reported E. coli results is shown in Figure 11a for dry weather sampling and Figure 11b for wet weather sampling in July and October 2018. The spatial distribution of the reported E. coli for the four 2019 events is shown individually in Figures 11c through 11f. The applicable Pueblo of Isleta and Pueblo of Sandia surface water quality standard for E. coli is 88 cfu/100 mL. The HEAL E. coli results are reported in most probable number per 100 milliliters (MPN/100 mL). The reporting unit of cfu/100 mL represents the actual count from the surface of a plate, while MPN/100 mL represents a statistical probability of the number of organisms. Assuming the units are equivalent, 21 of 97 (78 percent) of the samples exceeded the E. coli water quality standard.

The reported E. coli values ranged from 8 MPN/100 mL at SWRP Outfall to above the method detection limit (MDL) of 24,196 MPN/100 mL. Samples exceeding the MDL were reported at San Jose Drain at Woodward Ave, SDC at Avenida de Cesar Chavez, SDC at Broadway, Albuquerque Riverside Drain at Rio Bravo, Barelas Pump Station, Vito Romero Pump Station, and Rio Grande at Rio Bravo. An illicit discharge from a sewer lift station occurred near the San Jose location on June 4, 2018 and sewage was retained in the San Jose Channel. Residual sewage in the channel may be represented in the July 2018 sample.

The number of E. coli markers detected by qPCR analysis conducted by Weston is also reported in Tables 2 and 3 and Figures 12a through 12e. The results of the FIB and qPCR E. coli analyses are related but not proportional. The spatial distribution of the reported qPCR E. coli results is shown in Figure 12a for wet weather sampling in July and October 2018. The spatial distribution of the reported qPCR E. coli for the four 2019 events is shown individually in Figures 12b through 12e. The qPCR E. coli weak category consists of values above reporting limits to 1,000 copies/100 mL, weakly moderate category consists of values from 1,000 to 10,000 copies/100 mL, the moderate category consists of values from 10,000 to 100,000 copies/100 mL, the moderately strong category consists of values from 100,000 to 1,000,000 copies/100 mL, and the strong category consists of values greater than 1,000,000 copies/100 mL.

9. Conclusions

The purpose of the MST program is to assess progress in achieving goals and the effectiveness of the City's BMPs to reduce the impairment of the Rio Grande by bacteria discharged in surface water. The majority of the City's BMPs are designed to reduce the addition of pet and human fecal waste to the stormwater conveyance system and subsequently to the Rio Grande. BMPs are not currently in place to reduce input of avian or ruminant fecal material to the drainage system.

In the wet weather events, indications of weak to moderate human markers were reported in the Alameda Drain, Hahn Arroyo, and NDC in the northeast parts of the study area (Figure 7b). Notable areas in the southern part of the study area with strong human markers include those serviced by the Barelas Pump Station and those drained by the SDC and San Jose Drain (Figures 7d and 7e).

As discussed in the August 2018 status report, the dry weather sampling indicated weak human markers in the Central, Bridge, and Rio Bravo samples collected upstream of the SWRP and a moderate human fecal source downstream of the SWRP. A sample was not collected from the SWRP outfall during the dry weather background events. A sample was collected from the SWRP outfall during subsequent wet weather sampling events in September 2018 and March, May, and October 2019. The SWRP outfall sample indicated moderate to strong human fecal sources in all events (Table 2a). Rio Grande samples collected below the SWRP during these events also indicated a moderate to strong human signals, but samples collected upstream at Rio Grande at Rio Bravo were either below the detection limit or indicated weak human fecal sources.

Notably during the March 2019 event, the SWRP outfall (407,340 copies/100 mL), Rio Grande Downstream Tijeras/Albuquerque (151,347 copies/100 mL) and Rio Grande at Isleta (45,385 copies/100 mL) samples indicated a moderate-strong level of human fecal sources (Figure 7d). A weak signal of human markers were reported in the Rio Grande at Rio Bravo (1,263 copies/100 mL) collected upstream of the SWRP during the March 2019 event. Hence, the copies reported downstream of the SWRP may be a result of SWRP effluent. The FIB

reported value of the SWRP outfall sample was 8 MPN/100 mL, below the E. coli permit effluent limits of 47 cfu/100 mL monthly average and 88 cfu/100 mL daily maximum. Hence, while the SWRP is a contributor of *Bacteroidales* DNA to the Rio Grande, FIB results indicate that it is dead *Bacteroidales* DNA.

Indications of strong canine markers in the wet weather events were reported in several channels, drains, arroyos, and pump stations in the southern area of the watershed of the study area (Figures 8b through 8e). Notable moderate and strong values were reported from all samples collected from the Barelas Pump Station and San Jose Drain. Moderate canine markers were reported in the northeast and northwest parts of the study area (Figures 8b and 8c). Samples collected in the northeast foothills reported weak to non-detectable markers, indicating the addition of canine fecal material to the drainage system within the northern urban areas (Figure 8b). The marked increase in the reported canine markers collected in the Embudo Arroyo from the foothills location at Monte Largo (1,128 copies/100 mL) to Snow Heights Park (15,960 copies/100 mL) supports this conclusion. Other notable areas with reported moderate canine fecal sources include those serviced by the Barelas Pump Station, Isleta Drain at Cypress Drive, and the San Jose Drain at Woodward.

EPA-recommended guidelines for acceptable microbiological water quality are based on the cultivable densities of *Enterococcus* spp. or E. coli (U.S. EPA, 1986). Cultivable E. coli is currently used as the preferred indicator of fresh surface water quality by a majority of states and tribes in the U.S. (U.S. EPA, 2003). During the wet weather events, the highest values of cultivable E. coli were detected throughout the study area (Figures 11b through 11f). A total of 78 percent of the samples exceeded the applicable E. coli water quality standard of 88 cfu/ 100 mL. The relatively low levels reported in the samples collected in northeast foothills are notable, indicating the addition of bacteria to the drainage system within the northern urban areas (Figure 11b).

Epidemiological studies indicate that the results of qPCR analysis method for Enterococcus spp. were a stronger predictor of swimming-associated gastrointestinal illnesses than the accepted culture method for this FIB group (Wade et al., 2006 and 2008). Figures 12a through 12e show the spatial distribution of the E. coli marker in the study area. Again, the

relatively low levels reported in the samples collected in the northeast foothills (Figure 12a) and the marked increase at outlets to the Rio Grande indicate the addition of bacteria to the drainage system within the urban areas.

No markers were reported in the dry and wet weather equipment and laboratory blanks (Tables 2 and 3), indicating that the developed protocols are adequate for the MST program.

References

Daniel B. Stephens & Associates, Inc. (DBS&A). 2018a. *Field sampling plan for microbial source tracking program in compliance with Watershed Based Permit NMR04A000, City of Albuquerque*. Prepared for the City of Albuquerque, New Mexico. March 15, 2018.

DBS&A. 2018b. Letter report from Chad Johannesen to Shellie Eaton, City of Albuquerque, regarding Status report for the City of Albuquerque's Microbial Source Tracking Program, Albuquerque, New Mexico. August 17, 2018.

DBS&A. 2019. Letter report from Chad Johannesen to Shellie Eaton, City of Albuquerque, regarding Status report for the City of Albuquerque's Microbial Source Tracking Program, Albuquerque, New Mexico. January 25, 2019.

Harwood, V.J., C. Staley, B.D. Badgley, K. Borges, and A. Korajkic. 2014. Microbial source tracking markers for detection of fecal contamination in environmental waters: Relationships between pathogens and human health outcomes. *FEMS Microbiological Review* 38(1): 1-40.

Roslev, P. and A.S. Bukh. 2011. State of the art molecular markers for fecal pollution source tracking in water. *Applied Microbiology and Biotechnology* 89(5): 1341-1355.

Schriewer, A. 2020. Personal communication between Alexander Schriewer, PhD, and Chad Johannesen, DBS&A. April 2, 2020.

Stephen, A.M. and J.H. Cummings. 1980. The microbial contribution to human faecal mass. *Journal of Medical Microbiology* 13: 45-56.

Wade, T.J., R.L. Calderon, E. Sams, M. Beach, K.P. Brenner, A.H. Williams, and A.P. Dufour. 2006. Rapidly measured indicators of recreational water quality are predictive of swimming-associated gastrointestinal illness. *Environmental Health Perspectives* 114: 24-28.

Wade, T.J., R.L. Calderon, K.P. Brenner, E. Sams, M. Beach, R. Haugland, L. Wymer, and A.P. Dufour. 2008. High sensitivity of children to swimming-associated gastrointestinal illness: Results using a rapid assay of recreational water quality. *Epidemiology* 19, 375-383.

U.S. Environmental Protection Agency (U.S. EPA). 1986. *Ambient water quality criteria for bacteria – 1986*. EPA 440/5-84/002.

U.S. EPA. 2003. *Bacterial water quality standards for recreational waters (freshwater and marine waters)*. EPA-823-R-03-008.

U.S. EPA. 2014. NPDES General Permit No. NMR04A000 - Stormwater general permit for MS4s in the Middle Rio Grande Watershed in New Mexico. Available at <https://www.epa.gov/sites/production/files/2018-10/documents/r6-npdes-middle-rio-grande-ms4-nmr04a000-final-permit-2014.pdf>.

Figures

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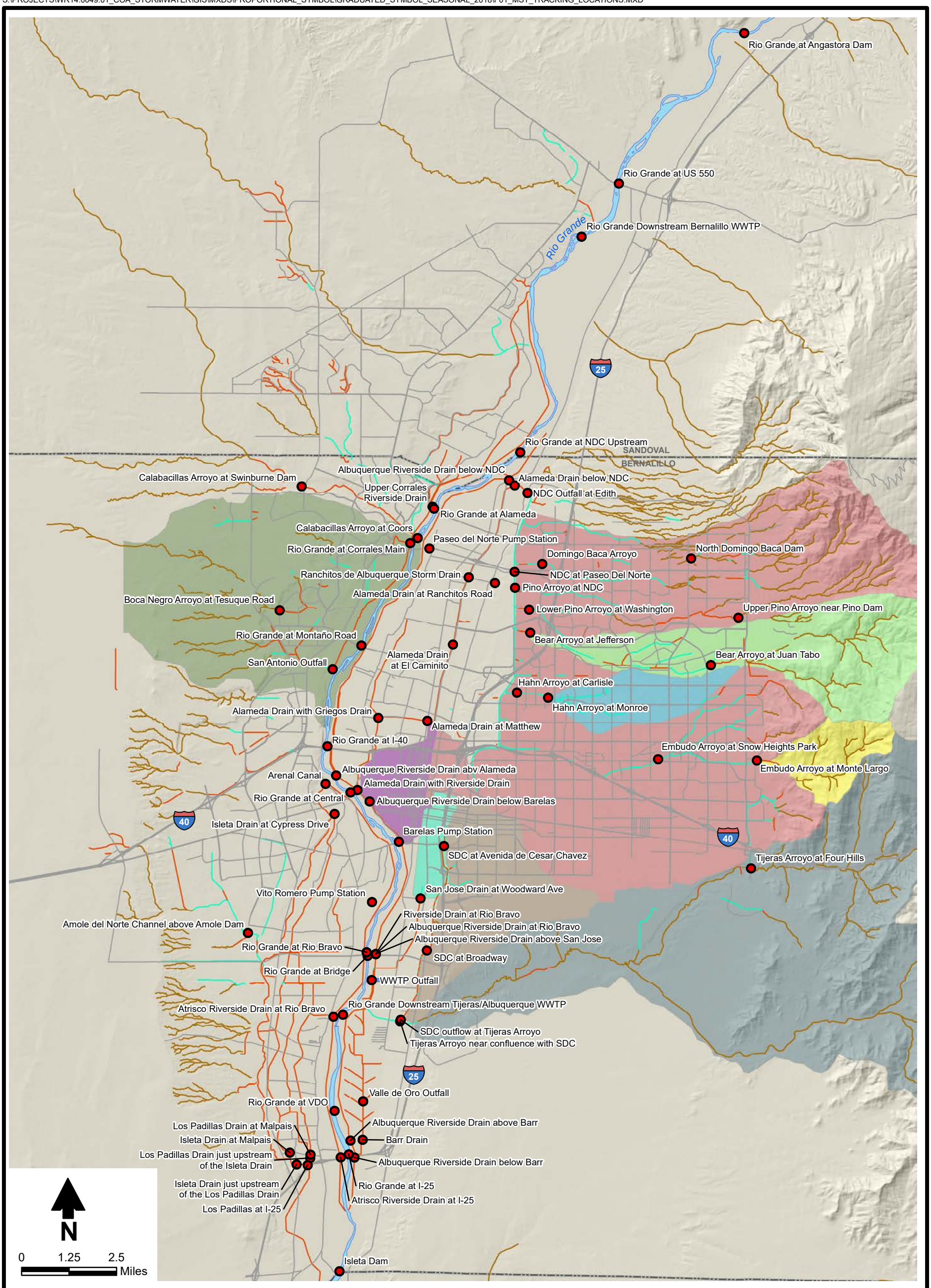


Explanation

- Microbial source tracking sample location
- Natural arroyo
- Concrete-lined channel
- Natural or rock-lined channel
- Barelas Pump Station
- Bear Arroyo
- Embudo Arroyo
- Hahn Arroyo
- North Diversion Channel
- San Antonio
- San Jose Drain
- South Diversion Channel
- Tijeras Arroyo

CITY OF ALBUQUERQUE

Microbial Source Tracking Water Quality Sampling

Figure 1

Daniel B. Stephens & Associates, Inc.

1/11/2019 JN DB17.1158

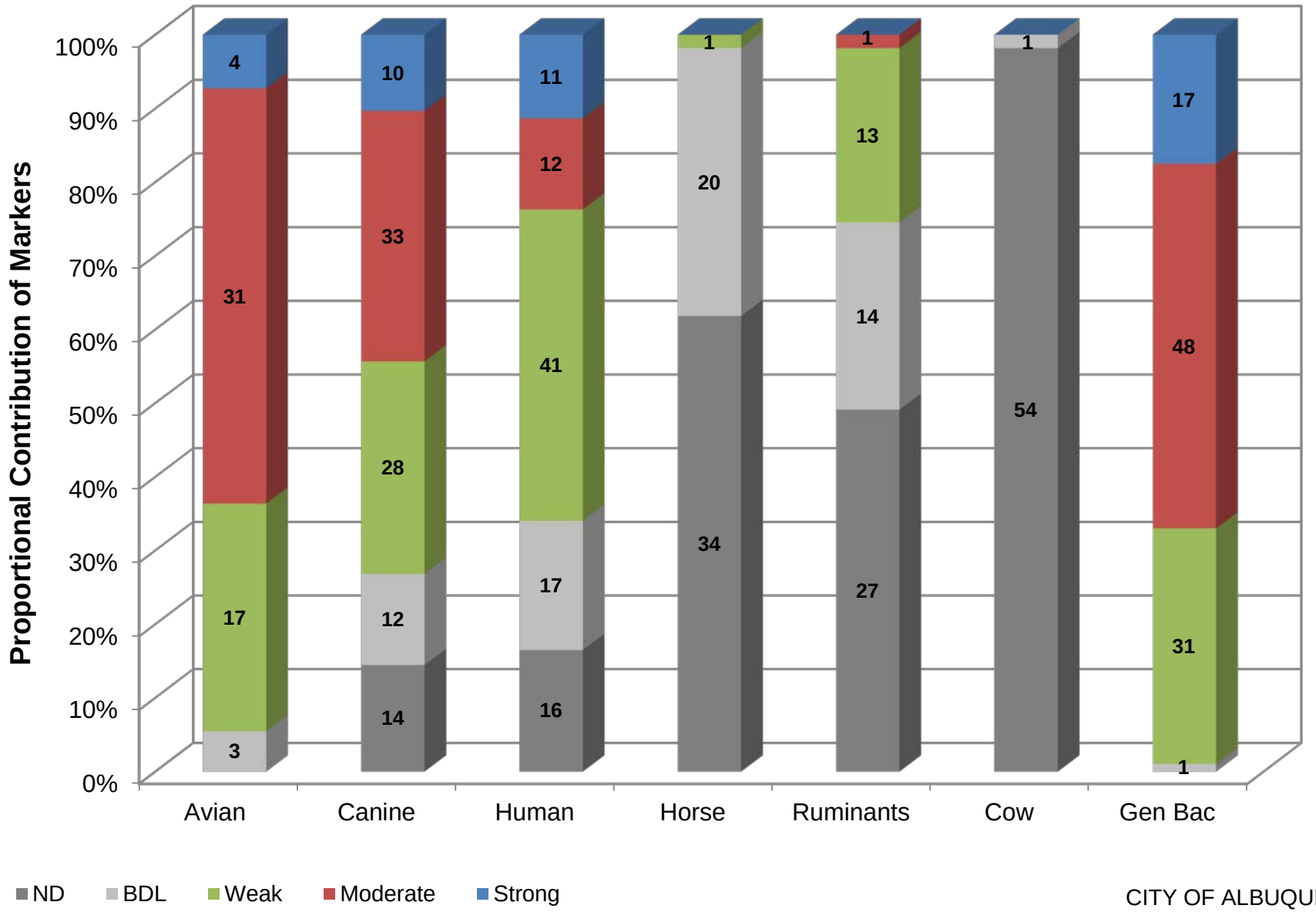


Figure 2a

CITY OF ALBUQUERQUE

Proportional Contribution of Genetic Markers
All Program Samples

Daniel B. Stephens & Associates, Inc.

5/4/20

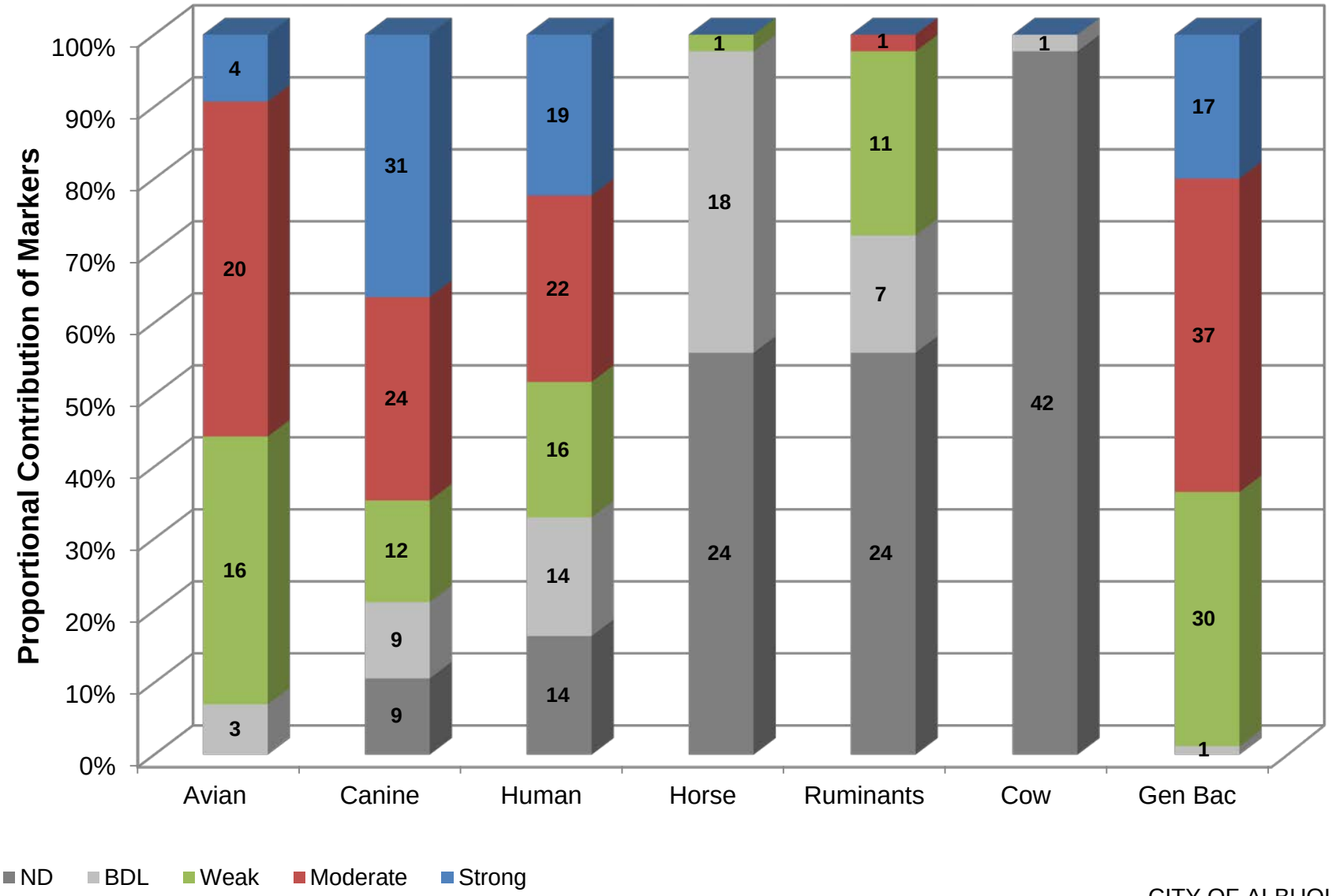


Figure 2b

CITY OF ALBUQUERQUE

Proportional Contribution of Genetic Markers
Wet Weather Samples

Daniel B. Stephens & Associates, Inc.

5/4/20

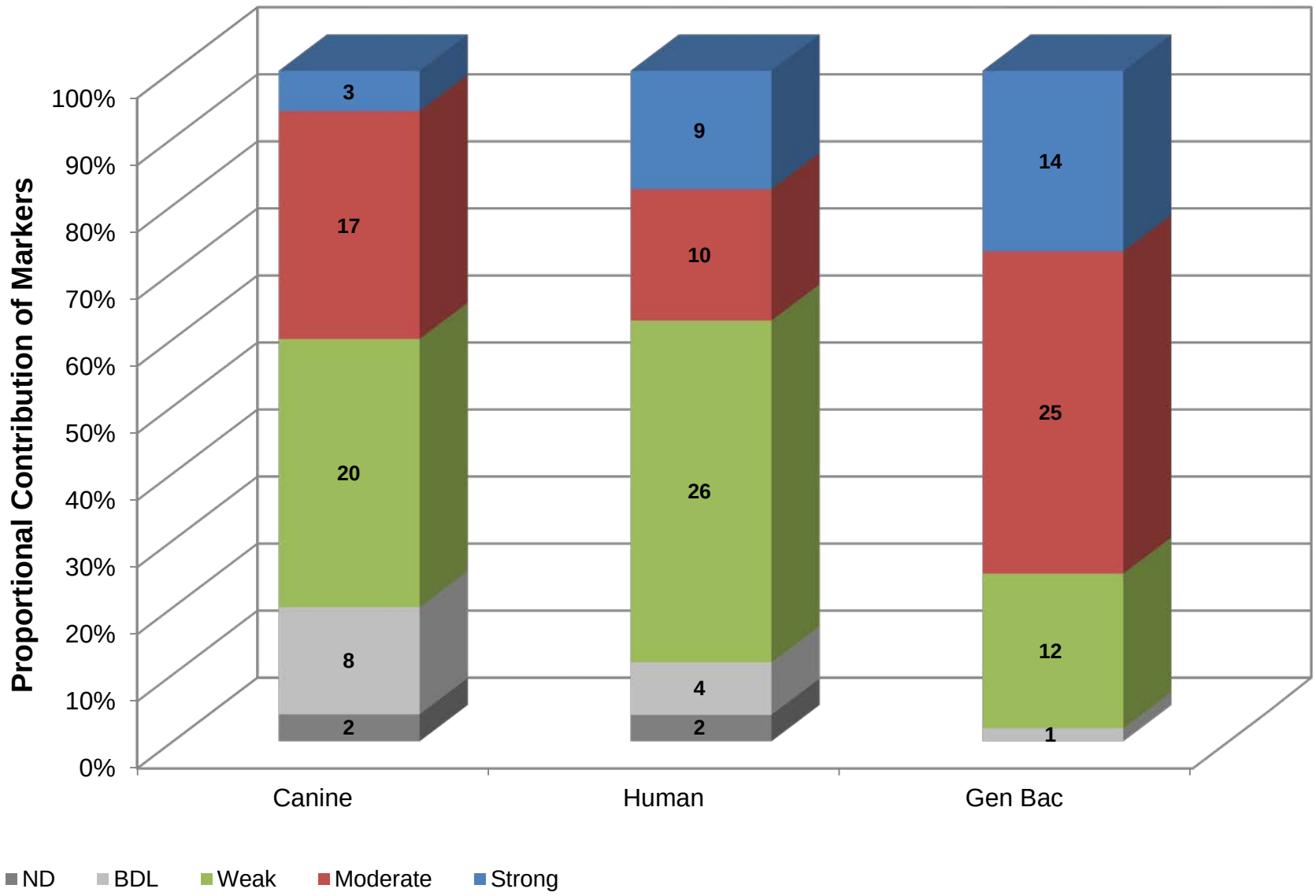


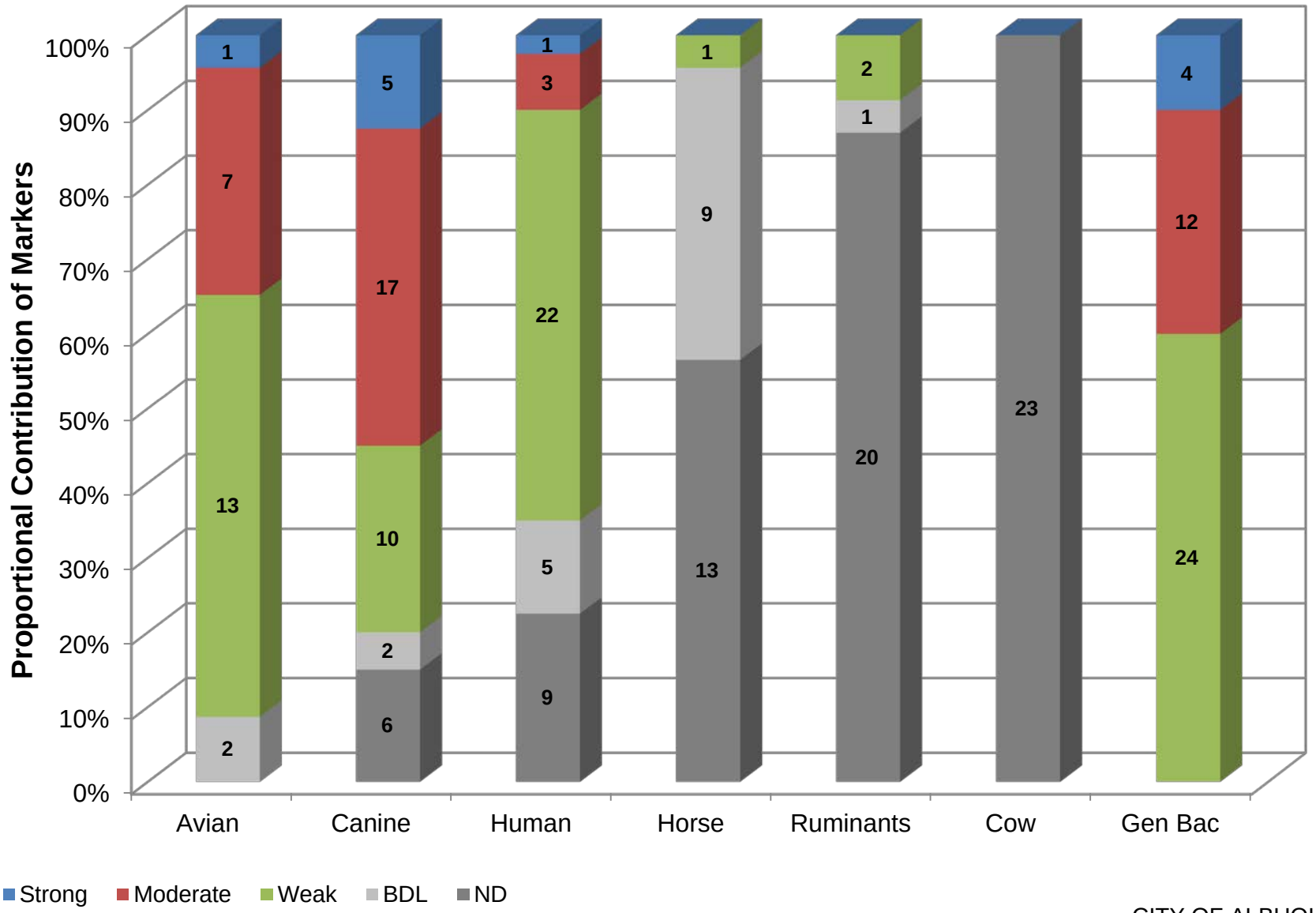
Figure 2c

CITY OF ALBUQUERQUE

Proportional Contribution of Genetic Markers Samples in Southern Project Area

Daniel B. Stephens & Associates, Inc.

5/4/20



CITY OF ALBUQUERQUE

Proportional Contribution of Genetic Markers
Channel and Arroyo Samples

Figure 3

Daniel B. Stephens & Associates, Inc.

5/4/20

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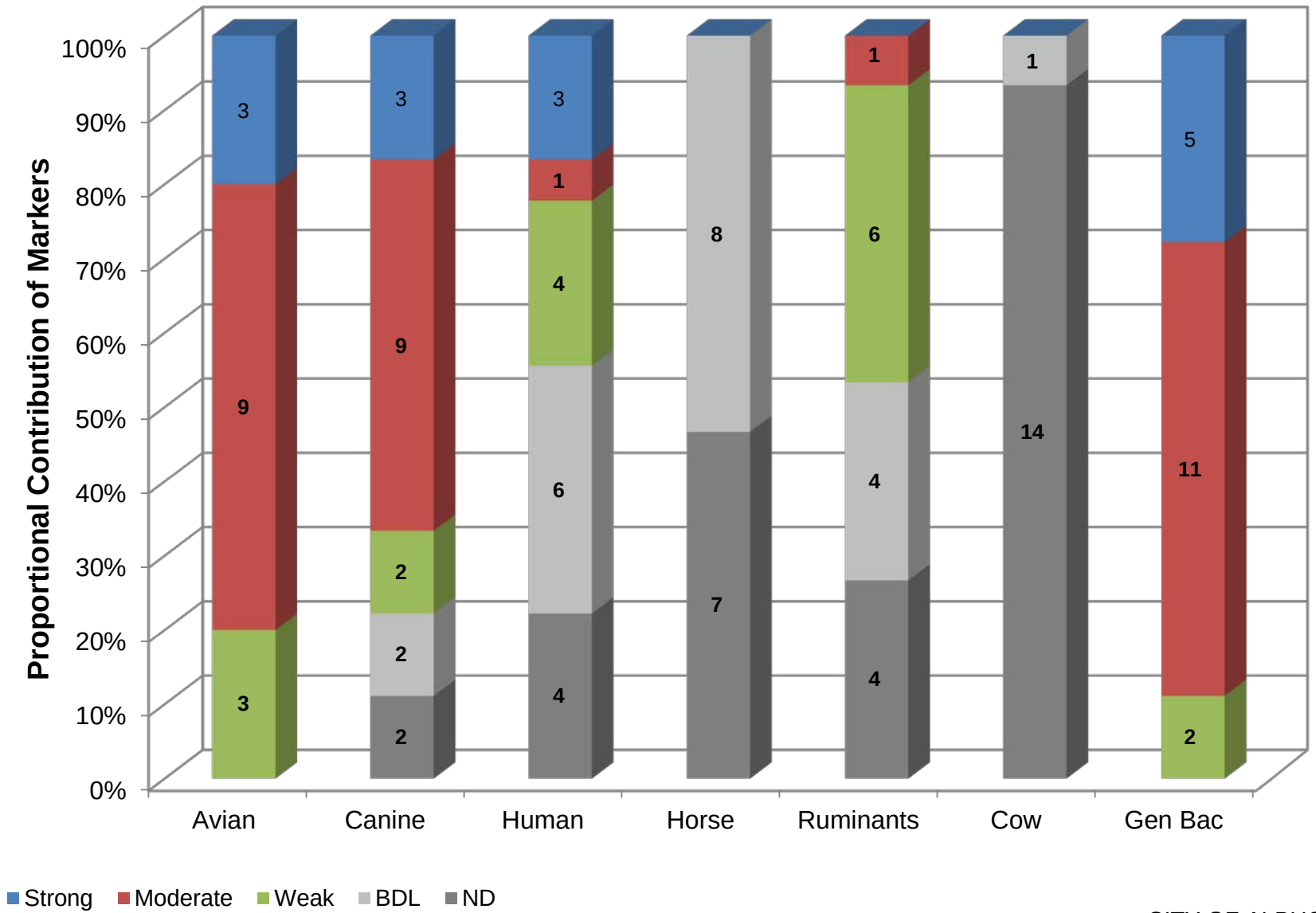


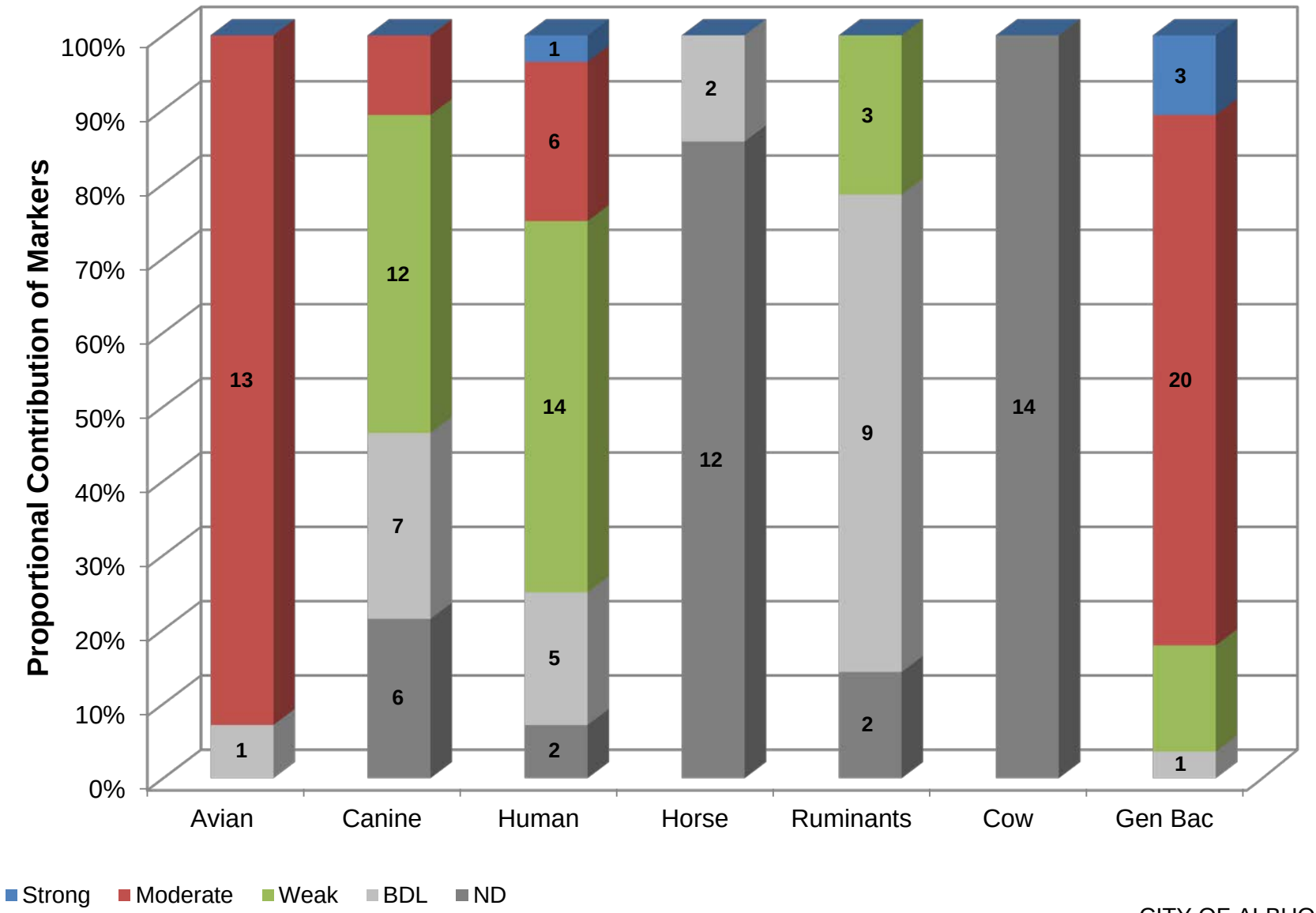
Figure 4

CITY OF ALBUQUERQUE

Proportional Contribution of Genetic Markers
Drain Samples

Daniel B. Stephens & Associates, Inc.

5/4/20



CITY OF ALBUQUERQUE

Proportional Contribution of Genetic Markers
Rio Grande Samples

Figure 5

Daniel B. Stephens & Associates, Inc.

5/4/20

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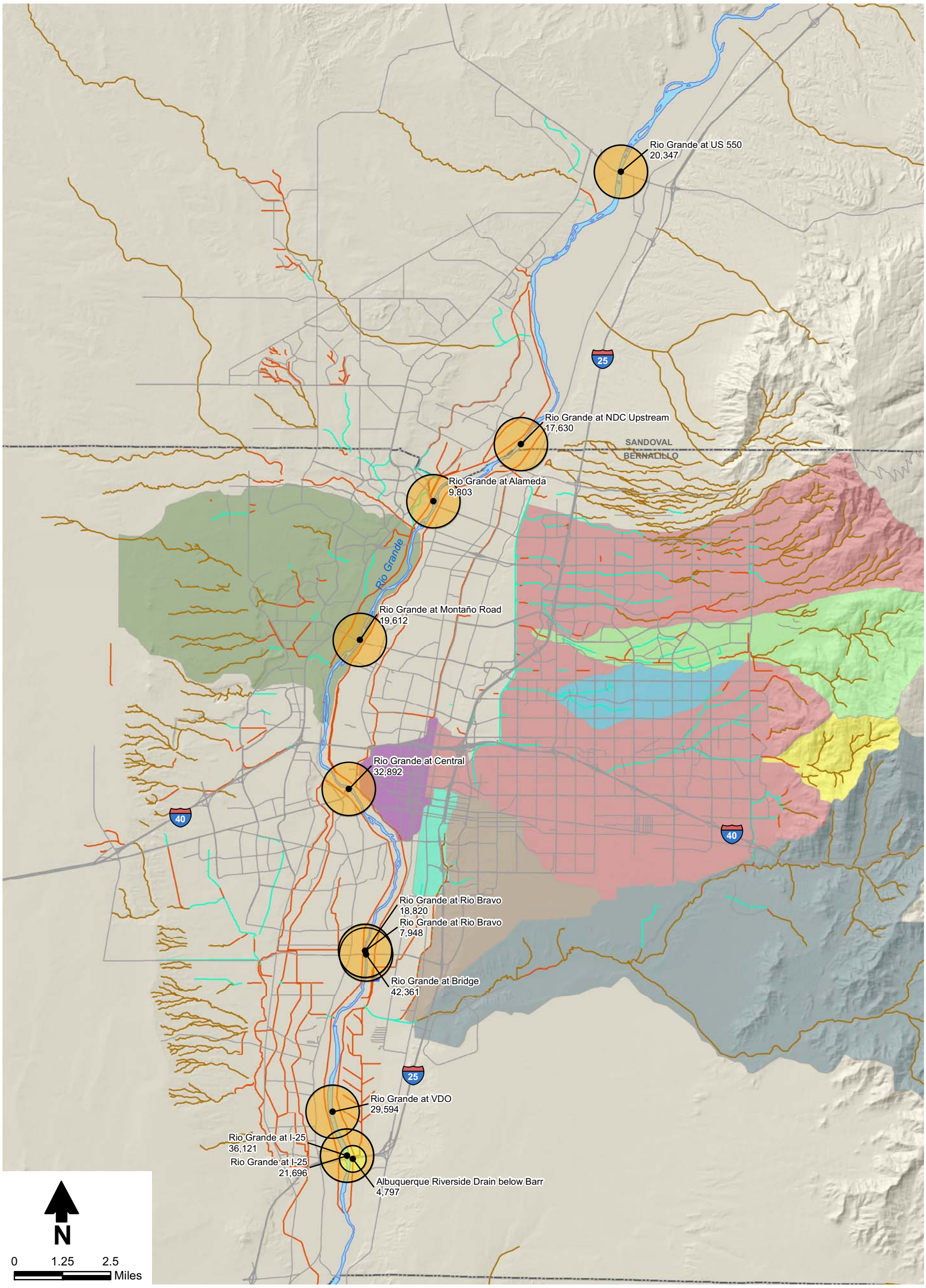

Explanation

Avian (copies/100 mL)

Weak (<5,000)

Moderate (5,000-50,000)

Strong (>50,000)

Note:
BDL = Below detectable limits
ND = Not detected

CITY OF ALBUQUERQUE

Avian GFD

Microbial Source Tracking

Water Quality Dry Weather Sampling

April/May 2018

Figure 6a

Daniel B. Stephens & Associates, Inc.

4/17/2020

JN DB17.1158

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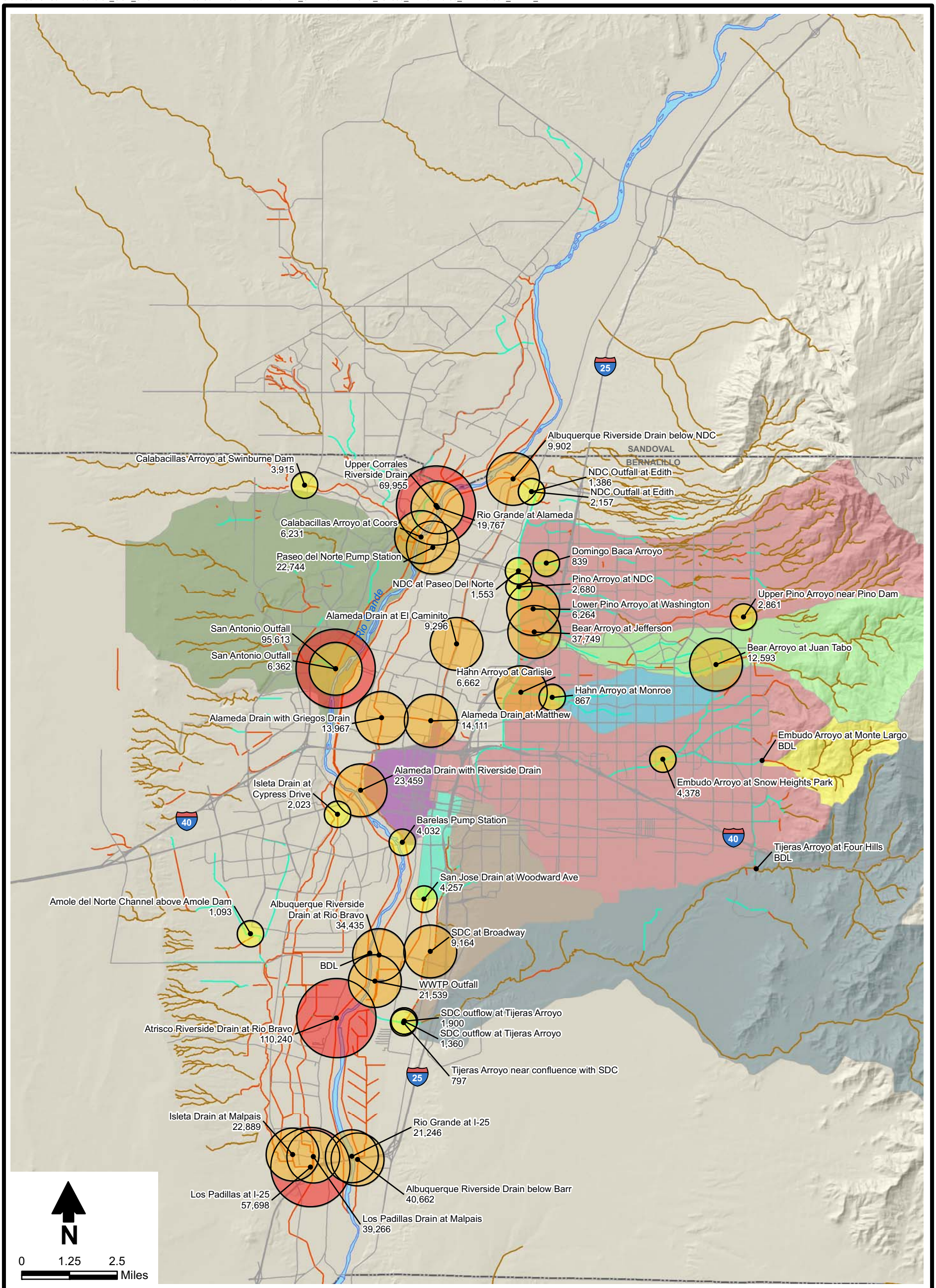

Explanation

Avian (copies/100 mL)

Weak
(<5,000)

Moderate
(5,000-50,000)

Strong
(>50,000)

Note:
BDL = Below detectable limits
ND = Not detected

CITY OF ALBUQUERQUE

Avian GFD

Microbial Source Tracking

Water Quality Wet Weather Sampling

July and October 2018

Figure 6b

Daniel B. Stephens & Associates, Inc.

4/17/2020

JN DB17.1158

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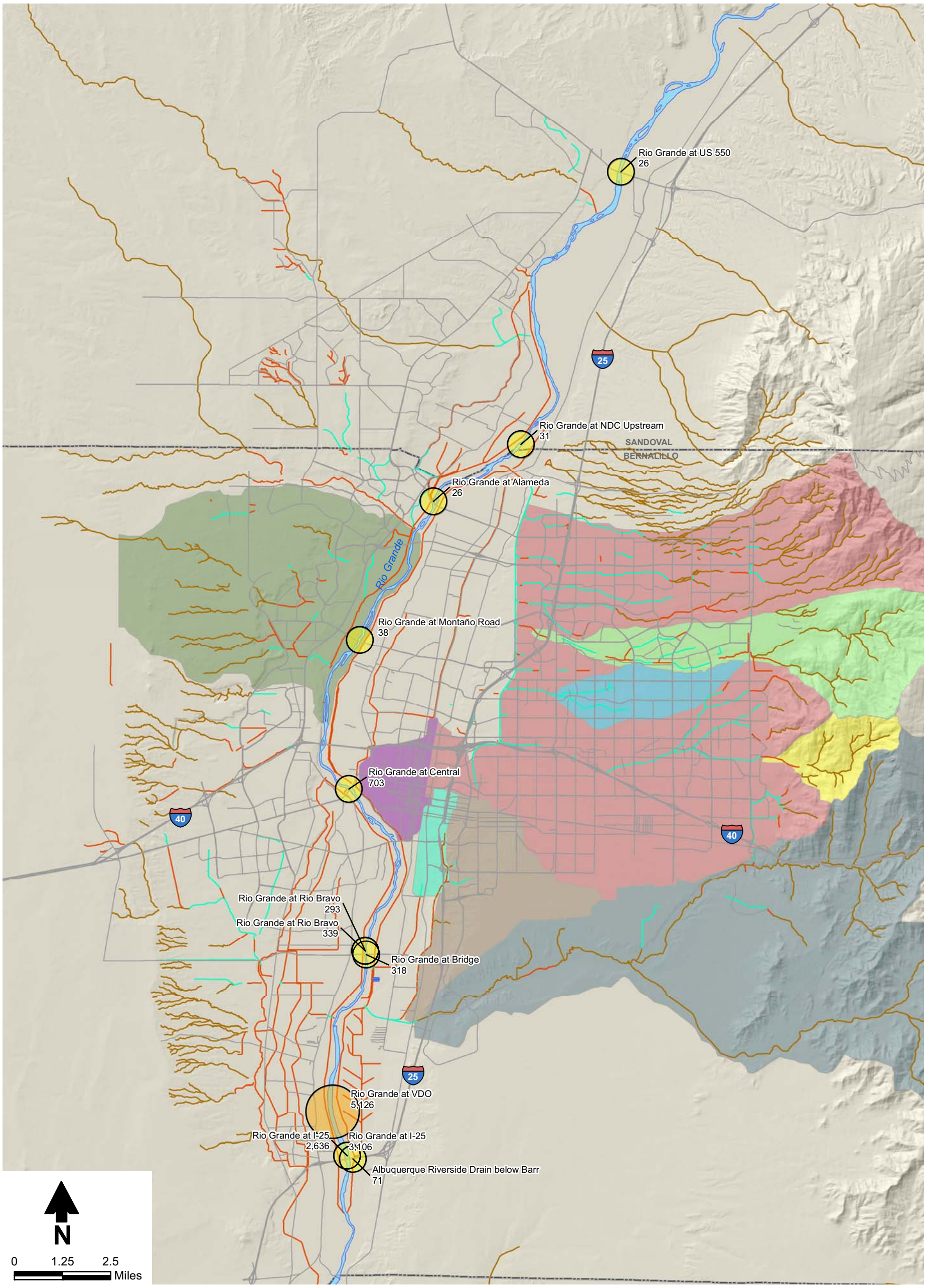

Explanation

Human HF183 (copies/100 mL)

Weak (<5,000)

Moderate (5,000-50,000)

Strong (>50,000)

Note:
BDL = Below detectable limits
ND = Not detected

CITY OF ALBUQUERQUE

Human HF183
Microbial Source Tracking
Water Quality Dry Weather Sampling
April/May 2018

Figure 7a

Daniel B. Stephens & Associates, Inc.
4/17/2020
JN DB17.1158

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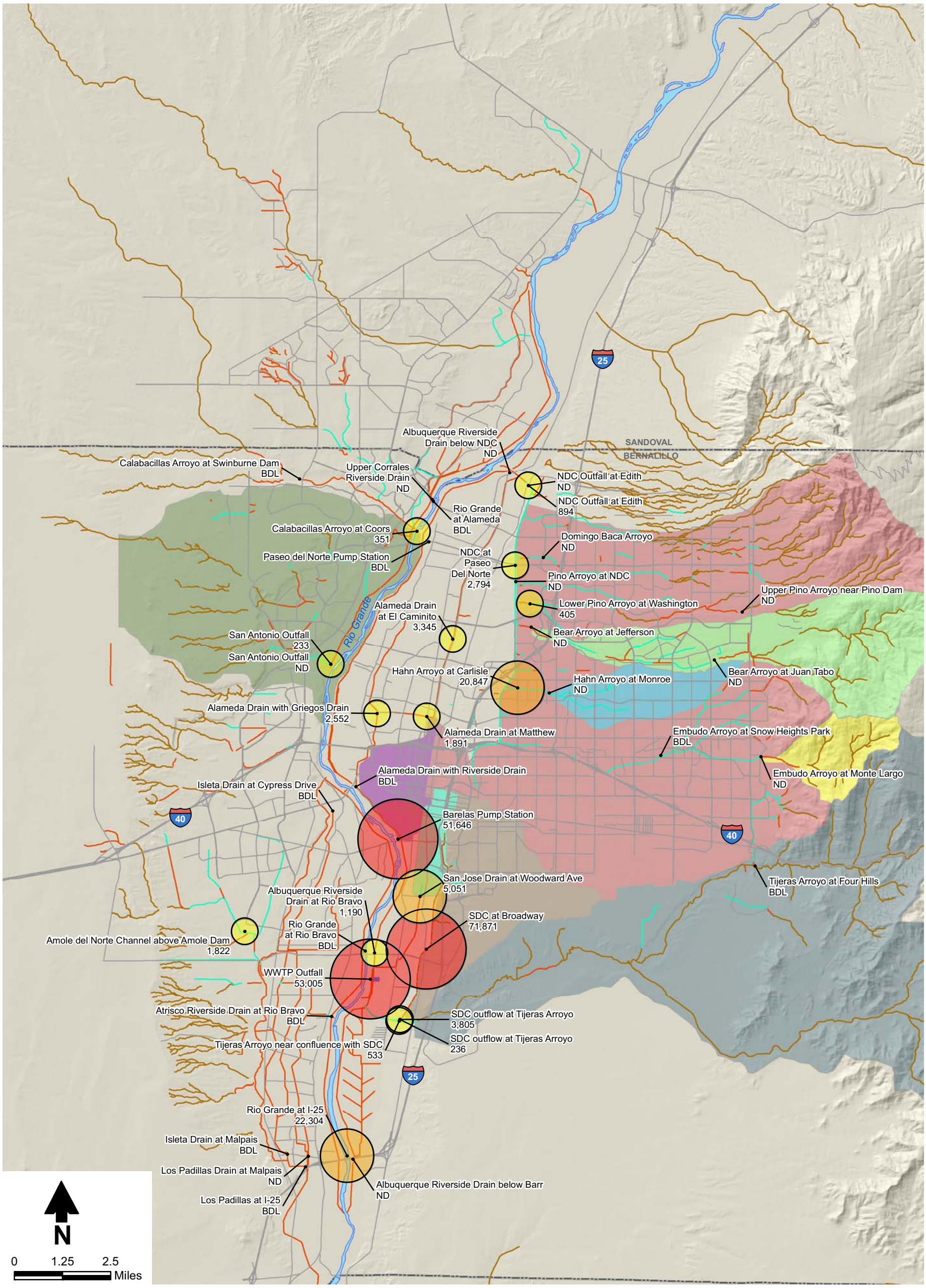

Explanation

Human HF183 (copies/100 mL)

Weak (<5,000)

Moderate (5,000-50,000)

Strong (>50,000)

Note:
BDL = Below detectable limits
ND = Not detected

CITY OF ALBUQUERQUE

Human HF 183

Microbial Source Tracking

Water Quality Wet Weather Sampling

July and October 2018

Figure 7b

Daniel B. Stephens & Associates, Inc.

4/17/2020 JN DB17.1158

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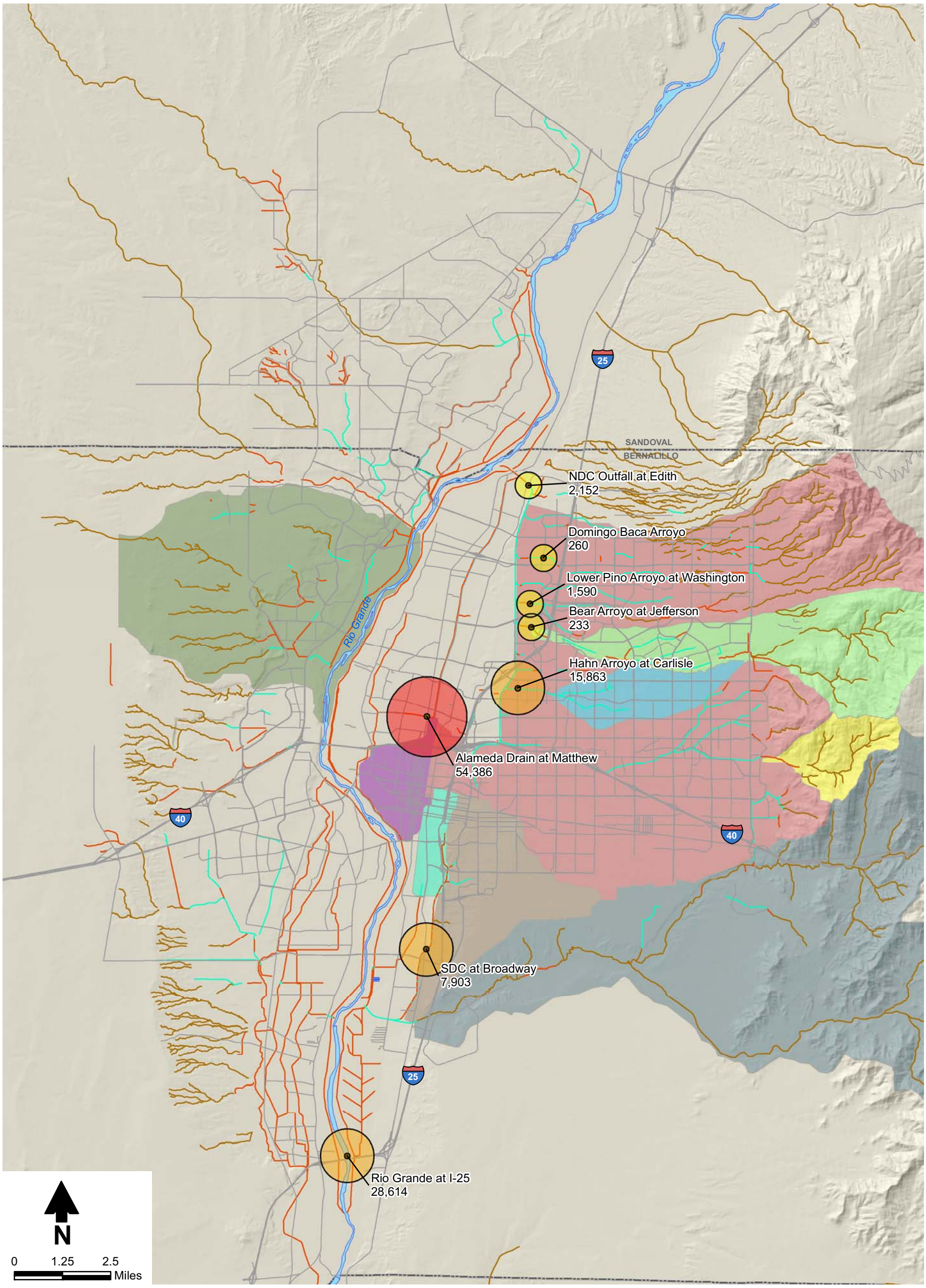

Explanation

Human HF183 (copies/100 mL)

Weak (<5,000)

Moderate (5,000-50,000)

Strong (>50,000)

CITY OF ALBUQUERQUE

Human HF 183

Microbial Source Tracking

Water Quality Wet Weather Sampling

January 2019

Figure 7c

Daniel B. Stephens & Associates, Inc.

4/27/2020

JN DB17.1158

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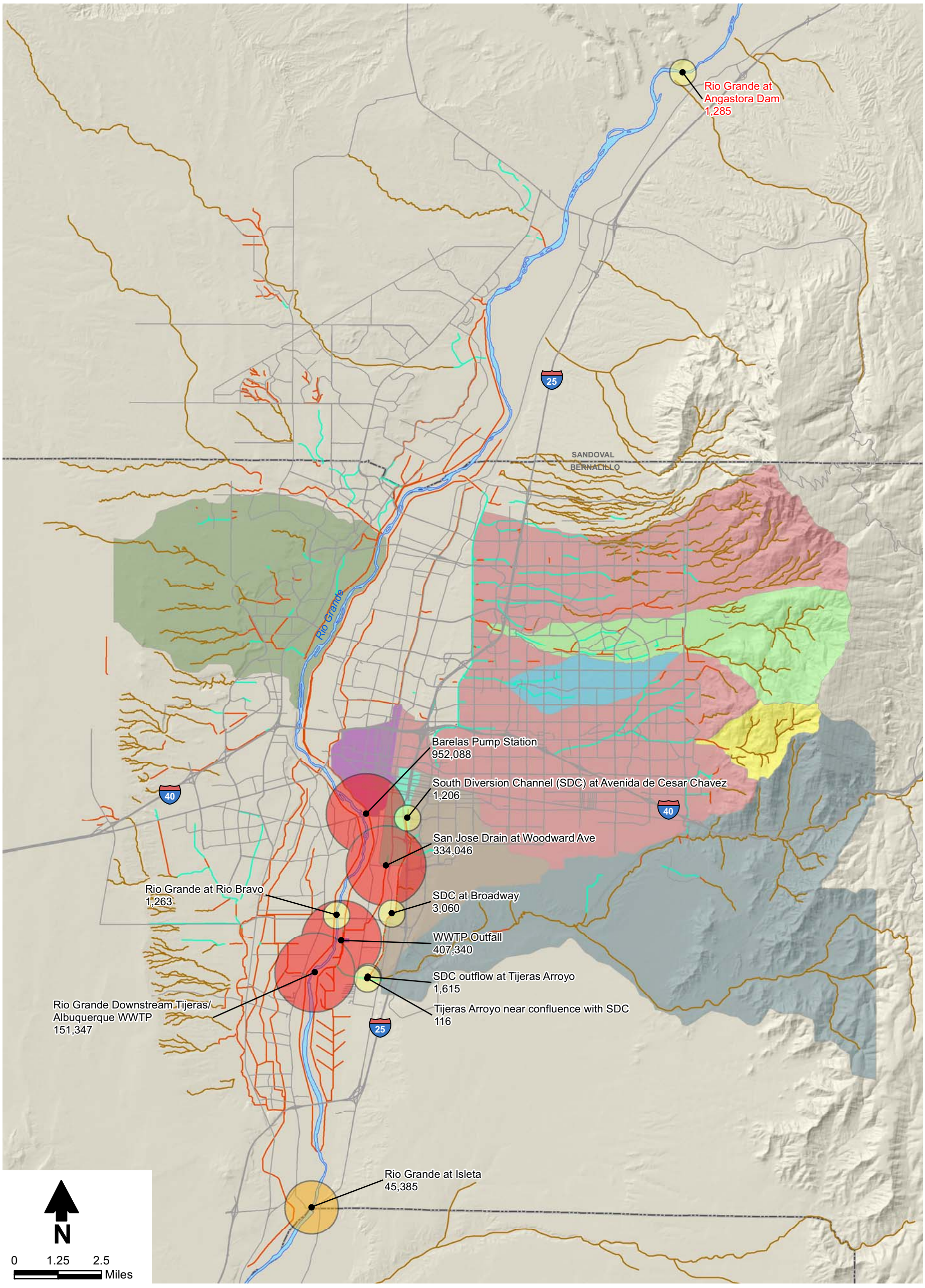


Explanation

Human HF183 (copies/100 mL)

Weak (<5,000)

Moderate (5,000-50,000)

Strong (>50,000)

CITY OF ALBUQUERQUE

Human HF 183

Microbial Source Tracking

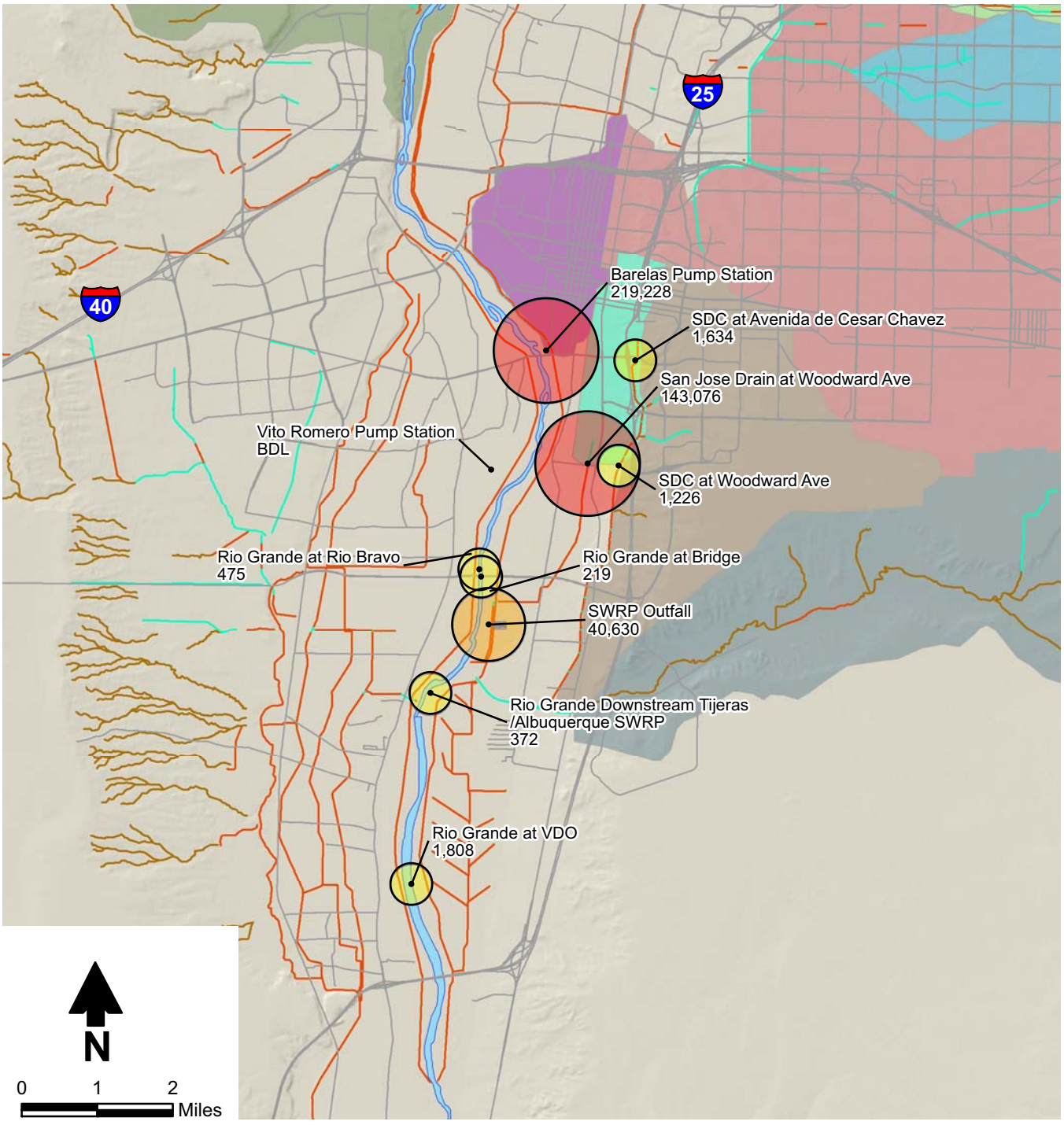
Water Quality Wet Weather Sampling

March 2019

Figure 7d

Daniel B. Stephens & Associates, Inc.

4/27/2020 JN DB17.1158



Explanation

Human HF183 (copies/100 mL)

Weak
(<5,000)

Moderate
(5,000-50,000)

Strong
(>50,000)

Note:
BDL = Below detectable limits

CITY OF ALBUQUERQUE

Human HF183
Microbial Source Tracking
Water Quality Sampling
May 2019

Daniel B. Stephens & Associates, Inc.
4/17/2020
JN DB17.1158

Figure 7e

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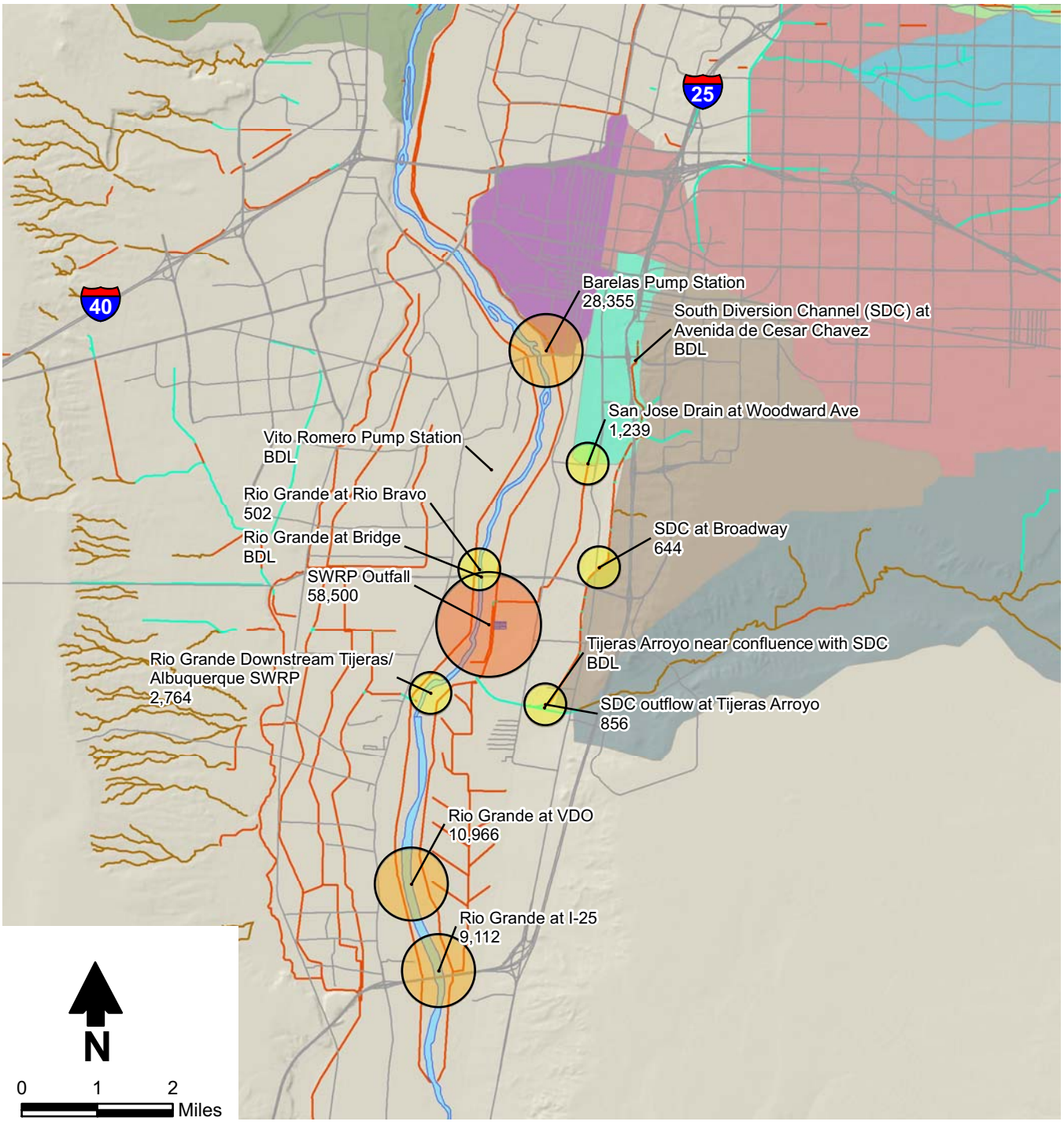

Explanation

Human HF183 (copies/100 mL)

Weak (<5,000)

Moderate (5,000-50,000)

Strong (>50,000)

Note:
BDL = Below detectable limits

CITY OF ALBUQUERQUE

Human HF183
Microbial Source Tracking
Water Quality Sampling
October 2019

Daniel B. Stephens & Associates, Inc.
4/17/2020
JN DB17.1158

Figure 7f

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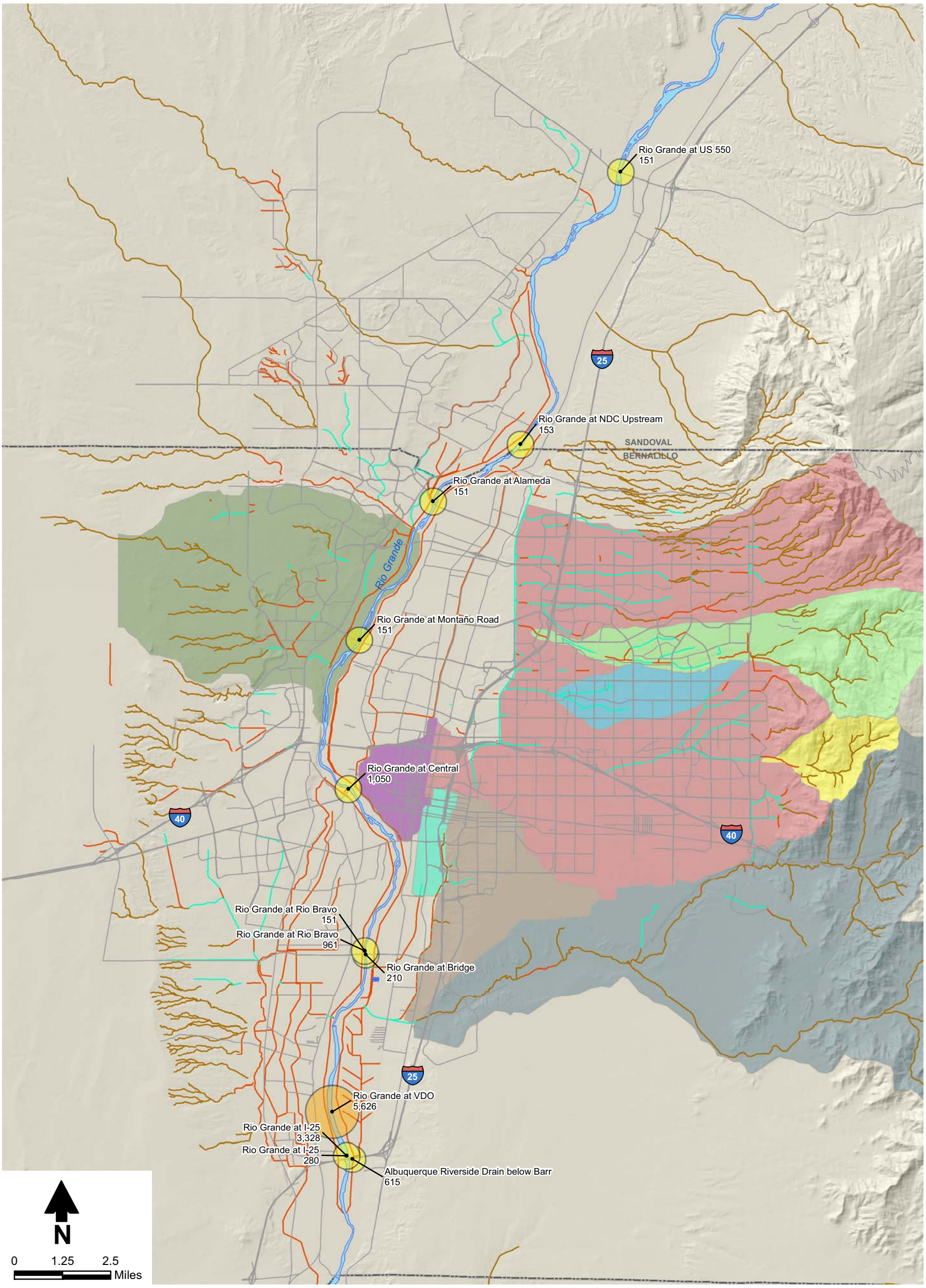

Explanation

Canine (copies/100 mL)

Weak (<5,000)

Moderate (5,000-50,000)

Strong (>50,000)

Note:
BDL = Below detectable limits
ND = Not detected

CITY OF ALBUQUERQUE

Canine Bacteria
Microbial Source Tracking
Water Quality Dry Weather Sampling
April/May 2018

Figure 8a

Daniel B. Stephens & Associates, Inc.
4/17/2020 JN DB17.1158

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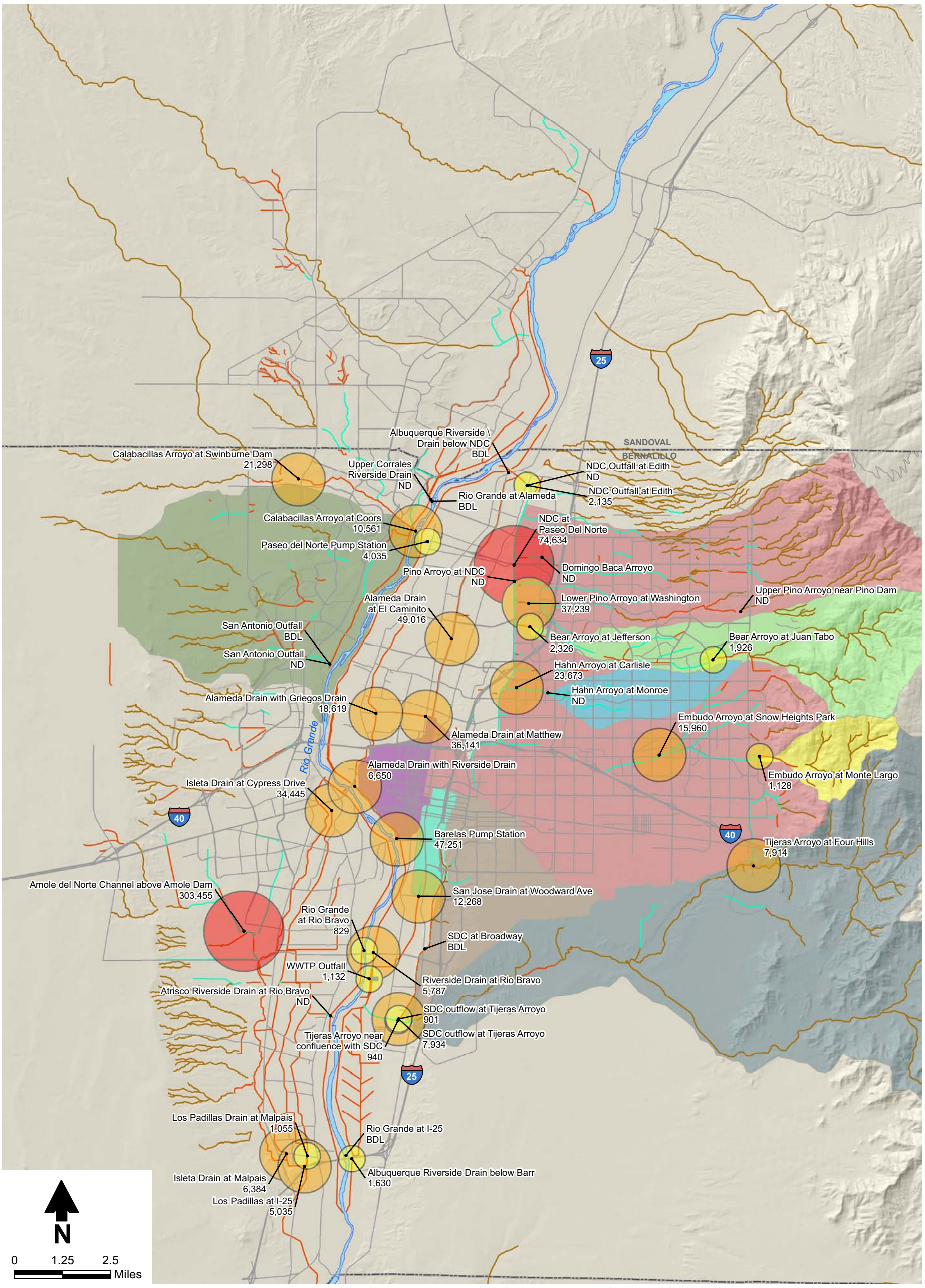

Explanation

Canine (copies/100 mL)

Weak (<5,000)

Moderate (5,000-50,000)

Strong (>50,000)

Note:
BDL = Below detectable limits
ND = Not detected

CITY OF ALBUQUERQUE

Canine Bacteria
Microbial Source Tracking
Water Quality Wet Weather Sampling
July and October 2018

Figure 8b

Daniel B. Stephens & Associates, Inc.
4/17/2020
JN WR14.0049

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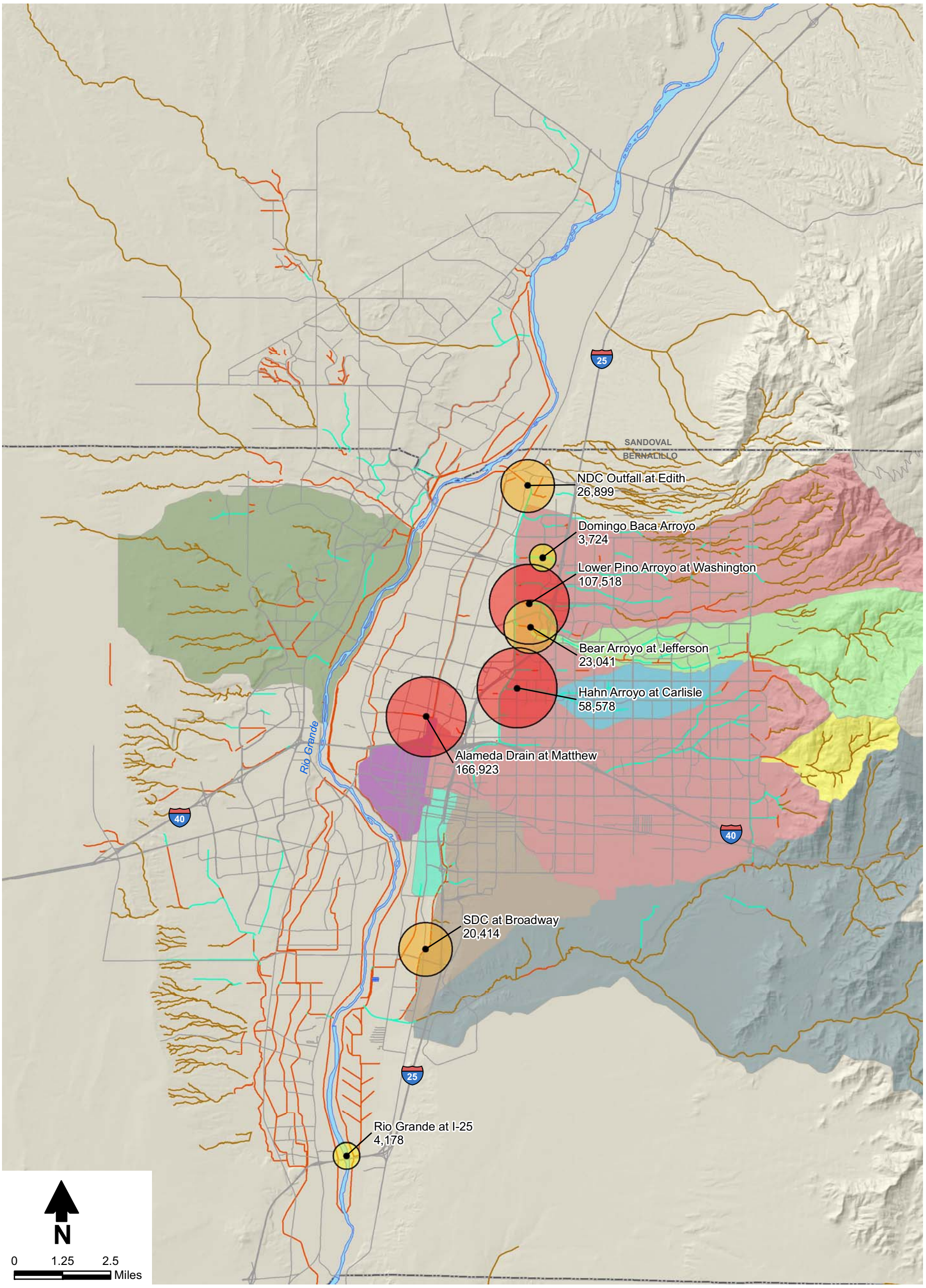

Explanation

Canine (copies/100 mL)

Weak (<5,000)

Moderate (5,000-50,000)

Strong (>50,000)

Note:
ND = Not detected

CITY OF ALBUQUERQUE

Canine Bacteria
Microbial Source Tracking
Water Quality Wet Weather Sampling
January 2019

Figure 8c

Daniel B. Stephens & Associates, Inc.
4/27/2020
JN DB17.1158

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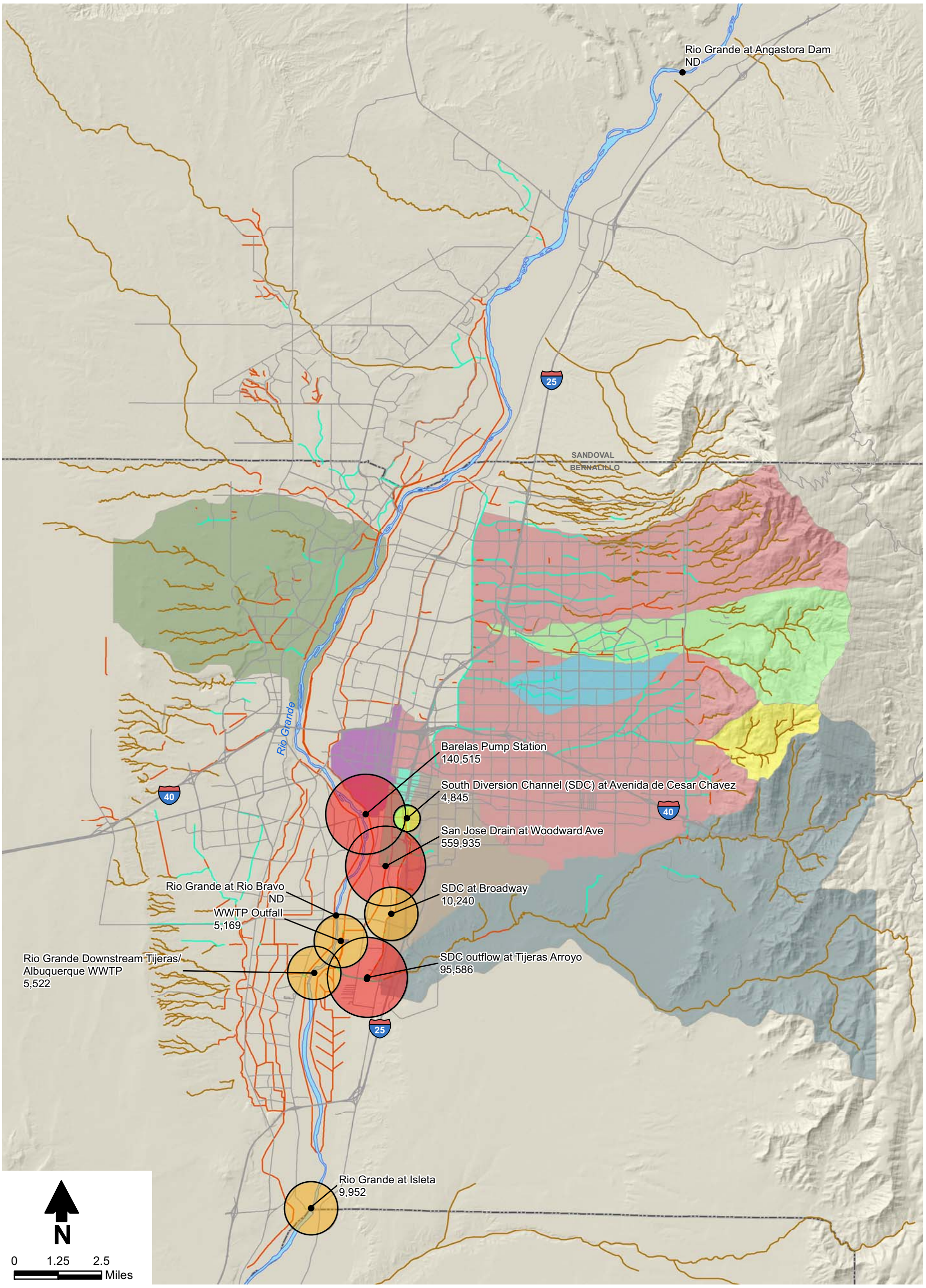


Explanation

Canine (copies/100 mL)

Weak
(<5,000)

Moderate
(5,000-50,000)

Strong
(>50,000)

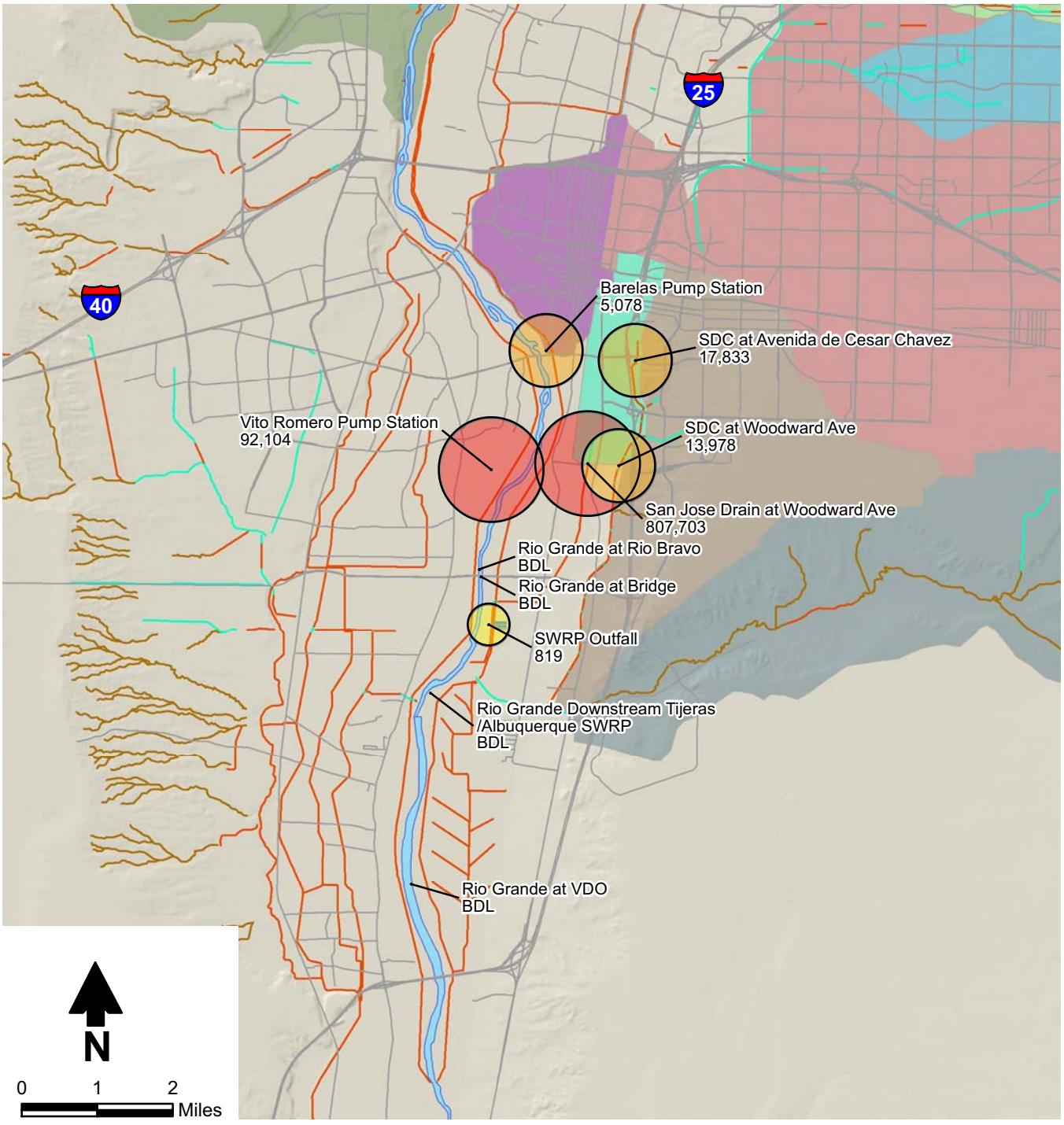
Note:
ND = Not detected

CITY OF ALBUQUERQUE

Canine Bacteria
Microbial Source Tracking
Water Quality Wet Weather Sampling
March 2019

Figure 8d

Daniel B. Stephens & Associates, Inc.
4/27/2020
JN DB17.1158



Explanation

Canine (copies/100 mL)

- Weak (<5,000)
- Moderate (5,000-50,000)
- Strong (>50,000)

Note:
BDL = Below detectable limits

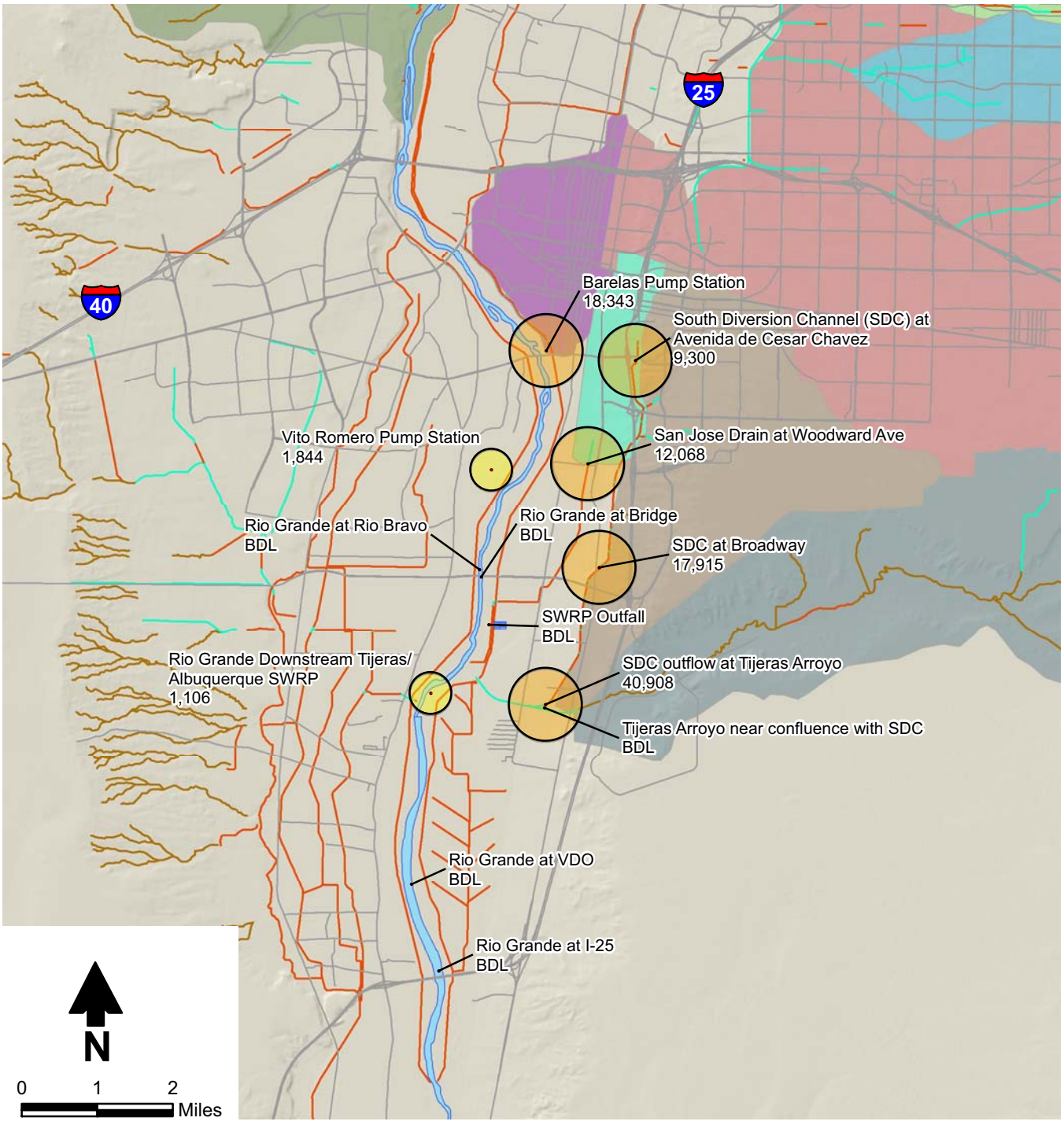
CITY OF ALBUQUERQUE

Canine Bacteria Microbial Source Tracking Water Quality Sampling May 2019

Daniel B. Stephens & Associates, Inc.
4/17/2020
JN DB17.1158

Figure 8e

S:\Projects\WR14.0049.01_COA_StormwaterGIS\MXDs\Proportional_Symbol\Revised_202003_Report\F08_Canine\F08E_Canine_Bac_20190510.mxd



Explanation

Canine (copies/100 mL)

- Weak (<5,000)
- Moderate (5,000-50,000)
- Strong (>50,000)

Note:
BDL = Below detectable limits

CITY OF ALBUQUERQUE

Canine Bacteria
Microbial Source Tracking
Water Quality Sampling
October 2019

Daniel B. Stephens & Associates, Inc.
4/17/2020
JN DB17.1158

Figure 8f

S:\Projects\WR14.0049.01_COA_StormwaterGIS\MXDs\Proportional_Symbol\Revised_202003_Report\F08_Canine\F08F_Canine_Bac_20191004.mxd

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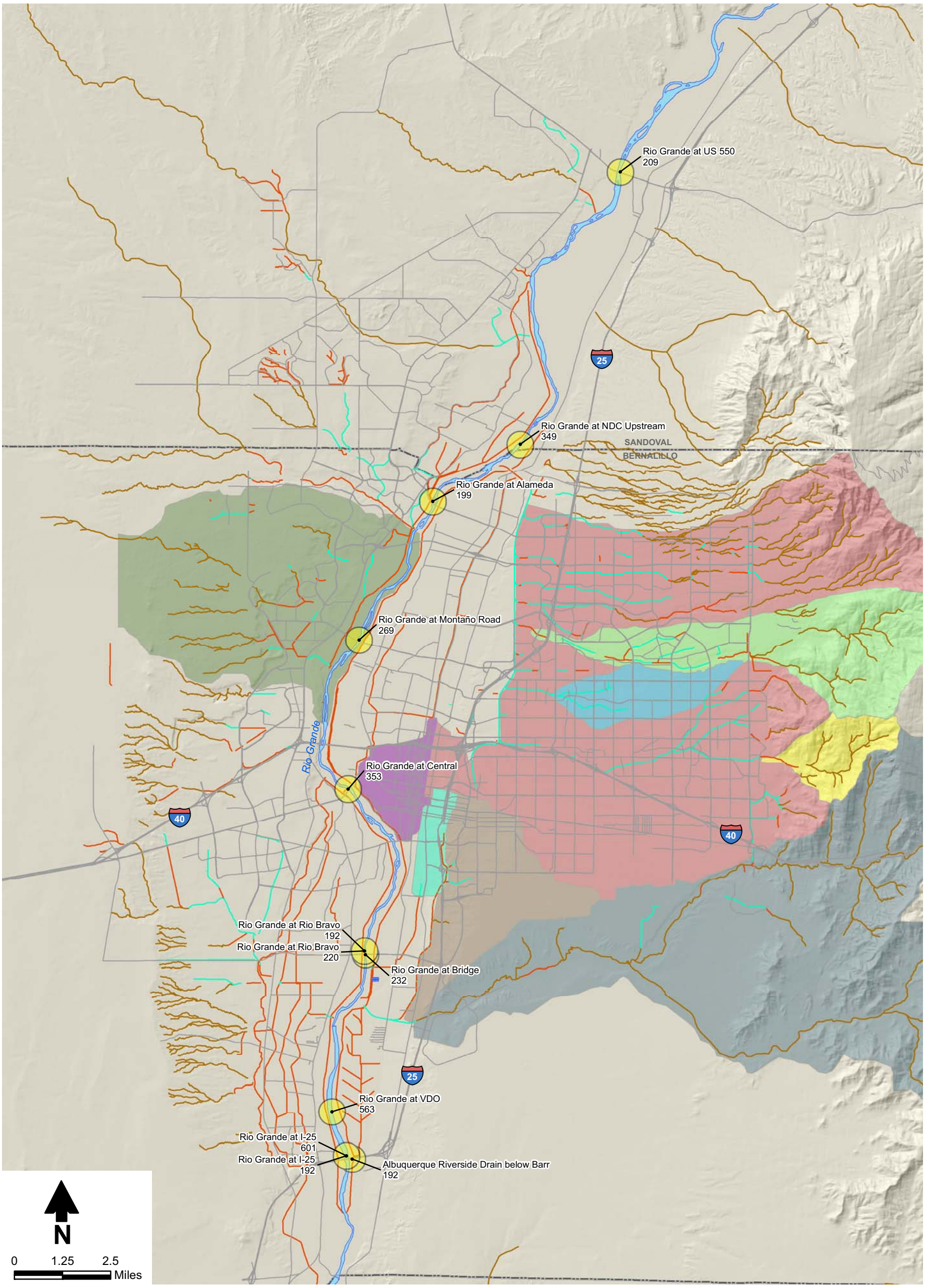


Explanation

Ruminant bacteria (copies/100 mL)

Weak
(<5,000)

Moderate
(5,000-50,000)

Strong
(>50,000)

Note:
BDL = Below detectable limits
ND = Not detected

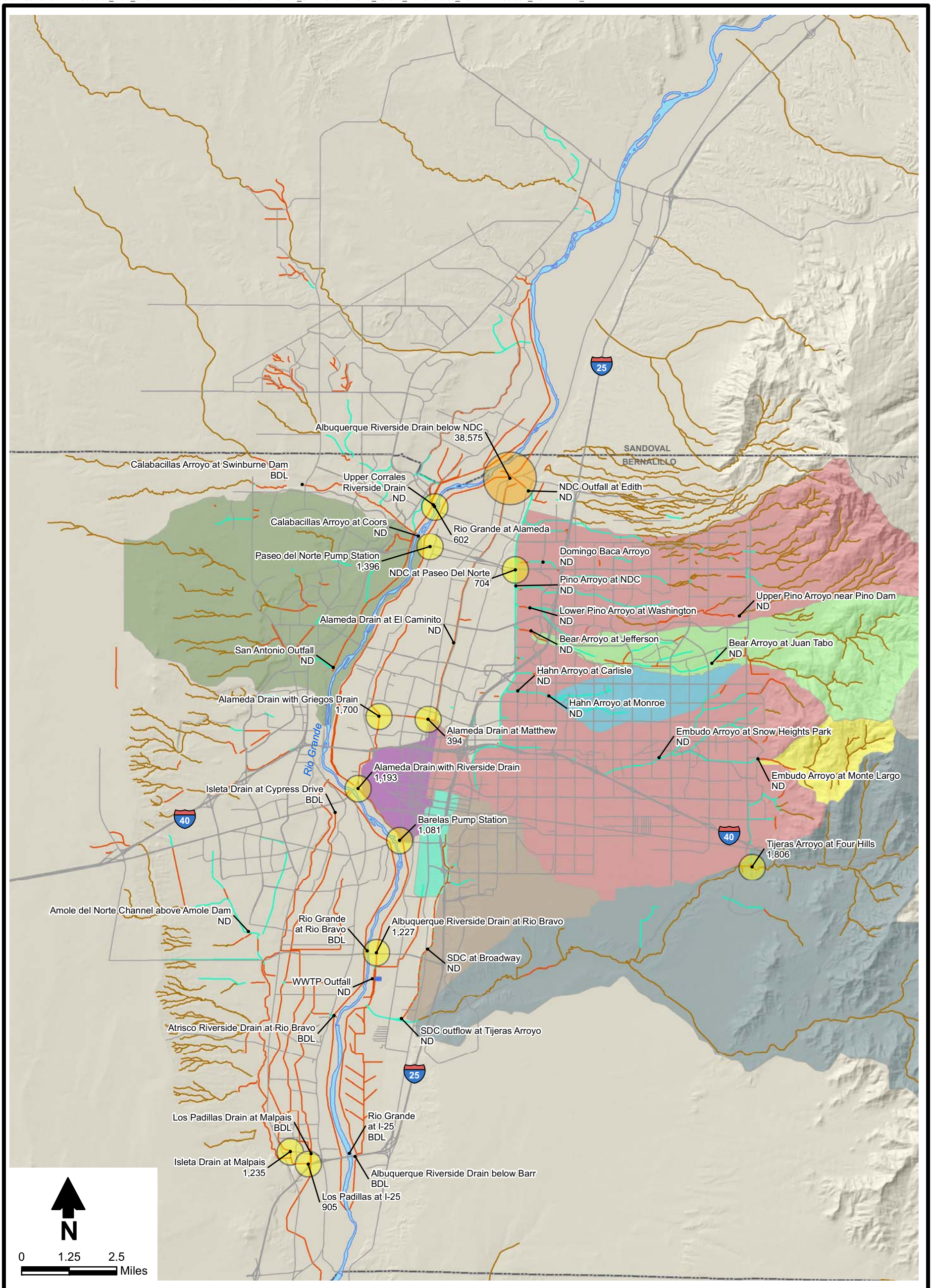
CITY OF ALBUQUERQUE

Ruminant Bacteria
Microbial Source Tracking
Water Quality Dry Weather Sampling
April/May 2018

Figure 9a

Daniel B. Stephens & Associates, Inc.
4/17/2020
JN DB17.1158

S:\PROJECTS\WR14.0049.01_COA_STORMWATER\GIS\MXDS\PROPORTIONAL_SYMBOL\REVISED_202003_REPORT\F09_RUMINANTS\F09B_RUMINANTS_WET.MXD



Explanation

Ruminant bacteria (copies/100 mL)

- Weak (<5,000)
- Moderate (5,000-50,000)
- Strong (>50,000)

Note:
BDL = Below detectable limits
ND = Not detected

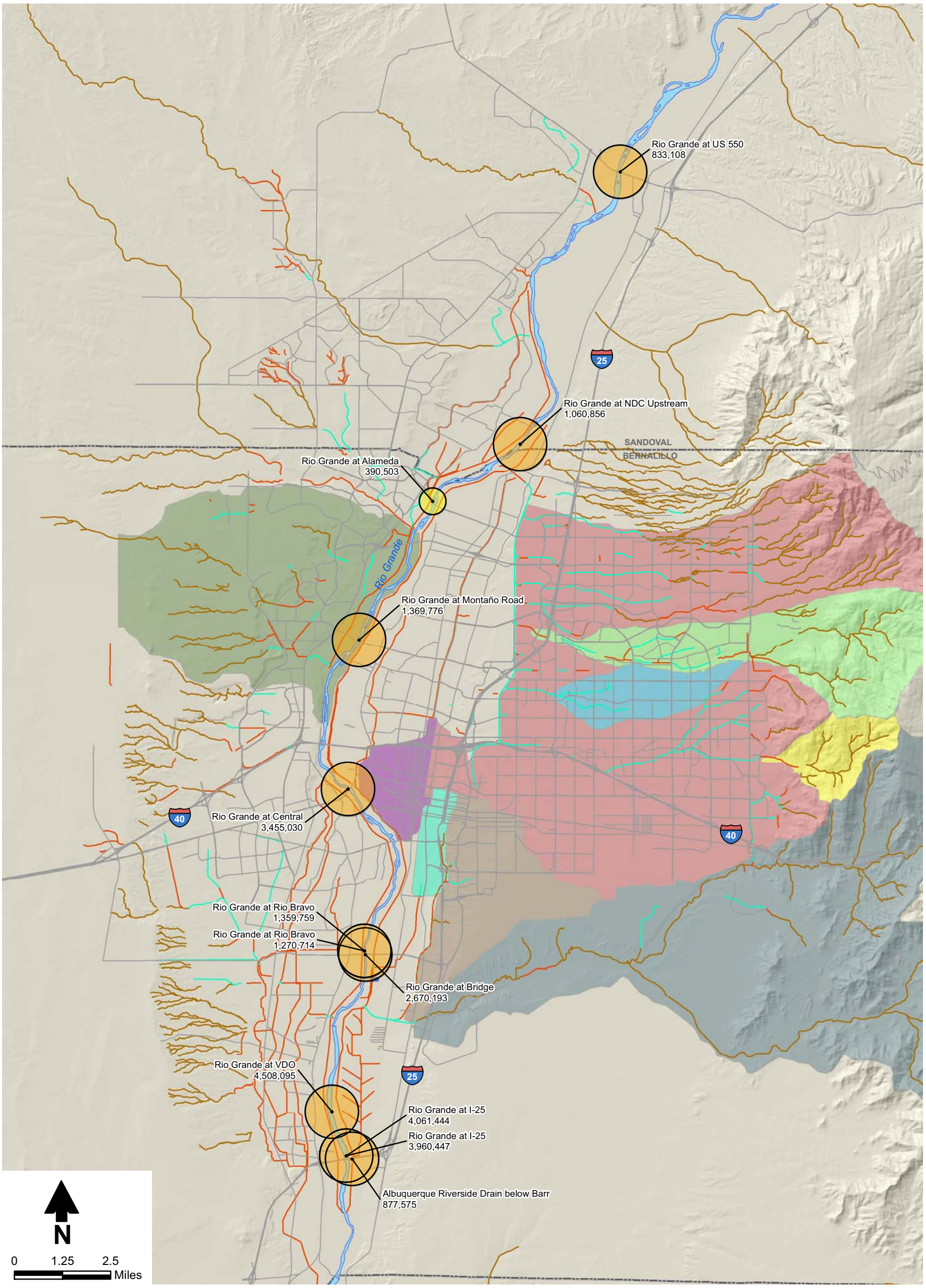
CITY OF ALBUQUERQUE

Ruminant Bacteria
Microbial Source Tracking
Water Quality Wet Weather Sampling
July and October 2018

Figure 9b

Daniel B. Stephens & Associates, Inc.
4/17/2020 JN DB17.1158

S:\PROJECTS\WR14.0049.01_COA_STORMWATER\GIS\MXDS\PROPORTIONAL_SYMBOL\REVISED_202003_REPORT\F10_GENBAC\F10A_GENBAC_DRY.MXD



Explanation

General *Bacteroidales* (GenBac 3) (copies/100 mL)

Weak (<500,000)

Moderate (500,000-5,000,000)

Strong (>5,000,000)

Note:
BDL = Below detectable limits
ND = Not detected

CITY OF ALBUQUERQUE

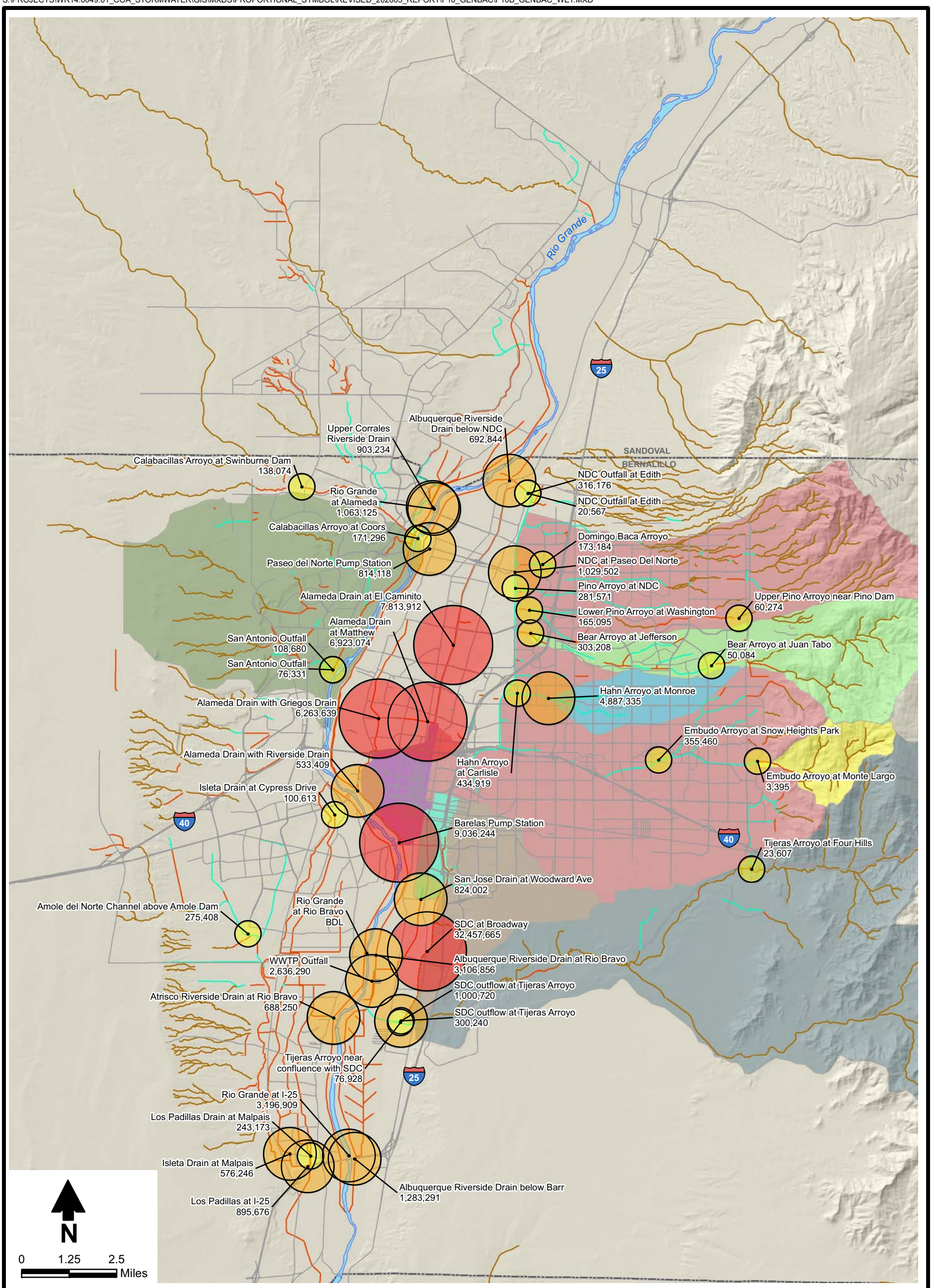
General *Bacteroidales* Microbial Source Tracking Water Quality Dry Weather Sampling April/May 2018

Figure 10a

Daniel B. Stephens & Associates, Inc.

4/17/2020 JN DB17.1158

S:\PROJECTS\WR14.0049.01_COA_STORMWATER\GIS\MXDS\PROPORTIONAL_SYMBOL\REVISED_202003_REPORT\F10_GENBAC\F10B_GENBAC_WET.MXD



Explanation

General *Bacteroidales* (GenBac 3) (copies/100 mL)

Weak (<500,000)

Moderate (500,000-5,000,000)

Strong (>5,000,000)

Note:
BDL = Below detectable limits
ND = Not detected

CITY OF ALBUQUERQUE

General *Bacteroidales* Microbial Source Tracking Water Quality Wet Weather Sampling July and October 2018

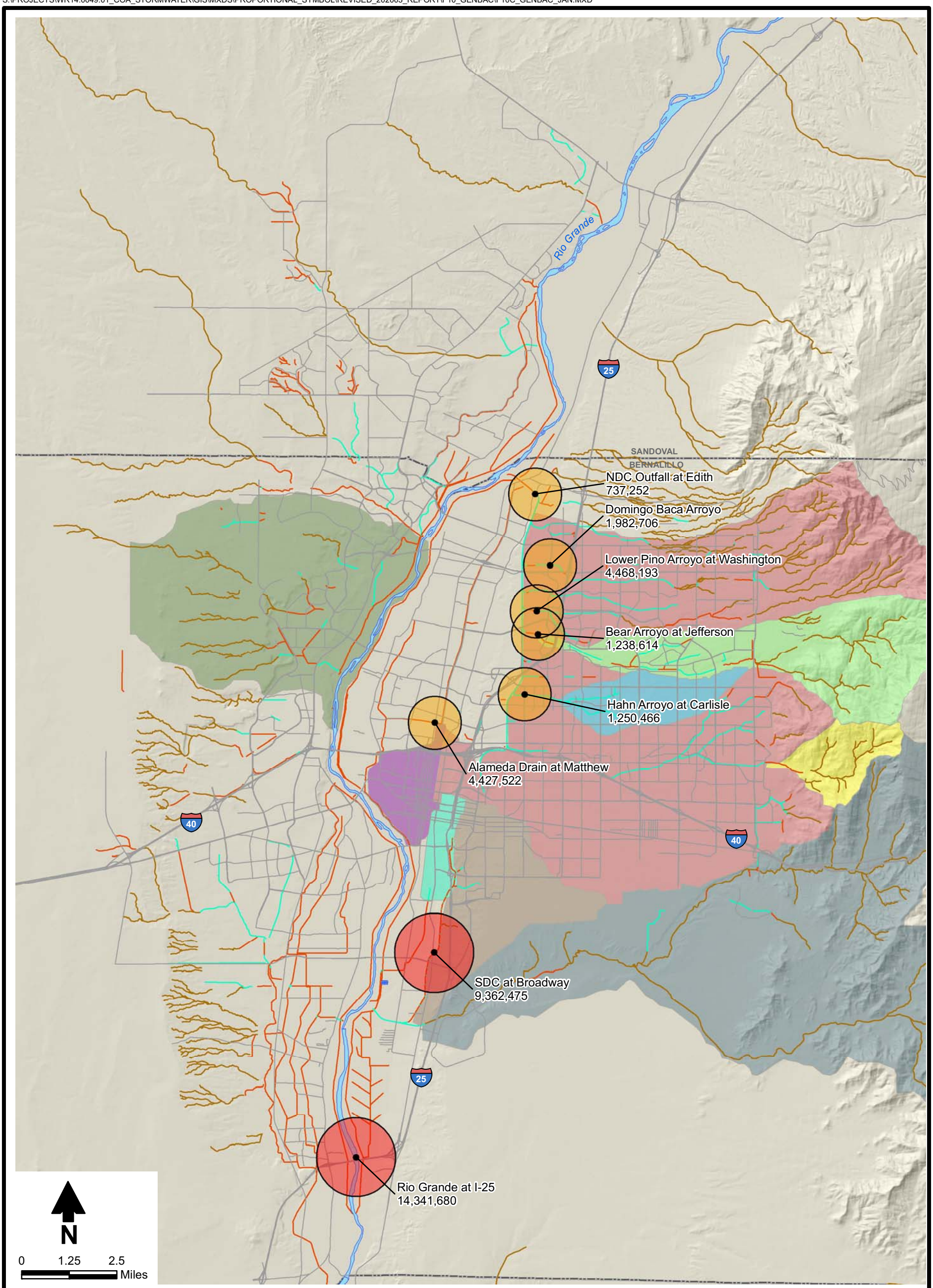
Figure 10b

Daniel B. Stephens & Associates, Inc.

4/17/2020

JN DB17.1158

S:\PROJECTS\WR14.0049.01_COA_STORMWATER\GIS\MXDS\PROPORTIONAL_SYMBOL\REVISED_202003_REPORT\F10_GENBAC\F10C_GENBAC_JAN.MXD



Explanation

General *Bacteroidales* (GenBac 3) (copies/100 mL)

Weak (<500,000)

Moderate (500,000-5,000,000)

Strong (>5,000,000)

Note:
BDL = Below detectable limits
ND = Not detected

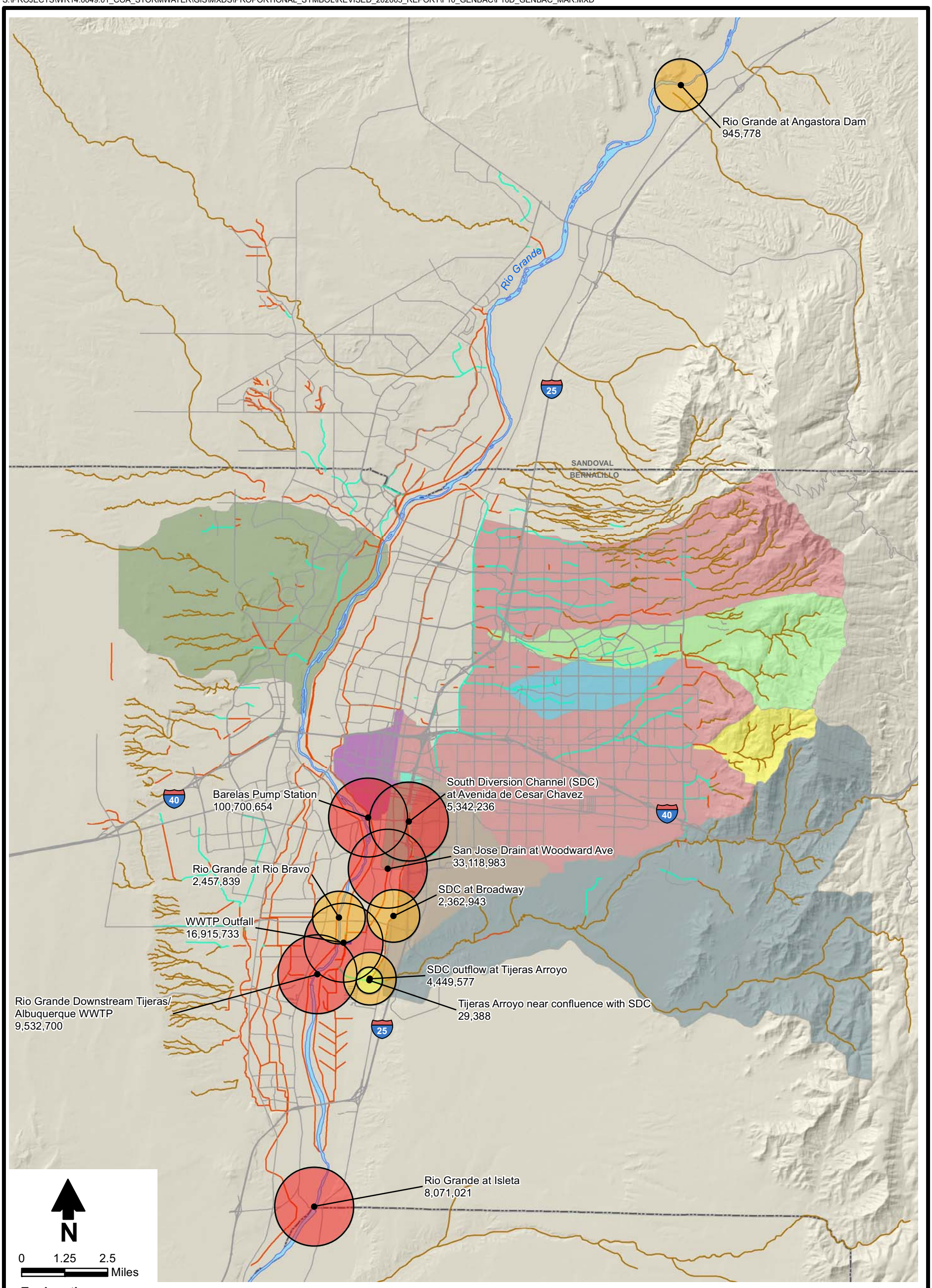
CITY OF ALBUQUERQUE

General *Bacteroidales*
Microbial Source Tracking
Water Quality Wet Weather Sampling
January 2019

Figure 10c

Daniel B. Stephens & Associates, Inc.
4/27/2020 JN DB17.1158

S:\PROJECTS\WR14.0049.01_COA_STORMWATER\GIS\MXDS\PROPORTIONAL_SYMBOL\REVISED_202003_REPORT\F10_GENBAC\F10D_GENBAC_MAR.MXD



Explanation

General *Bacteroidales* (GenBac 3) (copies/100 mL)

Weak (<500,000)

Moderate (500,000-5,000,000)

Strong (>5,000,000)

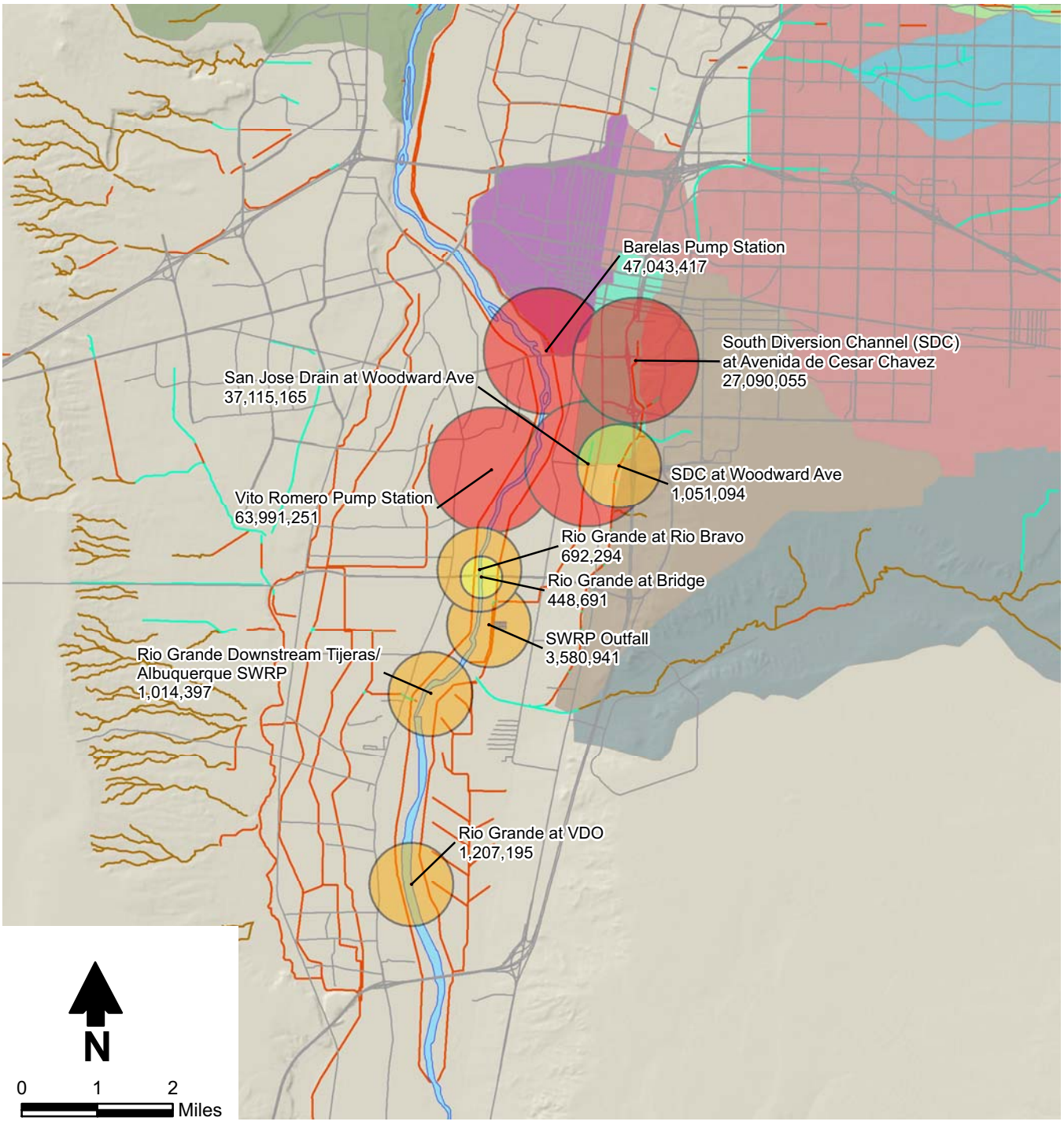
Note:
BDL = Below detectable limits
ND = Not detected

CITY OF ALBUQUERQUE

General *Bacteroidales*
Microbial Source Tracking
Water Quality Wet Weather Sampling
March 2019

Figure 10d

Daniel B. Stephens & Associates, Inc.
4/27/2020 JN DB17.1158



Explanation

General *Bacteroidales* (GenBac 3) (copies/100 mL)

Weak (<500,000)

Moderate (500,000-5,000,000)

Strong (>5,000,000)

Note:
BDL = Below detectable limits
ND = Not detected

CITY OF ALBUQUERQUE

General *Bacteroidales* Microbial Source Tracking Water Quality Sampling May 2019

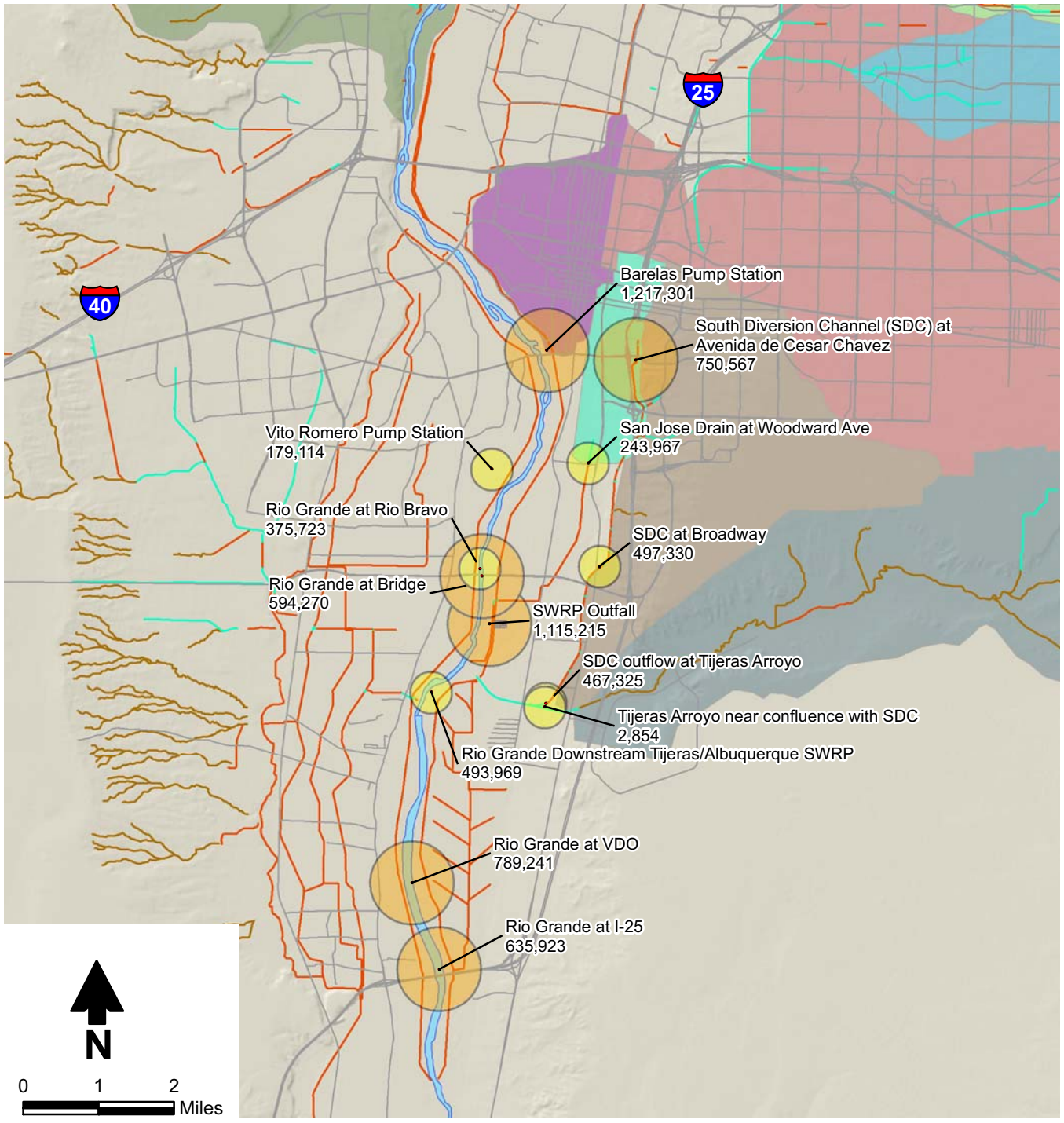
Daniel B. Stephens & Associates, Inc.

4/17/2020

JN DB17.1158

Figure 10e

S:\Projects\WR14.0049.01_COA_StormwaterGIS\MXDs\Proportional_Symbol\Revised_202003_Report\F10_GenBac\F10E_GenBac_20190510.mxd



Explanation

General *Bacteroidales* (GenBac 3) (copies/100 mL)

Weak (<500,000)

Moderate (500,000-5,000,000)

Strong (>5,000,000)

Note:
BDL = Below detectable limits
ND = Not detected

CITY OF ALBUQUERQUE

General *Bacteroidales* Microbial Source Tracking Water Quality Sampling October 2019

Daniel B. Stephens & Associates, Inc.
4/17/2020
JN DB17.1158

Figure 10f

S:\Projects\WR14.0049.01_COA_StormwaterGIS\MXDs\Proportional_Symbol\Revised_202003_Report\F10_GenBac\F10f_GenBac_20191004.mxd

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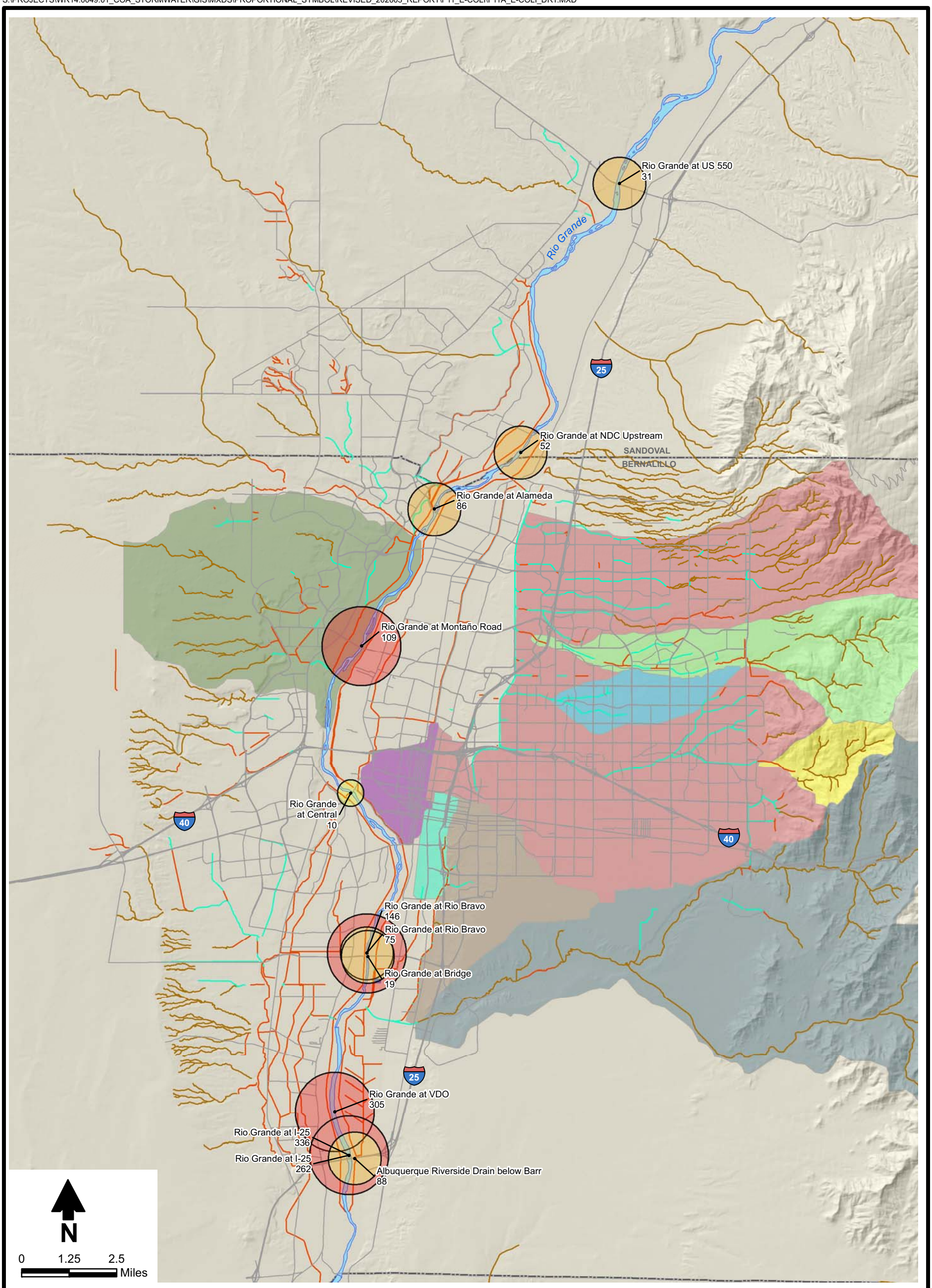


Explanation

E. coli (MPN/100 mL)

≤10

11-100

>100

Figure 11a

Daniel B. Stephens & Associates, Inc.

4/17/2020

JN DB17.1158

CITY OF ALBUQUERQUE

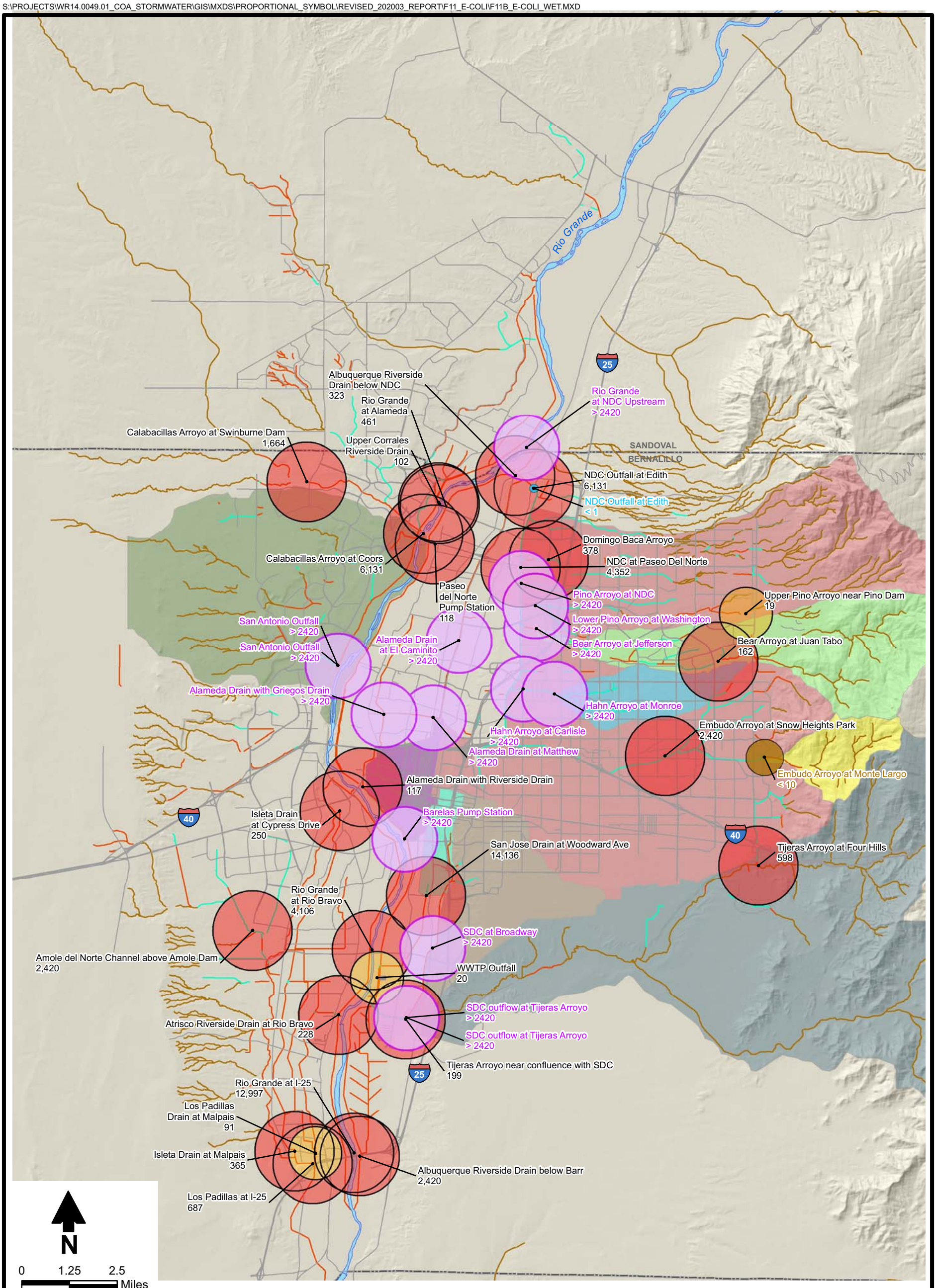
FIB E. coli Results

Microbial Source Tracking

Water Quality Dry Weather Sampling

April/May 2018

S:\PROJECTS\WR14.0049.01_COA_STORMWATER\GIS\MXDS\PROPORTIONAL_SYMBOL\REVISED_202003_REPORT\F11_E-COLI\F11B_E-COLI_WET.MXD



Explanation

E. coli (MPN/100 mL)

≤10

11-100

>100

Value ranges above and below stated number.

<1

<10

>2420

CITY OF ALBUQUERQUE

FIB E. coli Results
Microbial Source Tracking
Water Quality Wet Weather Sampling
July and October 2018

Figure 11b

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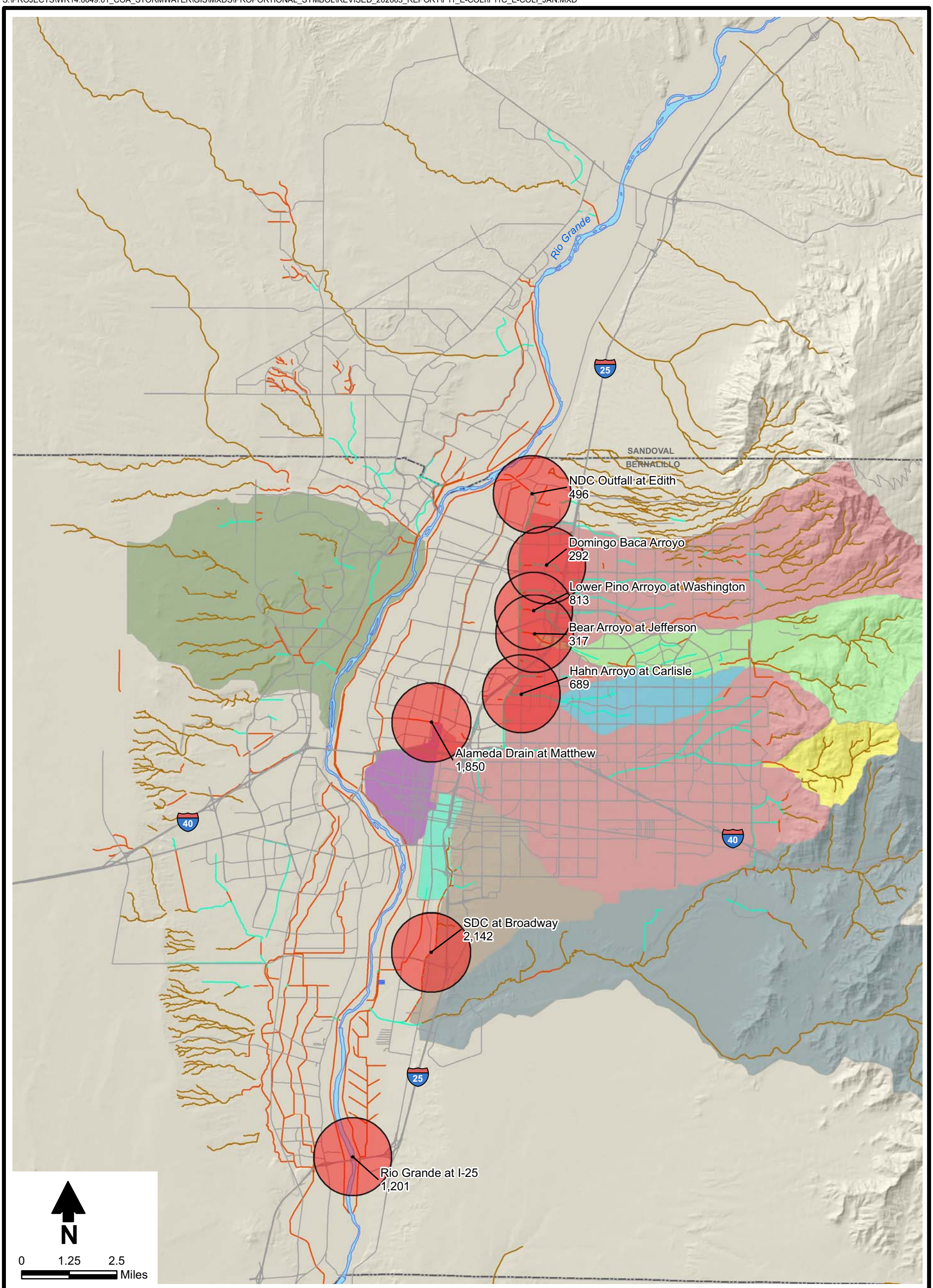
4/27/2020

JN DB17.1158

S:\PROJECTS\WR14.0049.01_COA_STORMWATER\GIS\MXDS\PROPORTIONAL_SYMBOL\REVISED_202003_REPORT\F11_E-COLI\F11C_E-COLI_JAN.MXD



CITY OF ALBUQUERQUE

FIB E. coli Results

Microbial Source Tracking

Water Quality Wet Weather Sampling

January 2019

Figure 11c

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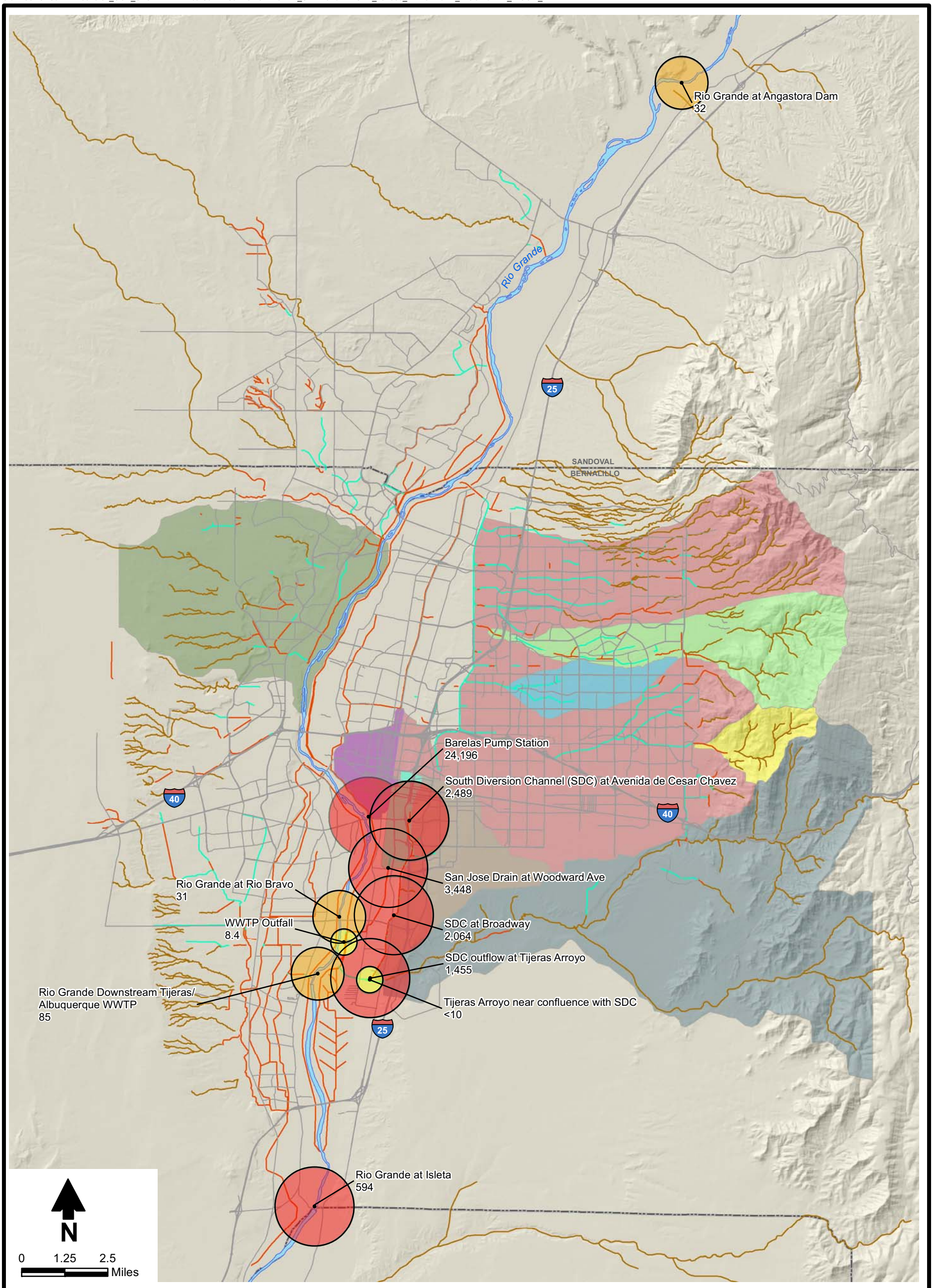
4/27/2020

JN DB17.1158

S:\PROJECTS\WR14.0049.01_COA_STORMWATER\GIS\MXDS\PROPORTIONAL_SYMBOL\REVISED_202003_REPORT\F11_E-COLI\F11D_E-COLI_MAR.MXD

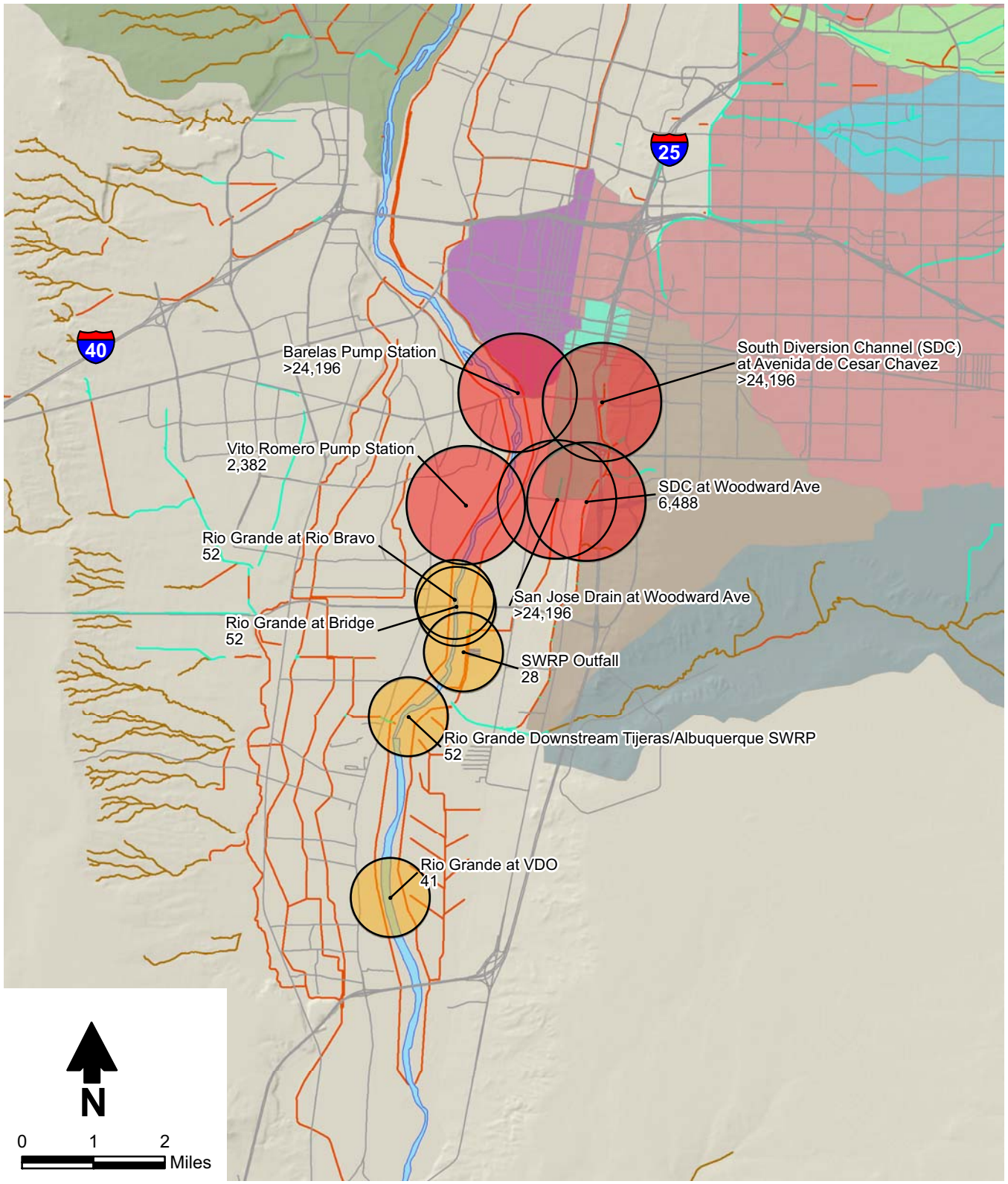


CITY OF ALBUQUERQUE

FIB E. coli Results
Microbial Source Tracking
Water Quality Wet Weather Sampling
March 2019

Figure 11d

Daniel B. Stephens & Associates, Inc.
4/27/2020 JN DB17.1158



Explanation

E. coli (MPN/100 mL)

≤10 11-100 >100

CITY OF ALBUQUERQUE

FIB E. coli Results
Microbial Source Tracking
Water Quality Sampling
May 2019

Daniel B. Stephens & Associates, Inc.

4/27/2020

JN DB17.1158

Figure 11e

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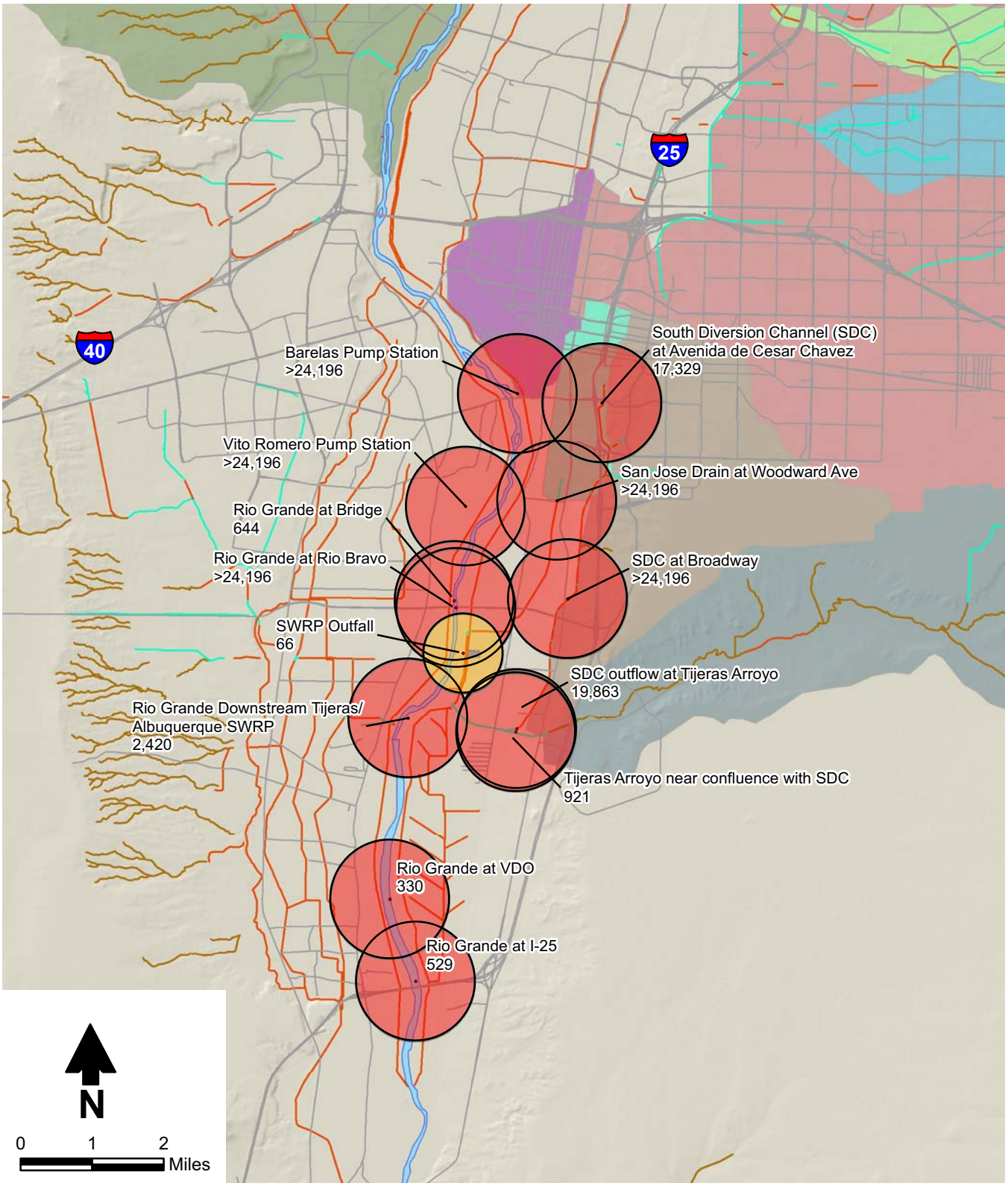

CITY OF ALBUQUERQUE

FIB E. coli Results
Microbial Source Tracking
Water Quality Sampling
October 2019

Daniel B. Stephens & Associates, Inc.

4/17/2020

JN DB17.1158

Figure 11f

S:\Projects\WR14.0049.01_COA_StormwaterGIS\MXDs\Proportional_Symbol\Revised_202003_Report\F11_E-Coli\F11F_FIB_MP_20191004.mxd

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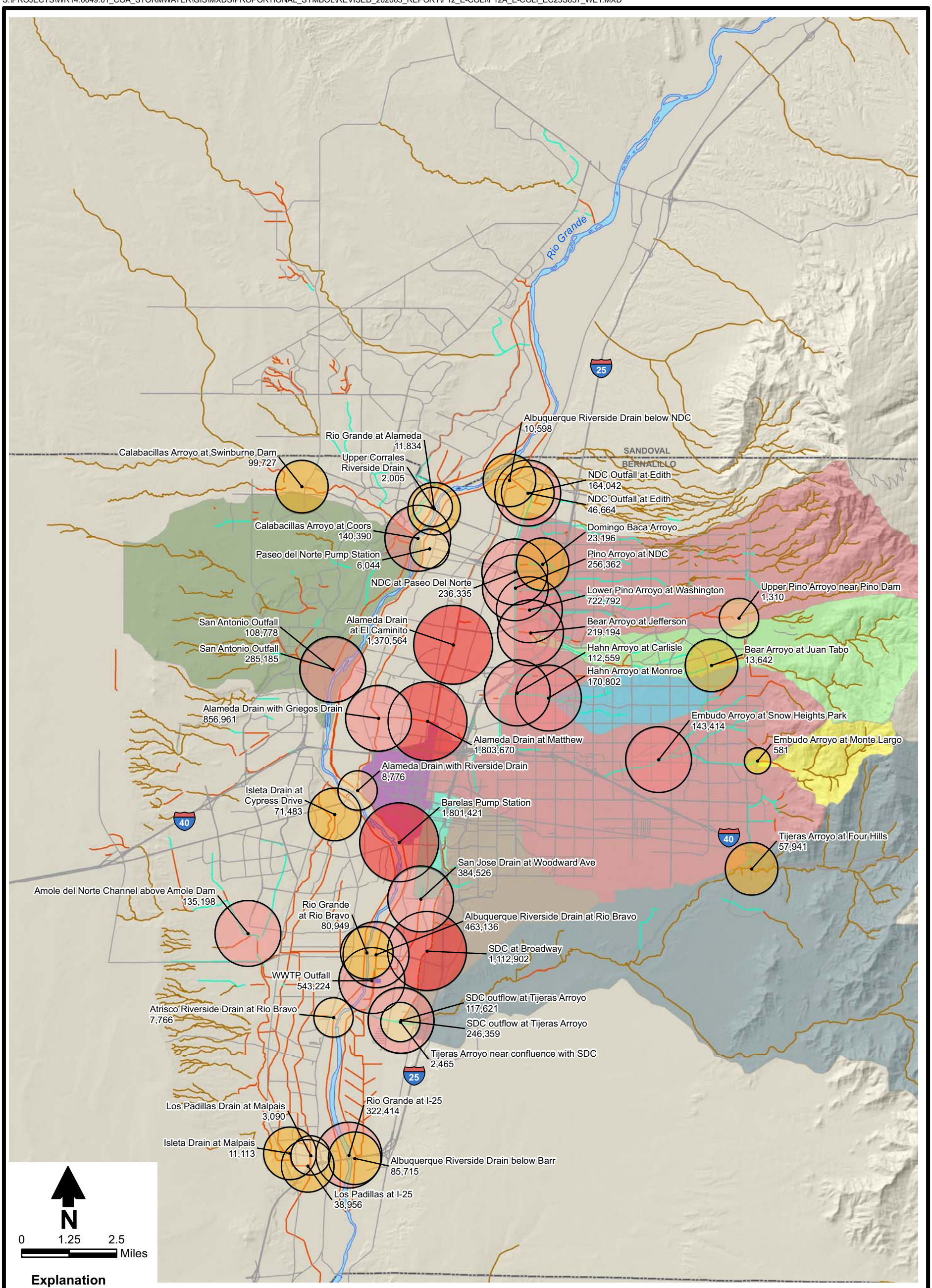


CITY OF ALBUQUERQUE

qPCR E. coli Results
Microbial Source Tracking
Water Quality Wet Weather Sampling
July and October 2018

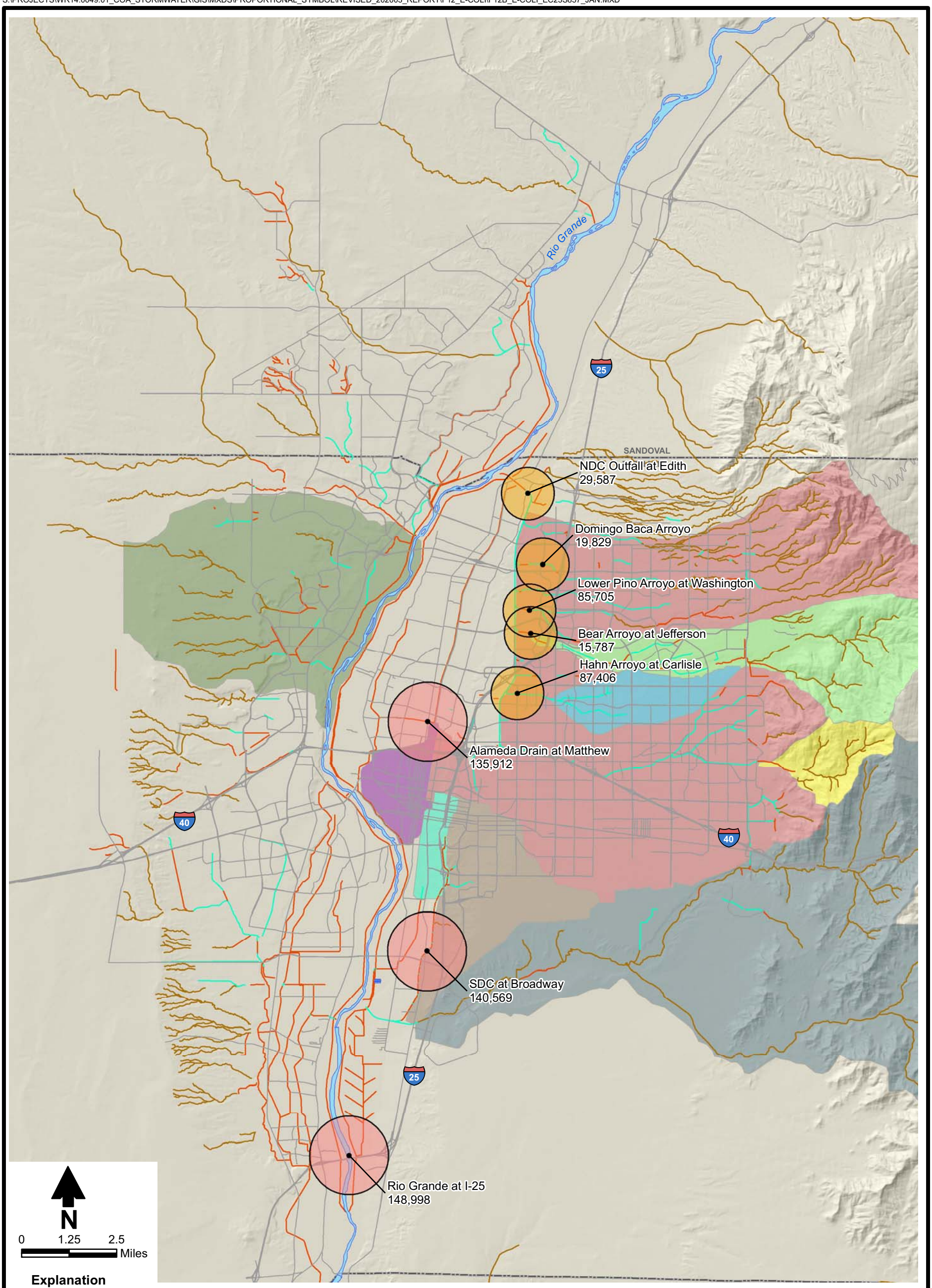
Figure 12a

Daniel B. Stephens & Associates, Inc.

4/20/2020

JN DB17.1158

S:\PROJECTS\WR14.0049.01_COA_STORMWATER\GIS\MXDS\PROPORTIONAL_SYMBOL\REVISED_202003_REPORT\F12_E-COLI\F12B_E-COLI_EC23S857_JAN.MXD



Explanation

E. coli (copies/100 mL)

- Weak (<1,000)
- Moderately weak (1,001 - 10,000)
- Moderate (10,001 - 100,000)
- Moderately strong (100,001 - 1,000,000)
- Strong (> 1,000,000)

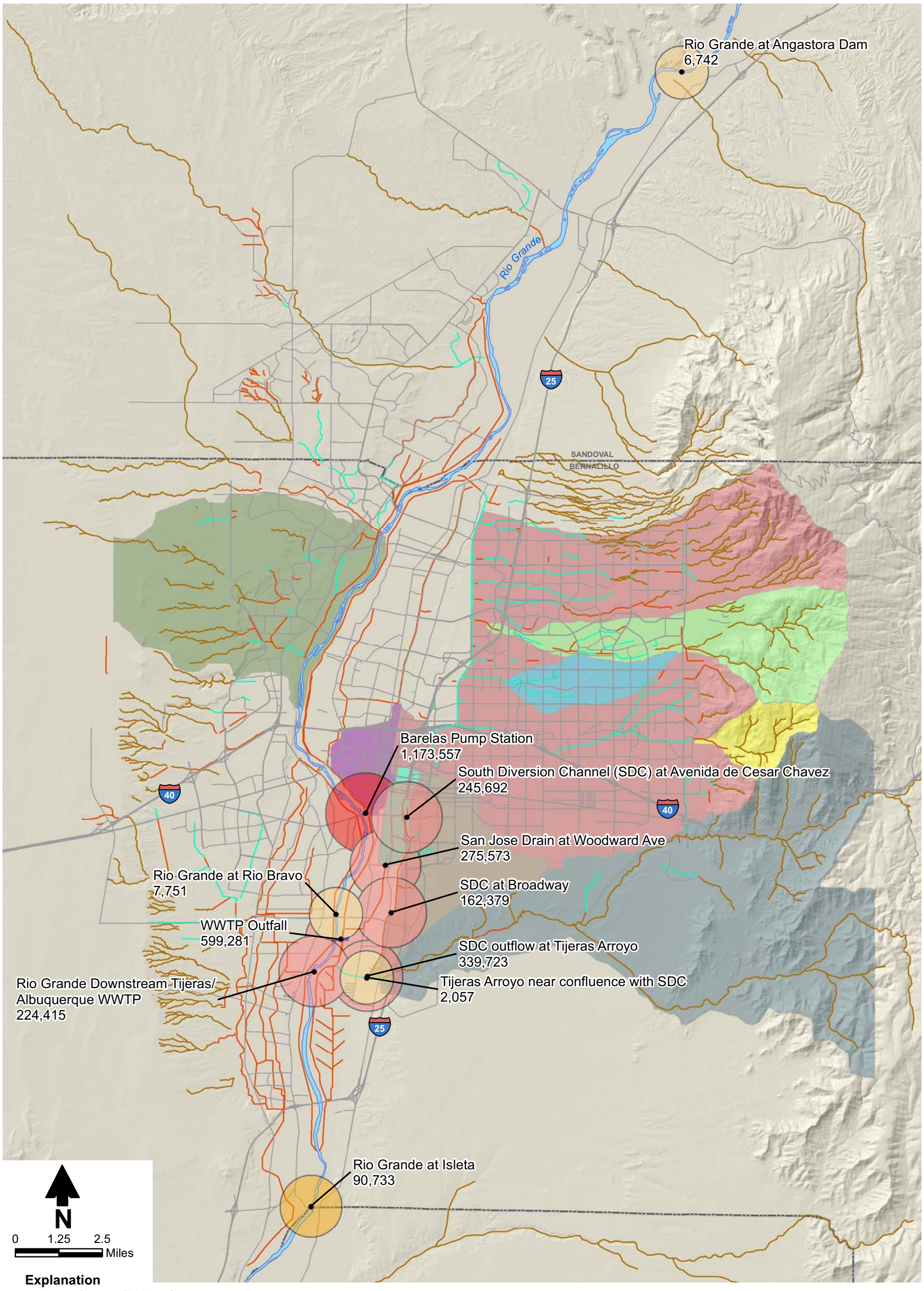
CITY OF ALBUQUERQUE

qPCR E. coli Results
Microbial Source Tracking
Water Quality Wet Weather Sampling
January 2019

Figure 12b

Daniel B. Stephens & Associates, Inc.
4/27/2020
JN DB17.1158

S:\PROJECTS\WR14.0049.01_COA_STORMWATER\GIS\MXDS\PROPORTIONAL_SYMBOL\REVISED_202003_REPORT\F12_E-COLI\F12C_E-COLI_EC23S857_MAR.MXD



CITY OF ALBUQUERQUE

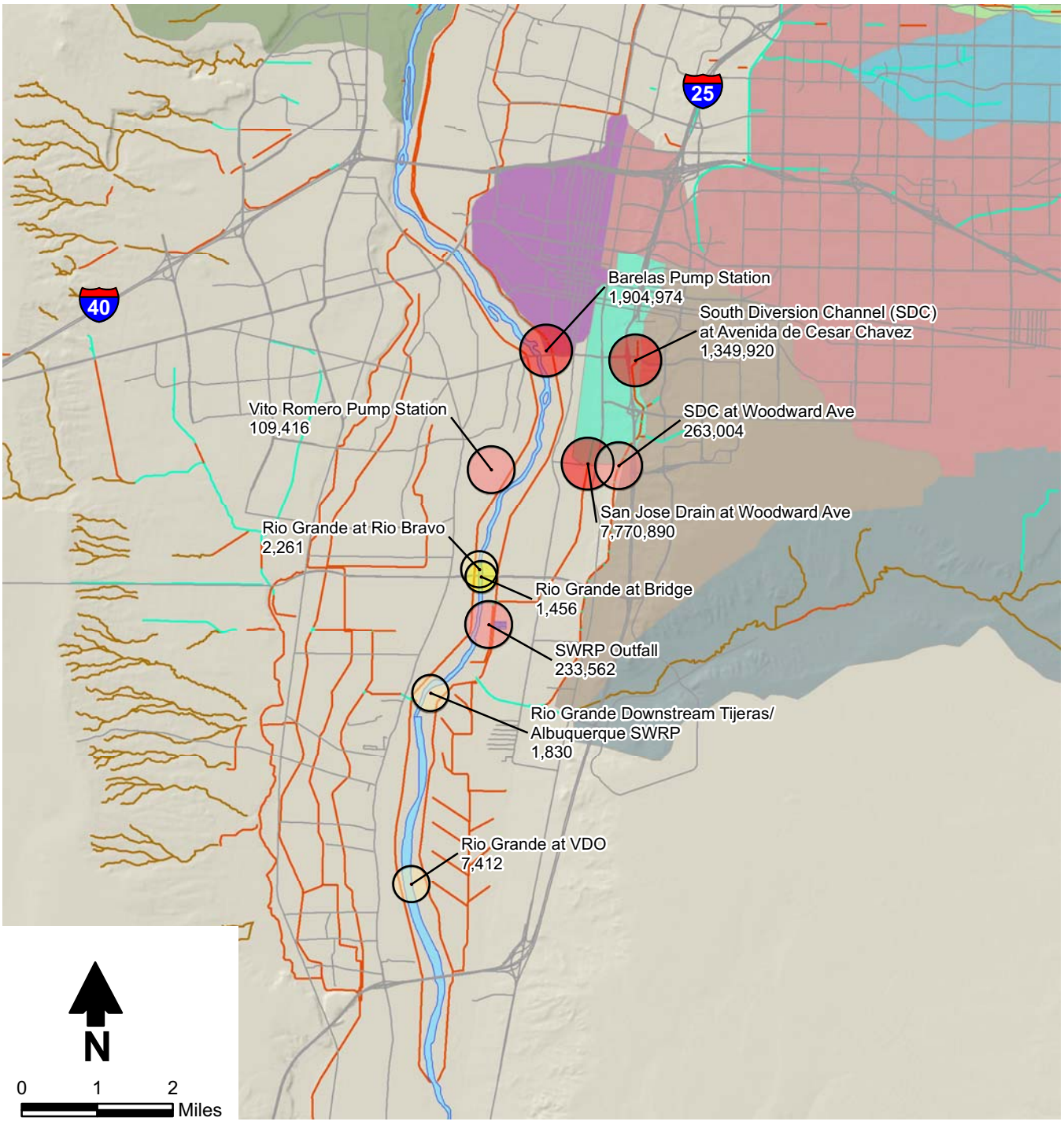
qPCR E. coli Results
Microbial Source Tracking
Water Quality Wet Weather Sampling
March 2019

Figure 12c

Daniel B. Stephens & Associates, Inc.

4/27/2020

JN DB17.1158



Explanation

E. coli (copies/100 mL)

- Weak (<1,000)
- Moderately weak (1,001-10,000)
- Moderate (10,001-100,000)
- Moderately strong (100,001-1,000,000)
- Strong (>1,000,000)

CITY OF ALBUQUERQUE

qPCR E. coli Results
Microbial Source Tracking
Water Quality Sampling
May 2019

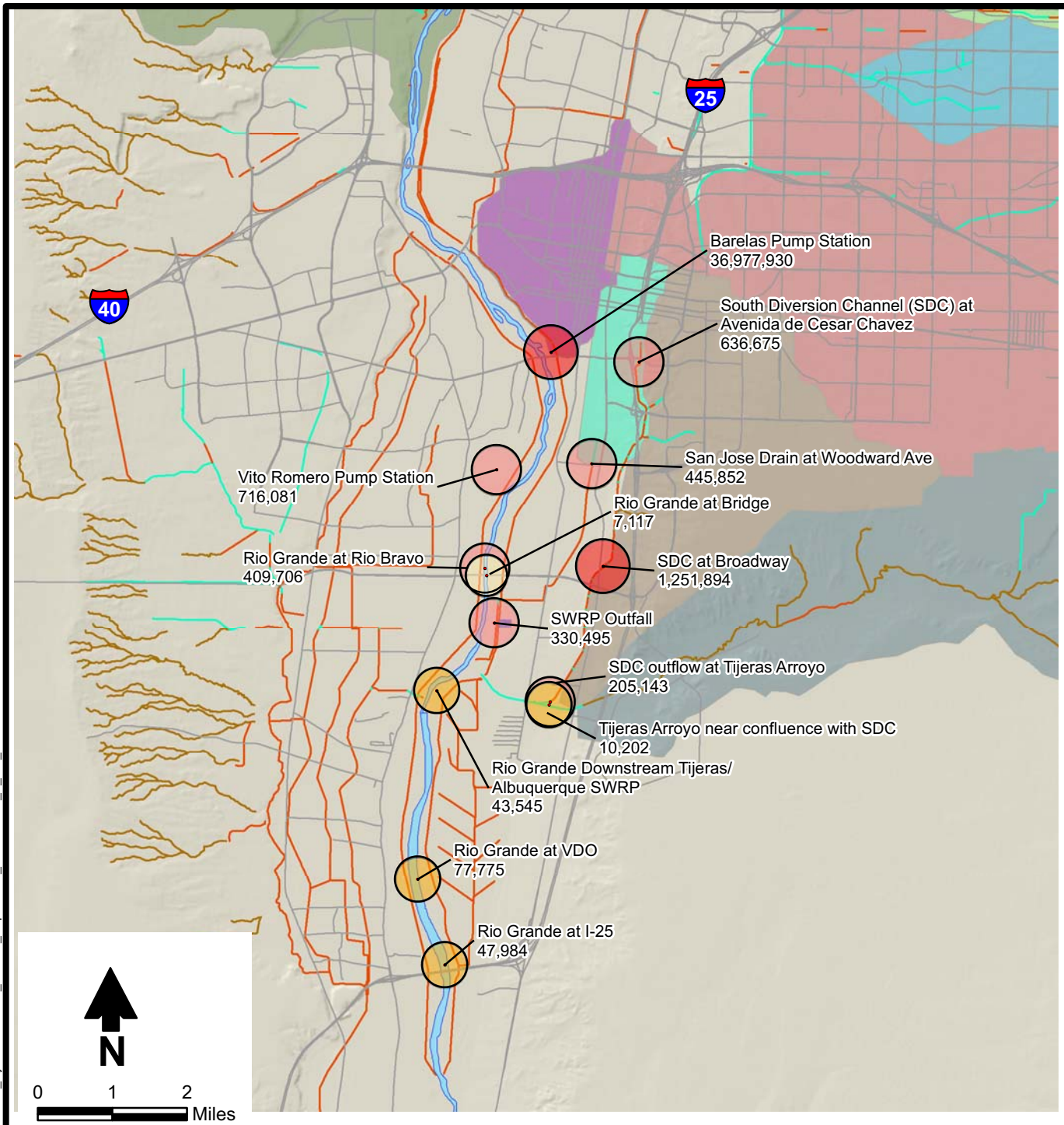
Daniel B. Stephens & Associates, Inc.

4/20/2020

JN DB17.1158

Figure 12d

S:\Projects\WR14.0049.01_COA_StormwaterGIS\MXDs\Proportional_Symbol\Revised_202003_Report\F12_E-Coli\F12D_E_coli_20190510.mxd



Explanation

E. coli (copies/100 mL)

- Weak (<1,000)
- Moderately weak (1,001-10,000)
- Moderate (10,001-100,000)
- Moderately strong (100,001-1,000,000)
- Strong (>1,000,000)

CITY OF ALBUQUERQUE

qPCR E. coli Results
Microbial Source Tracking
Water Quality Sampling
October 2019

Daniel B. Stephens & Associates, Inc.

4/27/2020

JN DB17.1158

Figure 12e

S:\Projects\WR14.0049.01_COA_StormwaterGIS\MXDs\Proportional_Symbol\Revised_202003_Report\F12_E-Coli\F12E_E_coli_20191004.mxd

Tables

Table 1. Sampling Events

Sampling Event Date	Duration of Storm Event (hours)	Rainfall Measurement or Estimate (inches)	Duration between this Event and End of Previous Measurable Event (hours)
4/12/2018 [a]	0	0	408
5/29/2018 [a]	0	0	192
7/26/2018	2.25	0.8	23
8/23/2018	1.9	0.27	11.5
9/20/2018	14.5	0.3	252
10/23/2018	24.25	1.4	241
1/11/2019	17.5	0.36	79
3/12/2019	11.25	0.39	14
5/10/2019	9	0.24	37
10/4/2019	3.25	0.55	367

[a] Background dry weather event

Table 2. Analytical Results by Sample Location Type

Location	Sample Date	Fecal Indicator Bacteria (MPN/100 mL)	Result (copies/100 mL)							
			E. coli EC23S857	General Bacteroidales GenBac3	Human HF183	Canine DogBact	Avian GFD	Cow CowM2	Horse HorseBact	Ruminant Rum2Bac
Arroyo Sample Locations										
Bear Arroyo at Jefferson	9/20/2018	>2,420	219,194	303,208	ND	2,326	37,749	ND	BDL	ND
	1/11/2019	317	15,787	1,238,614	233	23,041	—	—	—	—
Bear Arroyo at Juan Tabo	9/20/2018	162	13,642	50,084	ND	1,926	12,593	ND	ND	ND
Calabacillas Arroyo at Coors	9/20/2018	6,131	140,390	171,296	350	10,561	6,231	ND	ND	ND
Calabacillas Arroyo at Swinburne Dam	10/23/2018	1,664	99,727	138,074	BDL	21,298	3,915	ND	BDL	BDL
Domingo Baca Arroyo	8/23/2018	378	23,196	173,184	ND	ND	839	ND	ND	ND
	1/11/2019	292	19,829	1,982,706	260	3,724	—	—	—	—
Embudo Arroyo at Monte Largo	10/23/2018	<10	581	3,395	ND	1,128	BDL	ND	BDL	ND
Embudo Arroyo at Snow Heights Park	9/20/2018	2,420	143,414	355,460	BDL	15,960	4,378	ND	ND	ND
Hahn Arroyo at Carlisle	9/20/2018	>2,420	112,559	434,919	20,847	23,673	6,662	ND	ND	ND
	1/11/2019	689	87,406	1,250,466	15,863	58,578	—	—	—	—
Hahn Arroyo at Monroe	7/26/2018	>2,420	170,802	4,887,335	ND	ND	867	ND	ND	ND
Lower Pino Arroyo at Washington	9/20/2018	>2,420	722,792	165,095	405	37,239	6,264	ND	BDL	ND
	1/11/2019	813	85,705	4,468,193	1,590	107,518	—	—	—	—
Pino Arroyo at NDC	8/23/2018	>2,420	256,362	281,571	ND	ND	2,680	ND	ND	ND
Tijeras Arroyo at Four Hills	10/23/2018	598	57,941	23,607	BDL	7,914	BDL	ND	BDL	1,806
Tijeras Arroyo near confluence with SDC	7/27/2018	199	2,465	76,928	533	940	797	ND	BDL	ND
	3/12/2019	<10	2,057	29,388	BDL	BDL	—	—	—	—
	10/4/2019	921	10,202	2,854	BDL	BDL	—	—	—	—

MPN/100 mL = Most probable number per 100 milliliters
ND = Not detected
BDL = Below detection limit
— = Not analyzed

Table 2. Analytical Results by Sample Location Type

Location	Sample Date	Fecal Indicator Bacteria (MPN/100 mL)	Result (copies/100 mL)							
			E. coli EC23S857	General Bacteroidales GenBac3	Human HF183	Canine DogBact	Avian GFD	Cow CowM2	Horse HorseBact	Ruminant Rum2Bac
Arroyo Sample Locations (cont.)										
Upper Pino Arroyo near Pino Dam	9/20/2018	18	1,310	60,274	ND	ND	2,861	ND	ND	ND
Channel Sample Locations										
Amole del Norte Channel above Amole Dam	10/23/2018	2,420	135,198	275,408	1,822	303,454	1,093	ND	ND	ND
NDC at Paseo Del Norte	10/23/2018	4,352	236,335	1,029,502	2,794	74,634	1,553	ND	ND	704
NDC Outfall at Edith	7/27/2018	6,131	164,042	316,176	894	2,134	1,386	ND	912	ND
	8/23/2018	<1	46,664	20,566	ND	ND	2,156	ND	BDL	ND
	1/11/2019	496	29,587	737,252	2,152	26,899	—	—	—	—
San Antonio Outfall	7/27/2018	>2,420	108,778	76,331	ND	ND	6,362	ND	BDL	ND
	9/20/2018	>2,420	285,185	108,680	233	BDL	95,612	ND	ND	ND
SDC at Broadway	9/20/2018	>2,420	1,112,902	32,457,665	71,871	488	9,164	ND	ND	ND
	1/11/2019	2,142	140,569	9,362,475	7,903	20,414	—	—	—	—
	3/12/2019	2,064	162,379	2,362,943	3,060	10,240	—	—	—	—
	10/4/2019	>24196	1,251,894	497,330	644	17,915	—	—	—	—
SDC outflow at Tijeras Arroyo	7/27/2018	>2,420	117,621	300,240	236	7,934	1,360	ND	ND	ND
	8/23/2018	>2,420	246,359	1,000,720	3,805	901	1,900	ND	BDL	ND
	3/12/2019	1,455	339,723	4,449,577	1,615	95,586	—	—	—	—
	10/4/2019	19,863	205,143	467,325	856	40,908	—	—	—	—
SDC at Avenida de Cesar Chavez	3/12/2019	2,489	245,692	5,342,236	1,206	4,845	—	—	—	—
	5/10/2019	>24196	1,349,920	27,090,055	1,634	17,833	—	—	—	—
	10/4/2019	17,329	636,675	750,567	BDL	9,300	—	—	—	—

MPN/100 mL = Most probable number per 100 milliliters
ND = Not detected
BDL = Below detection limit
— = Not analyzed

Table 2. Analytical Results by Sample Location Type

Location	Sample Date	Fecal Indicator Bacteria (MPN/100 mL)	Result (copies/100 mL)							
			E. coli EC23S857	General Bacteroidales GenBac3	Human HF183	Canine DogBact	Avian GFD	Cow CowM2	Horse HorseBact	Ruminant Rum2Bac
Channel Sample Locations (cont.)										
SDC at Woodward Ave	5/10/2019	6,488	263,004	1,051,094	1,226	13,978	—	—	—	—
Drain Sample Locations										
Alameda Drain at El Caminito	9/20/2018	>2,420	1,370,564	7,813,912	3,345	36,141	9,296	ND	BDL	ND
Alameda Drain at Matthew	9/20/2018	>2,420	1,803,670	6,923,074	1,891	36,141	14,110	ND	ND	394
	1/11/2019	1,850	135,912	4,427,522	54,386	166,923	—	—	—	—
Alameda Drain with Griegos Drain	9/20/2018	>2,420	856,961	6,263,639	2,552	18,619	13,967	ND	ND	1,700
Alameda Drain with Riverside Drain	10/23/2018	117	8,776	533,409	BDL	6,650	23,458	ND	BDL	1,193
Albuquerque Riverside Drain at Rio Bravo	9/20/2018	>2,420	463,136	3,106,856	1,190	5,787	34,435	ND	ND	1,227
Albuquerque Riverside Drain below Barr	4/12/2018	88	5,870	877,575	BDL	BDL	4,797	ND	BDL	ND
	9/20/2018	2,420	85,715	1,283,291	ND	1,630	40,662	ND	ND	BDL
Albuquerque Riverside Drain below NDC	8/23/2018	323	10,598	692,844	ND	BDL	9,902	BDL	BDL	38,575
Atrisco Riverside Drain at Rio Bravo	9/20/2018	228	7,766	688,250	BDL	ND	110,240	ND	ND	BDL
Isleta Drain at Cypress Drive	10/23/2018	250	71,483	100,613	BDL	34,445	2,023	ND	ND	BDL
Isleta Drain at Malpais	10/23/2018	365	11,113	576,246	BDL	6,384	22,889	ND	BDL	1,235
Los Padillas at I-25	10/23/2018	687	38,956	895,676	BDL	5,035	57,698	ND	BDL	905
Los Padillas Drain at Malpais	10/23/2018	91	3,090	243,173	ND	1,055	39,266	ND	BDL	BDL

MPN/100 mL = Most probable number per 100 milliliters
ND = Not detected
BDL = Below detection limit
— = Not analyzed

Table 2. Analytical Results by Sample Location Type

Location	Sample Date	Fecal Indicator Bacteria (MPN/100 mL)	Result (copies/100 mL)							
			E. coli EC23S857	General Bacteroidales GenBac3	Human HF183	Canine DogBact	Avian GFD	Cow CowM2	Horse HorseBact	Ruminant Rum2Bac
Drain Sample Locations (cont.)										
San Jose Drain at Woodward Ave	7/27/2018	14,136	384,526	824,002	5,051	12,268	4,257	ND	BDL	ND
	3/12/2019	3,448	275,573	33,118,983	334,046	559,935	—	—	—	—
	5/10/2019	>24,196	7,770,890	37,115,165	143,076	807,703	—	—	—	—
	10/4/2019	>24,196	445,852	243,967	1,239	12,068	—	—	—	—
Upper Corrales Riverside Drain	9/20/2018	102	2,005	903,234	ND	ND	69,955	ND	ND	ND
Pump Station Sample Locations (cont.)										
Barelas Pump Station	10/23/2018	24,196	1,801,421	9,036,244	51,646	47,251	4,032	ND	BDL	1,081
	3/12/2019	24,196	1,173,557	100,700,654	952,088	140,515	—	—	—	—
	5/10/2019	>24196	1,904,974	47,043,417	219,228	5,078	—	—	—	—
	10/4/2019	>24196	36,977,930	1,217,301	28,355	18,343	—	—	—	—
Paseo del Norte Pump Station	10/23/2018	118	6,044	814,118	BDL	4,035	22,744	ND	ND	1,396
Vito Romero Pump Station	5/10/2019	2,382	109,416	63,991,251	ND	92,104	—	—	—	—
	10/4/2019	>24196	716,081	179,114	ND	1,844	—	—	—	—
Rio Grande Sample Locations										
Rio Grande at Angastora Dam	3/11/2019	32	6,742	945,778	1,285	BDL	—	—	—	—
Rio Grande at US 550	5/29/2018	31	1,019	833,108	ND	ND	20,347	ND	ND	BDL
Rio Grande at NDC Upstream	5/29/2018	52	2,267	1,060,856	BDL	ND	17,630	ND	ND	BDL

MPN/100 mL = Most probable number per 100 milliliters
ND = Not detected
BDL = Below detection limit
— = Not analyzed

Table 2. Analytical Results by Sample Location Type

Location	Sample Date	Fecal Indicator Bacteria (MPN/100 mL)	Result (copies/100 mL)							
			E. coli EC23S857	General Bacteroidales GenBac3	Human HF183	Canine DogBact	Avian GFD	Cow CowM2	Horse HorseBact	Ruminant Rum2Bac
Rio Grande Sample Locations (cont.)										
Rio Grande at Alameda	5/29/2018	86	886	390,503	ND	ND	9,803	ND	ND	BDL
	9/20/2018	461	11,834	1,063,125	BDL	BDL	19,767	ND	ND	602
Rio Grande at Montaño Road	5/29/2018	109	3,174	1,369,776	BDL	ND	19,612	ND	ND	BDL
Rio Grande at Central	5/29/2018	10	11,770	3,455,030	703	1,050	32,892	ND	ND	BDL
Rio Grande at Bridge	5/29/2018	18	8,586	2,670,193	318	BDL	42,361	ND	ND	BDL
	5/10/2019	52	1,456	448,691	219	BDL	—	—	—	—
	10/4/2019	644	7,117	594,270	BDL	BDL	—	—	—	—
Rio Grande at Rio Bravo	4/12/2018	75	2,559	1,270,714	293	ND	7,948	ND	ND	ND
	5/29/2018	146	5,614	1,359,759	339	961	18,820	ND	ND	BDL
	9/20/2018	4,106	80,949	BDL	BDL	829	BDL	ND	BDL	BDL
	3/12/2019	31	7,751	2,457,839	1,263	BDL	—	—	—	—
	5/10/2019	52	2,261	692,294	475	BDL	—	—	—	—
	10/4/2019	>24196	409,706	375,723	502	BDL	—	—	—	—
Rio Grande downstream Tijeras/Albuquerque SWRP	3/12/2019	85	224,415	9,532,700	151,347	5,522	—	—	—	—
	5/10/2019	52	1,830	1,014,397	372	BDL	—	—	—	—
	10/4/2019	2,420	43,545	493,969	2,764	1,106	—	—	—	—
Rio Grande at VDO	5/29/2018	305	105,709	4,508,095	5,126	5,626	29,594	ND	ND	563
	5/10/2019	41	7,412	1,207,195	1,808	BDL	—	—	—	—
	10/4/2019	330	77,775	789,241	10,966	BDL	—	—	—	—

MPN/100 mL = Most probable number per 100 milliliters
ND = Not detected
BDL = Below detection limit
— = Not analyzed

Table 2. Analytical Results by Sample Location Type

Location	Sample Date	Fecal Indicator Bacteria (MPN/100 mL)	Result (copies/100 mL)							
			E. coli EC23S857	General Bacteroidales GenBac3	Human HF183	Canine DogBact	Avian GFD	Cow CowM2	Horse HorseBact	Ruminant Rum2Bac
Rio Grande Sample Locations (cont.)										
Rio Grande at I-25	4/12/2018	262	12,859	4,061,444	3,106	BDL	21,696	ND	BDL	ND
	5/29/2018	336	82,008	3,960,447	2,636	3,328	36,121	ND	ND	601
	9/20/2018	12,997	322,414	3,196,909	22,304	BDL	21,246	ND	ND	BDL
	1/11/2019	1,201	148,998	14,341,680	28,614	4,178	—	—	—	—
	10/4/2019	529	47,984	635,923	9,112	ND	—	—	—	—
Rio Grande at Isleta	3/13/2019	594	90,733	8,071,021	45,385	6,952	—	—	—	—
WWTP Samples										
WWTP Outfall	9/20/2018	20	543,224	2,636,290	53,005	1,132	21,539	ND	ND	ND
	3/12/2019	8	599,281	16,915,733	407,340	5,169	—	—	—	—
	5/10/2019	28	233,562	3,580,941	40,630	819	—	—	—	—
	10/4/2019	66	330,495	1,115,215	58,500	BDL	—	—	—	—
Blanks										
Equipment blank	5/29/2018	—	ND	ND	ND	ND	ND	ND	ND	ND
	7/27/2018	—	ND	—	—	—	—	—	—	—
	9/20/2018	—	ND	—	—	—	—	—	—	—
	10/23/2018	—	ND	—	—	—	—	—	—	—
	5/10/2019	—	ND	—	—	—	—	—	—	—
	10/4/2019	—	ND	—	—	—	—	—	—	—
Method blank	4/12/2018	—	ND	ND	ND	ND	ND	ND	ND	ND
	7/27/2018	—	ND	—	—	—	—	—	—	—
	8/24/2018	—	ND	—	—	—	—	—	—	—

MPN/100 mL = Most probable number per 100 milliliters
ND = Not detected
BDL = Below detection limit
— = Not analyzed

Table 2. Analytical Results by Sample Location Type

Location	Sample Date	Fecal Indicator Bacteria (MPN/100 mL)	Result (copies/100 mL)							
			E. coli EC23S857	General Bacteroidales GenBac3	Human HF183	Canine DogBact	Avian GFD	Cow CowM2	Horse HorseBact	Ruminant Rum2Bac
Blanks (cont.)										
Method blank (cont.)	9/20/2018	—	ND	—	—	—	—	—	—	—
	10/23/2018	—	ND	—	—	—	—	—	—	—
	5/10/2019	—	ND	—	—	—	—	—	—	—
	10/4/2019	—	ND	—	—	—	—	—	—	—

MPN/100 mL = Most probable number per 100 milliliters
ND = Not detected
BDL = Below detection limit
— = Not analyzed

Table 3. Analytical Results by Sampling Event

Location	Sample Date	Sample Time	Fecal Indicator Bacteria (MPN/100 mL)	Result (copies/100 mL)								Flow (cfs)		Location on Event Hydrograph
				E. coli EC23S857	General Bacteroidales GenBac3	Human HF183	Canine DogBact	Avian GFD	Cow CowM2	Horse HorseBact	Ruminant Rum2Bac	Instantaneous Discharge	Event Maximum	
April 2018 Dry Weather Event														
Albuquerque Riverside Drain below Barr	4/12/2018	11:30	88	5,870	877,575	BDL	BDL	4,797	ND	BDL	ND	—	—	—
Rio Grande at I-25	4/12/2018	11:25	262	12,859	4,061,444	3,106	BDL	21,696	ND	BDL	ND	383	NA	—
Rio Grande at Rio Bravo	4/12/2018	10:48	75	2,559	1,270,714	293	ND	7,948	ND	ND	ND	—	—	—
Method blank	4/12/2018	15:00	—	ND	ND	ND	ND	ND	ND	ND	ND	—	—	—
May 2018 Dry Weather Event														
Rio Grande at Alameda	5/29/2018	11:55	86	886	390,503	ND	ND	9,803	ND	ND	BDL	636	NA	—
Rio Grande at Bridge	5/29/2018	11:00	18	8,586	2,670,193	318	BDL	42,361	ND	ND	BDL	—	—	—
Rio Grande at Central	5/29/2018	10:00	10	11,770	3,455,030	703	1,050	32,892	ND	ND	BDL	738	NA	—
Rio Grande at I-25	5/29/2018	14:00	336	82,008	3,960,447	2,636	3,328	36,121	ND	ND	601	494	—	—
Rio Grande at Montaño Road	5/29/2018	13:30	109	3,174	1,369,776	BDL	ND	19,612	ND	ND	BDL	—	—	—
Rio Grande at NDC Upstream	5/29/2018	10:14	52	2,267	1,060,856	BDL	ND	17,630	ND	ND	BDL	—	—	—
Rio Grande at Rio Bravo	5/29/2018	12:00	146	5,614	1,359,759	339	961	18,820	ND	ND	BDL	—	—	—
Rio Grande at US 550	5/29/2018	11:04	31	1,019	833,108	ND	ND	20,347	ND	ND	BDL	—	—	—
Rio Grande at VDO	5/29/2018	13:15	305	105,709	4,508,095	5,126	5,626	29,594	ND	ND	563	—	—	—
Equipment blank	5/29/2018	13:30	—	ND	ND	ND	ND	ND	ND	ND	ND	—	—	—
July 2018 Wet Weather Event														
Hahn Arroyo at Monroe	7/26/2018	19:37	>2,420	170,802	4,887,335	ND	ND	867	ND	ND	ND	0	162	Start
Tijeras Arroyo near confluence with SDC	7/27/2018	12:00	199	2,465	76,928	533	940	797	ND	BDL	ND	3	166	Tail
NDC Outfall at Edith	7/27/2018	9:30	6,131	164,042	316,176	894	2,134	1,386	ND	912	ND	20	7280	Tail
San Antonio Outfall	7/27/2018	11:40	>2,420	108,778	76,331	ND	ND	6,362	ND	BDL	ND	1	6	Tail
SDC outflow at Tijeras Arroyo	7/27/2018	12:30	>2,420	117,621	300,240	236	7,934	1,360	ND	ND	ND	1	568	Tail
San Jose Drain at Woodward Ave	7/27/2018	14:15	14,136	384,526	824,002	5,051	12,268	4,257	ND	BDL	ND	0	20	Tail
Equipment blank	7/27/2018	13:21	—	ND	—	—	—	—	—	—	—	—	—	—
Method blank	7/27/2018	17:00	—	ND	—	—	—	—	—	—	—	—	—	—
August 2018 Wet Weather Event														
Domingo Baca Arroyo	8/23/2018	13:00	378	23,196	173,184	ND	ND	839	ND	ND	ND	—	—	—
Pino Arroyo at NDC	8/23/2018	14:25	>2,420	256,362	281,571	ND	ND	2,680	ND	ND	ND	0	0	Tail
NDC Outfall at Edith	8/23/2018	13:30	<1	46,664	20,566	ND	ND	2,156	ND	BDL	ND	3	965	Tail
SDC outflow at Tijeras Arroyo	8/23/2018	11:30	>2,420	246,359	1,000,720	3,805	901	1,900	ND	BDL	ND	1	40	—
Albuquerque Riverside Drain below NDC	8/23/2018	14:00	323	10,598	692,844	ND	BDL	9,902	BDL	BDL	38,575	—	—	—
Method blank	8/24/2018	12:30	—	ND	—	—	—	—	—	—	—	—	—	—

MPN/100 mL = Most probable number per 100 milliliters
cfs = Cubic feet per second
ND = Not detected
BDL = Below detection limit
— = Not analyzed

Table 3. Analytical Results by Sampling Event

Location	Sample Date	Sample Time	Fecal Indicator Bacteria (MPN/100 mL)	Result (copies/100 mL)								Flow (cfs)		Location on Event Hydrograph
				E. coli EC23S857	General Bacteroidales GenBac3	Human HF183	Canine DogBact	Avian GFD	Cow CowM2	Horse HorseBact	Ruminant Rum2Bac	Instantaneous Discharge	Event Maximum	
September 2018 Wet Weather Event														
Bear Arroyo at Jefferson	9/20/2018	8:15	>2,420	219,194	303,208	ND	2,326	37,749	ND	BDL	ND	4	4	Peak
Bear Arroyo at Juan Tabo	9/20/2018	6:25	162	13,642	50,084	ND	1,926	12,593	ND	ND	ND	—	—	—
Calabacillas Arroyo at Coors	9/20/2018	8:30	6,131	140,390	171,296	350	10,561	6,231	ND	ND	ND	—	—	—
Embudo Arroyo at Snow Heights Park	9/20/2018	5:55	2,420	143,414	355,460	BDL	15,960	4,378	ND	ND	ND	—	—	—
Hahn Arroyo at Carlisle	9/20/2018	10:00	>2,420	112,559	434,919	20,847	23,673	6,662	ND	ND	ND	1	12	Tail
Lower Pino Arroyo at Washington	9/20/2018	9:00	>2,420	722,792	165,095	405	37,239	6,264	ND	BDL	ND	1	1	Peak
Upper Pino Arroyo near Pino Dam	9/20/2018	6:50	18	1,310	60,274	ND	ND	2,861	ND	ND	ND	—	—	—
San Antonio Outfall	9/20/2018	7:30	>2,420	285,185	108,680	233	BDL	95,612	ND	ND	ND	2	2	Peak
SDC at Broadway	9/20/2018	8:52	>2,420	1,112,902	32,457,665	71,871	488	9,164	ND	ND	ND	—	—	—
Alameda Drain at El Caminito	9/20/2018	9:20	>2,420	1,370,564	7,813,912	3,345	36,141	9,296	ND	BDL	ND	—	—	—
Alameda Drain at Matthew	9/20/2018	9:30	>2,420	1,803,670	6,923,074	1,891	36,141	14,110	ND	ND	394	—	—	—
Alameda Drain with Griegos Drain	9/20/2018	9:15	>2,420	856,961	6,263,639	2,552	18,619	13,967	ND	ND	1,700	—	—	—
Albuquerque Riverside Drain at Rio Bravo	9/20/2018	10:40	>2,420	463,136	3,106,856	1,190	5,787	34,435	ND	ND	1,227	—	—	—
Albuquerque Riverside Drain below Barr	9/20/2018	10:20	2,420	85,715	1,283,291	ND	1,630	40,662	ND	ND	BDL	—	—	—
Atrisco Riverside Drain at Rio Bravo	9/20/2018	8:45	228	7,766	688,250	BDL	ND	110,240	ND	ND	BDL	—	—	—
Upper Corrales Riverside Drain	9/20/2018	7:45	102	2,005	903,234	ND	ND	69,955	ND	ND	ND	—	—	—
Rio Grande at Alameda	9/20/2018	8:00	461	11,834	1,063,125	BDL	BDL	19,767	ND	ND	602	317	373	—
Rio Grande at I-25	9/20/2018	9:40	12,997	322,414	3,196,909	22,304	BDL	21,246	ND	ND	BDL	146	—	—
Rio Grande at Rio Bravo	9/20/2018	9:00	4,106	80,949	BDL	BDL	829	BDL	ND	BDL	BDL	—	—	—
WWTP Outfall	9/20/2018	10:05	20	543,224	2,636,290	53,005	1,132	21,539	ND	ND	ND	—	—	—
Equipment blank	9/20/2018	10:00	—	ND	—	—	—	—	—	—	—	—	—	—
Method blank	9/20/2018	11:00	—	ND	—	—	—	—	—	—	—	—	—	—
October 2018 Wet Weather Event														
Calabacillas Arroyo at Swinburne Dam	10/23/2018	10:45	1,664	99,727	138,074	BDL	21,298	3,915	ND	BDL	BDL	—	—	—
Embudo Arroyo at Monte Largo	10/23/2018	15:20	<10	581	3,395	ND	1,128	BDL	ND	BDL	ND	0	0	Tail
Tijeras Arroyo at Four Hills	10/23/2018	15:10	598	57,941	23,607	BDL	7,914	BDL	ND	BDL	1,806	—	—	—
Amole del Norte Channel above Amole Dam	10/23/2018	9:45	2,420	135,198	275,408	1,822	303,454	1,093	ND	ND	ND	—	—	—
NDC at Paseo Del Norte	10/23/2018	9:30	4,352	236,335	1,029,502	2,794	74,634	1,553	ND	ND	704	273	486	Tail
Alameda Drain with Riverside Drain	10/23/2018	12:00	117	8,776	533,409	BDL	6,650	23,458	ND	BDL	1,193	—	—	—
Isleta Drain at Cypress Drive	10/23/2018	11:40	250	71,483	100,613	BDL	34,445	2,023	ND	ND	BDL	—	—	—
Isleta Drain at Malpais	10/23/2018	10:15	365	11,113	576,246	BDL	6,384	22,889	ND	BDL	1,235	—	—	—
Los Padillas at I-25	10/23/2018	10:30	687	38,956	895,676	BDL	5,035	57,698	ND	BDL	905	—	—	—
Los Padillas Drain at Malpais	10/23/2018	10:50	91	3,090	243,173	ND	1,055	39,266	ND	BDL	BDL	157	—	—

MPN/100 mL = Most probable number per 100 milliliters
cfs = Cubic feet per second
ND = Not detected
BDL = Below detection limit
— = Not analyzed

Table 3. Analytical Results by Sampling Event

Location	Sample Date	Sample Time	Fecal Indicator Bacteria (MPN/100 mL)	Result (copies/100 mL)								Flow (cfs)		Location on Event Hydrograph
				E. coli EC23S857	General Bacteroidales GenBac3	Human HF183	Canine DogBact	Avian GFD	Cow CowM2	Horse HorseBact	Ruminant Rum2Bac	Instantaneous Discharge	Event Maximum	
October 2018 Wet Weather Event (cont.)														
Barelas Pump Station	10/23/2018	11:00	24,196	1,801,421	9,036,244	51,646	47,251	4,032	ND	BDL	1,081	—	—	—
Paseo del Norte Pump Station	10/23/2018	10:00	118	6,044	814,118	BDL	4,035	22,744	ND	ND	1,396	—	—	—
Equipment blank	10/23/2018	12:00	—	ND	—	—	—	—	—	—	—	—	—	—
Method blank	10/23/2018	15:00	—	ND	—	—	—	—	—	—	—	—	—	—
January 2019 Wet Weather Event														
Bear Arroyo at Jefferson	1/11/2019	10:00	317	15,787	1,238,614	233	23,041	—	—	—	—	NA	NA	
NDC Outfall at Edith	1/11/2019	12:00	496	29,587	737,252	2,152	26,899	—	—	—	—	27	29	Peak
Domingo Baca Arroyo	1/11/2019	12:40	292	19,829	1,982,706	260	3,724	—	—	—	—	—	—	—
SDC at Broadway	1/11/2019	13:30	2,142	140,569	9,362,475	7,903	20,414	—	—	—	—	—	—	—
Rio Grande at I-25	1/11/2019	15:20	1,201	148,998	14,341,680	28,614	4,178	—	—	—	—	401	NA	—
Lower Pino Arroyo at Washington	1/11/2019	13:35	813	85,705	4,468,193	1,590	107,518	—	—	—	—	—	—	—
Hahn Arroyo at Carlisle	1/11/2019	14:15	689	87,406	1,250,466	15,863	58,578	—	—	—	—	0	0	Tail
Alameda Drain at Matthew	1/11/2019	14:45	1,850	135,912	4,427,522	54,386	166,923	—	—	—	—	—	—	—
Equipment blank	1/11/2019	15:40	—	ND	—	—	—	—	—	—	—	—	—	—
Method blank	1/11/2019	19:00	—	ND	—	—	—	—	—	—	—	—	—	—
March 2019 Wet Weather Event														
Rio Grande at Angastora Dam	3/11/2019	10:45	32	6,742	945,778	1,285	BDL	—	—	—	—	—	—	—
Barelas Pump Station	3/12/2019	16:05	24,196	1,173,557	100,700,654	952,088	140,515	—	—	—	—	—	—	—
Tijeras Arroyo near confluence with SDC	3/12/2019	13:25	<10	2,057	29,388	BDL	BDL	—	—	—	—	2	3	Start
SDC outflow at Tijeras Arroyo	3/12/2019	14:45	1,455	339,723	4,449,577	1,615	95,586	—	—	—	—	1	5	Tail
San Jose Drain at Woodward Ave	3/12/2019	15:34	3,448	275,573	33,118,983	334,046	559,935	—	—	—	—	3	4	Peak
SDC at Broadway	3/12/2019	15:30	2,064	162,379	2,362,943	3,060	10,240	—	—	—	—	—	—	—
Rio Grande at Rio Bravo	3/12/2019	15:40	31	7,751	2,457,839	1,263	BDL	—	—	—	—	—	—	—
SDC at Avenida de Cesar Chavez	3/12/2019	15:45	2,489	245,692	5,342,236	1,206	4,845	—	—	—	—	—	—	—
SWRP Outfall	3/12/2019	15:00	8	599,281	16,915,733	407,340	5,169	—	—	—	—	—	—	—
Rio Grande Downstream Tijeras/ Albuquerque SWRP	3/12/2019	16:05	85	224,415	9,532,700	151,347	5,522	—	—	—	—	—	—	—
Rio Grande at Isleta	3/13/2019	9:45	594	90,733	8,071,021	45,385	6,952	—	—	—	—	—	—	—
May 2019 Wet Weather Event														
Barelas Pump Station	5/10/2019	9:32	>24196	1,904,974	47,043,417	219,228	5,078	—	—	—	—	—	—	—
SDC at Avenida de Cesar Chavez	5/10/2019	9:10	>24196	1,349,920	27,090,055	1,634	17,833	—	—	—	—	—	—	—
San Jose Drain at Woodward Ave	5/10/2019	10:35	>24196	7,770,890	37,115,165	143,076	807,703	—	—	—	—	1	2	Peak
SDC at Woodward Ave	5/10/2019	9:35	6,488	263,004	1,051,094	1,226	13,978	—	—	—	—	—	—	—

MPN/100 mL = Most probable number per 100 milliliters
cfs = Cubic feet per second
ND = Not detected
BDL = Below detection limit
— = Not analyzed

Table 3. Analytical Results by Sampling Event

Location	Sample Date	Sample Time	Fecal Indicator Bacteria (MPN/100 mL)	Result (copies/100 mL)								Flow (cfs)		Location on Event Hydrograph
				E. coli EC23S857	General Bacteroidales GenBac3	Human HF183	Canine DogBact	Avian GFD	Cow CowM2	Horse HorseBact	Ruminant Rum2Bac	Instantaneous Discharge	Event Maximum	
May 2019 Wet Weather Event (cont.)														
Vito Romero Pump Station	5/10/2019	11:35	2,382	109,416	63,991,251	ND	92,104	—	—	—	—	—	—	—
Rio Grande at Rio Bravo	5/10/2019	9:20	52	2,261	692,294	475	BDL	—	—	—	—	—	—	—
Rio Grande at Bridge	5/10/2019	10:00	52	1,456	448,691	219	BDL	—	—	—	—	—	—	—
SWRP Outfall	5/10/2019	10:15	28	233,562	3,580,941	40,630	819	—	—	—	—	—	—	—
Rio Grande Downstream Tijeras/ Albuquerque SWRP	5/10/2019	10:45	52	1,830	1,014,397	372	BDL	—	—	—	—	—	—	—
Rio Grande at VDO	5/10/2019	11:00	41	7,412	1,207,195	1,808	BDL	—	—	—	—	—	—	—
Equipment blank	5/10/2019	11:30	—	ND	—	—	—	—	—	—	—	—	—	—
Method blank	5/10/2019	17:00	—	ND	—	—	—	—	—	—	—	—	—	—
October 2019 Wet Weather Event														
Barelas Pump Station	10/4/2019	9:30	>24196	36,977,930	1,217,301	28,355	18,343	—	—	—	—	—	—	—
SDC at Avenida de Cesar Chavez	10/4/2019	9:05	17,329	636,675	750,567	BDL	9,300	—	—	—	—	—	—	—
San Jose Drain at Woodward Ave	10/4/2019	9:10	>24196	445,852	243,967	1,239	12,068	—	—	—	—	3	22	Tail
Vito Romero Pump Station	10/4/2019	10:20	>24196	716,081	179,114	ND	1,844	—	—	—	—	—	—	—
SDC at Broadway	10/4/2019	10:30	>24196	1,251,894	497,330	644	17,915	—	—	—	—	—	—	—
Rio Grande at Rio Bravo	10/4/2019	12:00	>24196	409,706	375,723	502	BDL	—	—	—	—	—	—	—
Rio Grande at Bridge	10/4/2019	9:50	644	7,117	594,270	BDL	BDL	—	—	—	—	—	—	—
SWRP Outfall	10/4/2019	11:10	66	330,495	1,115,215	58,500	BDL	—	—	—	—	—	—	—
Rio Grande Downstream Tijeras/ Albuquerque SWRP	10/4/2019	11:45	2,420	43,545	493,969	2,764	1,106	—	—	—	—	—	—	—
SDC outflow at Tijeras Arroyo	10/4/2019	9:10	19,863	205,143	467,325	856	40,908	—	—	—	—	48	71	Peak
Tijeras Arroyo near confluence with SDC	10/4/2019	9:40	921	10,202	2,854	BDL	BDL	—	—	—	—	0	2	Tail
Rio Grande at VDO	10/4/2019	10:25	330	77,775	789,241	10,966	BDL	—	—	—	—	—	—	—
Rio Grande at I-25	10/4/2019	10:55	529	47,984	635,923	9,112	ND	—	—	—	—	281	NA	—
Equipment blank	10/4/2019	12:10	—	ND	—	—	—	—	—	—	—	—	—	—
Method blank	10/4/2019	17:00	—	ND	—	—	—	—	—	—	—	—	—	—

MPN/100 mL = Most probable number per 100 milliliters
cfs = Cubic feet per second
ND = Not detected
BDL = Below detection limit
— = Not analyzed

Appendix A

Laboratory Analytical Reports

FIB Results

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 16, 2018

Chad Johannesen

Daniel B. Stephens & Assoc.
6020 Academy NE Suite 100
Albuquerque, NM 87109
TEL: (505) 822-9400
FAX (505) 822-8877

RE: MST Program OrderNo.: 1804670

Dear Chad Johannesen:

Hall Environmental Analysis Laboratory received 3 sample(s) on 4/12/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1804670**
Date Reported: **4/16/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Project: MST Program
Lab Order: 1804670

Lab ID: 1804670-001 **Collection Date:** 4/12/2018 10:48:00 AM
Client Sample ID: RG Rio Bravo 20180412 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	75	10.00		MPN/100mL	10	4/13/2018 3:18:00 PM	37581

Lab ID: 1804670-002 **Collection Date:** 4/12/2018 11:30:00 AM
Client Sample ID: Riverside Drain I25 20180412 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	88.2	1.000		MPN/100mL	1	4/13/2018 3:18:00 PM	37581

Lab ID: 1804670-003 **Collection Date:** 4/12/2018 11:55:00 AM
Client Sample ID: RG I25 20180412 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	262	10.00		MPN/100mL	10	4/13/2018 3:18:00 PM	37581

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix
W	Sample container temperature is out of limit as specified

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: DBS | Work Order Number: 1804670 | RcptNo: 1

Received By: Anne Thorne 4/12/2018 1:20:00 PM

Completed By: Michelle Garcia 4/12/2018 2:04:02 PM @ 1505

Reviewed By: SRC 04/12/18

LB: ENM

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
    # of preserved bottles checked for pH: ____ (<2 or >12 unless noted)
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐ Adjusted?
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐ Checked by:

ENM 4/12/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____
By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: ____
Client Instructions: ____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	18.2	Good	Not Present			

Chain-of-Custody Record

Client: DBS+A

Mailing Address: 6020 Academy

Phone #: 505-822-9400

email or Fax#: cjohannesen@dbstephens.

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: MST Program

Project #: DB17.1158

Project Manager: Chad Johannesen

Sampler: same

On Ice: ☒ Yes ☐ No

Sample Temperature: 19.2-CF-1.0=18.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1804670	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	E. coli - enumerated				Air Bubbles (Y or N)
4-12-18	1048	AQ	RG-Rio Bravo-20180412			001												X				
↓	1130	AQ	Riverside Drain-I25-20180412			002												X				
↓	1155	AQ	RG-I25-20180412			003												X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
4-12-18	1320	Chad Johannesen			
Date:	Time:	Relinquished by:	Received by:	Date	Time
				04/12/18	1320

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 01, 2018

Chad Johannesen

Daniel B. Stephens & Assoc.
6020 Academy NE Suite 100
Albuquerque, NM 87109
TEL: (505) 822-9400
FAX (505) 822-8877

RE: COA IDDE MST OrderNo.: 1805E98

Dear Chad Johannesen:

Hall Environmental Analysis Laboratory received 9 sample(s) on 5/29/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1805E98**
Date Reported: **6/1/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Lab Order: 1805E98
Project: COA IDDE MST

Lab ID: 1805E98-001 **Collection Date:** 5/29/2018 10:14:00 AM
Client Sample ID: NDC Upstream_180529 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	52	10.00		MPN/100mL	10	5/30/2018 5:17:00 PM	38371

Lab ID: 1805E98-002 **Collection Date:** 5/29/2018 11:04:00 AM
Client Sample ID: RG@ 550_180529 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	31	10.00		MPN/100mL	10	5/30/2018 5:17:00 PM	38371

Lab ID: 1805E98-003 **Collection Date:** 5/29/2018 11:55:00 AM
Client Sample ID: RG@ Alameda_180529 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	86	10.00		MPN/100mL	10	5/30/2018 5:17:00 PM	38371

Lab ID: 1805E98-004 **Collection Date:** 5/29/2018 1:30:00 PM
Client Sample ID: RG@ Montano_180529 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	109	10.00		MPN/100mL	10	5/30/2018 5:17:00 PM	38371

Lab ID: 1805E98-005 **Collection Date:** 5/29/2018 10:00:00 AM
Client Sample ID: RG@ Central_20180529 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	10	10.00		MPN/100mL	10	5/30/2018 5:17:00 PM	38371

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Project: COA IDDE MST
Lab Order: 1805E98

Lab ID: 1805E98-006 **Collection Date:** 5/29/2018 11:00:00 AM
Client Sample ID: RG@ Bridge_20180529 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	18.5	10.00		MPN/100mL	10	5/30/2018 5:17:00 PM	38371

Lab ID: 1805E98-007 **Collection Date:** 5/29/2018 12:00:00 PM
Client Sample ID: RG@ Rio Bravo_20180529 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	146	10.00		MPN/100mL	10	5/30/2018 5:17:00 PM	38371

Lab ID: 1805E98-008 **Collection Date:** 5/29/2018 1:15:00 PM
Client Sample ID: RG@ VDO_20180529 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	305	10.00		MPN/100mL	10	5/30/2018 5:17:00 PM	38371

Lab ID: 1805E98-009 **Collection Date:** 5/29/2018 2:00:00 PM
Client Sample ID: RG@ I25_20180529 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	336	10.00		MPN/100mL	10	5/30/2018 5:17:00 PM	38371

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: DBS | Work Order Number: 1805E98 | RcptNo: 1

Received By: Ashley Gallegos 5/29/2018 2:56:00 PM

Completed By: Erin Melendrez 5/29/2018 3:00:35 PM

Reviewed By: 05/29/18 @1400

Labled By: SD 05/29/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
	Samples were collected the same day and chilled.		
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)

Adjusted? _____

Checked by: SD 05/29/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	17.3	Good	Not Present			

Chain-of-Custody Record

Client: Daniel B. Stephens & Assoc.

Mailing Address: 6020 Academy RD NE

Phone #: 505-822-9400

email or Fax#: CJohannessen@Geolaw.e

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: AIR COA IDDE MST

Project #: DB17.1158

Project Manager: Chad Johannessen

Sampler: Amy Rosebrough + Elizabeth Botello

On Ice: ☒ Yes ☐ No

Sample Temperature: 17.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1805E98	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	E. coli by Enumeration				Air Bubbles (Y or N)
05/29/18	10:14	SW	NDC Upstream_180529	125mL poly		-001												X				
05/29/18	11:04	SW	RG@ 550_180529	125mL poly		-002												X				
05/29/18	11:55	SW	RG@Alameda_180529	125mL Poly		-003												X				
05/29/18	13:30	SW	RG@ Montano_180529	125mL Poly		-004												X				
05/29/18	10:00	SW	RG-Central-20180529	125mL Poly		-005												X				
05/29/18	11:00	SW	RG-Bridge-20180529	125mL Poly		-006												X				
05/29/18	12:00	SW	RG-RioBravo-20180529	125mL Poly		-007												X				
05/29/18	13:15	SW	RG-VDO-20180529	125mL Poly		-008												X				
05/29/18	14:00	SW	RG-I25-20180529	125mL Poly		-009												X				

Date	Time	Relinquished by:	Received by:	Date	Time
5/29/18	1456			05/29/18	1456
Date	Time	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 31, 2018

Chad Johannesen

Daniel B. Stephens & Assoc.
6020 Academy NE Suite 100
Albuquerque, NM 87109
TEL: (505) 822-9400
FAX (505) 822-8877

RE: COA-MST OrderNo.: 1807E89

Dear Chad Johannesen:

Hall Environmental Analysis Laboratory received 6 sample(s) on 7/27/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order: **1807E89**
Date Reported: **7/31/2018**

CLIENT: Daniel B. Stephens & Assoc.
Project: COA-MST
Lab Order: 1807E89

Lab ID: 1807E89-001 **Collection Date:** 7/27/2018 9:30:00 AM
Client Sample ID: NDC-20180727 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **AKS**	
E. Coli	6131	10.00		MPN/100	10	7/28/2018 4:55:00 PM	39462

Lab ID: 1807E89-002 **Collection Date:** 7/26/2018 7:37:00 PM
Client Sample ID: Hahn-20180726 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **AKS**	
E. Coli	>2419.6	1.000		MPN/100	1	7/28/2018 4:55:00 PM	39462

Lab ID: 1807E89-003 **Collection Date:** 7/27/2018 12:30:00 PM
Client Sample ID: SDC-20180727 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **AKS**	
E. Coli	>2419.6	1.000		MPN/100	1	7/28/2018 4:55:00 PM	39462

Lab ID: 1807E89-004 **Collection Date:** 7/27/2018 12:00:00 PM
Client Sample ID: Tijeras-20180727 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **AKS**	
E. Coli	199	10.00		MPN/100	10	7/28/2018 4:55:00 PM	39462

Lab ID: 1807E89-005 **Collection Date:** 7/27/2018 2:15:00 AM
Client Sample ID: San Jose-20180727 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **AKS**	
E. Coli	14136	10.00		MPN/100	10	7/28/2018 4:55:00 PM	39462

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Project: COA-MST
Lab Order: 1807E89

Lab ID: 1807E89-006
Collection Date: 7/27/2018 11:40:00 AM
Client Sample ID: San Antonio-20180727
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **AKS**	
E. Coli	>2419.6	1.000		MPN/100	1	7/28/2018 4:55:00 PM	39462

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: DBS | Work Order Number: 1807E89 | RcptNo: 1

Received By: **Erin Melendrez** 7/27/2018 2:10:00 PM

Completed By: **Michelle Garcia** 7/27/2018 2:34:03 PM Michelle Garcia

Reviewed By: MW 7/27/18 @ 1520

LB: ENM 7/27/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____
ENM 7/27/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	23.3	Good	Not Present			

Chain-of-Custody Record

Client: ~~COA MST~~ DBSA

Mailing Address: 6020 Academy

Phone #: 505-882-9400

email or Fax#: cjohannesen@geo-logic.com

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: COA-MST

Project #: COA-MST DB17.1158 phase6, task2

Project Manager: ChadJohannesen

Sampler: M. Tebo Zeh

On Ice: ☐ Yes ☒ No

Sample Temperature: 24.3-1.0(CA)=23.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1807E89	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Ecoli Enumeration				Air Bubbles (Y or N)
7/~~26~~/18	0930	W	NDC-20180727	Poly	NaThio	001												X				
7/26/18	1937	W	Hahn-20180726	Poly	NaThio	002												X				
~~7/26/18~~	~~2129~~	W	~~SDC-20180726~~	~~Poly~~														~~X~~				
7/27/18	1230	W	SDC-20180727	poly		003												X				
7/27/18	1200	W	Tijeras-20180727	poly		004												X				
7/27/18	0215	W	Sanjose-20180727	poly		005												X				
7/27/18	1140	W	Santantonio-20180727	poly		006												X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
7/27/18	1410			7/27/18	1410
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 28, 2018

Chad Johannesen

Daniel B. Stephens & Assoc.
6020 Academy NE Suite 100
Albuquerque, NM 87109
TEL: (505) 822-9400
FAX (505) 822-8877

RE: MST OrderNo.: 1808F02

Dear Chad Johannesen:

Hall Environmental Analysis Laboratory received 5 sample(s) on 8/23/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1808F02**
Date Reported: **8/28/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Project: MST
Lab Order: 1808F02

Lab ID: 1808F02-001 **Collection Date:** 8/23/2018 11:30:00 AM
Client Sample ID: SDC-20180823 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	>2419.6	1.000		MPN/100	1	8/24/2018 5:01:00 PM	39970

Lab ID: 1808F02-002 **Collection Date:** 8/23/2018 1:00:00 PM
Client Sample ID: DomingoBaca-20180823 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	378.4	1.000		MPN/100	1	8/24/2018 5:01:00 PM	39970

Lab ID: 1808F02-003 **Collection Date:** 8/23/2018 1:30:00 PM
Client Sample ID: NDC-20180823 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	<1	1.000		MPN/100	1	8/24/2018 5:01:00 PM	39970

Lab ID: 1808F02-004 **Collection Date:** 8/23/2018 2:00:00 PM
Client Sample ID: ABQ RiverDrain NDC-20180803 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	323	10.00		MPN/100	10	8/24/2018 5:01:00 PM	39970

Lab ID: 1808F02-005 **Collection Date:** 8/23/2018 2:25:00 PM
Client Sample ID: Pino-20180823 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	>2419.6	1.000		MPN/100	1	8/24/2018 5:01:00 PM	39970

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: DBS | Work Order Number: 1808F02 | RcptNo: 1

Received By: Jazzmine Burkhead 8/23/2018 4:15:00 PM

Completed By: Ashley Gallegos 8/23/2018 4:26:42 PM

Reviewed By: ENM 8/23/18 @ 1627 labeled by: 08/23/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____ 08/23/18
Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	10.0	Good	Not Present			

Chain-of-Custody Record

Client: DBSA

Mailing Address: 6020 Academy ABQ NM

Phone #: 505-822-9400

email or Fax#: cjohannesen@geo-logic.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☐ Standard ☐ Rush _____

Project Name: MST

Project #:

Project Manager: Chad Johannesen

Sampler: "

On Ice: ☑ Yes ☐ No

Sample Temperature: 10.0

HEAL No. 1808F02

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	E. coli - enumeration				Air Bubbles (Y or N)
8-23-18	1130	AQ	SDC-20180823	1		-001												X				
"	1300	"	DomingoBaca-20180823	1		-002												X				
"	1330	"	NDC-20180823	1		-003												X				
"	1400	"	ABQ River Drain NDC-	20180803 1		-004												X				
"	1425	"	RINO-20180823	1		-005												X				

Date: 8-23-18 Time: 1615 Relinquished by: [signature]

Received by: [signature] Date: 08/23/18 Time: 16:15

Date: Time: Relinquished by:

Received by: Date: Time:

Remarks:

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 27, 2018

Chad Johannesen

Daniel B. Stephens & Assoc.
6020 Academy NE Suite 100
Albuquerque, NM 87109
TEL: (505) 822-9400
FAX (505) 822-8877

RE: MST OrderNo.: 1809C06

Dear Chad Johannesen:

Hall Environmental Analysis Laboratory received 20 sample(s) on 9/20/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Lab Order:** 1809C06
Project: MST

Lab ID: 1809C06-001 **Collection Date:** 9/20/2018 7:45:00 AM
Client Sample ID: UCRD-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	101.9	1.000		MPN/100	1	9/21/2018 1:48:00 PM	40482

Lab ID: 1809C06-002 **Collection Date:** 9/20/2018 8:00:00 AM
Client Sample ID: RGAB-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	461.1	1.000		MPN/100	1	9/21/2018 1:48:00 PM	40482

Lab ID: 1809C06-003 **Collection Date:** 9/20/2018 8:30:00 AM
Client Sample ID: CAC-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	6131	10.00		MPN/100	10	9/21/2018 1:48:00 PM	40482

Lab ID: 1809C06-004 **Collection Date:** 9/20/2018 9:15:00 AM
Client Sample ID: ADV-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	>2419.6	1.000		MPN/100	1	9/21/2018 1:48:00 PM	40482

Lab ID: 1809C06-005 **Collection Date:** 9/20/2018 10:00:00 AM
Client Sample ID: HAC-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	>2419.6	1.000		MPN/100	1	9/21/2018 1:48:00 PM	40482

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Lab Order:** 1809C06
Project: MST

Lab ID: 1809C06-006 **Collection Date:** 9/20/2018 10:20:00 AM
Client Sample ID: ADM-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	>2419.6	1.000		MPN/100	1	9/21/2018 3:10:00 PM	40489

Lab ID: 1809C06-007 **Collection Date:** 9/20/2018 10:40:00 AM
Client Sample ID: AwithG-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	>2419.6	1.000		MPN/100	1	9/21/2018 3:10:00 PM	40489

Lab ID: 1809C06-008 **Collection Date:** 9/20/2018 8:45:00 AM
Client Sample ID: AtriscoatRioB-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	228.2	1.000		MPN/100	1	9/21/2018 1:48:00 PM	40482

Lab ID: 1809C06-009 **Collection Date:** 9/20/2018 9:00:00 AM
Client Sample ID: RGatRioB-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	4106	10.00		MPN/100	10	9/21/2018 1:48:00 PM	40482

Lab ID: 1809C06-010 **Collection Date:** 9/20/2018 9:30:00 AM
Client Sample ID: RiversideDatRioB-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	>24196	10.00		MPN/100	10	9/21/2018 1:48:00 PM	40482

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Lab Order:** 1809C06
Project: MST

Lab ID: 1809C06-011 **Collection Date:** 9/20/2018 10:05:00 AM
Client Sample ID: WWTPOutfall-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	19.7	1.000		MPN/100	1	9/21/2018 1:48:00 PM	40482

Lab ID: 1809C06-012 **Collection Date:** 9/20/2018 6:25:00 AM
Client Sample ID: BAatJT20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	162.4	1.000		MPN/100	1	9/21/2018 1:48:00 PM	40482

Lab ID: 1809C06-013 **Collection Date:** 9/20/2018 6:50:00 AM
Client Sample ID: PinoUp20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	18.5	1.000		MPN/100	1	9/21/2018 1:48:00 PM	40482

Lab ID: 1809C06-014 **Collection Date:** 9/20/2018 7:30:00 AM
Client Sample ID: SanAntonio20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	>2419.6	1.000		MPN/100	1	9/21/2018 1:48:00 PM	40482

Lab ID: 1809C06-015 **Collection Date:** 9/20/2018 8:50:00 AM
Client Sample ID: SDCBroadway-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	>2419.6	1.000		MPN/100	1	9/21/2018 1:48:00 PM	40482

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Lab Order:** 1809C06
Project: MST

Lab ID: 1809C06-016 **Collection Date:** 9/20/2018 9:20:00 AM
Client Sample ID: RivDrainatI25-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	2419.6	1.000		MPN/100	1	9/21/2018 1:48:00 PM	40482

Lab ID: 1809C06-017 **Collection Date:** 9/20/2018 9:40:00 AM
Client Sample ID: RGISLETA-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	12997	10.00		MPN/100	10	9/21/2018 1:48:00 PM	40482

Lab ID: 1809C06-018 **Collection Date:** 9/20/2018 5:55:00 AM
Client Sample ID: EMBATSNHT-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	2419.6	1.000		MPN/100	1	9/21/2018 1:48:00 PM	40482

Lab ID: 1809C06-019 **Collection Date:** 9/20/2018 8:15:00 AM
Client Sample ID: BearArroy-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	>2419.6	1.000		MPN/100	1	9/21/2018 1:48:00 PM	40482

Lab ID: 1809C06-020 **Collection Date:** 9/20/2018 9:00:00 AM
Client Sample ID: PinoArroyo-20180920 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	>2419.6	1.000		MPN/100	1	9/21/2018 1:48:00 PM	40482

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **DBS** Work Order Number: **1809C06** RcptNo: **1**

Received By: **Andy Freeman** **9/20/2018 12:20:00 PM** Andy F

Completed By: **Michelle Garcia** **9/20/2018 1:12:20 PM** Michelle Garcia

Reviewed By: VVZ 09/20/18 09/20/18 @ 1300 Labeled by: mg 09/20/18

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	12.1	Good	No			

Chain-of-Custody Record

Client: Daniel B Stephens

Mailing Address:

Phone #: 505-822-9400

email or Fax#: cjohanneson@geo-logic.com

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: MST

Project #: DB17.1158 P6

Project Manager: Chad Johanneson

Sampler: DBSA

On Ice: ☒ Yes ☐ No

Sample Temperature: 12.1 C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809C06	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	E.coli - enumeration				Air Bubbles (Y or N)
9-20	7:45	water	MCRD-20180920	1	NaThiO	001												X				
	8:00		RGAB-20180920	1		002												X				
	8:30		CAC-20180920	1		003												X				
	9:15		ADV-20180920	1		004												X				
	1000		HAC-20180920	1		005												X				
	1020		ADM-20180920	1		006												X				
	1040		Awith G-20180920	1		007												X				
	845		AtriscoatRioB-20180920	1		008												X				
	900		RGatRioB-20180920	1		009												X				
	930		RiversideDatRioB-20180920	1		010												X				
	1005		WWTPoutfall-20180920	1		011												X				
~~9-20~~	~~6:10~~		~~BEARCANYON-20180920~~																			

Date	Time	Relinquished by:	Received by:	Date	Time
9-20-18	1228			9/20/18	1228
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Page 1 of 2

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Chain-of-Custody Record

Client: Daniel B Stephens

Mailing Address:

Phone #: 505-822-9400

email or Fax#: CJohannesen@geo-logic.com

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: MST

Project #: DB17.1158 P6

Project Manager: Chad Johannesen

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 12.1 C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1809C04	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	E. Coli - enumeration				Air Bubbles (Y or N)
9-20-18	6:25	AQ	BAatJT20180920	1	NaThio	012												X				
	6:50		PINOUP20180920	1		013												X				
	7:30		SANANTONIO-20180920	1		014												X				
	8:50		SDCBROADWAY-20180920	1		015												X				
	9:20		RIVDRAINATI25-20180920	1		016												X				
	9:40		RGTSLETA-20180920	1		017												X				
	~~9:55~~ 555		EMBATCNHT20180920	1		018												X				
	815		BEARAN040-20180920	1		019												X				
	900		PINATRAYO-20180920	1		020												X				

Date	Time	Relinquished by:	Received by:	Date	Time
9-20-18	1228			9/20/18	1228
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Page 2 of 2

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 25, 2018

Chad Johannesen

Daniel B. Stephens & Assoc.
6020 Academy NE Suite 100
Albuquerque, NM 87109
TEL: (505) 822-9400
FAX (505) 822-8877

RE: COA MST OrderNo.: 1810C06

Dear Chad Johannesen:

Hall Environmental Analysis Laboratory received 10 sample(s) on 10/23/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1810C06**
Date Reported: **10/25/2018**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Project: COA MST
Lab Order: 1810C06

Lab ID: 1810C06-001 **Collection Date:** 10/23/2018 9:30:00 AM
Client Sample ID: NDC Paseo-20181023 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	4352	10.00		MPN/100	10	10/24/2018 5:17:00 PM	41156

Lab ID: 1810C06-002 **Collection Date:** 10/23/2018 10:00:00 AM
Client Sample ID: PDN_Pump-20181023 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	117.8	1.000		MPN/100	1	10/24/2018 5:17:00 PM	41156

Lab ID: 1810C06-003 **Collection Date:** 10/23/2018 10:45:00 AM
Client Sample ID: CalaSwinbuene-20181023 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	1664	10.00		MPN/100	10	10/24/2018 5:17:00 PM	41156

Lab ID: 1810C06-004 **Collection Date:** 10/23/2018 11:40:00 AM
Client Sample ID: IsletaDr_CYPCNS-20181023 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	249.5	1.000		MPN/100	1	10/24/2018 5:17:00 PM	41156

Lab ID: 1810C06-005 **Collection Date:** 10/23/2018 10:15:00 AM
Client Sample ID: IsletaDr_Malpais-20181023 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	365.4	1.000		MPN/100	1	10/24/2018 5:17:00 PM	41156

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc. **Lab Order:** 1810C06
Project: COA MST

Lab ID: 1810C06-006 **Collection Date:** 10/23/2018 10:30:00 AM
Client Sample ID: LosPadDr_Malpais-20181023 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	90.9	1.000		MPN/100	1	10/24/2018 5:17:00 PM	41156

Lab ID: 1810C06-007 **Collection Date:** 10/23/2018 10:50:00 AM
Client Sample ID: LosPadDr_I25-20181023 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	686.7	1.000		MPN/100	1	10/24/2018 5:17:00 PM	41156

Lab ID: 1810C06-008 **Collection Date:** 10/23/2018 9:40:00 AM
Client Sample ID: Amle_Unser-20181023 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	2419.6	1.000		MPN/100	1	10/24/2018 5:17:00 PM	41156

Lab ID: 1810C06-009 **Collection Date:** 10/23/2018 12:00:00 PM
Client Sample ID: Alamedda_Riverside-20181023 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	116.9	1.000		MPN/100	1	10/24/2018 5:17:00 PM	41156

Lab ID: 1810C06-010 **Collection Date:** 10/23/2018 11:00:00 AM
Client Sample ID: Barelas_Pump-20181023 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	>24196	10.00		MPN/100	10	10/24/2018 5:17:00 PM	41156

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

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Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: DBS | Work Order Number: 1810C06 | RcptNo: 1

Received By: Erin Melendrez 10/23/2018 2:50:00 PM

Completed By: Ashley Gallegos 10/23/2018 2:58:45 PM

Reviewed By: ENM 10/23/18@1515

CB: JO 10/23/18

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
Samples were collected the same day and chilled.			
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

JO 10/23/18

# of preserved bottles checked for pH: (<2 or >12 unless noted)

Adjusted?

Checked by:

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	10.8	Good	Not Present			

Chain-of-Custody Record

Client: ~~COA-MST~~ D35A
Mt.

Mailing Address:

Phone #:

email or Fax#: CJohannesen@geologic.com

QA/QC Package:
~~Standard~~ ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
~~Standard~~ ☐ Rush

Project Name:
COA-MST

Project #:
D317.1158

Project Manager:
C. Johannesen

Sampler: M. Zbrozek

On Ice: ~~Yes~~ ☐ No

Sample Temperature: 11.7-0.9(CF)= 10.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions ($F, Cl, NO_3, NO_2, PO_4, SO_4$)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	ECOLI Enumeration				Air Bubbles (Y or N)
		~~Soil~~	10/23/18			1810COLD																
10.23	0930	AQ	NDC_Paseo-20181023	1 poly	NaThio	-001												X				
	1000		PON_Pump-20181023			-002												X				
	1045		CalaSwinburne-20181023			-003												X				
	1140		IsletaDr_CYPCNS-20181023			-005												X				
	10:15		IsletaDr_Malpais-20181023			-006												X				
	10:30		LosPadDr_Malpais-20181023			-007												X				
	10:50		LosPadDr_I25-20181023			-008												X				
	9:40		Amole_Unser-20181023			-009												X				
	—		~~Angostura-20181023~~																			
	—		~~Isleta Dam-20181023~~																			
	1200		Alameda_Riverside-20181023			-010												X				
	1100		Barelas_Pump-20181023			-011												X				

Date:	Time:	Relinquished by:	Received by:	Date	Time	Remarks:
10/23/2018	1450			10/23/18	~~1550~~ 1814	ENM
Date:	Time:	Relinquished by:	Received by:	Date	Time	

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 25, 2018

Chad Johannesen

Daniel B. Stephens & Assoc.
6020 Academy NE Suite 100
Albuquerque, NM 87109
TEL: (505) 822-9400
FAX (505) 822-8877

RE: CABQ MST OrderNo.: 1810C11

Dear Chad Johannesen:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/23/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order: **1810C11**
Date Reported: **10/25/2018**

CLIENT: Daniel B. Stephens & Assoc.
Project: CABQ MST
Lab Order: 1810C11

Lab ID: 1810C11-001
Collection Date: 10/23/2018 3:10:00 PM
Client Sample ID: Tijeras 4 Hills-20181023
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	598	10.00		MPN/100	10	10/24/2018 5:17:00 PM	41156

Lab ID: 1810C11-002
Collection Date: 10/23/2018 3:20:00 PM
Client Sample ID: Embudo Monte-20181023
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dbf**	
E. Coli	<1	10.00		MPN/100	10	10/24/2018 5:17:00 PM	41156

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: DBS | Work Order Number: 1810C11 | RcptNo: 1

Received By: **Jazzmine Burkhead** 10/23/2018 4:00:00 PM

Completed By: **Jazzmine Burkhead** 10/23/2018 4:12:54 PM

Reviewed By: 10/23/18 @ 1633

Labeled by: DAD 10/23/18 @

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
	Samples were collected the same day and chilled.		
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted?
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: DAD 10/23/18

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	15.0	Good	Not Present			

Chain-of-Custody Record

Client: DBSA

Mailing Address: 6020 Academy

Phone #: 505-822-9400

email or Fax#: Johannessen@Geologic.com

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: CABQ-MST

Project #: DB17.1158

Project Manager: C. Johannessen

Sampler:

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 15.9-0.9(1P)=15.0

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1810C11
1023	0510	SW	Tijeras4A.1S-20181023	1poly	WASHG	-001
↓	0520	Aq	Embudomonte-20181023	1poly		-002
		JMB 10/23/18				

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	E.coli enumeration
										X
										X

Date:	Time:	Relinquished by	Received by:	Via:	Date	Time
10/23/18	1600				10/23/18	16:00
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: Client

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 14, 2019

Chad Johannesen

Daniel B. Stephens & Assoc.
6020 Academy NE Suite 100
Albuquerque, NM 87109
TEL: (505) 822-9400
FAX (505) 822-8877

RE: COA MST OrderNo.: 1901468

Dear Chad Johannesen:

Hall Environmental Analysis Laboratory received 3 sample(s) on 1/11/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1901468**
Date Reported: **1/14/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Project: COA MST
Lab Order: 1901468

Lab ID: 1901468-001 **Collection Date:** 1/11/2019 1:35:00 PM
Client Sample ID: LPinoWash-20190111 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SRM**	
E. Coli	813	10.00		MPN/100	1	1/12/2019 7:25:00 PM	42571

Lab ID: 1901468-002 **Collection Date:** 1/11/2019 2:15:00 PM
Client Sample ID: HahnCar-20190111 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SRM**	
E. Coli	689	10.00		MPN/100	1	1/12/2019 7:25:00 PM	42571

Lab ID: 1901468-003 **Collection Date:** 1/11/2019 2:45:00 PM
Client Sample ID: AlamedaDMatt-20190111 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SRM**	
E. Coli	1850	10.00		MPN/100	1	1/12/2019 7:25:00 PM	42571

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: DBS | Work Order Number: 1901468 | RcptNo: 1

Received By: **Erin Melendrez** 1/11/2019 3:35:00 PM

Completed By: **Erin Melendrez** 1/11/2019 3:46:01 PM @ 16:10

Reviewed By: VV2 1/11/19
LB: DAD 1/11/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
Samples were collected the same day and chilled.			
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
Adjusted? _____
Checked by: DAD 1/11/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	9.7	Good	Not Present			

Chain-of-Custody Record

Client: DGSA

Mailing Address:

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: CoA MST

Project #: DB17.1158

Project Manager: Chad Johannesen

Sampler:

On Ice: ☒ Yes ☐ No

Sample Temperature: 9.7

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1901468	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	E. coli: Numeration				Air Bubbles (Y or N)
1/11/19	13:35	SW	LP Pino Wash-20190111	1-125mL		-001												X				
1/11/19	14:15	SW	Hahn Car-20190111	1-125mL		-002												X				
1/11/19	14:45	SW	Alameda D Matt-20190111	1-125mL		-003												X				

Date:	Time:	Relinquished by:	Received by:	Date	Time
1/11/19	15:35			1/11/19	1535
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks: Numeration

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 14, 2019

Chad Johannesen

Daniel B. Stephens & Assoc.
6020 Academy NE Suite 100
Albuquerque, NM 87109
TEL: (505) 822-9400
FAX (505) 822-8877

RE: COA MST OrderNo.: 1901478

Dear Chad Johannesen:

Hall Environmental Analysis Laboratory received 5 sample(s) on 1/11/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order: **1901478**
Date Reported: **1/14/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Project: COA MST
Lab Order: 1901478

Lab ID: 1901478-001 **Collection Date:** 1/11/2019 10:00:00 AM
Client Sample ID: Bear Canyon Jeff-20190111 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SRM**	
E. Coli	317	10.00		MPN/100	1	1/12/2019 7:17:00 PM	42572

Lab ID: 1901478-002 **Collection Date:** 1/11/2019 12:00:00 PM
Client Sample ID: NDCEdith-20190111 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SRM**	
E. Coli	496	10.00		MPN/100	1	1/12/2019 7:17:00 PM	42572

Lab ID: 1901478-003 **Collection Date:** 1/11/2019 12:40:00 PM
Client Sample ID: DomBacaJeff-20190111 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SRM**	
E. Coli	292	10.00		MPN/100	1	1/12/2019 7:17:00 PM	42572

Lab ID: 1901478-004 **Collection Date:** 1/11/2019 1:30:00 PM
Client Sample ID: SDC@Broad-20190111 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SRM**	
E. Coli	2142	10.00		MPN/100	1	1/12/2019 7:17:00 PM	42572

Lab ID: 1901478-005 **Collection Date:** 1/11/2019 3:20:00 PM
Client Sample ID: RGI25-20190111 **Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SRM**	
E. Coli	1201	10.00		MPN/100	1	1/12/2019 7:17:00 PM	42572

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **DBS** Work Order Number: **1901478** RcptNo: **1**

Received By: **Leah Baca** **1/11/2019 4:35:00 PM** Leah Baca

Completed By: **Victoria Zellar** **1/11/2019 4:38:56 PM** Victoria Zellar

Reviewed By: DAD 1/11/19 (a) 16:45

Labelled by VVZ 1/11/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
Samples were collected the same day and chilled.			
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☐	No ☐	No VOA Vials ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	VVZ 1/11/19
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: _____ (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? _____
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified:		Date	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	11.4	Good	Not Present			

Chain-of-Custody Record

Client: DBS+A

Mailing Address:

Phone #: 505-822-9400

email or Fax#:

QA/QC Package:
☑ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: COA MST

Project #: DB17.1158.00/Phase 6

Project Manager: Chad Johannesen

Sampler: " "

On Ice: ☒ Yes ☐ No

# of Coolers: (1)

Cooler Temp (including CF): 1.1+.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1904178	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	E. Coli - enumerated
1/11/19	1000	SW	BearCanyonJeff-20190111	125mL poly		-001											✓
1/11/19	1200	SW	NDCEdith-20190111	125mL poly		-002											✓
1/11/19	1240	SW	DomBacaJeff-20190111	125mL poly		-003											✓
1/11/19	1330	SW	SDC@Broad-20190111	125mL poly		-004											✓
1/11/19	1520	SW	RGI25-20190111	125 mL poly		-005											✓

1/11/19

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
1/11/19	1635			Client		
Date:	Time:	Relinquished by:	Received by:	Via:	1/11/19	1635
					Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 20, 2019

Chad Johannesen

Daniel B. Stephens & Assoc.
6020 Academy NE Suite 100
Albuquerque, NM 87109
TEL: (505) 822-9400
FAX (505) 822-8877

RE: COA MST OrderNo.: 1903588

Dear Chad Johannesen:

Hall Environmental Analysis Laboratory received 7 sample(s) on 3/12/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,



Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order: **1903588**
Date Reported: **3/20/2019**

CLIENT: Daniel B. Stephens & Assoc.
Project: COA MST
Lab Order: 1903588

Lab ID: 1903588-001 **Collection Date:** 3/12/2019 4:05:00 PM
Client Sample ID: Barelas-20190312 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **plr**	
E. Coli	24196	10.00		MPN/100	10	3/13/2019 6:06:00 PM	43643

Lab ID: 1903588-002 **Collection Date:** 3/12/2019 3:30:00 PM
Client Sample ID: SDC-Broad-20190312 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **plr**	
E. Coli	2064	10.00		MPN/100	10	3/13/2019 6:06:00 PM	43643

Lab ID: 1903588-003 **Collection Date:** 3/12/2019 3:34:00 PM
Client Sample ID: San Jose- 20190312 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **plr**	
E. Coli	3448	10.00		MPN/100	10	3/13/2019 6:06:00 PM	43643

Lab ID: 1903588-004 **Collection Date:** 3/12/2019 3:45:00 PM
Client Sample ID: SDC-Chavez-20190312 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **plr**	
E. Coli	2489	10.00		MPN/100	10	3/13/2019 6:06:00 PM	43643

Lab ID: 1903588-005 **Collection Date:** 3/12/2019 3:00:00 PM
Client Sample ID: SWRP-20190312 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **plr**	
E. Coli	8.4	1.000		MPN/100	1	3/13/2019 6:06:00 PM	43643

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Daniel B. Stephens & Assoc.
Project: COA MST
Lab Order: 1903588

Lab ID: 1903588-006 **Collection Date:** 3/12/2019 3:40:00 PM
Client Sample ID: RG-Rio Bravo-20190312 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **plr**	
E. Coli	31	10.00		MPN/100	10	3/13/2019 6:06:00 PM	43643

Lab ID: 1903588-007 **Collection Date:** 3/12/2019 4:05:00 PM
Client Sample ID: RG-DS-WWTP-20190312 **Matrix:** AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **plr**	
E. Coli	85	10.00		MPN/100	10	3/13/2019 6:06:00 PM	43643

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Detection Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **DBS** Work Order Number: **1903588** RcptNo: **1**

Received By: **Desiree Dominguez** **3/12/2019 4:45:00 PM** DD

Completed By: **Leah Baca** **3/12/2019 5:04:08 PM** Leah Baca

Reviewed By: LB 3/12/19 @ 1710

Labeled by ENM 3/12/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: (<2 or >12 unless noted)
Adjusted?
Checked by: ENM 3/12/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	13.6	Good	Not Present			

Chain-of-Custody Record

Client: DBSA

Mailing Address: 6020 Academy

Phone #:

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation
☐ NELAP ☐ Other _____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush _____

Project Name: COA MST

Project #: DB17.1158

Project Manager: Chad Johannson

Sampler: "

On Ice: ☒ Yes ☐ No

Sample Temperature: 13.6°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1903588	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F,Cl,NO_3,NO_2,PO_4,SO_4)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	E. coli - enumerated				Air Bubbles (Y or N)
3-12-19	1605	AQ	Barelas-20190312	1		-001												X				
	1530	AQ	SDC-Broad-20190312	1		-002												X				
	1534	AQ	San Jose-20190312	1		-003												X				
	1545	AQ	SDC-Chavez-20190312	1		-004												X				
	15:00	AQ	SWRP-20190312	1		-005												X				
	15:40	AQ	RG-RioBravo-20190312	1		-006												X				
	16:05	AQ	RG-DS-WWTP-20190312	1		-007												X				
						~~-008~~	W	3/12/19														

Date:	Time:	Relinquished by:	Received by:	Date	Time
3/12/19	16:45	Elizabeth Baston	CDO	3/12/19	16:45
Date:	Time:	Relinquished by:	Received by:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

qPCR Results

WESTON SOLUTIONS, INC.
5817 Dryden Pl, Suite 101
Carlsbad, CA 92008
(760) 795-6900 / (760) 931-1580
www.westonsolutions.com

Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 1 and 2
Date Received: 4/13 and 5/31/18
n Samples: 14
Date Filtered: 4/12 and 5/29/18
Date Extracted: 4/20 and 6/1/18
Date PCR: 6/6/18

Assay: E.coli-EC23S857
µL Template per Reaction: 5
Lab Blanks: passed n= 2
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 6
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate307 EC23S857 rm.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
RG-RioBravo-20180412	RG - Rio Bravo	3699RG-RioBravo	04/12/18	1048	FW	Detected, ROQ		2,559	587	copies/100mL	286	429	90	0
RiversideDrain-I25-20180412	Riverside Drain	3700RSDrainI25	04/12/18	1130	FW	Detected, ROQ		5,870	536	copies/100mL	286	429	205	0
RG-I25-20180412	RG - I25	3701RGI25	04/12/18	1155	FW	Detected, ROQ		12,859	1,361	copies/100mL	286	429	450	0
Mblank-20180412	M Blank	3702Mblank	04/12/18	1500	Blank	ND	§<	127	0	copies/100mL	286	429	4	0
NDCupstream-180529	NDCupstream	3780NDCupstream	05/29/18	1014	FW	Detected, ROQ		2,267	1,055	copies/100mL	290	435	78	0
RG@Mon-180529	RG@Montano	3781RG@Mon	05/29/18	1330	FW	Detected, ROQ		3,174	2,390	copies/100mL	287	431	110	0
RG@550-180529	RG@550	3782RG@550	05/29/18	1104	FW	Detected, ROQ		1,019	343	copies/100mL	287	431	35	0
RG@Alameda-180529	RG@Alameda	3783RG@Alameda	05/29/18	1155	FW	Detected, ROQ		886	290	copies/100mL	287	431	31	0
Equip-blank-180529	Equip-blank	3784Equip-blank	05/29/18	1330	Blank	ND	§<	127	0	copies/100mL	287	430	4	0
RG-Central-20180529	RG@Central	3785RG-Central	05/29/18	1000	FW	Detected, ROQ		11,770	649	copies/100mL	287	430	411	0
RG-Bridge-20180529	RG@Bridge	3786RG-Bridge	05/29/18	1100	FW	Detected, ROQ		8,587	863	copies/100mL	286	429	301	0
RG-VDO-20180529	RG@VDO	3787RG-VDO	05/29/18	1315	FW	Detected, ROQ		105,709	11,251	copies/100mL	287	430	3,689	0
RG-I25-20180529	RG@I25	3788RG-I25	05/29/18	1400	FW	Detected, ROQ		82,008	6,676	copies/100mL	287	430	2,862	0
RG-RioBravo-20180529	RG@RioBravo	3789RG-RioBravo	05/29/18	1200	FW	Detected, ROQ		5,614	776	copies/100mL	287	430	196	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 1 and 2 **Date Received:** 4/13 and 5/31/18

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via internal process control (sketa) instead.
3701RGI25
3787RG-VDO
3788RG-I25

Standard Curve Metrics*

Assay	E.coli-EC23S857		
% Efficiency	97.17		
r^2	0.998		
slope	-3.39		
y-intercept	42.19		
curve source	Weston Master Curve		
standard source	plasmid		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.4	10	15
Ct equivalent	40.00	38.80	38.20
LOD % amplification	89		
LLOQ StdDev	0.78		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplifcation rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positve with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

Report template version 6.02

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 1 and 2
Date Received: 4/13 and 5/31/18
n Samples: 14
Date Filtered: 4/12 and 5/29/18
Date Extracted: 4/20 and 6/1/18
Date PCR: 6/25/18

Assay: GeneralBacteroidales-GenBac3
µL Template per Reaction: 2
Lab Blanks: passed n= 2
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 6
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 321 GenBac3 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
RG-RioBravo-20180412	RG - Rio Bravo	3699RG-RioBravo	04/12/18	1048	FW	Detected, ROQ		1,270,714	25,061	copies/100mL	1071	1429	17,790	0
RiversideDrain-I25-20180412	Riverside Drain	3700RSDrainI25	04/12/18	1130	FW	Detected, ROQ		877,575	82,877	copies/100mL	1071	1429	12,286	0
RG-I25-20180412	RG - I25	3701RGI25	04/12/18	1155	FW	Detected, ROQ		4,061,444	558,702	copies/100mL	1071	1429	56,860	0
Mblank-20180412	M Blank	3702Mblank	04/12/18	1500	Blank	ND	§<	316	0	copies/100mL	1071	1429	4	0
NDCupstream-180529	NDCupstream	3780NDCupstream	05/29/18	1014	FW	Detected, ROQ		1,060,856	92,904	copies/100mL	1087	1449	14,640	0
RG@Mon-180529	RG@Montano	3781RG@Mon	05/29/18	1330	FW	Detected, ROQ		1,369,776	48,501	copies/100mL	1078	1437	19,067	0
RG@550-180529	RG@550	3782RG@550	05/29/18	1104	FW	Detected, ROQ		833,108	52,783	copies/100mL	1078	1437	11,597	0
RG@Alameda-180529	RG@Alameda	3783RG@Alameda	05/29/18	1155	FW	Detected, ROQ		390,503	25,454	copies/100mL	1078	1437	5,436	0
Equip-blank-180529	Equip-blank	3784Equip-blank	05/29/18	1330	Blank	ND	§<	316	0	copies/100mL	1074	1433	4	0
RG-Central-20180529	RG@Central	3785RG-Central	05/29/18	1000	FW	Detected, ROQ		3,455,030	310,769	copies/100mL	1074	1433	48,232	0
RG-Bridge-20180529	RG@Bridge	3786RG-Bridge	05/29/18	1100	FW	Detected, ROQ		2,670,193	218,605	copies/100mL	1071	1429	37,383	0
RG-VDO-20180529	RG@VDO	3787RG-VDO	05/29/18	1315	FW	Detected, ROQ		4,508,095	454,617	copies/100mL	1074	1433	62,933	0
RG-I25-20180529	RG@I25	3788RG-I25	05/29/18	1400	FW	Detected, ROQ		3,960,447	97,410	copies/100mL	1074	1433	55,288	0
RG-RioBravo-20180529	RG@RioBravo	3789RG-RioBravo	05/29/18	1200	FW	Detected, ROQ		1,359,759	87,012	copies/100mL	1074	1433	18,982	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Comments:
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3701RGI25
3787RG-VDO
3788RG-I25

Standard Curve Metrics*

Assay	GeneralBacteroidales-GenBac3		
% Efficiency	94.15		
r^2	0.991		
slope	-3.47		
y-intercept	42.24		
curve source	Weston Master Curve		
standard source	genomic		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.4	15	20
Ct equivalent	40.00	38.16	37.72
LOD > % amplification	80		
LLOQ StdDev	0.61		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
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QC Officer (Satomi Yonemasu) Date

Report template version 6.02

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Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 1 and 2
Date Received: 4/13 and 5/31/18
n Samples: 14
Date Filtered: 4/12 and 5/29/18
Date Extracted: 4/20 and 6/1/18
Date PCR: 4/24, 6/7, and 6/18/18

Assay: HumanBacteroidales-HF183TaqmanCAMan
µL Template per Reaction: 2
Lab Blanks: passed n= 2
No Template Controls: passed n= 9
Positive Extraction Controls[A]: passed n= 6
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 285 HF183TMCaMan ka.pcrd Plate 316 HF183TMCaMan rm.pcrd
Plate 308 HF183TMCaMan ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
RG-RioBravo-20180412	RG - Rio Bravo	3699RG-RioBravo	04/12/18	1048	FW	Detected, DNQ		293	167	copies/100mL	214	429	4	0
RiversideDrain-I25-20180412	Riverside Drain	3700RSDrainI25	04/12/18	1130	FW	BDL	§<	71	39	copies/100mL	214	429	1	0
RG-I25-20180412	RG - I25	3701RGI25	04/12/18	1155	FW	Detected, ROQ		3,106	981	copies/100mL	214	429	43	0
Mblank-20180412	M Blank	3702Mblank	04/12/18	1500	Blank	ND	§<	26	0	copies/100mL	214	429	0	0
NDCupstream-180529	NDCupstream	3780NDCupstream	05/29/18	1014	FW	BDL	§<	31	11	copies/100mL	217	435	0	0
RG@Mon-180529	RG@Montano	3781RG@Mon	05/29/18	1330	FW	BDL	§<	38	16	copies/100mL	216	431	1	0
RG@550-180529	RG@550	3782RG@550	05/29/18	1104	FW	ND	§<	26	0	copies/100mL	216	431	0	0
RG@Alameda-180529	RG@Alameda	3783RG@Alameda	05/29/18	1155	FW	ND	§<	26	0	copies/100mL	216	431	0	0
Equip-blank-180529	Equip-blank	3784Equip-blank	05/29/18	1330	Blank	ND	§<	26	0	copies/100mL	215	430	0	0
RG-Central-20180529	RG@Central	3785RG-Central	05/29/18	1000	FW	Detected, ROQ		703	205	copies/100mL	215	430	10	0
RG-Bridge-20180529	RG@Bridge	3786RG-Bridge	05/29/18	1100	FW	Detected, DNQ		318	68	copies/100mL	214	429	4	0
RG-VDO-20180529	RG@VDO	3787RG-VDO	05/29/18	1315	FW	Detected, ROQ		5,126	936	copies/100mL	215	430	72	0
RG-I25-20180529	RG@I25	3788RG-I25	05/29/18	1400	FW	Detected, ROQ		2,636	83	copies/100mL	215	430	37	0
RG-RioBravo-20180529	RG@RioBravo	3789RG-RioBravo	05/29/18	1200	FW	Detected, DNQ		339	151	copies/100mL	215	430	5	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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5817 Dryden Pl, Suite 101
Carlsbad, CA 92008
(760) 795-6900 / (760) 931-1580
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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 1 and 2 **Date Received:** 4/13 and 5/31/18

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via internal process control (sketa) instead.
3701RGI25
3787RG-VDO
3788RG-I25

Standard Curve Metrics*

Assay	HumanBacteroidales-HF183TaqmanCAMan		
% Efficiency	99.32		
r^2	0.992		
slope	-3.34		
y-intercept	38.52		
curve source	Weston Master Curve		
standard source	genomic		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.36	3.0	6.0
Ct equivalent	40.00	36.93	35.93
LOD > % amplification	83		
LLOQ StdDev	0.85		
Copies per genome	7		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplifcation rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as “equivocal” because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positve with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 1 and 2
Date Received: 4/13 and 5/31/18
n Samples: 14
Date Filtered: 4/12 and 5/29/18
Date Extracted: 4/20 and 6/1/18
Date PCR: 6/13/18

Assay: DogBacteroidales-DogBact
µL Template per Reaction: 2
Lab Blanks: passed n= 2
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 6
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 313 DogBact ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
RG-RioBravo-20180412	RG - Rio Bravo	3699RG-RioBravo	04/12/18	1048	FW	ND	§<	150	0	copies/100mL	714	1786	2	0
RiversideDrain-I25-20180412	Riverside Drain	3700RSDrainI25	04/12/18	1130	FW	BDL		615	371	copies/100mL	714	1786	9	0
RG-I25-20180412	RG - I25	3701RGI25	04/12/18	1155	FW	BDL	§<	280	224	copies/100mL	714	1786	4	0
Mblank-20180412	M Blank	3702Mblank	04/12/18	1500	Blank	ND	§<	150	0	copies/100mL	714	1786	2	0
NDCupstream-180529	NDCupstream	3780NDCupstream	05/29/18	1014	FW	ND	§<	153	0	copies/100mL	725	1812	2	0
RG@Mon-180529	RG@Montano	3781RG@Mon	05/29/18	1330	FW	ND	§<	151	0	copies/100mL	718	1796	2	0
RG@550-180529	RG@550	3782RG@550	05/29/18	1104	FW	ND	§<	151	0	copies/100mL	718	1796	2	0
RG@Alameda-180529	RG@Alameda	3783RG@Alameda	05/29/18	1155	FW	ND	§<	151	0	copies/100mL	718	1796	2	0
Equip-blank-180529	Equip-blank	3784Equip-blank	05/29/18	1330	Blank	ND	§<	151	0	copies/100mL	716	1791	2	0
RG-Central-20180529	RG@Central	3785RG-Central	05/29/18	1000	FW	Detected, DNQ		1,050	265	copies/100mL	716	1791	15	0
RG-Bridge-20180529	RG@Bridge	3786RG-Bridge	05/29/18	1100	FW	BDL	§<	210	103	copies/100mL	714	1786	3	0
RG-VDO-20180529	RG@VDO	3787RG-VDO	05/29/18	1315	FW	Detected, ROQ		5,626	2,602	copies/100mL	716	1791	79	0
RG-I25-20180529	RG@I25	3788RG-I25	05/29/18	1400	FW	Detected, ROQ		3,328	1,399	copies/100mL	716	1791	46	0
RG-RioBravo-20180529	RG@RioBravo	3789RG-RioBravo	05/29/18	1200	FW	Detected, DNQ		961	620	copies/100mL	716	1791	13	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 1 and 2 **Date Received:** 4/13 and 5/31/18

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via internal process control (sketa) instead.
3701RGI25
3787RG-VDO
3788RG-I25

Standard Curve Metrics*

Assay	DogBacteroidales-DogBact		
% Efficiency	105.35		
r^2	0.990		
slope	-3.20		
y-intercept	41.04		
curve source	Weston Master Curve		
standard source	plasmid		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.1	10	25
Ct equivalent	40.00	37.84	36.56
LOD > % amplification	73		
LLOQ StdDev	0.55		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplifcation rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as “equivocal” because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positve with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 1 and 2
Date Received: 4/13 and 5/31/18
n Samples: 14
Date Filtered: 4/12 and 5/29/18
Date Extracted: 4/20 and 6/1/18
Date PCR: 6/7/18

Assay: AvianHelicobacter-GFDSYBRAvian
µL Template per Reaction: 2
Lab Blanks: passed n= 2
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 6
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 309 AvianGFD rm.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
RG-RioBravo-20180412	RG - Rio Bravo	3699RG-RioBravo	04/12/18	1048	FW	Detected, ROQ		7,948	1,587	copies/100mL	714	714	111	0
RiversideDrain-I25-20180412	Riverside Drain	3700RSDrainI25	04/12/18	1130	FW	Detected, ROQ		4,797	2,329	copies/100mL	714	714	67	0
RG-I25-20180412	RG - I25	3701RGI25	04/12/18	1155	FW	Detected, ROQ		21,696	6,797	copies/100mL	714	714	304	0
Mblank-20180412	M Blank	3702Mblank	04/12/18	1500	Blank	ND	§<	13	0	copies/100mL	714	714	0	0
NDCupstream-180529	NDCupstream	3780NDCupstream	05/29/18	1014	FW	Detected, ROQ		17,630	2,272	copies/100mL	725	725	243	0
RG@Mon-180529	RG@Montano	3781RG@Mon	05/29/18	1330	FW	Detected, ROQ		19,612	2,179	copies/100mL	718	718	273	0
RG@550-180529	RG@550	3782RG@550	05/29/18	1104	FW	Detected, ROQ		20,347	1,711	copies/100mL	718	718	283	0
RG@Alameda-180529	RG@Alameda	3783RG@Alameda	05/29/18	1155	FW	Detected, ROQ		9,803	998	copies/100mL	718	718	136	0
Equip-blank-180529	Equip-blank	3784Equip-blank	05/29/18	1330	Blank	ND	§<	13	0	copies/100mL	716	716	0	0
RG-Central-20180529	RG@Central	3785RG-Central	05/29/18	1000	FW	Detected, ROQ		32,892	8,202	copies/100mL	716	716	459	0
RG-Bridge-20180529	RG@Bridge	3786RG-Bridge	05/29/18	1100	FW	Detected, ROQ		42,361	8,589	copies/100mL	714	714	593	0
RG-VDO-20180529	RG@VDO	3787RG-VDO	05/29/18	1315	FW	Detected, ROQ		29,594	7,215	copies/100mL	716	716	413	0
RG-I25-20180529	RG@I25	3788RG-I25	05/29/18	1400	FW	Detected, ROQ		36,121	8,817	copies/100mL	716	716	504	0
RG-RioBravo-20180529	RG@RioBravo	3789RG-RioBravo	05/29/18	1200	FW	Detected, ROQ		18,820	3,359	copies/100mL	716	716	263	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 1 and 2 **Date Received:** 4/13 and 5/31/18

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via internal process control (sketa) instead.
3701RGI25
3787RG-VDO
3788RG-I25

Standard Curve Metrics*

Assay	AvianHelicobacter-GFDSYBRAvian		
% Efficiency	94.00		
r^2	0.992		
slope	-3.47		
y-intercept	37.40		
curve source	Weston Master Curve		
standard source	plasmid		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.18	10	10
Ct equivalent	40.00	33.92	33.92
LOD % amplification	100		
LLOQ StdDev	1.01		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplifcation rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positve with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 1 and 2
Date Received: 4/13 and 5/31/18
n Samples: 14
Date Filtered: 4/12 and 5/29/18
Date Extracted: 4/20 and 6/1/18
Date PCR: 6/12/18

Assay: CowBacteroidales-Cow M2
µL Template per Reaction: 2
Lab Blanks: passed n= 2
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 6
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 311 CowM2 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
RG-RioBravo-20180412	RG - Rio Bravo	3699RG-RioBravo	04/12/18	1048	FW	ND	§<	210	0	copies/100mL	500	714	3	0
RiversideDrain-I25-20180412	Riverside Drain	3700RSDrainI25	04/12/18	1130	FW	ND	§<	210	0	copies/100mL	500	714	3	0
RG-I25-20180412	RG - I25	3701RGI25	04/12/18	1155	FW	ND	§<	210	0	copies/100mL	500	714	3	0
Mblank-20180412	M Blank	3702Mblank	04/12/18	1500	Blank	ND	§<	210	0	copies/100mL	500	714	3	0
NDCupstream-180529	NDCupstream	3780NDCupstream	05/29/18	1014	FW	ND	§<	213	0	copies/100mL	507	725	3	0
RG@Mon-180529	RG@Montano	3781RG@Mon	05/29/18	1330	FW	ND	§<	211	0	copies/100mL	503	718	3	0
RG@550-180529	RG@550	3782RG@550	05/29/18	1104	FW	ND	§<	211	0	copies/100mL	503	718	3	0
RG@Alameda-180529	RG@Alameda	3783RG@Alameda	05/29/18	1155	FW	ND	§<	211	0	copies/100mL	503	718	3	0
Equip-blank-180529	Equip-blank	3784Equip-blank	05/29/18	1330	Blank	ND	§<	211	0	copies/100mL	501	716	3	0
RG-Central-20180529	RG@Central	3785RG-Central	05/29/18	1000	FW	ND	§<	211	0	copies/100mL	501	716	3	0
RG-Bridge-20180529	RG@Bridge	3786RG-Bridge	05/29/18	1100	FW	ND	§<	210	0	copies/100mL	500	714	3	0
RG-VDO-20180529	RG@VDO	3787RG-VDO	05/29/18	1315	FW	ND	§<	211	0	copies/100mL	501	716	3	0
RG-I25-20180529	RG@I25	3788RG-I25	05/29/18	1400	FW	ND	§<	211	0	copies/100mL	501	716	3	0
RG-RioBravo-20180529	RG@RioBravo	3789RG-RioBravo	05/29/18	1200	FW	ND	§<	211	0	copies/100mL	501	716	3	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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(760) 795-6900 / (760) 931-1580
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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 1 and 2 **Date Received:** 4/13 and 5/31/18

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via internal process control (sketa) instead.
3701RGI25
3787RG-VDO
3788RG-I25

Standard Curve Metrics*

Assay	CowBacteroidales-Cow M2		
% Efficiency	94.22		
r^2	0.996		
slope	-3.47		
y-intercept	41.63		
curve source	Weston Master Curve		
standard source	plasmid		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.9	7.0	10
Ct equivalent	40.00	38.70	38.16
LOD % amplification	90		
LLOQ StdDev	1.03		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplifcation rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positve with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 1 and 2
Date Received: 4/13 and 5/31/18
n Samples: 14
Date Filtered: 4/12 and 5/29/18
Date Extracted: 4/20 and 6/1/18
Date PCR: 6/12/18

Assay: Horse Bacteroidales-HorseBact
µL Template per Reaction: 2
Lab Blanks: passed n= 2
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 6
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 312 HorseBact rm.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
RG-RioBravo-20180412	RG - Rio Bravo	3699RG-RioBravo	04/12/18	1048	FW	ND	§<	59	0	copies/100mL	714	727	1	0
RiversideDrain-I25-20180412	Riverside Drain	3700RSDrainI25	04/12/18	1130	FW	BDL	§<	95	62	copies/100mL	714	727	1	0
RG-I25-20180412	RG - I25	3701RGI25	04/12/18	1155	FW	BDL	§<	116	98	copies/100mL	714	727	2	0
Mblank-20180412	M Blank	3702Mblank	04/12/18	1500	Blank	ND	§<	59	0	copies/100mL	714	727	1	0
NDCupstream-180529	NDCupstream	3780NDCupstream	05/29/18	1014	FW	ND	§<	60	0	copies/100mL	725	738	1	0
RG@Mon-180529	RG@Montano	3781RG@Mon	05/29/18	1330	FW	ND	§<	59	0	copies/100mL	718	731	1	0
RG@550-180529	RG@550	3782RG@550	05/29/18	1104	FW	ND	§<	59	0	copies/100mL	718	731	1	0
RG@Alameda-180529	RG@Alameda	3783RG@Alameda	05/29/18	1155	FW	ND	§<	59	0	copies/100mL	718	731	1	0
Equip-blank-180529	Equip-blank	3784Equip-blank	05/29/18	1330	Blank	ND	§<	59	0	copies/100mL	716	729	1	0
RG-Central-20180529	RG@Central	3785RG-Central	05/29/18	1000	FW	ND	§<	59	0	copies/100mL	716	729	1	0
RG-Bridge-20180529	RG@Bridge	3786RG-Bridge	05/29/18	1100	FW	ND	§<	59	0	copies/100mL	714	727	1	0
RG-VDO-20180529	RG@VDO	3787RG-VDO	05/29/18	1315	FW	ND	§<	59	0	copies/100mL	716	729	1	0
RG-I25-20180529	RG@I25	3788RG-I25	05/29/18	1400	FW	ND	§<	59	0	copies/100mL	716	729	1	0
RG-RioBravo-20180529	RG@RioBravo	3789RG-RioBravo	05/29/18	1200	FW	ND	§<	59	0	copies/100mL	716	729	1	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 1 and 2 **Date Received:** 4/13 and 5/31/18

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via internal process control (sketa) instead.
3701RGI25
3787RG-VDO
3788RG-I25

Standard Curve Metrics*

Assay	Horse Bacteroidales-HorseBact		
% Efficiency	100.54		
r^2	0.995		
slope	-3.31		
y-intercept	39.73		
curve source	Weston Master Curve		
standard source	plasmid		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.83	10	10
Ct equivalent	40.00	36.42	36.39
LOD > % amplification	100		
LLOQ StdDev	0.61		

* based on a master standard curve with a minimum of 45 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplifcation rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as “equivocal” because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positve with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 1 and 2
Date Received: 4/13 and 5/31/18
n Samples: 14
Date Filtered: 4/12 and 5/29/18
Date Extracted: 4/20 and 6/1/18
Date PCR: 6/27/18

Assay: Ruminant Bacteroidales-Rum2Bac
µL Template per Reaction: 2
Lab Blanks: passed n= 2
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 6
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 322 Rum2Bac rm.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
RG-RioBravo-20180412	RG - Rio Bravo	3699RG-RioBravo	04/12/18	1048	FW	ND	§<	192	0	copies/100mL	357	714	3	0
RiversideDrain-I25-20180412	Riverside Drain	3700RSDrainI25	04/12/18	1130	FW	ND	§<	192	0	copies/100mL	357	714	3	0
RG-I25-20180412	RG - I25	3701RGI25	04/12/18	1155	FW	ND	§<	192	0	copies/100mL	357	714	3	0
Mblank-20180412	M Blank	3702Mblank	04/12/18	1500	Blank	ND	§<	192	0	copies/100mL	357	714	3	0
NDCupstream-180529	NDCupstream	3780NDCupstream	05/29/18	1014	FW	BDL	§<	349	160	copies/100mL	362	725	5	0
RG@Mon-180529	RG@Montano	3781RG@Mon	05/29/18	1330	FW	BDL	§<	269	132	copies/100mL	359	718	4	0
RG@550-180529	RG@550	3782RG@550	05/29/18	1104	FW	BDL	§<	208	27	copies/100mL	359	718	3	0
RG@Alameda-180529	RG@Alameda	3783RG@Alameda	05/29/18	1155	FW	BDL	§<	199	11	copies/100mL	359	718	3	0
Equip-blank-180529	Equip-blank	3784Equip-blank	05/29/18	1330	Blank	ND	§<	192	0	copies/100mL	358	716	3	0
RG-Central-20180529	RG@Central	3785RG-Central	05/29/18	1000	FW	BDL		353	102	copies/100mL	358	716	5	0
RG-Bridge-20180529	RG@Bridge	3786RG-Bridge	05/29/18	1100	FW	BDL	§<	232	59	copies/100mL	357	714	3	0
RG-VDO-20180529	RG@VDO	3787RG-VDO	05/29/18	1315	FW	Detected, DNQ		563	172	copies/100mL	358	716	8	0
RG-I25-20180529	RG@I25	3788RG-I25	05/29/18	1400	FW	Detected, DNQ		601	375	copies/100mL	358	716	8	0
RG-RioBravo-20180529	RG@RioBravo	3789RG-RioBravo	05/29/18	1200	FW	BDL	§<	220	48	copies/100mL	358	716	3	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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5817 Dryden Pl, Suite 101
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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 1 and 2 **Date Received:** 4/13 and 5/31/18

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via internal process control (sketa) instead.
3701RGI25
3787RG-VDO
3788RG-I25

Standard Curve Metrics*

Assay	Ruminant Bacteroidales-Rum2Bac		
% Efficiency	94.27		
r^2	0.995		
slope	-3.47		
y-intercept	41.49		
curve source	Weston Master Curve		
standard source	plasmid		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.7	5.0	10
Ct equivalent	40.00	39.06	38.02
LOD > % amplification	85		
LLOQ StdDev	1.39		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplifcation rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as “equivocal” because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positve with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 3 and 4
Date Received: 7/31 and 8/28/18
n Samples: 14
Date Filtered: 7/27 and 8/24/18
Date Extracted: 9/20/18
Date PCR: 9/28 and 10/11/18

Assay: E.coli-EC23S857
µL Template per Reaction: 5
Lab Blanks: passed n= 2
No Template Controls: passed n= 6
Positive Extraction Controls[A]: passed n= 3
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 379 EC23S857 ka.pcrd
Plate 410 EC23S857 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
NDC	NDC	4267NDC	07/27/18	0930	SW	Detected, ROQ		164,042	17,529	copies/100mL	286	429	5,741	0
SDC	SDC	4268SDC	07/27/18	1230	SW	Detected, ROQ		117,621	4,963	copies/100mL	286	429	4,117	0
Tijeras	Tijeras	4269Tijeras	07/27/18	1200	SW	Detected, ROQ		2,465	494	copies/100mL	287	430	86	0
SanJose	SanJose	4270SanJose	07/27/18	0215	SW	Detected, ROQ		384,526	57,643	copies/100mL	286	429	13,458	0
SanAntonio	SanAntonio	4271SanAntonio	07/27/18	1140	SW	Detected, ROQ		108,778	10,085	copies/100mL	286	429	3,802	0
Hahn	Hahn	4272Hahn	07/26/18	1937	SW	Detected, ROQ		170,802	20,233	copies/100mL	286	429	5,978	0
Methodblank	Methodblank	4273Methodblank	07/27/18	1700	SW	ND	§<	127	0	copies/100mL	287	430	4	0
Field Blank	Field Blank	4274Field Blank	07/27/18	1321	SW	ND	§<	127	0	copies/100mL	286	429	4	0
SDC	SDC	4500SDC	08/23/18	1130	SW	Detected, ROQ		246,359	26,220	copies/100mL	286	429	8,610	0
Domingo	Domingo	4501Domingo	08/23/18	1300	SW	Detected, ROQ		23,196	2,771	copies/100mL	286	429	812	0
NDC	NDC	4502NDC	08/23/18	1330	SW	Detected, ROQ		46,664	1,351	copies/100mL	286	429	1,633	0
ABQRivDrain	ABQRivDrain	4503ABQRivDrain	08/23/18	1400	SW	Detected, ROQ		10,598	583	copies/100mL	286	429	371	0
Pino	Pino	4504Pino	08/23/18	1425	SW	Detected, ROQ		256,362	23,206	copies/100mL	286	429	8,973	0
Methodblank	Methodblank	4505Methodblank	08/24/18	1230	SW	ND	§<	127	0	copies/100mL	286	429	4	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 3 and 4 **Date Received:** 7/31 and 8/28/18

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

4270SanJose, 4500SDC

Standard Curve Metrics*

Assay	E.coli-EC23S857		
% Efficiency	97.17		
r^2	0.998		
slope	-3.39		
y-intercept	42.19		
curve source	Weston Master Curve		
standard source	plasmid		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.4	10	15
Ct equivalent	40.00	38.80	38.20
LOD > % amplification	89		
LLOQ StdDev	0.78		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Carlsbad, CA 92008
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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 3 and 4
Date Received: 7/31 and 8/28/18
n Samples: 11
Date Filtered: 7/27 and 8/24/18
Date Extracted: 9/20/18
Date PCR: 10/5/18

Assay: GeneralBacteroidales-GenBac3
µL Template per Reaction: 5
Lab Blanks: passed n= 2
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 2
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 380 GenBac3 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
NDC	NDC	4267NDC	07/27/18	0930	SW	Detected, ROQ		316,175	17,796	copies/100mL	429	571	11,066	0
SDC	SDC	4268SDC	07/27/18	1230	SW	Detected, ROQ		300,240	34,841	copies/100mL	429	571	10,508	0
Tijeras	Tijeras	4269Tijeras	07/27/18	1200	SW	Detected, ROQ		76,928	13,306	copies/100mL	430	573	2,685	0
SanJose	SanJose	4270SanJose	07/27/18	0215	SW	Detected, ROQ		824,002	135,979	copies/100mL	429	571	28,840	0
SanAntonio	SanAntonio	4271SanAntonio	07/27/18	1140	SW	Detected, ROQ		76,331	12,583	copies/100mL	429	572	2,668	0
Hahn	Hahn	4272Hahn	07/26/18	1937	SW	Detected, ROQ		4,887,335	333,340	copies/100mL	429	571	171,057	0
SDC	SDC	4500SDC	08/23/18	1130	SW	Detected, ROQ		1,000,720	72,224	copies/100mL	429	571	35,025	0
Domingo	Domingo	4501Domingo	08/23/18	1300	SW	Detected, ROQ		173,184	26,910	copies/100mL	429	572	6,053	0
NDC	NDC	4502NDC	08/23/18	1330	SW	Detected, ROQ		20,566	1,320	copies/100mL	429	571	720	0
ABQRivDrain	ABQRivDrain	4503ABQRivDrain	08/23/18	1400	SW	Detected, ROQ		692,844	43,668	copies/100mL	429	571	24,250	0
Pino	Pino	4504Pino	08/23/18	1425	SW	Detected, ROQ		281,571	30,354	copies/100mL	429	571	9,855	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Carlsbad, CA 92008
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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 3 and 4 **Date Received:** 7/31 and 8/28/18

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

4270SanJose, 4500SDC

Standard Curve Metrics*

Assay	GeneralBacteroidales-GenBac3
% Efficiency	94.15
r^2	0.991
slope	-3.47
y-intercept	42.24
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.4	15	20
Ct equivalent	40.00	38.16	37.72
LOD > % amplification	80		
LLOQ StdDev	0.61		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 3 and 4
Date Received: 7/31 and 8/28/18
n Samples: 11
Date Filtered: 7/27 and 8/24/18
Date Extracted: 9/20/18
Date PCR: 9/26/18

Assay: HumanBacteroidales-HF183TaqmanCAMan
µL Template per Reaction: 2
Lab Blanks: passed n= 4
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 2
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 378 HF183TMCaMan ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
NDC	NDC	4267NDC	07/27/18	0930	SW	Detected, ROQ		894	150	copies/100mL	214	429	13	0
SDC	SDC	4268SDC	07/27/18	1230	SW	Detected, DNQ		236	210	copies/100mL	214	429	3	0
Tijeras	Tijeras	4269Tijeras	07/27/18	1200	SW	Detected, ROQ		533	25	copies/100mL	215	430	7	0
SanJose	SanJose	4270SanJose	07/27/18	0215	SW	Detected, ROQ		5,051	1,202	copies/100mL	214	429	71	0
SanAntonio	SanAntonio	4271SanAntonio	07/27/18	1140	SW	ND	§<	26	0	copies/100mL	215	429	0	0
Hahn	Hahn	4272Hahn	07/26/18	1937	SW	ND	§<	26	0	copies/100mL	214	429	0	0
SDC	SDC	4500SDC	08/23/18	1130	SW	Detected, ROQ		3,805	848	copies/100mL	214	429	53	0
Domingo	Domingo	4501Domingo	08/23/18	1300	SW	ND	§<	26	0	copies/100mL	215	429	0	0
NDC	NDC	4502NDC	08/23/18	1330	SW	ND	§<	26	0	copies/100mL	214	429	0	0
ABQRivDrain	ABQRivDrain	4503ABQRivDrain	08/23/18	1400	SW	ND	§<	26	0	copies/100mL	214	429	0	0
Pino	Pino	4504Pino	08/23/18	1425	SW	ND	§<	26	0	copies/100mL	214	429	0	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Carlsbad, CA 92008
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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 3 and 4 **Date Received:** 7/31 and 8/28/18

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

4270SanJose, 4500SDC

Standard Curve Metrics*

Assay	HumanBacteroidales-HF183TaqmanCAMan		
% Efficiency	99.32		
r^2	0.992		
slope	-3.34		
y-intercept	38.52		
curve source	Weston Master Curve		
standard source	genomic		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.36	3.0	6.0
Ct equivalent	40.00	36.93	35.93
LOD > % amplification	83		
LLOQ StdDev	0.85		

Copies per genome 7

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 3 and 4
Date Received: 7/31 and 8/28/18
n Samples: 11
Date Filtered: 7/27 and 8/24/18
Date Extracted: 9/20/18
Date PCR: 10/8/18

Assay: DogBacteroidales-DogBact
µL Template per Reaction: 2
Lab Blanks: passed n= 2
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 2
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 384 DogBact rm.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
NDC	NDC	4267NDC	07/27/18	0930	SW	Detected, ROQ		2,134	259	copies/100mL	714	1786	30	0
SDC	SDC	4268SDC	07/27/18	1230	SW	Detected, ROQ		7,934	2,062	copies/100mL	714	1786	111	0
Tijeras	Tijeras	4269Tijeras	07/27/18	1200	SW	Detected, DNQ		940	730	copies/100mL	716	1791	13	0
SanJose	SanJose	4270SanJose	07/27/18	0215	SW	Detected, ROQ		12,268	8,201	copies/100mL	714	1786	172	0
SanAntonio	SanAntonio	4271SanAntonio	07/27/18	1140	SW	ND	§<	151	0	copies/100mL	715	1788	2	0
Hahn	Hahn	4272Hahn	07/26/18	1937	SW	ND	§<	150	0	copies/100mL	714	1786	2	0
SDC	SDC	4500SDC	08/23/18	1130	SW	Detected, DNQ		901	463	copies/100mL	714	1786	13	0
Domingo	Domingo	4501Domingo	08/23/18	1300	SW	ND	§<	151	0	copies/100mL	715	1788	2	0
NDC	NDC	4502NDC	08/23/18	1330	SW	ND	§<	150	0	copies/100mL	714	1786	2	0
ABQRivDrain	ABQRivDrain	4503ABQRivDrain	08/23/18	1400	SW	BDL	§<	173	39	copies/100mL	714	1786	2	0
Pino	Pino	4504Pino	08/23/18	1425	SW	ND	§<	150	0	copies/100mL	714	1786	2	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 3 and 4 **Date Received:** 7/31 and 8/28/18

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

4270SanJose, 4500SDC

Standard Curve Metrics*

Assay	DogBacteroidales-DogBact
% Efficiency	105.35
r^2	0.990
slope	-3.20
y-intercept	41.04
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.1	10	25
Ct equivalent	40.00	37.84	36.56
LOD > % amplification	73		
LLOQ StdDev	0.55		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 3 and 4
Date Received: 7/31 and 8/28/18
n Samples: 11
Date Filtered: 7/27 and 8/24/18
Date Extracted: 9/20/18
Date PCR: 9/28/18

Assay: AvianHelicobacter-GFDSYBRAvian
µL Template per Reaction: 2
Lab Blanks: passed n= 2
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 2
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 381 AvianGFD ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
NDC	NDC	4267NDC	07/27/18	0930	SW	Detected, ROQ		1,386	344	copies/100mL	714	714	19	0
SDC	SDC	4268SDC	07/27/18	1230	SW	Detected, ROQ		1,360	776	copies/100mL	714	714	19	0
Tijeras	Tijeras	4269Tijeras	07/27/18	1200	SW	Detected, ROQ		797	300	copies/100mL	716	716	11	0
SanJose	SanJose	4270SanJose	07/27/18	0215	SW	Detected, ROQ		4,257	633	copies/100mL	714	714	60	0
SanAntonio	SanAntonio	4271SanAntonio	07/27/18	1140	SW	Detected, ROQ		6,362	1,475	copies/100mL	715	715	89	0
Hahn	Hahn	4272Hahn	07/26/18	1937	SW	Detected, ROQ		867	348	copies/100mL	714	714	12	0
SDC	SDC	4500SDC	08/23/18	1130	SW	Detected, ROQ		1,900	720	copies/100mL	714	714	27	0
Domingo	Domingo	4501Domingo	08/23/18	1300	SW	Detected, ROQ		839	209	copies/100mL	715	715	12	0
NDC	NDC	4502NDC	08/23/18	1330	SW	Detected, ROQ		2,156	778	copies/100mL	714	714	30	0
ABQRivDrain	ABQRivDrain	4503ABQRivDrain	08/23/18	1400	SW	Detected, ROQ		9,901	2,614	copies/100mL	714	714	139	0
Pino	Pino	4504Pino	08/23/18	1425	SW	Detected, ROQ		2,680	1,427	copies/100mL	714	714	38	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 3 and 4 **Date Received:** 7/31 and 8/28/18

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

4270SanJose, 4500SDC

Standard Curve Metrics*

Assay	AvianHelicobacter-GFDSYBRAvian
% Efficiency	94.00
r^2	0.992
slope	-3.47
y-intercept	37.40
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.18	10	10
Ct equivalent	40.00	33.92	33.92
LOD > % amplification	100		
LLOQ StdDev	1.01		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 3 and 4
Date Received: 7/31 and 8/28/18
n Samples: 11
Date Filtered: 7/27 and 8/24/18
Date Extracted: 9/20/18
Date PCR: 10/1/18

Assay: CowBacteroidales-Cow M2
µL Template per Reaction: 2
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 2
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 382 CowM2 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
NDC	NDC	4267NDC	07/27/18	0930	SW	ND	§<	210	0	copies/100mL	500	714	3	0
SDC	SDC	4268SDC	07/27/18	1230	SW	ND	§<	210	0	copies/100mL	500	714	3	0
Tijeras	Tijeras	4269Tijeras	07/27/18	1200	SW	ND	§<	211	0	copies/100mL	501	716	3	0
SanJose	SanJose	4270SanJose	07/27/18	0215	SW	ND	§<	210	0	copies/100mL	500	714	3	0
SanAntonio	SanAntonio	4271SanAntonio	07/27/18	1140	SW	ND	§<	211	0	copies/100mL	501	715	3	0
Hahn	Hahn	4272Hahn	07/26/18	1937	SW	ND	§<	210	0	copies/100mL	500	714	3	0
SDC	SDC	4500SDC	08/23/18	1130	SW	ND	§<	210	0	copies/100mL	500	714	3	0
Domingo	Domingo	4501Domingo	08/23/18	1300	SW	ND	§<	211	0	copies/100mL	501	715	3	0
NDC	NDC	4502NDC	08/23/18	1330	SW	ND	§<	210	0	copies/100mL	500	714	3	0
ABQRivDrain	ABQRivDrain	4503ABQRivDrain	08/23/18	1400	SW	BDL	§<	348	238	copies/100mL	500	714	5	0
Pino	Pino	4504Pino	08/23/18	1425	SW	ND	§<	210	0	copies/100mL	500	714	3	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 3 and 4 **Date Received:** 7/31 and 8/28/18

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

4270SanJose, 4500SDC

Standard Curve Metrics*

Assay	CowBacteroidales-Cow M2		
% Efficiency	94.22		
r^2	0.996		
slope	-3.47		
y-intercept	41.63		
curve source	Weston Master Curve		
standard source	plasmid		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.9	7.0	10
Ct equivalent	40.00	38.70	38.16
LOD > % amplification	90		
LLOQ StdDev	1.03		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 3 and 4
Date Received: 7/31 and 8/28/18
n Samples: 11
Date Filtered: 7/27 and 8/24/18
Date Extracted: 9/20/18
Date PCR: 10/1/18

Assay: Horse Bacteroidales-HorseBact
µL Template per Reaction: 2
Lab Blanks: passed n= 2
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 2
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 383 HorseBact ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
NDC	NDC	4267NDC	07/27/18	0930	SW	Detected, ROQ		912	185	copies/100mL	714	714	13	0
SDC	SDC	4268SDC	07/27/18	1230	SW	ND	§<	59	0	copies/100mL	714	714	1	0
Tijeras	Tijeras	4269Tijeras	07/27/18	1200	SW	BDL	§<	79	34	copies/100mL	716	716	1	0
SanJose	SanJose	4270SanJose	07/27/18	0215	SW	BDL	§<	111	91	copies/100mL	714	714	2	0
SanAntonio	SanAntonio	4271SanAntonio	07/27/18	1140	SW	BDL	§<	79	34	copies/100mL	715	715	1	0
Hahn	Hahn	4272Hahn	07/26/18	1937	SW	ND	§<	59	0	copies/100mL	714	714	1	0
SDC	SDC	4500SDC	08/23/18	1130	SW	BDL	§<	103	76	copies/100mL	714	714	1	0
Domingo	Domingo	4501Domingo	08/23/18	1300	SW	ND	§<	59	0	copies/100mL	715	715	1	0
NDC	NDC	4502NDC	08/23/18	1330	SW	BDL	§<	192	129	copies/100mL	714	714	3	0
ABQRivDrain	ABQRivDrain	4503ABQRivDrain	08/23/18	1400	SW	BDL	§<	128	120	copies/100mL	714	714	2	0
Pino	Pino	4504Pino	08/23/18	1425	SW	ND	§<	59	0	copies/100mL	714	714	1	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 3 and 4 **Date Received:** 7/31 and 8/28/18

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

4270SanJose, 4500SDC

Standard Curve Metrics*

Assay	Horse Bacteroidales-HorseBact
% Efficiency	100.54
r^2	0.995
slope	-3.31
y-intercept	39.73
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.83	10	10
Ct equivalent	40.00	36.42	36.42
LOD > % amplification	100		
LLOQ StdDev	0.61		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 3 and 4
Date Received: 7/31 and 8/28/18
n Samples: 11
Date Filtered: 7/27 and 8/24/18
Date Extracted: 9/20/18
Date PCR: 10/8/18

Assay: Ruminant Bacteroidales-Rum2Bac
µL Template per Reaction: 2
Lab Blanks: passed n= 2
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 2
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 385 Rum2Bac ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
NDC	NDC	4267NDC	07/27/18	0930	SW	ND	§<	192	0	copies/100mL	357	714	3	0
SDC	SDC	4268SDC	07/27/18	1230	SW	ND	§<	192	0	copies/100mL	357	714	3	0
Tijeras	Tijeras	4269Tijeras	07/27/18	1200	SW	ND	§<	192	0	copies/100mL	358	716	3	0
SanJose	SanJose	4270SanJose	07/27/18	0215	SW	ND	§<	192	0	copies/100mL	357	714	3	0
SanAntonio	SanAntonio	4271SanAntonio	07/27/18	1140	SW	ND	§<	192	0	copies/100mL	358	715	3	0
Hahn	Hahn	4272Hahn	07/26/18	1937	SW	ND	§<	192	0	copies/100mL	357	714	3	0
SDC	SDC	4500SDC	08/23/18	1130	SW	ND	§<	192	0	copies/100mL	357	714	3	0
Domingo	Domingo	4501Domingo	08/23/18	1300	SW	ND	§<	192	0	copies/100mL	358	715	3	0
NDC	NDC	4502NDC	08/23/18	1330	SW	ND	§<	192	0	copies/100mL	357	714	3	0
ABQRivDrain	ABQRivDrain	4503ABQRivDrain	08/23/18	1400	SW	Detected, ROQ		38,575	16,357	copies/100mL	357	714	540	0
Pino	Pino	4504Pino	08/23/18	1425	SW	ND	§<	192	0	copies/100mL	357	714	3	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 3 and 4 **Date Received:** 7/31 and 8/28/18

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

4270SanJose, 4500SDC

Standard Curve Metrics*

Assay	Ruminant Bacteroidales-Rum2Bac
% Efficiency	94.27
r^2	0.995
slope	-3.47
y-intercept	41.49
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.7	5	10
Ct equivalent	40.00	39.06	38.02
LOD > % amplification	85		
LLOQ StdDev	1.39		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 22
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/22/18

Assay: E.coli-EC23S857
µL Template per Reaction: 5
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 401 EC23S857 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	Detected, ROQ		2,005	948	copies/100mL	286	429	70	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	Detected, ROQ		11,834	1,771	copies/100mL	286	429	414	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	Detected, ROQ		140,390	36,133	copies/100mL	287	430	4,900	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	Detected, ROQ		1,370,564	261,909	copies/100mL	286	429	47,970	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	Detected, ROQ		112,559	9,856	copies/100mL	286	429	3,940	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	Detected, ROQ		1,803,670	308,086	copies/100mL	288	432	62,587	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	Detected, ROQ		856,961	71,343	copies/100mL	287	431	29,822	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	Detected, ROQ		7,766	819	copies/100mL	286	429	272	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	Detected, ROQ		463,136	48,088	copies/100mL	288	432	16,071	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	Detected, ROQ		543,224	96,580	copies/100mL	286	429	19,013	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	Detected, ROQ		13,642	1,925	copies/100mL	286	429	477	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	Detected, ROQ		1,310	416	copies/100mL	286	429	46	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	Detected, ROQ		285,185	20,909	copies/100mL	286	429	9,981	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	Detected, ROQ		1,112,902	88,972	copies/100mL	286	429	38,952	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	Detected, ROQ		85,715	3,804	copies/100mL	286	429	3,000	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	Detected, ROQ		322,414	24,584	copies/100mL	286	429	11,284	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	Detected, ROQ		143,414	15,345	copies/100mL	286	429	5,019	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	Detected, ROQ		219,194	32,273	copies/100mL	286	429	7,672	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	Detected, ROQ		722,792	38,838	copies/100mL	287	430	25,225	0
Field Blank-20180920	Field Blank	4744Field Blank	09/20/18	1000	FB	ND	§<	127	0	copies/100mL	286	429	4	0

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Weston Solutions qPCR Report - Sample Results

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
Methodblank-20180920	Method Blank	4745Methodblank	09/20/18	1100	FB	ND	§<	127	0	copies/100mL	286	429	4	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	Detected, ROQ		80,949	13,867	copies/100mL	286	429	2,833	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	E.coli-EC23S857		
% Efficiency	97.17		
r^2	0.998		
slope	-3.39		
y-intercept	42.19		
curve source	Weston Master Curve		
standard source	plasmid		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.4	10	15
Ct equivalent	40.00	38.80	38.20
LOD > % amplification	89		
LLOQ StdDev	0.78		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 20
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/22 and 10/25/18

Assay: GeneralBacteroidales-GenBac3
µL Template per Reaction: 5
Lab Blanks: passed n= 3
No Template Controls: passed n= 6
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 402 GenBac3 rm.pcrd
Plate 412 GenBac3 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	Detected, ROQ		903,234	46,915	copies/100mL	429	571	31,613	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	Detected, ROQ		1,063,125	183,414	copies/100mL	429	571	37,209	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	Detected, ROQ		171,296	38,124	copies/100mL	430	573	5,978	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	Detected, ROQ		7,813,912	1,132,166	copies/100mL	429	571	273,487	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	Detected, ROQ		434,919	66,191	copies/100mL	429	571	15,222	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	Detected, ROQ		6,923,074	394,194	copies/100mL	432	576	240,231	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	Detected, ROQ		6,263,639	1,012,612	copies/100mL	431	575	217,975	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	Detected, ROQ		688,250	69,581	copies/100mL	429	571	24,089	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	Detected, ROQ		3,106,855	245,885	copies/100mL	432	576	107,808	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	Detected, ROQ		2,636,290	293,649	copies/100mL	429	571	92,270	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	Detected, ROQ		50,084	3,951	copies/100mL	429	571	1,753	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	Detected, ROQ		60,274	9,757	copies/100mL	429	571	2,110	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	Detected, ROQ		108,680	2,117	copies/100mL	429	571	3,804	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	Detected, ROQ		32,457,665	1,284,795	copies/100mL	429	571	1,136,018	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	Detected, ROQ		1,283,291	81,695	copies/100mL	429	571	44,915	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	Detected, ROQ		3,196,909	107,300	copies/100mL	429	571	111,892	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	Detected, ROQ		355,460	14,461	copies/100mL	429	571	12,441	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	Detected, ROQ		303,208	11,846	copies/100mL	429	571	10,612	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	Detected, ROQ		165,095	3,115	copies/100mL	430	573	5,762	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	BDL		279	146	copies/100mL	429	571	10	0

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Weston Solutions qPCR Report - Sample Results

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	GeneralBacteroidales-GenBac3		
% Efficiency	94.15		
r^2	0.991		
slope	-3.47		
y-intercept	42.24		
curve source	Weston Master Curve		
standard source	plasmid		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.42	15.0	20.0
Ct equivalent	40.00	38.16	37.72
LOD > % amplification	80		
LLOQ StdDev	0.61		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 20
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/18 and 10/19/18

Assay: HumanBacteroidales-HF183TaqmanCAMan
µL Template per Reaction: 2
Lab Blanks: passed n= 5
No Template Controls: passed n= 6
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 399 HF183TMCaMan ka.pcrd
Plate 400 HF183TMCaMan ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	ND	§<	26	0	copies/100mL	214	429	0	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	BDL	§<	69	75	copies/100mL	214	429	1	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	Detected, DNQ		350	263	copies/100mL	215	430	5	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	Detected, ROQ		3,345	922	copies/100mL	214	429	47	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	Detected, ROQ		20,847	1,829	copies/100mL	214	429	292	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	Detected, ROQ		1,891	588	copies/100mL	216	432	26	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	Detected, ROQ		2,552	336	copies/100mL	216	431	36	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	BDL	§<	29	6	copies/100mL	214	429	0	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	Detected, ROQ		1,190	397	copies/100mL	216	432	17	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	Detected, ROQ		53,005	6,759	copies/100mL	214	429	742	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	ND	§<	26	0	copies/100mL	214	429	0	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	ND	§<	26	0	copies/100mL	214	429	0	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	Detected, DNQ	§<	233	335	copies/100mL	214	429	3	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	Detected, ROQ		71,871	4,756	copies/100mL	214	429	1,006	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	ND	§<	26	0	copies/100mL	214	429	0	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	Detected, ROQ		22,304	2,062	copies/100mL	214	429	312	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	BDL		109	29	copies/100mL	214	429	2	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	ND	§<	26	0	copies/100mL	214	429	0	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	Detected, DNQ		405	180	copies/100mL	215	430	6	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	BDL		167	51	copies/100mL	214	429	2	0

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Weston Solutions qPCR Report - Sample Results

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	HumanBacteroidales-HF183TaqmanCAMan
% Efficiency	99.32
r^2	0.992
slope	-3.34
y-intercept	38.52
curve source	Weston Master Curve
standard source	genomic

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.36	3.0	6.0
Ct equivalent	40.00	36.93	35.93
LOD > % amplification	83		
LLOQ StdDev	0.85		

Copies per genome 7

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Carlsbad, CA 92008
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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 20
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/23/18

Assay: DogBacteroidales-DogBact
µL Template per Reaction: 2
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 406 DogBact rm.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	ND	§<	150	0	copies/100mL	714	1786	2	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	BDL	§<	171	36	copies/100mL	714	1786	2	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	Detected, ROQ		10,561	3,576	copies/100mL	716	1791	147	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	Detected, ROQ		49,016	15,616	copies/100mL	714	1786	686	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	Detected, ROQ		23,673	4,458	copies/100mL	714	1786	331	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	Detected, ROQ		36,141	1,451	copies/100mL	720	1801	502	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	Detected, ROQ		18,619	3,313	copies/100mL	718	1796	259	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	ND	§<	150	0	copies/100mL	714	1786	2	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	Detected, ROQ		5,787	557	copies/100mL	720	1801	80	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	Detected, DNQ		1,132	691	copies/100mL	714	1786	16	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	Detected, ROQ		1,926	1,213	copies/100mL	714	1786	27	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	ND	§<	150	0	copies/100mL	714	1786	2	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	BDL	§<	413	284	copies/100mL	714	1786	6	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	BDL		488	445	copies/100mL	714	1786	7	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	Detected, DNQ		1,630	1,737	copies/100mL	714	1786	23	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	BDL	§<	682	472	copies/100mL	714	1786	10	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	Detected, ROQ		15,960	1,716	copies/100mL	714	1786	223	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	Detected, ROQ		2,326	1,078	copies/100mL	714	1786	33	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	Detected, ROQ		37,239	4,985	copies/100mL	716	1791	520	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	Detected, DNQ	§<	829	599	copies/100mL	714	1786	12	0

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Weston Solutions qPCR Report - Sample Results

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	DogBacteroidales-DogBact
% Efficiency	105.35
r^2	0.990
slope	-3.20
y-intercept	41.04
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.11	10.0	25.0
Ct equivalent	40.00	37.84	36.56
LOD > % amplification	73		
LLOQ StdDev	0.55		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 20
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/22/18

Assay: AvianHelicobacter-GFDSYBRAvian
µL Template per Reaction: 2
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 403 AvianGFD ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	Detected, ROQ		69,955	2,055	copies/100mL	714	714	979	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	Detected, ROQ		19,767	1,726	copies/100mL	714	714	277	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	Detected, ROQ		6,231	1,654	copies/100mL	716	716	87	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	Detected, ROQ		9,296	1,231	copies/100mL	714	714	130	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	Detected, ROQ		6,662	1,228	copies/100mL	714	714	93	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	Detected, ROQ		14,110	1,706	copies/100mL	720	720	196	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	Detected, ROQ		13,967	809	copies/100mL	718	718	194	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	Detected, ROQ		110,240	13,565	copies/100mL	714	714	1,543	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	Detected, ROQ		34,435	2,526	copies/100mL	720	720	478	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	Detected, ROQ		21,539	1,880	copies/100mL	714	714	302	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	Detected, ROQ		12,593	1,542	copies/100mL	714	714	176	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	Detected, ROQ		2,861	585	copies/100mL	714	714	40	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	Detected, ROQ		95,613	9,426	copies/100mL	714	714	1,339	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	Detected, ROQ		9,164	1,104	copies/100mL	714	714	128	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	Detected, ROQ		40,662	5,747	copies/100mL	714	714	569	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	Detected, ROQ		21,246	5,899	copies/100mL	714	714	297	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	Detected, ROQ		4,378	362	copies/100mL	714	714	61	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	Detected, ROQ		37,749	3,552	copies/100mL	714	714	528	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	Detected, ROQ		6,264	966	copies/100mL	716	716	87	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	BDL		224	242	copies/100mL	714	714	3	0

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Weston Solutions qPCR Report - Sample Results

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	AvianHelicobacter-GFDSYBRAvian
% Efficiency	94.00
r^2	0.992
slope	-3.47
y-intercept	37.40
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.18	10.0	10.0
Ct equivalent	40.00	33.92	33.92
LOD > % amplification	100		
LLOQ StdDev	1.01		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 20
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/22/18

Assay: CowBacteroidales-Cow M2
µL Template per Reaction: 2
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 404 CowM2 rm.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	ND	§<	210	0	copies/100mL	500	714	3	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	ND	§<	210	0	copies/100mL	500	714	3	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	ND	§<	211	0	copies/100mL	501	716	3	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	ND	§<	210	0	copies/100mL	500	714	3	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	ND	§<	210	0	copies/100mL	500	714	3	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	ND	§<	212	0	copies/100mL	504	720	3	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	ND	§<	211	0	copies/100mL	503	718	3	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	ND	§<	210	0	copies/100mL	500	714	3	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	ND	§<	212	0	copies/100mL	504	720	3	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	ND	§<	210	0	copies/100mL	500	714	3	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	ND	§<	210	0	copies/100mL	500	714	3	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	ND	§<	210	0	copies/100mL	500	714	3	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	ND	§<	210	0	copies/100mL	500	714	3	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	ND	§<	210	0	copies/100mL	500	714	3	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	ND	§<	210	0	copies/100mL	500	714	3	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	ND	§<	210	0	copies/100mL	500	714	3	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	ND	§<	210	0	copies/100mL	500	714	3	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	ND	§<	210	0	copies/100mL	500	714	3	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	ND	§<	211	0	copies/100mL	501	716	3	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	ND	§<	210	0	copies/100mL	500	714	3	0

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Weston Solutions qPCR Report - Sample Results

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	CowBacteroidales-Cow M2
% Efficiency	94.22
r^2	0.996
slope	-3.47
y-intercept	41.63
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.94	7.0	10.0
Ct equivalent	40.00	38.70	38.16
LOD > % amplification	90		
LLOQ StdDev	1.03		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 20
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/23/18

Assay: Horse Bacteroidales-HorseBact
µL Template per Reaction: 2
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 405 HorseBact ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	ND	§<	59	0	copies/100mL	714	714	1	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	ND	§<	59	0	copies/100mL	714	714	1	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	ND	§<	59	0	copies/100mL	716	716	1	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	BDL	§<	80	36	copies/100mL	714	714	1	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	ND	§<	59	0	copies/100mL	714	714	1	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	ND	§<	60	0	copies/100mL	720	720	1	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	ND	§<	59	0	copies/100mL	718	718	1	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	ND	§<	59	0	copies/100mL	714	714	1	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	ND	§<	60	0	copies/100mL	720	720	1	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	ND	§<	59	0	copies/100mL	714	714	1	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	ND	§<	59	0	copies/100mL	714	714	1	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	ND	§<	59	0	copies/100mL	714	714	1	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	ND	§<	59	0	copies/100mL	714	714	1	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	ND	§<	59	0	copies/100mL	714	714	1	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	ND	§<	59	0	copies/100mL	714	714	1	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	ND	§<	59	0	copies/100mL	714	714	1	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	ND	§<	59	0	copies/100mL	714	714	1	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	BDL	§<	117	100	copies/100mL	714	714	2	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	BDL	§<	129	120	copies/100mL	716	716	2	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	BDL	§<	115	97	copies/100mL	714	714	2	0

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Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	Horse Bacteroidales-HorseBact
% Efficiency	100.54
r^2	0.995
slope	-3.31
y-intercept	39.73
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.83	10.0	10.0
Ct equivalent	40.00	36.42	36.42
LOD > % amplification	100		
LLOQ StdDev	0.61		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 20
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/24/18

Assay: Ruminant Bacteroidales-Rum2Bac
µL Template per Reaction: 2
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 407 Rum2Bac ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	ND	§<	192	0	copies/100mL	357	714	3	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	Detected, DNQ		602	54	copies/100mL	357	714	8	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	ND	§<	192	0	copies/100mL	358	716	3	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	ND	§<	192	0	copies/100mL	357	714	3	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	ND	§<	192	0	copies/100mL	357	714	3	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	Detected, DNQ	§<	394	211	copies/100mL	360	720	5	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	Detected, ROQ		1,700	593	copies/100mL	359	718	24	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	BDL	§<	215	41	copies/100mL	357	714	3	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	Detected, ROQ		1,227	432	copies/100mL	360	720	17	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	ND	§<	192	0	copies/100mL	357	714	3	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	ND	§<	192	0	copies/100mL	357	714	3	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	ND	§<	192	0	copies/100mL	357	714	3	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	ND	§<	192	0	copies/100mL	357	714	3	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	ND	§<	192	0	copies/100mL	357	714	3	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	BDL	§<	225	59	copies/100mL	357	714	3	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	BDL	§<	197	9	copies/100mL	357	714	3	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	ND	§<	192	0	copies/100mL	357	714	3	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	ND	§<	192	0	copies/100mL	357	714	3	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	ND	§<	192	0	copies/100mL	358	716	3	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	BDL	§<	252	104	copies/100mL	357	714	4	0

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Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	Ruminant Bacteroidales-Rum2Bac
% Efficiency	94.27
r^2	0.995
slope	-3.47
y-intercept	41.49
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.68	5.0	10.0
Ct equivalent	40.00	39.06	38.02
LOD > % amplification	85		
LLOQ StdDev	1.39		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 22
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/22/18

Assay: E.coli-EC23S857
µL Template per Reaction: 5
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 401 EC23S857 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	Detected, ROQ		2,005	948	copies/100mL	286	429	70	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	Detected, ROQ		11,834	1,771	copies/100mL	286	429	414	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	Detected, ROQ		140,390	36,133	copies/100mL	287	430	4,900	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	Detected, ROQ		1,370,564	261,909	copies/100mL	286	429	47,970	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	Detected, ROQ		112,559	9,856	copies/100mL	286	429	3,940	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	Detected, ROQ		1,803,670	308,086	copies/100mL	288	432	62,587	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	Detected, ROQ		856,961	71,343	copies/100mL	287	431	29,822	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	Detected, ROQ		7,766	819	copies/100mL	286	429	272	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	Detected, ROQ		463,136	48,088	copies/100mL	288	432	16,071	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	Detected, ROQ		543,224	96,580	copies/100mL	286	429	19,013	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	Detected, ROQ		13,642	1,925	copies/100mL	286	429	477	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	Detected, ROQ		1,310	416	copies/100mL	286	429	46	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	Detected, ROQ		285,185	20,909	copies/100mL	286	429	9,981	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	Detected, ROQ		1,112,902	88,972	copies/100mL	286	429	38,952	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	Detected, ROQ		85,715	3,804	copies/100mL	286	429	3,000	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	Detected, ROQ		322,414	24,584	copies/100mL	286	429	11,284	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	Detected, ROQ		143,414	15,345	copies/100mL	286	429	5,019	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	Detected, ROQ		219,194	32,273	copies/100mL	286	429	7,672	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	Detected, ROQ		722,792	38,838	copies/100mL	287	430	25,225	0
Field Blank-20180920	Field Blank	4744Field Blank	09/20/18	1000	FB	ND	§<	127	0	copies/100mL	286	429	4	0

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Weston Solutions qPCR Report - Sample Results

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
Methodblank-20180920	Method Blank	4745Methodblank	09/20/18	1100	FB	ND	§<	127	0	copies/100mL	286	429	4	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	Detected, ROQ		80,949	13,867	copies/100mL	286	429	2,833	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	E.coli-EC23S857		
% Efficiency	97.17		
r^2	0.998		
slope	-3.39		
y-intercept	42.19		
curve source	Weston Master Curve		
standard source	plasmid		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.4	10	15
Ct equivalent	40.00	38.80	38.20
LOD > % amplification	89		
LLOQ StdDev	0.78		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

Report template version 6.05

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 20
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/22 and 10/25/18

Assay: GeneralBacteroidales-GenBac3
µL Template per Reaction: 5
Lab Blanks: passed n= 3
No Template Controls: passed n= 6
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 402 GenBac3 rm.pcrd
Plate 412 GenBac3 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	Detected, ROQ		903,234	46,915	copies/100mL	429	571	31,613	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	Detected, ROQ		1,063,125	183,414	copies/100mL	429	571	37,209	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	Detected, ROQ		171,296	38,124	copies/100mL	430	573	5,978	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	Detected, ROQ		7,813,912	1,132,166	copies/100mL	429	571	273,487	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	Detected, ROQ		434,919	66,191	copies/100mL	429	571	15,222	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	Detected, ROQ		6,923,074	394,194	copies/100mL	432	576	240,231	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	Detected, ROQ		6,263,639	1,012,612	copies/100mL	431	575	217,975	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	Detected, ROQ		688,250	69,581	copies/100mL	429	571	24,089	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	Detected, ROQ		3,106,855	245,885	copies/100mL	432	576	107,808	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	Detected, ROQ		2,636,290	293,649	copies/100mL	429	571	92,270	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	Detected, ROQ		50,084	3,951	copies/100mL	429	571	1,753	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	Detected, ROQ		60,274	9,757	copies/100mL	429	571	2,110	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	Detected, ROQ		108,680	2,117	copies/100mL	429	571	3,804	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	Detected, ROQ		32,457,665	1,284,795	copies/100mL	429	571	1,136,018	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	Detected, ROQ		1,283,291	81,695	copies/100mL	429	571	44,915	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	Detected, ROQ		3,196,909	107,300	copies/100mL	429	571	111,892	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	Detected, ROQ		355,460	14,461	copies/100mL	429	571	12,441	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	Detected, ROQ		303,208	11,846	copies/100mL	429	571	10,612	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	Detected, ROQ		165,095	3,115	copies/100mL	430	573	5,762	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	BDL		279	146	copies/100mL	429	571	10	0

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Weston Solutions qPCR Report - Sample Results

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	GeneralBacteroidales-GenBac3		
% Efficiency	94.15		
r^2	0.991		
slope	-3.47		
y-intercept	42.24		
curve source	Weston Master Curve		
standard source	plasmid		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.42	15.0	20.0
Ct equivalent	40.00	38.16	37.72
LOD > % amplification	80		
LLOQ StdDev	0.61		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 20
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/18 and 10/19/18

Assay: HumanBacteroidales-HF183TaqmanCAMan
µL Template per Reaction: 2
Lab Blanks: passed n= 5
No Template Controls: passed n= 6
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 399 HF183TMCaMan ka.pcrd
Plate 400 HF183TMCaMan ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	ND	§<	26	0	copies/100mL	214	429	0	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	BDL	§<	69	75	copies/100mL	214	429	1	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	Detected, DNQ		350	263	copies/100mL	215	430	5	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	Detected, ROQ		3,345	922	copies/100mL	214	429	47	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	Detected, ROQ		20,847	1,829	copies/100mL	214	429	292	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	Detected, ROQ		1,891	588	copies/100mL	216	432	26	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	Detected, ROQ		2,552	336	copies/100mL	216	431	36	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	BDL	§<	29	6	copies/100mL	214	429	0	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	Detected, ROQ		1,190	397	copies/100mL	216	432	17	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	Detected, ROQ		53,005	6,759	copies/100mL	214	429	742	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	ND	§<	26	0	copies/100mL	214	429	0	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	ND	§<	26	0	copies/100mL	214	429	0	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	Detected, DNQ	§<	233	335	copies/100mL	214	429	3	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	Detected, ROQ		71,871	4,756	copies/100mL	214	429	1,006	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	ND	§<	26	0	copies/100mL	214	429	0	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	Detected, ROQ		22,304	2,062	copies/100mL	214	429	312	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	BDL		109	29	copies/100mL	214	429	2	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	ND	§<	26	0	copies/100mL	214	429	0	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	Detected, DNQ		405	180	copies/100mL	215	430	6	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	BDL		167	51	copies/100mL	214	429	2	0

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Weston Solutions qPCR Report - Sample Results

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	HumanBacteroidales-HF183TaqmanCAMan
% Efficiency	99.32
r^2	0.992
slope	-3.34
y-intercept	38.52
curve source	Weston Master Curve
standard source	genomic

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.36	3.0	6.0
Ct equivalent	40.00	36.93	35.93
LOD > % amplification	83		
LLOQ StdDev	0.85		

Copies per genome 7

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 20
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/23/18

Assay: DogBacteroidales-DogBact
µL Template per Reaction: 2
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 406 DogBact rm.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	ND	§<	150	0	copies/100mL	714	1786	2	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	BDL	§<	171	36	copies/100mL	714	1786	2	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	Detected, ROQ		10,561	3,576	copies/100mL	716	1791	147	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	Detected, ROQ		49,016	15,616	copies/100mL	714	1786	686	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	Detected, ROQ		23,673	4,458	copies/100mL	714	1786	331	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	Detected, ROQ		36,141	1,451	copies/100mL	720	1801	502	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	Detected, ROQ		18,619	3,313	copies/100mL	718	1796	259	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	ND	§<	150	0	copies/100mL	714	1786	2	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	Detected, ROQ		5,787	557	copies/100mL	720	1801	80	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	Detected, DNQ		1,132	691	copies/100mL	714	1786	16	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	Detected, ROQ		1,926	1,213	copies/100mL	714	1786	27	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	ND	§<	150	0	copies/100mL	714	1786	2	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	BDL	§<	413	284	copies/100mL	714	1786	6	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	BDL		488	445	copies/100mL	714	1786	7	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	Detected, DNQ		1,630	1,737	copies/100mL	714	1786	23	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	BDL	§<	682	472	copies/100mL	714	1786	10	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	Detected, ROQ		15,960	1,716	copies/100mL	714	1786	223	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	Detected, ROQ		2,326	1,078	copies/100mL	714	1786	33	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	Detected, ROQ		37,239	4,985	copies/100mL	716	1791	520	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	Detected, DNQ	§<	829	599	copies/100mL	714	1786	12	0

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Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	DogBacteroidales-DogBact
% Efficiency	105.35
r^2	0.990
slope	-3.20
y-intercept	41.04
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.11	10.0	25.0
Ct equivalent	40.00	37.84	36.56
LOD > % amplification	73		
LLOQ StdDev	0.55		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 20
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/22/18

Assay: AvianHelicobacter-GFDSYBRAvian
µL Template per Reaction: 2
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 403 AvianGFD ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	Detected, ROQ		69,955	2,055	copies/100mL	714	714	979	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	Detected, ROQ		19,767	1,726	copies/100mL	714	714	277	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	Detected, ROQ		6,231	1,654	copies/100mL	716	716	87	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	Detected, ROQ		9,296	1,231	copies/100mL	714	714	130	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	Detected, ROQ		6,662	1,228	copies/100mL	714	714	93	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	Detected, ROQ		14,110	1,706	copies/100mL	720	720	196	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	Detected, ROQ		13,967	809	copies/100mL	718	718	194	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	Detected, ROQ		110,240	13,565	copies/100mL	714	714	1,543	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	Detected, ROQ		34,435	2,526	copies/100mL	720	720	478	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	Detected, ROQ		21,539	1,880	copies/100mL	714	714	302	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	Detected, ROQ		12,593	1,542	copies/100mL	714	714	176	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	Detected, ROQ		2,861	585	copies/100mL	714	714	40	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	Detected, ROQ		95,613	9,426	copies/100mL	714	714	1,339	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	Detected, ROQ		9,164	1,104	copies/100mL	714	714	128	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	Detected, ROQ		40,662	5,747	copies/100mL	714	714	569	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	Detected, ROQ		21,246	5,899	copies/100mL	714	714	297	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	Detected, ROQ		4,378	362	copies/100mL	714	714	61	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	Detected, ROQ		37,749	3,552	copies/100mL	714	714	528	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	Detected, ROQ		6,264	966	copies/100mL	716	716	87	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	BDL		224	242	copies/100mL	714	714	3	0

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Weston Solutions qPCR Report - Sample Results

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	AvianHelicobacter-GFDSYBRAvian
% Efficiency	94.00
r^2	0.992
slope	-3.47
y-intercept	37.40
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.18	10.0	10.0
Ct equivalent	40.00	33.92	33.92
LOD > % amplification	100		
LLOQ StdDev	1.01		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 20
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/22/18

Assay: CowBacteroidales-Cow M2
µL Template per Reaction: 2
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 404 CowM2 rm.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	ND	§<	210	0	copies/100mL	500	714	3	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	ND	§<	210	0	copies/100mL	500	714	3	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	ND	§<	211	0	copies/100mL	501	716	3	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	ND	§<	210	0	copies/100mL	500	714	3	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	ND	§<	210	0	copies/100mL	500	714	3	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	ND	§<	212	0	copies/100mL	504	720	3	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	ND	§<	211	0	copies/100mL	503	718	3	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	ND	§<	210	0	copies/100mL	500	714	3	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	ND	§<	212	0	copies/100mL	504	720	3	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	ND	§<	210	0	copies/100mL	500	714	3	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	ND	§<	210	0	copies/100mL	500	714	3	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	ND	§<	210	0	copies/100mL	500	714	3	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	ND	§<	210	0	copies/100mL	500	714	3	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	ND	§<	210	0	copies/100mL	500	714	3	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	ND	§<	210	0	copies/100mL	500	714	3	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	ND	§<	210	0	copies/100mL	500	714	3	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	ND	§<	210	0	copies/100mL	500	714	3	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	ND	§<	210	0	copies/100mL	500	714	3	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	ND	§<	211	0	copies/100mL	501	716	3	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	ND	§<	210	0	copies/100mL	500	714	3	0

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Weston Solutions qPCR Report - Sample Results

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	CowBacteroidales-Cow M2
% Efficiency	94.22
r^2	0.996
slope	-3.47
y-intercept	41.63
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.94	7.0	10.0
Ct equivalent	40.00	38.70	38.16
LOD > % amplification	90		
LLOQ StdDev	1.03		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 20
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/23/18

Assay: Horse Bacteroidales-HorseBact
µL Template per Reaction: 2
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 405 HorseBact ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	ND	§<	59	0	copies/100mL	714	714	1	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	ND	§<	59	0	copies/100mL	714	714	1	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	ND	§<	59	0	copies/100mL	716	716	1	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	BDL	§<	80	36	copies/100mL	714	714	1	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	ND	§<	59	0	copies/100mL	714	714	1	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	ND	§<	60	0	copies/100mL	720	720	1	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	ND	§<	59	0	copies/100mL	718	718	1	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	ND	§<	59	0	copies/100mL	714	714	1	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	ND	§<	60	0	copies/100mL	720	720	1	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	ND	§<	59	0	copies/100mL	714	714	1	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	ND	§<	59	0	copies/100mL	714	714	1	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	ND	§<	59	0	copies/100mL	714	714	1	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	ND	§<	59	0	copies/100mL	714	714	1	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	ND	§<	59	0	copies/100mL	714	714	1	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	ND	§<	59	0	copies/100mL	714	714	1	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	ND	§<	59	0	copies/100mL	714	714	1	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	ND	§<	59	0	copies/100mL	714	714	1	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	BDL	§<	117	100	copies/100mL	714	714	2	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	BDL	§<	129	120	copies/100mL	716	716	2	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	BDL	§<	115	97	copies/100mL	714	714	2	0

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Weston Solutions qPCR Report - Sample Results

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	Horse Bacteroidales-HorseBact
% Efficiency	100.54
r^2	0.995
slope	-3.31
y-intercept	39.73
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.83	10.0	10.0
Ct equivalent	40.00	36.42	36.42
LOD > % amplification	100		
LLOQ StdDev	0.61		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 5
Date Received: 9/25/18
n Samples: 20
Date Filtered: 9/20/18
Date Extracted: 10/10 and 10/11/18
Date PCR: 10/24/18

Assay: Ruminant Bacteroidales-Rum2Bac
µL Template per Reaction: 2
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 20
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 407 Rum2Bac ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
UCRD-20180920	Upper Corrales Riverside Drain	4725UCRD	09/20/18	0745	FW	ND	§<	192	0	copies/100mL	357	714	3	0
RGAB-20180920	Rio Grande @ Alameda	4726RGAB	09/20/18	8000	FW	Detected, DNQ		602	54	copies/100mL	357	714	8	0
CAC-20180920	Calabacillas Arroyo	4727CAC	09/20/18	0830	FW	ND	§<	192	0	copies/100mL	358	716	3	0
ADV-20180920	Alameda drain	4728ADV	09/20/18	0915	FW	ND	§<	192	0	copies/100mL	357	714	3	0
HAC-20180920	Hahn at Carisle	4729HAC	09/20/18	1000	FW	ND	§<	192	0	copies/100mL	357	714	3	0
ADM-20180920	Alameda drain	4730ADM	09/20/18	1020	FW	Detected, DNQ	§<	394	211	copies/100mL	360	720	5	0
AwithG-20180920	Alameda drain	4731AwithG	09/20/18	1040	FW	Detected, ROQ		1,700	593	copies/100mL	359	718	24	0
AtriscoatRioB-20180920	Atrisco @ Rio Bravo	4732AtriscoRioB	09/20/18	0845	FW	BDL	§<	215	41	copies/100mL	357	714	3	0
RiversideatRioB-20180920	Riverside drain Rio B	4733RivrsdeRioB	09/20/18	0930	FW	Detected, ROQ		1,227	432	copies/100mL	360	720	17	0
WWTPOutfall-20180920	WWTP Outfall	4734WWTPOutfall	09/20/18	1005	FW	ND	§<	192	0	copies/100mL	357	714	3	0
BAatJT-20180920	Bear Arroyo @ Juan	4735BAatJT	09/20/18	0625	FW	ND	§<	192	0	copies/100mL	357	714	3	0
PinoUp-20180920	Pino Arroyo at DB	4736PinoUp	09/20/18	0650	FW	ND	§<	192	0	copies/100mL	357	714	3	0
SanAntonio-20180920	San Antonio Arroyo	4737SanAntonio	09/20/18	0730	FW	ND	§<	192	0	copies/100mL	357	714	3	0
SDCBroadway-20180920	SDC at Broadway	4738SDCBroadway	09/20/18	0850	FW	ND	§<	192	0	copies/100mL	357	714	3	0
RiverdrainatI25-20180920	Riverside Drain I25	4739RvrdrnatI25	09/20/18	0920	FW	BDL	§<	225	59	copies/100mL	357	714	3	0
RGIsleta-20180920	Rio Grande at Isleta	4740RGIsleta	09/20/18	0940	FW	BDL	§<	197	9	copies/100mL	357	714	3	0
EMBATSNHT-20180920	Embudo Arroyo Snow	4741EMBATSNHT	09/20/18	0555	FW	ND	§<	192	0	copies/100mL	357	714	3	0
BearArroyo-20180920	Bear Canyon @ Jefferson	4742BearArroyo	09/20/18	0815	FW	ND	§<	192	0	copies/100mL	357	714	3	0
PinoArroyo-20180920	Pino Arroyo at Wash	4743PinoArroyo	09/20/18	0900	FW	ND	§<	192	0	copies/100mL	358	716	3	0
RGatRioBravo-20180920	Rio Grande @ Rio Bravo	4746RGatRioB	09/20/18	0900	FW	BDL	§<	252	104	copies/100mL	357	714	4	0

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Weston Solutions qPCR Report - Sample Results

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 5 **Date Received:** 9/25/2018

Comments:

Standard Curve Metrics*

Assay	Ruminant Bacteroidales-Rum2Bac
% Efficiency	94.27
r^2	0.995
slope	-3.47
y-intercept	41.49
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.68	5.0	10.0
Ct equivalent	40.00	39.06	38.02
LOD > % amplification	85		
LLOQ StdDev	1.39		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 7
Date Received: 01/15/19
n Samples: 10
Date Filtered: 01/11/19
Date Extracted: 03/14/19
Date PCR: 04/09/19

Assay: E.coli-EC23S857
µL Template per Reaction: 5
Lab Blanks: passed n= 2
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 8
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 465 EC23S857 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
Bear Canyon Jeff - 20190111	Bear Arroyo Jefferson	5878BearCnynJff	01/11/19	1000	SW	Detected, ROQ		15,787	2,652	copies/100mL	286	429	553	0
NDC Edith - 20190111	NDC at Edith	5879NDCEdith	01/11/19	1200	SW	Detected, ROQ		29,587	2,605	copies/100mL	286	429	1,036	0
DomBac Jeff - 20190111	Domingo Baca	5880DomBacJeff	01/11/19	1240	SW	Detected, ROQ		19,829	5,122	copies/100mL	286	429	694	0
SDC Broad - 20190111	South Diversion Channel at Broadway	5881SDCBroad	01/11/19	1330	SW	Detected, ROQ		140,569	28,851	copies/100mL	286	429	4,920	0
RGI25 - 20190111	Rio Grande at I-25	5882RGI25	01/11/19	1520	SW	Detected, ROQ		148,998	28,439	copies/100mL	286	429	5,215	0
Lower Pino Wash - 20190111	Pino Arroyo at Washington	5883LwerPinoWsh	01/11/19	1335	SW	Detected, ROQ		85,705	15,828	copies/100mL	286	429	3,000	0
Hahn Car - 20190111	Hahn at Carisle	5884HahnCar	01/11/19	1415	SW	Detected, ROQ		87,406	22,081	copies/100mL	286	429	3,059	0
Al Matt - 20190111	Alameda Drain at Matthew	5885AlMatt	01/11/19	1445	SW	Detected, ROQ		135,912	20,750	copies/100mL	286	429	4,757	0
Method - 20190111	Method Blank	5886Method	01/11/19	1900	SW	ND	§<	127	0	copies/100mL	286	429	4	0
Equip - 20190111	Equipment Blank	5887Equip	01/11/19	1540	SW	ND	§<	127	0	copies/100mL	286	429	4	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 7 **Date Received:** 1/15/2019

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

5879NDCEdith; 5881SDCBroad; 5882RGI25; 5883LwerPinoWsh; 5884HahnCar; 5885AlMatt

Standard Curve Metrics*

Assay	E.coli-EC23S857
% Efficiency	97.17
r^2	0.998
slope	-3.39
y-intercept	42.19
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.4	10	15
Ct equivalent	40.00	38.80	38.20
LOD > % amplification	89		
LLOQ StdDev	0.78		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu 4/12/2019
QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 7
Date Received: 01/15/19
n Samples: 8
Date Filtered: 01/11/19
Date Extracted: 03/14/19
Date PCR: 04/09/19

Assay: General Bacteroidales-GenBac3
µL Template per Reaction: 5
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 8
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 466 GenBac3 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
Bear Canyon Jeff - 20190111	Bear Arroyo Jefferson	5878BearCnynJff	01/11/19	1000	SW	Detected, ROQ		1,238,614	59,926	copies/100mL	429	571	43,351	0
NDC Edith - 20190111	NDC at Edith	5879NDCEdith	01/11/19	1200	SW	Detected, ROQ		737,252	13,873	copies/100mL	429	571	25,804	0
DomBac Jeff - 20190111	Domingo Baca	5880DomBacJeff	01/11/19	1240	SW	Detected, ROQ		1,982,706	312,709	copies/100mL	429	571	69,395	0
SDC Broad - 20190111	South Diversion Channel at Broadway	5881SDCBroad	01/11/19	1330	SW	Detected, ROQ		9,362,475	1,700,548	copies/100mL	429	571	327,687	0
RGI25 - 20190111	Rio Grande at I-25	5882RGI25	01/11/19	1520	SW	Detected, ROQ		14,341,680	2,166,141	copies/100mL	429	571	501,959	0
Lower Pino Wash - 20190111	Pino Arroyo at Washington	5883LwerPinoWsh	01/11/19	1335	SW	Detected, ROQ		4,468,193	409,073	copies/100mL	429	571	156,387	0
Hahn Car - 20190111	Hahn at Carisle	5884HahnCar	01/11/19	1415	SW	Detected, ROQ		1,250,466	80,901	copies/100mL	429	571	43,766	0
Al Matt - 20190111	Alameda Drain at Matthew	5885AlMatt	01/11/19	1445	SW	Detected, ROQ		4,427,522	433,709	copies/100mL	429	571	154,963	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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5817 Dryden Pl, Suite 101
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www.westonsolutions.com

Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 7 **Date Received:** 1/15/2019

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

5879NDCEdith; 5881SDCBroad; 5882RGI25; 5883LwerPinoWsh; 5884HahnCar; 5885AlMatt

Standard Curve Metrics*

Assay	General Bacteroidales-GenBac3		
% Efficiency	94.15		
r^2	0.991		
slope	-3.47		
y-intercept	42.24		
curve source	Weston Master Curve		
standard source	plasmid		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.42	15	20
Ct equivalent	40.00	38.16	37.72
LOD > % amplification	80		
LLOQ StdDev	0.61		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu 4/12/2019
QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 7
Date Received: 01/15/19
n Samples: 8
Date Filtered: 01/11/19
Date Extracted: 03/14/19
Date PCR: 03/21/19

Assay: Human Bacteroidales-HF183TaqmanCAMan
µL Template per Reaction: 2
Lab Blanks: passed n= 2
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 8
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 463 HF183TMCaMan

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
Bear Canyon Jeff - 20190111	Bear Arroyo Jefferson	5878BearCnynJff	01/11/19	1000	SW	Detected, DNQ		233	137	copies/100mL	214	429	3	0
NDC Edith - 20190111	NDC at Edith	5879NDCEdith	01/11/19	1200	SW	Detected, ROQ		2,152	432	copies/100mL	214	429	30	0
DomBac Jeff - 20190111	Domingo Baca	5880DomBacJeff	01/11/19	1240	SW	Detected, DNQ	§<	260	223	copies/100mL	214	429	4	0
SDC Broad - 20190111	South Diversion Channel at Broadway	5881SDCBroad	01/11/19	1330	SW	Detected, ROQ		7,903	586	copies/100mL	214	429	111	0
RGI25 - 20190111	Rio Grande at I-25	5882RGI25	01/11/19	1520	SW	Detected, ROQ		28,614	4,984	copies/100mL	214	429	401	0
Lower Pino Wash - 20190111	Pino Arroyo at Washington	5883LwerPinoWsh	01/11/19	1335	SW	Detected, ROQ		1,590	478	copies/100mL	214	429	22	0
Hahn Car - 20190111	Hahn at Carisle	5884HahnCar	01/11/19	1415	SW	Detected, ROQ		15,863	1,719	copies/100mL	214	429	222	0
Al Matt - 20190111	Alameda Drain at Matthew	5885AlMatt	01/11/19	1445	SW	Detected, ROQ		54,386	6,961	copies/100mL	214	429	761	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 7 **Date Received:** 1/15/2019

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

5879NDCEdith; 5881SDCBroad; 5882RGI25; 5883LwerPinoWsh; 5884HahnCar; 5885AlMatt

Standard Curve Metrics*

Assay	Human Bacteroidales-HF183TaqmanCAMan
% Efficiency	99.32
r^2	0.992
slope	-3.34
y-intercept	38.52
curve source	Weston Master Curve
standard source	genomic

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.36	3.0	6.0
Ct equivalent	40.00	36.93	35.93
LOD > % amplification	83		
LLOQ StdDev	0.85		

Copies per genome 7

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu 4/12/2019
QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 7
Date Received: 01/15/19
n Samples: 8
Date Filtered: 01/11/19
Date Extracted: 03/14/19
Date PCR: 04/02/19

Assay: Dog Bacteroidales-DogBact
µL Template per Reaction: 2
Lab Blanks: passed n= 2
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 8
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 467 DogBact rm.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
Bear Canyon Jeff - 20190111	Bear Arroyo Jefferson	5878BearCnynJff	01/11/19	1000	SW	Detected, ROQ		23,041	4,169	copies/100mL	714	1786	323	0
NDC Edith - 20190111	NDC at Edith	5879NDCEdith	01/11/19	1200	SW	Detected, ROQ		26,899	4,649	copies/100mL	714	1786	377	0
DomBac Jeff - 20190111	Domingo Baca	5880DomBacJeff	01/11/19	1240	SW	Detected, ROQ		3,724	1,973	copies/100mL	714	1786	52	0
SDC Broad - 20190111	South Diversion Channel at Broadway	5881SDCBroad	01/11/19	1330	SW	Detected, ROQ		20,414	1,405	copies/100mL	714	1786	286	0
RGI25 - 20190111	Rio Grande at I-25	5882RGI25	01/11/19	1520	SW	Detected, ROQ		4,178	371	copies/100mL	714	1786	58	0
Lower Pino Wash - 20190111	Pino Arroyo at Washington	5883LwerPinoWsh	01/11/19	1335	SW	Detected, ROQ		107,518	20,647	copies/100mL	714	1786	1,505	0
Hahn Car - 20190111	Hahn at Carisle	5884HahnCar	01/11/19	1415	SW	Detected, ROQ		58,578	11,951	copies/100mL	714	1786	820	0
Al Matt - 20190111	Alameda Drain at Matthew	5885AlMatt	01/11/19	1445	SW	Detected, ROQ		166,923	33,684	copies/100mL	714	1786	2,337	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 7 **Date Received:** 1/15/2019

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

5879NDCEdith; 5881SDCBroad; 5882RGI25; 5883LwerPinoWsh; 5884HahnCar; 5885AlMatt

Standard Curve Metrics*

Assay	Dog Bacteroidales-DogBact		
% Efficiency	105.35		
r^2	0.990		
slope	-3.20		
y-intercept	41.04		
curve source	Weston Master Curve		
standard source	plasmid		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.1	10	25
Ct equivalent	40.00	37.84	36.56
LOD > % amplification	73		
LLOQ StdDev	0.55		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu 4/12/2019
QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 8
Date Received: 03/14/19
n Samples: 13
Date Filtered: 03/11/19-03/13/19
Date Extracted: 03/19/19
Date PCR: 04/9/19 and 04/11/19

Assay: E.coli-EC23S857
µL Template per Reaction: 5
Lab Blanks: passed n= 1
No Template Controls: passed n= 6
Positive Extraction Controls[A]: passed n= 11
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 465 EC23S857 ka.pcrd
Plate 469 EC23S857 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
RG-North-20190311	RG-North Angastora	5890RG-North	03/11/19	1045	SW	Detected, ROQ		6,742	688	copies/100mL	286	429	236	0
Barelas-20190312	Barelas Pump Station	5891Barelas	03/12/19	1605	SW	Detected, ROQ		1,173,557	61,641	copies/100mL	286	429	41,075	0
Tijeras-20190312	Tijeras Arroyo	5892Tijeras	03/12/19	1325	SW	Detected, ROQ		2,057	574	copies/100mL	286	429	72	0
SDC-20190312	South Diversion Channel	5893SDC	03/12/19	1445	SW	Detected, ROQ		339,723	11,913	copies/100mL	286	429	11,890	0
SanJose-20190312	San Jose Drain	5894SanJose	03/12/19	1534	SW	Detected, ROQ		275,573	46,948	copies/100mL	286	429	9,645	0
SDC-Broad-20190312	SDC @ Broadway	5895SDC-Broad	03/12/19	1530	SW	Detected, ROQ		162,379	10,620	copies/100mL	286	429	5,683	0
RG-RioBravo-20190312	RG @ Rio Bravo	5896RG-RioBravo	03/12/19	1540	SW	Detected, ROQ		7,751	1,285	copies/100mL	286	429	271	0
SDC-Chavez-20190312	SDC @ Cesar Chavez	5897SDC-Chavez	03/12/19	1545	SW	Detected, ROQ		245,692	16,962	copies/100mL	286	429	8,599	0
SWRP-20190312	WWTP Outfall	5898SWRP	03/12/19	1500	SW	Detected, ROQ		599,281	28,414	copies/100mL	286	429	20,975	0
RG-DS-WWTP-20190312	RG Downstream WWTP out	5899RG-DS-WWTP	03/12/19	1605	SW	Detected, ROQ		224,415	10,324	copies/100mL	286	429	7,855	0
EqBlank-20190312	Equipment Blank	5900EqBlank	03/12/19	1200	SW	ND	§<	127	0	copies/100mL	286	429	4	0
Method-20190312	Method Blank	5901Method	03/12/19	1925	SW	ND	§<	127	0	copies/100mL	286	429	4	0
RG-South-20190312	RG South Isleta	5902RG-South	03/13/19	0945	SW	Detected, ROQ		90,733	6,404	copies/100mL	294	441	3,085	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 8 **Date Received:** 3/14/2019

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

5891Barelas; 5893SDC; 5894SanJose; 5895SDC-Broad; 5898SWRP; 5899RG-DS-WWTP; 5902RG-South

Standard Curve Metrics*

Assay	E.coli-EC23S857
% Efficiency	97.17
r^2	0.998
slope	-3.39
y-intercept	42.19
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.4	10	15
Ct equivalent	40.00	38.80	38.20
LOD > % amplification	89		
LLOQ StdDev	0.78		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Gonemasu 4/12/2019
QC Officer (Satomi Gonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 8
Date Received: 03/14/19
n Samples: 11
Date Filtered: 3/11/19-3/13/19
Date Extracted: 03/19/19
Date PCR: 04/09/19

Assay: General Bacteroidales-GenBac3
µL Template per Reaction: 5
Lab Blanks: passed n= 1
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 11
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 466 GenBac3 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
RG-North-20190311	RG-North Angastora	5890RG-North	03/11/19	1045	SW	Detected, ROQ		945,778	35,015	copies/100mL	429	571	33,102	0
Barelas-20190312	Barelas Pump Station	5891Barelas	03/12/19	1605	SW	Detected, ROQ		100,700,654	3,977,680	copies/100mL	429	571	3,524,523	0
Tijeras-20190312	Tijeras Arroyo	5892Tijeras	03/12/19	1325	SW	Detected, ROQ		29,388	1,673	copies/100mL	429	571	1,029	0
SDC-20190312	South Diversion Channel	5893SDC	03/12/19	1445	SW	Detected, ROQ		4,449,577	302,758	copies/100mL	429	571	155,735	0
SanJose-20190312	San Jose Drain	5894SanJose	03/12/19	1534	SW	Detected, ROQ		33,118,983	3,438,320	copies/100mL	429	571	1,159,164	0
SDC-Broad-20190312	SDC @ Broadway	5895SDC-Broad	03/12/19	1530	SW	Detected, ROQ		2,362,943	100,780	copies/100mL	429	571	82,703	0
RG-RioBravo-20190312	RG @ Rio Bravo	5896RG-RioBravo	03/12/19	1540	SW	Detected, ROQ		2,457,839	239,338	copies/100mL	429	571	86,024	0
SDC-Chavez-20190312	SDC @ Cesar Chavez	5897SDC-Chavez	03/12/19	1545	SW	Detected, ROQ		5,342,236	179,811	copies/100mL	429	571	186,978	0
SWRP-20190312	WWTP Outfall	5898SWRP	03/12/19	1500	SW	Detected, ROQ		16,915,733	1,451,386	copies/100mL	429	571	592,051	0
RG-DS-WWTP-20190312	RG Downstream WWTP out	5899RG-DS-WWTP	03/12/19	1605	SW	Detected, ROQ		9,532,700	700,727	copies/100mL	429	571	333,644	0
RG-South-20190312	RG South Isleta	5902RG-South	03/13/19	0945	SW	Detected, ROQ		8,071,021	533,211	copies/100mL	441	588	274,415	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 8 **Date Received:** 3/14/2019

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

5891Barelas; 5893SDC; 5894SanJose; 5895SDC-Broad; 5898SWRP; 5899RG-DS-WWTP; 5902RG-South

Standard Curve Metrics*

Assay	General Bacteroidales-GenBac3
% Efficiency	94.15
r^2	0.991
slope	-3.47
y-intercept	42.24
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.42	15	20
Ct equivalent	40.00	38.16	37.72
LOD > % amplification	80		
LLOQ StdDev	0.61		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu 4/12/2019
QC Officer (Satomi Yonemasu) Date

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(760) 795-6900 / (760) 931-1580
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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 8
Date Received: 03/14/19
n Samples: 11
Date Filtered: 03/11/19-03/13/19
Date Extracted: 03/19/19
Date PCR: 03/21/19

Assay: Human Bacteroidales-HF183TaqmanCAMan
µL Template per Reaction: 2
Lab Blanks: passed n= 1
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 11
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 464 HF183TMCaMan ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
RG-North-20190311	RG-North Angastora	5890RG-North	03/11/19	1045	SW	Detected, ROQ		1,285	636	copies/100mL	214	429	18	0
Barelas-20190312	Barelas Pump Station	5891Barelas	03/12/19	1605	SW	Detected, ROQ		952,088	145,354	copies/100mL	214	429	13,329	0
Tijeras-20190312	Tijeras Arroyo	5892Tijeras	03/12/19	1325	SW	BDL	§<	116	79	copies/100mL	214	429	2	0
SDC-20190312	South Diversion Channel	5893SDC	03/12/19	1445	SW	Detected, ROQ		1,615	598	copies/100mL	214	429	23	0
SanJose-20190312	San Jose Drain	5894SanJose	03/12/19	1534	SW	Detected, ROQ		334,046	44,330	copies/100mL	214	429	4,677	0
SDC-Broad-20190312	SDC @ Broadway	5895SDC-Broad	03/12/19	1530	SW	Detected, ROQ		3,060	287	copies/100mL	214	429	43	0
RG-RioBravo-20190312	RG @ Rio Bravo	5896RG-RioBravo	03/12/19	1540	SW	Detected, ROQ		1,263	432	copies/100mL	214	429	18	0
SDC-Chavez-20190312	SDC @ Cesar Chavez	5897SDC-Chavez	03/12/19	1545	SW	Detected, ROQ		1,206	238	copies/100mL	214	429	17	0
SWRP-20190312	WWTP Outfall	5898SWRP	03/12/19	1500	SW	Detected, ROQ		407,340	35,962	copies/100mL	214	429	5,703	0
RG-DS-WWTP-20190312	RG Downstream WWTP out	5899RG-DS-WWTP	03/12/19	1605	SW	Detected, ROQ		151,347	5,024	copies/100mL	214	429	2,119	0
RG-South-20190312	RG South Isleta	5902RG-South	03/13/19	0945	SW	Detected, ROQ		45,385	5,961	copies/100mL	221	441	617	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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5817 Dryden Pl, Suite 101
Carlsbad, CA 92008
(760) 795-6900 / (760) 931-1580
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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 8 **Date Received:** 3/14/2019

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

5891Barelas; 5893SDC; 5894SanJose; 5895SDC-Broad; 5898SWRP; 5899RG-DS-WWTP; 5902RG-South

Standard Curve Metrics*

Assay	Human Bacteroidales-HF183TaqmanCAMan
% Efficiency	99.32
r^2	0.992
slope	-3.34
y-intercept	38.52
curve source	Weston Master Curve
standard source	genomic

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.36	3.0	6.0
Ct equivalent	40.00	36.93	35.93
LOD > % amplification	83		
LLOQ StdDev	0.85		

Copies per genome 7

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu 4/12/2019
QC Officer (Satomi Yonemasu Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: 8
Date Received: 03/14/19
n Samples: 11
Date Filtered: 3/11/19-3/13/19
Date Extracted: 03/19/19
Date PCR: 04/02/19

Assay: Dog Bacteroidales-DogBact
µL Template per Reaction: 2
Lab Blanks: passed n= 1
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 11
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 467 DogBact rm.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
RG-North-20190311	RG-North Angastora	5890RG-North	03/11/19	1045	SW	BDL	§<	380	397	copies/100mL	714	1786	5	0
Barelas-20190312	Barelas Pump Station	5891Barelas	03/12/19	1605	SW	Detected, ROQ		140,515	13,523	copies/100mL	714	1786	1,967	0
Tijeras-20190312	Tijeras Arroyo	5892Tijeras	03/12/19	1325	SW	BDL	§<	368	377	copies/100mL	714	1786	5	0
SDC-20190312	South Diversion Channel	5893SDC	03/12/19	1445	SW	Detected, ROQ		95,586	11,886	copies/100mL	714	1786	1,338	0
SanJose-20190312	San Jose Drain	5894SanJose	03/12/19	1534	SW	Detected, ROQ		559,935	114,361	copies/100mL	714	1786	7,839	0
SDC-Broad-20190312	SDC @ Broadway	5895SDC-Broad	03/12/19	1530	SW	Detected, ROQ		10,240	2,210	copies/100mL	714	1786	143	0
RG-RioBravo-20190312	RG @ Rio Bravo	5896RG-RioBravo	03/12/19	1540	SW	BDL		425	109	copies/100mL	714	1786	6	0
SDC-Chavez-20190312	SDC @ Cesar Chavez	5897SDC-Chavez	03/12/19	1545	SW	Detected, ROQ		4,845	2,372	copies/100mL	714	1786	68	0
SWRP-20190312	WWTP Outfall	5898SWRP	03/12/19	1500	SW	Detected, ROQ		5,169	1,410	copies/100mL	714	1786	72	0
RG-DS-WWTP-20190312	RG Downstream WWTP out	5899RG-DS-WWTP	03/12/19	1605	SW	Detected, ROQ		5,522	2,235	copies/100mL	714	1786	77	0
RG-South-20190312	RG South Isleta	5902RG-South	03/13/19	0945	SW	Detected, ROQ		6,952	1,924	copies/100mL	735	1838	95	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by substituting Cq with maximum number of cycles (Boehm et al., 2013). [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Carlsbad, CA 92008
(760) 795-6900 / (760) 931-1580
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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** 8 **Date Received:** 3/14/2019

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

5891Barelas; 5893SDC; 5894SanJose; 5895SDC-Broad; 5898SWRP; 5899RG-DS-WWTP; 5902RG-South

Standard Curve Metrics*

Assay	Dog Bacteroidales-DogBact
% Efficiency	105.35
r^2	0.990
slope	-3.20
y-intercept	41.04
curve source	Weston Master Curve
standard source	plasmid

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.1	10	25
Ct equivalent	40.00	37.84	36.56
LOD > % amplification	73		
LLOQ StdDev	0.55		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu 4/12/2019
QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: No 9
Date Received: 05/14/19
n Samples: 12
Date Filtered: 05/10/19
Date Extracted: 05/22/19
Date qPCR: 05/29/19

Assay: E.coli - EC23S857
µL Template per Reaction: 2 **Method:** qPCR
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 10
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 483 EC23S857 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
SanJose-20190510	San Jose	6021SanJose	05/10/19	1035	SW	Detected, ROQ		7,770,890	841,265	copies/100mL	714	1071	108,792	0
SDC-Chavez-20190510	SDC Chavez	6022SDCChavez	05/10/19	0910	SW	Detected, ROQ		1,349,920	17,512	copies/100mL	714	1071	18,899	0
RGRioBravo-20190510	RG-Rio Bravo	6023RGRioBravo	05/10/19	0920	SW	Detected, ROQ		2,261	883	copies/100mL	714	1071	32	0
SWRP-20190510	SWRP	6024-SWRP	05/10/19	1015	SW	Detected, ROQ		233,562	52,410	copies/100mL	735	1103	3,176	0
RG-DS-WWTP-20190510	RG-DS-WWTP	6025RG-DS-WWTP	05/10/19	1045	SW	Detected, ROQ		1,830	1,016	copies/100mL	714	1071	26	0
VitoRomero-20190510	Vito Romero	6026VitoRomero	05/10/19	1135	SW	Detected, ROQ		109,416	23,709	copies/100mL	735	1103	1,488	0
SDCWoodward-20190510	SDC @ Woodward	6027SDCWoodward	05/10/19	0935	SW	Detected, ROQ		263,004	37,849	copies/100mL	758	1136	3,472	0
Barelas-20190510	Barelas Pump	6028Barelas	05/10/19	0932	SW	Detected, ROQ		1,904,974	233,300	copies/100mL	758	1136	25,146	0
RG-Bridge-20190510	RG-Bridge	6029RGBridge	05/10/19	1000	SW	Detected, ROQ		1,456	469	copies/100mL	714	1071	20	0
Equipblank-20190510	Equipment Blank	6030EquipBlank	05/10/19	1130	Blank	ND	§<	316	0	copies/100mL	714	1071	4	N/A
Methodblank-20190510	Method Blank	6031MethBlank	05/10/19	1700	Blank	ND	§<	316	0	copies/100mL	714	1071	4	N/A
RG-VDO-20190510	RG @ VDO	6032-RG-VDO	05/10/19	1100	SW	Detected, ROQ		7,412	1,655	copies/100mL	714	1071	104	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by a) qPCR: substituting Cq with maximum number of cycles (Boehm et al., 2013) or b) ddPCR: substituting with 1 cpr. [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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5817 Dryden Pl, Suite 101
Carlsbad, CA 92008
(760) 795-6900 / (760) 931-1580
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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** No 9 **Date Received:** 5/14/2019

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

6021SanJose; 6022SDCChavez; 6024-SWRP; 6028Barelas; 6032-RG-VDO

Standard Curve Metrics

Assay	E.coli - EC23S857
% Efficiency	97.17
r^2	0.998
slope	-3.39
y-intercept	42.19
curve source	Weston Master Curve
standard source:	plasmid, undigested

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.4	10	15
Ct equivalent	40.00	38.80	38.20
LOD > % amplification	89		
LLOQ StdDev	0.78		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu 6/3/2019
QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: No 9
Date Received: 05/14/19
n Samples: 10
Date Filtered: 05/10/19
Date Extracted: 05/22/19
Date qPCR: 05/27 and 05/31/19

Assay: General Bacteroidales - GenBac3
µL Template per Reaction: 2 **Method:** qPCR
Lab Blanks: passed n= 3
No Template Controls: passed n= 6
Positive Extraction Controls[A]: passed n= 10
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 482 HF183TMCaMan ka.pcrd
Plate 489 GenBac3 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
SanJose-20190510	San Jose	6021SanJose	05/10/19	1035	SW	Detected, ROQ		37,115,165	1,851,531	copies/100mL	1071	1429	519,612	0
SDC-Chavez-20190510	SDC Chavez	6022SDCChavez	05/10/19	0910	SW	Detected, ROQ		27,090,055	4,630,844	copies/100mL	1071	1429	379,261	0
RGRioBravo-20190510	RG-Rio Bravo	6023RGRioBravo	05/10/19	0920	SW	Detected, ROQ		692,294	238,524	copies/100mL	1071	1429	9,692	0
SWRP-20190510	SWRP	6024-SWRP	05/10/19	1015	SW	Detected, ROQ		3,580,941	622,631	copies/100mL	1103	1471	48,701	0
RG-DS-WWTP-20190510	RG-DS-WWTP	6025RG-DS-WWTP	05/10/19	1045	SW	Detected, ROQ		1,014,397	189,574	copies/100mL	1071	1429	14,202	0
VitoRomero-20190510	Vito Romero	6026VitoRomero	05/10/19	1135	SW	Detected, ROQ		63,991,251	11,861,686	copies/100mL	1103	1471	870,281	0
SDCWoodward-20190510	SDC @ Woodward	6027SDCWoodward	05/10/19	0935	SW	Detected, ROQ		1,051,094	115,352	copies/100mL	1136	1515	13,874	0
Barelas-20190510	Barelas Pump	6028Barelas	05/10/19	0932	SW	Detected, ROQ		47,043,417	15,774,487	copies/100mL	1136	1515	620,973	0
RG-Bridge-20190510	RG-Bridge	6029RGBridge	05/10/19	1000	SW	Detected, ROQ		448,691	19,087	copies/100mL	1071	1429	6,282	0
RG-VDO-20190510	RG @ VDO	6032-RG-VDO	05/10/19	1100	SW	Detected, ROQ		1,207,195	63,788	copies/100mL	1071	1429	16,901	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by a) qPCR: substituting Cq with maximum number of cycles (Boehm et al., 2013) or b) ddPCR: substituting with 1 cpr. [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** No 9 **Date Received:** 5/14/2019

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

6021SanJose; 6022SDCChavez; 6024-SWRP; 6028Barelas; 6032-RG-VDO

Standard Curve Metrics

Assay	General Bacteroidales - GenBac3
% Efficiency	94.15
r^2	0.991
slope	-3.47
y-intercept	42.24
curve source	Weston Master Curve
standard source:	plasmid, undigested

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.4	15	20
Ct equivalent	40.00	38.16	37.72
LOD > % amplification	80		
LLOQ StdDev	0.61		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu 6/3/2019
QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: No 9
Date Received: 05/14/19
n Samples: 10
Date Filtered: 05/10/19
Date Extracted: 05/22/19
Date qPCR: 05/27 and 05/31/19

Assay: General Bacteroidales - GenBac3
µL Template per Reaction: 2 **Method:** qPCR
Lab Blanks: passed n= 3
No Template Controls: passed n= 6
Positive Extraction Controls[A]: passed n= 10
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 484 GenBac3 ka.pcrd
Plate 489 GenBac3 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
SanJose-20190510	San Jose	6021SanJose	05/10/19	1035	SW	Detected, ROQ		37,115,165	1,851,531	copies/100mL	1071	1429	519,612	0
SDC-Chavez-20190510	SDC Chavez	6022SDCChavez	05/10/19	0910	SW	Detected, ROQ		27,090,055	4,630,844	copies/100mL	1071	1429	379,261	0
RGRioBravo-20190510	RG-Rio Bravo	6023RGRioBravo	05/10/19	0920	SW	Detected, ROQ		692,294	238,524	copies/100mL	1071	1429	9,692	0
SWRP-20190510	SWRP	6024-SWRP	05/10/19	1015	SW	Detected, ROQ		3,580,941	622,631	copies/100mL	1103	1471	48,701	0
RG-DS-WWTP-20190510	RG-DS-WWTP	6025RG-DS-WWTP	05/10/19	1045	SW	Detected, ROQ		1,014,397	189,574	copies/100mL	1071	1429	14,202	0
VitoRomero-20190510	Vito Romero	6026VitoRomero	05/10/19	1135	SW	Detected, ROQ		63,991,251	11,861,686	copies/100mL	1103	1471	870,281	0
SDCWoodward-20190510	SDC @ Woodward	6027SDCWoodward	05/10/19	0935	SW	Detected, ROQ		1,051,094	115,352	copies/100mL	1136	1515	13,874	0
Barelas-20190510	Barelas Pump	6028Barelas	05/10/19	0932	SW	Detected, ROQ		47,043,417	15,774,487	copies/100mL	1136	1515	620,973	0
RG-Bridge-20190510	RG-Bridge	6029RGBridge	05/10/19	1000	SW	Detected, ROQ		448,691	19,087	copies/100mL	1071	1429	6,282	0
RG-VDO-20190510	RG @ VDO	6032-RG-VDO	05/10/19	1100	SW	Detected, ROQ		1,207,195	63,788	copies/100mL	1071	1429	16,901	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by a) qPCR: substituting Cq with maximum number of cycles (Boehm et al., 2013) or b) ddPCR: substituting with 1 cpr. [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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5817 Dryden Pl, Suite 101
Carlsbad, CA 92008
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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** No 9 **Date Received:** 5/14/2019

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

6021SanJose; 6022SDCChavez; 6024-SWRP; 6028Barelas; 6032-RG-VDO

Standard Curve Metrics

Assay	General Bacteroidales - GenBac3
% Efficiency	94.15
r^2	0.991
slope	-3.47
y-intercept	42.24
curve source	Weston Master Curve
standard source:	plasmid, undigested

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.4	15	20
Ct equivalent	40.00	38.16	37.72
LOD > % amplification	80		
LLOQ StdDev	0.61		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu 6/3/2019
QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: No 9
Date Received: 05/14/19
n Samples: 10
Date Filtered: 05/10/19
Date Extracted: 05/22/19
Date qPCR: 05/27 and 05/30/19

Assay: Human Bacteroidales - HF183TMCaMan
µL Template per Reaction: 2 **Method:** qPCR
Lab Blanks: passed n= 3
No Template Controls: passed n= 6
Positive Extraction Controls[A]: passed n= 10
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 482 HF183TMCaMan ka.pcrd
Plate 488 HF183TMCaMan ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
SanJose-20190510	San Jose	6021SanJose	05/10/19	1035	SW	Detected, ROQ		143,076	11,562	copies/100mL	214	429	2,003	0
SDC-Chavez-20190510	SDC Chavez	6022SDCChavez	05/10/19	0910	SW	Detected, ROQ		1,634	1,310	copies/100mL	214	429	23	0
RGRioBravo-20190510	RG-Rio Bravo	6023RGRioBravo	05/10/19	0920	SW	Detected, ROQ		475	207	copies/100mL	214	429	7	0
SWRP-20190510	SWRP	6024-SWRP	05/10/19	1015	SW	Detected, ROQ		40,630	18,200	copies/100mL	221	441	553	0
RG-DS-WWTP-20190510	RG-DS-WWTP	6025RG-DS-WWTP	05/10/19	1045	SW	Detected, DNQ		372	151	copies/100mL	214	429	5	0
VitoRomero-20190510	Vito Romero	6026VitoRomero	05/10/19	1135	SW	ND	§<	27	0	copies/100mL	221	441	0	0
SDCWoodward-20190510	SDC @ Woodward	6027SDCWoodward	05/10/19	0935	SW	Detected, ROQ		1,226	907	copies/100mL	227	455	16	0
Barelas-20190510	Barelas Pump	6028Barelas	05/10/19	0932	SW	Detected, ROQ		219,228	44,931	copies/100mL	227	455	2,894	0
RG-Bridge-20190510	RG-Bridge	6029RGBridge	05/10/19	1000	SW	Detected, DNQ		219	75	copies/100mL	214	429	3	0
RG-VDO-20190510	RG @ VDO	6032-RG-VDO	05/10/19	1100	SW	Detected, ROQ		1,808	579	copies/100mL	214	429	25	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by a) qPCR: substituting Cq with maximum number of cycles (Boehm et al., 2013) or b) ddPCR: substituting with 1 cpr. [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** No 9 **Date Received:** 5/14/2019

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

6021SanJose; 6022SDCChavez; 6024-SWRP; 6028Barelas; 6032-RG-VDO

Standard Curve Metrics

Assay	Human Bacteroidales - HF183TMCaMan		
% Efficiency	99.32		
r^2	0.992		
slope	-3.34		
y-intercept	38.52		
curve source	Weston Master Curve		
standard source:	genomic DNA		
Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.36	3.0	6.0
Ct equivalent	40.00	36.93	35.93
LOD > % amplification	83		
LLOQ StdDev	0.85		
Copies per genome	7		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Gonemasu 6/3/2019
QC Officer (Satomi Gonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: No 9
Date Received: 05/14/19
n Samples: 10
Date Filtered: 05/10/19
Date Extracted: 05/22/19
Date qPCR: 05/29 and 05/31/19

Assay: Dog Bacteroidales - DogBact
µL Template per Reaction: 2 **Method:** qPCR
Lab Blanks: passed n= 3
No Template Controls: passed n= 6
Positive Extraction Controls[A]: passed n= 10
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 485 DogBact ka.pcrd
Plate 490 DogBact rm.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
SanJose-20190510	San Jose	6021SanJose	05/10/19	1035	SW	Detected, ROQ		807,703	135,939	copies/100mL	714	1786	11,308	0
SDC-Chavez-20190510	SDC Chavez	6022SDCChavez	05/10/19	0910	SW	Detected, ROQ		17,833	1,969	copies/100mL	714	1786	250	0
RGRioBravo-20190510	RG-Rio Bravo	6023RGRioBravo	05/10/19	0920	SW	BDL	§<	198	65	copies/100mL	714	1786	3	0
SWRP-20190510	SWRP	6024-SWRP	05/10/19	1015	SW	Detected, DNQ	§<	819	703	copies/100mL	735	1838	11	0
RG-DS-WWTP-20190510	RG-DS-WWTP	6025RG-DS-WWTP	05/10/19	1045	SW	BDL	§<	194	76	copies/100mL	714	1786	3	0
VitoRomero-20190510	Vito Romero	6026VitoRomero	05/10/19	1135	SW	Detected, ROQ		92,104	14,216	copies/100mL	735	1838	1,253	0
SDCWoodward-20190510	SDC @ Woodward	6027SDCWoodward	05/10/19	0935	SW	Detected, ROQ		13,978	5,511	copies/100mL	758	1894	185	0
Barelas-20190510	Barelas Pump	6028Barelas	05/10/19	0932	SW	Detected, ROQ		5,078	1,456	copies/100mL	758	1894	67	0
RG-Bridge-20190510	RG-Bridge	6029RGBridge	05/10/19	1000	SW	BDL	§<	167	28	copies/100mL	714	1786	2	0
RG-VDO-20190510	RG @ VDO	6032-RG-VDO	05/10/19	1100	SW	BDL	§<	290	106	copies/100mL	714	1786	4	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by a) qPCR: substituting Cq with maximum number of cycles (Boehm et al., 2013) or b) ddPCR: substituting with 1 cpr. [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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5817 Dryden Pl, Suite 101
Carlsbad, CA 92008
(760) 795-6900 / (760) 931-1580
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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** No 9 **Date Received:** 5/14/2019

Comments:
For the samples listed below (Weston DNA-ID) the Inhibition control via B.dorei spike was not possible due to the HF183TMCaMan marker concentration (>20 cpr). Inhibition was assessed via qPCR performance of internal process control (sketa) instead.

6021SanJose; 6022SDCChavez; 6024-SWRP; 6028Barelas; 6032-RG-VDO

Standard Curve Metrics

Assay	Dog Bacteroidales - DogBact
% Efficiency	105.35
r^2	0.990
slope	-3.20
y-intercept	41.04
curve source	Weston Master Curve
standard source:	plasmid, undigested

Site Conclusion Values	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.1	10	25
Ct equivalent	40.00	37.84	36.56
LOD > % amplification	73		
LLOQ StdDev	0.55		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu 6/3/2019
QC Officer (Satomi Yonemasu) Date

Report template version 7.01

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: No 10
Date Received: 10/08/19
n Samples: 15
Date Filtered: 10/04/19
Date Extracted: 10/22/19
Date qPCR: 10/30 and 11/06/19

Assay: E.coli - EC23S857
µL Template per Reaction: 5
Lab Blanks: passed
No Template Controls: passed
Positive Extraction Controls[A]: passed
Inhibition Control[B]: HF183 (B.dorei)
File name(s): Plate 581 EC23S857 rm.pcrd
Plate 608 EC23S857 ka.pcrd

Method: qPCR
n= 3
n= 6
n= 15
Sketa

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
Fieldblank-20191004	Equipment Blank	7583FieldBlk100419	10/04/19	1210	FW	ND	§<	127	0	copies/100mL	286	429	4	0
Methodblank-20191004	Method Blank	7584MthdBlk100419	10/04/19	1700	FW	ND	§<	127	0	copies/100mL	286	429	4	0
SDCChavez-20191004	SDCChavez	7585SDCChavez1004	10/04/19	0905	FW	Detected, ROQ		636,675	94,772	copies/100mL	286	429	22,284	0
Barelas-20191004	Barelas Pump	7586Barelas100419	10/04/19	0930	FW	Detected, ROQ		36,977,930	6,058,911	copies/100mL	286	429	1,294,228	0
RG-Bridge-20191004	RG-Bridge	7587RGBridge1004	10/04/19	0950	FW	Detected, ROQ		7,117	2,744	copies/100mL	286	429	249	0
Vito Romero-20191004	Vito Romero	7588VitoRomero1004	10/04/19	1020	FW	Detected, ROQ		716,081	60,904	copies/100mL	286	429	25,063	0
SWRP-20191004	SWRP	7589SWRP20191004	10/04/19	1110	FW	Detected, ROQ		330,495	32,192	copies/100mL	286	429	11,567	0
SDCTijeras-20191004	SDC at Tijeras	7590SDCTijeras1004	10/04/19	0910	FW	Detected, ROQ		205,143	4,035	copies/100mL	286	429	7,180	0
San Jose-20191004	San Jose	7591SanJose1004	10/04/19	0910	FW	Detected, ROQ		445,852	28,896	copies/100mL	286	429	15,605	0
Tijeras-20191004	Tijeras	7592Tijeras100419	10/04/19	0940	FW	Detected, ROQ		10,202	226	copies/100mL	286	429	357	0
RG-VDO-20191004	RG-VDO	7593RGVDO100419	10/04/19	1025	FW	Detected, ROQ		77,775	2,918	copies/100mL	286	429	2,722	0
SDC-Broad-20191004	SDC-Broad	7594SDCBroad1004	10/04/19	1030	FW	Detected, ROQ		1,251,894	357,855	copies/100mL	286	429	43,816	0
RG-I25-20191004	RG-I25	7595RGI25100419	10/04/19	1055	FW	Detected, ROQ		47,984	5,607	copies/100mL	290	435	1,655	0
RG-DS-WWTP-20191004	RG-DS-WWTP	7596RGDSWWTP	10/04/19	1145	FW	Detected, ROQ		43,545	564	copies/100mL	286	429	1,524	0
RG-RioBravo-20191004	RG-Rio Bravo	7597RGRioBravo	10/04/19	1200	FW	Detected, ROQ		409,706	31,052	copies/100mL	286	429	14,340	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by a) qPCR: substituting Cq with maximum number of cycles (Boehm et al., 2013) or b) ddPCR: substituting with 1 cpr. [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** No 10 **Date Received:** 10/8/2019

Comments:

Standard Curve Metrics

Assay	E.coli - EC23S857
% Efficiency	97.17
r^2	0.998
slope	-3.39
y-intercept	42.19
curve source	Weston Master Curve
standard source:	plasmid, undigested

Method Detection Limits	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.4	10	15
Ct equivalent	40.00	38.80	38.20
LOD > % amplification	89		
LLOQ StdDev	0.78		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu 11/8/2019
QC Officer (Satomi Yonemasu) Date

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5817 Dryden Pl, Suite 101
Carlsbad, CA 92008
(760) 795-6900 / (760) 931-1580
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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: No 10
Date Received: 10/08/19
n Samples: 13
Date Filtered: 10/04/19
Date Extracted: 10/22/19
Date qPCR: 10/29 and 11/6/19

Assay: General Bacteroidales - GenBac3
µL Template per Reaction: 5 **Method:** qPCR
Lab Blanks: passed n= 3
No Template Controls: passed n= 6
Positive Extraction Controls[A]: passed n= 13
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 579 GenBac3 ka.pcrd
Plate 607 GenBac3 ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
SDCChavez-20191004	SDCChavez	7585SDCChavez1004	10/04/19	0905	FW	Detected, ROQ		750,567	64,523	copies/100mL	429	571	26,270	0
Barelas-20191004	Barelas Pump	7586Barelas100419	10/04/19	0930	FW	Detected, ROQ		1,217,301	180,090	copies/100mL	429	571	42,606	0
RG-Bridge-20191004	RG-Bridge	7587RGBridge1004	10/04/19	0950	FW	Detected, ROQ		594,270	96,669	copies/100mL	429	571	20,799	0
Vito Romero-20191004	Vito Romero	7588VitoRomero1004	10/04/19	1020	FW	Detected, ROQ		179,114	39,350	copies/100mL	429	571	6,269	0
SWRP-20191004	SWRP	7589SWRP20191004	10/04/19	1110	FW	Detected, ROQ		1,115,215	220,518	copies/100mL	429	571	39,033	0
SDCTijeras-20191004	SDC at Tijeras	7590SDCTijeras1004	10/04/19	0910	FW	Detected, ROQ		467,325	45,326	copies/100mL	429	571	16,356	0
San Jose-20191004	San Jose	7591SanJose1004	10/04/19	0910	FW	Detected, ROQ		243,967	4,257	copies/100mL	429	571	8,539	0
Tijeras-20191004	Tijeras	7592Tijeras100419	10/04/19	0940	FW	Detected, ROQ		2,854	283	copies/100mL	429	571	100	0
RG-VDO-20191004	RG-VDO	7593RGVDO100419	10/04/19	1025	FW	Detected, ROQ		789,241	155,647	copies/100mL	429	571	27,623	0
SDC-Broad-20191004	SDC-Broad	7594SDCBroad1004	10/04/19	1030	FW	Detected, ROQ		497,330	38,374	copies/100mL	429	571	17,407	0
RG-I25-20191004	RG-I25	7595RGI25100419	10/04/19	1055	FW	Detected, ROQ		635,923	11,413	copies/100mL	435	580	21,939	0
RG-DS-WWTP-20191004	RG-DS-WWTP	7596RGDSWWTP	10/04/19	1145	FW	Detected, ROQ		493,969	31,912	copies/100mL	429	571	17,289	0
RG-RioBravo-20191004	RG-Rio Bravo	7597RGRioBravo	10/04/19	1200	FW	Detected, ROQ		375,723	25,639	copies/100mL	429	571	13,150	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by a) qPCR: substituting Cq with maximum number of cycles (Boehm et al., 2013) or b) ddPCR: substituting with 1 cpr. [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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5817 Dryden Pl, Suite 101
Carlsbad, CA 92008
(760) 795-6900 / (760) 931-1580
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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** No 10 **Date Received:** 10/8/2019

Comments:

Standard Curve Metrics

Assay	General Bacteroidales - GenBac3
% Efficiency	94.15
r^2	0.991
slope	-3.47
y-intercept	42.24
curve source	Weston Master Curve
standard source:	plasmid, undigested

Method Detection Limits	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	4.42	15.0	20.0
Ct equivalent	40.00	38.16	37.72
LOD > % amplification	80		
LLOQ StdDev	0.61		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu 11/8/2019
QC Officer (Satomi Yonemasu) Date

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Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: No 10
Date Received: 10/08/19
n Samples: 13
Date Filtered: 10/04/19
Date Extracted: 10/22/19
Date qPCR: 10/23/19

Assay: Human Bacteroidales - HF183TMCaMan
µL Template per Reaction: 2 **Method:** qPCR
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 13
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 577 HF183TMCaMan ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
SDCChavez-20191004	SDCChavez	7585SDCChavez1004	10/04/19	0905	FW	BDL		174	123	copies/100mL	214	429	2	0
Barelas-20191004	Barelas Pump	7586Barelas100419	10/04/19	0930	FW	Detected, ROQ		28,355	2,847	copies/100mL	214	429	397	0
RG-Bridge-20191004	RG-Bridge	7587RGBridge1004	10/04/19	0950	FW	BDL		202	115	copies/100mL	214	429	3	0
Vito Romero-20191004	Vito Romero	7588VitoRomero1004	10/04/19	1020	FW	ND	§<	26	0	copies/100mL	214	429	0	0
SWRP-20191004	SWRP	7589SWRP20191004	10/04/19	1110	FW	Detected, ROQ		58,500	11,194	copies/100mL	214	429	819	0
SDCTijeras-20191004	SDC at Tijeras	7590SDCTijeras1004	10/04/19	0910	FW	Detected, ROQ		856	634	copies/100mL	214	429	12	0
San Jose-20191004	San Jose	7591SanJose1004	10/04/19	0910	FW	Detected, ROQ		1,239	555	copies/100mL	214	429	17	0
Tijeras-20191004	Tijeras	7592Tijeras100419	10/04/19	0940	FW	BDL	§<	50	43	copies/100mL	214	429	1	0
RG-VDO-20191004	RG-VDO	7593RGVDO100419	10/04/19	1025	FW	Detected, ROQ		10,966	749	copies/100mL	214	429	154	0
SDC-Broad-20191004	SDC-Broad	7594SDCBroad1004	10/04/19	1030	FW	Detected, ROQ		644	246	copies/100mL	214	429	9	0
RG-I25-20191004	RG-I25	7595RGI25100419	10/04/19	1055	FW	Detected, ROQ		9,112	655	copies/100mL	217	435	126	0
RG-DS-WWTP-20191004	RG-DS-WWTP	7596RGDSWWTP	10/04/19	1145	FW	Detected, ROQ		2,764	264	copies/100mL	214	429	39	0
RG-RioBravo-20191004	RG-Rio Bravo	7597RGRioBravo	10/04/19	1200	FW	Detected, ROQ		502	118	copies/100mL	214	429	7	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by a) qPCR: substituting Cq with maximum number of cycles (Boehm et al., 2013) or b) ddPCR: substituting with 1 cpr. [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

WESTON SOLUTIONS, INC.
5817 Dryden Pl, Suite 101
Carlsbad, CA 92008
(760) 795-6900 / (760) 931-1580
www.westonsolutions.com

Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** No 10 **Date Received:** 10/8/2019

Comments:

Standard Curve Metrics

Assay	Human Bacteroidales - HF183TMCaMan		
% Efficiency	99.32		
r^2	0.992		
slope	-3.34		
y-intercept	38.52		
curve source	Weston Master Curve		
standard source:	genomic DNA		
Method Detection Limits	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	0.36	3.0	6.0
Ct equivalent	40.00	36.93	35.93
LOD > % amplification	83		
LLOQ StdDev	0.85		

Copies per genome 7

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu 11/8/2019
QC Officer (Satomi Yonemasu) Date

Report template version 7.04

WESTON SOLUTIONS, INC.
5817 Dryden Pl, Suite 101
Carlsbad, CA 92008
(760) 795-6900 / (760) 931-1580
www.westonsolutions.com

Weston Solutions qPCR Report - Sample Results

Client: Daniel B Stephens & Assoc.
Project: COA MST
Survey: No 10
Date Received: 10/08/19
n Samples: 13
Date Filtered: 10/04/19
Date Extracted: 10/22/19
Date qPCR: 10/25/19

Assay: Dog Bacteroidales - DogBact
µL Template per Reaction: 2 **Method:** qPCR
Lab Blanks: passed n= 3
No Template Controls: passed n= 3
Positive Extraction Controls[A]: passed n= 13
Inhibition Control[B]: HF183 (B.dorei) Sketa
File name(s): Plate 580 DogBact ka.pcrd

Sample ID	Site ID	Weston DNA ID	Date Sampled	Time Sampled	Matrix	Sample Result[C]	Qualifier[D]	Sample Concentration[E]	Sample Stdev[F]	Units[G]	SLOD[H]	SLLOQ[H]	cpr	Inhibition Result[I]
SDCChavez-20191004	SDCChavez	7585SDCChavez1004	10/04/19	0905	FW	Detected, ROQ		9,300	3,396	copies/100mL	714	1786	130	0
Barelas-20191004	Barelas Pump	7586Barelas100419	10/04/19	0930	FW	Detected, ROQ		18,343	2,253	copies/100mL	714	1786	257	0
RG-Bridge-20191004	RG-Bridge	7587RGBridge1004	10/04/19	0950	FW	BDL	§<	243	161	copies/100mL	714	1786	3	0
Vito Romero-20191004	Vito Romero	7588VitoRomero1004	10/04/19	1020	FW	Detected, ROQ		1,844	1,072	copies/100mL	714	1786	26	0
SWRP-20191004	SWRP	7589SWRP20191004	10/04/19	1110	FW	BDL	§<	549	357	copies/100mL	714	1786	8	0
SDCTijeras-20191004	SDC at Tijeras	7590SDCTijeras1004	10/04/19	0910	FW	Detected, ROQ		40,908	7,772	copies/100mL	714	1786	573	0
San Jose-20191004	San Jose	7591SanJose1004	10/04/19	0910	FW	Detected, ROQ		12,068	1,558	copies/100mL	714	1786	169	0
Tijeras-20191004	Tijeras	7592Tijeras100419	10/04/19	0940	FW	BDL	§<	573	579	copies/100mL	714	1786	8	0
RG-VDO-20191004	RG-VDO	7593RGVDO100419	10/04/19	1025	FW	BDL		631	387	copies/100mL	714	1786	9	0
SDC-Broad-20191004	SDC-Broad	7594SDCBroad1004	10/04/19	1030	FW	Detected, ROQ		17,915	2,247	copies/100mL	714	1786	251	0
RG-I25-20191004	RG-I25	7595RGI25100419	10/04/19	1055	FW	ND	§<	153	0	copies/100mL	725	1812	2	0
RG-DS-WWTP-20191004	RG-DS-WWTP	7596RGDSWWTP	10/04/19	1145	FW	Detected, DNQ		1,106	523	copies/100mL	714	1786	15	0
RG-RioBravo-20191004	RG-Rio Bravo	7597RGRioBravo	10/04/19	1200	FW	BDL	§<	315	157	copies/100mL	714	1786	4	0

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; FW: Fresh Water; GW: Ground Water; L; SLT: Salt Water; SW: Storm Water; LOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Footnotes: [A]Sample Process Control (SPC), Sketa assay for salmon sperm. [B]Inhibition Control = assay used for 2 well spike with DNA dilution method. [C]Suggestion for conversion of sample result into categorical results: ROQ and DNQ = positive; ND = negative; BDL = equivocal (see explanation on Part B). [D]If shown: §Average computed for ND result by a) qPCR: substituting Cq with maximum number of cycles (Boehm et al., 2013) or b) ddPCR: substituting with 1 cpr. [E]Concentration = mean of at least 3 technical replicates. [F]Standard Deviation of at least 3 technical replicates. [G]For enterococci, results are given in Target Sequence Copies (TSC), as per EPA Method 1611 (standard concs in TSC/ul = copies/ul x 4). [H]SLOD and SLLOQ: sample specific detection and quantification limits calculated based on sample specific processing volumes see more information on Part B. [I]Inhibition: 0 = no inhibition observed, 1 = inhibition observed, but overcome in diluted sample, 2 = inhibition not overcome in diluted sample: The given concentration may be underestimated for positive samples, 3 = Dilution needed to overcome inhibition did not yield amplification. Given concentration may be underestimated. NT = not tested. See Part B for additional comments.

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Weston Solutions qPCR Report - Standard Curve Metrics

Client: Daniel B Stephens & Assoc. **Project:** COA MST **Survey:** No 10 **Date Received:** 10/8/2019

Comments:

Standard Curve Metrics

Assay	Dog Bacteroidales - DogBact
% Efficiency	105.35
r^2	0.990
slope	-3.20
y-intercept	41.04
curve source	Weston Master Curve
standard source:	plasmid, undigested

Method Detection Limits	**ND sub**	**LOD**	**LLOQ**
cpr (copies per reaction)	2.1	10	25
Ct equivalent	40.00	37.84	36.56
LOD > % amplification	73		
LLOQ StdDev	0.55		

* based on a master standard curve with a minimum of 50 data points.

AVG Filtration Volume 100 mL

Sample result calculations use cpr values based on the following definitions:
ND: Cq=maximum cycle number, negative result.
BDL: 0<Cq≤LOD, Equivocal result.
DNQ: LOD<Cq≤LLOQ, positive binary result.
ROQ: Cq>LLOQ, positive result.
LLOQ : lowest concentration with amplification rate of 100% (>20 reps).

In addition, SLOD and SLLOQ values are provided. These are sample specific detection limits which take into account sample processing, for example volumes or mass.

Categorical Results:
ROQ and DNQ = positive; ND = negative
BDL results are categorized as "equivocal" because a signal was observed below the limit of detection. The result can therefore not be classified as either a negative or positive with great confidence. Weston uses BDL concentration values to compute averages unless directed otherwise by Client. Sites with chronic BDL results may warrant additional monitoring.

Abbreviations: Avg = Average; BDL = Below Detection Limit; cpr = copies per reaction; Cq = quantification (threshold) cycle; DNQ = Detectable But Not Quantifiable; FB = Field Blank; LLOQ = Lower Limit of Quantification; LOD = Limit of Detection; n=number; N/A = Not Applicable; ND = Not Detected; NDsub = substitution value for nondetects; PCR = Polymerase chain reaction; rxs = reactions; StdDev = Standard Deviation; sub = substitution; TSC = Target Sequence Copies; ROQ = Range of Quantification; SLLOQ = Sample Specific Lower Limit of Quantification; SLOD = Sample Specific Limit of Detection.

Satomi Yonemasu 11/8/2019
QC Officer (Satomi Yonemasu) Date

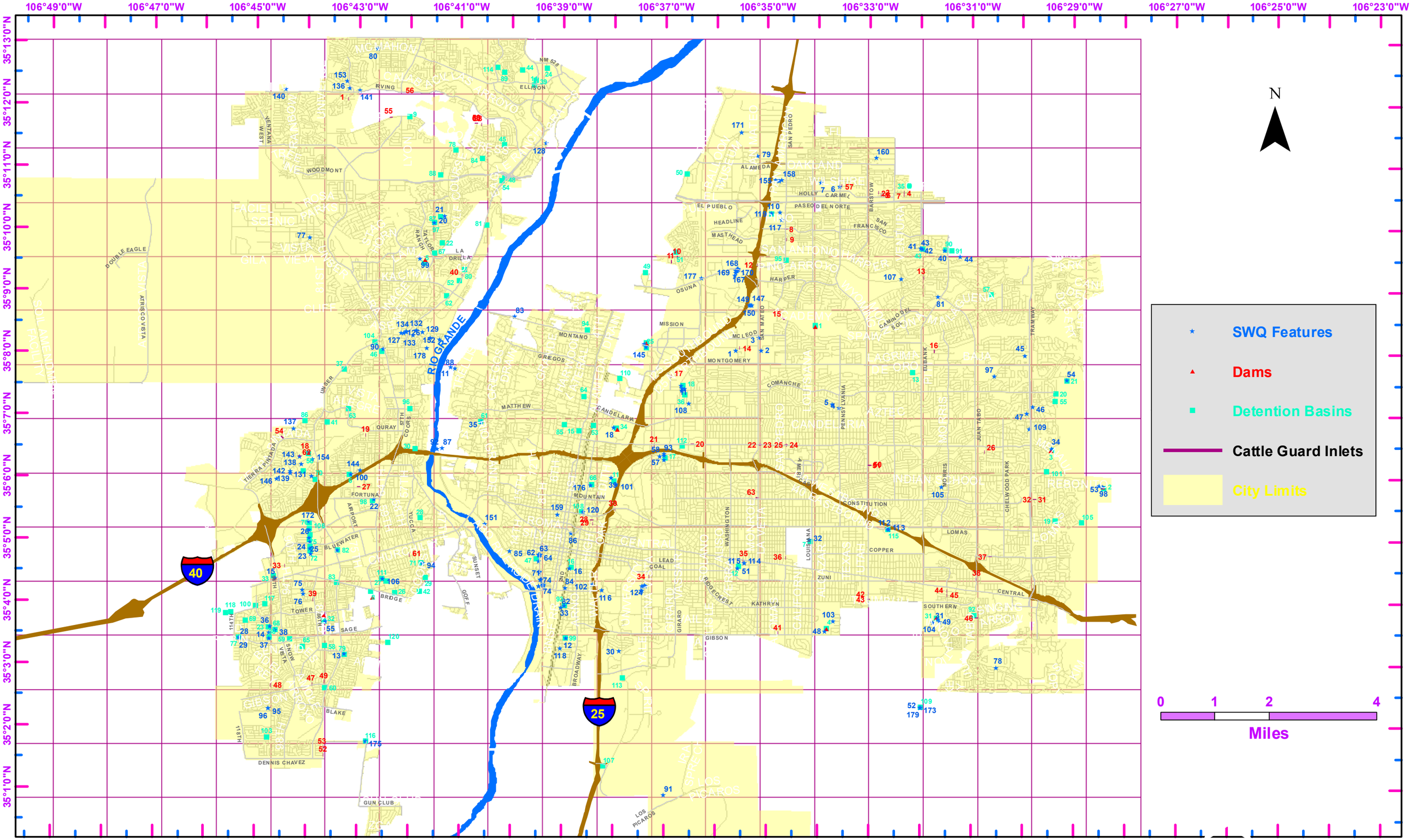
Report template version 7.04

Attachment 3

Map, Listing and Description

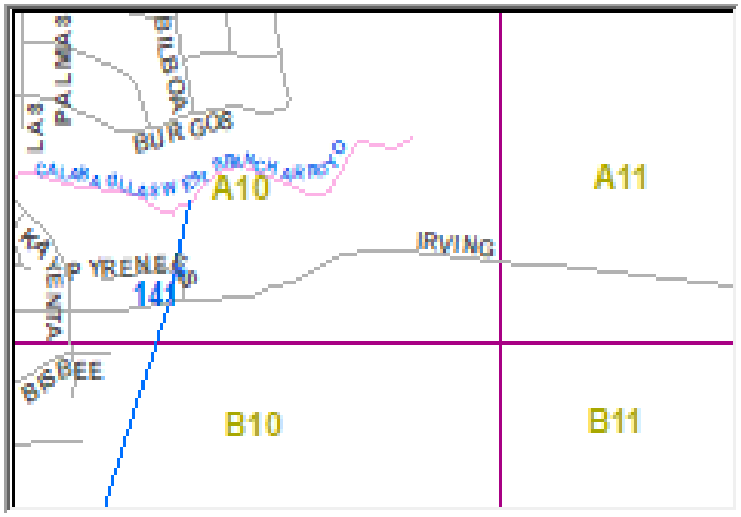
Storm Water Quality Features

City of Albuquerque Stormwater Quality Features FY20



SWQ FEATURES

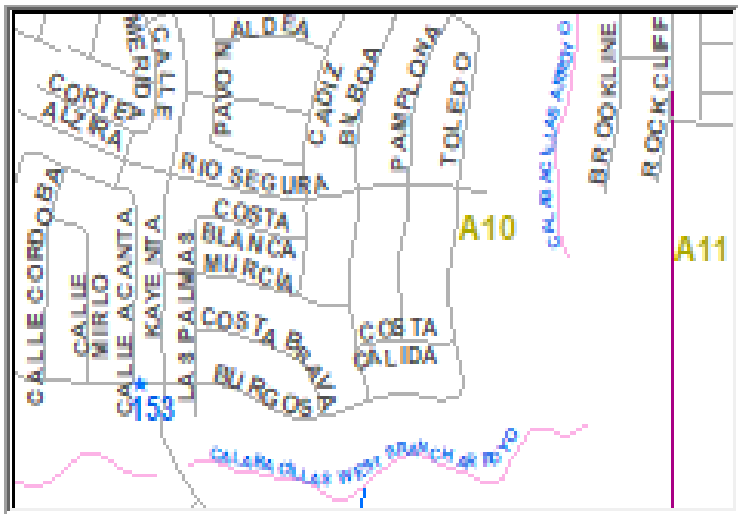
LOCATION	PYRENEES NW
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	A10	City_Quad	NW
Year_Built	2007	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	722683	NUMBER	141

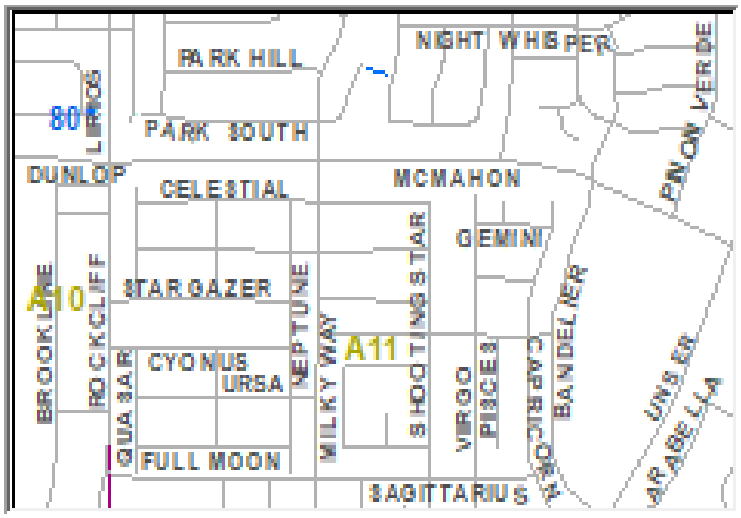
LOCATION	BURGOS-KAYENTA NW
STRUCTURE_NAME	SWQ-MH





MAP_KEY	A10	City_Quad	NW
Year_Built	2004	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	684981	NUMBER	153

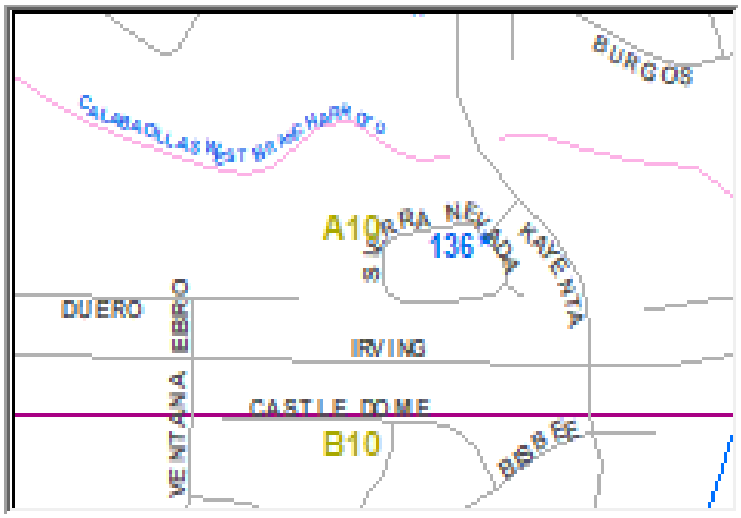
LOCATION	**6200 NUEVA ESPANA NW**
STRUCTURE_NAME	TRASH SCREEN





MAP_KEY	A10	City_Quad	NW
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	EXPANDED METAL 3/4 IN 9 GAGE		
SWQ SIZE	8' X 25 IN HORIZ+12'X6 IN VERTICAL	cost	$695
PROJECT_NO	na-vendar	NUMBER	80

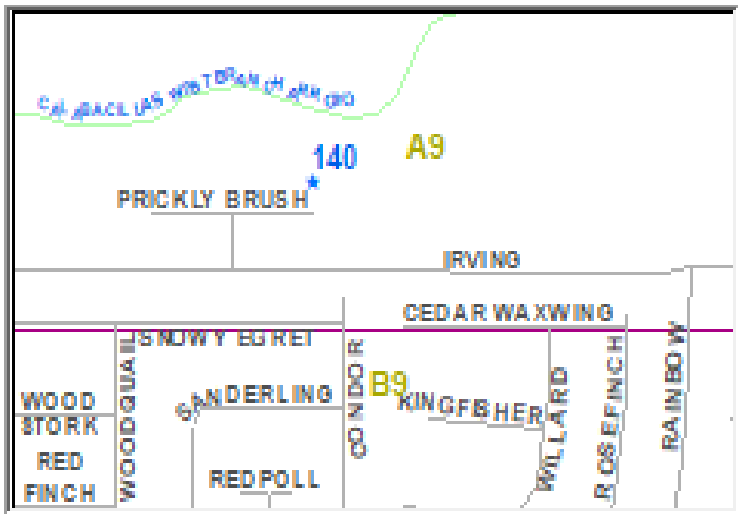
LOCATION	SIERRA NEVADA NW
STRUCTURE_NAME	SWQ-MH





MAP_KEY	A10	City_Quad	NW
Year_Built	2007	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	722682	NUMBER	136

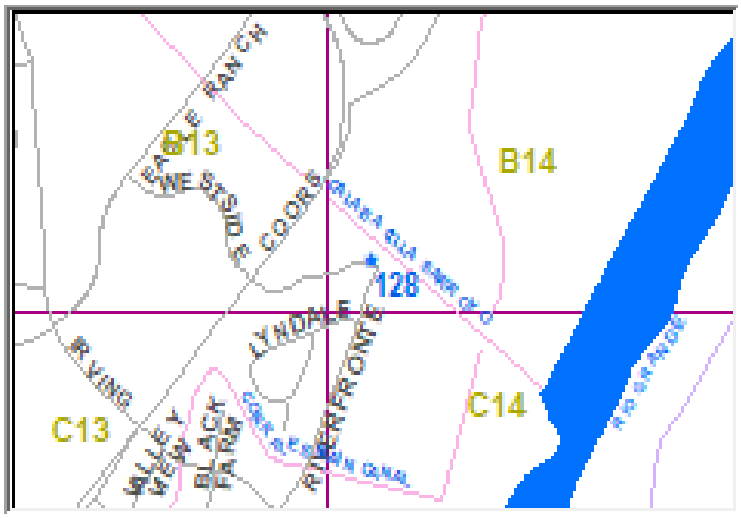
LOCATION	PRICKLY BRUSH
STRUCTURE_NAME	SWQ-MH





MAP_KEY	A9	City_Quad	NW
Year_Built	2007	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	793781	NUMBER	140

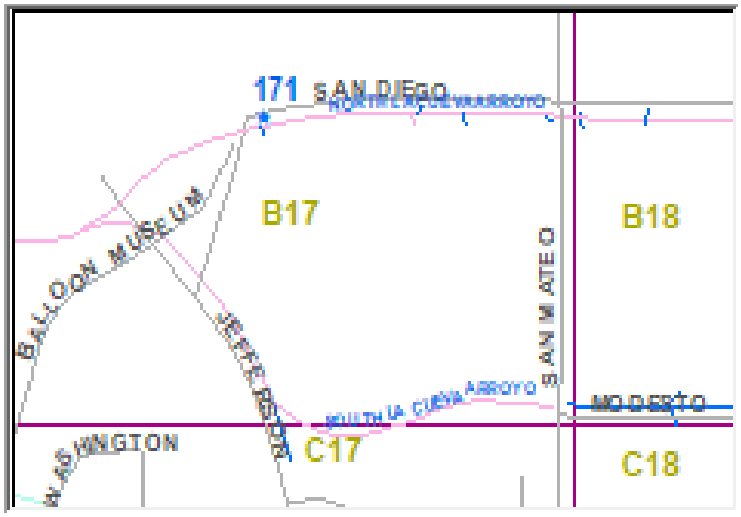
LOCATION	**WESTSIDE-RIVERF FRONT NW EAST OF COORS**
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	B14	City_Quad	NW
Year_Built	2007	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	732981	NUMBER	128

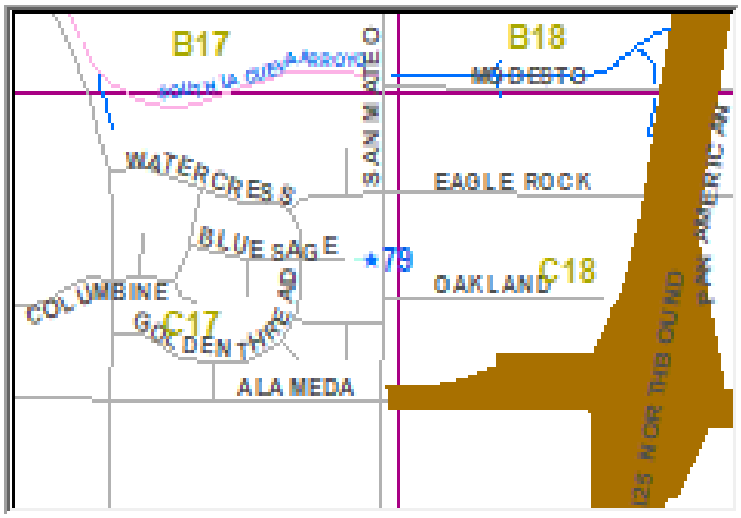
LOCATION	SAN DIEGO WEST OF SAN MATEO
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	B17	City_Quad	NW
Year_Built	2004	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	707791	NUMBER	171

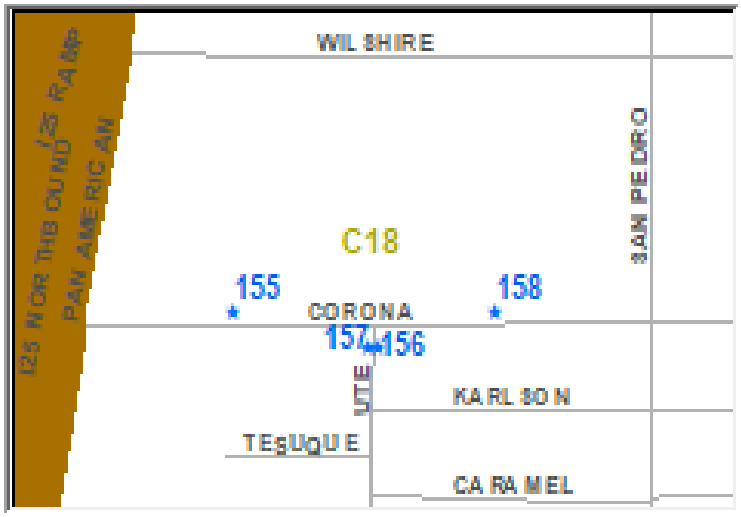
LOCATION	5117 BLUE SAGE NE (AND SAN MATEO)
STRUCTURE_NAME	SECURITY RACK





MAP_KEY	C17	City_Quad	NE
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	3 CMP SECURITY RACKS		
SWQ SIZE	24 IN DIA	cost	$1,535
PROJECT_NO		NUMBER	79

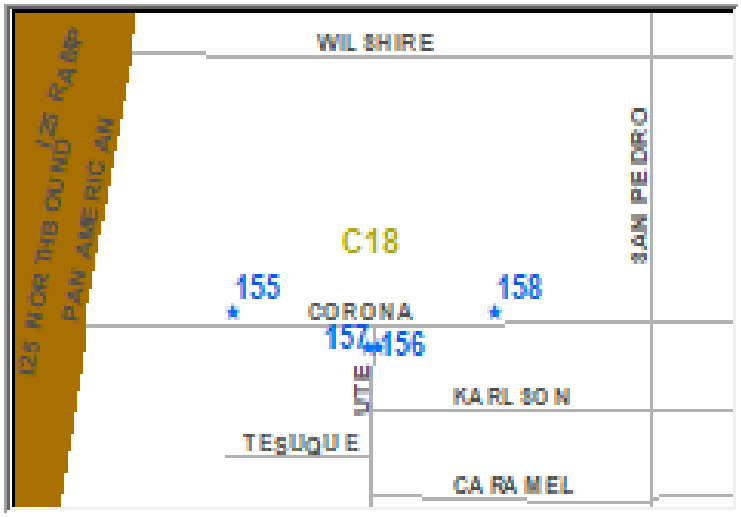
LOCATION	**END OF CORONA**
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	C18	City_Quad	NE
Year_Built	2003	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	674681	NUMBER	155

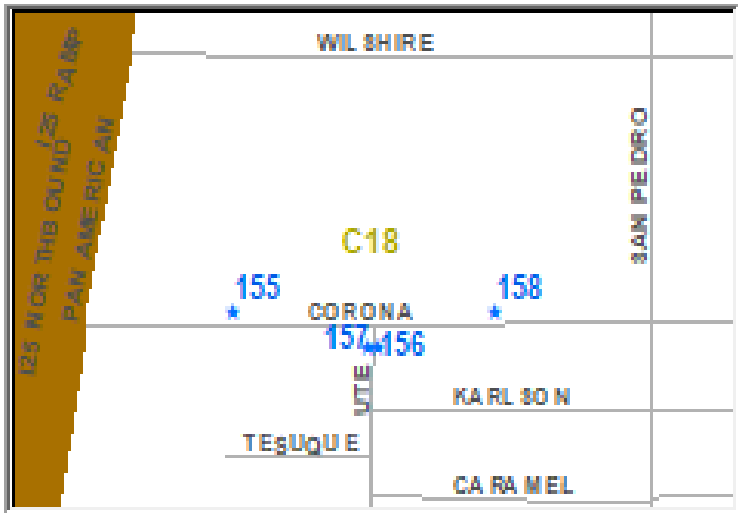
LOCATION	UTE SOUTH OF CORONA
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	C18	City_Quad	NE
Year_Built	2003	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	674681	NUMBER	156

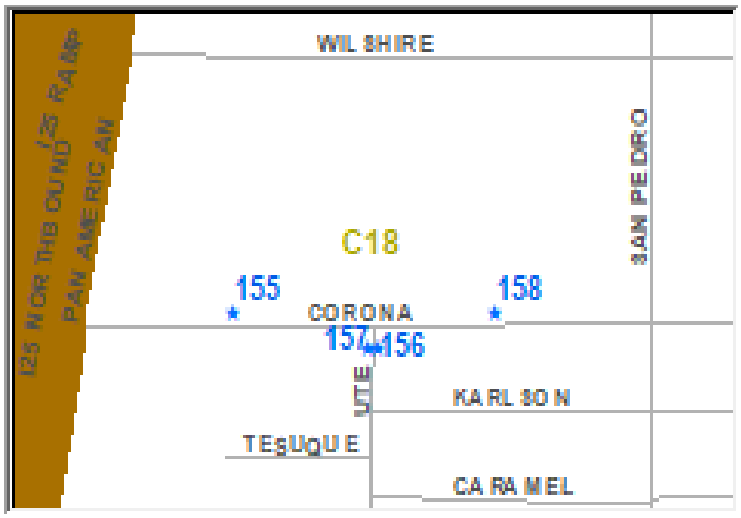
LOCATION	**UTE SOUTH OF CORONA**
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	C18	City_Quad	NE
Year_Built	2003	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	674681	NUMBER	157

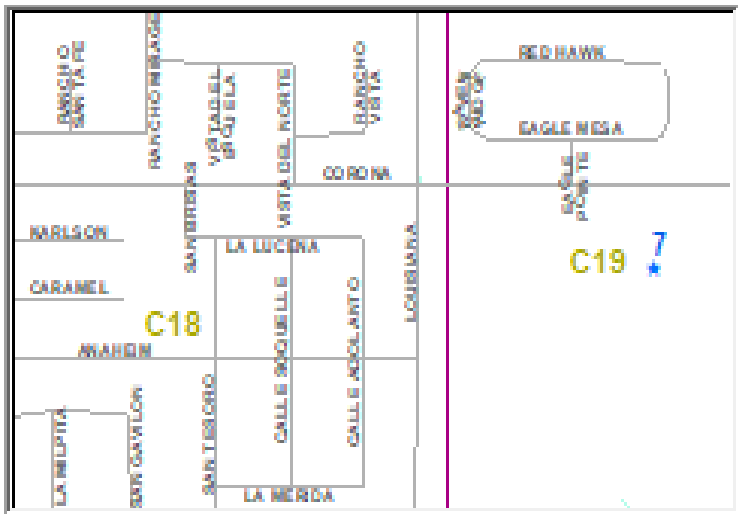
LOCATION	CORONA WEST OF SAN PEDRO
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	C18	City_Quad	NE
Year_Built	2003	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	674681	NUMBER	158

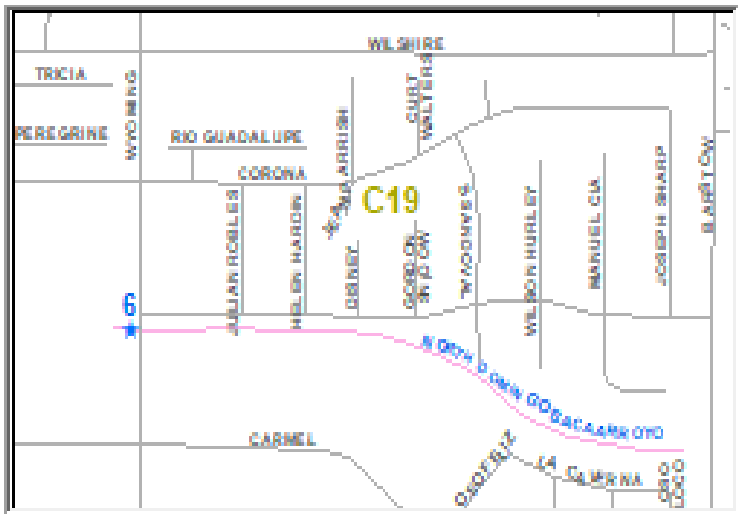
LOCATION	0.2 M SE LOUISIANA AND CORONA
STRUCTURE_NAME	





MAP_KEY	C19	City_Quad	NE
Year_Built	2006	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\00
NOTES	SECURITY RACK		
SWQ SIZE	21' W X 29' L	cost	
PROJECT_NO		NUMBER	7

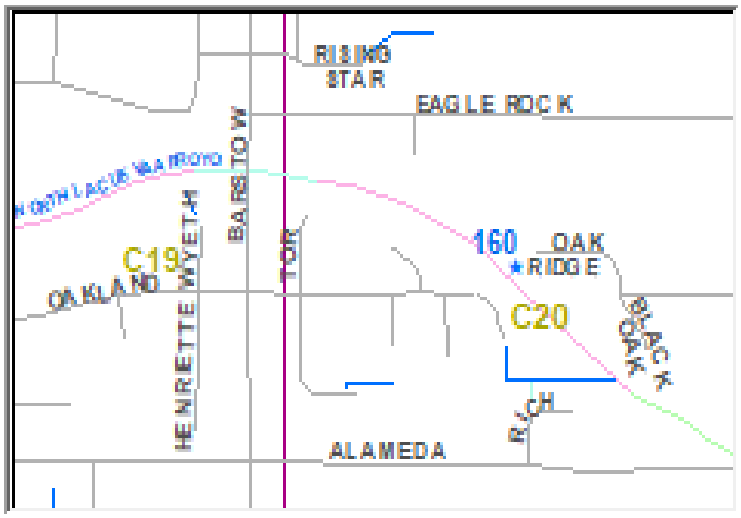
LOCATION	WYOMING 0.25 M N PASEO DEL NORTE
STRUCTURE_NAME	





MAP_KEY	C19	City_Quad	NE
Year_Built	2006	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\00
NOTES	NEEDS SPECIAL ATTENTION		
SWQ SIZE	21' W X 29' L	cost	
PROJECT_NO		NUMBER	6

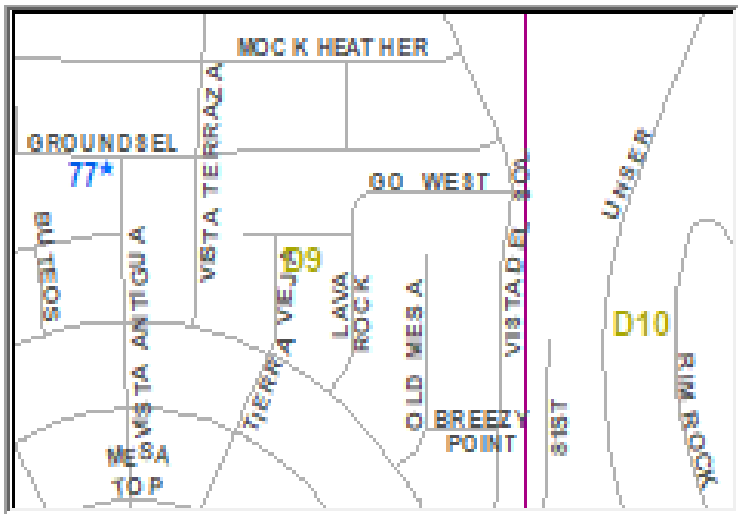
LOCATION	END OF OAK RIDGE
STRUCTURE_NAME	SWQ-MH





MAP_KEY	C20	City_Quad	NE
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	160

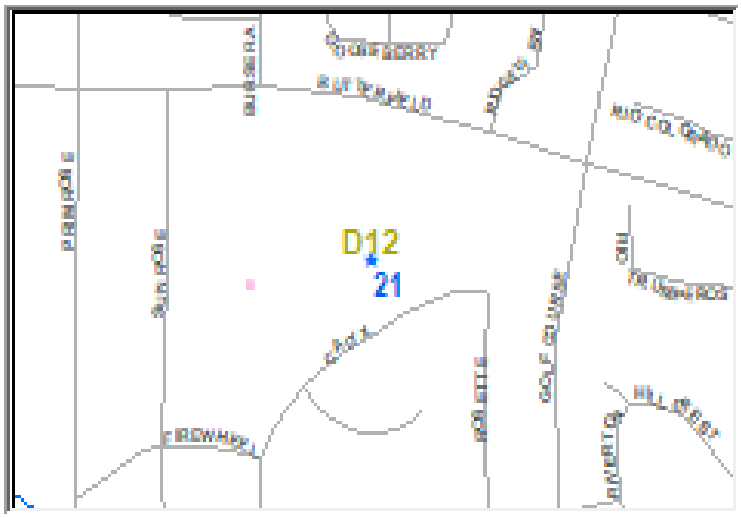
LOCATION	8501 GROUNDSEL NW
STRUCTURE_NAME	TRASH SCREEN





MAP_KEY	D09	City_Quad	NW
Year_Built	2016	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	3"X3" CLEAR OPENINGS-3/4" D BARS-INSTALLED BY ED ON 11-10-2016		
SWQ SIZE	19 W1X 48L X 53W2 AND 13H X 53W2 IN	cost	$1,678
PROJECT_NO		NUMBER	77

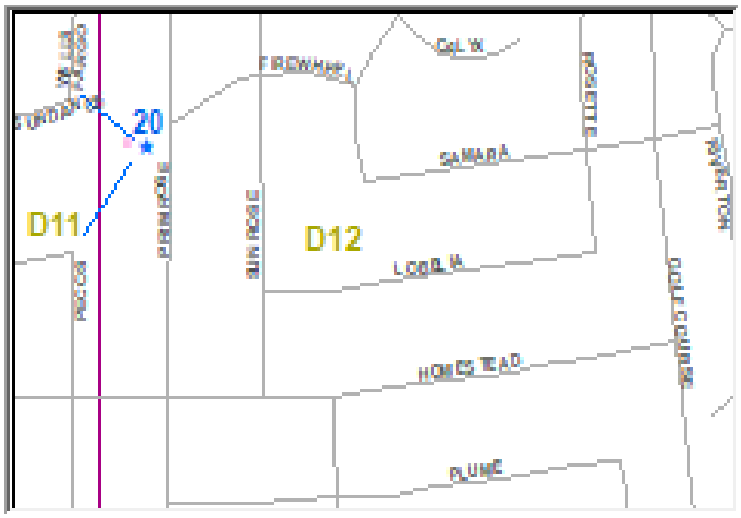
LOCATION	**0.2 M SW GOLF COURSE AND BUTTERFIELD**
STRUCTURE_NAME	





MAP_KEY	D12	City_Quad	NW
Year_Built	2005	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE BUTTERFIELD POND-PARK		
SWQ SIZE	10' W X 13' L	cost	
PROJECT_NO		NUMBER	21

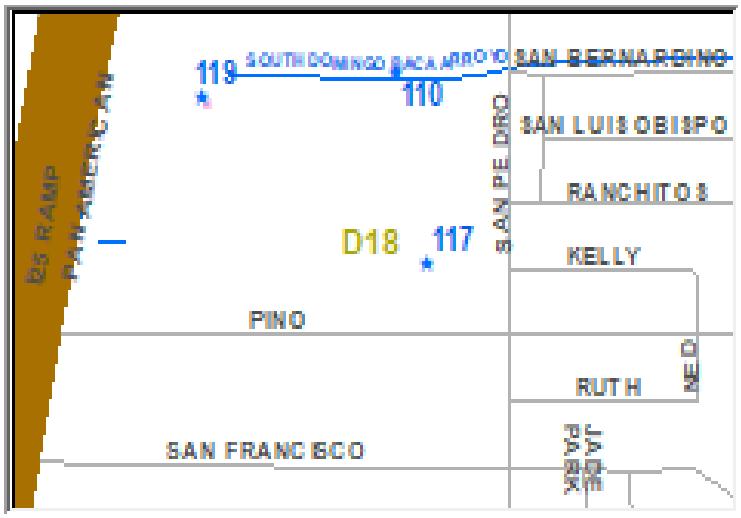
LOCATION	**PRIMROSE AND FIREWHEEL**
STRUCTURE_NAME	





MAP_KEY	D12	City_Quad	NW
Year_Built	2007	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	SECURITY RACK, INSIDE PRIMROSE- FIREWHEEL POND		
SWQ SIZE	8' W X 8' L	cost	
PROJECT_NO		NUMBER	20

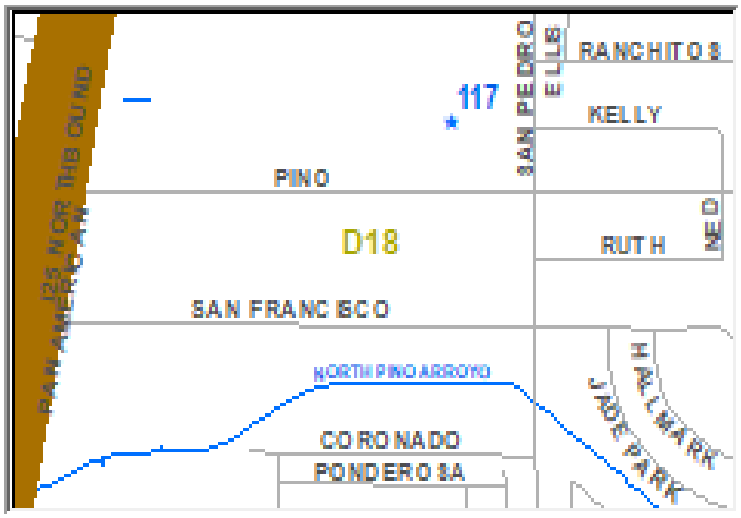
LOCATION	PINO YARD AT PINO AND SAN PEDRO
STRUCTURE_NAME	SWQF





MAP_KEY	D18	City_Quad	NE
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	OIL SEPARATOR		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	119

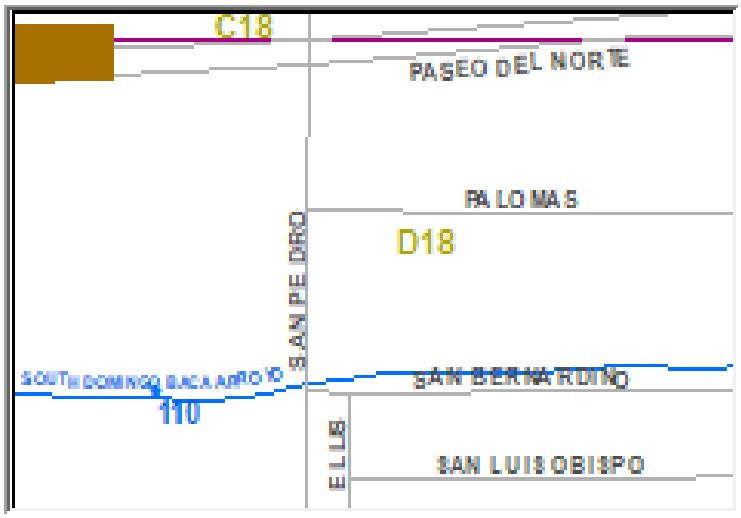
LOCATION	PINO YARD AT PINO AND SAN PEDRO
STRUCTURE_NAME	SWQF





MAP_KEY	D18	City_Quad	NE
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	PERMEABLE PAVEMENT		
SWQ SIZE		cost	
PROJECT_NO	528000	NUMBER	117

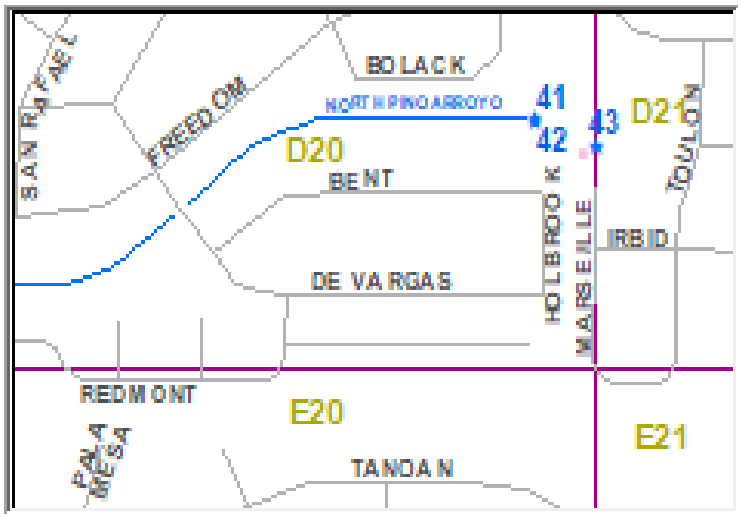
LOCATION	TH DOMINGO BACA ARROYO-WEST OF SAN PE
STRUCTURE_NAME	BIO-SWALES





MAP_KEY	D18	City_Quad	NE
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	110

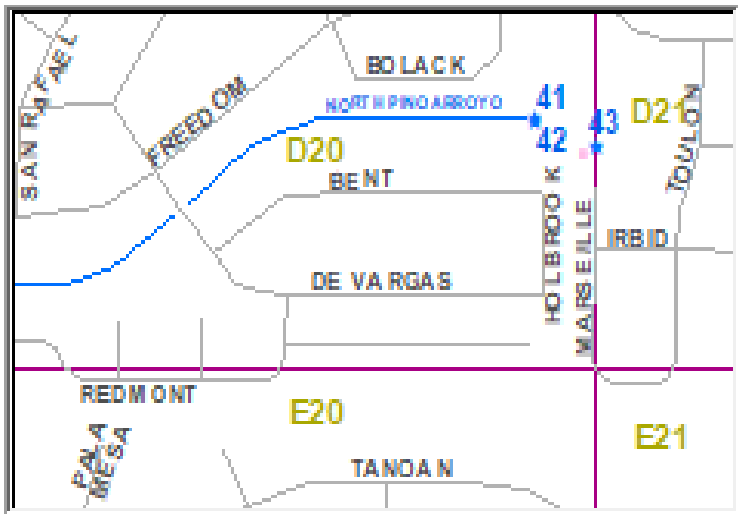
LOCATION	0.1 M SW QUINTESSENCE AND TOULON
STRUCTURE_NAME	





MAP_KEY	D20	City_Quad	NE
Year_Built	1998	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE THE QUINTESSENCE POND#3 (IT IS A PARK)		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	43

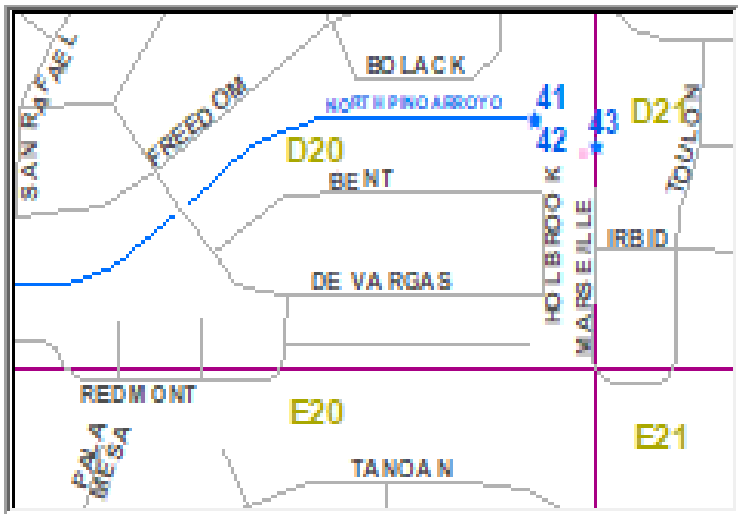
LOCATION	**0.1 M S HOLBROOK AND FREEDOM-SOUTH**
STRUCTURE_NAME	





MAP_KEY	D20	City_Quad	NE
Year_Built	1998	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	SECURITY RACK, ADJACENT AT #41		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	42

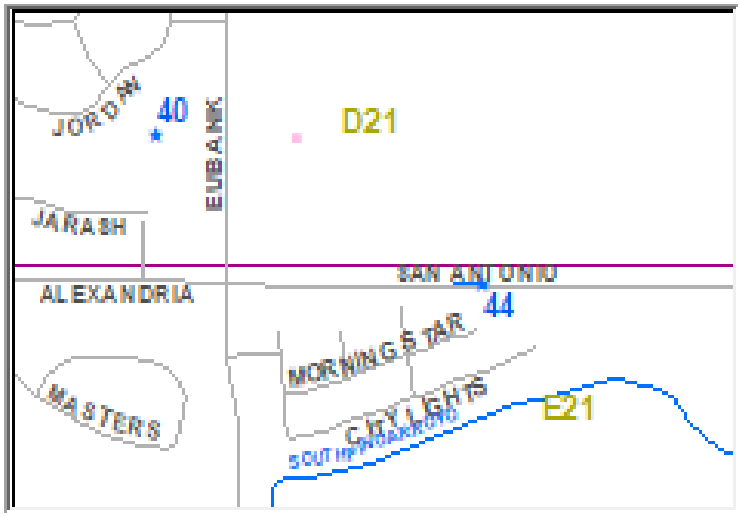
LOCATION	0.1 M S HOLBROOK AND FREEDOM-NORTH
STRUCTURE_NAME	





MAP_KEY	D20	City_Quad	NE
Year_Built	1998	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	SECURITY RACK, ADJACENT TO #42		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	41

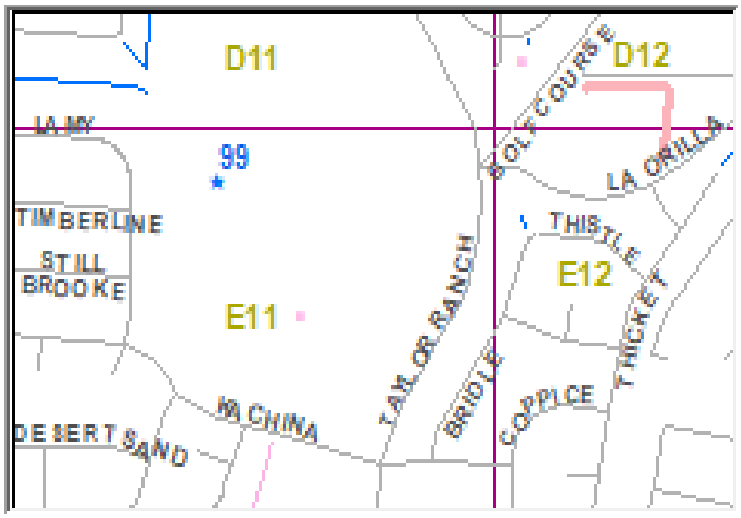
LOCATION	NW EUBANK AND SANTA MONICA
STRUCTURE_NAME	





MAP_KEY	D21	City_Quad	NE
Year_Built	1998	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE THE QUINTESSENCE SUBDIV POND#2		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	40

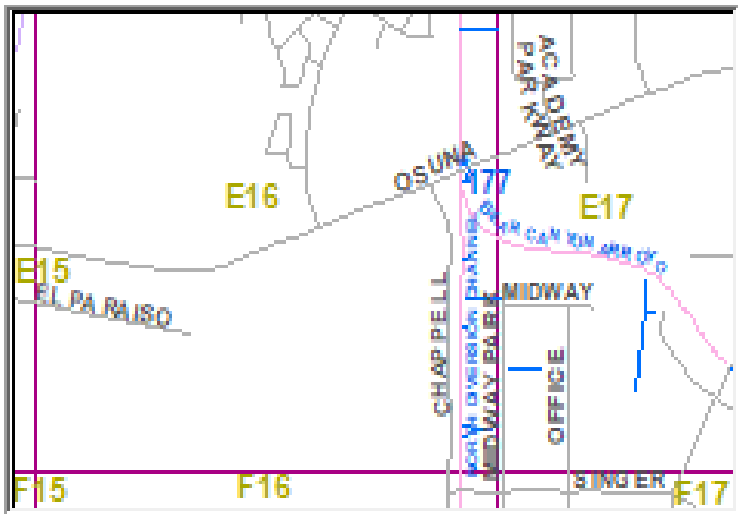
LOCATION	INSIDE MARIPOSA POND
STRUCTURE_NAME	





MAP_KEY	E11	City_Quad	NW
Year_Built	1994	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	PR# 400090		
SWQ SIZE	24 IN CMP	cost	
PROJECT_NO		NUMBER	99

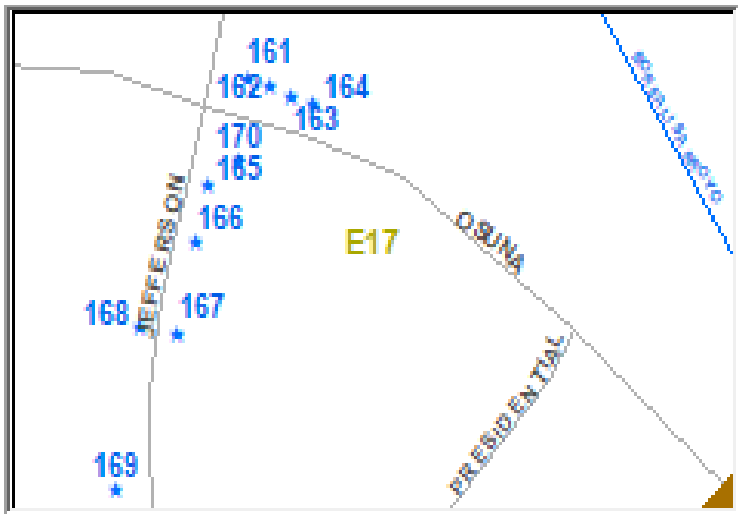
LOCATION	OSUNA-NDC
STRUCTURE_NAME	SWQ-MH





MAP_KEY	E16	City_Quad	NE
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	177

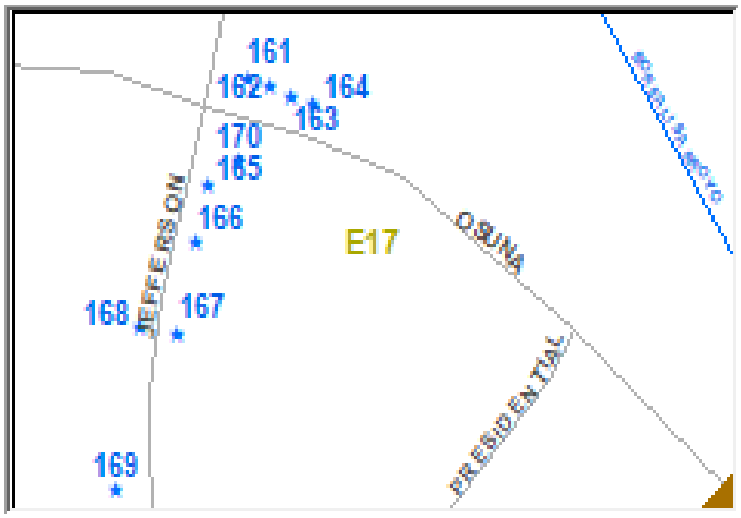
LOCATION	NE OF OSUNA AND JEFFERSON
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	E17	City_Quad	NE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	547991	NUMBER	163

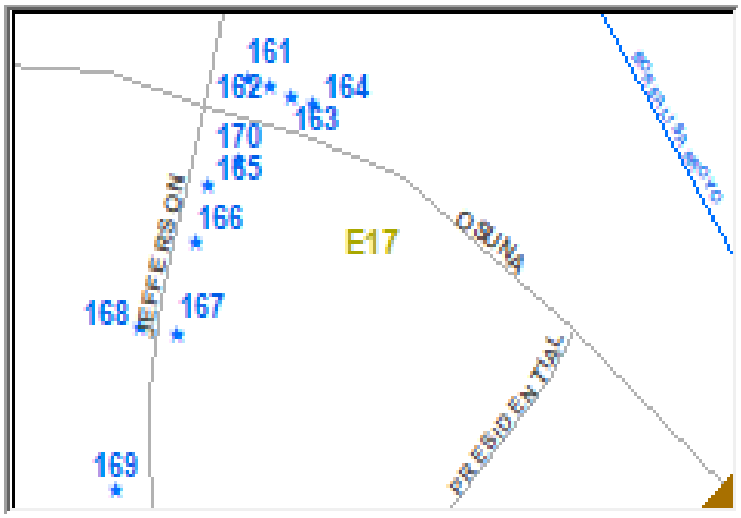
LOCATION	SE OF OSUNA AND JEFFERSON
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	E17	City_Quad	NE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	547991	NUMBER	165

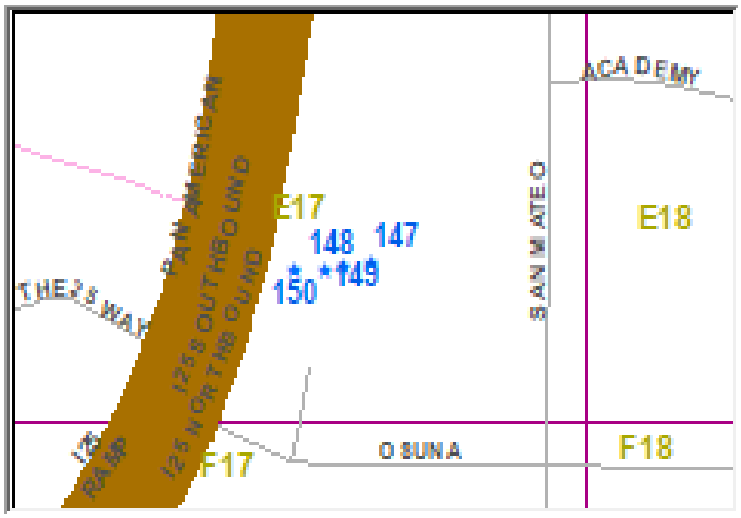
LOCATION	**JEFFERSON SOUTH OF OSUNA**
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	E17	City_Quad	NE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	547991	NUMBER	168

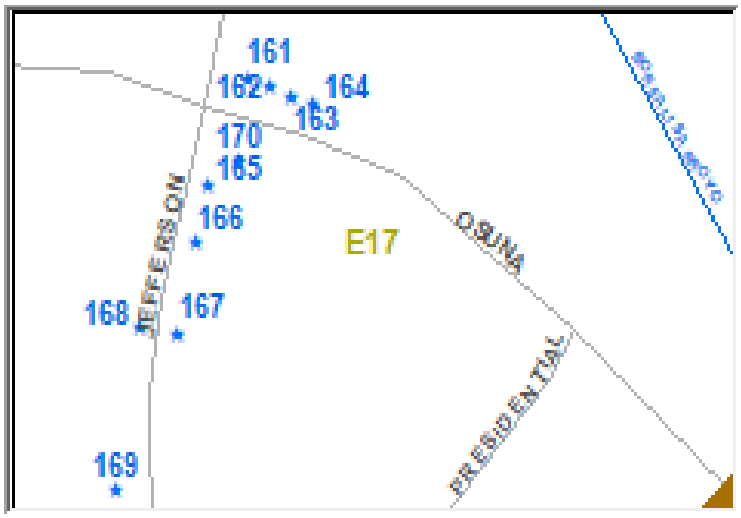
LOCATION	**OSUNA-SAN MATEO-I-25**
STRUCTURE_NAME	SWQ-MH





MAP_KEY	E17	City_Quad	NE
Year_Built	2006	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	723681	NUMBER	147

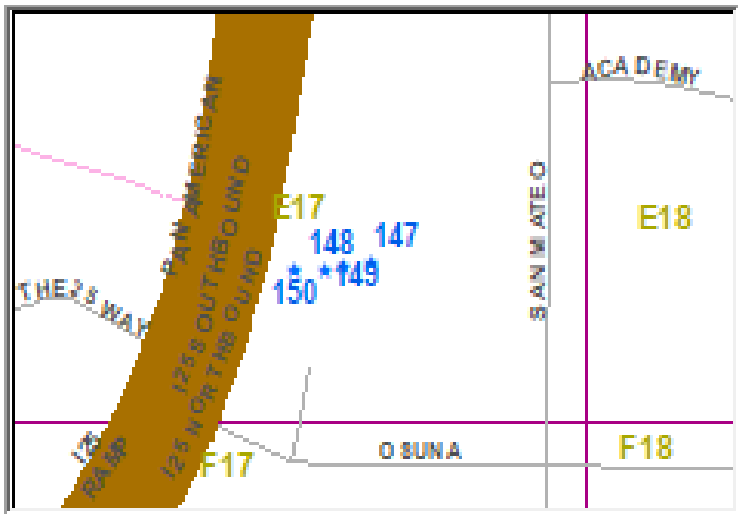
LOCATION	**SE OF OSUNA AND JEFFERSON**
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	E17	City_Quad	NE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	547991	NUMBER	170

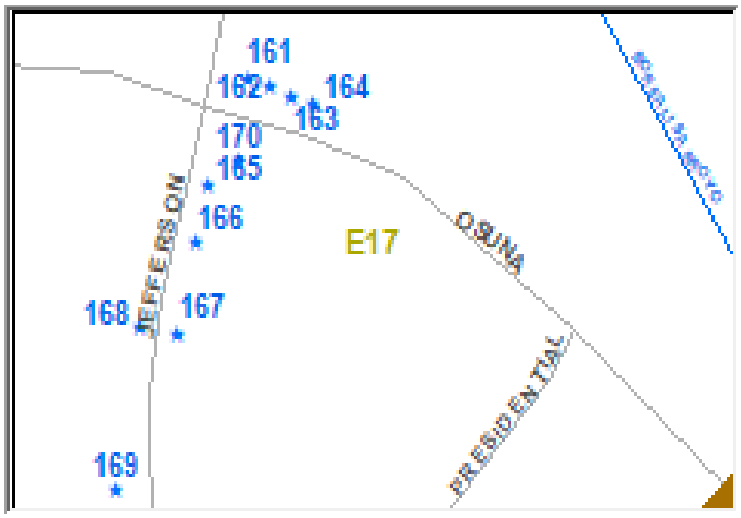
LOCATION	**OSUNA-SAN MATEO-I-25**
STRUCTURE_NAME	SWQ-MH





MAP_KEY	E17	City_Quad	NE
Year_Built	2006	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	723681	NUMBER	148

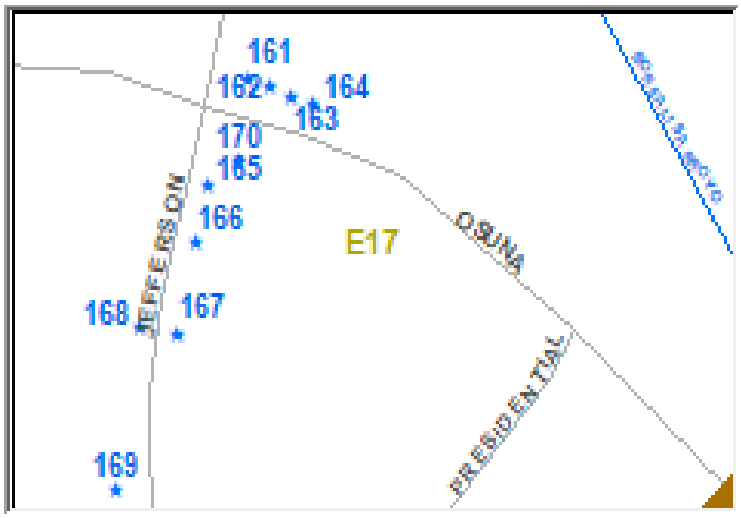
LOCATION	NE OF OSUNA AND JEFFERSON
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	E17	City_Quad	NE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	547991	NUMBER	162

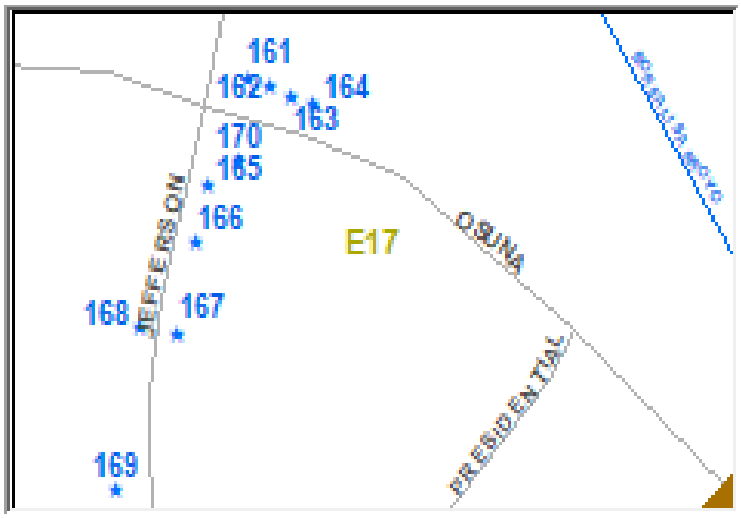
LOCATION	**JEFFERSON SOUTH OF OSUNA**
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	E17	City_Quad	NE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	547991	NUMBER	169

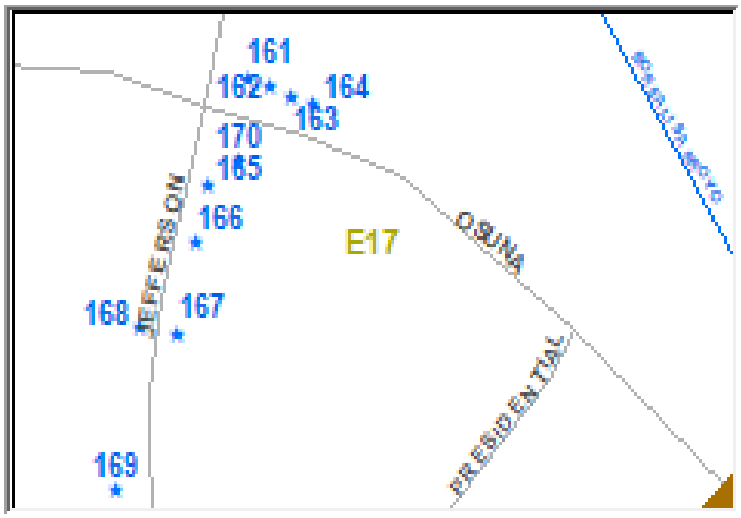
LOCATION	SE OF OSUNA AND JEFFERSON
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	E17	City_Quad	NE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	547991	NUMBER	166

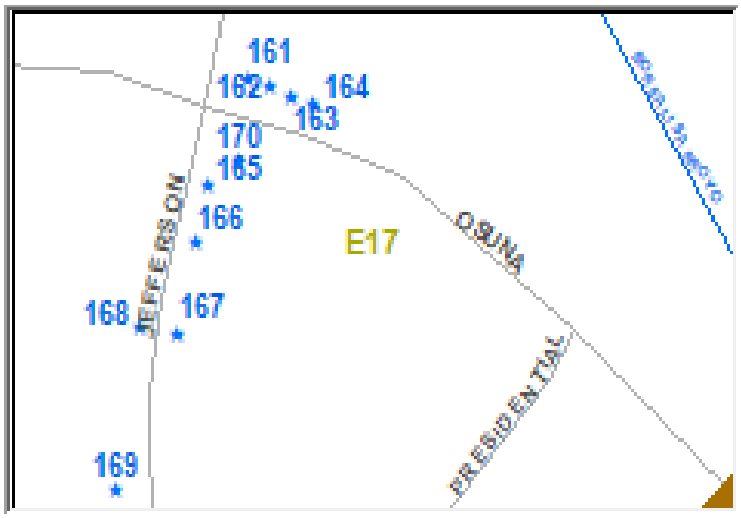
LOCATION	NE OF OSUNA AND JEFFERSON
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	E17	City_Quad	NE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	547991	NUMBER	164

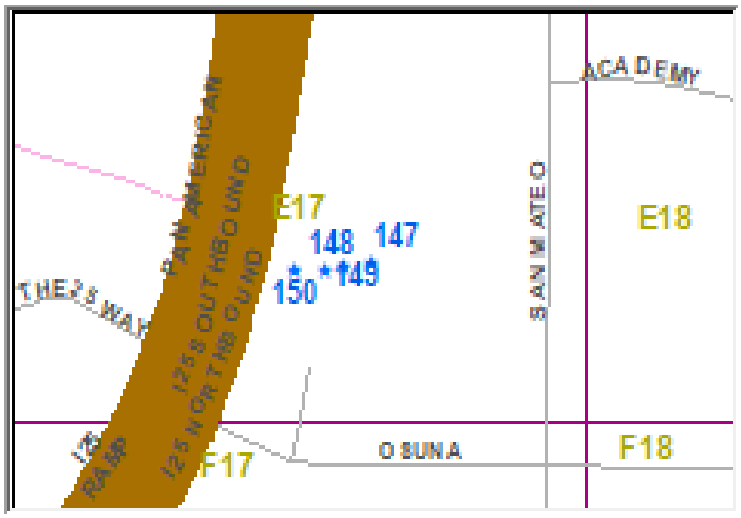
LOCATION	NE OF OSUNA AND JEFFERSON
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	E17	City_Quad	NE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	547991	NUMBER	161

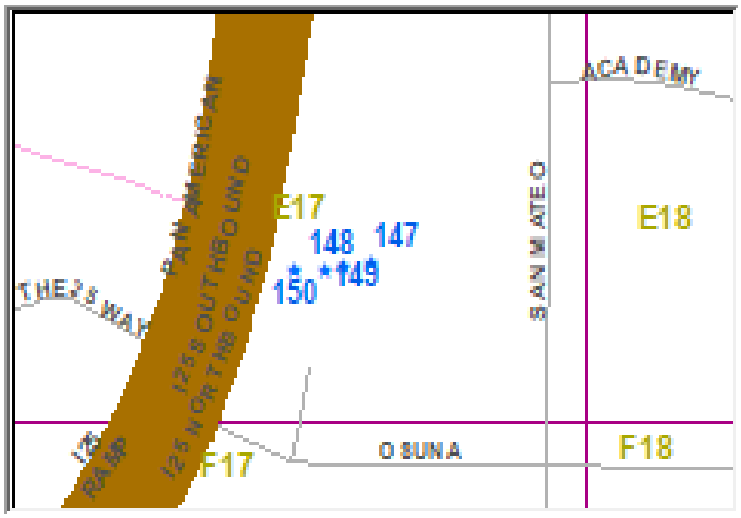
LOCATION	OSUNA-SAN MATEO-I-25
STRUCTURE_NAME	SWQ-MH





MAP_KEY	E17	City_Quad	NE
Year_Built	2006	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	723681	NUMBER	150

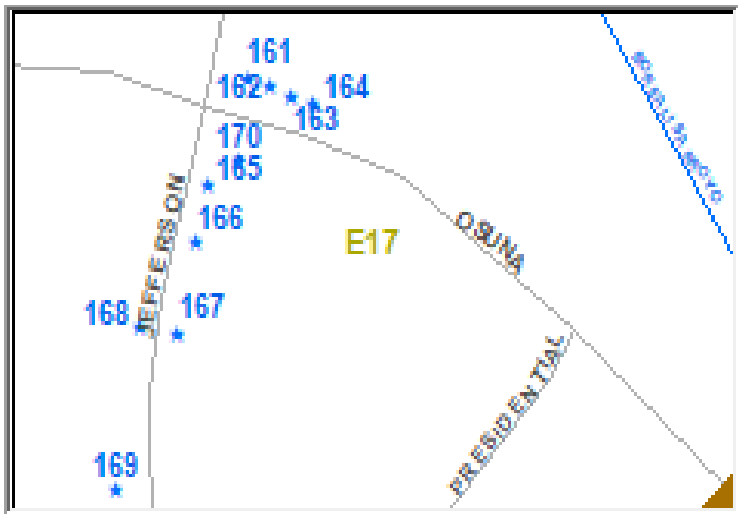
LOCATION	**OSUNA-SAN MATEO-I-25**
STRUCTURE_NAME	SWQ-MH





MAP_KEY	E17	City_Quad	NE
Year_Built	2006	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	723681	NUMBER	149

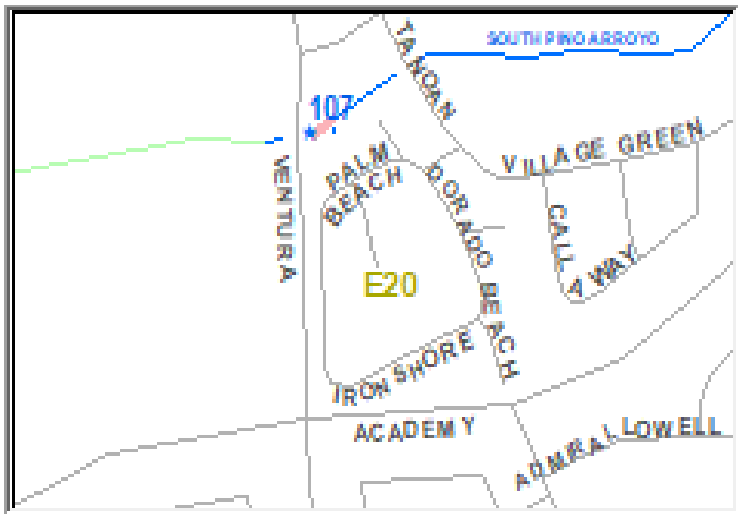
LOCATION	JEFFERSON SOUTH OF OSUNA
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	E17	City_Quad	NE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	547991	NUMBER	167

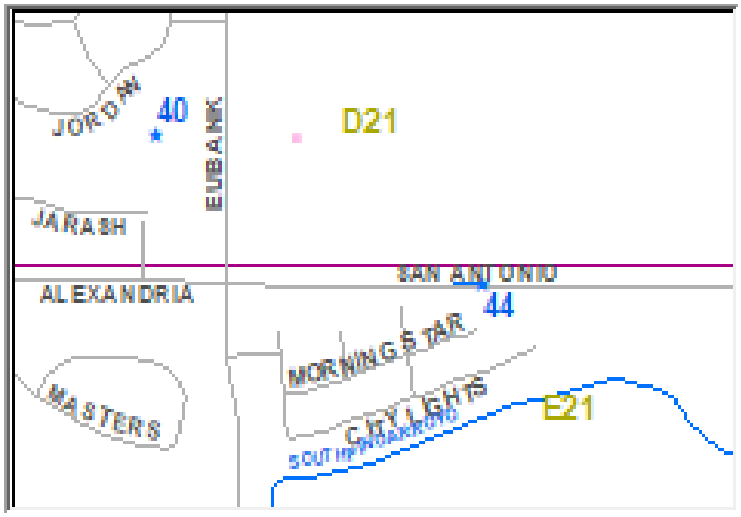
LOCATION	SOUTH PINO ARROYO AT VENTURA
STRUCTURE_NAME	SWQ STRUCTURE





MAP_KEY	E20	City_Quad	NE
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	107

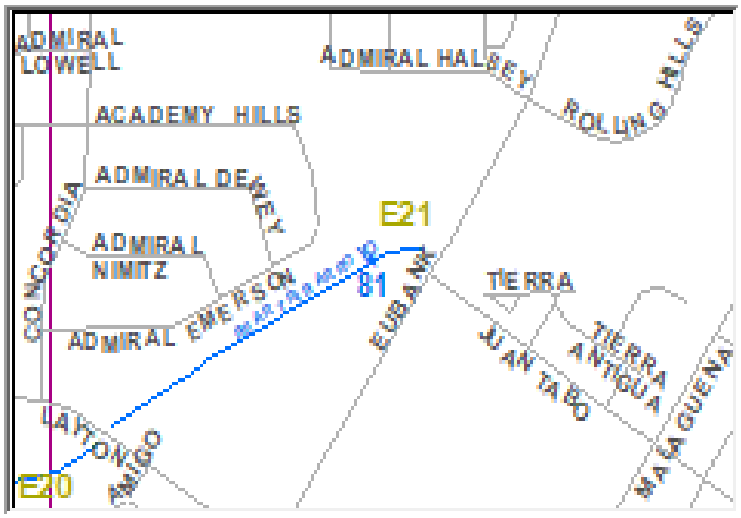
LOCATION	SAN ANTONIO 0.2 M E EUBANK
STRUCTURE_NAME	





MAP_KEY	E21	City_Quad	NE
Year_Built	2006	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	SECURITY RACK		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	44

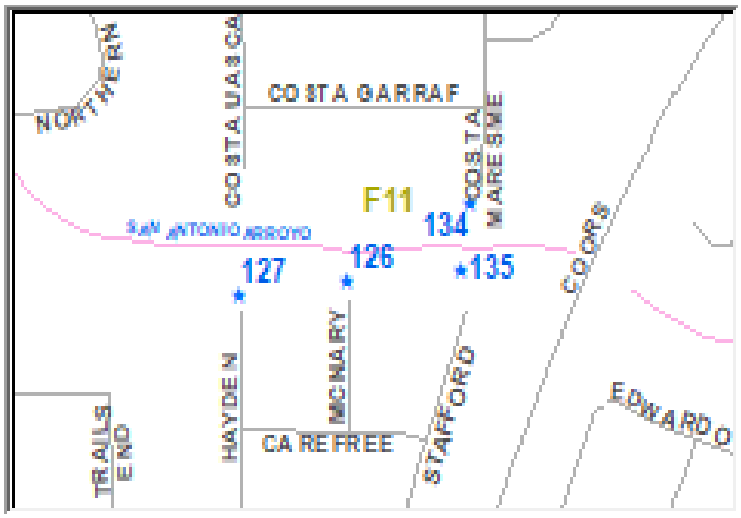
LOCATION	CADEMY HILLS PARK-EUBANK AND JUAN TAB
STRUCTURE_NAME	TRASH SCREEN





MAP_KEY	E21	City_Quad	NE
Year_Built	2016	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	6" SPACING, 3/4" BARS		
SWQ SIZE	2' W X 2' H X 8'L	cost	$1,923
PROJECT_NO		NUMBER	81

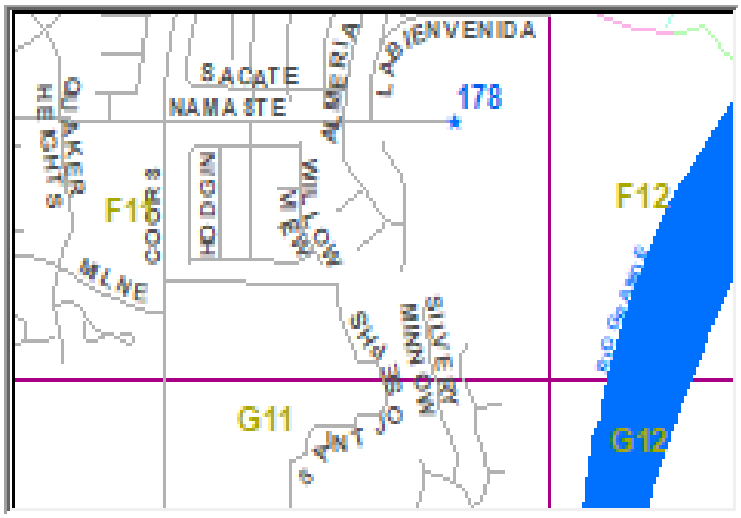
LOCATION	COSTA MARESME
STRUCTURE_NAME	SWQ-MH





MAP_KEY	F11	City_Quad	NW
Year_Built	2008	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	791481	NUMBER	134

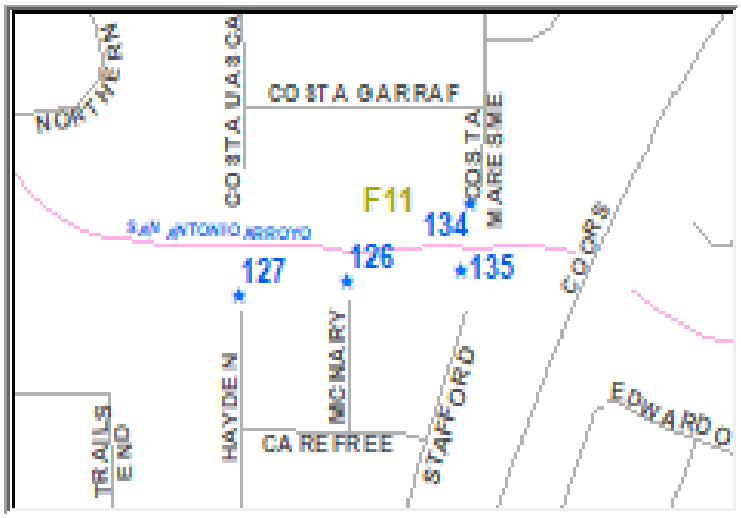
LOCATION	END OF NAMASTE-RIO GRANDE-SWQ-MH
STRUCTURE_NAME	SWQ-MH





MAP_KEY	F11	City_Quad	NW
Year_Built	2004	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	699582	NUMBER	178

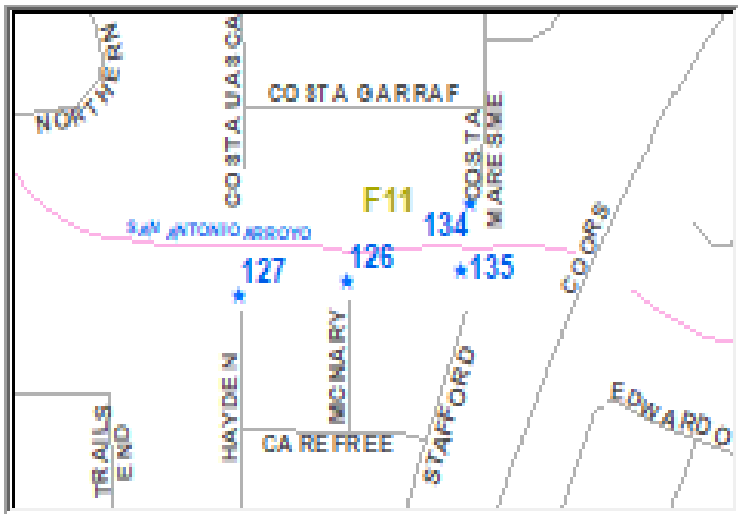
LOCATION	**END OF MCNARY**
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	F11	City_Quad	NW
Year_Built	2007	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	WESTERN TRAILS SUBDIV		
SWQ SIZE		cost	
PROJECT_NO	700581	NUMBER	126

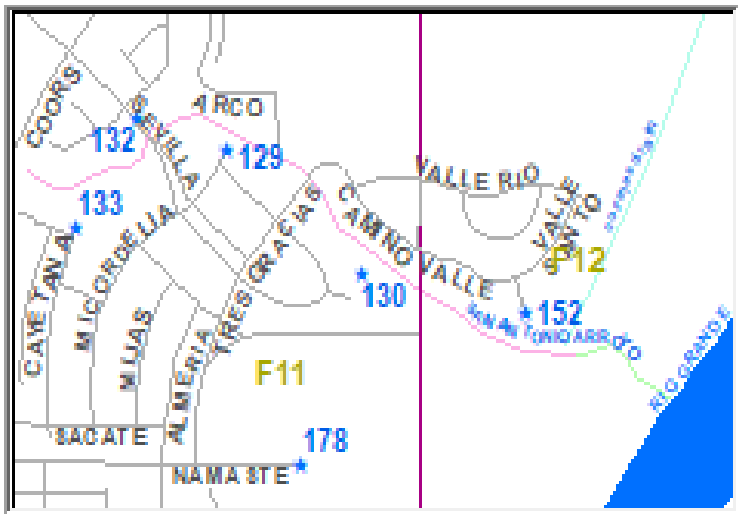
LOCATION	**END OF HAYDEN**
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	F11	City_Quad	NW
Year_Built	2007	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	700581	NUMBER	127

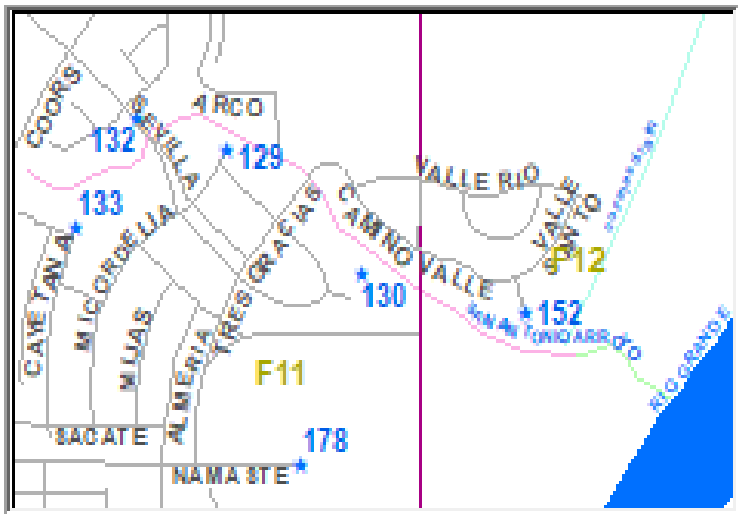
LOCATION	CORDELIA NW-EAST OF CORDELIA R/W BY ARI
STRUCTURE_NAME	SWQ-MH





MAP_KEY	F11	City_Quad	NW
Year_Built	2009	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	730881	NUMBER	129

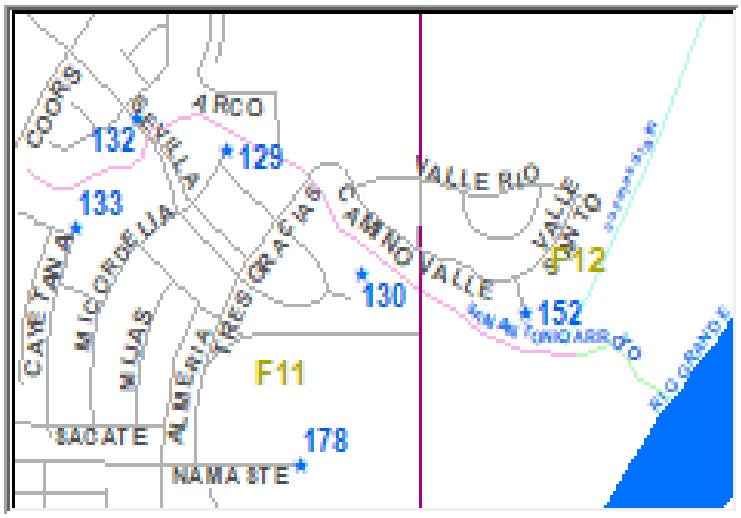
LOCATION	SEVILLA
STRUCTURE_NAME	SWQ-MH





MAP_KEY	F11	City_Quad	NW
Year_Built	2009	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	730881	NUMBER	130

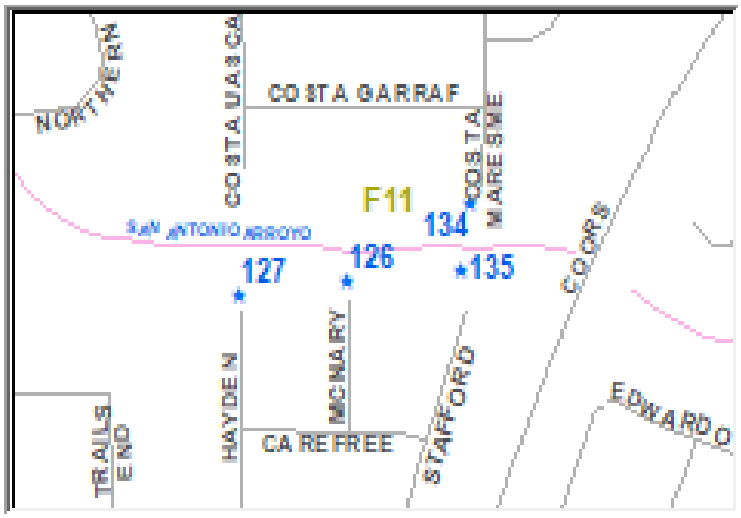
LOCATION	MONTE FRIO NORTH OF EDWARDO
STRUCTURE_NAME	SWQ-MH





MAP_KEY	F11	City_Quad	NW
Year_Built	2009	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	730881	NUMBER	133

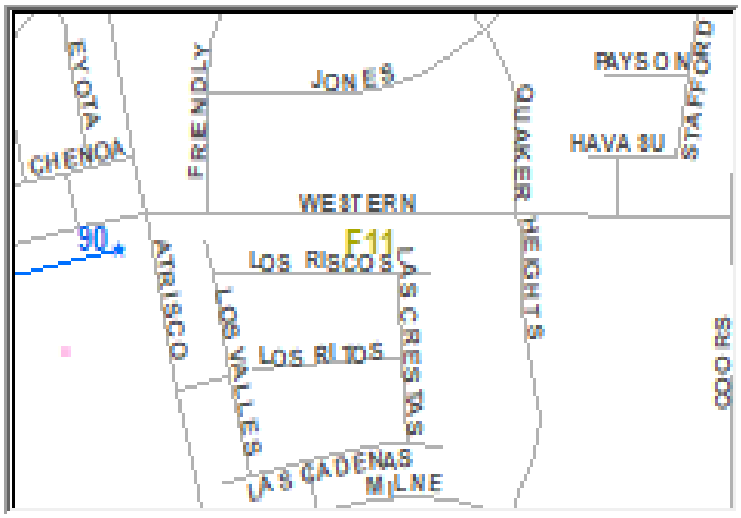
LOCATION	STAFFORD
STRUCTURE_NAME	SWQ-MH





MAP_KEY	F11	City_Quad	NW
Year_Built	2007	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	700581	NUMBER	135

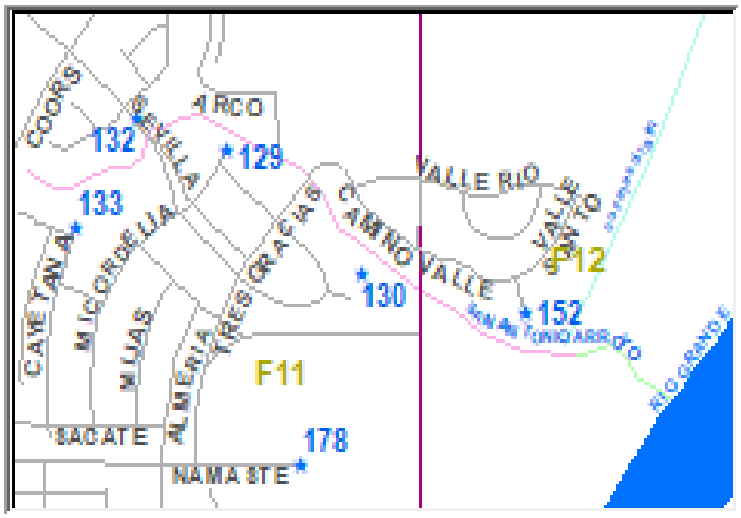
LOCATION	LADERA 16-AT ATRISCO AND WESTERN TRAIL
STRUCTURE_NAME	





MAP_KEY	F11	City_Quad	NW
Year_Built	2013	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	Q100= 30 CFS		
SWQ SIZE	10' X 30' COVERED WITH 3/4" EXPANDED STEEL	cost	
PROJECT_NO		NUMBER	90

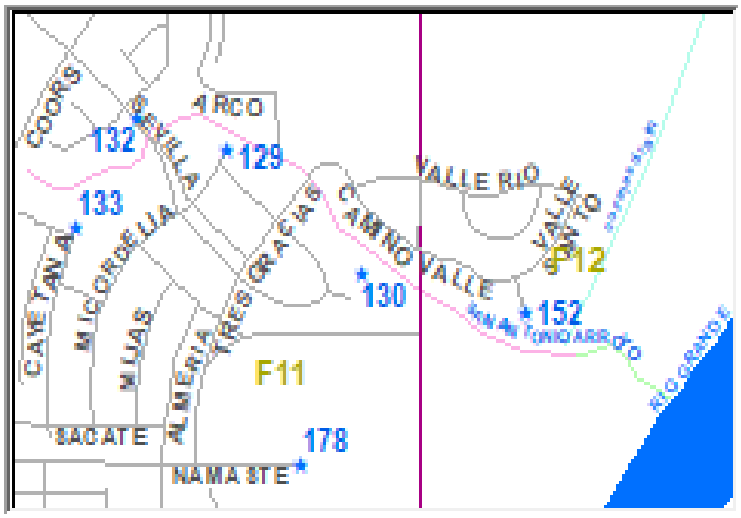
LOCATION	SEVLLA EAST OF CALLE ESPANA
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	F11	City_Quad	NW
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	730881	NUMBER	132

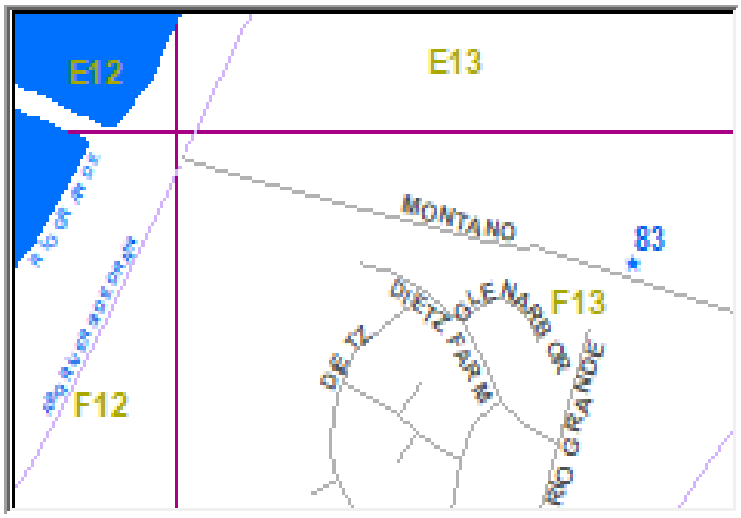
LOCATION	**END OF VALLEBONITA**
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	F12	City_Quad	NW
Year_Built	2006	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	730883	NUMBER	152

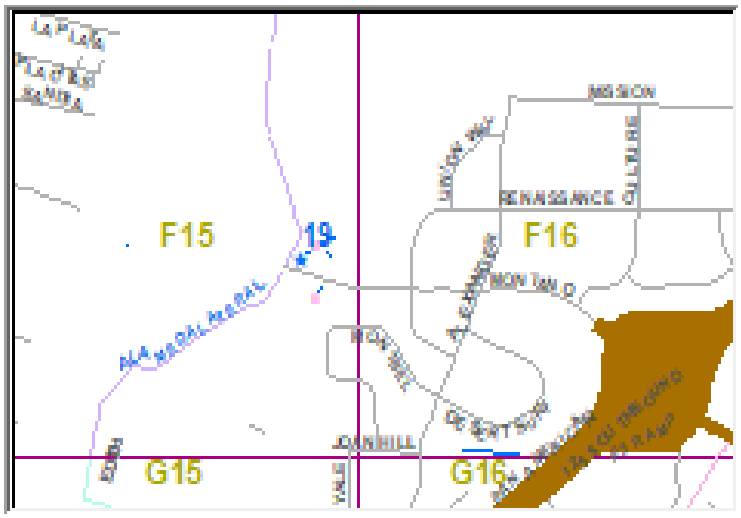
LOCATION	PS 47 RIO GRANDE BLVD - MONTANIO
STRUCTURE_NAME	





MAP_KEY	F13	City_Quad	NW
Year_Built	1995	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	83

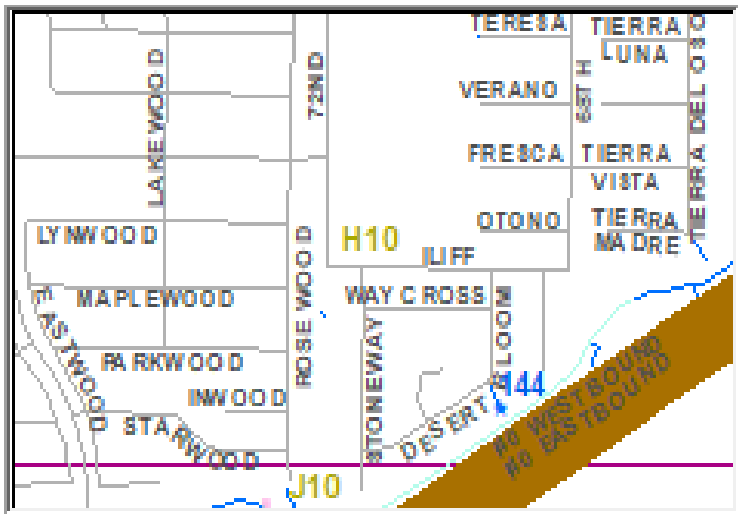
LOCATION	0.25 M NE MONTANO AND EDITH
STRUCTURE_NAME	





MAP_KEY	F15	City_Quad	NE
Year_Built	2006	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	NEED SPECIAL ATTENTION- INSIDE RENAISSANCE POND		
SWQ SIZE	10' W X 8' H X 10' L	cost	
PROJECT_NO		NUMBER	19

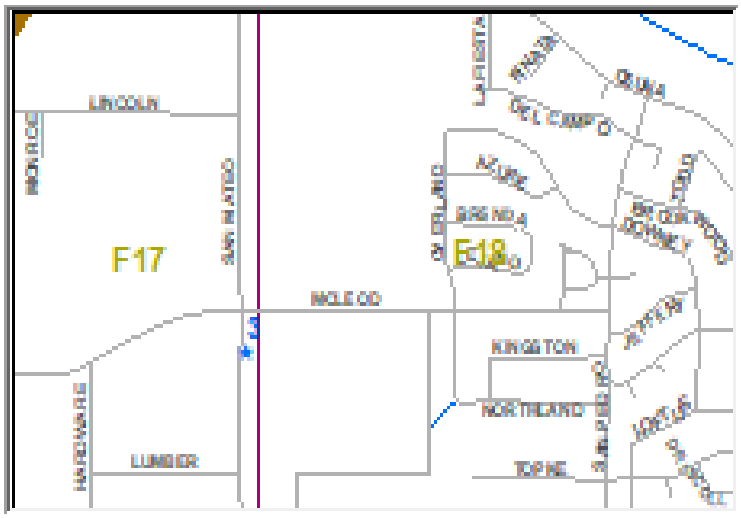
LOCATION	**MONTANO-MONTBEL**
STRUCTURE_NAME	PORTED RISER





MAP_KEY	F15	City_Quad	NW
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	144

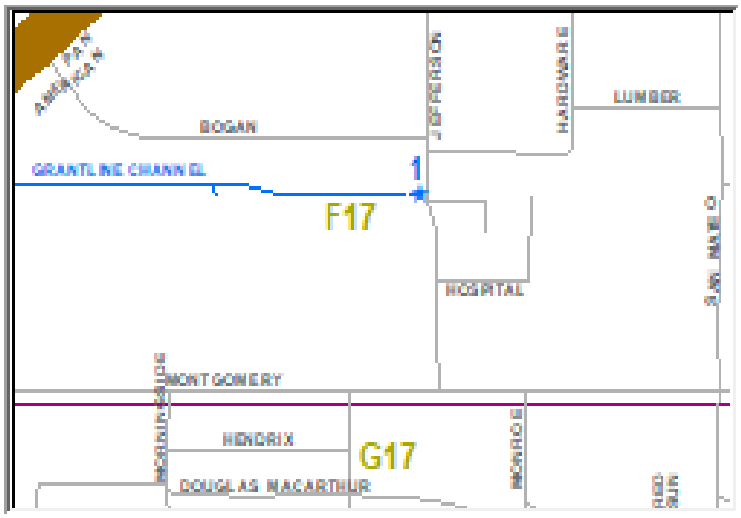
LOCATION	SAN MATEO 0.1 M S MCLEOD
STRUCTURE_NAME	





MAP_KEY	F17	City_Quad	NE
Year_Built	2005	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\00
NOTES	SECURITY RACK		
SWQ SIZE	15' W X 10' L	cost	
PROJECT_NO		NUMBER	3

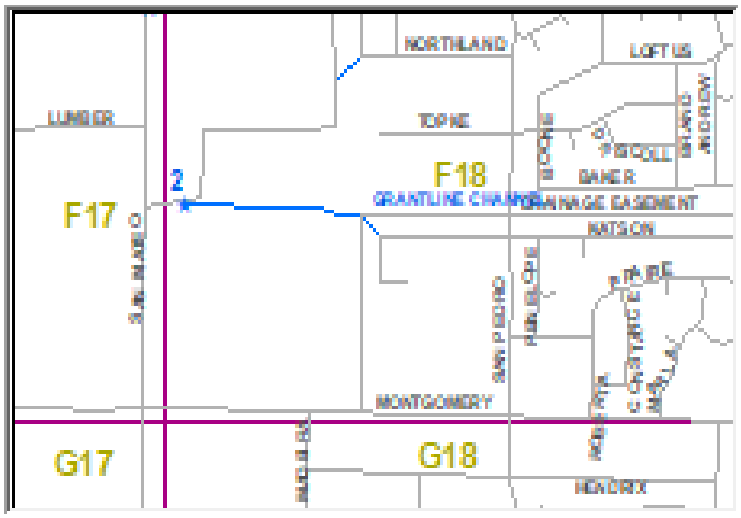
LOCATION	JEFFERSON 0.25 M N MONTGOMERY
STRUCTURE_NAME	





MAP_KEY	F17	City_Quad	NE
Year_Built	2005	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\00
NOTES	SECURITY RACK		
SWQ SIZE	12.5' W X 13.5' L	cost	
PROJECT_NO		NUMBER	1

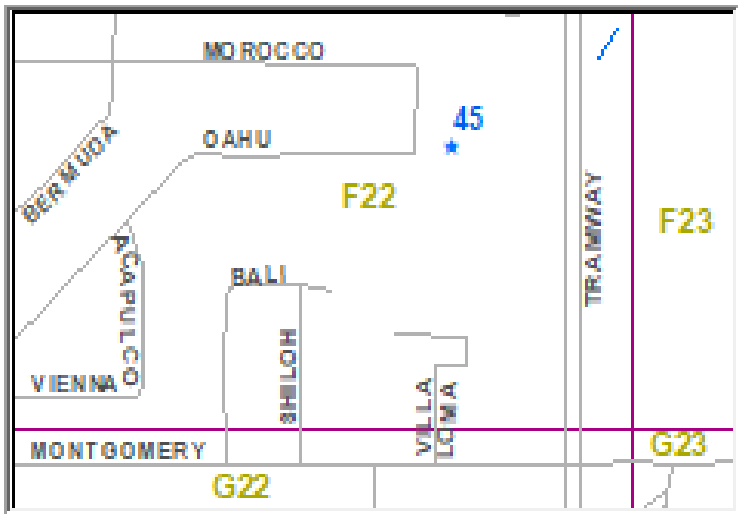
LOCATION	SAN MATEO 0.25 M N MONGOMERY
STRUCTURE_NAME	





MAP_KEY	F18	City_Quad	NE
Year_Built	2005	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\00
NOTES	TRASH RACK		
SWQ SIZE	10' W X 21' L	cost	
PROJECT_NO		NUMBER	2

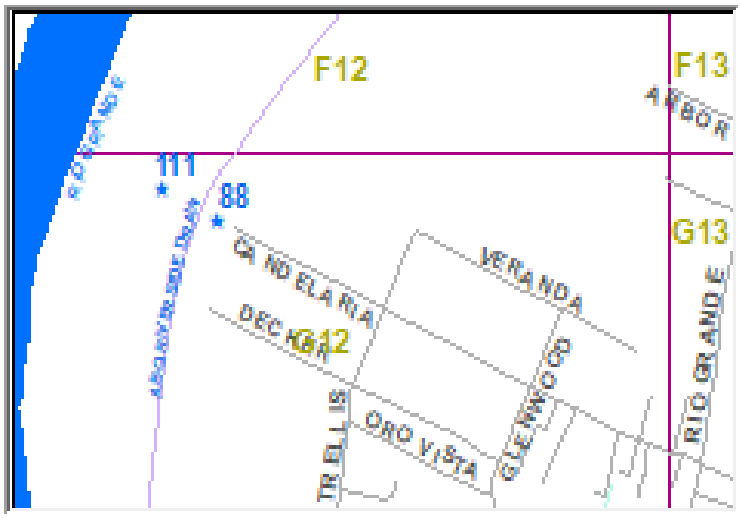
LOCATION	EASEMENT NEXT TO HOUSE# 4800 OAHU NE
STRUCTURE_NAME	





MAP_KEY	F22	City_Quad	NE
Year_Built	UNKNOWN	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	NEEDS SPECIAL ATTENTION		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	45

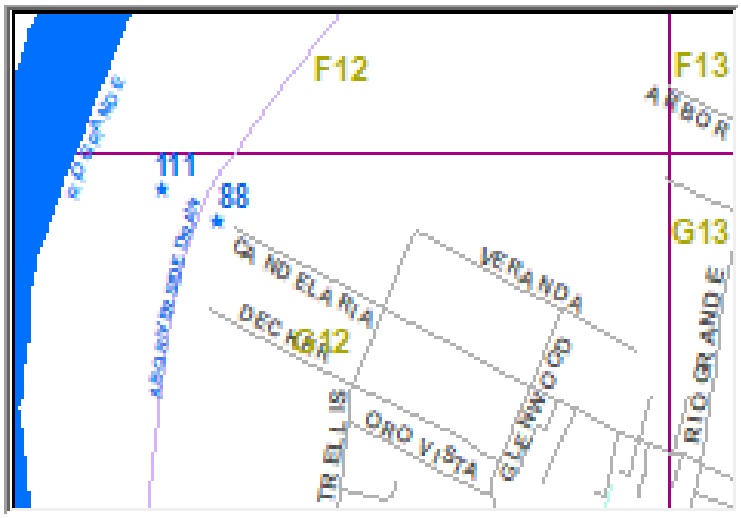
LOCATION	3001 CANDELARIA PS 40 OUTFALL
STRUCTURE_NAME	





MAP_KEY	G12	City_Quad	NW
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	111

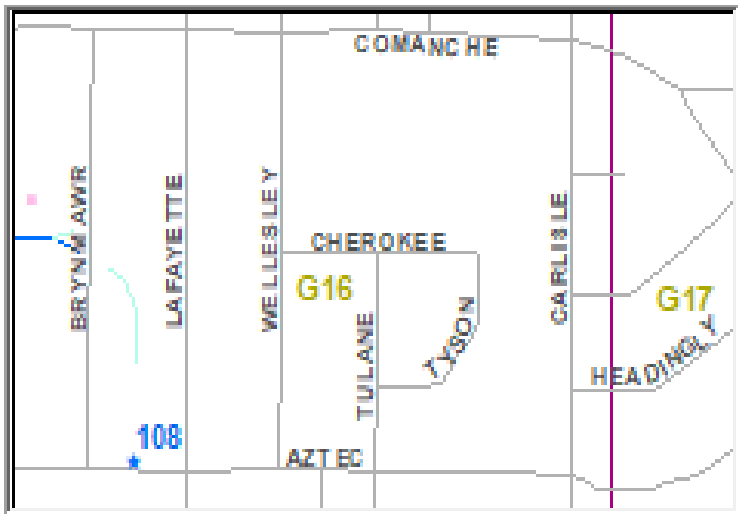
LOCATION	3001 CANDELARIA NW PS 40
STRUCTURE_NAME	





MAP_KEY	G12	City_Quad	NW
Year_Built	1965	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	88

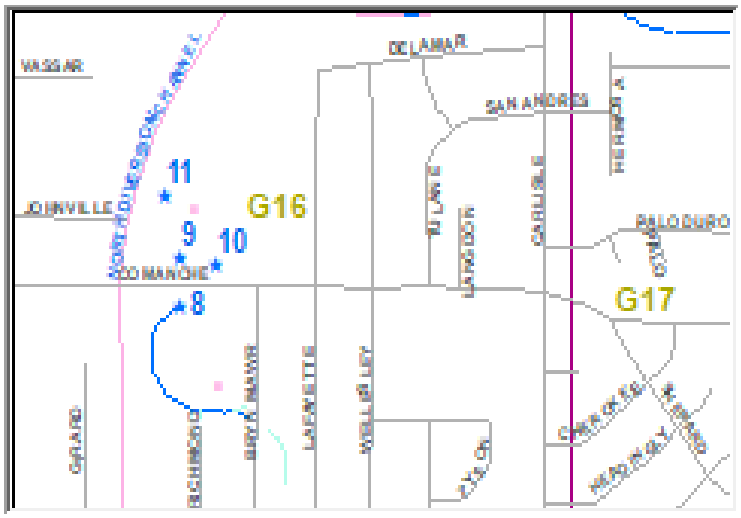
LOCATION	AZTEC AND BRYN MAWR NE
STRUCTURE_NAME	2 SWQ INLETS





MAP_KEY	G16	City_Quad	NE
Year_Built	2017	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	784903	NUMBER	108

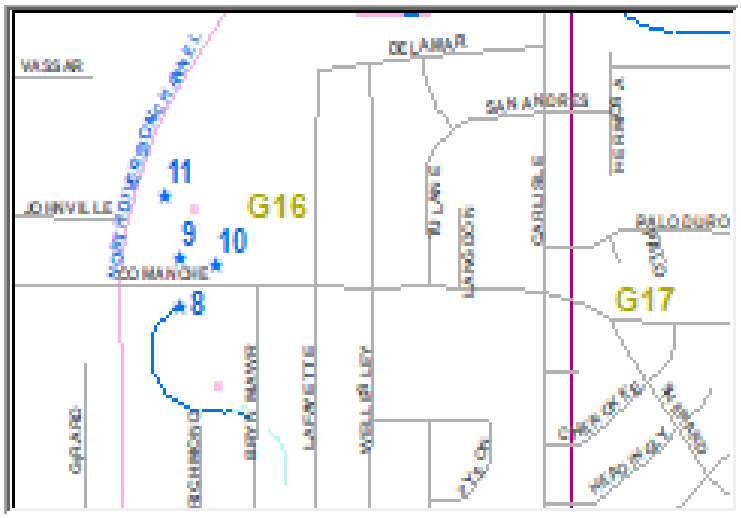
LOCATION	0.1 M SW COMANCHE AND BRYN MAWR
STRUCTURE_NAME	





MAP_KEY	G16	City_Quad	NE
Year_Built	2005	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\00
NOTES	NEEDS SPECIAL ATTENTION-INSIDE LITTLE LEAGE PARK		
SWQ SIZE	8' W TOP X 15' BOTTOM X 10' L	cost	
PROJECT_NO		NUMBER	8

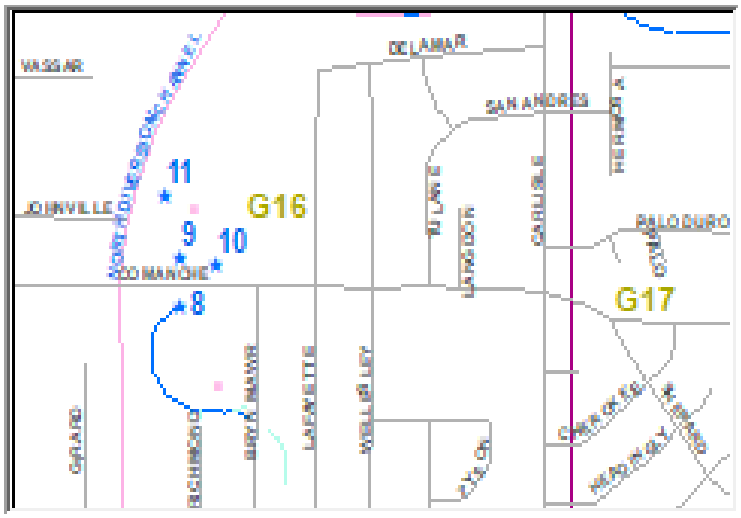
LOCATION	0.15 M NW COMANCHE AND BRYN MAWR
STRUCTURE_NAME	





MAP_KEY	G16	City_Quad	NE
Year_Built	1967	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\01
NOTES	ENTRANCE TO PUMP STATION # 35		
SWQ SIZE	18' W X 8' H	cost	
PROJECT_NO		NUMBER	11

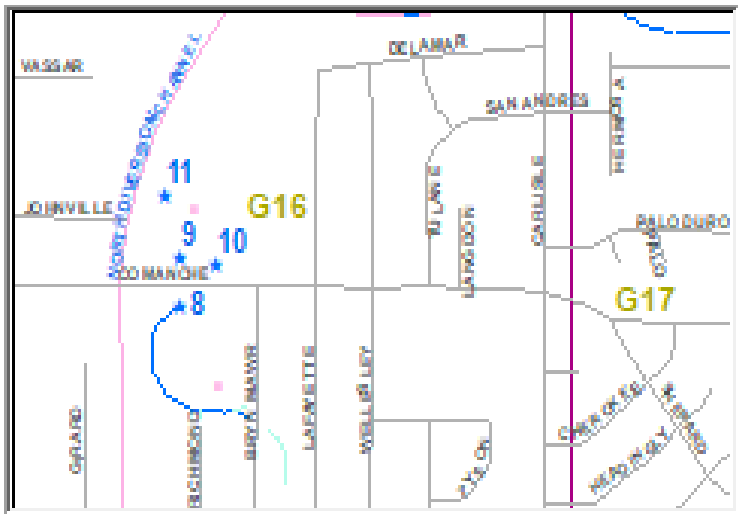
LOCATION	0.1 M NW COMANCHE AND BRYN MAWR
STRUCTURE_NAME	





MAP_KEY	G16	City_Quad	NE
Year_Built	2005	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\01
NOTES	SECURITY RACK, INSIDE COMANCHE POND		
SWQ SIZE	8" W X 10' L	cost	
PROJECT_NO		NUMBER	10

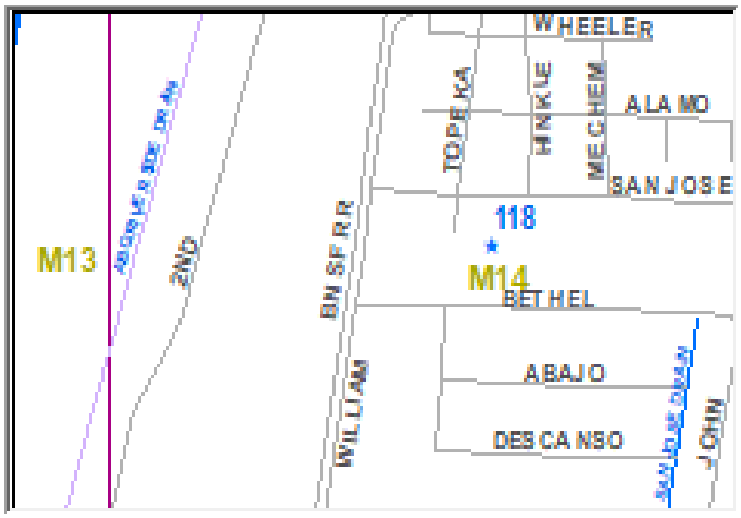
LOCATION	0.2 M NW COMANCHE AND BRYN MAWR
STRUCTURE_NAME	





MAP_KEY	G16	City_Quad	NE
Year_Built	2005	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\00
NOTES	SECURITY RACK, INSIDE THE COMANCHE POND		
SWQ SIZE	8" W X 10' L	cost	
PROJECT_NO		NUMBER	9

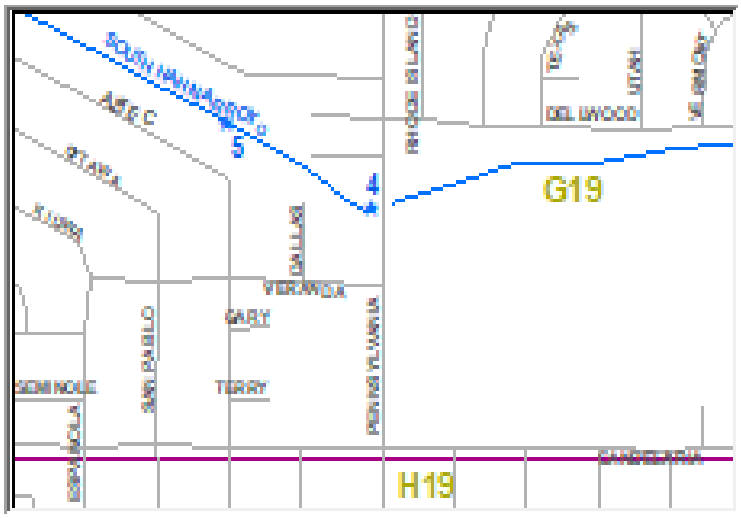
LOCATION	**SAN JOSE PARK AT SAN JOSE AND TOPEKA SE**
STRUCTURE_NAME	SWQF





MAP_KEY	G16	City_Quad	SE
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	STC 2400 PRECAST CONCRETE STORMCEPTOR-STORMSEPTOR		
SWQ SIZE		cost	
PROJECT_NO	792602	NUMBER	118

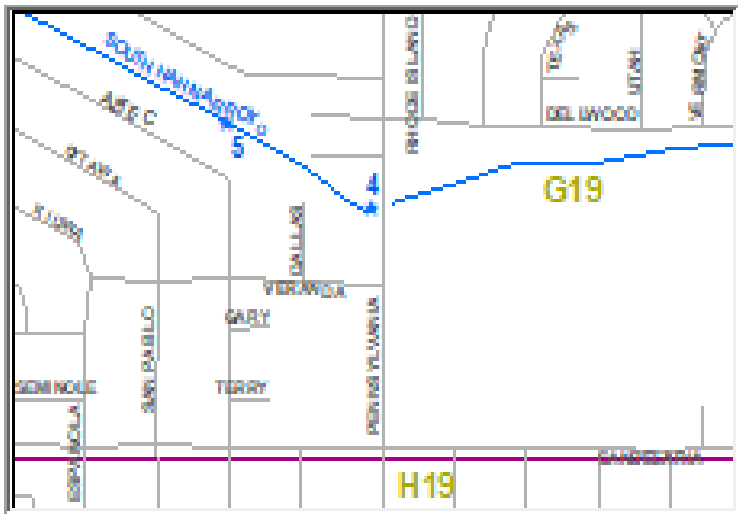
LOCATION	AZTEC 0.1 M W PENSYLVANIA
STRUCTURE_NAME	





MAP_KEY	G19	City_Quad	NE
Year_Built	2005	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\00
NOTES	SECURITY RACK		
SWQ SIZE	9' TOP W X 18' BOTTOM W X 18' L	cost	
PROJECT_NO		NUMBER	5

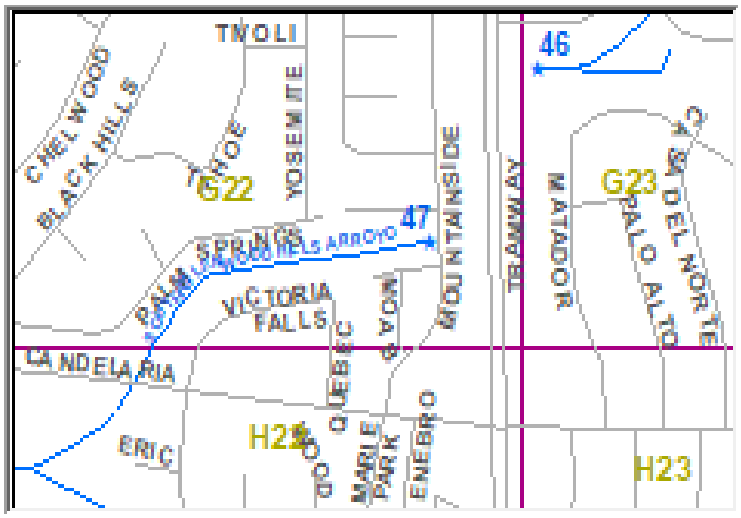
LOCATION	PENNSYLVANIA 0.2 M N CANDELARIA
STRUCTURE_NAME	





MAP_KEY	G19	City_Quad	NE
Year_Built	2005	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\00
NOTES	SECURITY RACK		
SWQ SIZE	10.5' W X 14' L	cost	
PROJECT_NO		NUMBER	4

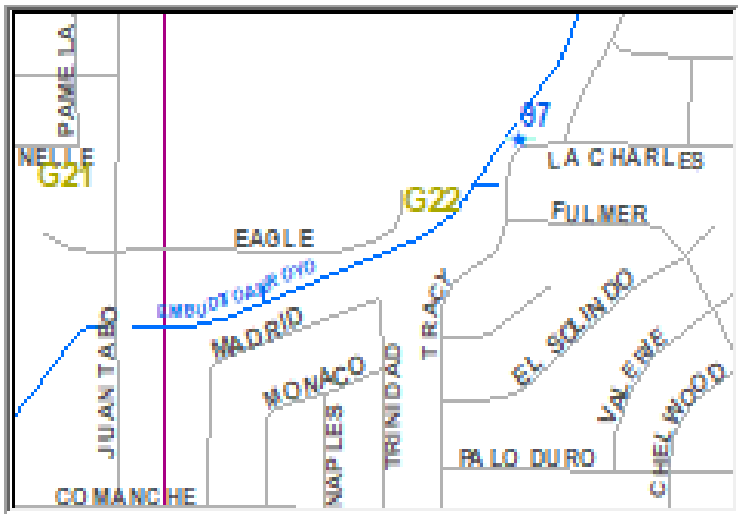
LOCATION	TRAMWAY 0.1 M N CANDELARIA
STRUCTURE_NAME	





MAP_KEY	G22	City_Quad	NE
Year_Built	2004	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	SECURITY RACK		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	47

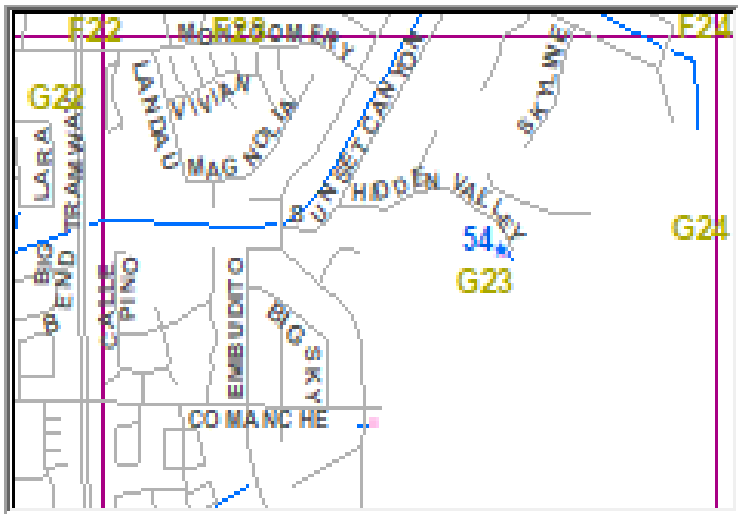
LOCATION	11805 LA CHARLES NE
STRUCTURE_NAME	SECURITY SCREEN





MAP_KEY	G22	City_Quad	NE
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE	48 IN DIA	cost	
PROJECT_NO		NUMBER	97

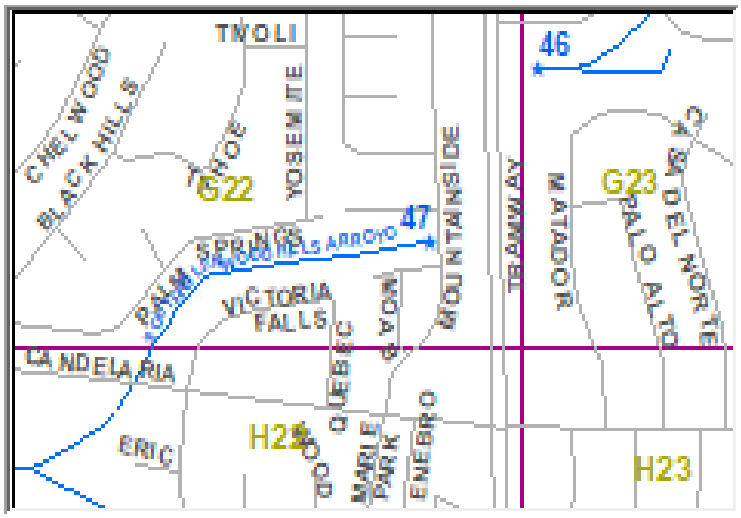
LOCATION	0.1 M SE HIDDEN VALLEY AND DEER TRAIL
STRUCTURE_NAME	





MAP_KEY	G23	City_Quad	NE
Year_Built	1975	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE THE HIDDEN VALLEY POND		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	54

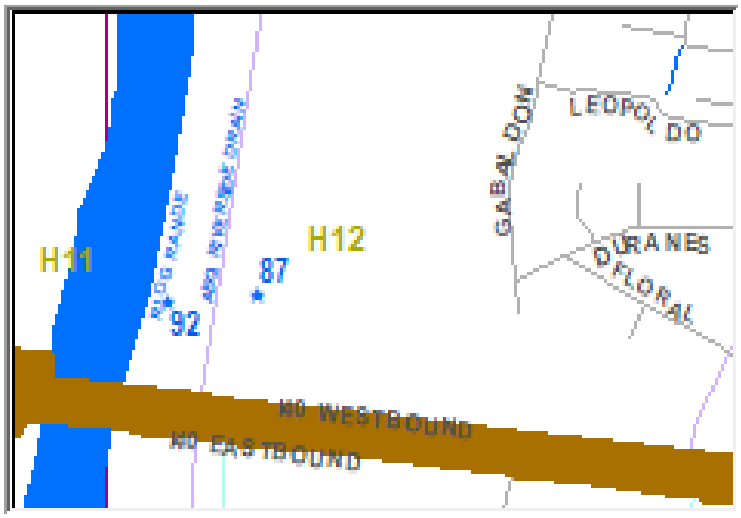
LOCATION	TRAMWAY 0.25 M N CANDELARIA
STRUCTURE_NAME	





MAP_KEY	G23	City_Quad	NE
Year_Built	2004	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	46

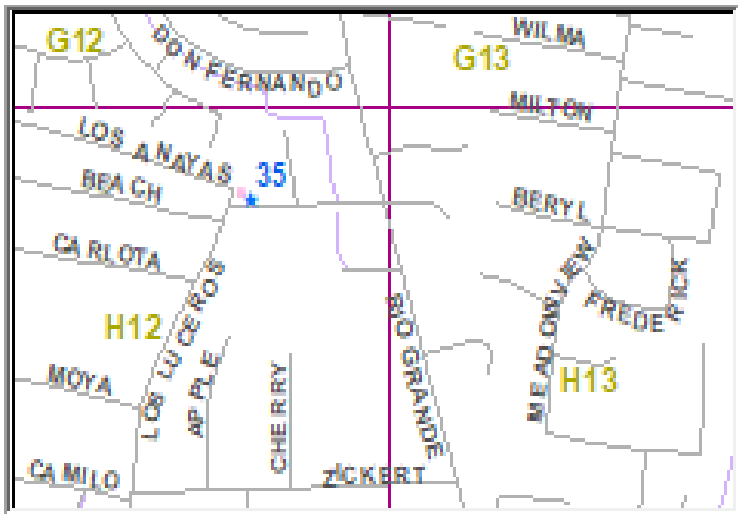
LOCATION	3241 DURANES NW PS 30
STRUCTURE_NAME	





MAP_KEY	H12	City_Quad	NW
Year_Built	1965	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	87

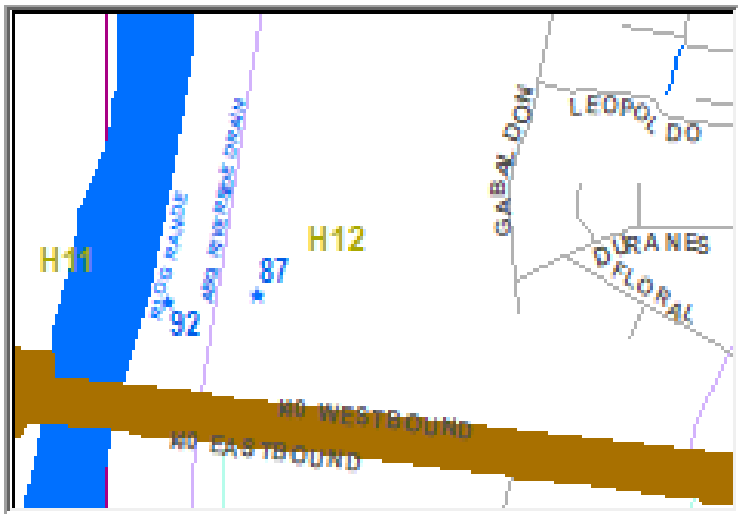
LOCATION	LOS ANAYAS AND LOS LUCEROS
STRUCTURE_NAME	





MAP_KEY	H12	City_Quad	NW
Year_Built	1990	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE THE POND		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	35

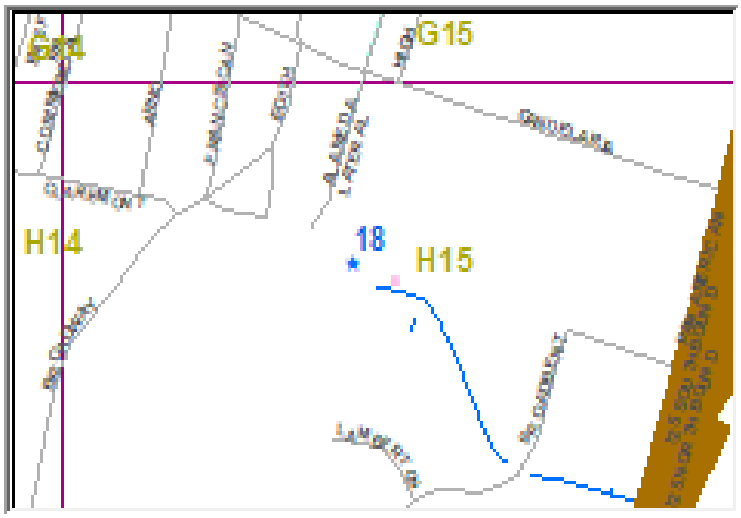
LOCATION	DURANCE PUMP-DISCGARGE PIPE
STRUCTURE_NAME	





MAP_KEY	H12	City_Quad	NW
Year_Built	1962	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	PROJ-NO-08-622-62		
SWQ SIZE	48 IN D	cost	
PROJECT_NO		NUMBER	92

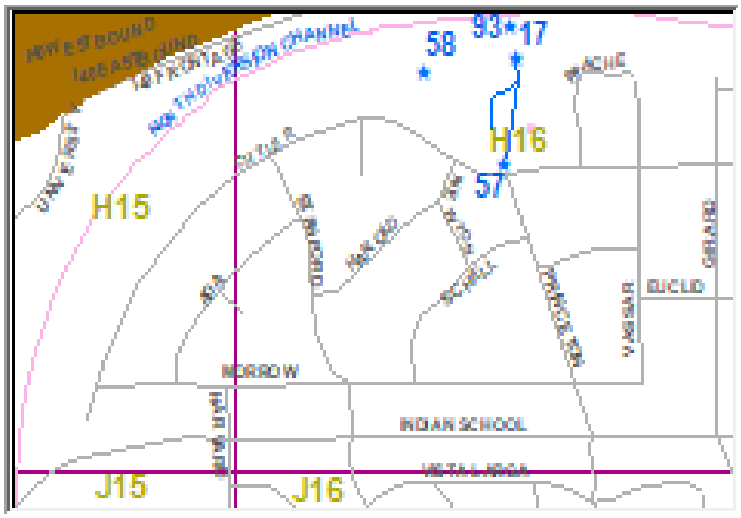
LOCATION	0.25 M SE CANDELARIA AND EDITH
STRUCTURE_NAME	





MAP_KEY	H15	City_Quad	NE
Year_Built	1995	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE MENAUL POND		
SWQ SIZE	8' W X 8' H X 8' L	cost	
PROJECT_NO		NUMBER	18

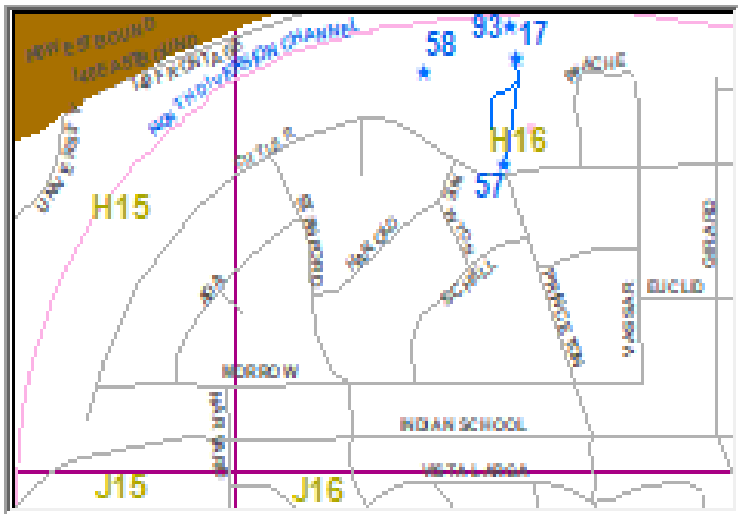
LOCATION	200 FT NORTH OF CUTLER AND PRINCETON NE
STRUCTURE_NAME	





MAP_KEY	H16	City_Quad	NE
Year_Built	1969	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	POND ENTRANCE		
SWQ SIZE	10' W X 8' L	cost	
PROJECT_NO		NUMBER	58

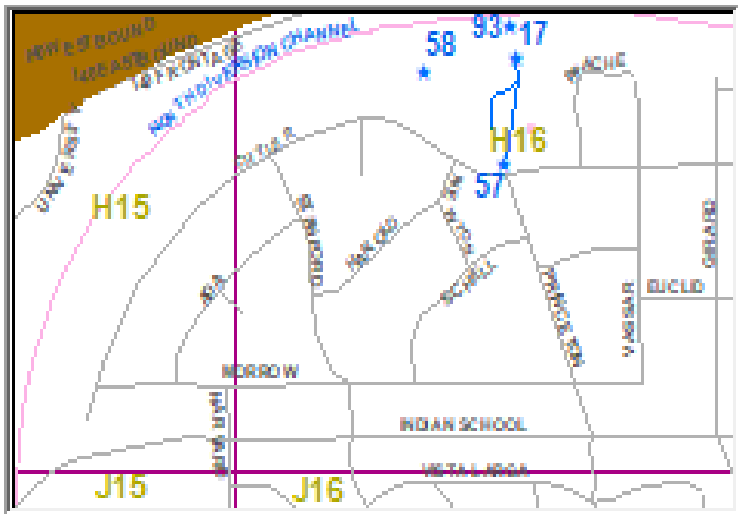
LOCATION	PRINCETON AND CUTLER
STRUCTURE_NAME	





MAP_KEY	H16	City_Quad	NE
Year_Built	1970	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	POND ENTRANCE		
SWQ SIZE	25' W X 8' L	cost	
PROJECT_NO		NUMBER	57

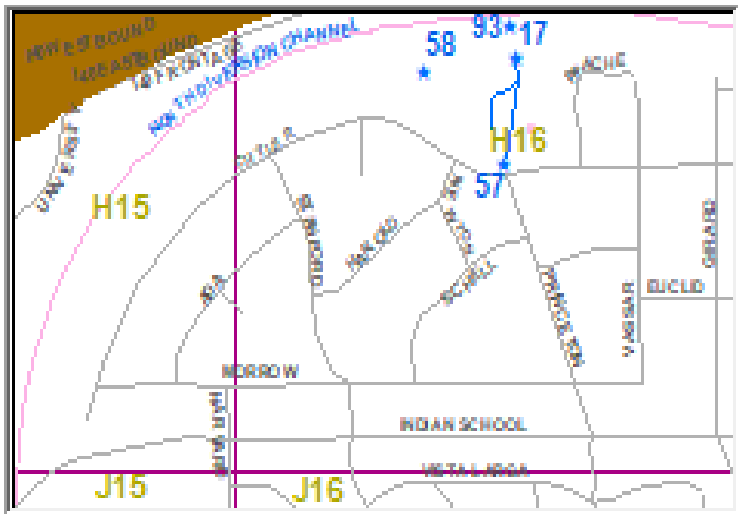
LOCATION	PRINCTON PS DISCHARGE PIPES-4 PIPES
STRUCTURE_NAME	





MAP_KEY	H16	City_Quad	NE
Year_Built	1970	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	SECURITY		
SWQ SIZE	4 AT 24 IN	cost	
PROJECT_NO		NUMBER	93

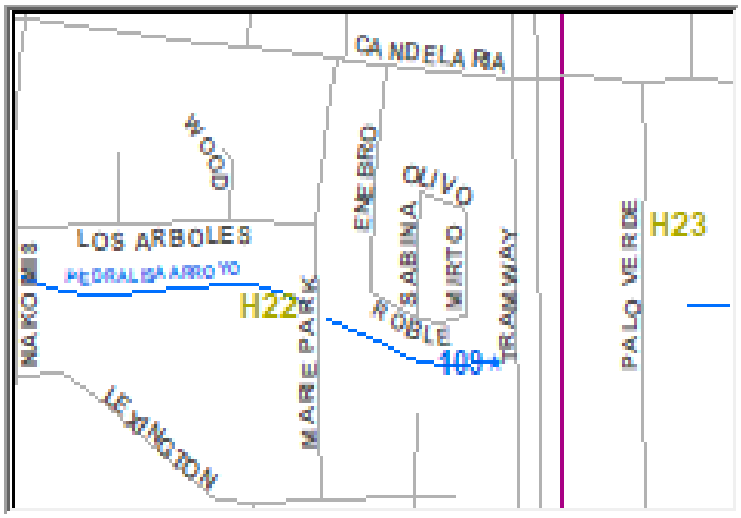
LOCATION	**CUTLER AND PRINCETON PS INLET**
STRUCTURE_NAME	





MAP_KEY	H16	City_Quad	NE
Year_Built	1970	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\01
NOTES	THIS IS A PUMP STATION #36 INSIDE THE PRINCETON POND		
SWQ SIZE	3 @ 10' W X 8' L	cost	
PROJECT_NO		NUMBER	17

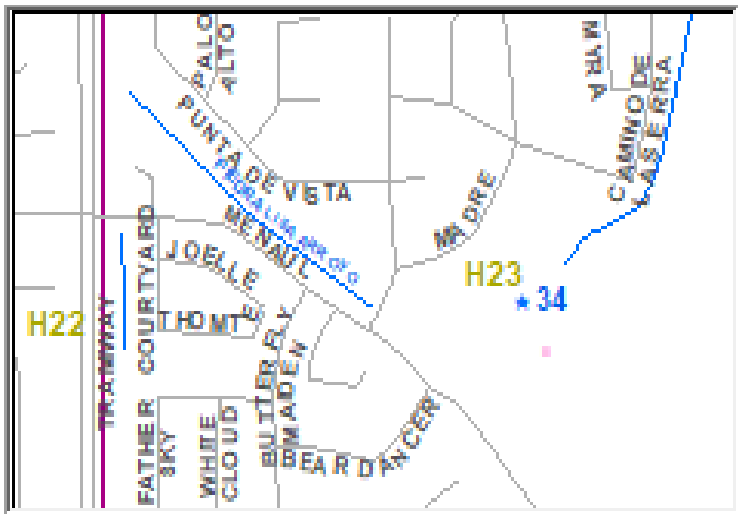
LOCATION	PIEDRA LISA ARROYO AT TRAMWAY
STRUCTURE_NAME	PERMEABLE PAVERS





MAP_KEY	H22	City_Quad	NE
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	109

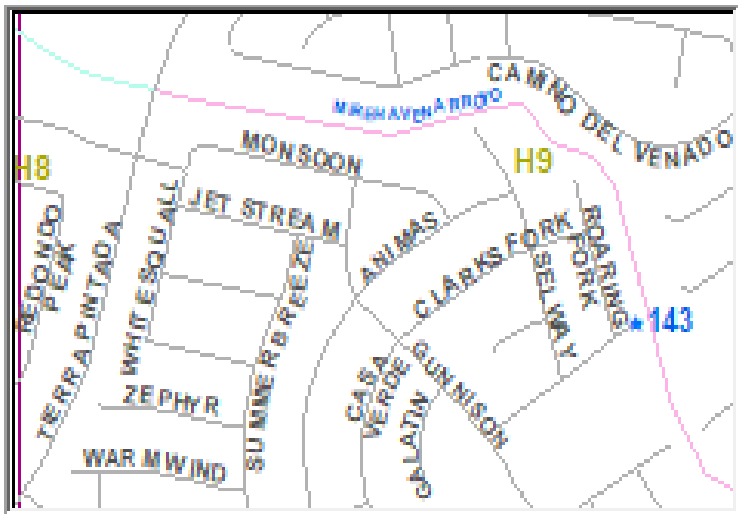
LOCATION	**ALISA DAM AT 0.2 M NE MENAUL AND GAMB**
STRUCTURE_NAME	





MAP_KEY	H23	City_Quad	NE
Year_Built	2013	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	LOCATED INSIDE PIEDRALISA DAM-PRINCIPAL SPILLWAY-440000		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	34

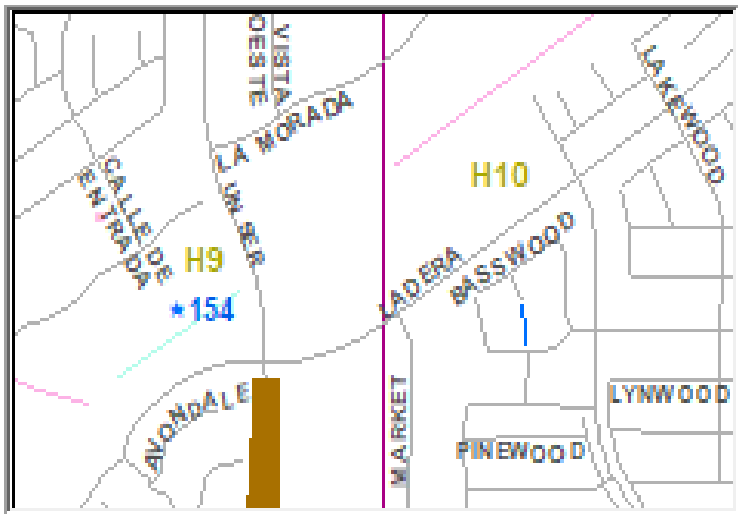
LOCATION	**END OF EAGLE RIVER**
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	H9	City_Quad	NW
Year_Built	2007	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	545382	NUMBER	143

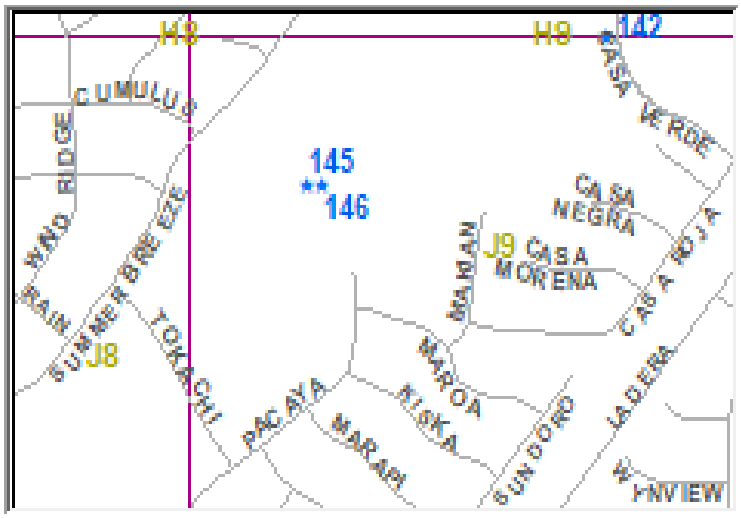
LOCATION	**LADERA**
STRUCTURE_NAME	SWQ-MH





MAP_KEY	H9	City_Quad	NW
Year_Built	2004	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	691581	NUMBER	154

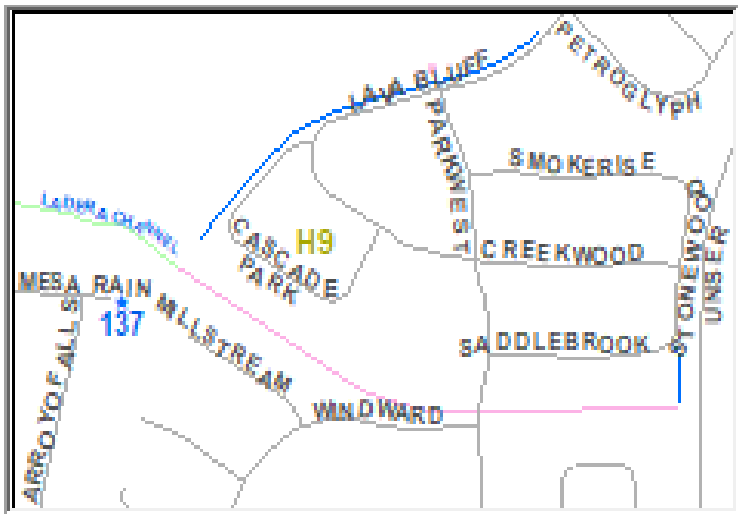
LOCATION	CASA VERDE
STRUCTURE_NAME	SWQ-MH





MAP_KEY	H9	City_Quad	NW
Year_Built	2007	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	650279	NUMBER	142

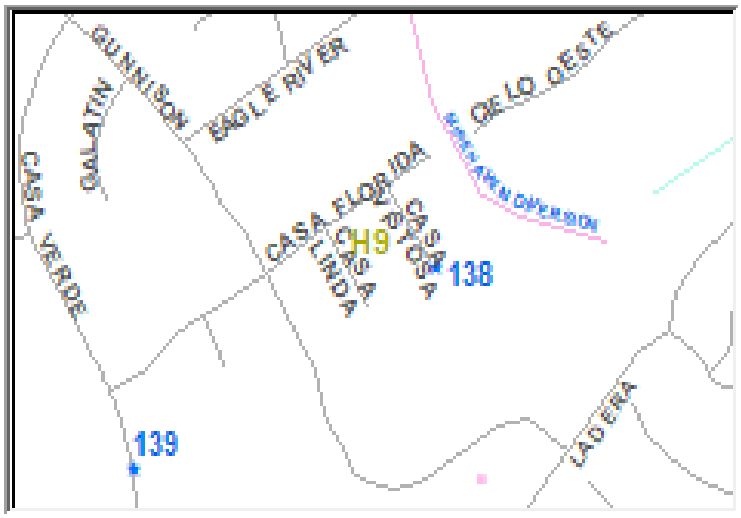
LOCATION	END OF MESA RAIN
STRUCTURE_NAME	SWQ-MH





MAP_KEY	H9	City_Quad	NW
Year_Built	2007	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	742981	NUMBER	137

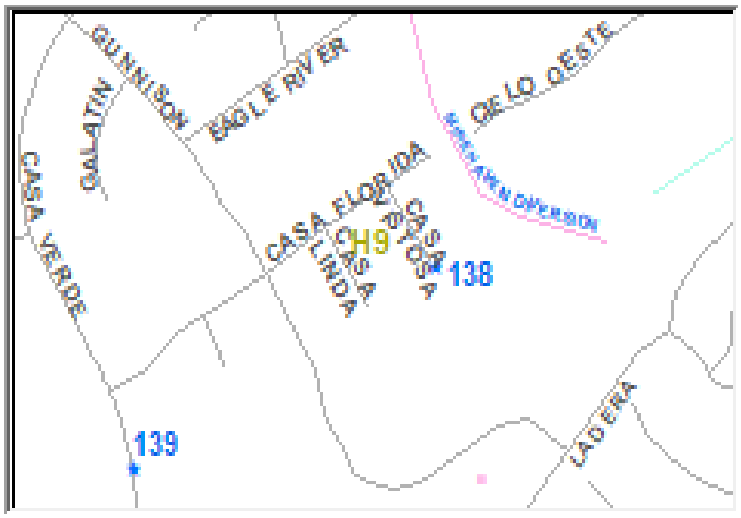
LOCATION	END OF CASA VISTOSA
STRUCTURE_NAME	SWQ-MH





MAP_KEY	H9	City_Quad	NW
Year_Built	2007	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	138

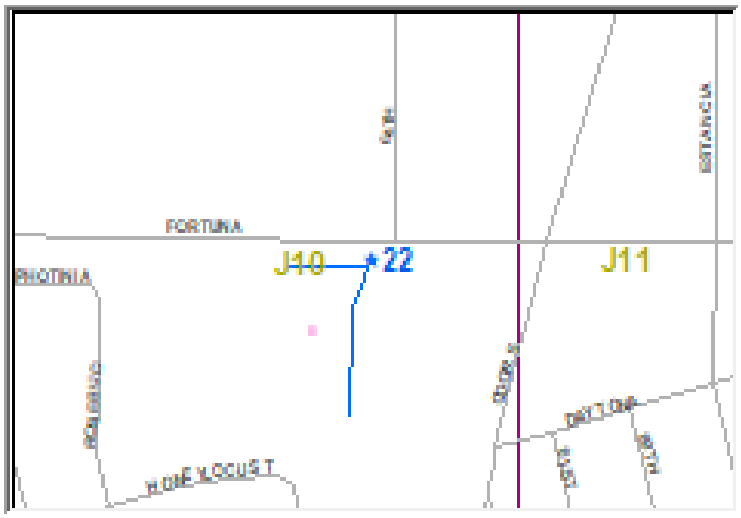
LOCATION	CASA VERDE
STRUCTURE_NAME	SWQ-MH





MAP_KEY	H9	City_Quad	NW
Year_Built	2007	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	671581	NUMBER	139

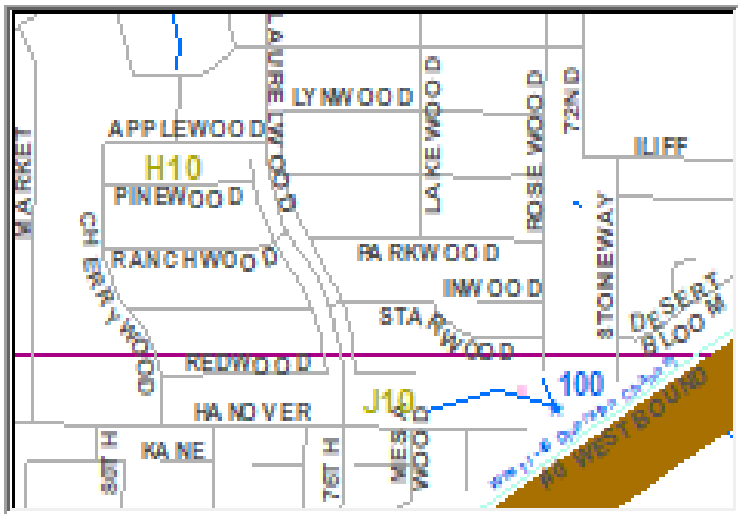
LOCATION	0.1 M SW COORS AND FORTUNA
STRUCTURE_NAME	





MAP_KEY	J10	City_Quad	NW
Year_Built	2004	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE WEST MESA POND		
SWQ SIZE	15' W X 15' L	cost	
PROJECT_NO		NUMBER	22

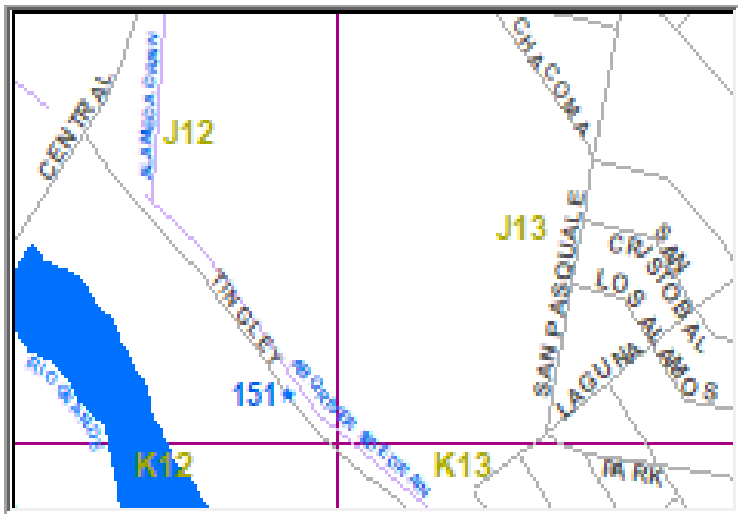
LOCATION	**LAURELWOOD POND**
STRUCTURE_NAME	





MAP_KEY	J10	City_Quad	NW
Year_Built	2006	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	PR# 699481		
SWQ SIZE	14' X 15' X 10' H POND RISER	cost	
PROJECT_NO		NUMBER	100

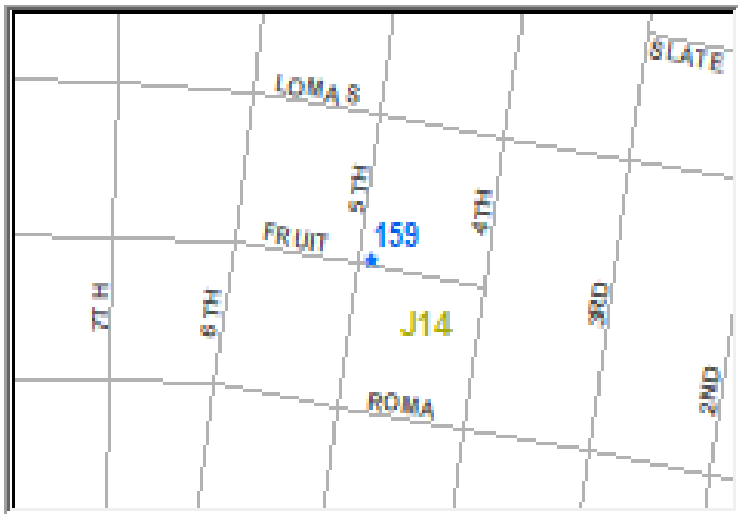
LOCATION	**TINGLEY-CENTRAL**
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	J12	City_Quad	SW
Year_Built	2006	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	701291	NUMBER	151

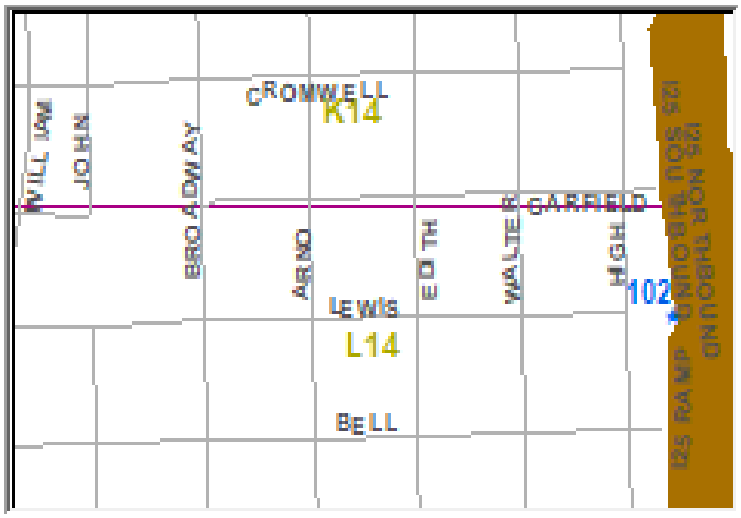
LOCATION	NE OF FRUIT AND 5TH
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	J14	City_Quad	NW
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	159

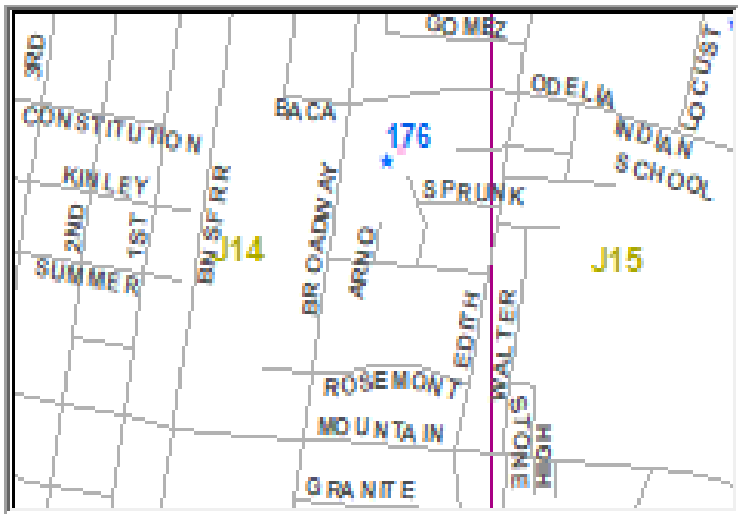
LOCATION	HIGH-LEWIS OUTLETS
STRUCTURE_NAME	





MAP_KEY	J14	City_Quad	SE
Year_Built	1970	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	SECURITY FOR NMDOT		
SWQ SIZE	2 @ 50 IN DIA RCP	cost	
PROJECT_NO		NUMBER	102

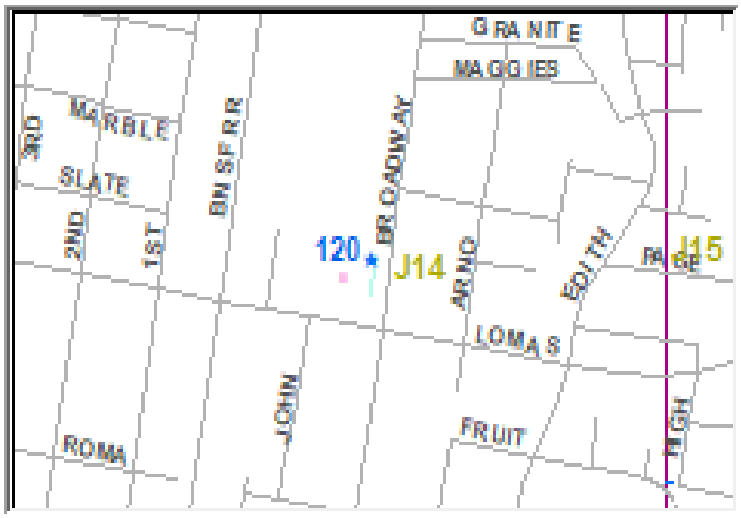
LOCATION	AQ POND-END OF FRANCISCAN
STRUCTURE_NAME	CONC-BOX





MAP_KEY	J14	City_Quad	NE
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	176

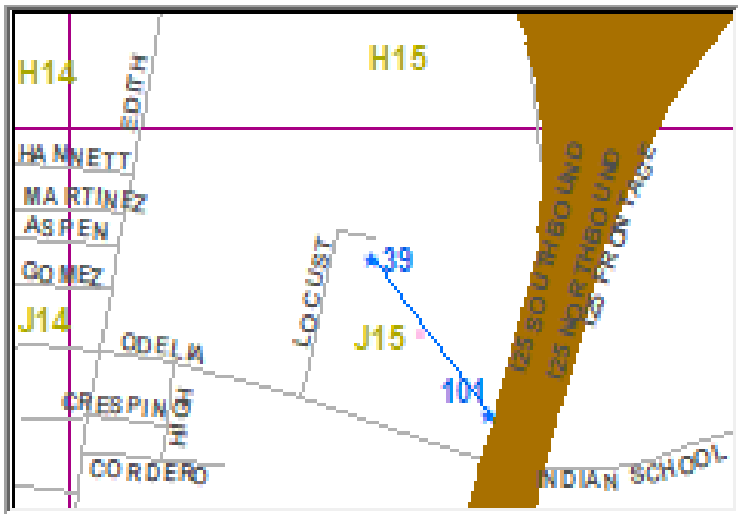
LOCATION	LOMAS-BROADWAY POND
STRUCTURE_NAME	CONC-BOX





MAP_KEY	J14	City_Quad	NW
Year_Built	2009	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	796394	NUMBER	120

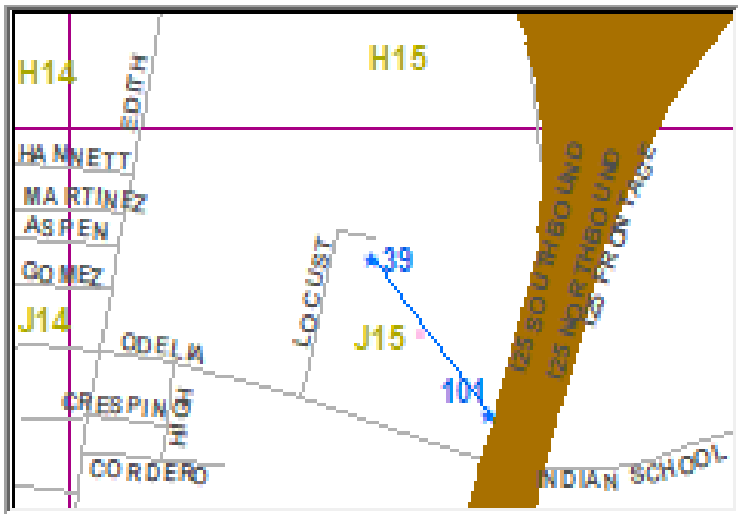
LOCATION	NE ODELIA AND LOCUST
STRUCTURE_NAME	





MAP_KEY	J15	City_Quad	NE
Year_Built	2013	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	NEED VERY SPECIAL ATTENTION-440004		
SWQ SIZE	5'D X 10' H WITH EXPANDED METAL MESH-ROLLED STEEL-1/2", 3/4", 1 1/2" OPENINGS	cost	
PROJECT_NO		NUMBER	39

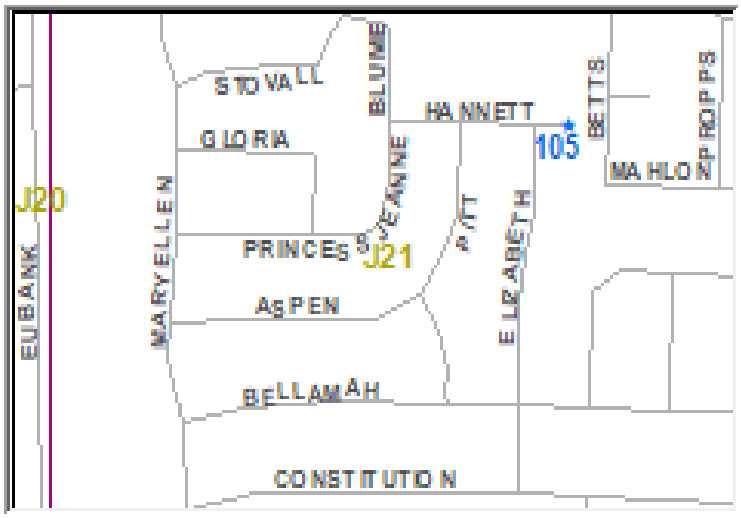
LOCATION	ODELIA-I-25 TUNNELS
STRUCTURE_NAME	





MAP_KEY	J15	City_Quad	NE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	3 RCP OF 70 IN DIA		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	101

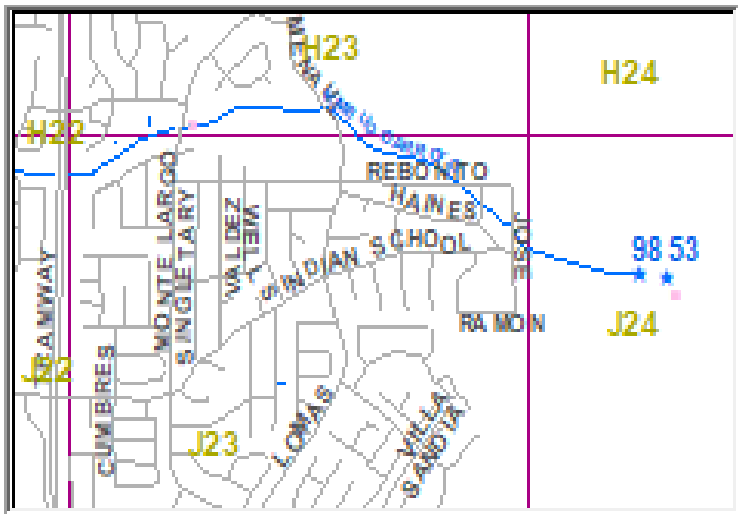
LOCATION	1609 BETTS NE
STRUCTURE_NAME	SWQ MH





MAP_KEY	J21	City_Quad	NE
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	105

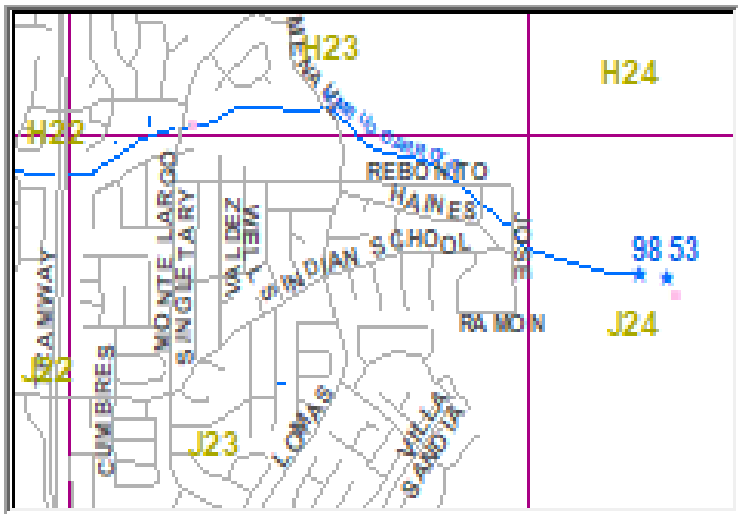
LOCATION	0.4 M E INDIAN SCHOOL AND HAINES
STRUCTURE_NAME	





MAP_KEY	J24	City_Quad	NE
Year_Built	1979	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE EMBUDO DAM		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	53

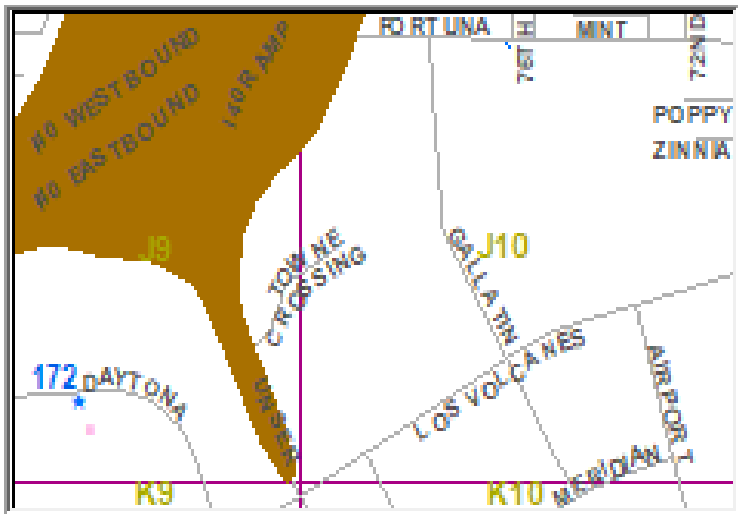
LOCATION	**BUDO PRINCIPAL SPILLWAY PIPE-SECURITY RA**
STRUCTURE_NAME	

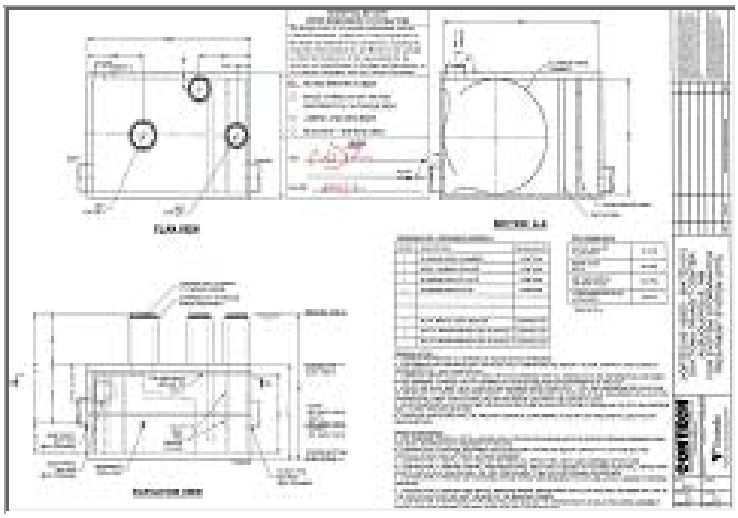




MAP_KEY	J24	City_Quad	NE
Year_Built	1979	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	PR#800179		
SWQ SIZE	48 IN DIA	cost	
PROJECT_NO		NUMBER	98

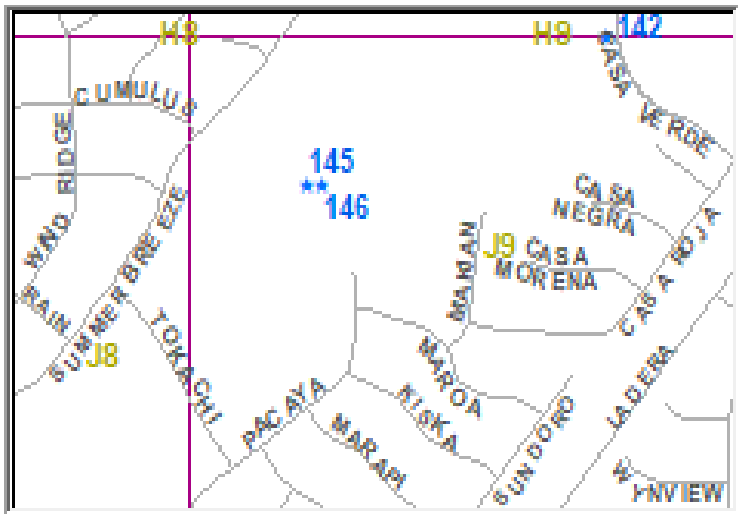
LOCATION	**DAYTONA-LOS VOLCANES-UNSER**
STRUCTURE_NAME	SWQF





MAP_KEY	J9		City_Quad	NW	
Year_Built	2017	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack		
NOTES	TRASH RACK				
SWQ SIZE			cost		
PROJECT_NO			NUMBER	172	

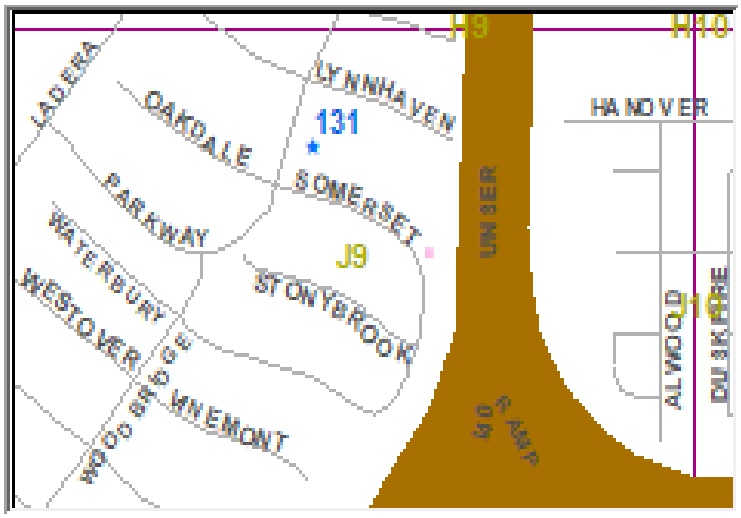
LOCATION	**SUMMER BREEZE-STORMCLOUD**
STRUCTURE_NAME	SWQ-MH





MAP_KEY	J9	City_Quad	NW
Year_Built	2007	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	650278	NUMBER	146

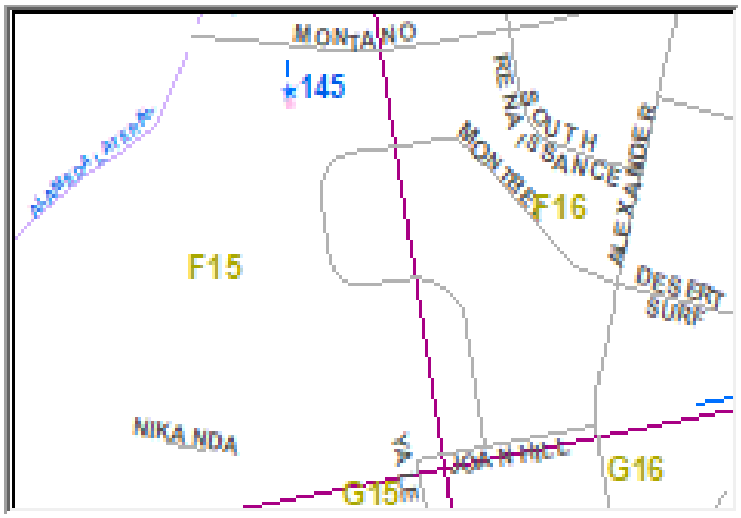
LOCATION	PARKWAY-LYNNHAVEN-SOMERSET NW
STRUCTURE_NAME	SWQ-MH





MAP_KEY	J9	City_Quad	NW
Year_Built	2009	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	691592	NUMBER	131

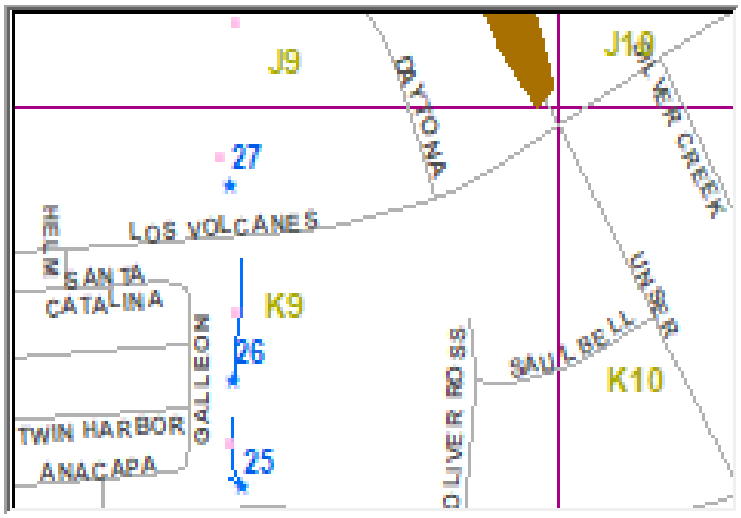
LOCATION	**MONTANO-MONTBEL**
STRUCTURE_NAME	PORTED RISER





MAP_KEY	J9	City_Quad	NE
Year_Built	2007	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\14
NOTES	PORTED RISER		
SWQ SIZE		cost	
PROJECT_NO	650278	NUMBER	145

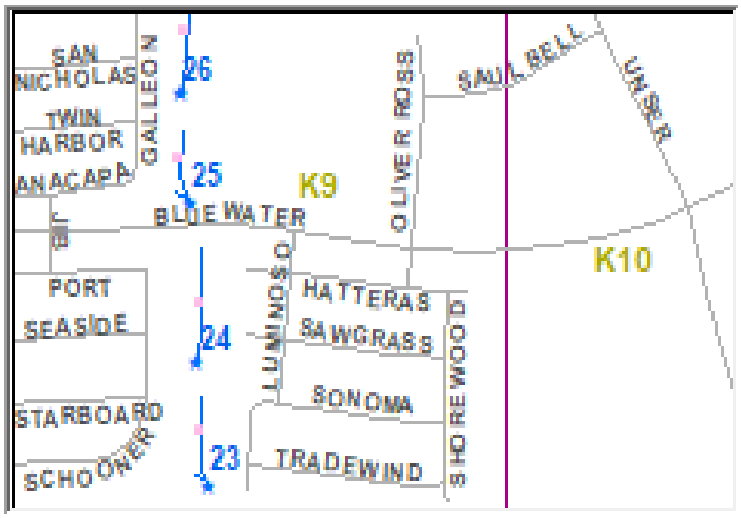
LOCATION	0.5 M NW UNSER AND BLUEWATER
STRUCTURE_NAME	





MAP_KEY	K09	City_Quad	NW
Year_Built	1996	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE UNSER DIV POND#5 (POND # 76)		
SWQ SIZE	12' W X 12' H X 12' L	cost	
PROJECT_NO		NUMBER	27

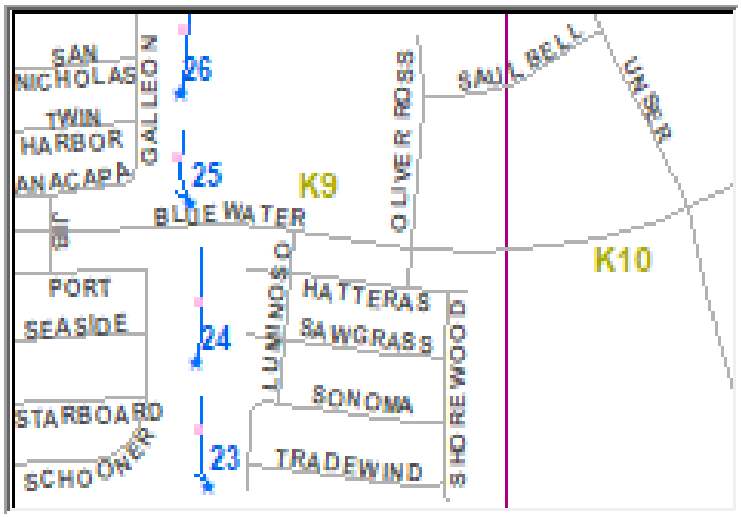
LOCATION	BLUEWATER 0.4 M W UNSER
STRUCTURE_NAME	





MAP_KEY	K09	City_Quad	NW
Year_Built	1996	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE UNSER DIV POND#3 (POND # 74)		
SWQ SIZE	12' W X 12' H X 12' L	cost	
PROJECT_NO		NUMBER	25

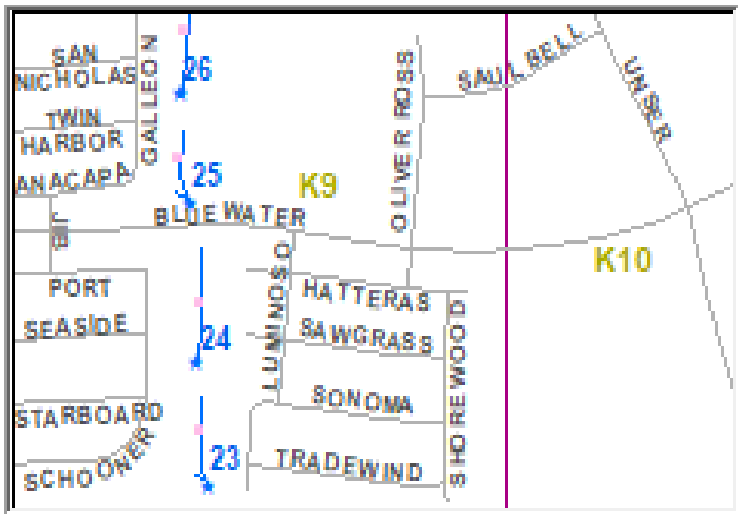
LOCATION	0.5 M SW UNSER AND BLUEWATER
STRUCTURE_NAME	





MAP_KEY	K09	City_Quad	NW
Year_Built	1996	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE UNSER DIV POND#1 (POND # 72)		
SWQ SIZE	12' W X 12' H X 12' L	cost	
PROJECT_NO		NUMBER	23

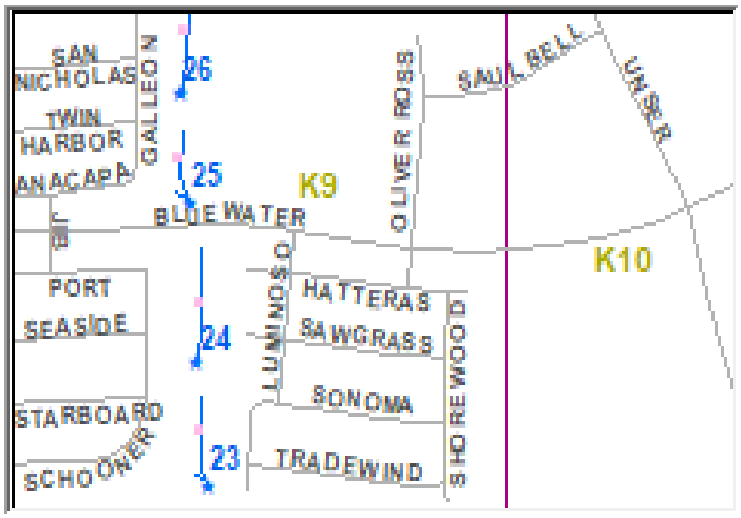
LOCATION	0.4 M SW UNSER AND BLUEWATER
STRUCTURE_NAME	





MAP_KEY	K09	City_Quad	NW
Year_Built	1996	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE UNSER DIV POND#2 (POND# 73)		
SWQ SIZE	12' W X 12' H X 12' L	cost	
PROJECT_NO		NUMBER	24

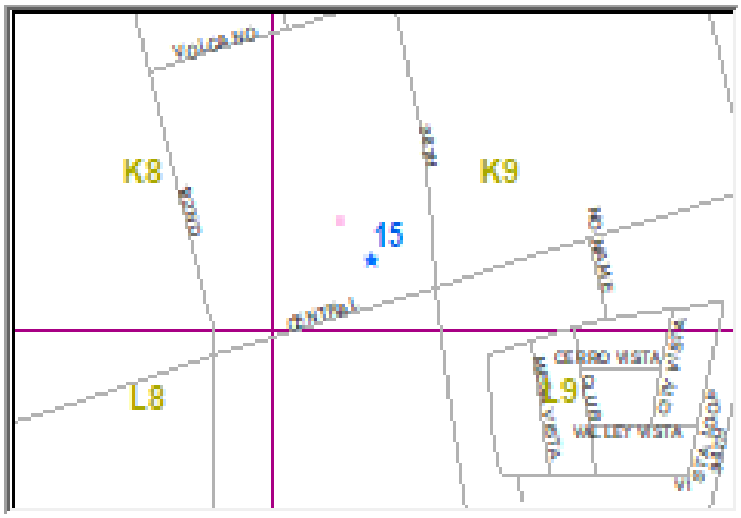
LOCATION	**0.4 M NW UNSER AND BLUEWATER**
STRUCTURE_NAME	





MAP_KEY	K09	City_Quad	NW
Year_Built	1996	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE UNSER DIV POND#4 (POND # 75)		
SWQ SIZE	12' W X 12' H X 12' L	cost	
PROJECT_NO		NUMBER	26

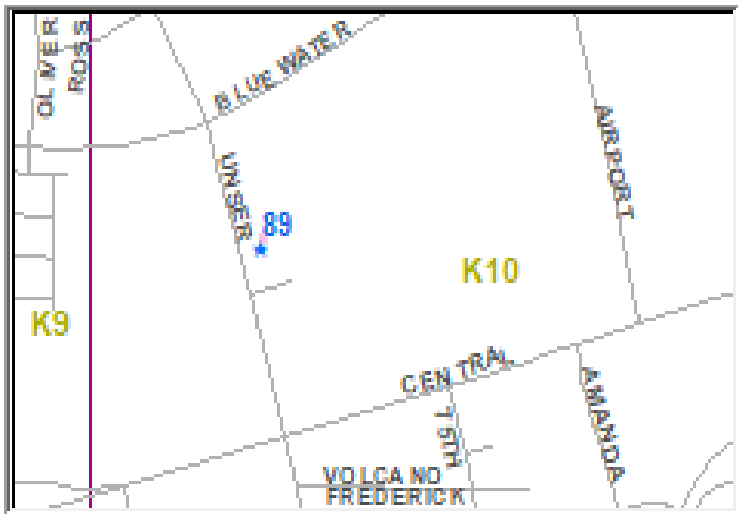
LOCATION	**0.1 M NW CENTRAL AND 98TH ST**
STRUCTURE_NAME	





MAP_KEY	K09	City_Quad	NW
Year_Built	1998	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\01
NOTES	INSIDE AMOLE DETENTION DAM		
SWQ SIZE	25' W BOTTOM X 30' W TOP X 15' L	cost	
PROJECT_NO		NUMBER	15

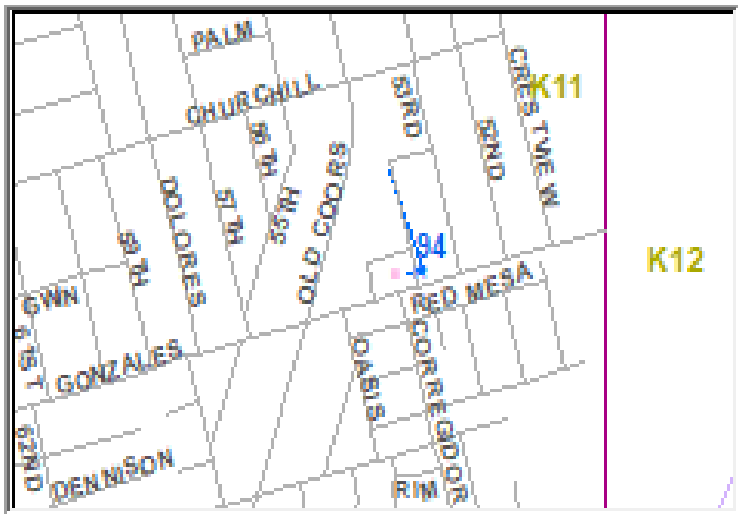
LOCATION	UNSER & BLUEWATER
STRUCTURE_NAME	





MAP_KEY	K10	City_Quad	NW
Year_Built	2014	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	89

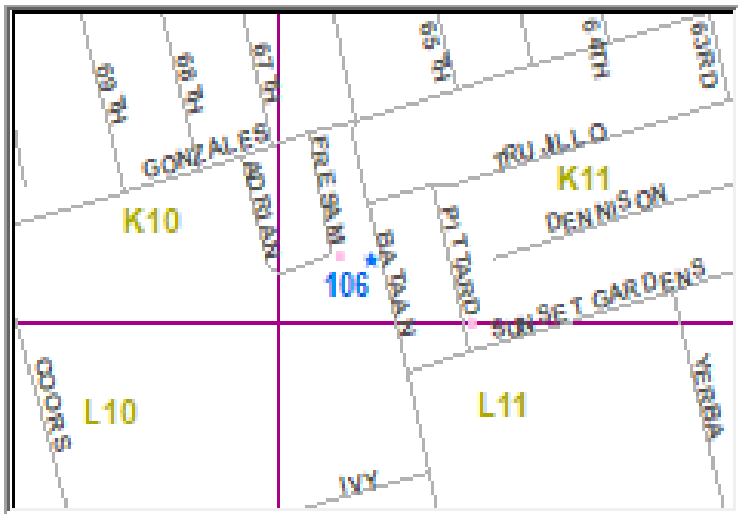
LOCATION	GONZALEZ OUTLET PIPE
STRUCTURE_NAME	





MAP_KEY	K11	City_Quad	SW
Year_Built	1995	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	94

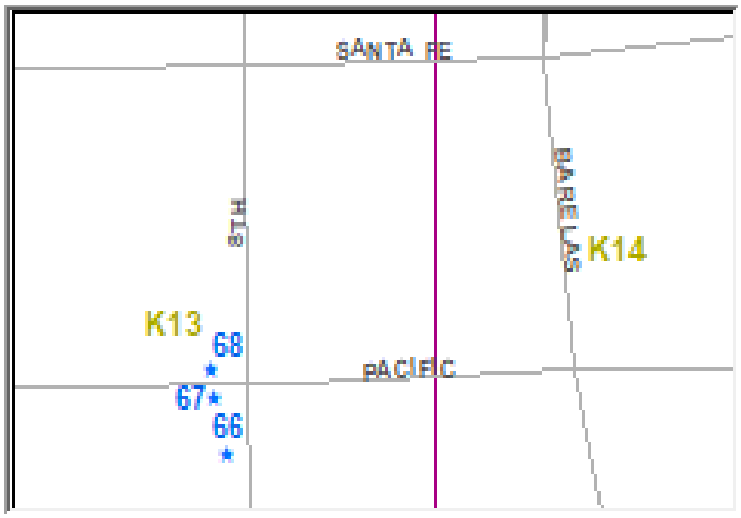
LOCATION	600 FRESAM SW
STRUCTURE_NAME	PERMEABLE PAVEMENT





MAP_KEY	K11	City_Quad	SW
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	106

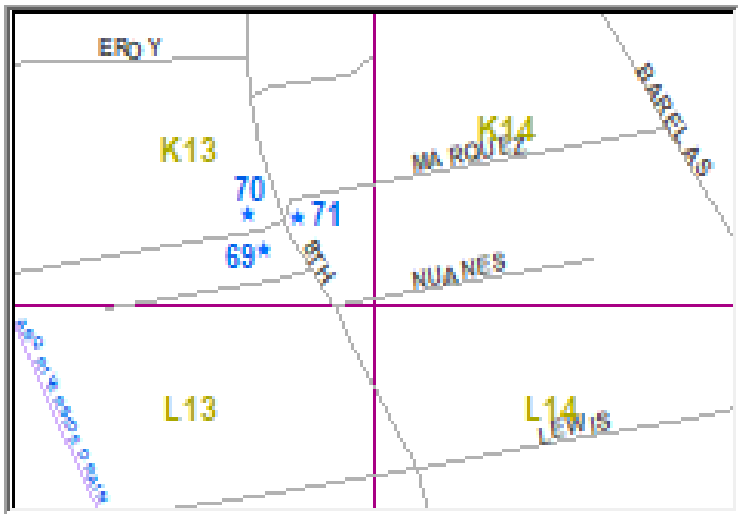
LOCATION	PACIFIC S OF 1017 8TH SW
STRUCTURE_NAME	INLETS WITH TRASH SCREEN





MAP_KEY	K13	City_Quad	SW
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	648391	NUMBER	68

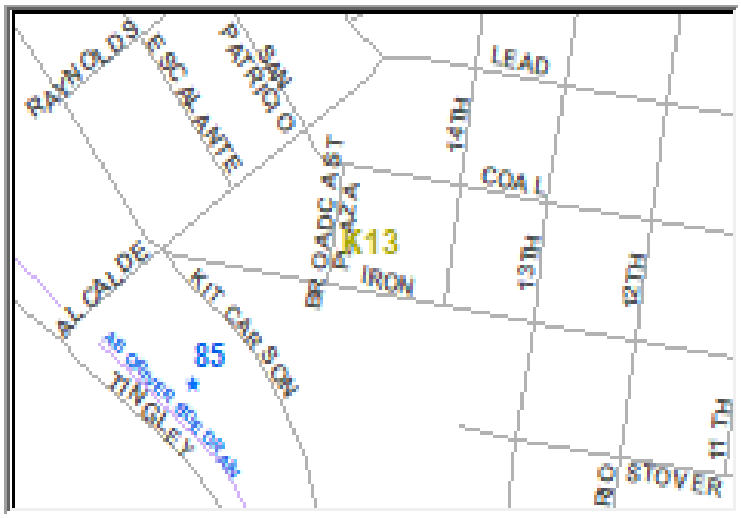
LOCATION	**806 MARQUEZ SW**
STRUCTURE_NAME	INLETS WITH TRASH SCREEN





MAP_KEY	K13	City_Quad	SW
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	648391	NUMBER	69

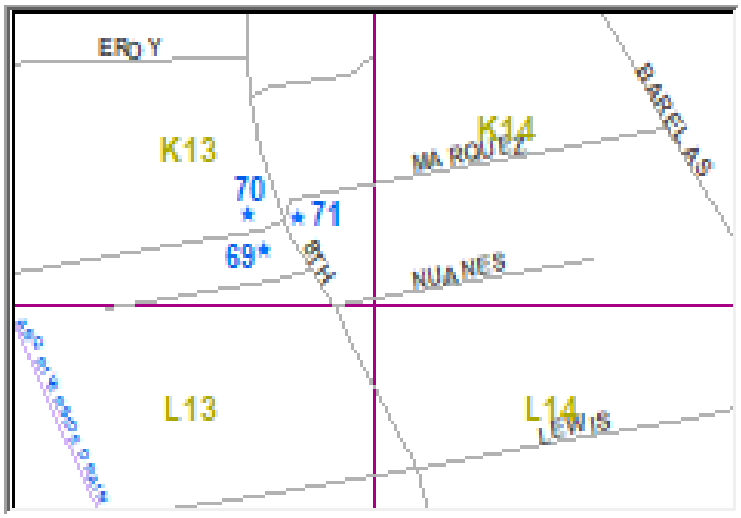
LOCATION	900 ALCALDE SW PS 41 MECH BAR SCREEN
STRUCTURE_NAME	





MAP_KEY	K13	City_Quad	SW
Year_Built	1995	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	85

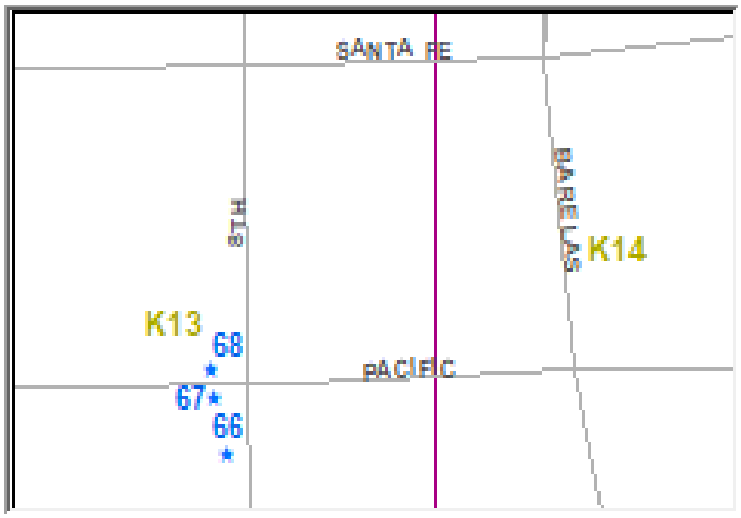
LOCATION	**1304 8TH SW**
STRUCTURE_NAME	





MAP_KEY	K13	City_Quad	SW
Year_Built	2014	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	648391	NUMBER	71

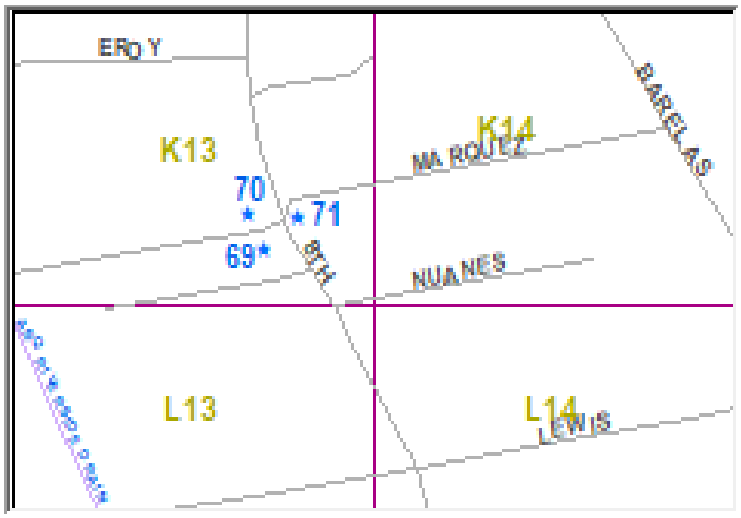
LOCATION	8TH EAST OF 800 PACIFIC SW
STRUCTURE_NAME	INLETS WITH TRASH SCREEN





MAP_KEY	K13	City_Quad	SW
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	648391	NUMBER	66

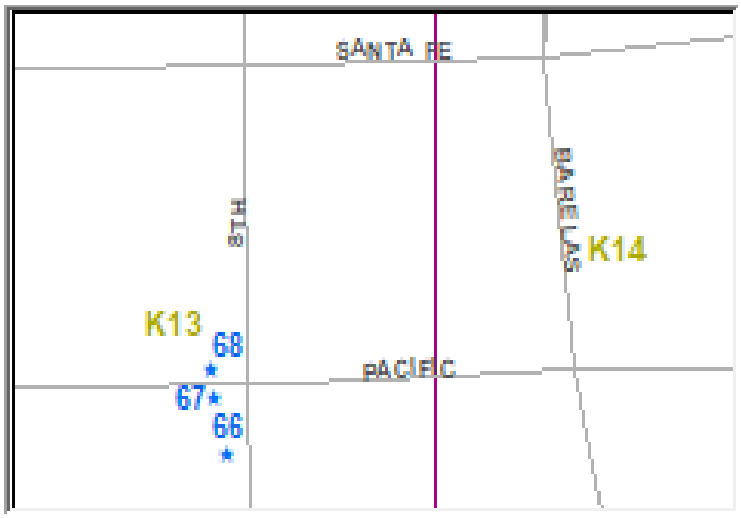
LOCATION	**MARQUEZ SOUTH OF 1223 8TH SW**
STRUCTURE_NAME	INLET WITH TRASH SCREEN





MAP_KEY	K13	City_Quad	SW
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	648391	NUMBER	70

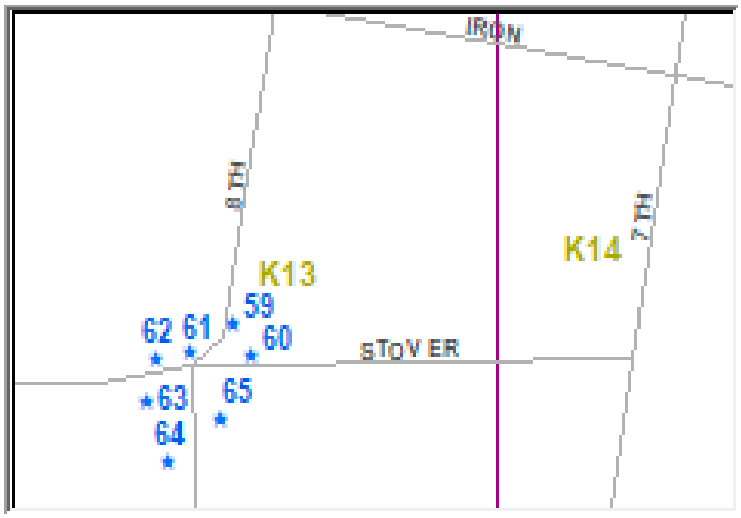
LOCATION	800 PACIFIC SW
STRUCTURE_NAME	INLETS WITH TRASH SCREEN





MAP_KEY	K13	City_Quad	SW
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	648391	NUMBER	67

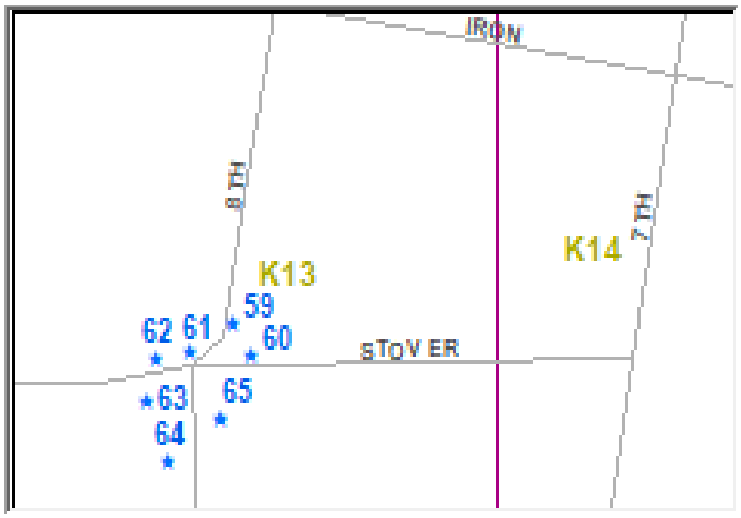
LOCATION	8TH WEST OF 724 STOVER SW
STRUCTURE_NAME	INLETS WITH TRASH SCREEN





MAP_KEY	K13	City_Quad	SW
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	648391	NUMBER	65

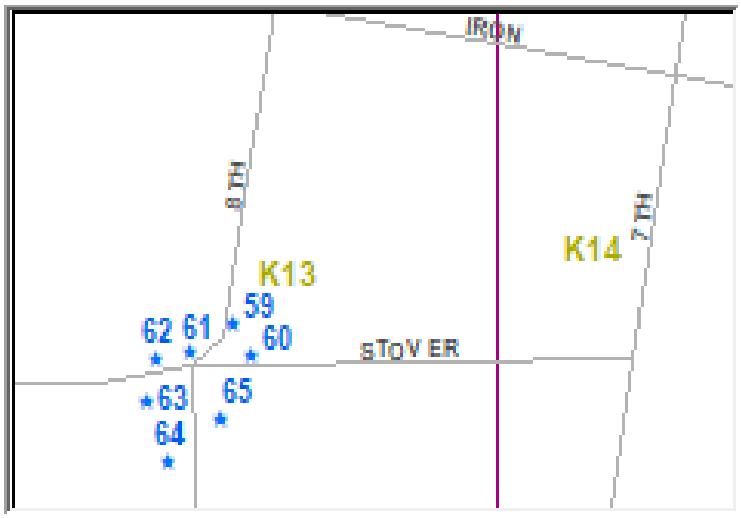
LOCATION	8TH EAST OF 800 STOVER SW
STRUCTURE_NAME	INLETS WITH TRASH SCREEN





MAP_KEY	K13	City_Quad	SW
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	648391	NUMBER	64

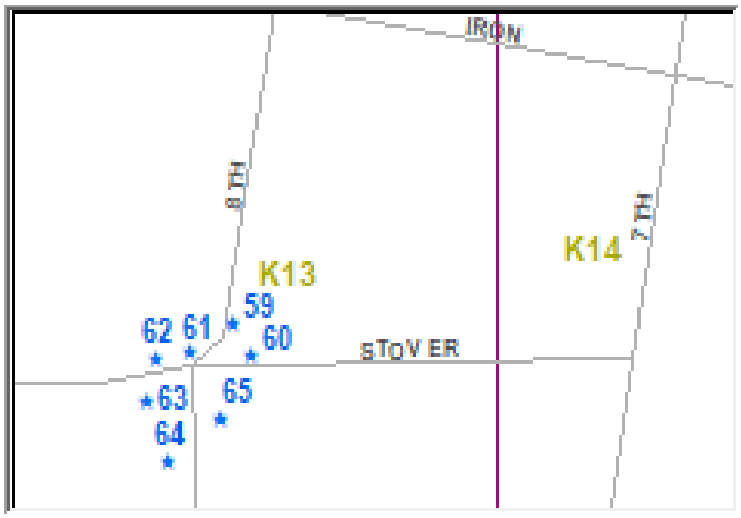
LOCATION	800 STOVER SW
STRUCTURE_NAME	INLETS WITH TRASH SCREEN





MAP_KEY	K13	City_Quad	SW
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	648391	NUMBER	63

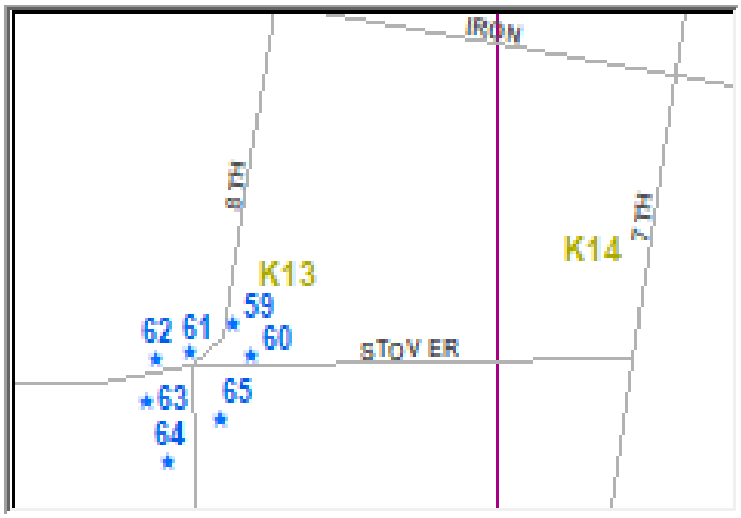
LOCATION	801 STOVER SW
STRUCTURE_NAME	INLETS WITH TRASH SCREEN





MAP_KEY	K13	City_Quad	SW
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	648391	NUMBER	62

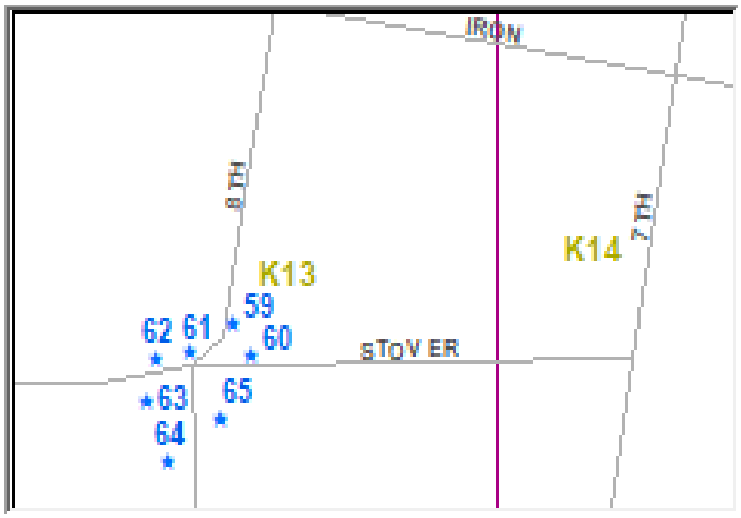
LOCATION	8TH EAST OF 801 STOVER SW
STRUCTURE_NAME	INLETS WITH TRASH SCREEN





MAP_KEY	K13	City_Quad	SW
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	648391	NUMBER	61

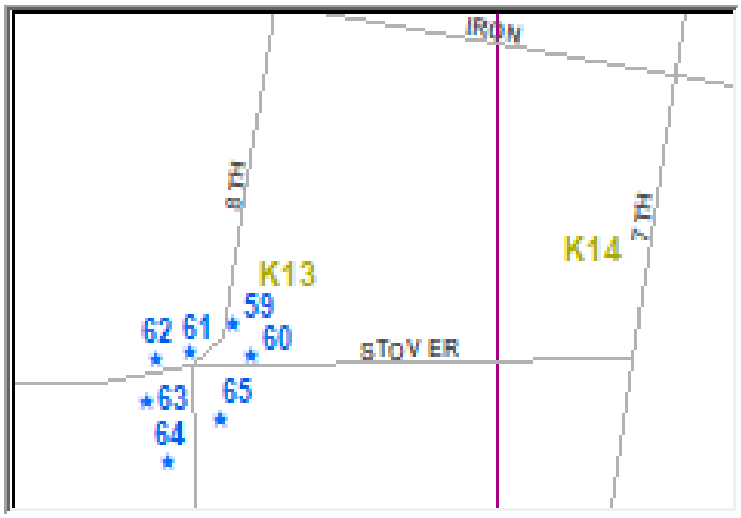
LOCATION	8TH ST SW WEST OF 717 STOVER SW
STRUCTURE_NAME	INLETS WITH TRASH SCREEN





MAP_KEY	K13	City_Quad	SW
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	648391	NUMBER	60

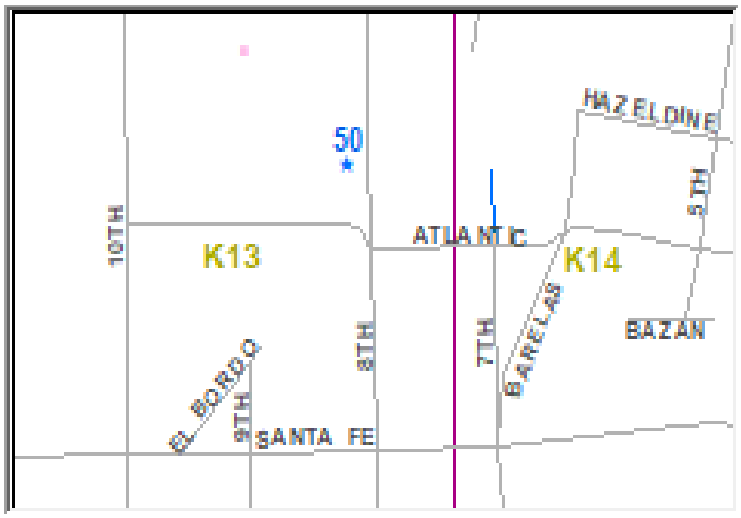
LOCATION	8TH WEST OF 717 STOVER SW
STRUCTURE_NAME	INLETS WITH TRASH SCREEN





MAP_KEY	K13	City_Quad	SW
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	$1,000
PROJECT_NO	648391	NUMBER	59

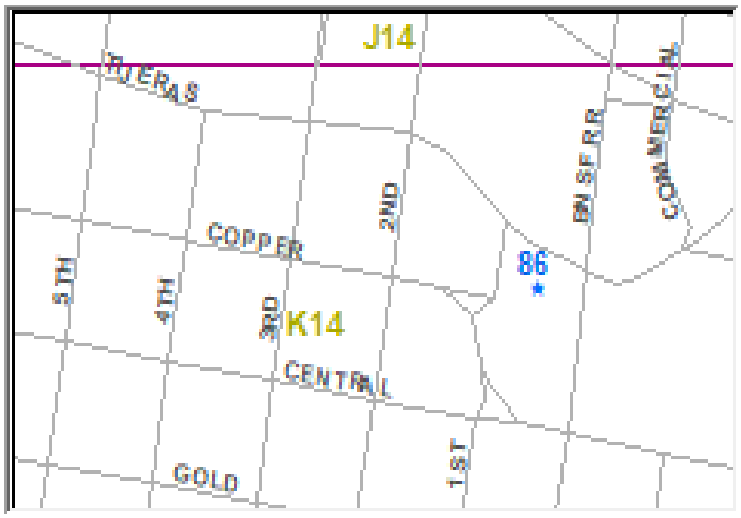
LOCATION	NW 8TH ST AND ATLANTIC
STRUCTURE_NAME	





MAP_KEY	K13	City_Quad	SW
Year_Built	2008	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE TINGLEY PARK-DET POND		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	50

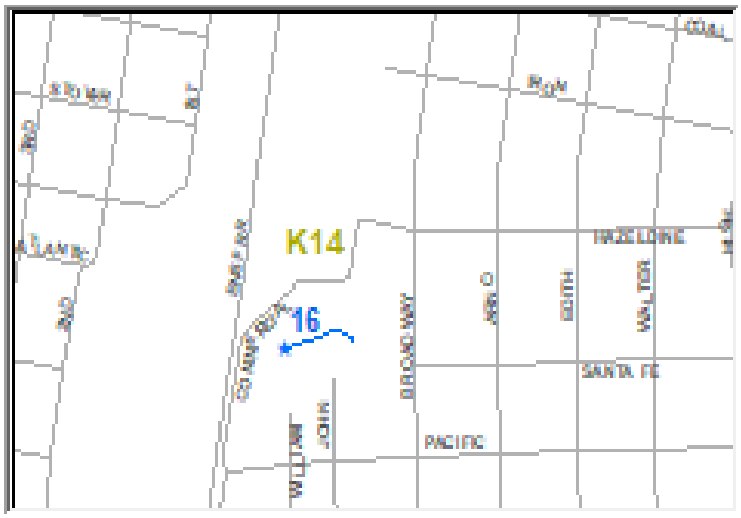
LOCATION	200 1ST ST NW PS 43
STRUCTURE_NAME	





MAP_KEY	K14	City_Quad	NW
Year_Built	1995	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	86

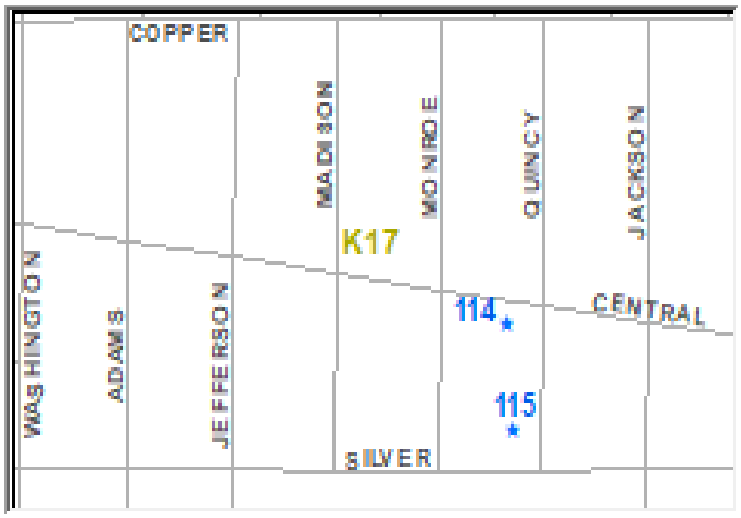
LOCATION	0.1 M SW BROADWAY AND HAZELDINE
STRUCTURE_NAME	

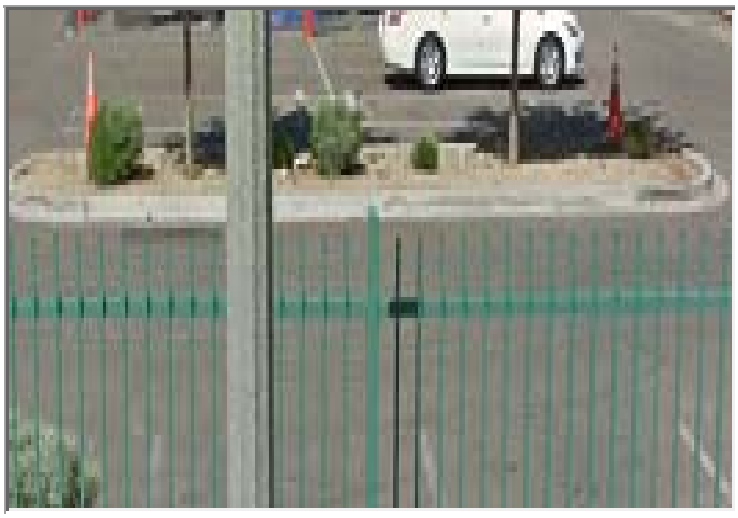




MAP_KEY	K14	City_Quad	SW
Year_Built	2003	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\01
NOTES	INSIDE SOUTH BROADWAY POND		
SWQ SIZE	15' W X 12' L	cost	
PROJECT_NO		NUMBER	16

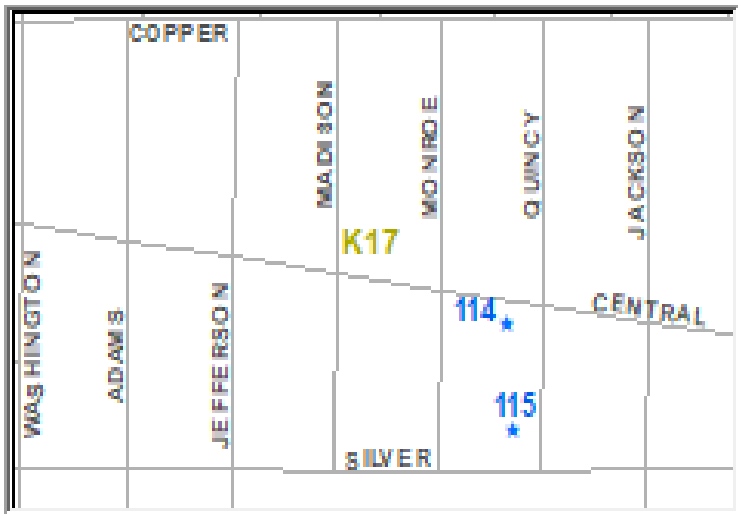
LOCATION	GHLAND SENIOR CENTER AT 131 MONROE ST
STRUCTURE_NAME	SWQF

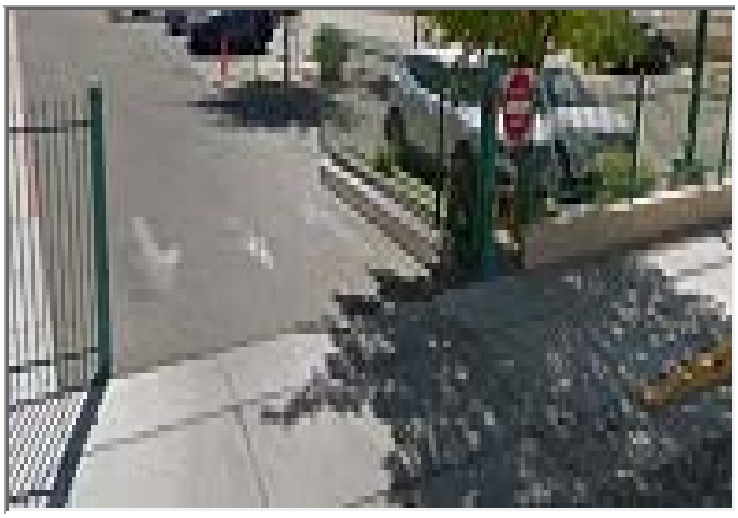




MAP_KEY	K17	City_Quad	NE
Year_Built	2016	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	BIO-SWELLS		
SWQ SIZE		cost	
PROJECT_NO	658802	NUMBER	115

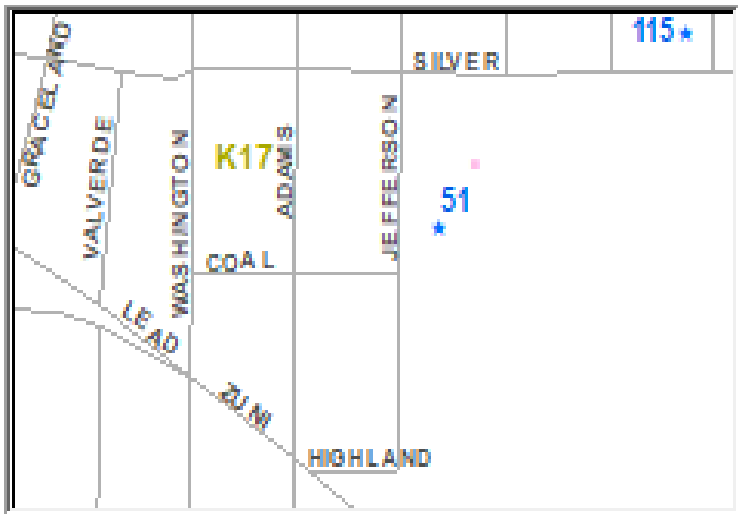
LOCATION	GHLAND SENIOR CENTER AT 131 MONROE ST
STRUCTURE_NAME	SWQF





MAP_KEY	K17	City_Quad	NE
Year_Built	2016	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	PERMEABLE PAVEMENT		
SWQ SIZE		cost	
PROJECT_NO	658802	NUMBER	114

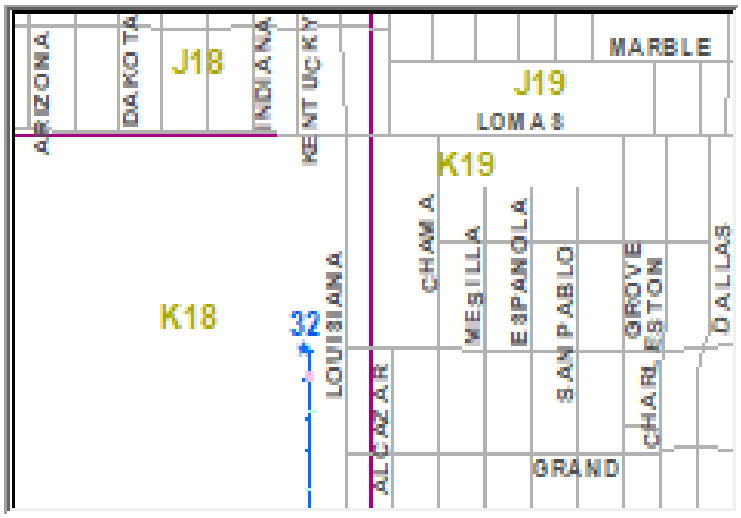
LOCATION	NE COAL AND JEFFERSON
STRUCTURE_NAME	





MAP_KEY	K17	City_Quad	SE
Year_Built	1985	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE HIGHLAND DET POND		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	51

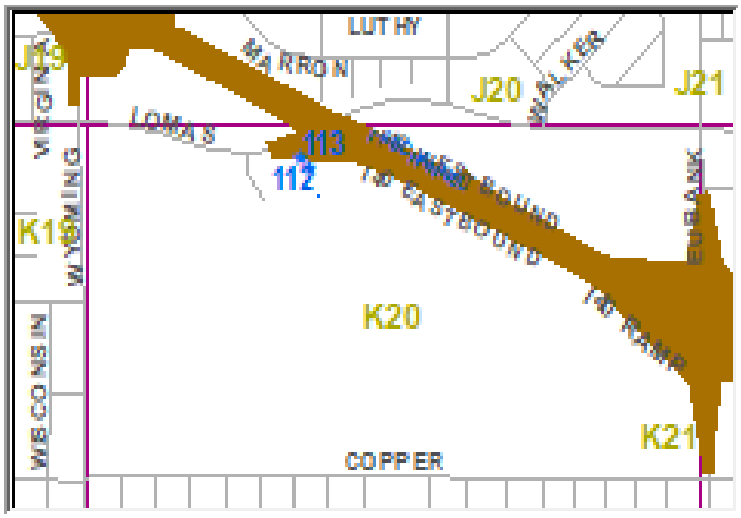
LOCATION	EXPO NM POND AT LOMAS AND LOUISIANA
STRUCTURE_NAME	PORTED RISER





MAP_KEY	K18	City_Quad	NE
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	REPLACE OLD RACK-LOCATED INSIDE NM-EXPO (STATE TAIR GROUND)-730491		
SWQ SIZE		cost	
PROJECT_NO	730491	NUMBER	32

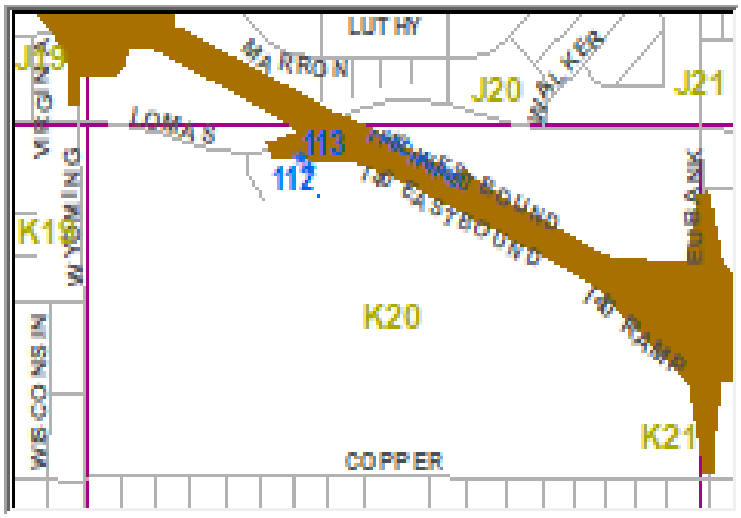
LOCATION	LOS ALTOS PARK AND ANIMAL SHELTER
STRUCTURE_NAME	SECURITY RACK





MAP_KEY	K20	City_Quad	NE
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	SECURITY		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	113

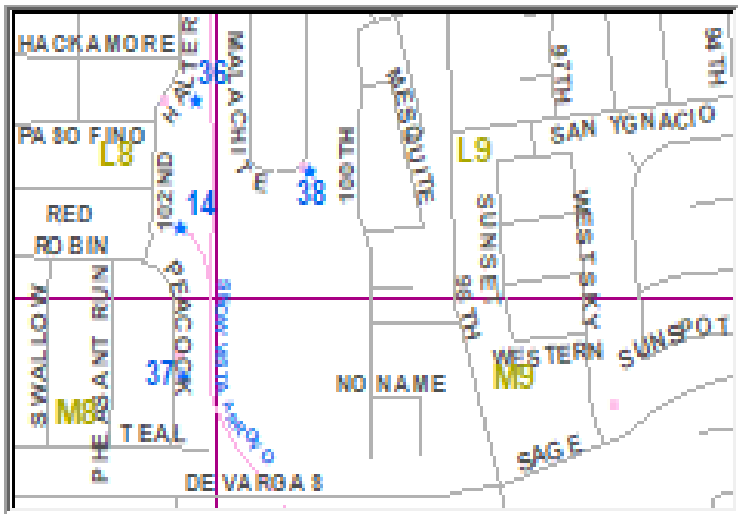
LOCATION	I-40-LOMAS-ANIMAL SHELTER
STRUCTURE_NAME	TRASH RACK





MAP_KEY	K20	City_Quad	NE
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	2 CBS EACH 7 FT H X 9 FT W TRASH RACK		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	112

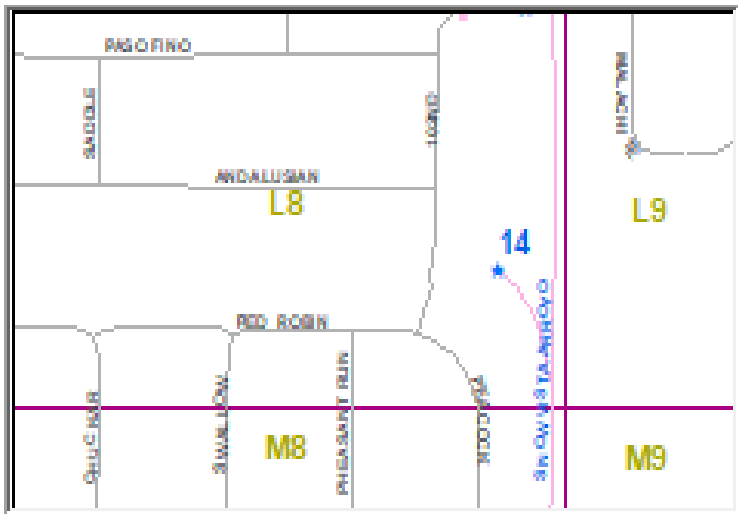
LOCATION	SE HACKAMORE AND HALTER
STRUCTURE_NAME	





MAP_KEY	L08	City_Quad	SW
Year_Built	1996	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE THE POND		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	36

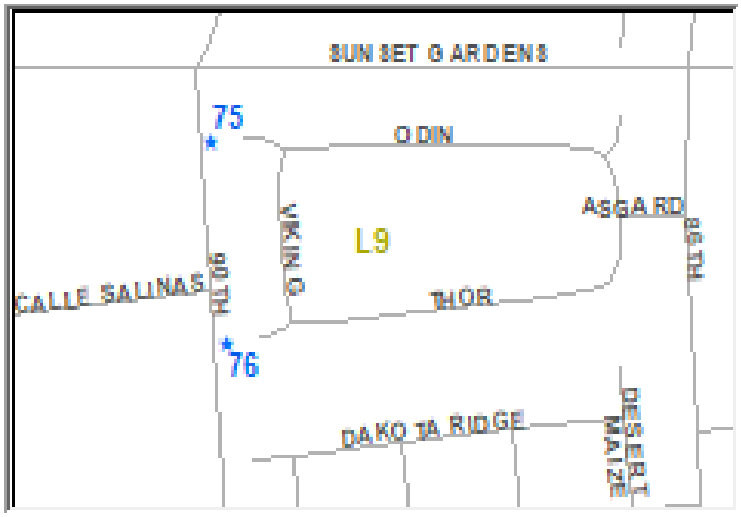
LOCATION	0.1 M NE 102ND ST AND PEACOCK
STRUCTURE_NAME	





MAP_KEY	L08	City_Quad	SW
Year_Built	2005	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\01
NOTES	SECURITY RACK		
SWQ SIZE	11.5' W X 11' L	cost	
PROJECT_NO		NUMBER	14

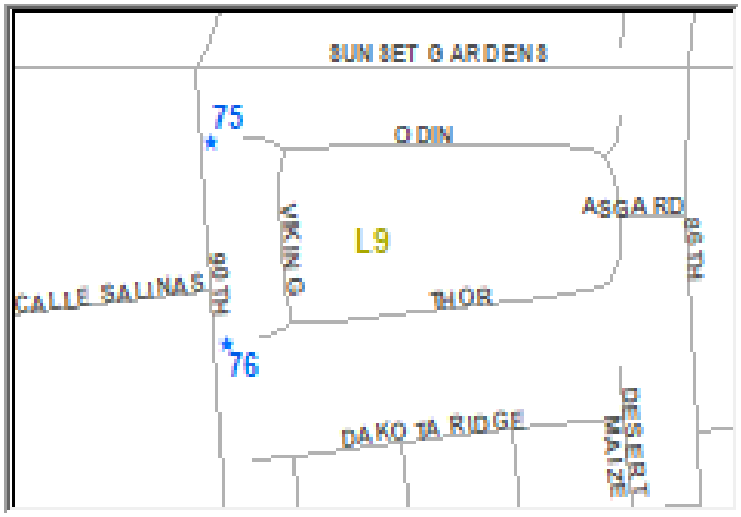
LOCATION	TH ST SE, 150 FT SOUTH OF SUNSET GARDENS
STRUCTURE_NAME	TRASH SCREEN





MAP_KEY	L09	City_Quad	SW
Year_Built	2016	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	3"X3" CLEAR OPENINGS-3/4" D BARS-5/8"X6" PLATE-INSTALLED BY ED ON 9-6-2016		
SWQ SIZE	3' X 16'	cost	$1,743
PROJECT_NO		NUMBER	75

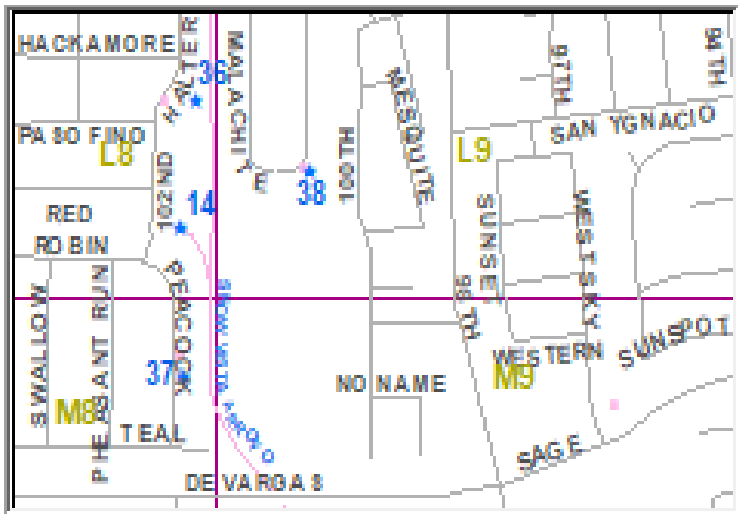
LOCATION	TH ST SE, 550 FT SOUTH OF SUNSET GARDENS
STRUCTURE_NAME	TRASH SCREEN





MAP_KEY	L09	City_Quad	SW
Year_Built	2016	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	3"X3" CLEAR OPENINGS-3/4" D BARS-5/8"X6" PLATE-INSTALLED BY ED ON 9-6-2016		
SWQ SIZE	3' X 16'	cost	$1,743
PROJECT_NO		NUMBER	76

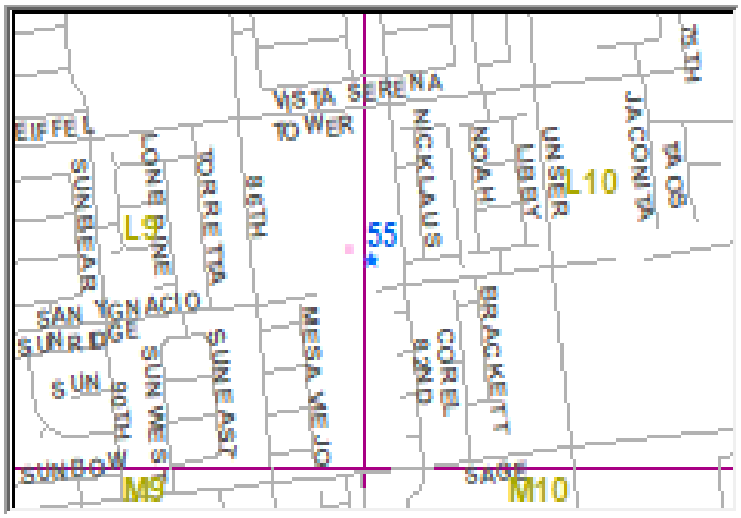
LOCATION	TERRACOTTA AND MALACHITE
STRUCTURE_NAME	





MAP_KEY	L09	City_Quad	SW
Year_Built	1997	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	LOCATED INSIDE THE POND		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	38

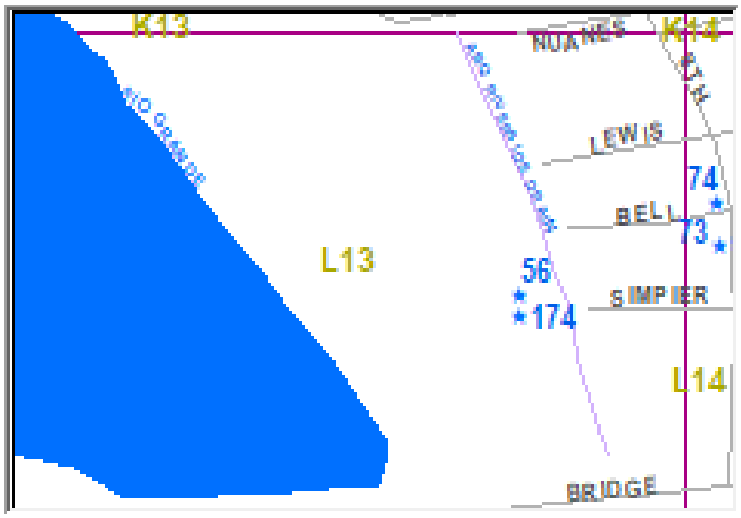
LOCATION	SE TOWER AND 86TH ST
STRUCTURE_NAME	





MAP_KEY	L10	City_Quad	SW
Year_Built	2003	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE THE TOWER-SAGE DET POND-PARK		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	55

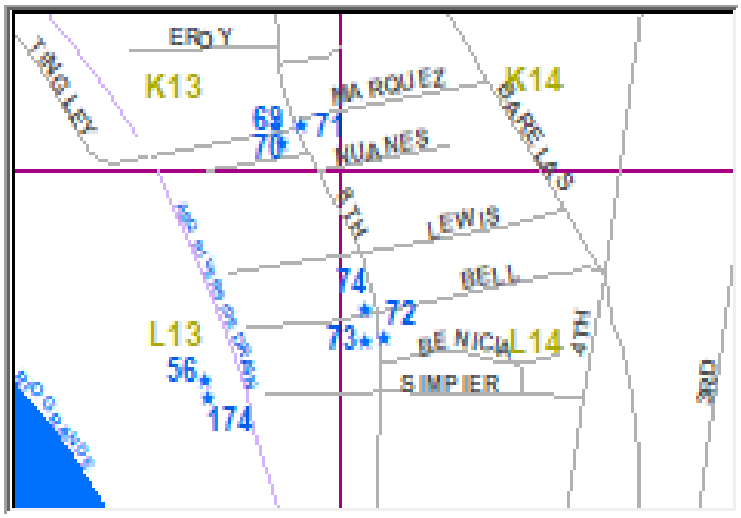
LOCATION	BARELAS PS SCREEN
STRUCTURE_NAME	TRASH RACK





MAP_KEY	L13	City_Quad	SW
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	174

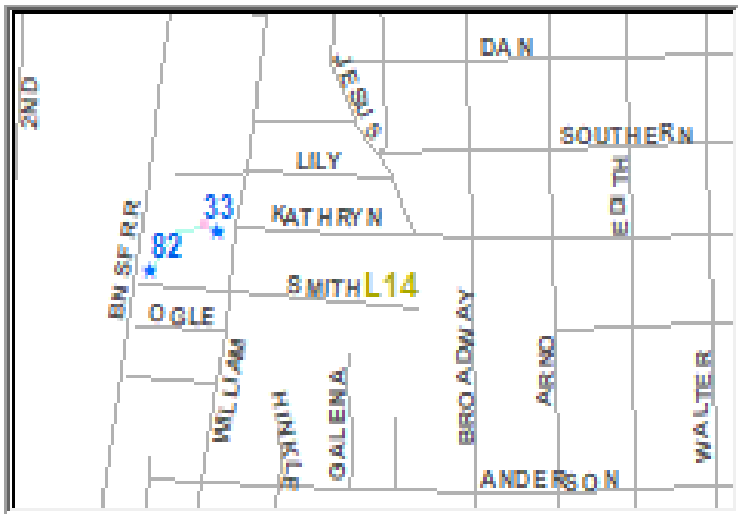
LOCATION	**0.2 M NW BRIDGE AND 8TH ST**
STRUCTURE_NAME	





MAP_KEY	L13	City_Quad	SW
Year_Built	1961	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	DISCHARGE PIPES FROM BARELAS PUMP STATION		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	56

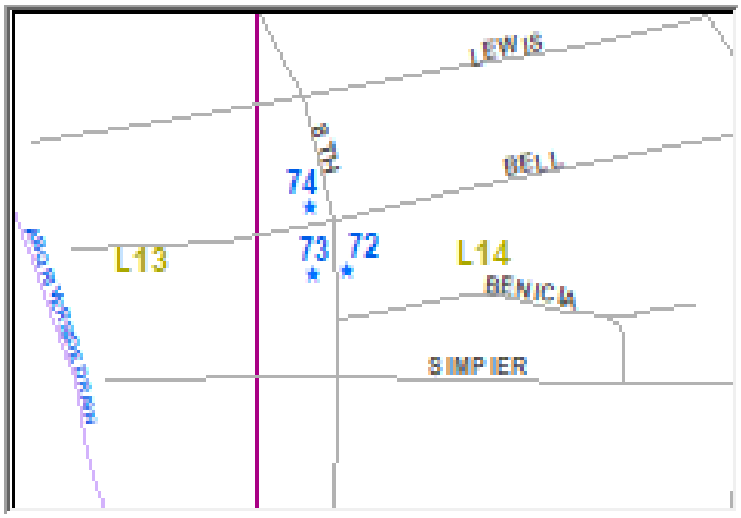
LOCATION	ORTED RISER INSIDE WILLIAM-KATHRYN PON
STRUCTURE_NAME	





MAP_KEY	L14	City_Quad	SW
Year_Built	1995	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	82

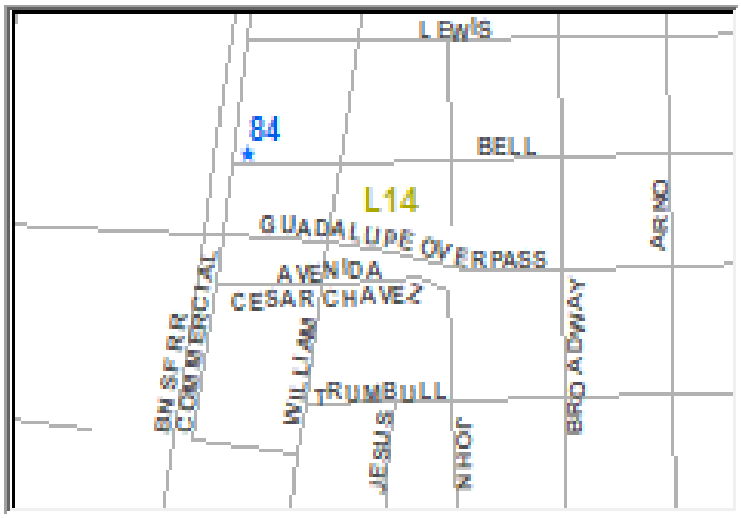
LOCATION	**1407 8TH SW**
STRUCTURE_NAME	





MAP_KEY	L14	City_Quad	SW
Year_Built	2014	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	648391	NUMBER	74

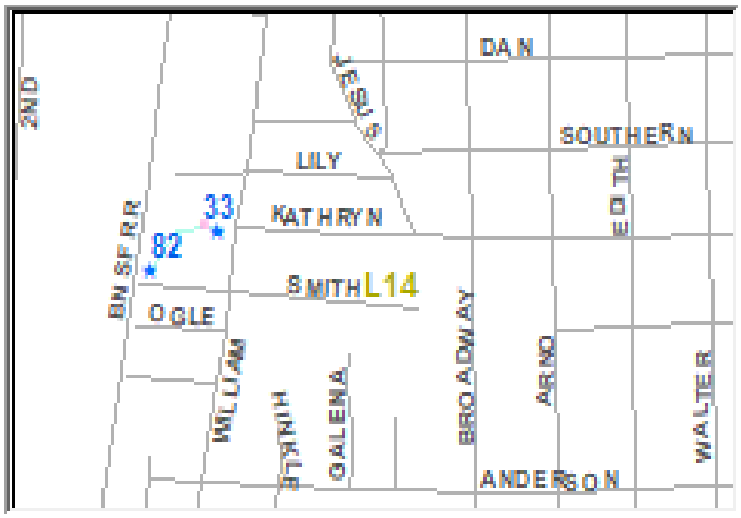
LOCATION	BELL AT COMMERCIAL-PS 37 MECH BAR SCRE
STRUCTURE_NAME	





MAP_KEY	L14	City_Quad	SW
Year_Built	1995	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	84

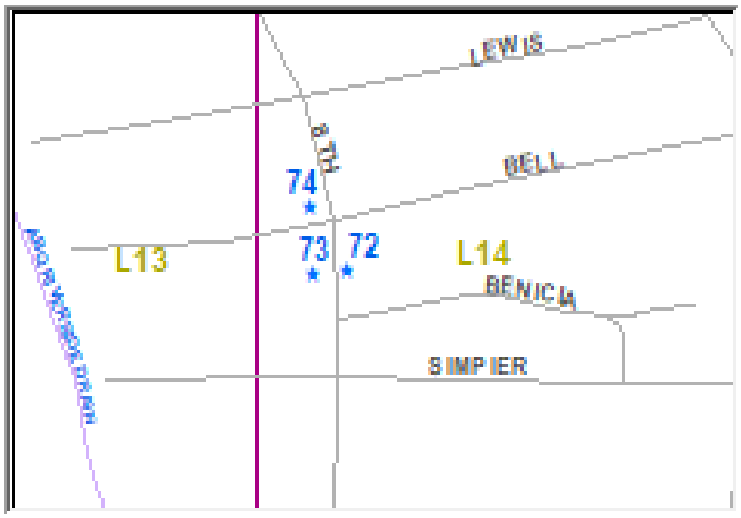
LOCATION	WILLIAM AND KATHRYN
STRUCTURE_NAME	





MAP_KEY	L14	City_Quad	SW
Year_Built	2004	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	2 SECURITY RACKS LOCATED INSIDE THE WILLIAM-KATHRYN POND (POND # 93)		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	33

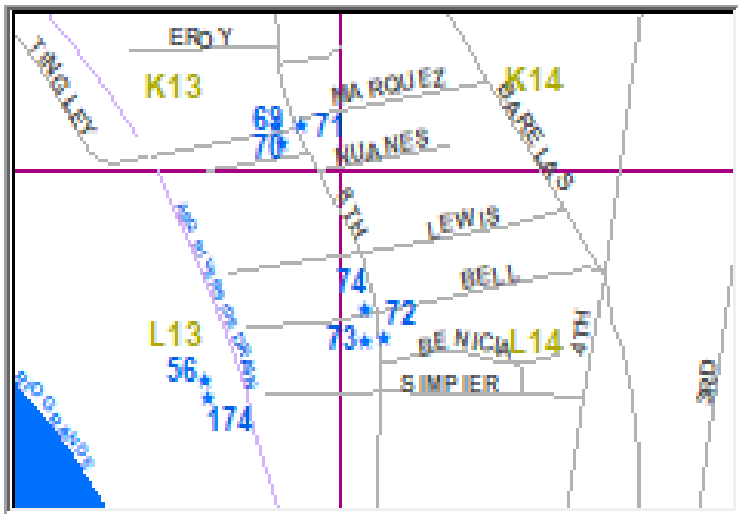
LOCATION	**1412 8TH SW**
STRUCTURE_NAME	





MAP_KEY	L14	City_Quad	SW
Year_Built	2014	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	648391	NUMBER	72

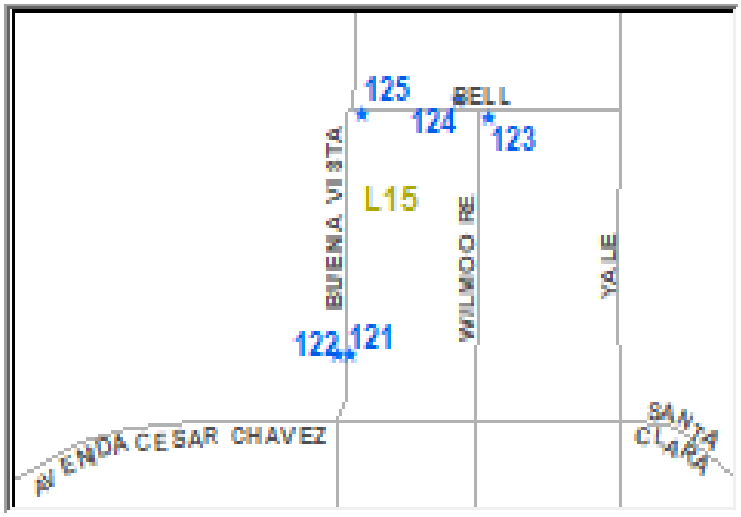
LOCATION	**1411 8TH SW**
STRUCTURE_NAME	





MAP_KEY	L14	City_Quad	SW
Year_Built	2014	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	648391	NUMBER	73

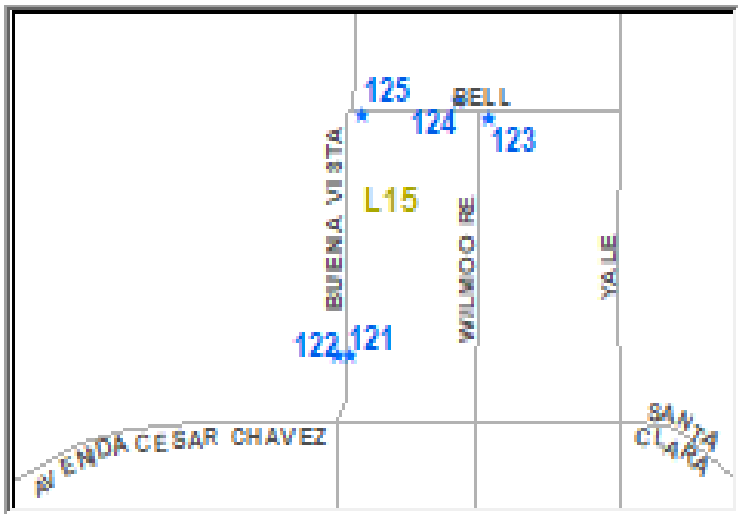
LOCATION	**BELL EAST OF BUENA VISTA**
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	L15	City_Quad	NE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	452291	NUMBER	125

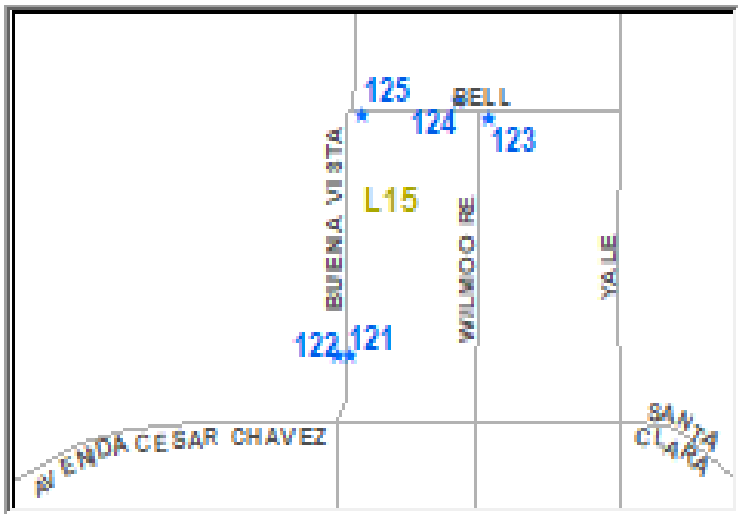
LOCATION	BELL WEST OF WILMOORE
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	L15	City_Quad	SE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	452291	NUMBER	124

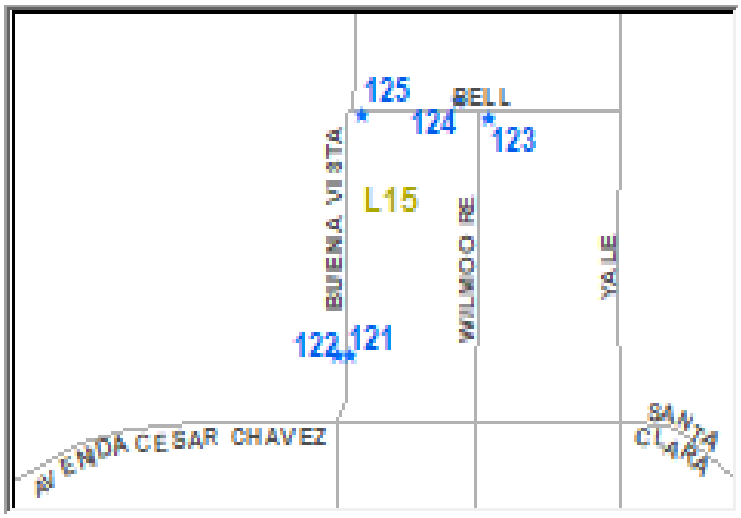
LOCATION	**BELL EAST OF WILMOORE**
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	L15	City_Quad	SE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	452291	NUMBER	123

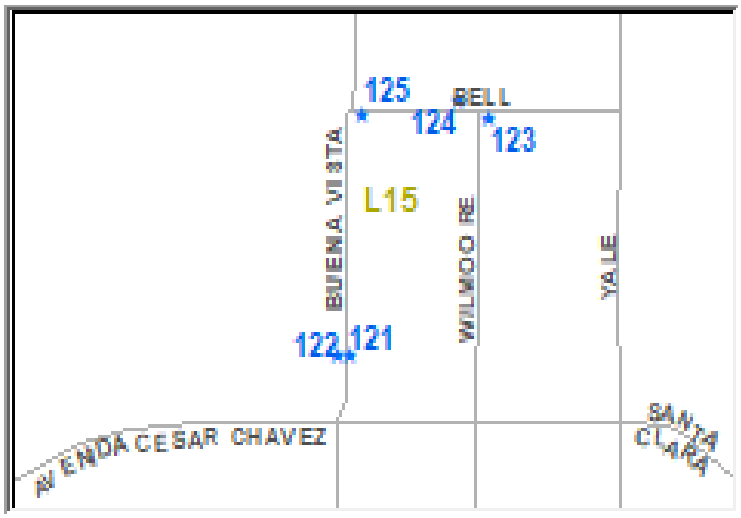
LOCATION	BUENA VISTA NORTH OF AVENIDA CESAR CHA
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	L15	City_Quad	SE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	452291	NUMBER	122

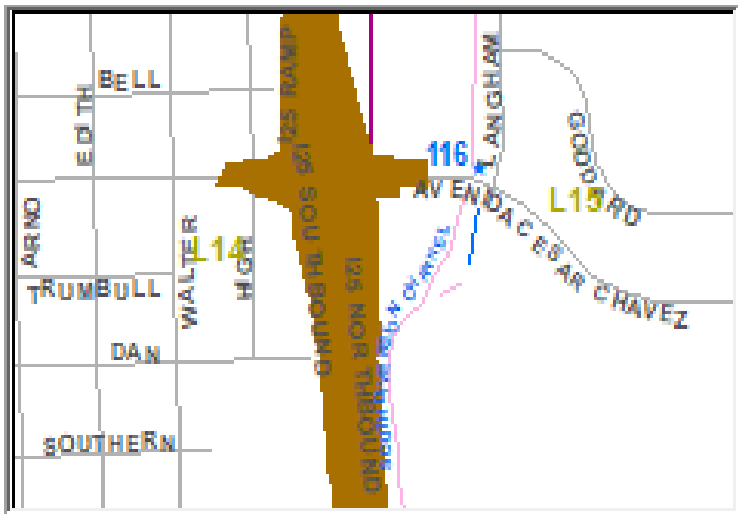
LOCATION	BUENA VISTA NORTH OF AVENIDA CESAR CHA
STRUCTURE_NAME	SWQ-INLET





MAP_KEY	L15	City_Quad	SE
Year_Built	2012	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	452291	NUMBER	121

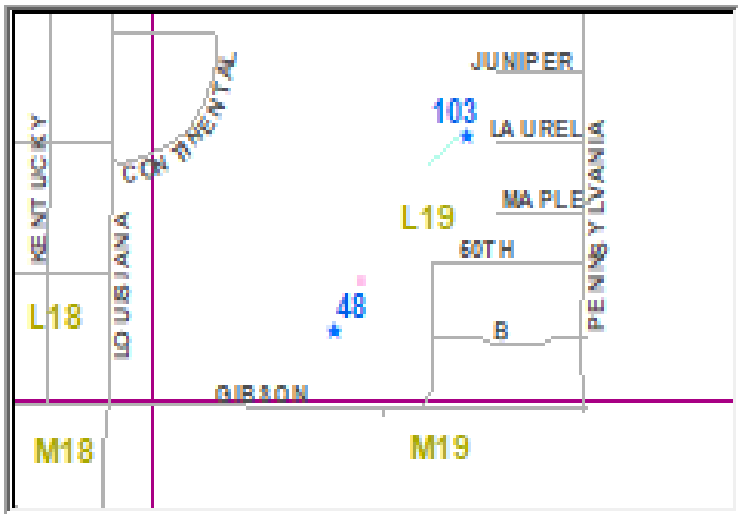
LOCATION	AVANIDA CEZAR CHAVEZ SE AT I-25
STRUCTURE_NAME	SWQ-MH





MAP_KEY	L15	City_Quad	NE
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO	501507	NUMBER	116

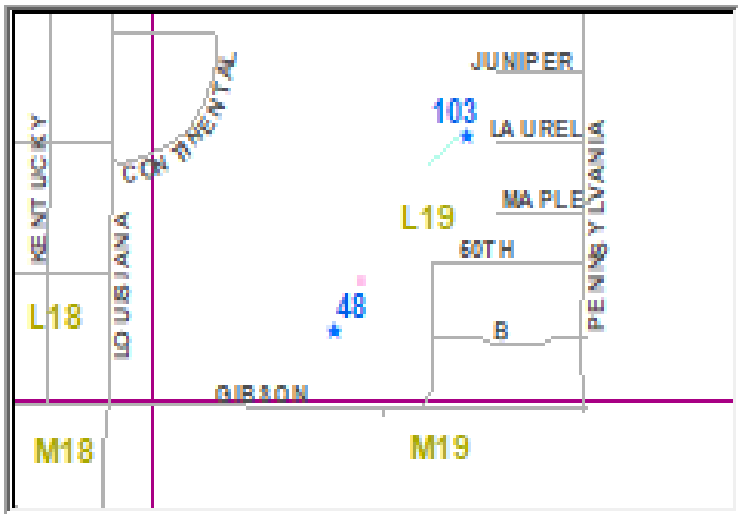
LOCATION	KAFB POND - NORTH INLETS
STRUCTURE_NAME	





MAP_KEY	L19	City_Quad	SE
Year_Built	1985	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE	2 @ 40 IN	cost	
PROJECT_NO	167485	NUMBER	103

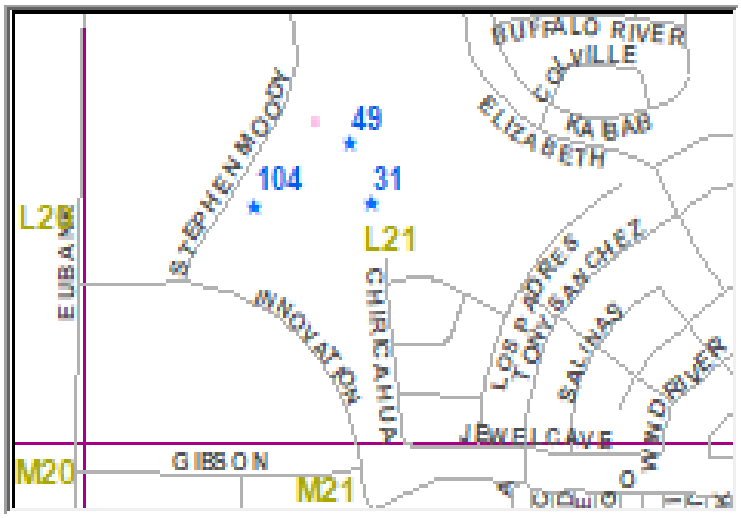
LOCATION	KAFB DET DAM AT LOUISIANA AND GIBSON
STRUCTURE_NAME	





MAP_KEY	L19	City_Quad	SE
Year_Built	2006	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE KAFB DET DAM		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	48

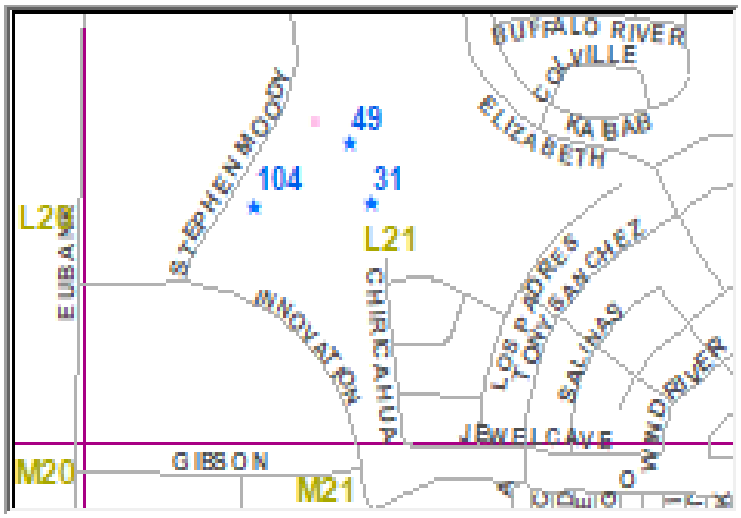
LOCATION	0.5 M SE EUBANK AND SOUTHERN
STRUCTURE_NAME	





MAP_KEY	L21	City_Quad	SE
Year_Built	2001	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE MANZANO MESA DET. DAM		
SWQ SIZE	14' X 14' X8' L	cost	
PROJECT_NO		NUMBER	31

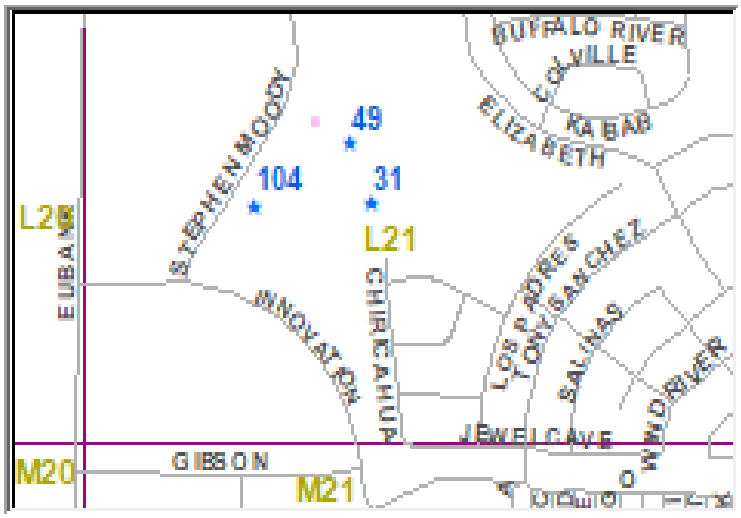
LOCATION	MANZANO MESA POND-NORTH RACK
STRUCTURE_NAME	





MAP_KEY	L21	City_Quad	SE
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	49

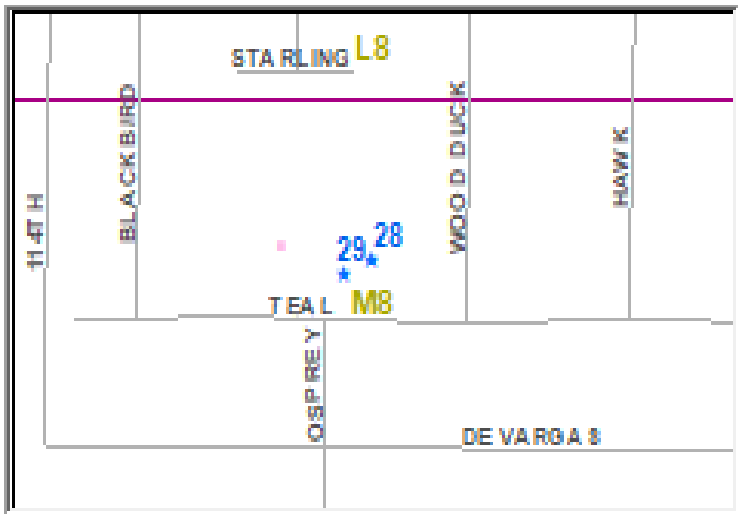
LOCATION	MANZANO MESA SOUTH ROUND TRASH RACK
STRUCTURE_NAME	STORMCEPTOR





MAP_KEY	L21	City_Quad	SE
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	104

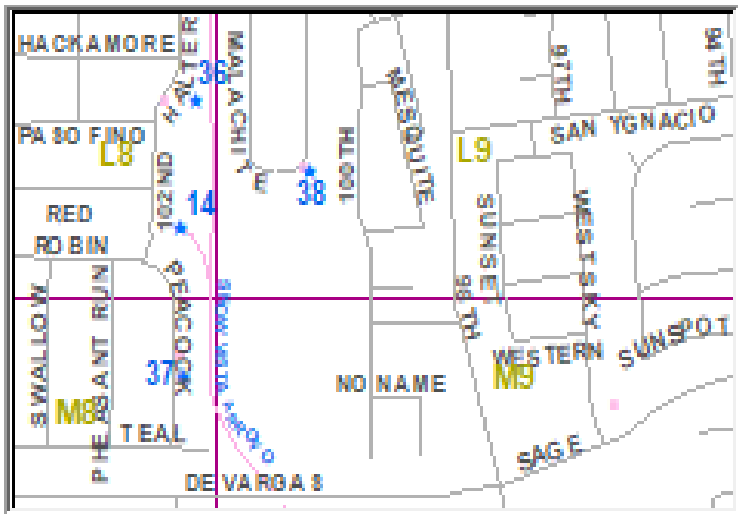
LOCATION	**TEAL AND OSPREY**
STRUCTURE_NAME	





MAP_KEY	M08	City_Quad	SW
Year_Built	2005	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE THE PARK, SECURITY RACK		
SWQ SIZE	7' W X 8' L	cost	
PROJECT_NO		NUMBER	29

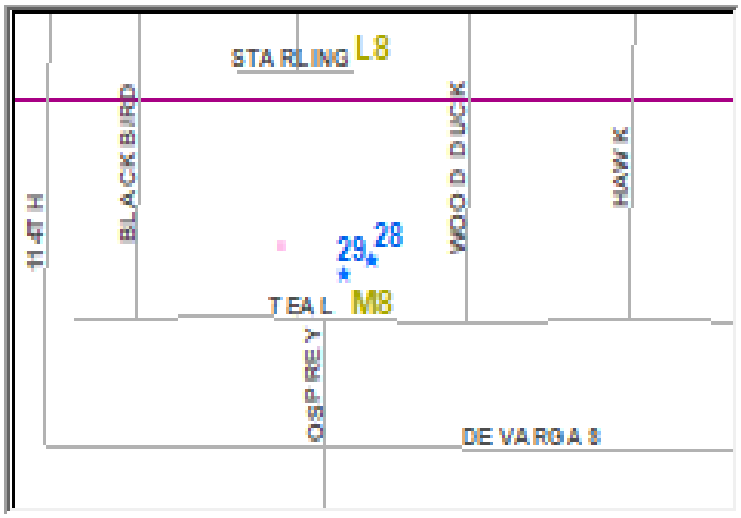
LOCATION	NE PEACOCK AND TEAL
STRUCTURE_NAME	





MAP_KEY	M08	City_Quad	SW
Year_Built	1999	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	LOCATED INDSIDE THE POND		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	37

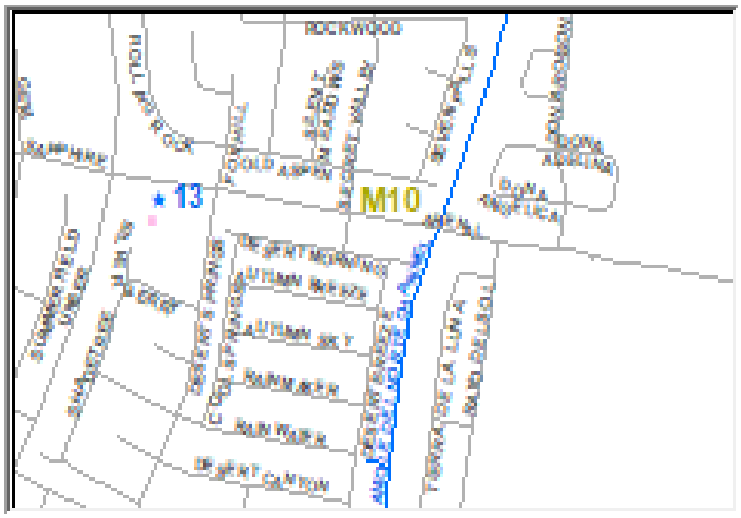
LOCATION	**TEAL AND OSPREY-SMALL**
STRUCTURE_NAME	





MAP_KEY	M08	City_Quad	SW
Year_Built	2005	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	SECURITY RACK, INSIDE THE PARK		
SWQ SIZE	5' W X 5' L	cost	
PROJECT_NO		NUMBER	28

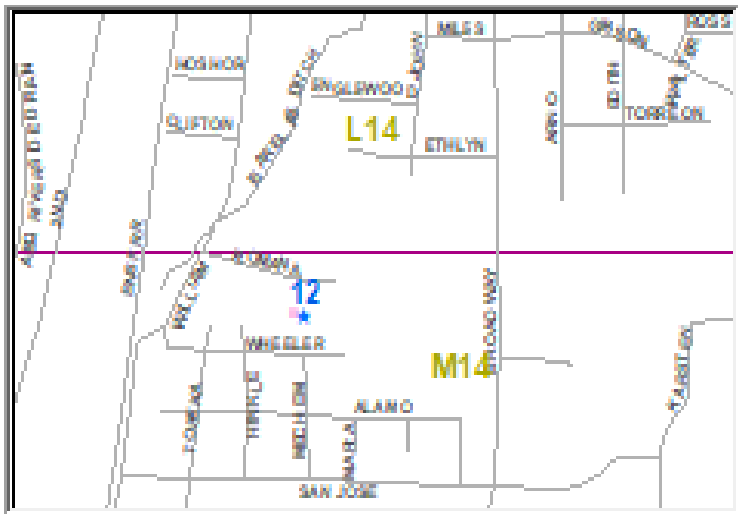
LOCATION	**0.1 M SE ARENAL AND UNSER**
STRUCTURE_NAME	





MAP_KEY	M10	City_Quad	SW
Year_Built	1979	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\01
NOTES	INSIDE ARENAL AND UNSER POND		
SWQ SIZE	15" W X 15' H	cost	
PROJECT_NO		NUMBER	13

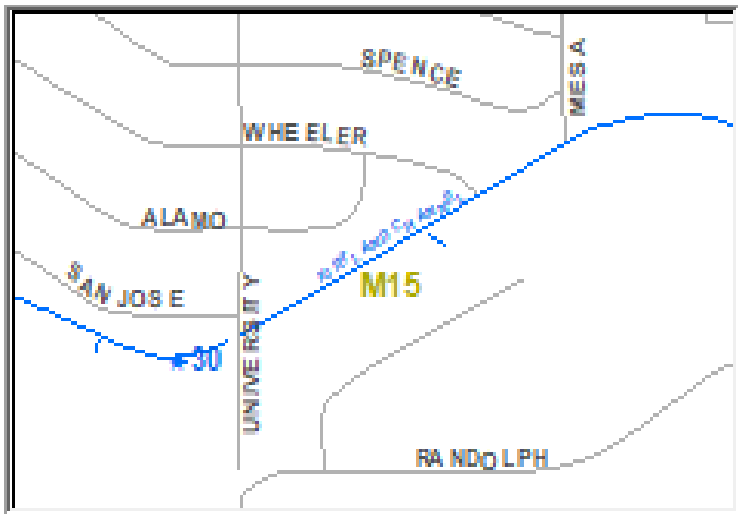
LOCATION	MECHEM POND CONC-BOX
STRUCTURE_NAME	PORTED RISER





MAP_KEY	M14	City_Quad	SE
Year_Built	2015	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\01
NOTES	INSIDE MECHEM'S POND		
SWQ SIZE		cost	
PROJECT_NO	792602	NUMBER	12

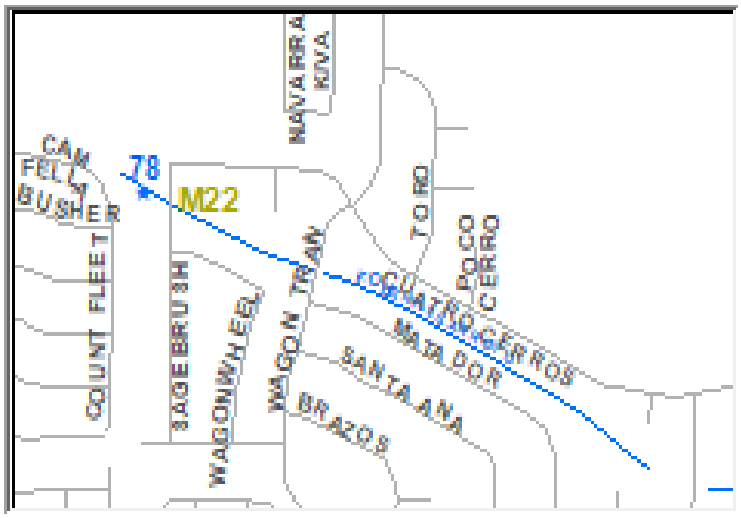
LOCATION	0.1 M SW UNIVERSITY AND SAN JOSE
STRUCTURE_NAME	





MAP_KEY	M15	City_Quad	SE
Year_Built	1967	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	SECURITY DOOR, NEED SPECIAL ATTENTION		
SWQ SIZE	66" DIA	cost	
PROJECT_NO		NUMBER	30

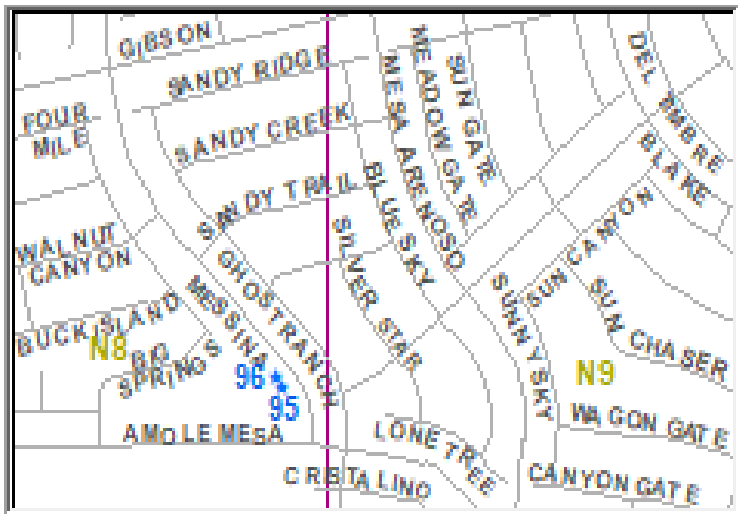
LOCATION	**FOUR HILLS ARROYO AT SAGE BRUSH**
STRUCTURE_NAME	TRASH SCREEN





MAP_KEY	M22	City_Quad	SE
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	5 IN X 5 IN OC SPACING AND 15 DEG FROM HORIZ		
SWQ SIZE	22'W1X16'W2X11'L+ 22' WX 2'H VERTICAL	cost	
PROJECT_NO	756392	NUMBER	78

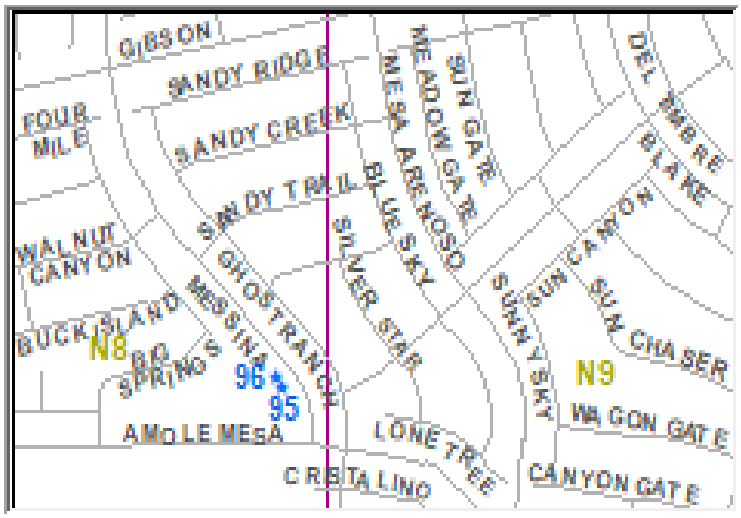
LOCATION	SIERRA SUNSET PARK-SOUTH 54 IN PIPE
STRUCTURE_NAME	TRASH SCREEN





MAP_KEY	N08	City_Quad	SW
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	95

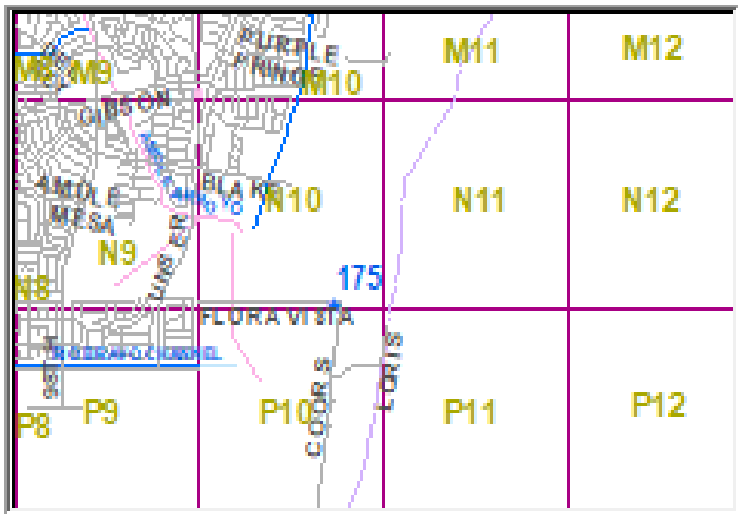
LOCATION	SIERRA SUNSET PARK-NORTH 48 IN PIPE
STRUCTURE_NAME	TRASH SCREEN





MAP_KEY	N08	City_Quad	SW
Year_Built	2015	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES			
SWQ SIZE		cost	
PROJECT_NO		NUMBER	96

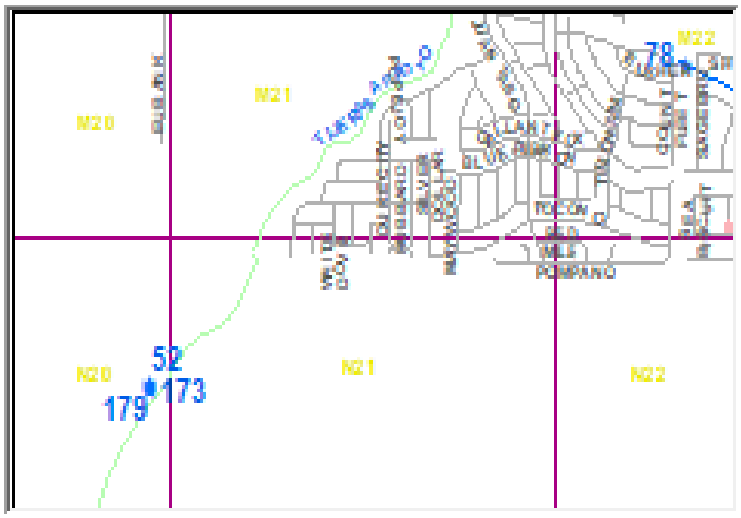
LOCATION	**FLORA VISTA AND COORS**
STRUCTURE_NAME	SWQF





MAP_KEY	N10	City_Quad	SW
Year_Built	2014	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INFELTRATION TRENCH		
SWQ SIZE	36" PERMEATED CORRUGATED METAL PIPE OVER 7' X 26' GRAVEL BED	cost	
PROJECT_NO	736592	NUMBER	175

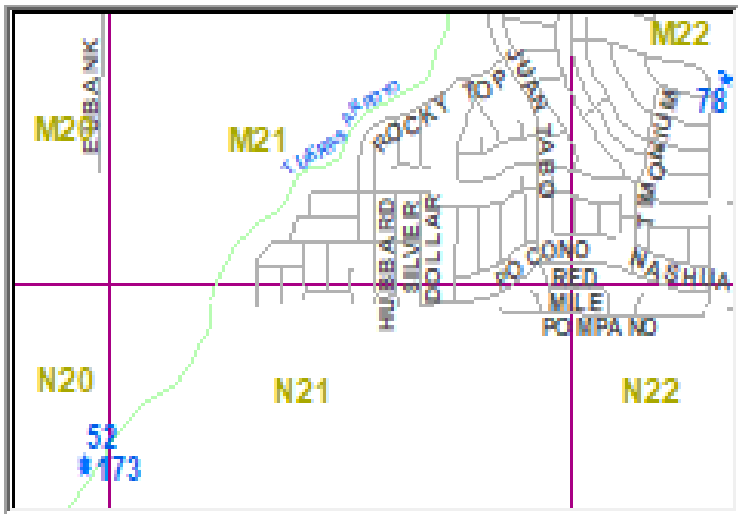
LOCATION	EUBANK OUTFALL SWQF
STRUCTURE_NAME	INFILTRATION BED





MAP_KEY	N20	City_Quad	NE
Year_Built	2019	link	X:\MD\SHARE\MD-Storm\Ponds-Trash Racks\TRASH_RACKS\17
NOTES			
SWQ SIZE	18'X40'X9" RINO MATTRESS GABION	cost	$34,874
PROJECT_NO	802402	NUMBER	179

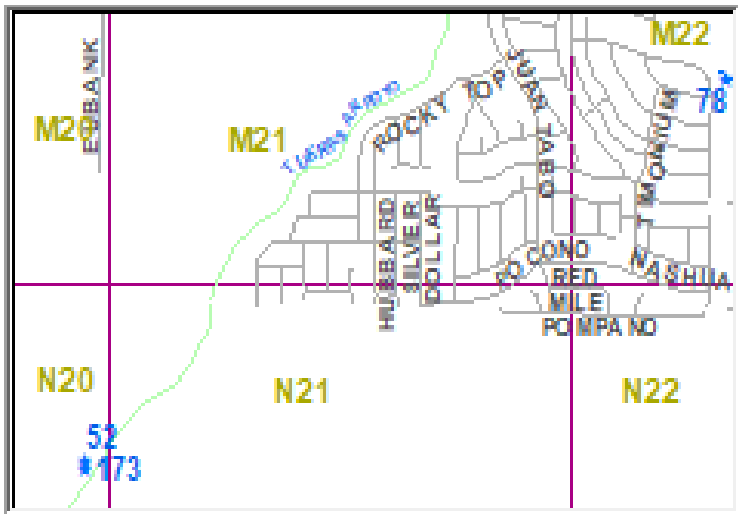
LOCATION	EUBANK OUTFALL AT TIJERAS ARROYO
STRUCTURE_NAME	SWQF





MAP_KEY	N20	City_Quad	NE
Year_Built		link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	REVERSE SLOPE OUTLET PIPES		
SWQ SIZE	6 HDPE PIPES OF 18 IN DIA AND 33 FT LONG	cost	
PROJECT_NO	479091	NUMBER	173

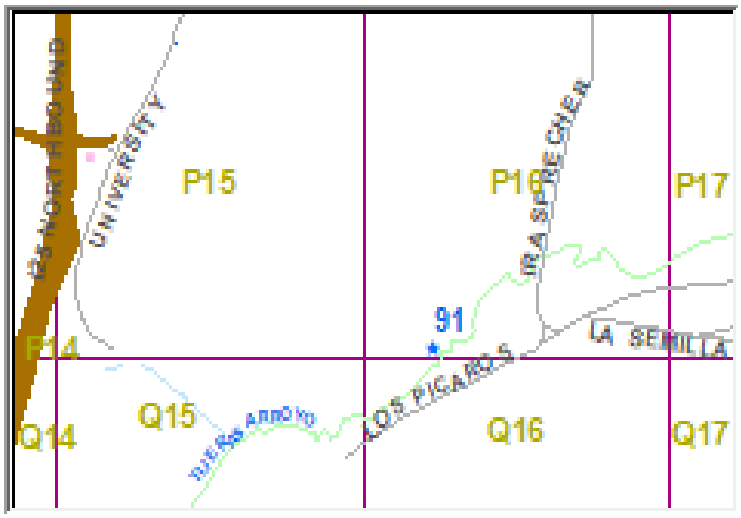
LOCATION	**EUBANK 1.25 M S GIBSON**
STRUCTURE_NAME	





MAP_KEY	N20	City_Quad	SE
Year_Built	2004	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSIDE KAFB		
SWQ SIZE		cost	
PROJECT_NO		NUMBER	52

LOCATION	AIRPORT-TIJERAS OUTFALL
STRUCTURE_NAME	SECURITY SCREEN





MAP_KEY	P16	City_Quad	SE
Year_Built	2013	link	\\coa.cabq.lcl\dfsroot\MD\SHARE\MD-Storm\Ponds-Trash Rack
NOTES	INSTALLED BY STREET MAINTENANCE AFTER A KOAT-TV REPORTING ON APRIL 25, 2013 THAT A MAN CAME OUT A MH INSIDE THE AIRPORT		
SWQ SIZE	9 FT DIA (108") , 6" X 6" C-C SCREEN	cost	$18,739
PROJECT_NO	901018	NUMBER	91

PONDS

ARROYO DEL OSO DETENTION DAM-HH

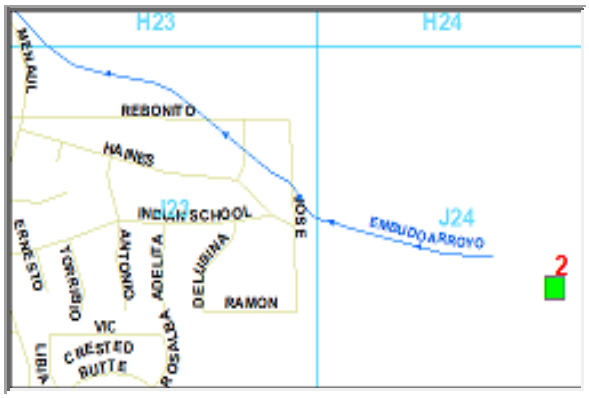




PondNo	1	CITY ZONE KEY	F-19
Location	OSUNA & LOUISIANA	CITY QUAD	NE
year built	1956		
Area, Acre	5.0	LastMaintDate	
InletSource	Bear Canion Arroyo E	OutletSource	cbc 6' H x 12' W- no trash rack
Note	High Hazard Dam	ID	16
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

EMBUDO DETENTION DAM-HH





PondNo	2	CITY ZONE KEY	J-24
Location	EAST END OF INDIAN SCHOOL ROAD	CITY QUAD	NE
year built	1980		
Area, Acre	5.0	LastMaintDate	
InletSource	open space E	OutletSource	48" RCP W through a trash rack
Note	High Hazard Dam	ID	31
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

PIEDRA LISA DETENTION DAM

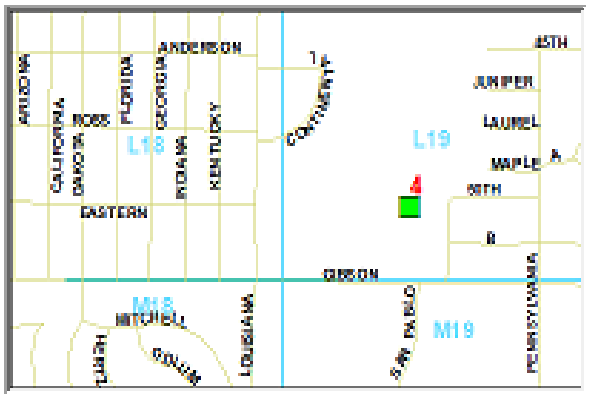




PondNo	3	CITY ZONE KEY	H-23
Location	EAST END OF MENAUL	CITY QUAD	NE
year built	1982		
Area, Acre	5.0	LastMaintDate	
InletSource	Piedra lisa arroyo and open space E	OutletSource	30" RCP W-through dmd ported riser
Note	Dam	ID	67
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

KIRTLAND DETENTION BASIN





PondNo	4	CITY ZONE KEY	L-19
Location	NW GIBSON AND LOUISINA INSIDE THE KAFB	CITY QUAD	SE
year built	1985		
Area, Acre	3.0	LastMaintDate	
InletSource	24", 2@40", 60" RCP E	OutletSource	30"RCP W through a trash rack
Note	Dam, Access restrict	ID	43
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

MARIPOSA DETENTION BASIN-HH

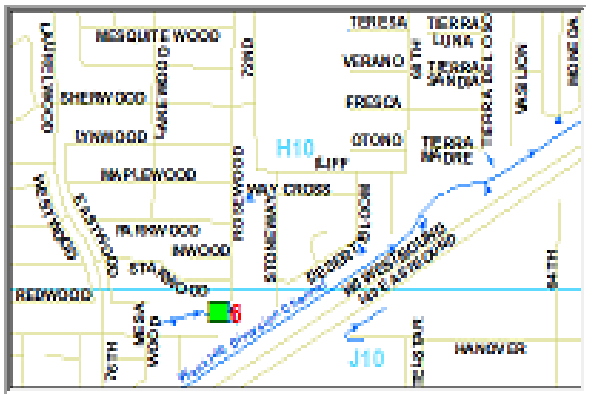




PondNo	5	CITY ZONE KEY	E-11
Location	TAYLOR RANCH ROAD & KATCHINA DRIVE	CITY QUAD	NW
year built	1983		
Area, Acre	33.8	LastMaintDate	
InletSource	60 ft W Mariposa arroyo W 2 @36 in , 30 in RCP N, 2 @36 in	OutletSource	8 ft w x 6 ft h cbc s - no trash screen
Note		ID	58
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

LAUELWOOD DETENTION BASIN

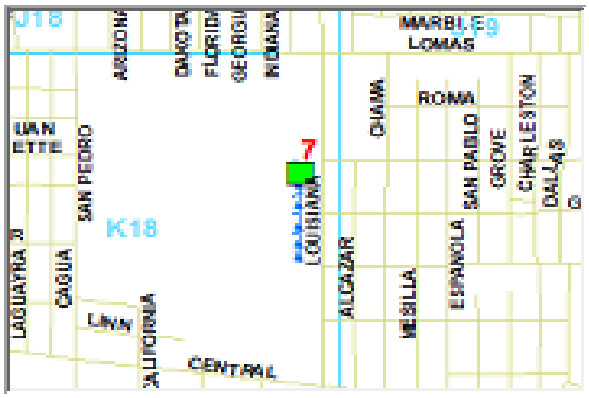




PondNo	6	CITY ZONE KEY	J-10
Location	NW HANOVER/ I-40 (LAURELWOOD PARKWAY)	CITY QUAD	NW
year built			
Area, Acre	3.0	LastMaintDate	
InletSource	30 in rcp N, 54 in rcp W	OutletSource	48 in rcp SE to W I-40 CH- through concrete box reverse slope pipes
Note		ID	50
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

EXPO NM LOUISIANA & CENTRAL





PondNo	7	CITY ZONE KEY	K-18
Location	FAIRGROUND LOUISIANA & CENTRAL	CITY QUAD	NE
year built			
Area, Acre	5.0	LastMaintDate	
InletSource	66 in and 90 in RCP E	OutletSource	36 in RCP NW- through concte box with reverse slope outlets
Note		ID	87
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

NORTH/SOUTH COORS DETENTION BASIN

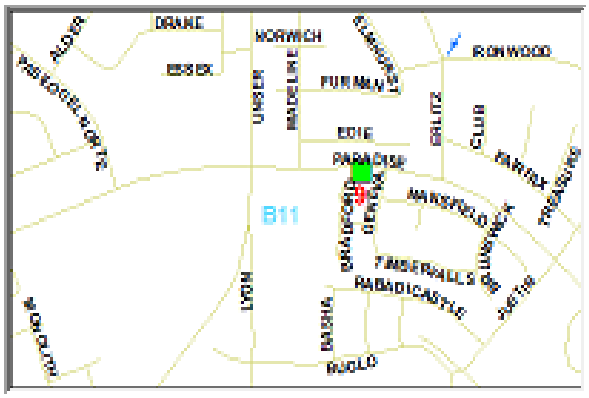




PondNo	8	CITY ZONE KEY	L-10
Location	SW CORNER OF COORS & BRIDGE	CITY QUAD	SW
year built	1988		
Area, Acre	8.0	LastMaintDate	
InletSource	15 ft w tierra bayita channel w 72 in rcp e	OutletSource	3 rcp @54 in s- no trash screens
Note		ID	63
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

Paradise and Geneva NW





PondNo	9	CITY ZONE KEY	B-11
Location	Paradise and Geneva NW	CITY QUAD	NW
year built			
Area, Acre	1.0	LastMaintDate	
InletSource	8 ft w swell w, 18 in rcp s	OutletSource	24 in rcp e through inlet grates
Note		ID	36
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

RENAISSANCE DETENTION DAM





PondNo	10	CITY ZONE KEY	F-15
Location	0.2 M W OF RENAISSANCE/MONTGOM	CITY QUAD	NE
year built	1985		
Area, Acre	3.7	LastMaintDate	
InletSource	84 in rcp n, 24 in rcp e	OutletSource	18 in rcp n through a trash rack
Note		ID	74
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

ODELIA POND





PondNo	11	CITY ZONE KEY	J-15
Location	NW INDIAN SCHOOL AND I-25	CITY QUAD	NE
year built			
Area, Acre	10.0	LastMaintDate	
InletSource	3 rcp @72 in (6 ft) e	OutletSource	30 in rcp w through dmd ported riser
Note		ID	64
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

HIGHLAND

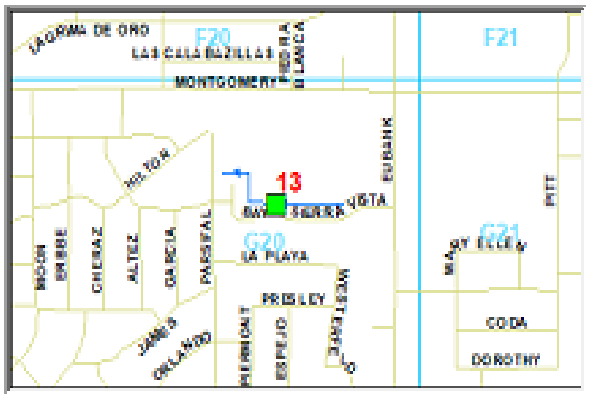




PondNo	12	CITY ZONE KEY	K-17
Location	NE JEFFERSON / COAL	CITY QUAD	SW
year built			
Area, Acre	3.0	LastMaintDate	
InletSource	42 in rcp n	OutletSource	78 in rcp w through a pyrimid type trash screen
Note		ID	40
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

HILTON-SIERRA VISTA-EUBANK-MONTG.





PondNo	13	CITY ZONE KEY	G-20
Location	END OF SIERRA VISTA CT	CITY QUAD	NE
year built			
Area, Acre	3.0	LastMaintDate	
InletSource	30 in rcp e, 15 ft w channel s	OutletSource	36 in rcp e through a trash rack
Note		ID	41
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

COORS-BY-PASS BW ELESON and 7 BAR LP

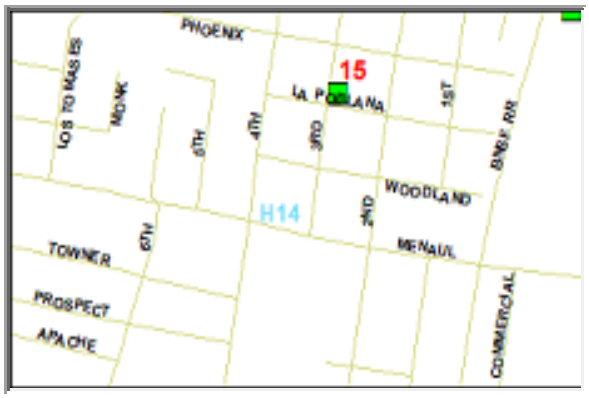




PondNo	14	CITY ZONE KEY	A-13
Location	SW COORS-BY-PASS & ELESON	CITY QUAD	NW
year built			
Area, Acre	3.0	LastMaintDate	
InletSource	42 in rcp nw,36 in rcp e, 24 in rcp se, 10 ft w run down w	OutletSource	24 in rcp ne through ported riser
Note		ID	79
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

3RD & LA POBLANA

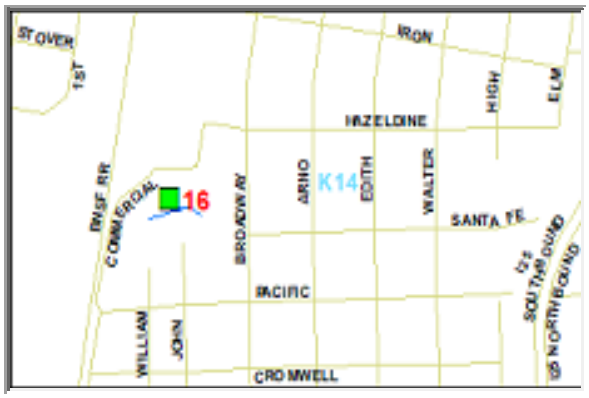




PondNo	15	CITY ZONE KEY	H-14
Location	3RD & LA POBLANA	CITY QUAD	NW
year built			
Area, Acre	1.0	LastMaintDate	
InletSource	30 ft rundown s	OutletSource	30 in rcp ?
Note		ID	98
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

SOUTH BROADWAY at JOHN-HAZELDINE

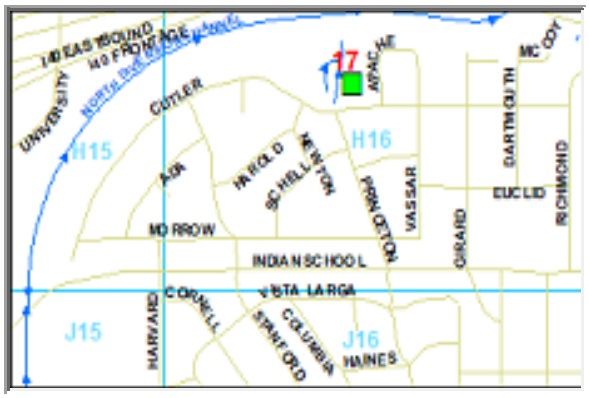




PondNo	16	CITY ZONE KEY	K-14
Location	S JOHN / HAZELDINE-COMMERCIAL -2 BLOKS S COAL	CITY QUAD	SW
year built			
Area, Acre	3.0	LastMaintDate	
InletSource	90 in rcp se,	OutletSource	30 in rcp se with trash rack
Note		ID	19
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

PRINCETON-CUTLER





PondNo	17	CITY ZONE KEY	H-16
Location	NE PRINCTON / CUTLER	CITY QUAD	NE
year built			
Area, Acre	3.0	LastMaintDate	
InletSource	48 in s, 60 in and 72 in n, 24 in ne	OutletSource	4 CI 24 in, 6 in CI PS-36, 2 -48 in rcp n to north of i-40-through trash screen
Note		ID	69
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

COMANCHE-3101 comanche ne





PondNo	18	CITY ZONE KEY	G-16
Location	NE COMANCHE / NORTH DIV CHANNEL	CITY QUAD	NE
year built	1967		
Area, Acre	2.0	LastMaintDate	
InletSource	2 rcp @ 36 in s	OutletSource	PS 2 CI pipes @12 in and 1 @4 in to NDC-through trash screen
Note	ps-35	ID	24
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

LOMAS





PondNo	19	CITY ZONE KEY	J-23
Location	0.2 MILE EAST OF TRAMWAY / LOMAS	CITY QUAD	NE
year built			
Area, Acre	6.0	LastMaintDate	
InletSource	10 ft w channel se, 36 in rcp nw, 48 in rcp e	OutletSource	10 ft w channel w
Note		ID	52
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

GLENWOOD HILLS at comanche and camino de la sierra ne

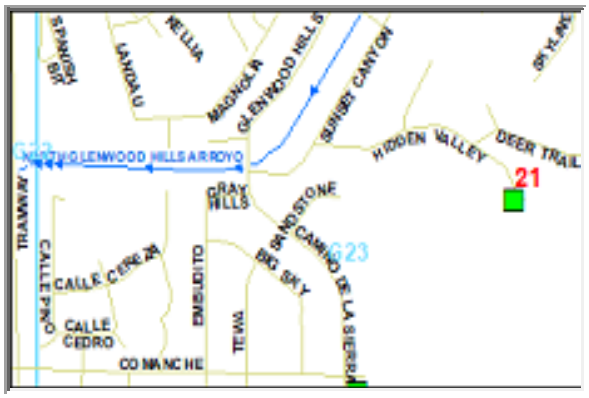




PondNo	20	CITY ZONE KEY	G-23
Location	SE CAMINO DE LA SIERRA / COMANCHE	CITY QUAD	NE
year built			
Area, Acre	0.7	LastMaintDate	
InletSource	watershed from e	OutletSource	20 ft wide spillway
Note		ID	34
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

HIDDEN VALLEY BASIN

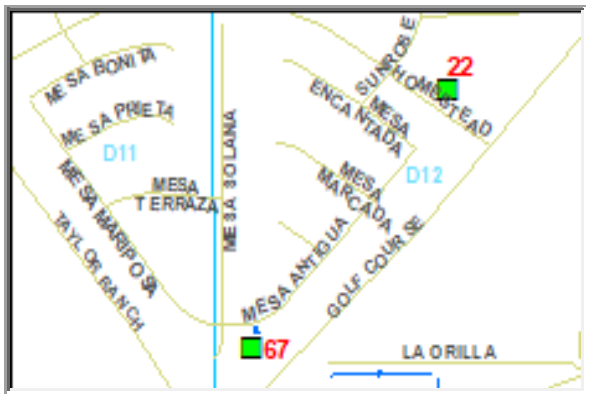




PondNo	21	CITY ZONE KEY	G-23
Location	EAST END OF HIDDEN VALLEY	CITY QUAD	NE
year built	1975		
Area, Acre	2.0	LastMaintDate	
InletSource	watershed from e & s	OutletSource	54 in rcp w with security rack
Note		ID	39
X_Link			

PRAIRIE RIDGE POND





PondNo	22	CITY ZONE KEY	D-12
Location	NW HOMESTEAD / GOLF COURSE	CITY QUAD	NW
year built			
Area, Acre	1.4	LastMaintDate	
InletSource	42 in rcp w	OutletSource	18 in rcp s through perforated riser
Note		ID	68
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

HALTER-HACKAMORE





PondNo	23	CITY ZONE KEY	L-08
Location	HALTER / HACKAMORE- NEAR TOWER/98TH ST	CITY QUAD	SW
year built			
Area, Acre	0.3	LastMaintDate	
InletSource	10 ft w rundown w	OutletSource	18 in rcp and 17 ft w spillway to snow vista arroyo e with pryamid type trash rack
Note		ID	38
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

COTTONWOOD RIDGE SUBDIVISION POND-priv?

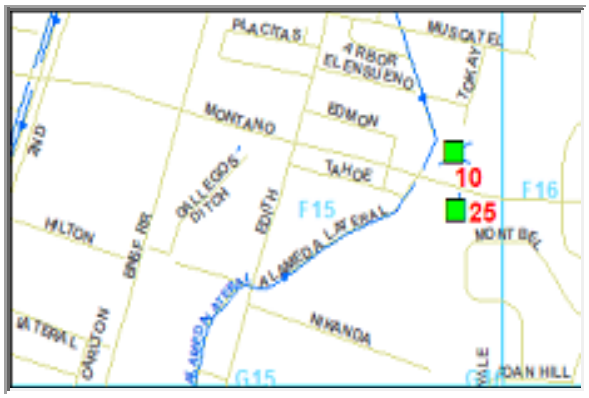




PondNo	24	CITY ZONE KEY	A-14
Location	SE NM528 / COTTONWOOD	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	30
X_Link			

A.G.P POND (ALEXANDER / MONTANO)





PondNo	25	CITY ZONE KEY	F-16
Location	0.2 MILE SW MONTANO / RENAISSANCE	CITY QUAD	NE
year built			
Area, Acre	1.0	LastMaintDate	
InletSource	10 ft w rundown s, 30 in rcp ne	OutletSource	12 in rcp n through perforated standing pipe
Note		ID	8
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

EUCARIZ POND(BRIDGE / EUCARIZ)





PondNo	26	CITY ZONE KEY	L-11
Location	NW BRIDGE / YERBA	CITY QUAD	SW
year built			
Area, Acre	1.7	LastMaintDate	
InletSource	66 in rcp n, 10 ft w rundown n	OutletSource	30 in rcp- no trash rack
Note		ID	32
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

SUNSET GARDENS POND





PondNo	27	CITY ZONE KEY	K-11
Location	NE SUNSET GARDENS / PITTARD ????	CITY QUAD	SW
year built			
Area, Acre	0.1	LastMaintDate	
InletSource	2 sidewalk culverts each 6 in x 24 in	OutletSource	no outlet-no tras rack
Note		ID	78
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

REGINA POND (REGINA / BLUEWATER)





PondNo	28	CITY ZONE KEY	J-11
Location	REGINA PL	CITY QUAD	NW
year built	1992		
Area, Acre	2.0	LastMaintDate	
InletSource	30 in rcp w	OutletSource	18 in rcp s with grate inlet
Note		ID	73
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

SALVADOR & LUNA RW





PondNo	29	CITY ZONE KEY	K-11
Location	SW SALVADOR - LUNA	CITY QUAD	SW
year built			
Area, Acre	1.0	LastMaintDate	
InletSource	no	OutletSource	no
Note	rw land	ID	76
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

ALMAGORDO-I-40 EASMT





PondNo	30	CITY ZONE KEY	H-11
Location	SW OF ALMAGORDO AND BRIDGES	CITY QUAD	
year built			
Area, Acre	1.0	LastMaintDate	
InletSource	8 ft rundown n	OutletSource	30 in rcp s with inclined pipe trash rack
Note		ID	12
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

MANZANO MESA DAM

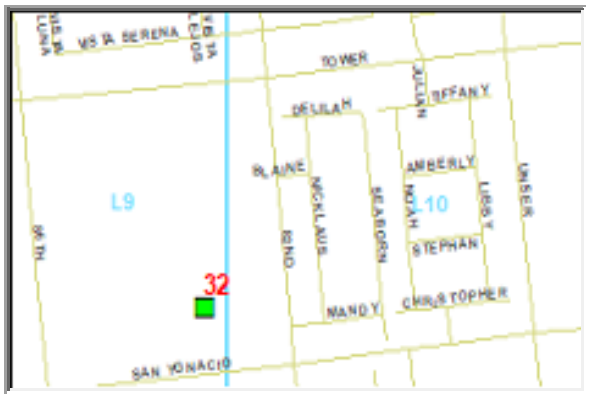




PondNo	31	CITY ZONE KEY	L-21
Location	NE CORNER INOVATION PKWY & STEPHEN MOODY	CITY QUAD	SE
year built	2002		
Area, Acre	12.2	LastMaintDate	
InletSource	78 in rcp ne, 48 in rcp w, 72 in rcp se, 24 in rcp s	OutletSource	72 in rcp w with beehive pyramid type trash rack two round horizontal screen bars
Note	dam	ID	57
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

TOWER-SAGE DAM

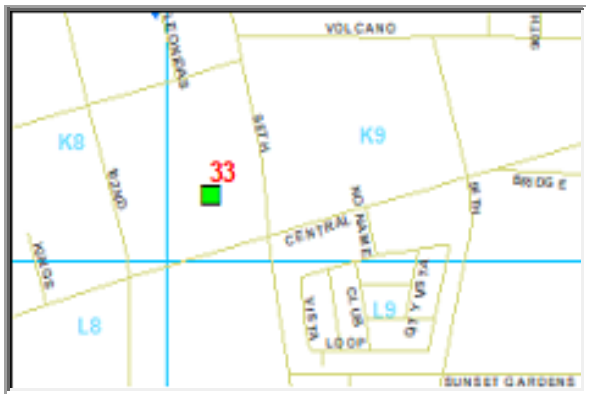




PondNo	32	CITY ZONE KEY	L-09
Location	SW CORNER 86TH & TOWER	CITY QUAD	SW
year built	2001		
Area, Acre	18.0	LastMaintDate	
InletSource	96 in rcp sw, 2 @18 in rcp w, 90 in rcp ne	OutletSource	36 in rcp se with two surge beehives pyramid type trash racks
Note	dam	ID	83
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

AMOLE DEL NORTE DAM-HH





PondNo	33	CITY ZONE KEY	K-09
Location	NW CORNER CENTRAL & 98TH	CITY QUAD	NW
year built	1983		
Area, Acre	10.0	LastMaintDate	
InletSource	84 in rcp n	OutletSource	36 in rcp se with inclined pipe type trash rack
Note	high hazard dam	ID	13
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

MENAUL DETENTION DAM

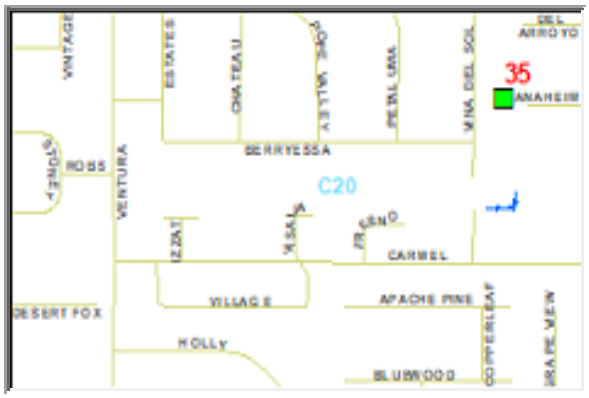




PondNo	34	CITY ZONE KEY	H-15
Location	SE BROADWAY-CANDELARIA	CITY QUAD	NE
year built	1995		
Area, Acre	8.2	LastMaintDate	
InletSource	30 ft w broadbent channel s, 42 in rcp s, 8 ft w rundown s, 18 in	OutletSource	12 in pvc underdrain e, 12 in pvc under drain sw, and 24 in rcp nw, with ported riser and
Note	dam	ID	60
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

ANAHIM & HALBROOK easement





PondNo	35	CITY ZONE KEY	C-20
Location	0.25 M W HALBROOK	CITY QUAD	NE
year built			
Area, Acre	0.1	LastMaintDate	
InletSource	open space e, 4 inlets @ 2 ft x 18 ft inlets	OutletSource	24 in rcp with concrete box type riser and horizontal trash rack
Note		ID	14
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

LITTLE LEAGUE FIELD

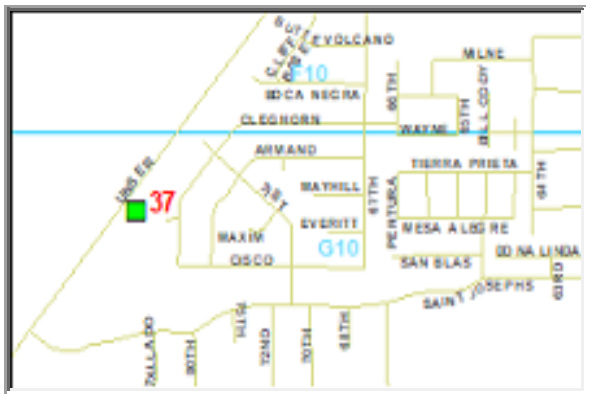




PondNo	36	CITY ZONE KEY	G-16
Location	COMANCHE AND BRYNMAWR	CITY QUAD	NE
year built			
Area, Acre	9.8	LastMaintDate	
InletSource	10 ft x 2.5 ft cbc e and 10 ft w run down	OutletSource	36 in rcp n with inclined pipe type trash rack
Note		ID	1
X_Link	X:\MUNICIPAL DEVELOPMENT\SHARE\MD-Storm\P		

UNSER ST. JOSEPH 4 PONDS





PondNo	37	CITY ZONE KEY	G-10
Location	UNSER & SAINT JOSEPH, EAST UNSER	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	93
X_Link			

102ND-PEACOOK





PondNo	38	CITY ZONE KEY	M-9
Location	102ND-PEACOOK	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	2
X_Link			

CIBOLA -coors by pass- park and ride





PondNo	39	CITY ZONE KEY	B-13
Location	NW OF COOR-BY-PASS & ELLISON	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	22
X_Link			

LADERA-W UNSER





PondNo	40	CITY ZONE KEY	J-9
Location	1/4 MILE W LADERA-UNSER	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	45
X_Link			

UNSER-TWIN OAKS





PondNo	41	CITY ZONE KEY	H-10
Location	UNSER-TWIN OAKS	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	54
X_Link			

ALTA VISTA POND





PondNo	42	CITY ZONE KEY	L-11
Location	FOOTHILL NORTH OF BRIDGE	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	94
X_Link			

QUINTESSENCE -#1-(PARK)

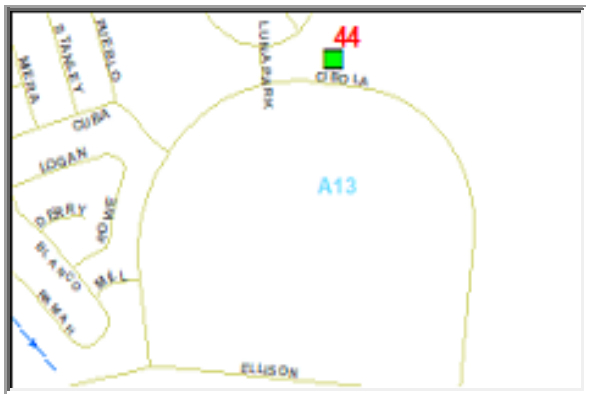




PondNo	43	CITY ZONE KEY	D-21
Location	RAMTH /QUINTESSENCE ROAD	CITY QUAD	NE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	70
X_Link			

CIBOLA LP-LUNA PARK-priv





PondNo	44	CITY ZONE KEY	A-13
Location	NE LUNA PARK-CIBOLA LP	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	21
X_Link			

CONGRESS DETENTION BASIN

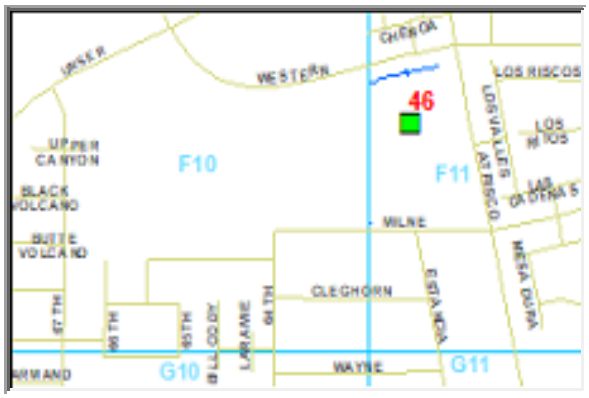




PondNo	45	CITY ZONE KEY	B-13
Location	SE CONGRESS / BENTON	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	25
X_Link			

LADERA-16B





PondNo	46	CITY ZONE KEY	F-11
Location	WESTERN TRAIL / ATRISCO	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	44
X_Link			

8TH AND STOVER TINGLEY PARK

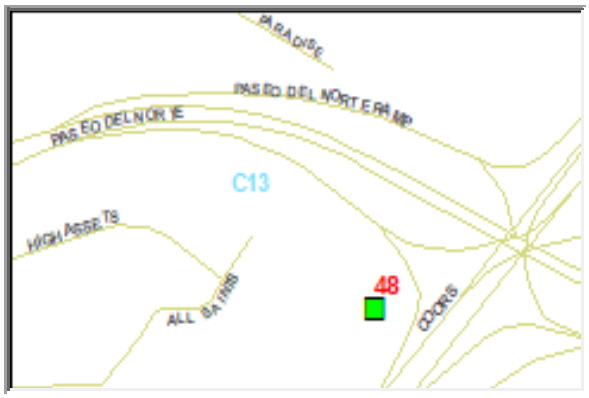




PondNo	47	CITY ZONE KEY	A-13
Location	8TH AND STOVER TINGLEY PARK	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	96
X_Link			

ALL SAINTS

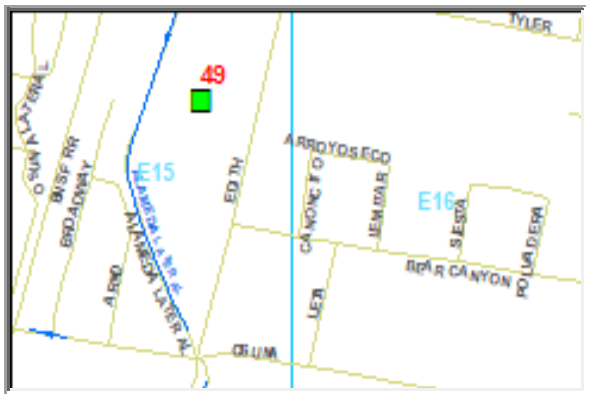




PondNo	48	CITY ZONE KEY	C-13
Location	SW PASEO DEL NORTE & COORS	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	11
X_Link			

NORTH EDITH





PondNo	49	CITY ZONE KEY	E-15
Location	0.4 M N OSUNA AT TYLER	CITY QUAD	NE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	62
X_Link			

ALAMEDA

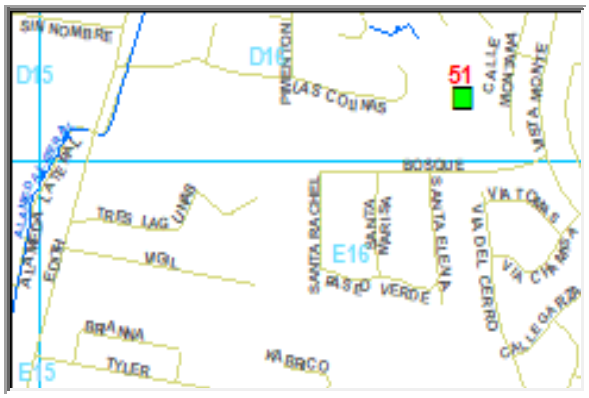




PondNo	50	CITY ZONE KEY	C-16
Location	0.4 M N PASEO DEL NORTE	CITY QUAD	
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	10
X_Link			

VISTA DEL NORTE

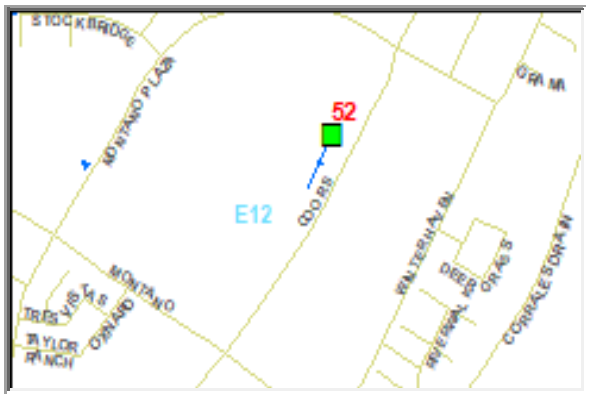




PondNo	51	CITY ZONE KEY	D-16
Location	BOSQUE 1/4 MILE W VISTA DEL NORTE(OSUNA & N DIV CH)	CITY QUAD	ne
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	95
X_Link			

COORS & MONTANO PLAZA #2-SOTUH





PondNo	52	CITY ZONE KEY	E-12
Location	SOUTH SIDE OF MONTANO PLAZA-COORS	CITY QUAD	
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	29
X_Link			

CLAREMONT

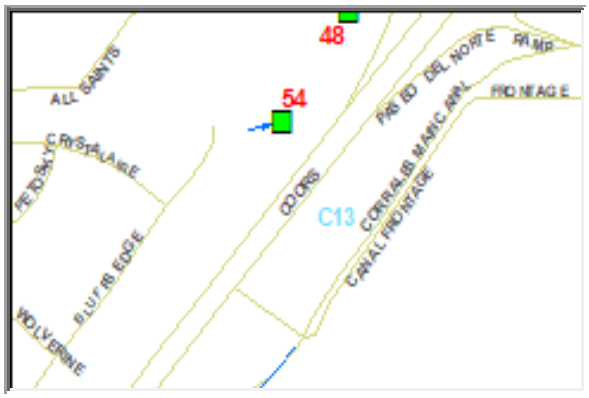




PondNo	53	CITY ZONE KEY	H-14
Location	ON CLAREMONT & COMMERCIAL	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	23
X_Link			

BLUFFS EDGE COORS SOUTH OF PDN





PondNo	54	CITY ZONE KEY	C-13
Location	BLUFFS EDGE COORS SOUTH OF PDN	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	33
X_Link			

GLENWOOD HILLS DETENTION BASIN #2





PondNo	55	CITY ZONE KEY	G-23
Location	NE CAMINO DE LA SIERRA / MOUNTAIN SHADOW	CITY QUAD	NE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	35
X_Link			

LOS LOMITAS SUB DIV

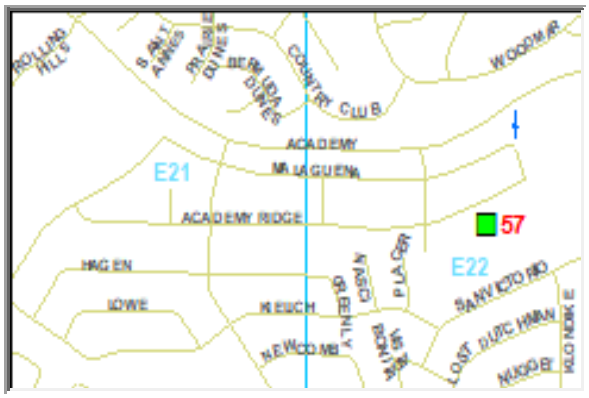




PondNo	56	CITY ZONE KEY	H-9
Location	SW CALLE DE ENTRADA AND CORTE DEL VIENTO	CITY QUAD	
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	55
X_Link			

ACADEMY RIDGE





PondNo	57	CITY ZONE KEY	E-22
Location	S MALAGUENA AND ACADEMY RIDGE	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	9
X_Link			

1152 CASSANDRA SW

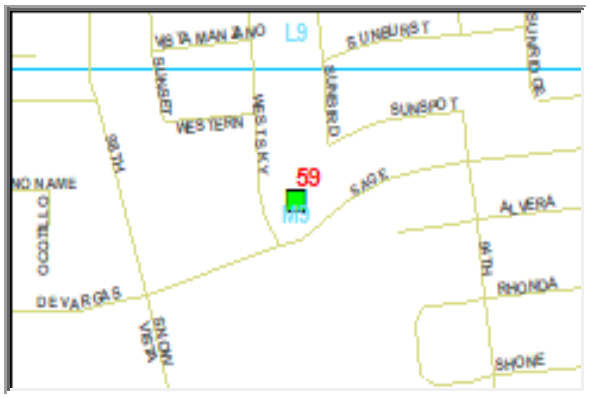




PondNo	58	CITY ZONE KEY	M-10
Location	SW OF SAGE -82 ND	CITY QUAD	
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	4
X_Link			

SAGE &98TH ST

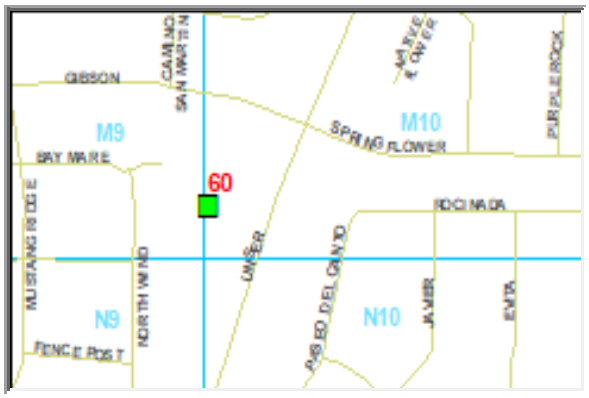




PondNo	59	CITY ZONE KEY	M-09
Location	NE SAGE / WEST SKY	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	75
X_Link			

UNSER AND GOBSON





PondNo	60	CITY ZONE KEY	M-10
Location	UNSER AND GOBSON	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	99
X_Link			

LOS ANAYAS POND

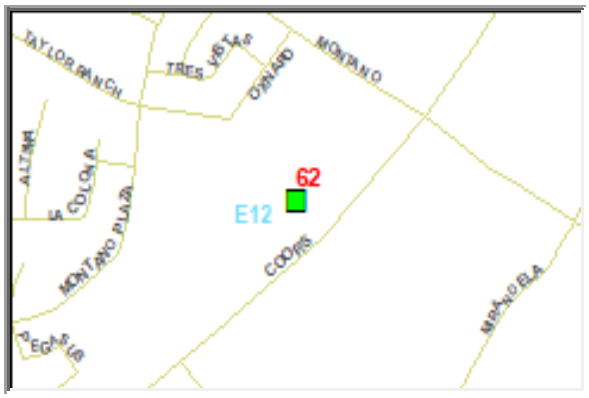




PondNo	61	CITY ZONE KEY	H-12
Location	LOS ANAYAS / LOS LUCEROS	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	53
X_Link			

COORS & MONTANO





PondNo	62	CITY ZONE KEY	E-12
Location	COORS / MONTANO, BEHIND GAS STATION	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	27
X_Link			

QUICK WATER ARROYO AT OURAY AND RONDA





PondNo	63	CITY ZONE KEY	G-10
Location	QUICK WATER ARROYO AT OURAY AND RONDA	CITY QUAD	NE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	84
X_Link			

3RD & AZTEC

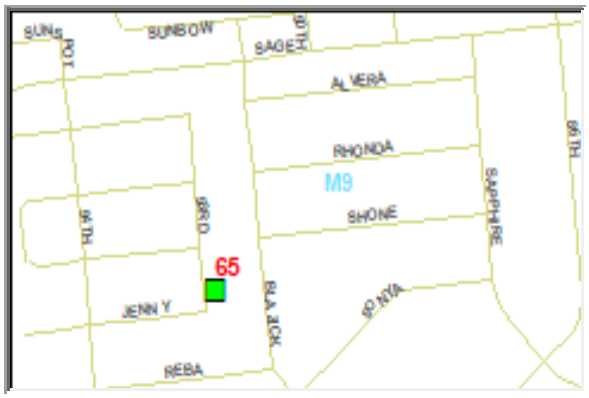




PondNo	64	CITY ZONE KEY	G-14
Location		CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	5
X_Link			

93RD / JENNY DETENTION BASIN





PondNo	65	CITY ZONE KEY	M-09
Location	EAST OF 93RD / JENNY	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	7
X_Link			

AQ POND BROADWAY & ODELIA

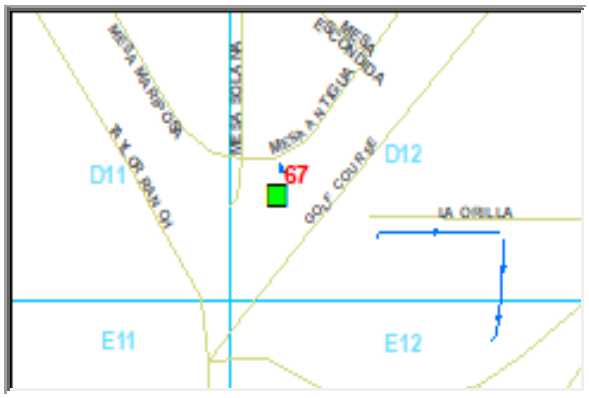




PondNo	66	CITY ZONE KEY	J-14
Location	AQ POND BROADWAY & ODELIA	CITY QUAD	NE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	81
X_Link			

MESA ANTIGUA POND





PondNo	67	CITY ZONE KEY	D-12
Location	MESA ANTIGUA AND MESA SOLANA NW	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	61
X_Link			

TERRACOTTA-MALACHITE- TOWER

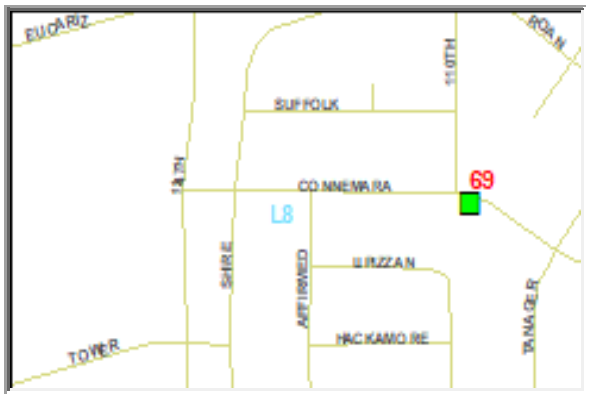




PondNo	68	CITY ZONE KEY	L-09
Location	ONE BLOCK S TERRACOTTA PL / TOWER	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	80
X_Link			

CONNMMARA - WESTGATE POND #2

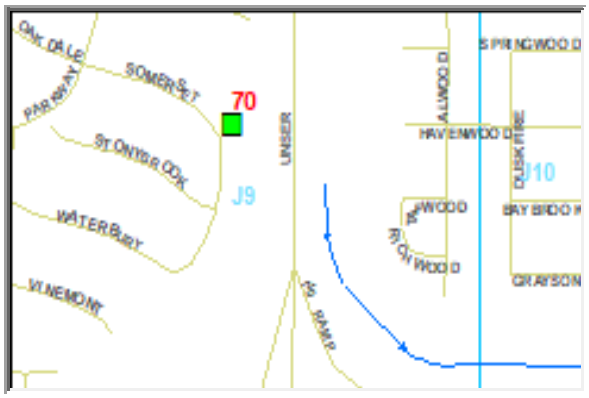




PondNo	69	CITY ZONE KEY	L-08
Location	CONNEMARA /110TH ST	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	26
X_Link			

PARKWAY SUBDIVISION POND

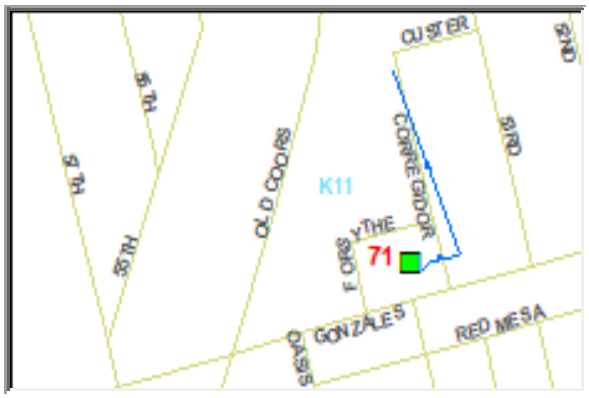




PondNo	70	CITY ZONE KEY	J-09
Location	??	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	66
X_Link			

GONZALES

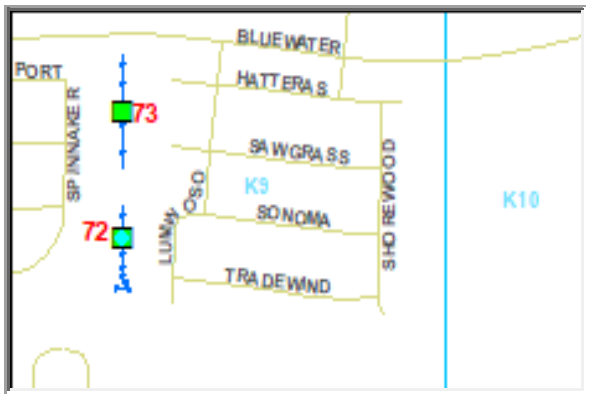




PondNo	71	CITY ZONE KEY	K-10
Location	1/2 BLOCL WEST OLD COORS / GONZALES	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	37
X_Link			

UNSER DIVERSION POND #1

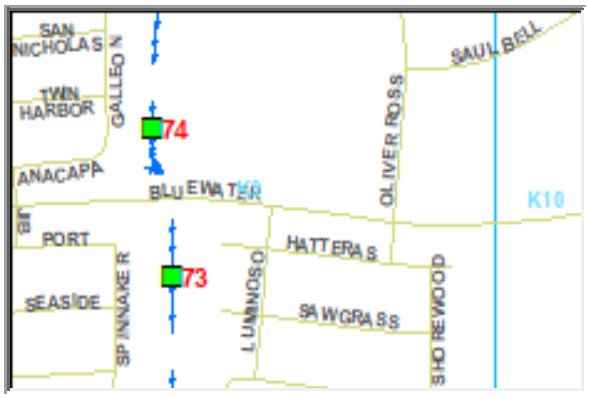




PondNo	72	CITY ZONE KEY	K-10
Location	200 FT SW BLUEWATER / UNSER	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	88
X_Link			

UNSER DIVERSION POND #2

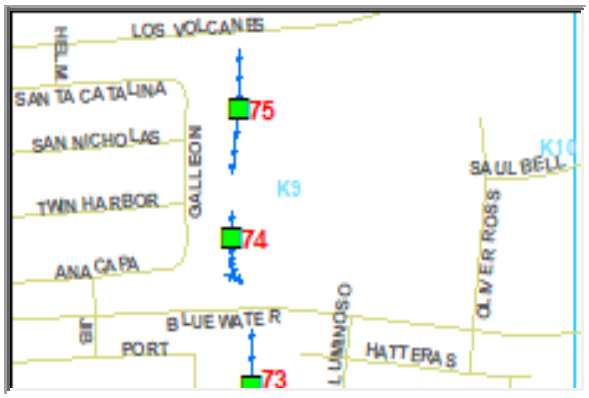




PondNo	73	CITY ZONE KEY	K-10
Location	SW BLUEWATER / UNSER	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	89
X_Link			

UNSER DIVERSION POND #3

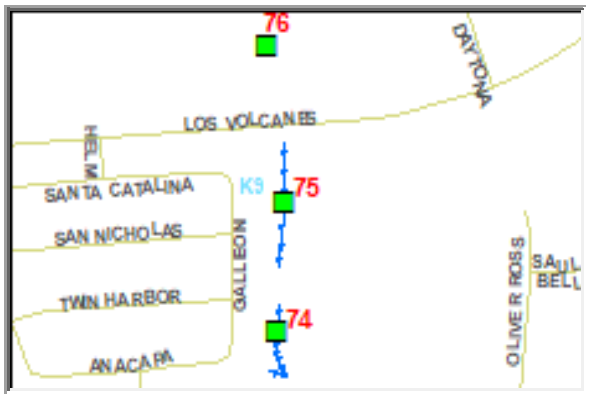




PondNo	74	CITY ZONE KEY	K-10
Location	NW W BLUEWATER / UNSER	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	90
X_Link			

UNSER DIVERSION POND #4





PondNo	75	CITY ZONE KEY	K-10
Location	SW W BLUEWATER / LOS VOLCANOES	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	91
X_Link			

UNSER DIVERSION POND #5

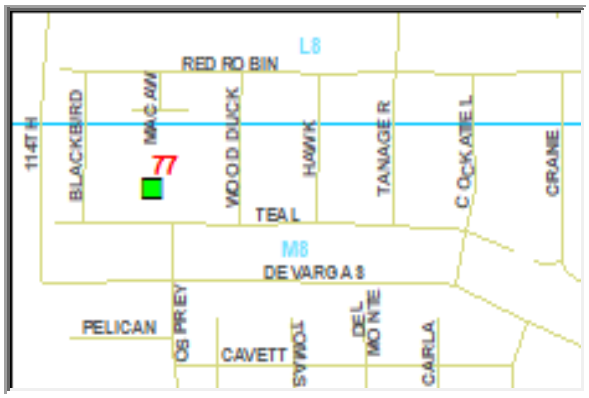




PondNo	76	CITY ZONE KEY	K-10
Location	NW W BLUEWATER / LOS VOLCANOES	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	92
X_Link			

TIMARRON POND





PondNo	77	CITY ZONE KEY	M-08
Location	TIMARRON / TEAL -OSPRAY	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	82
X_Link			

JILL PATRICIA POND

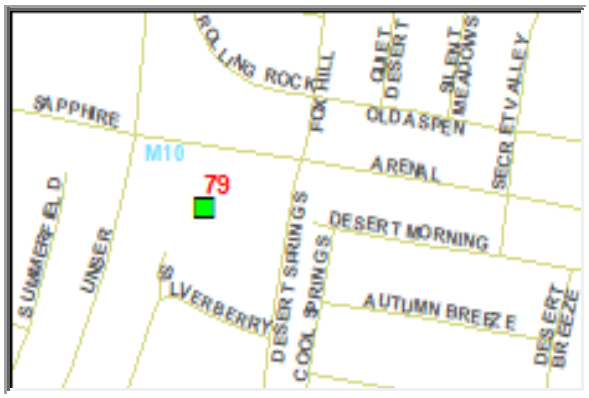




PondNo	78	CITY ZONE KEY	C-12
Location	JILL PATRICIA / GOLF COURSE ??	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	42
X_Link			

ARENAL & UNSER





PondNo	79	CITY ZONE KEY	M-10
Location		CITY QUAD	
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	100
X_Link			

COORS & MONTANO PLAZA #1-NORTH





PondNo	80	CITY ZONE KEY	E-12
Location	NORTH SIDE OF MONTANO PLAZA-COORS	CITY QUAD	NE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	28
X_Link			

BOSQUE MEADOW POND

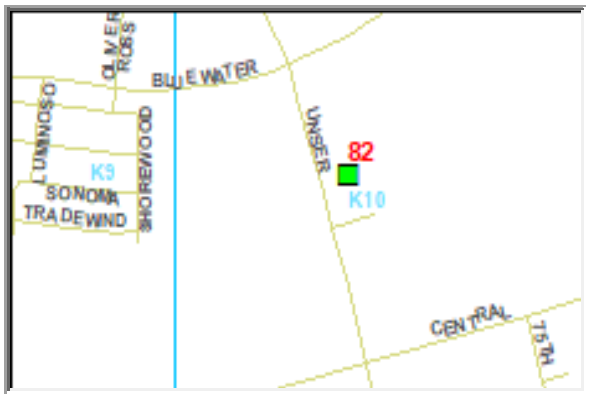




PondNo	81	CITY ZONE KEY	D-12
Location	NE OF BOSQUE MEADOW / COORS	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	18
X_Link			

BLUEWATER POND





PondNo	82	CITY ZONE KEY	K-10
Location	EAST OF UNSER B/W BLUEWATER AND CENTRAL	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	17
X_Link			

UNSER & BRIDGE LAND R/W

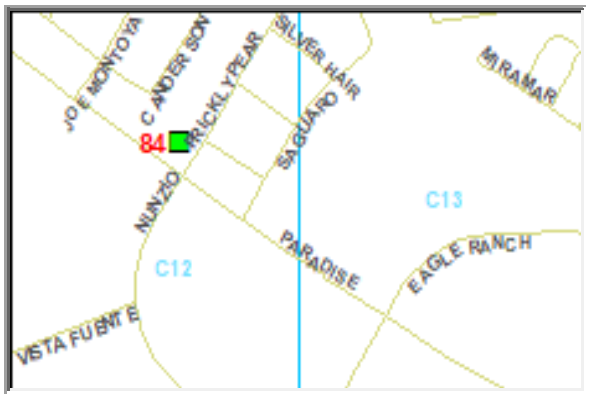




PondNo	83	CITY ZONE KEY	L-10
Location	UNSER & BRIDGE	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	86
X_Link			

PARADIS & PRICKLY PEAR





PondNo	84	CITY ZONE KEY	C-12
Location	PARADIS & PRICKLY PEAR	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	65
X_Link			

LOS TOMASES & PHOENIX POND

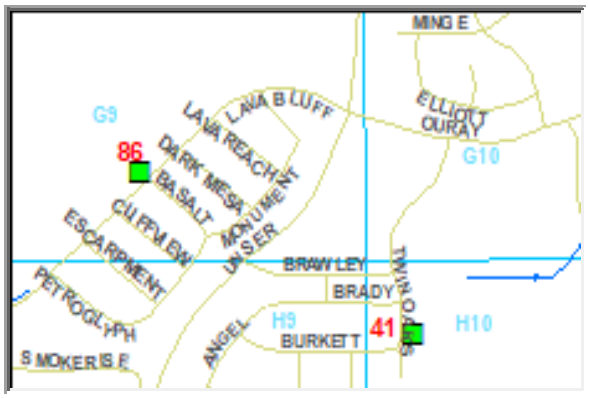




PondNo	85	CITY ZONE KEY	H-14
Location	LOS TOMASES & PHOENIX	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	56
X_Link			

LAVA BLUFF POND

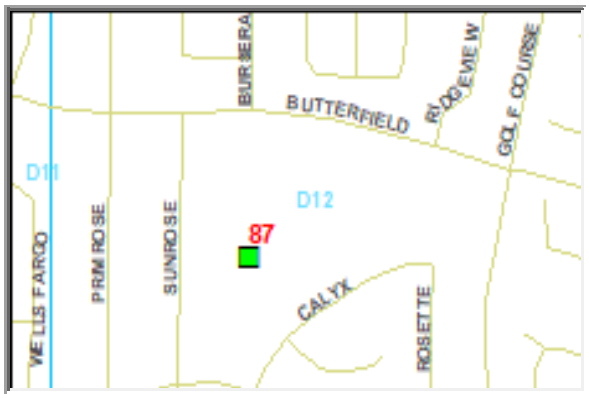




PondNo	86	CITY ZONE KEY	H-09
Location	LAVA BLUFF / PARKWEST	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	51
X_Link			

BUTTERFIELD & GOLF COURSE

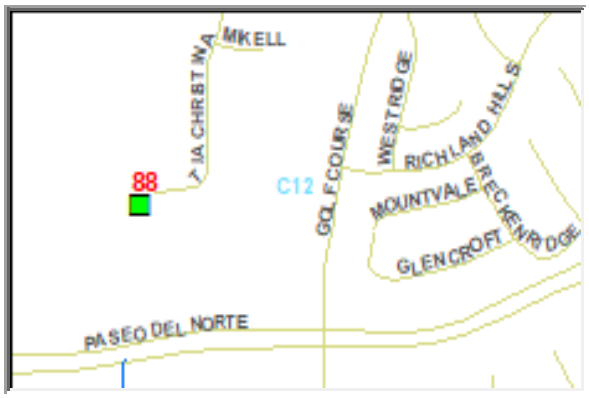




PondNo	87	CITY ZONE KEY	D-12
Location	SW OF BUTTERFIELD AND GOLFCOURSE	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	20
X_Link			

LAS MARCADAS POND





PondNo	88	CITY ZONE KEY	C-12
Location	MARNA LYNN AVE / CHRISTINA ??	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	49
X_Link			

TRES PLACITAS-private

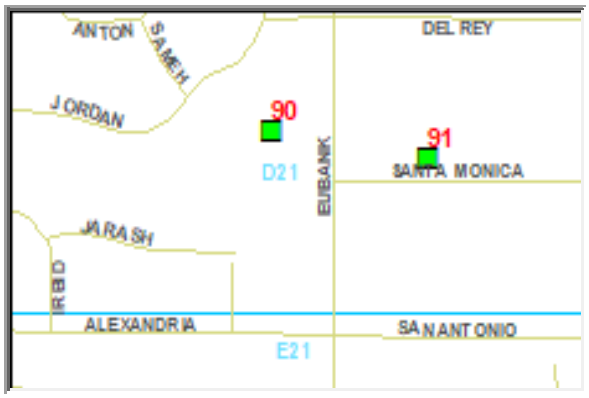




PondNo	89	CITY ZONE KEY	A-13
Location	MIERA DRIVE / CUBA ??	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	85
X_Link			

QUINTESSENCE -#2-(ENTRANCE)

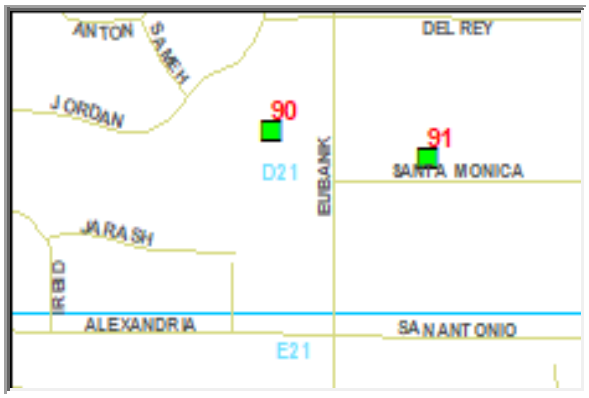




PondNo	90	CITY ZONE KEY	D-21
Location	QUINTESSENCE / EUBANK	CITY QUAD	NE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	71
X_Link			

QUINTESSENCE -#3-(E. EUBANK)

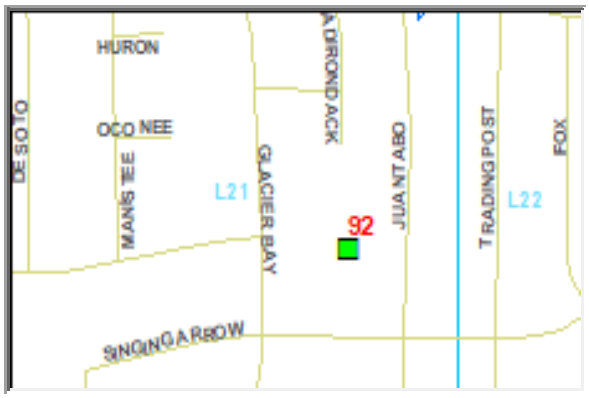




PondNo	91	CITY ZONE KEY	D-21
Location	NE EUBANK & SANTA MONICA	CITY QUAD	NE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	72
X_Link			

SINGINING ARROW-MONTABELLA

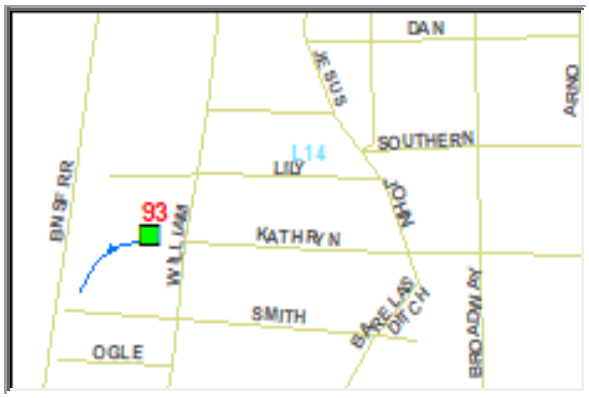




PondNo	92	CITY ZONE KEY	L-21
Location	NW CORNER OF JUAN TABO / SINGING ARROW	CITY QUAD	SE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	77
X_Link			

WILLIAM & KATHRYN

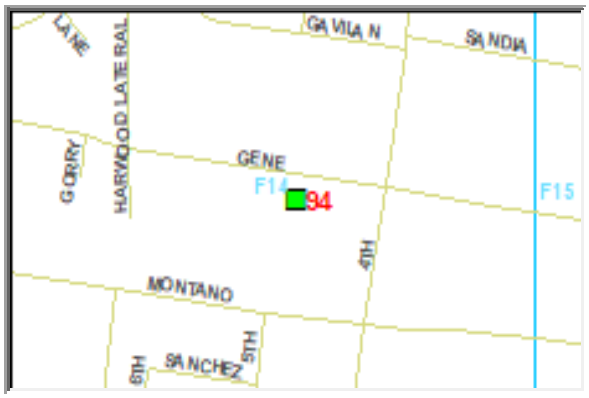




PondNo	93	CITY ZONE KEY	L-14
Location	WILLIAM & KATHRYN-4 BLOCHS S BRIDGE	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	97
X_Link			

LAND AT 424 GENE

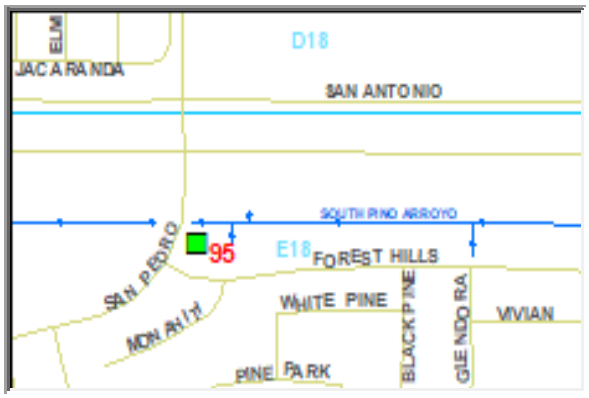




PondNo	94	CITY ZONE KEY	F-14
Location	4TH AND MONTANIO	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	48
X_Link			

LAND AT SAN PEDRO & FOREST HILLS

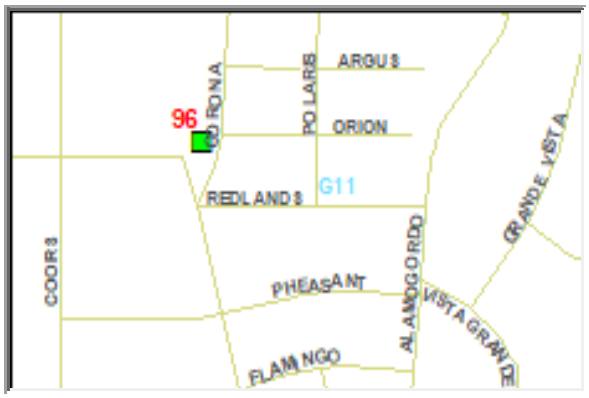




PondNo	95	CITY ZONE KEY	E-18
Location	???	CITY QUAD	NE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	47
X_Link			

LAND AT REDLAND & CORONA

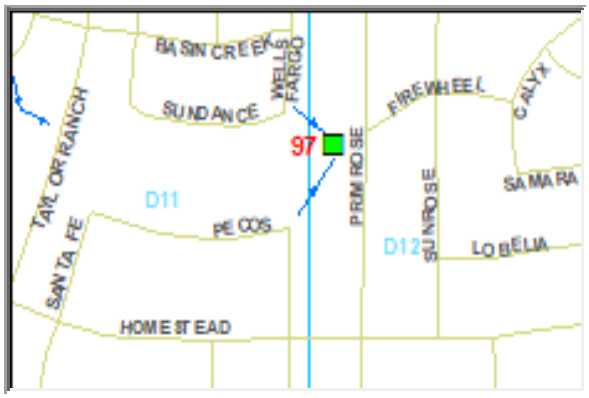




PondNo	96	CITY ZONE KEY	G-11
Location	???	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	46
X_Link			

PRIMROSE FIREWHEEL





PondNo	97	CITY ZONE KEY	D-12
Location	PRIMROSE FIREWHEEL	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	102
X_Link			

WEST MESA FORTUNA - COORS

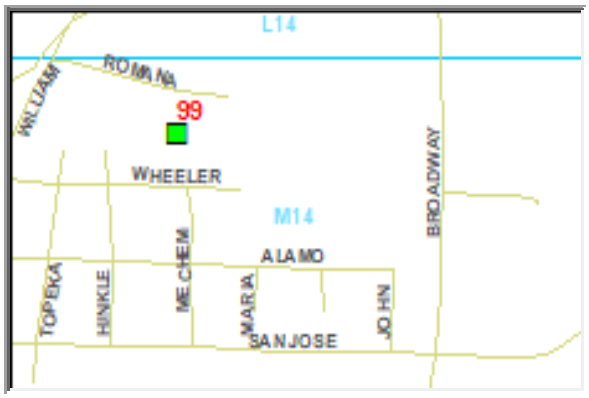




PondNo	98	CITY ZONE KEY	J-10
Location	WEST MESA FORTUNA - COORS	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	103
X_Link			

MECHEM POND





PondNo	99	CITY ZONE KEY	M-14
Location	E MECHEM / WHEELER	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	59
X_Link			

106TH-EUCARIZ

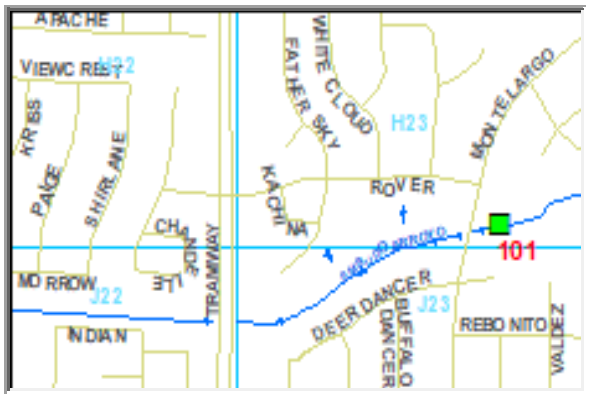




PondNo	100	CITY ZONE KEY	L-08
Location	106 TH / EUCARIZ	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	3
X_Link			

EMBUDO AT MONTELARGO

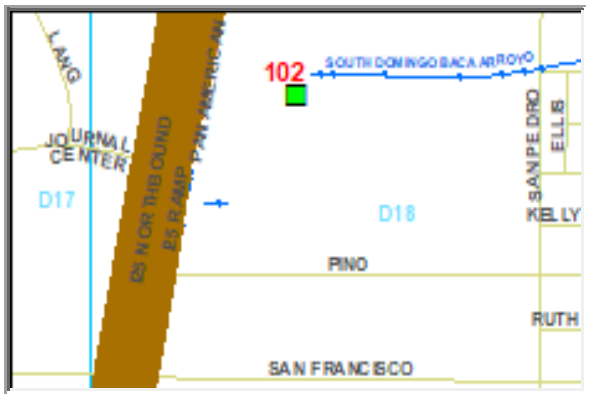




PondNo	101	CITY ZONE KEY	H-23
Location	EMBUDO AT MONTELARGO	CITY QUAD	NE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	15
X_Link			

PINO CITY YARD POND

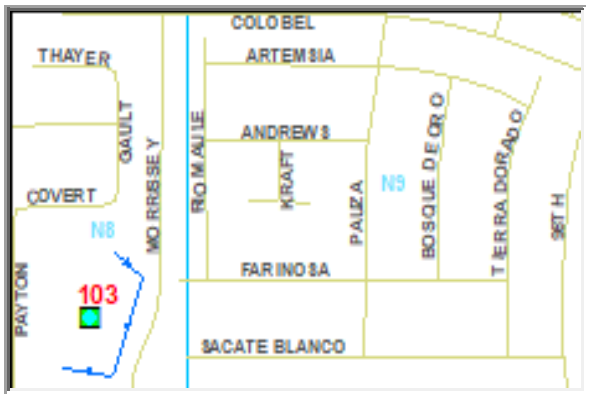




PondNo	102	CITY ZONE KEY	D-18
Location	PINO CITY YARD	CITY QUAD	NE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	104
X_Link			

MORRISSEY AND ANTLER TOOL SW

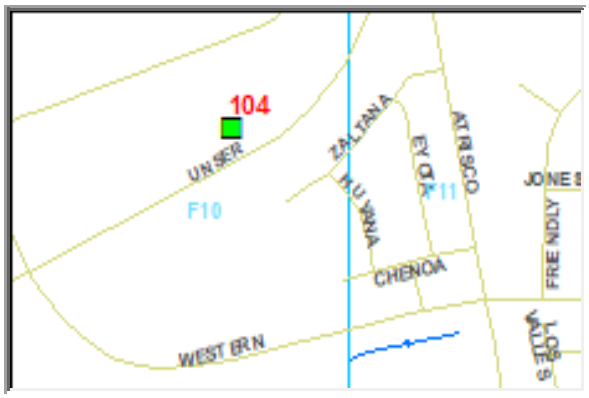




PondNo	103	CITY ZONE KEY	N-08
Location	MORRISSEY AND ANTLER TOOL SW	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	105
X_Link			

LADERA - 16A - NE UNSER - WESTERN NW

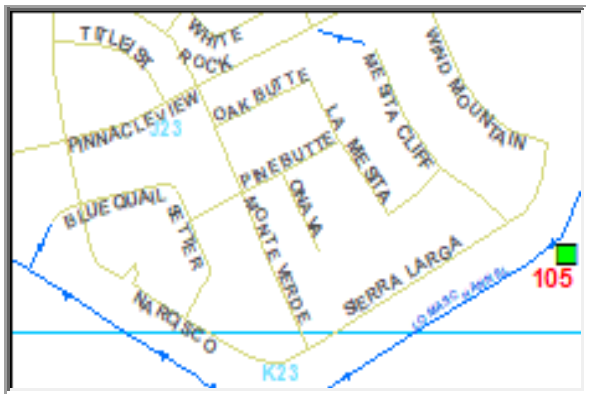




PondNo	104	CITY ZONE KEY	F-10
Location	LADERA - 16A - NE UNSER - WESTERN NW	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	106
X_Link			

GLENWOOD HILLS TRAINING HIKE

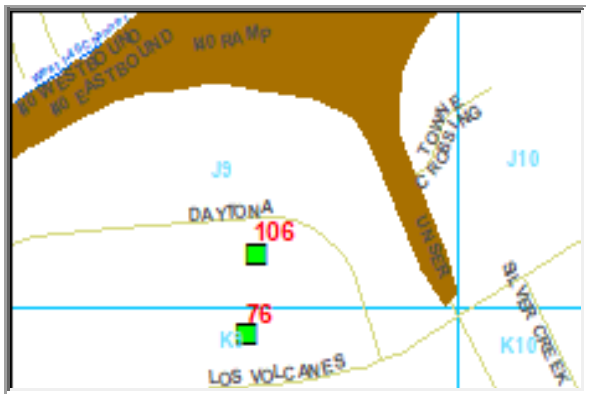




PondNo	105	CITY ZONE KEY	J-23
Location		CITY QUAD	NE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	107
X_Link			

NE UNSER AND LOS VOLCANES - DAYTONA

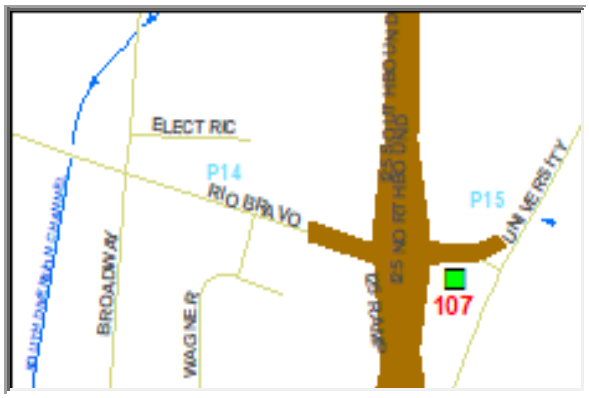




PondNo	106	CITY ZONE KEY	J-09
Location	NE UNSER AND LOS VOLCANES - DAYTONA	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	108
X_Link			

UNIVERSITY AND RIO BRAVO

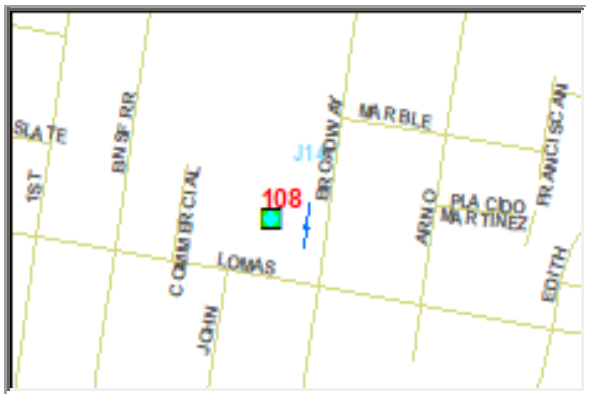




PondNo	107	CITY ZONE KEY	P-15
Location	UNIVERSITY AND RIO BRAVO	CITY QUAD	SE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	109
X_Link			

LOMAS AND BROADWAY POND

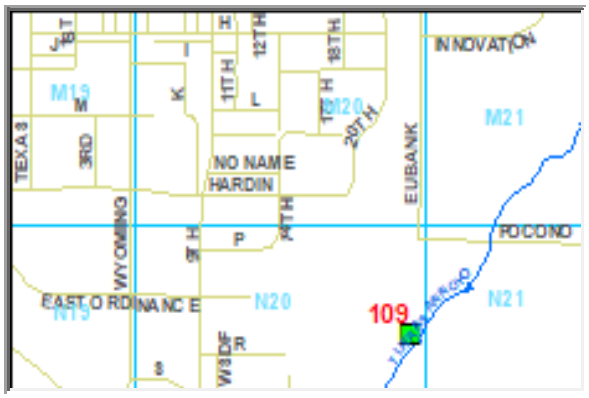




PondNo	108	CITY ZONE KEY	J-14
Location	LOMAS AND BROADWAY POND	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	110
X_Link			

TIJERAS-EUBANK OUTFALL-KAFB

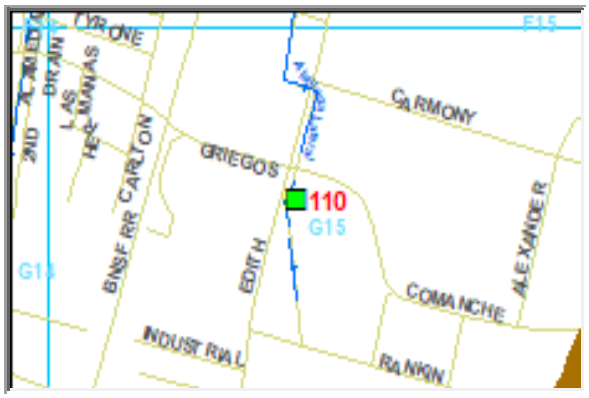




PondNo	109	CITY ZONE KEY	N-20
Location	TIJERAS-EUBANK OUTFALL-KAFB	CITY QUAD	SE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	111
X_Link			

EDITH-COMANCHE SOLIDWASET

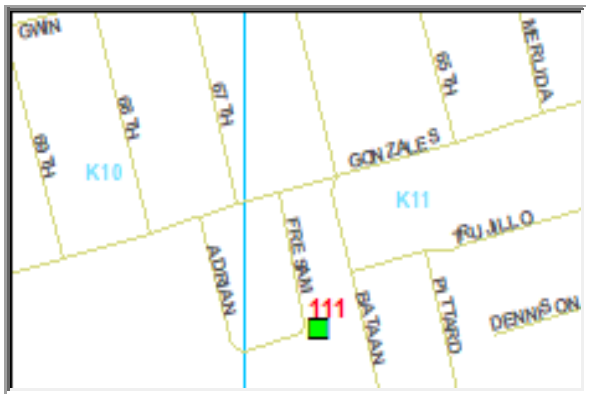




PondNo	110	CITY ZONE KEY	G-15
Location	EDITH-COMANCHE SOLIDWASET	CITY QUAD	NE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	112
X_Link			

FRESHAM AND BATAAN WASMENT





PondNo	111	CITY ZONE KEY	K-11
Location	538 fresam sw	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	113
X_Link			

I-40-NDC-MENAUL

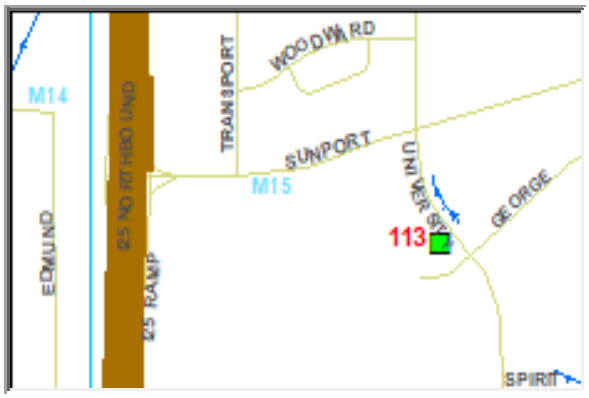




PondNo	112	CITY ZONE KEY	H-16
Location	2101 bryn mawr ne	CITY QUAD	NE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	114
X_Link			

SUNPORT AND UNIVERSITY AVIATION

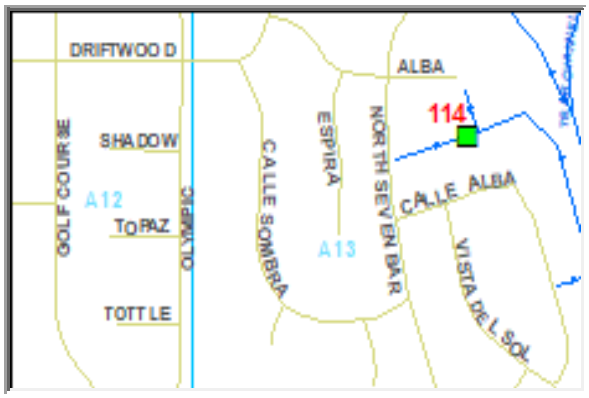




PondNo	113	CITY ZONE KEY	M-15
Location	SUNPORT AND UNIVERSITY AVIATION	CITY QUAD	SE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	115
X_Link			

SARAGOSSA and ALBA

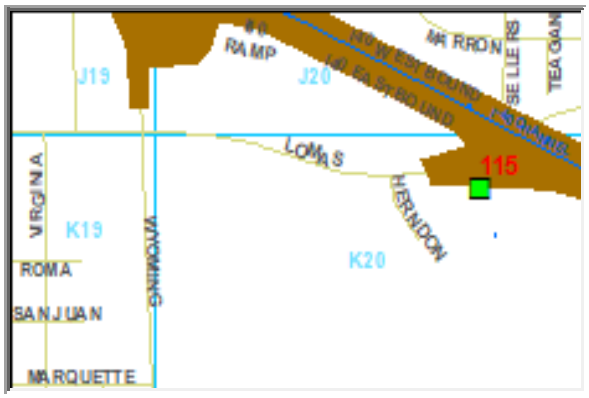




PondNo	114	CITY ZONE KEY	A-13
Location	SARAGOSSA and ALBA	CITY QUAD	NW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	116
X_Link			

I-40 and Lomas outfall

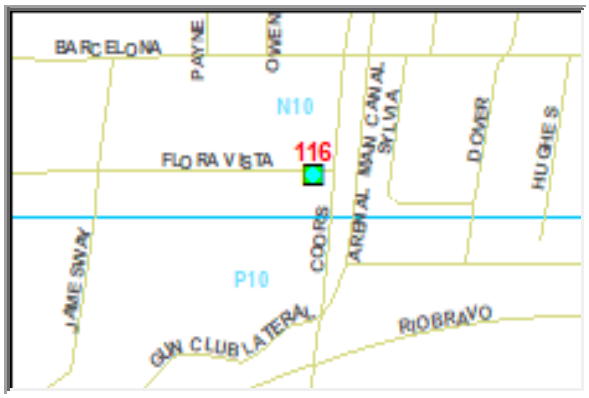




PondNo	115	CITY ZONE KEY	K-20
Location	I-40 and Lomas	CITY QUAD	NE
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	117
X_Link			

Flora Vista and Coors Infilteration Trench

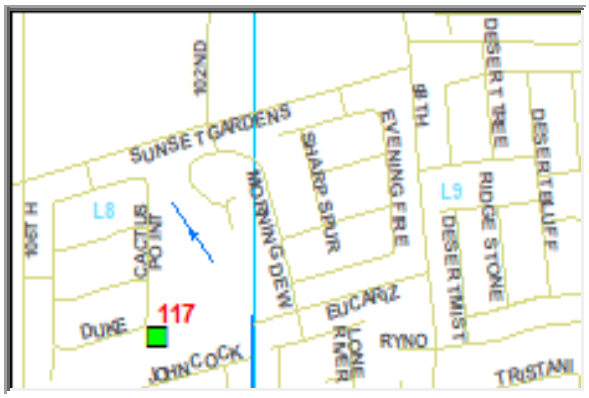




PondNo	116	CITY ZONE KEY	N-10
Location	Flora Vista and Coors	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	118
X_Link			

cactus point-duke-sunrise ranch west pond

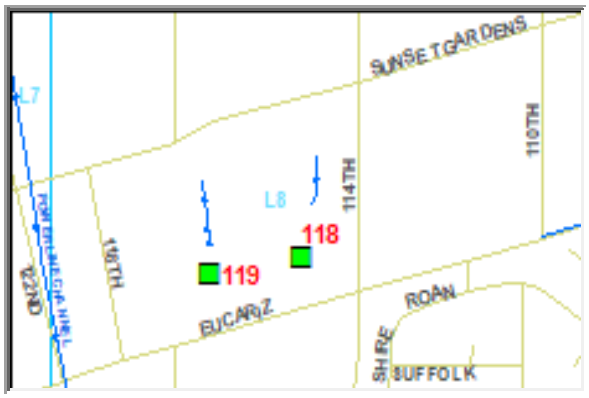




PondNo	117	CITY ZONE KEY	L-08
Location	cactus point-duke-sunrise ranch	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	119
X_Link			

fire academy-Eucariz-114 st sw

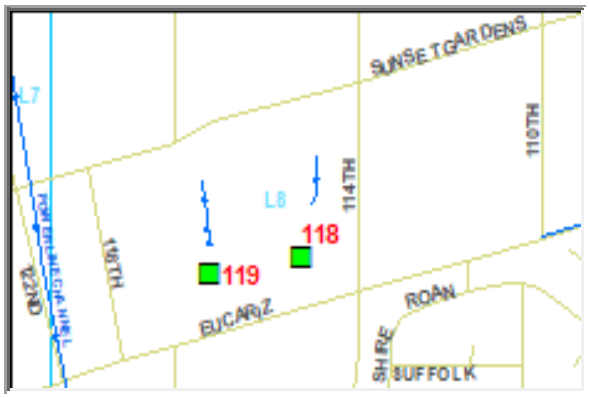




PondNo	118	CITY ZONE KEY	L-08
Location	Eucariz-114 st sw	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	120
X_Link			

SW area street Maintenance yard-Eucariz-118th sw





PondNo	119	CITY ZONE KEY	L-08
Location	Eucariz-118th sw	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	121
X_Link			

6801 calle cielo sw

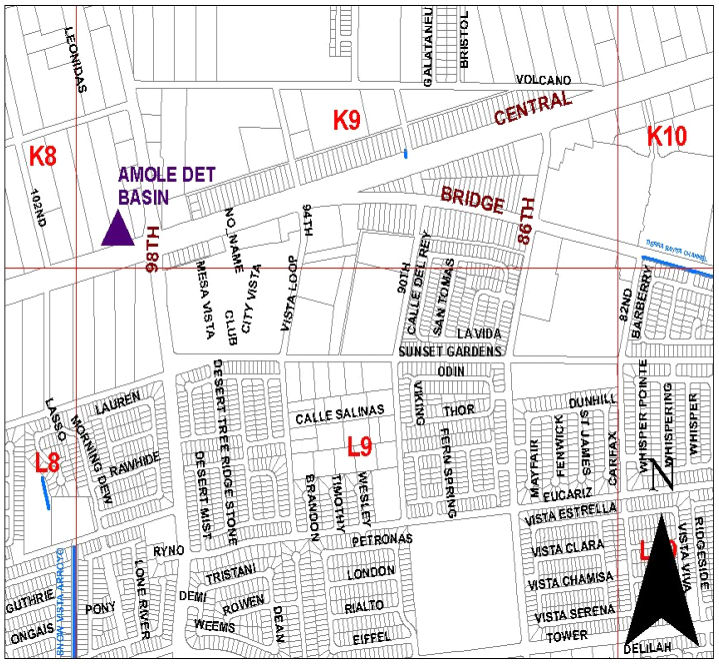




PondNo	120	CITY ZONE KEY	M-11
Location	6801 calle cielo sw	CITY QUAD	SW
year built			
Area, Acre		LastMaintDate	
InletSource		OutletSource	
Note		ID	122
X_Link			

AMOLE DEL NORTE DETENTION DAM





CITY ZONE KEY	K-09
CITY QUAD	NW
Year Built	1996
DATE LAST MAINTENANCE	2/3/2006
MAINTENANCE MONTH	DEC
FACILITY S.A.	16.41
C Y REMOVED	NA
COA Dam Engr.	RICHARD COSTALES
Last Insp. Date	12/8/2005
OSE Inspector	JAMES HEAD
Insp. Condition	SATISFACTORY
Design Storm Event	0.5 PMF
Dam Type	EARTHFILL/PITS
DamHazClass:	HIGH
Max Height (ft)	7.5
Dam Crest Elev	5215.5
OSE Action Items From Last Insp.	SEE LATEST ATTACHED OSE INSPECTION REPORT.
COA Notes to the File	NONE

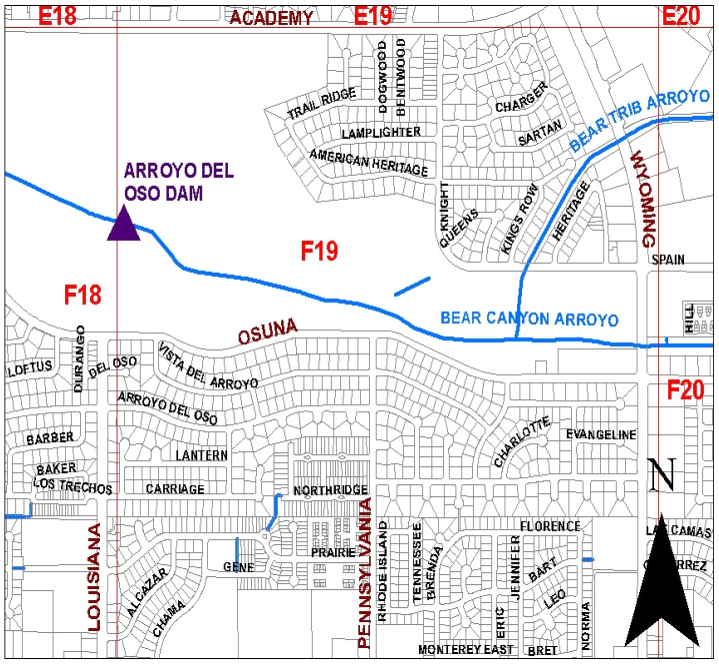
NOTES

STRUCTURE IS ACTUALLY 2 SEPARATE BASINS WITH A CENTER DIVIDER. DATA SHOWN IS FOR SOUTH POND.

Dam Crest Length (ft)	632
Dam Crest Width (ft)	10
Slope of U.S. Face (H:V)	3:1
Slope of D. S. Face (H:V)	3:1
Pond/Pit Side Slope (H:V)	3:1
Drainage Area (Acres)	679
Capacity at Spillway Crest (Acre-ft)	77
Maximum Elevation of SDF (ft)	5215.4
Dead Storage Elevation (ft)	NA
Em. Spill. Type	SOIL CEMENT
Spillway Crest Elev (ft)	5212
Spillway Width (ft)	10
Spillway Length (ft)	398
Spillway Capacity (cfs)	7096
FREEBOARD,Orig. OSE, ft	0.1
FREEBOARD,FEMA,ft	3.5
OUTLET DESCRIP	36" DIA RCP WITH TRASH RACK & RESTRICTER
Conduit Size (in.)	36
Inlet Invert Elevation (ft)	5201
Flow Control Size (in.)	4"X30"
Flow Control Location	OUTLET-ORIFICE PLATE

ARROYO DEL OSO DETENTION DAM





CITY ZONE KEY	F-19
CITY QUAD	NE
Year Built	1956
DATE LAST MAINTENANCE	11/14/2005
MAINTENANCE MONTH	NOV
FACILITY S.A.	72.8
C Y REMOVED	NA
COA Dam Engr.	JAME EISENBERG
Last Insp. Date	1/5/2006
OSE Inspector	S. CHAUDHARY
Insp. Condition	SATISFACTORY
Design Storm Event	1 PMF
Dam Type	ЯEBUILT EARTHFILL
DamHazClass:	HIGH
Max Height (ft)	38
Dam Crest Elev	5351
OSE Action Items From Last Insp.	SEE LATEST ATTACHED OSE INSPECTION REPORT.
COA Notes to the File	ON MARCH 15, 2002, LETTER SENT TO OSE REGARDING "RETAINING WALL" AND CERTIFICATION THAT THERE IS NO IMPACT TO THE TOE OF THE DAM.

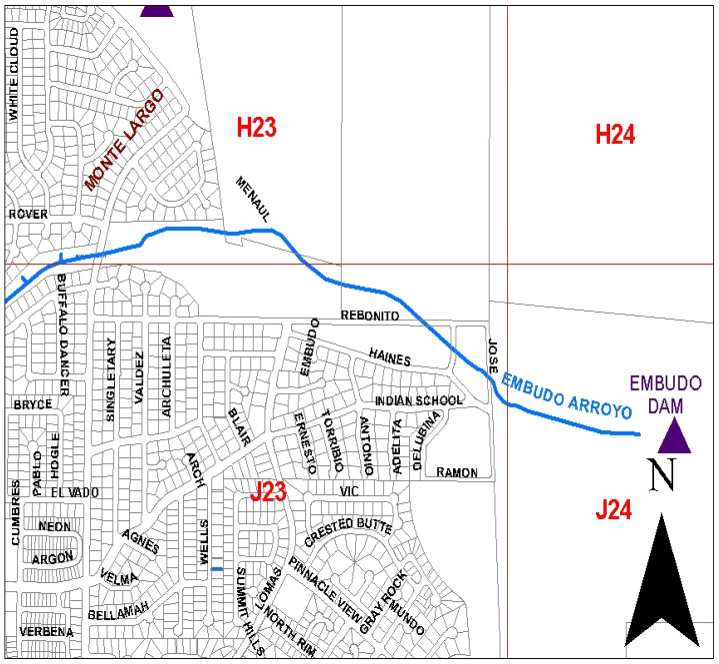
NOTES

DAM WAS ORIGINALLY BUILT IN 1956 WITH GATED TOWER OUTLET WORKS. TOWER AND GATES WERE ELIMINATED IN 1981 RENOVATION.

Dam Crest Length (ft)	3061
Dam Crest Width (ft)	15
Slope of U.S. Face (H:V)	3:1
Slope of D. S. Face (H:V)	2:1
Pond/Pit Side Slope (H:V)	NA
Drainage Area (Acres)	9510
Capacity at Spillway Crest (Acre-ft)	325
Maximum Elevation of SDF (ft)	5350.8
Dead Storage Elevation (ft)	5351
Em. Spill. Type	CONC. DROP & CHUTE
Spillway Crest Elev (ft)	5339
Spillway Width (ft)	183
Spillway Length (ft)	165
Spillway Capacity (cfs)	36500
FREEBOARD,Orig. OSE, ft	0.6
FREEBOARD,FEMA,ft	12
OUTLET DESCRIP	CONCRETE BOX - 6' X (12-16') WIDE
Conduit Size (in.)	EE ABOVE
Inlet Invert Elevation (ft)	5321
Flow Control Size (in.)	NA
Flow Control Location	NA

EMBUDO DAM





CITY ZONE KEY	J-24
CITY QUAD	NE
Year Built	1980
DATE LAST MAINTENANCE	12/6/2006
MAINTENANCE MONTH	NOV
FACILITY S.A.	15
C Y REMOVED	10
COA Dam Engr.	JAME EISENBERG
Last Insp. Date	1/5/2006
OSE Inspector	S. CHAUDHARY
Insp. Condition	SATISFACTORY
Design Storm Event	1 PMF
Dam Type	EARTH FILL
DamHazClass:	HIGH
Max Height (ft)	64
Dam Crest Elev	6335
OSE Action Items From Last Insp.	SEE LATEST ATTACHED OSE INSPECTION REPORT.
COA Notes to the File	REPORT DUE TO OSE BY MAY 1,2006 ON CORRECTIVE ACTIONS TAKEN.

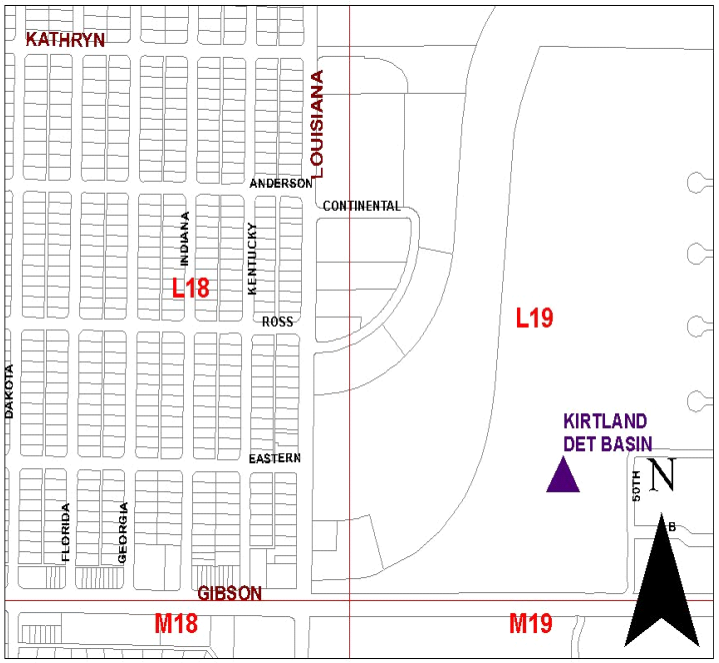
NOTES

NONE

Dam Crest Length (ft)	1010
Dam Crest Width (ft)	18
Slope of U.S. Face (H:V)	3:1
Slope of D. S. Face (H:V)	3:1
Pond/Pit Side Slope (H:V)	NA
Drainage Area (Acres)	2381
Capacity at Spillway Crest (Acre-ft)	150
Maximum Elevation of SDF (ft)	6334.8
Dead Storage Elevation (ft)	6330
Em. Spill. Type	CONCRETE CHUTE
Spillway Crest Elev (ft)	6321.9
Spillway Width (ft)	120
Spillway Length (ft)	278
Spillway Capacity (cfs)	16840
FREEBOARD,Orig. OSE, ft	0.2
FREEBOARD,FEMA,ft	13.1
OUTLET DESCRIP	REINFORCED CONCRETE TOWER WITH PIPE CONDUIT
Conduit Size (in.)	48
Inlet Invert Elevation (ft)	6300
Flow Control Size (in.)	47
Flow Control Location	AT INLET TOWER

KIRTLAND AFB DETENTION DAM





CITY ZONE KEY	L-19
CITY QUAD	SE
Year Built	1985
DATE LAST MAINTENANCE	12/14/2006
MAINTENANCE MONTH	NOV
FACILITY S.A.	22
C Y REMOVED	NA
COA Dam Engr.	ROLAND PENTTILA
Last Insp. Date	2/15/2006
OSE Inspector	S. CHAUDHARY
Insp. Condition	SATISFACTORY
Design Storm Event	1 PMF
Dam Type	EARTHFILL
DamHazClass:	HIGH
Max Height (ft)	9.2
Dam Crest Elev	5360.8
OSE Action Items From Last Insp.	SEE LATEST ATTACHED OSE INSPECTION REPORT.
COA Notes to the File	NEW TRASH RACK HAS BEEN DESIGNED AND WAS INSTALLED MARCH, 2006.

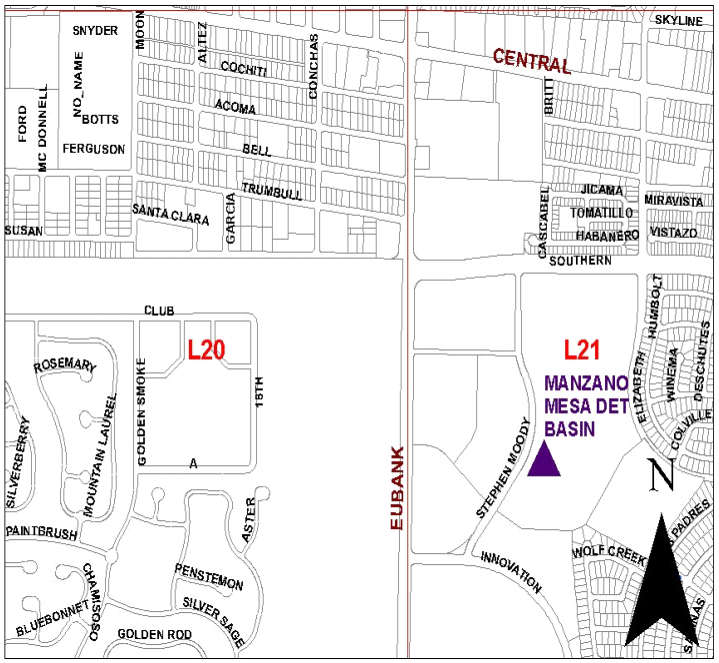
NOTES

ORIGINAL GATED STRUCTURE AT OUTLET HAS BEEN REMOVED. UTILITY CONTRACTORS BREACHED SECTION OF EMERGENCY SPILLWAY IN 1987. REPAIRS WERE MADE AND NO FURTHER EXCAVATION ACTIVITY HAS BEEN OBSERVED. PRINCIPAL SPILLWAY IS NOW UNGATED PIPE.

Dam Crest Length (ft)	2910
Dam Crest Width (ft)	20
Slope of U.S. Face (H:V)	4:1
Slope of D. S. Face (H:V)	3:1
Pond/Pit Side Slope (H:V)	3:1
Drainage Area (Acres)	650.24
Capacity at Spillway Crest (Acre-ft)	50.8
Maximum Elevation of SDF (ft)	5360
Dead Storage Elevation (ft)	5346.75
Em. Spill. Type	RE ENCLOSED RIPRAP
Spillway Crest Elev (ft)	5355.5
Spillway Width (ft)	250
Spillway Length (ft)	100
Spillway Capacity (cfs)	4636
FREEBOARD,Orig. OSE, ft	2
FREEBOARD,FEMA,ft	5.3
OUTLET DESCRIP	REINFORCED CONCRETE BOX WITH TRASH RACK
Conduit Size (in.)	30
Inlet Invert Elevation (ft)	5345.5
Flow Control Size (in.)	20
Flow Control Location	AT INLET STRUCTURE

MANZANO MESA DETENTION BASIN





CITY ZONE KEY	L-21
CITY QUAD	SE
Year Built	2002
DATE LAST MAINTENANCE	11/29/2005
MAINTENANCE MONTH	DEC
FACILITY S.A.	12.2
C Y REMOVED	NA
COA Dam Engr.	ROLAND PENTTILA
Last Insp. Date	1/5/2006
OSE Inspector	S. CHAUDHARY
Insp. Condition	SATISFACTORY
Design Storm Event	100 YR
Dam Type	PIT/EARTHFILL
DamHazClass:	SIGNIFICANT
Max Height (ft)	3
Dam Crest Elev	5486
OSE Action Items From Last Insp.	SEE LATEST ATTACHED OSE INSPECTION REPORT. NECESSARY COMPLETION REPORT SENT TO SEO 2/06.
COA Notes to the File	CAPACITY OF STREET AND OVERLAND FLOW IN NEW STEPHEN MOODY DRIVE CALCULATED BY COA IN 2006 TO BE 300 CFS BEFORE ANY RUNOFF WOULD ENTER WESTWARD APARTMENT COMPLEX.

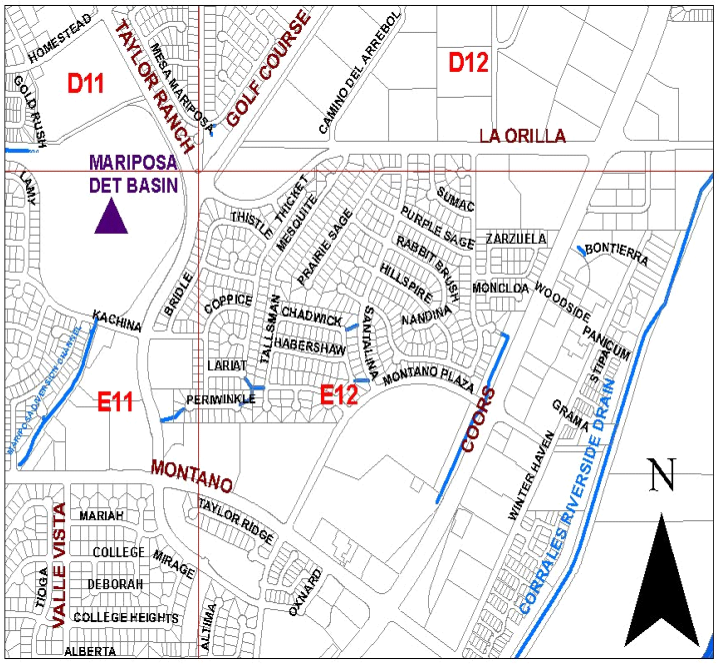
NOTES

NONE

Dam Crest Length (ft)	585
Dam Crest Width (ft)	7
Slope of U.S. Face (H:V)	3:1
Slope of D. S. Face (H:V)	3:1
Pond/Pit Side Slope (H:V)	NA
Drainage Area (Acres)	536
Capacity at Spillway Crest (Acre-ft)	37.9
Maximum Elevation of SDF (ft)	5485
Dead Storage Elevation (ft)	NA
Em. Spill. Type	CONCRETE WEIR
Spillway Crest Elev (ft)	5483
Spillway Width (ft)	7
Spillway Length (ft)	369
Spillway Capacity (cfs)	2169.4
FREEBOARD,Orig. OSE, ft	2.1
FREEBOARD,FEMA,ft	3
OUTLET DESCRIP	CONCRETE BEEHIVE BOX
Conduit Size (in.)	72
Inlet Invert Elevation (ft)	5465.56
Flow Control Size (in.)	48
Flow Control Location	OUTLET BEEHIVE

MARIPOSA DAM





CITY ZONE KEY	E-11
CITY QUAD	NW
Year Built	1983
DATE LAST MAINTENANCE	1/30/2007
MAINTENANCE MONTH	NOV
FACILITY S.A.	48.11
C Y REMOVED	NA
COA Dam Engr.	JOHN CURTIN
Last Insp. Date	12/8/2005
OSE Inspector	JAMES HEAD
Insp. Condition	SATISFACTORY
Design Storm Event	1 PMF ?
Dam Type	EARTHFILL/PIT
DamHazClass:	HIGH
Max Height (ft)	19
Dam Crest Elev	5130
OSE Action Items From Last Insp.	SEE LATEST ATTACHED OSE INSPECTION REPORT.
COA Notes to the File	NONE

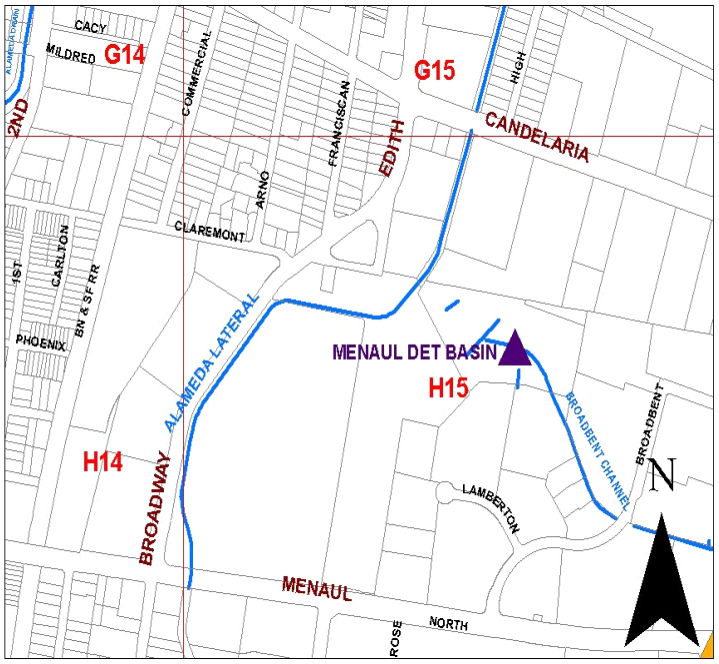
NOTES

NONE

Dam Crest Length (ft)	5150
Dam Crest Width (ft)	12
Slope of U.S. Face (H:V)	3:1
Slope of D. S. Face (H:V)	3:1
Pond/Pit Side Slope (H:V)	3:1
Drainage Area (Acres)	13600
Capacity at Spillway Crest (Acre-ft)	494
Maximum Elevation of SDF (ft)	5125.5
Dead Storage Elevation (ft)	NA
Em. Spill. Type	EMENT TREATED BASE
Spillway Crest Elev (ft)	5125.5
Spillway Width (ft)	47
Spillway Length (ft)	343
Spillway Capacity (cfs)	4500
FREEBOARD,Orig. OSE, ft	0.11
FREEBOARD,FEMA,ft	3.5
OUTLET DESCRIP	CONCRETE BOX CULVERT 8'X6'
Conduit Size (in.)	96"X72"
Inlet Invert Elevation (ft)	5096.98
Flow Control Size (in.)	NA
Flow Control Location	NA

MENAUL DETENTION DAM





CITY ZONE KEY	H-15
CITY QUAD	NE
Year Built	1995
DATE LAST MAINTENANCE	1/17/2007
MAINTENANCE MONTH	JAN
FACILITY S.A.	8.22
C Y REMOVED	20
COA Dam Engr.	SERTIL KANBAR
Last Insp. Date	12/8/2005
OSE Inspector	JAMES HEAD
Insp. Condition	SATISFACTORY
Design Storm Event	0.5 PMF
Dam Type	EARTHFILL/PIT
DamHazClass:	HIGH
Max Height (ft)	12
Dam Crest Elev	5006
OSE Action Items From Last Insp.	SEE LATEST ATTACHED OSE INSPECTION REPORT.
COA Notes to the File	NONE

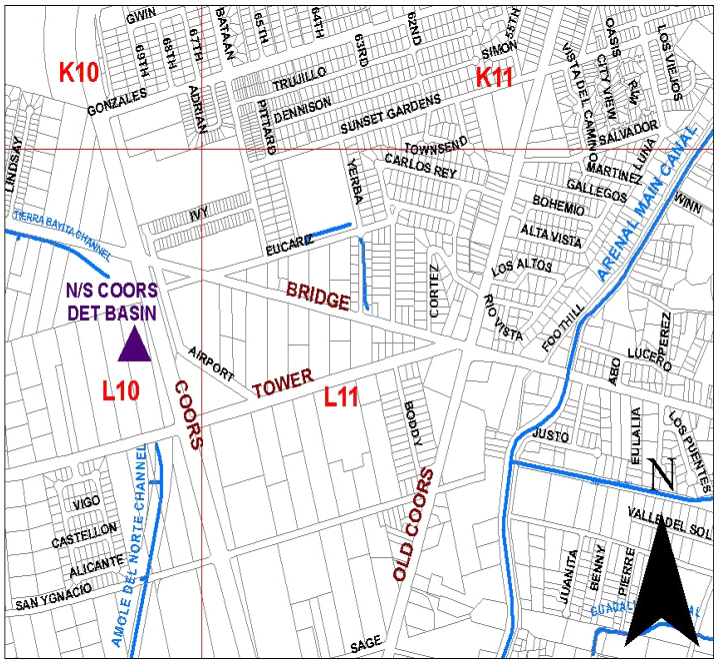
NOTES

HOODED INLET AND SAND FILTER AT OUTLET PIPE CONTROL FLOATABLES AND HEAVY METALS IN RUNOFF.

Dam Crest Length (ft)	80
Dam Crest Width (ft)	15
Slope of U.S. Face (H:V)	3:1
Slope of D. S. Face (H:V)	3:1
Pond/Pit Side Slope (H:V)	3:1
Drainage Area (Acres)	454
Capacity at Spillway Crest (Acre-ft)	68
Maximum Elevation of SDF (ft)	5003.63
Dead Storage Elevation (ft)	4982.6
Em. Spill. Type	CONCRETE CHUTE
Spillway Crest Elev (ft)	4998
Spillway Width (ft)	80
Spillway Length (ft)	80.5
Spillway Capacity (cfs)	4009
FREEBOARD,Orig. OSE, ft	2.37
FREEBOARD,FEMA,ft	8
OUTLET DESCRIP	HOODED CMP RISER
Conduit Size (in.)	24
Inlet Invert Elevation (ft)	4980.6
Flow Control Size (in.)	NA
Flow Control Location	NA

NORTH/SOUTH COORS DETENTION DAM





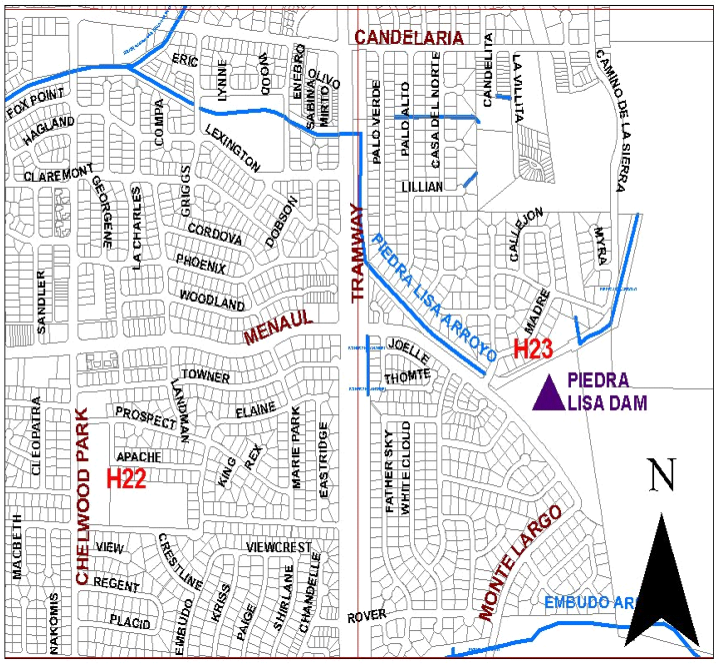
CITY ZONE KEY	L-10
CITY QUAD	SW
Year Built	1988
DATE LAST MAINTENANCE	12/5/2005
MAINTENANCE MONTH	NOV
FACILITY S.A.	8
C Y REMOVED	10
COA Dam Engr.	RICHARD COSTALES
Last Insp. Date	12/8/2005
OSE Inspector	JAMES HEAD
Insp. Condition	SATISFACTORY
Design Storm Event	0.5 PMF
Dam Type	EARTHFILL/PIT
DamHazClass:	HIGH
Max Height (ft)	19
Dam Crest Elev	5034
OSE Action Items From Last Insp.	SEE LATEST ATTACHED OSE INSPECTION REPORT.
COA Notes to the File	NONE

NOTES
NONE

Dam Crest Length (ft)	1800
Dam Crest Width (ft)	12
Slope of U.S. Face (H:V)	3:1
Slope of D. S. Face (H:V)	3:1
Pond/Pit Side Slope (H:V)	3:1
Drainage Area (Acres)	2611
Capacity at Spillway Crest (Acre-ft)	63.95
Maximum Elevation of SDF (ft)	5034.55
Dead Storage Elevation (ft)	NA
Em. Spill. Type	SOIL CEMENT
Spillway Crest Elev (ft)	5031
Spillway Width (ft)	12
Spillway Length (ft)	1350
Spillway Capacity (cfs)	17400
FREEBOARD,Orig. OSE, ft	0
FREEBOARD,FEMA,ft	3
OUTLET DESCRIP	3- 54" DIA. CONCRETE PIPES
Conduit Size (in.)	54
Inlet Invert Elevation (ft)	5018
Flow Control Size (in.)	NA
Flow Control Location	NA

PIEDRA LISA DETENTION DAM





CITY ZONE KEY	H-23
CITY QUAD	NE
Year Built	1982
DATE LAST MAINTENANCE	12/5/2006
MAINTENANCE MONTH	NOV
FACILITY S.A.	8.08
C Y REMOVED	10
COA Dam Engr.	JAME EISENBERG
Last Insp. Date	1/5/2006
OSE Inspector	S. CHAUDHARY
Insp. Condition	SATISFACTORY
Design Storm Event	1 PMF
Dam Type	EARTH FILL
DamHazClass:	HIGH
Max Height (ft)	18
Dam Crest Elev	5928
OSE Action Items From Last Insp.	SEE LATEST ATTACHED OSE INSPECTION REPORT.
COA Notes to the File	NONE

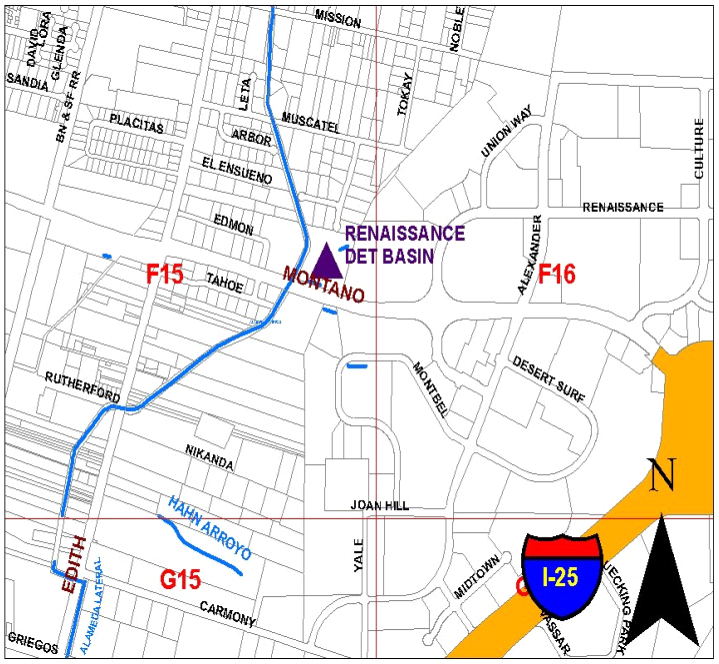
NOTES

INSIDE OF OUTLET PIPELINE VIDEO TAPED IN 1996. OUTLET PIPE APPEARED TO BE IN GOOD CONDITION AT THAT TIME.

Dam Crest Length (ft)	889
Dam Crest Width (ft)	12
Slope of U.S. Face (H:V)	3:1
Slope of D. S. Face (H:V)	3:1
Pond/Pit Side Slope (H:V)	NA
Drainage Area (Acres)	378
Capacity at Spillway Crest (Acre-ft)	28
Maximum Elevation of SDF (ft)	5927.9
Dead Storage Elevation (ft)	5915
Em. Spill. Type	CONCRETE CHUTE
Spillway Crest Elev (ft)	5924.5
Spillway Width (ft)	220
Spillway Length (ft)	125
Spillway Capacity (cfs)	4973
FREEBOARD,Orig. OSE, ft	0
FREEBOARD,FEMA,ft	3.5
OUTLET DESCRIP	CONCRETE BOX W/ TRASH RACK
Conduit Size (in.)	30
Inlet Invert Elevation (ft)	5915
Flow Control Size (in.)	27
Flow Control Location	INLET BOX

RENAISSANCE DETENTION DAM





CITY ZONE KEY	F-15
CITY QUAD	NE
Year Built	1985
DATE LAST MAINTENANCE	12/7/2005
MAINTENANCE MONTH	NOV
FACILITY S.A.	3.71
C Y REMOVED	10
COA Dam Engr.	SERTIL KANBAR
Last Insp. Date	12/8/2005
OSE Inspector	JAMES HEAD
Insp. Condition	SATISFACTORY
Design Storm Event	1 PMF
Dam Type	EARTHFILL
DamHazClass:	HIGH
Max Height (ft)	15
Dam Crest Elev	5013.5
OSE Action Items From Last Insp.	SEE LATEST ATTACHED OSE INSPECTION REPORT.
COA Notes to the File	NEW TRASH RACK AND RISER INSTALLED 6/06. OUTLET PIPE JETTED CLEAN 7/06.

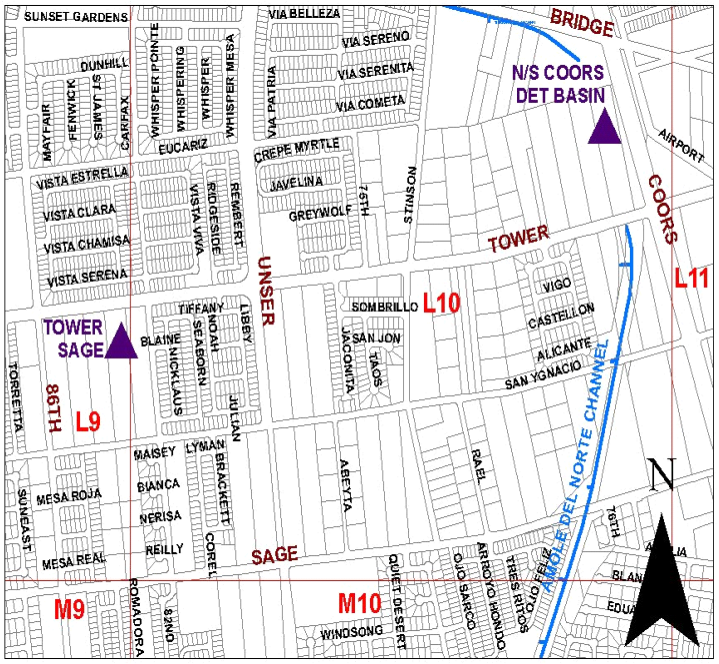
NOTES

PIPING FAILURE IN EAST ABUTMENT ALONG MONTANO REPAIRED IN 1987. OUTLET IS NOW UNGATED FLOW.

Dam Crest Length (ft)	1134
Dam Crest Width (ft)	12
Slope of U.S. Face (H:V)	3:1
Slope of D. S. Face (H:V)	2.5:1
Pond/Pit Side Slope (H:V)	3:1
Drainage Area (Acres)	264
Capacity at Spillway Crest (Acre-ft)	19.9
Maximum Elevation of SDF (ft)	5012.86
Dead Storage Elevation (ft)	NA
Em. Spill. Type	CONCRETE CHUTE
Spillway Crest Elev (ft)	5010.5
Spillway Width (ft)	100
Spillway Length (ft)	
Spillway Capacity (cfs)	1367
FREEBOARD,Orig. OSE, ft	0.64
FREEBOARD,FEMA,ft	3
OUTLET DESCRIP	PERFORATED STEEL RISER
Conduit Size (in.)	18
Inlet Invert Elevation (ft)	5001.5
Flow Control Size (in.)	24 (PERFORATED RISER)
Flow Control Location	OUTLET

TOWER/ SAGE DETENTION DAM





CITY ZONE KEY	L-09
CITY QUAD	SW
Year Built	2001
DATE LAST MAINTENANCE	12/6/2005
MAINTENANCE MONTH	DEC
FACILITY S.A.	1.75
C Y REMOVED	NA
COA Dam Engr.	RICHARD COSTALES
Last Insp. Date	12/8/2005
OSE Inspector	JAMES HEAD
Insp. Condition	SATISFACTORY
Design Storm Event	PMP
Dam Type	EARTHFILL/PIT
DamHazClass:	HIGH
Max Height (ft)	13.5
Dam Crest Elev	5093.5
OSE Action Items From Last Insp.	SEE LATEST ATTACHED OSE INSPECTION REPORT.
COA Notes to the File	NEW STRUCTURE

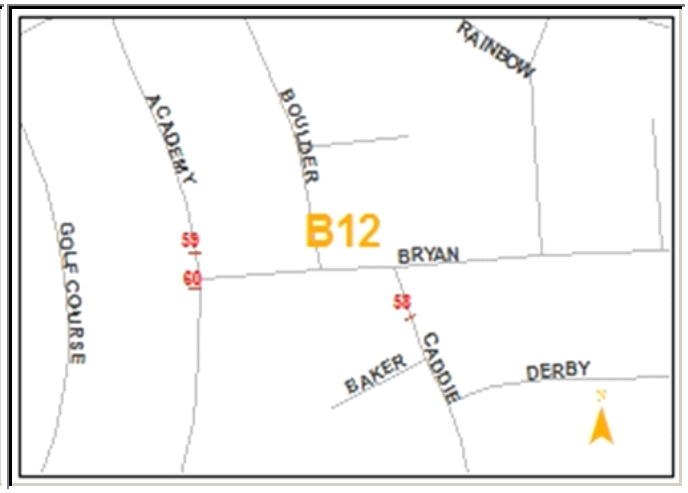
NOTES

ORIGINALLY CONSTRUCTED BY AMAFCA. BASEBALL FACILITY NOW OCCUPIES MAJOR PART OF STORAGE AREA OF DAM.

Dam Crest Length (ft)	800
Dam Crest Width (ft)	15
Slope of U.S. Face (H:V)	5:1
Slope of D. S. Face (H:V)	5:1
Pond/Pit Side Slope (H:V)	5:1
Drainage Area (Acres)	448
Capacity at Spillway Crest (Acre-ft)	56
Maximum Elevation of SDF (ft)	5093.1
Dead Storage Elevation (ft)	NA
Em. Spill. Type	SHOTCRETE
Spillway Crest Elev (ft)	5089.3
Spillway Width (ft)	15
Spillway Length (ft)	151
Spillway Capacity (cfs)	4856
FREEBOARD,Orig. OSE, ft	0.4
FREEBOARD,FEMA,ft	4.2
OUTLET DESCRIP	2 SURGE BEEHIVES
Conduit Size (in.)	36
Inlet Invert Elevation (ft)	5066.3
Flow Control Size (in.)	12"X15"
Flow Control Location	BEEHIVES

ACADEMY N BRYAN NW

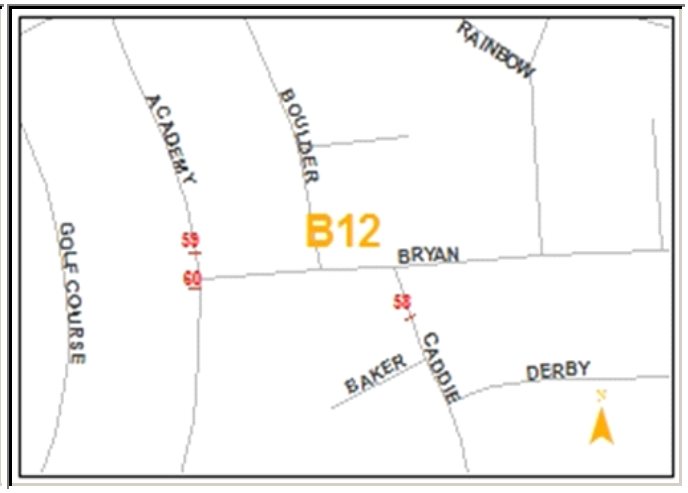




NO	59
ZONE	B12
LENGTH, ft	30
WIDTH, in	42
YEAR BUILT	2007
PROJECT #	26-5828.91-07

ACADEMY S BRYAN NW

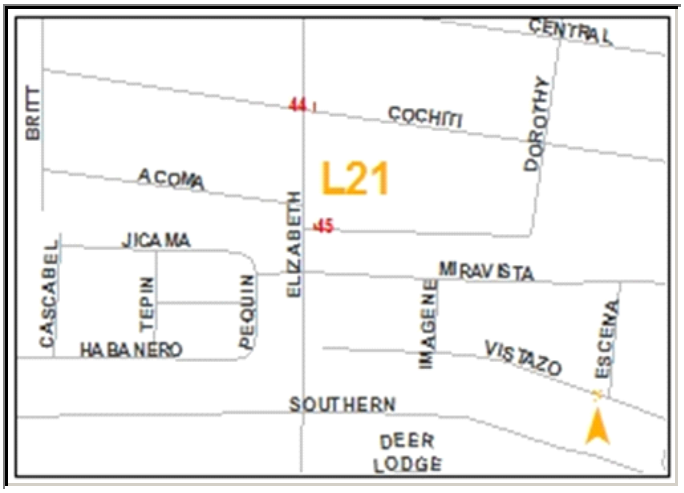




NO	60
ZONE	B12
LENGTH, ft	31
WIDTH, in	42
YEAR BUILT	2007
PROJECT #	26-5828.91-07

ACOMA E ELIZABETH SE

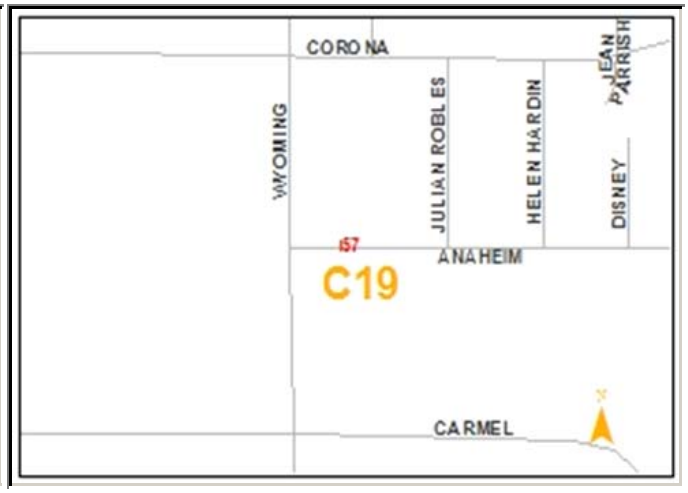




NO	45
ZONE	L21
LENGTH, ft	30
WIDTH, in	42
YEAR BUILT	2001
PROJECT #	26-6366.91-01

ANAHEIM E WYOMING NE

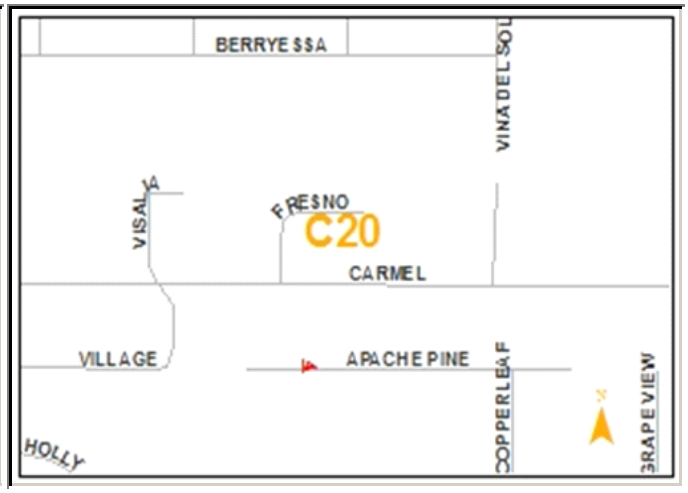




NO	57
ZONE	C19
LENGTH, ft	38
WIDTH, in	42
YEAR BUILT	2007
PROJECT #	26-6445.02-07

APACHE PINE W COPPERLEAF NE

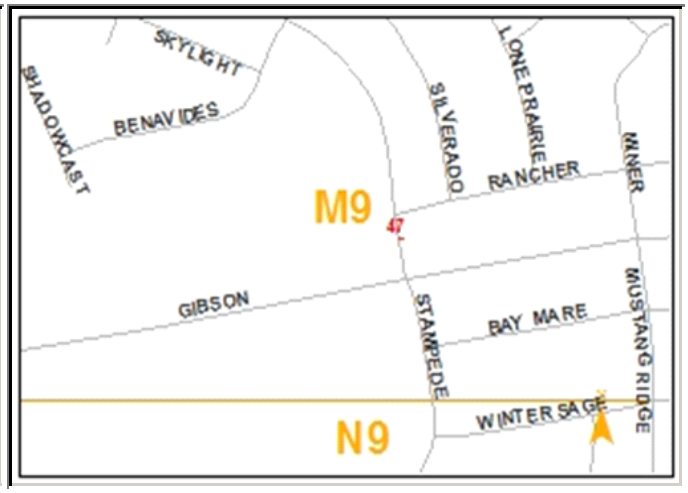




NO	4
ZONE	C20
LENGTH, ft	23
WIDTH, in	42
YEAR BUILT	2004
PROJECT #	26-7084.81-04

BARBADOS N GIBSON SW

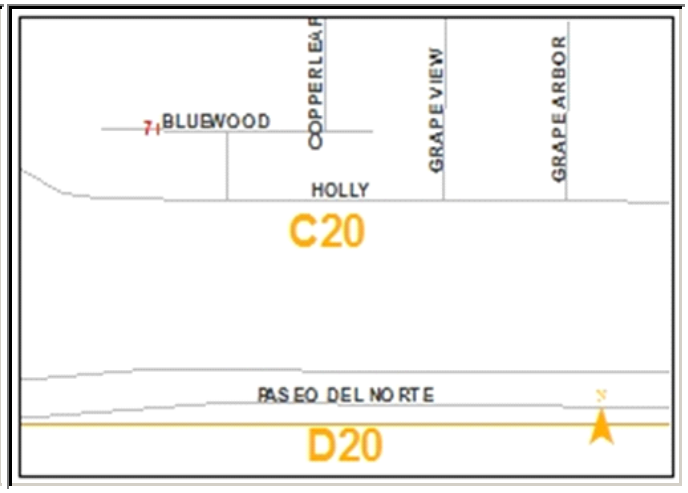




NO	47
ZONE	M09
LENGTH, ft	20
WIDTH, in	42
YEAR BUILT	2004
PROJECT #	26-6456.81-04

BLUEWOOD W COPPERLEAF NE

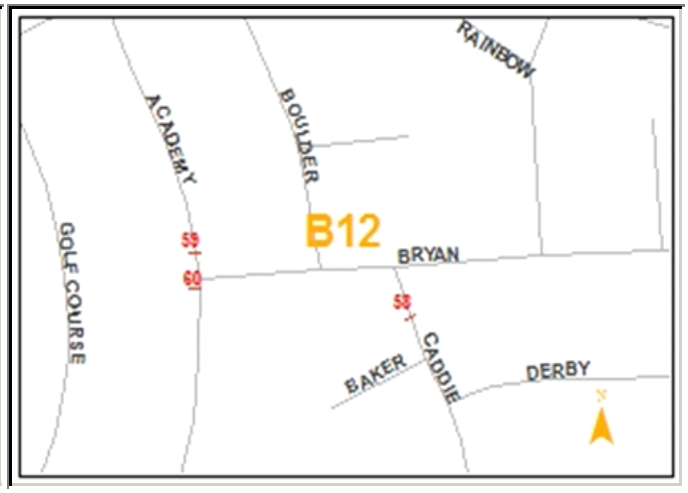




NO	7
ZONE	C20
LENGTH, ft	22
WIDTH, in	42
YEAR BUILT	2004
PROJECT #	26-7084.81-04

CADDIE SOUTH OF BRYAN NW





NO	58
ZONE	B12
LENGTH, ft	29
WIDTH, in	42
YEAR BUILT	2007
PROJECT #	26-5828.91-07

CALLE DE ENTRADA S CORTE DEL VIENTO NW

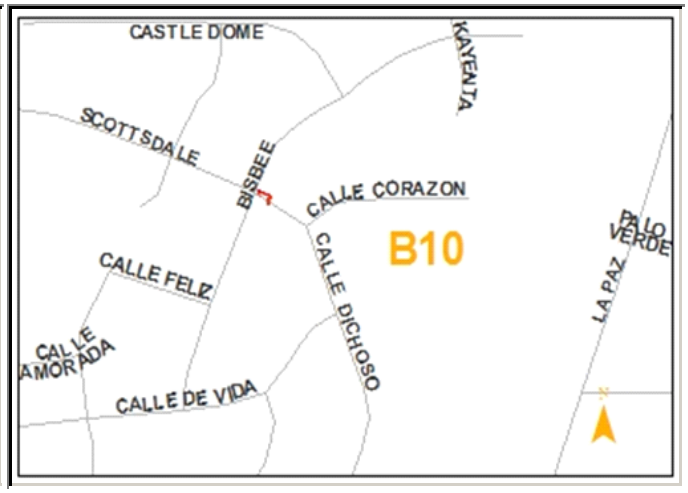




NO	18
ZONE	H09
LENGTH, ft	40
WIDTH, in	42
YEAR BUILT	2004
PROJECT #	26-6915.81-04

CALLE DICHOSO EAST OF BISBEE NW





NO	1
ZONE	B10
LENGTH, ft	29
WIDTH, in	42
YEAR BUILT	2002
PROJECT #	26-6416.81-02

CAMINO SAN MARTIN N RANCHER SW

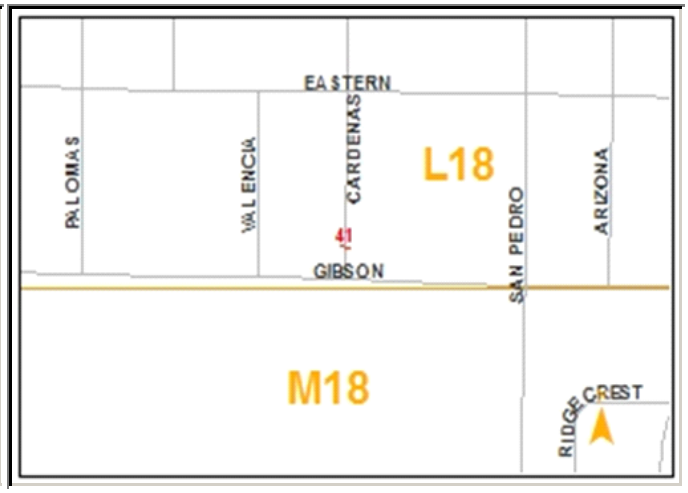




NO	49
ZONE	M10
LENGTH, ft	33
WIDTH, in	42
YEAR BUILT	2004
PROJECT #	26-6456.81-04

CARDENAS N GIBSON SE

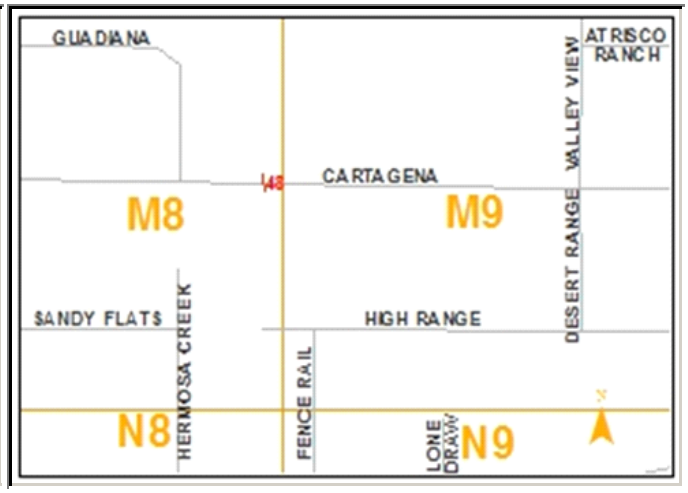




NO	41
ZONE	L18
LENGTH, ft	43
WIDTH, in	42
YEAR BUILT	1997
PROJECT #	26-2363.90

CARTAGENA E MESSINA SW

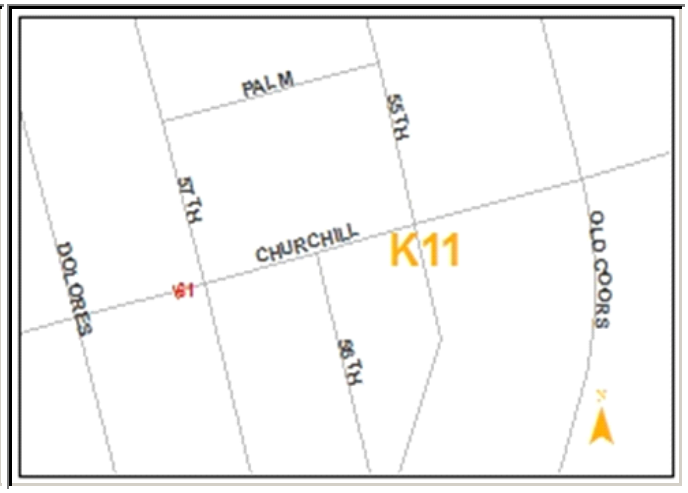




NO	48
ZONE	M09
LENGTH, ft	33
WIDTH, in	42
YEAR BUILT	2005
PROJECT #	26-6993.85-05

CHURCHILL W 57TH ST SW





NO	61
ZONE	K11
LENGTH, ft	32
WIDTH, in	42
YEAR BUILT	2007
PROJECT #	26-7219.02-07

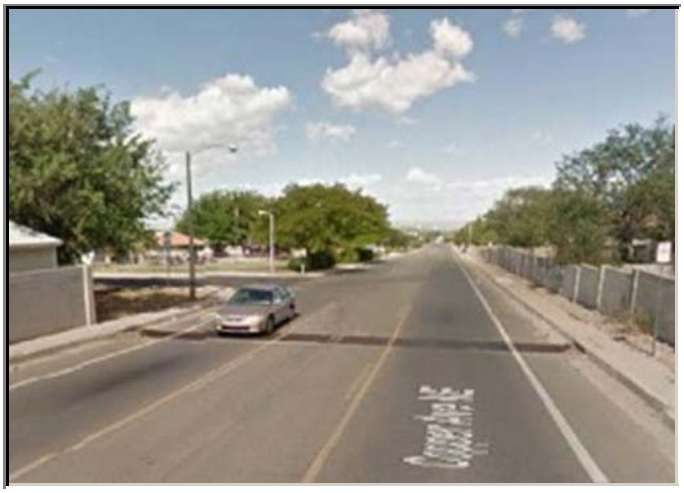
COCHITI E ELIZABETH SE





NO	44
ZONE	L21
LENGTH, ft	30
WIDTH, in	42
YEAR BUILT	2001
PROJECT #	26-6366.91-01

COPPER W BURMA NE

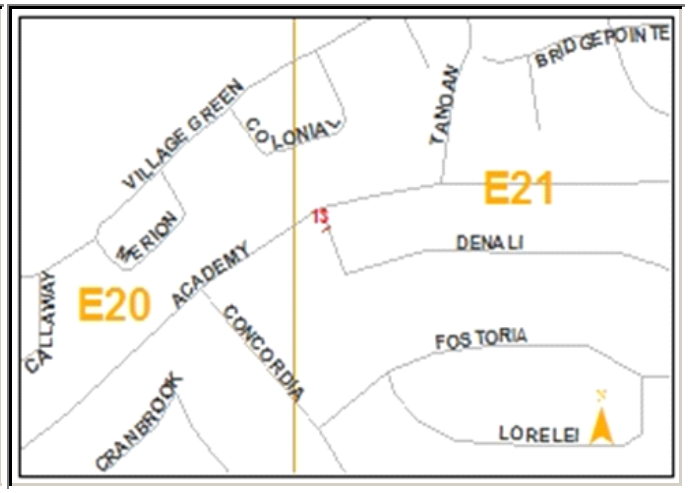




NO	37
ZONE	K22
LENGTH, ft	49
WIDTH, in	42
YEAR BUILT	1972
PROJECT #	10-178-72

DENALI S ACADEMY NE

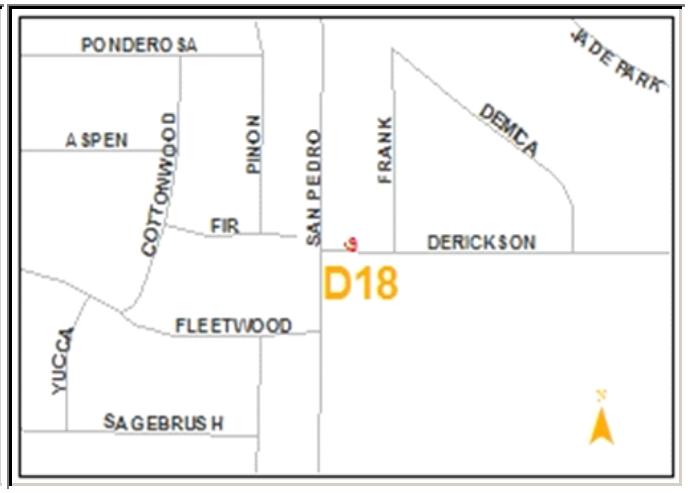




NO	13
ZONE	E21
LENGTH, ft	30
WIDTH, in	42
YEAR BUILT	1989
PROJECT #	26-3344-90

DERICKSON E SAN PEDRO NE

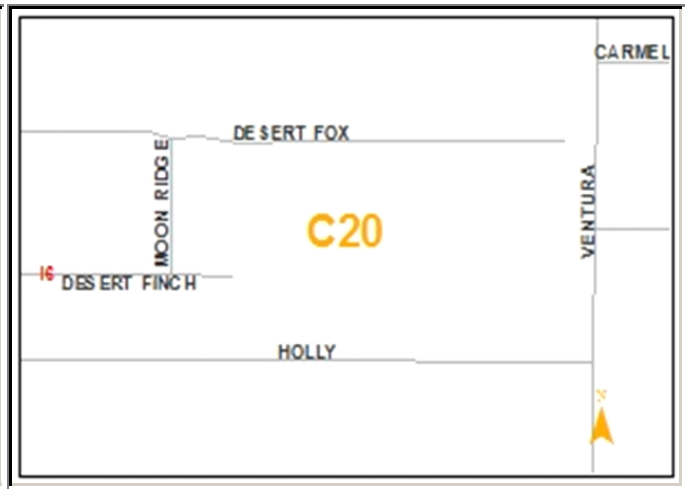




NO	9
ZONE	D18
LENGTH, ft	12
WIDTH, in	42
YEAR BUILT	2006
PROJECT #	26-7168.02-06

DESERT FINCH E DESERT SHADOW NE

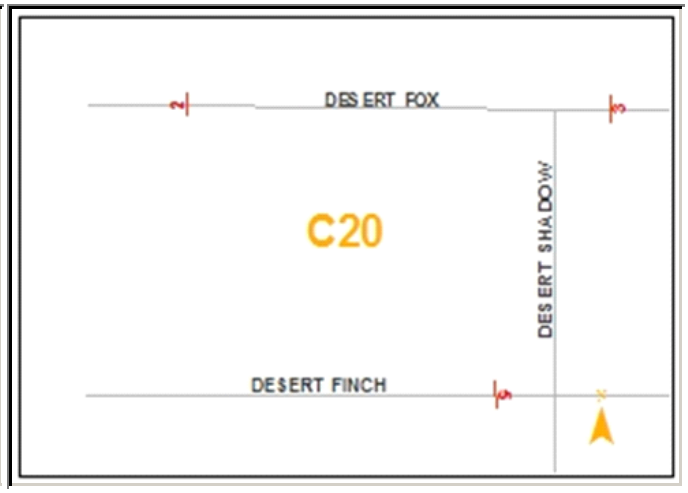




NO	6
ZONE	C20
LENGTH, ft	23
WIDTH, in	42
YEAR BUILT	2004
PROJECT #	26-7084.81-04

DESERT FINCH W DESERT SHADOW NE

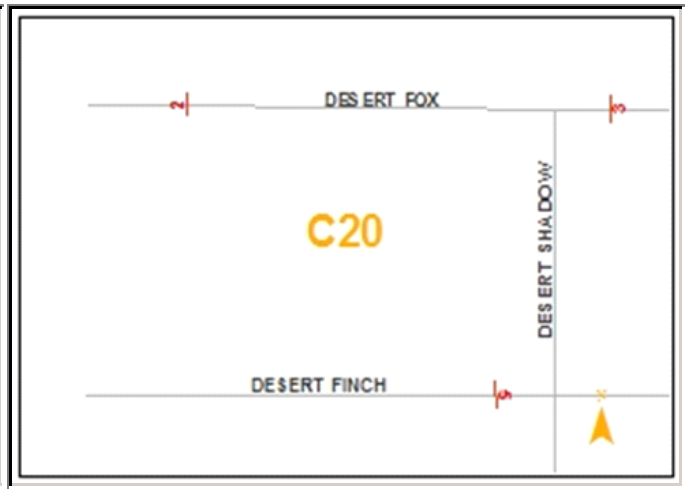




NO	5
ZONE	C20
LENGTH, ft	23
WIDTH, in	42
YEAR BUILT	2004
PROJECT #	26-7084.81-04

DESERT FOX E DESERT SHADOW NE

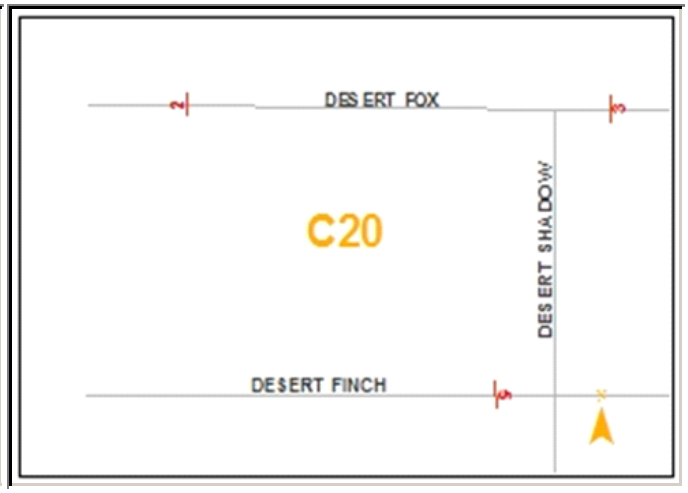




NO	3
ZONE	C20
LENGTH, ft	24
WIDTH, in	42
YEAR BUILT	2004
PROJECT #	26-6948.81-04

DESERT FOX W DESERT SHADOW NE





NO	2
ZONE	C20
LENGTH, ft	20
WIDTH, in	42
YEAR BUILT	2004
PROJECT #	26-6948.81-04

DESERT MAIZE S ROUND ROCK SW

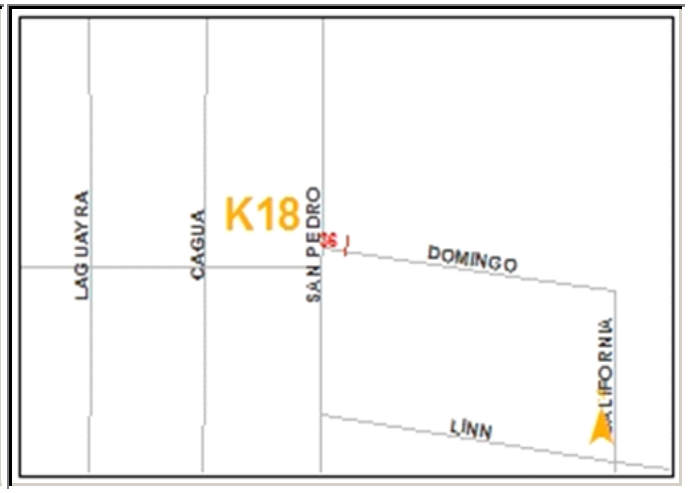




NO	39
ZONE	L09
LENGTH, ft	25
WIDTH, in	42
YEAR BUILT	2004
PROJECT #	26-7133.81-04

DOMINGO E SAN PEDRO NE





NO	36
ZONE	K18
LENGTH, ft	43
WIDTH, in	42
YEAR BUILT	1997
PROJECT #	26-4610.90-97

EAGLE RIVER E ROARING FORK PL NW

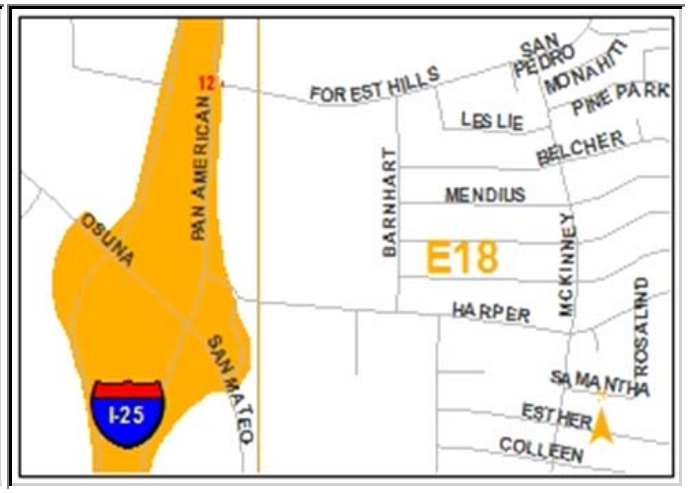




NO	62
ZONE	H09
LENGTH, ft	29
WIDTH, in	42
YEAR BUILT	2007
PROJECT #	26-5453.83-07

FOREST HILLS E PAN AMERICAN NE

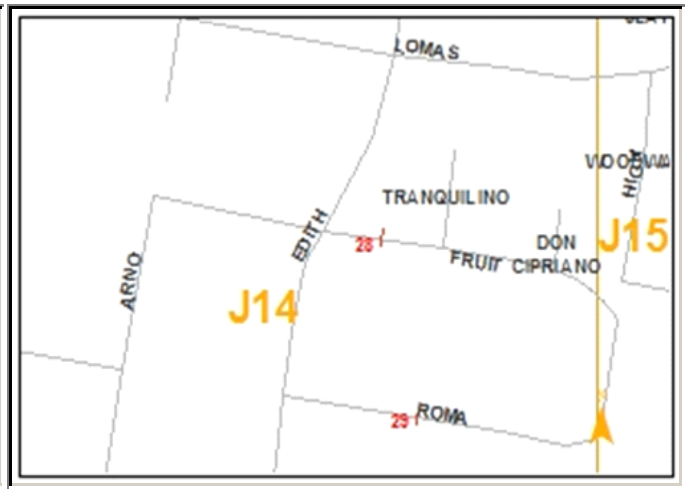




NO	12
ZONE	E17
LENGTH, ft	38
WIDTH, in	42
YEAR BUILT	1983
PROJECT #	26-1460-83

FRUIT E EDITH NE

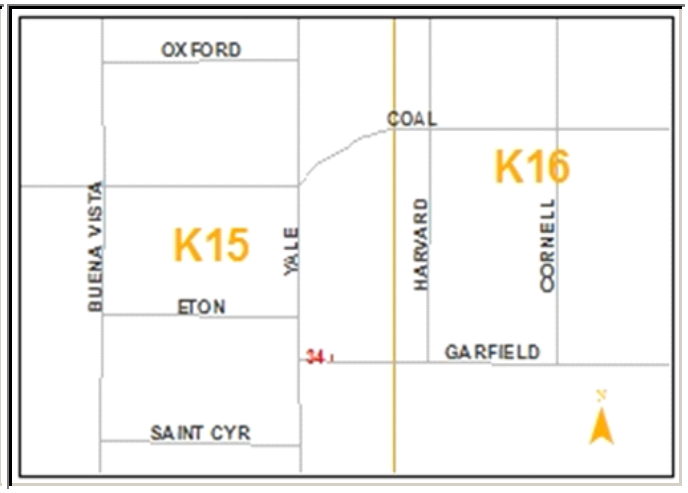




NO	28
ZONE	J14
LENGTH, ft	43
WIDTH, in	42
YEAR BUILT	1974
PROJECT #	10-002-74

GARFIELD E YALE SE





NO	34
ZONE	K15
LENGTH, ft	20
WIDTH, in	42
YEAR BUILT	1997
PROJECT #	26-4522.90-97

GLENRIO W 68 TH ST NW





NO	27
ZONE	J10
LENGTH, ft	6
WIDTH, in	42
YEAR BUILT	2004
PROJECT #	26-5381.04-04

INCA S OSOPARK NE

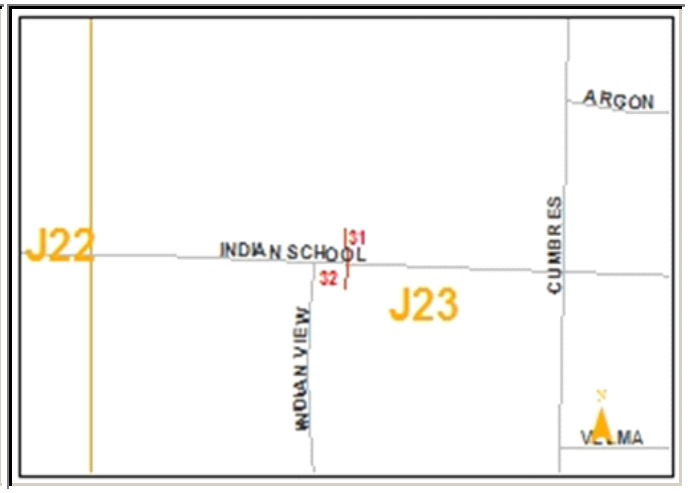




NO	16
ZONE	F21
LENGTH, ft	32
WIDTH, in	42
YEAR BUILT	2002
PROJECT #	26-6329.81-02

INDIAN SCHOOL EB E INDIAN VIEW NE

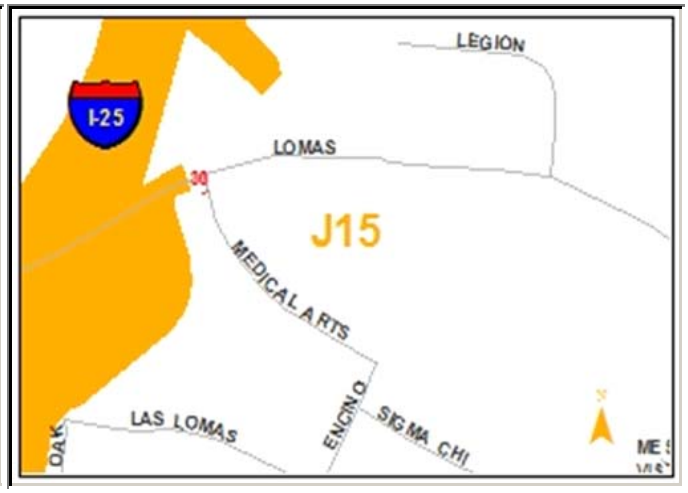




NO	32
ZONE	J23
LENGTH, ft	28
WIDTH, in	42
YEAR BUILT	1987
PROJECT #	26-2996-87

INDIAN SCHOOL WB E INDIAN VIEW NE

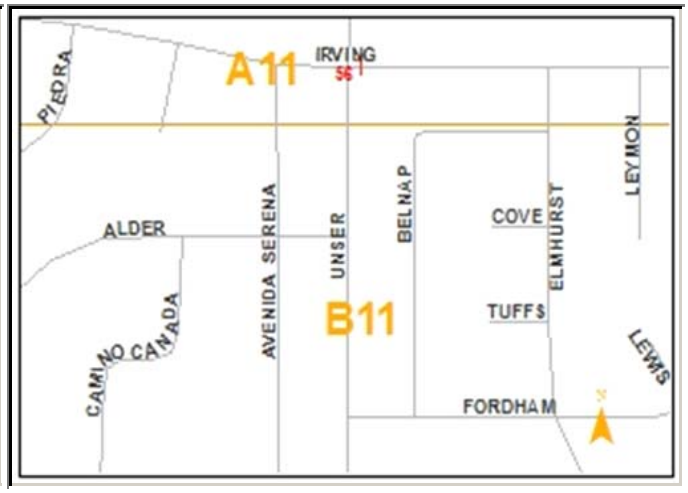




NO	31
ZONE	J23
LENGTH, ft	38
WIDTH, in	42
YEAR BUILT	1987
PROJECT #	26-2996-87

IRVING EAST OF UNSER NW





NO	56
ZONE	B11
LENGTH, ft	64
WIDTH, in	42
YEAR BUILT	2007
PROJECT #	26-7497.81-07

JUAN TABO S BUENA VENTURA NE

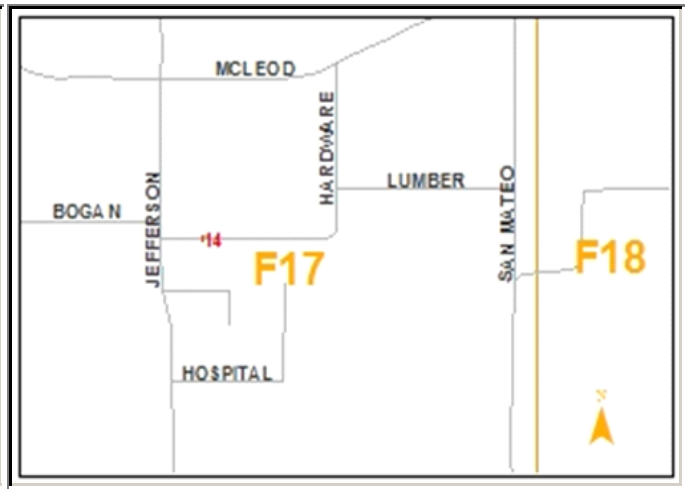




NO	38
ZONE	K21
LENGTH, ft	86
WIDTH, in	42
YEAR BUILT	1975
PROJECT #	10-183-75

LUMBER E JEFFERSON NE

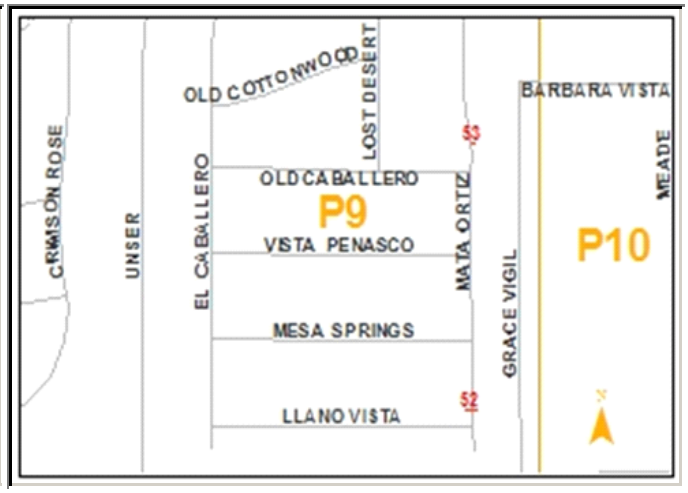




NO	14
ZONE	F17
LENGTH, ft	44
WIDTH, in	42
YEAR BUILT	1976
PROJECT #	20-020-76

MATA ORTIZ N LLANO VISTA SW

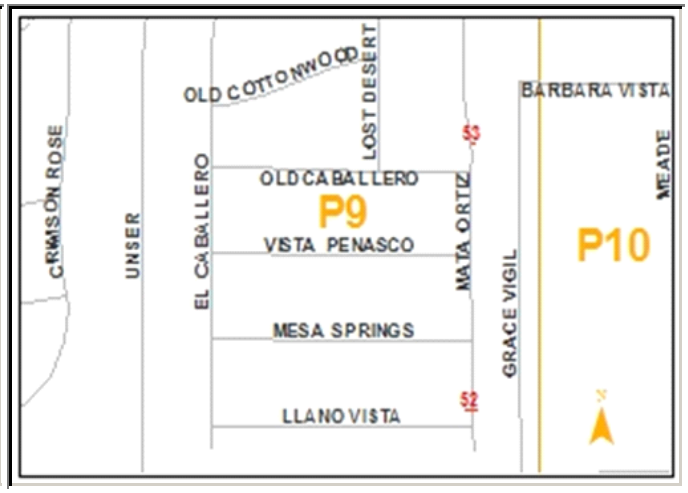




NO	52
ZONE	P09
LENGTH, ft	32
WIDTH, in	42
YEAR BUILT	2007
PROJECT #	26-5768.91-06

MATA ORTIZ N OLD CABALLERO SW

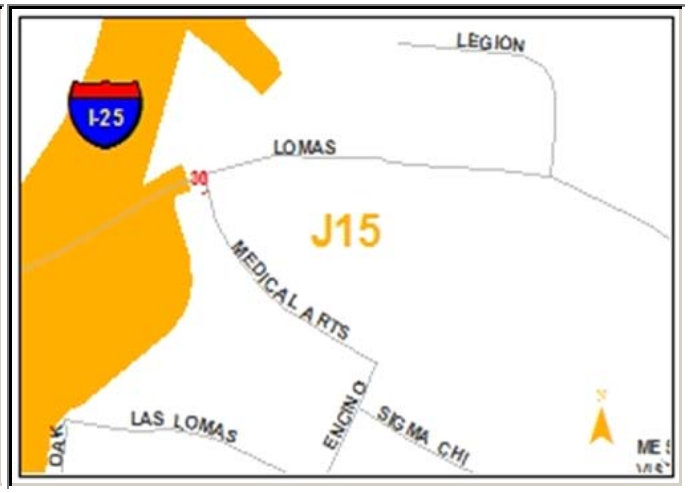




NO	53
ZONE	P09
LENGTH, ft	35
WIDTH, in	42
YEAR BUILT	2007
PROJECT #	26-5768.91-06

MEDICAL ARTS S LOMAS NE

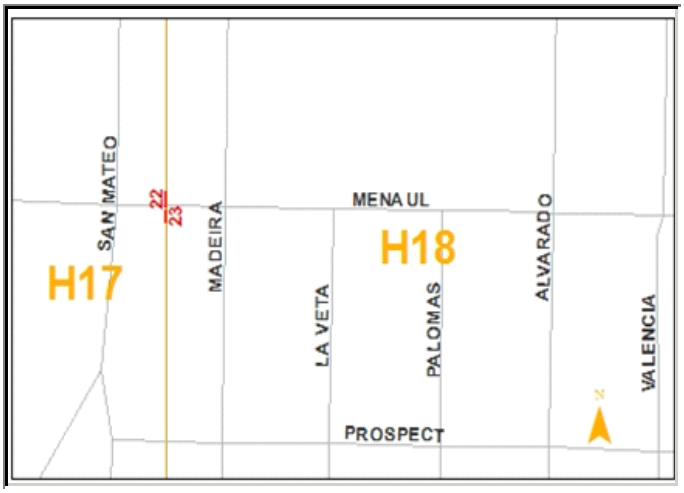




NO	30
ZONE	J15
LENGTH, ft	30
WIDTH, in	42
YEAR BUILT	1992
PROJECT #	26-3903.90-92

MENAUL EB E SAN MATEO NE

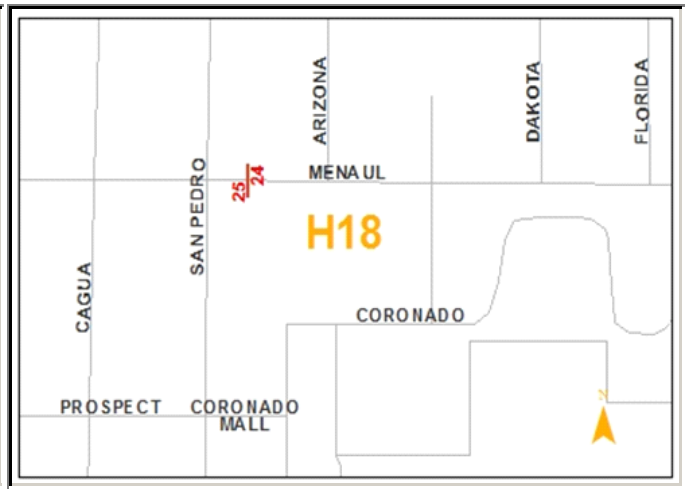




NO	23
ZONE	H18
LENGTH, ft	18
WIDTH, in	42
YEAR BUILT	1972
PROJECT #	08-172B-72

MENAUL EB E SAN PEDRO NE

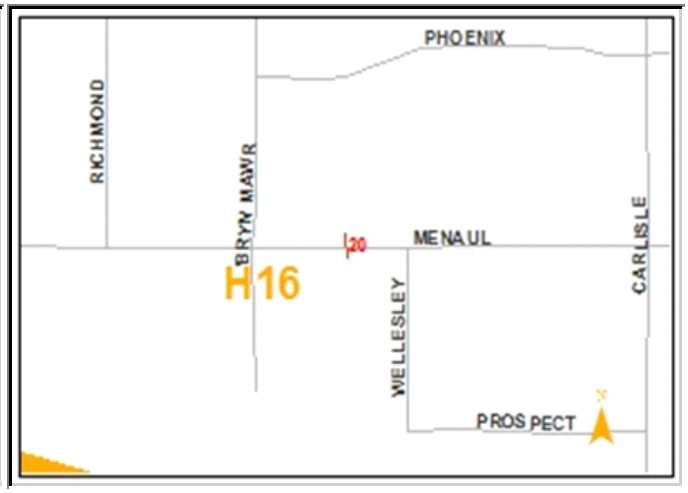




NO	25
ZONE	H18
LENGTH, ft	22
WIDTH, in	42
YEAR BUILT	1972
PROJECT #	08-172B-72

MENAUL W CARLISLE NE

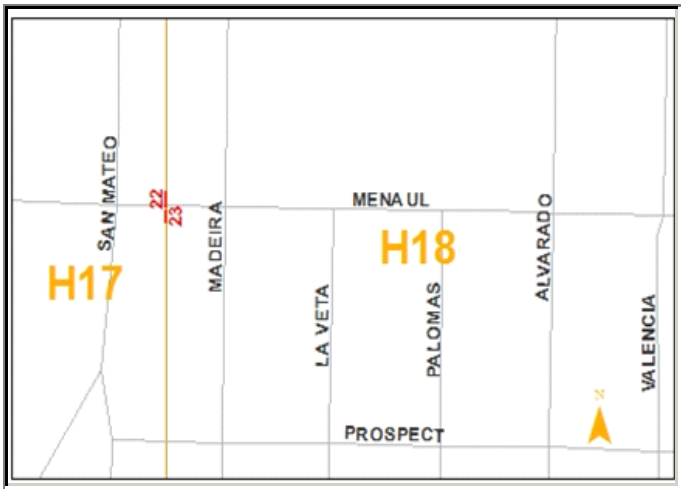




NO	20
ZONE	H16
LENGTH, ft	90
WIDTH, in	42
YEAR BUILT	1968
PROJECT #	08-002-68

MENAUL WB E SAN MATEO NE

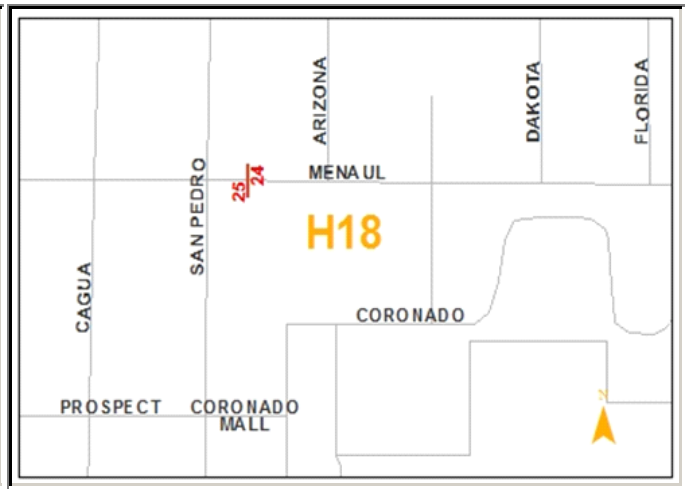




NO	22
ZONE	H18
LENGTH, ft	71
WIDTH, in	42
YEAR BUILT	1972
PROJECT #	08-172B-72

MENAUL WB E SAN PEDRO NE

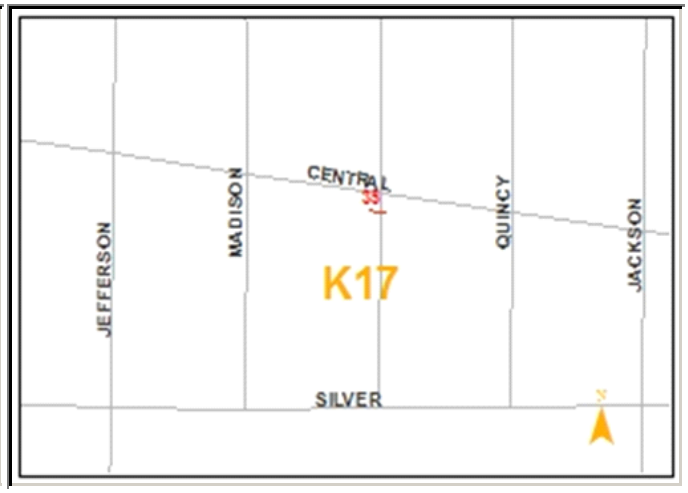




NO	24
ZONE	H18
LENGTH, ft	74
WIDTH, in	42
YEAR BUILT	1972
PROJECT #	08-172B-72

MONROE S CENTRAL NE





NO	35
ZONE	K17
LENGTH, ft	40
WIDTH, in	42
YEAR BUILT	1996
PROJECT #	432490

Montano plazw w coors nw

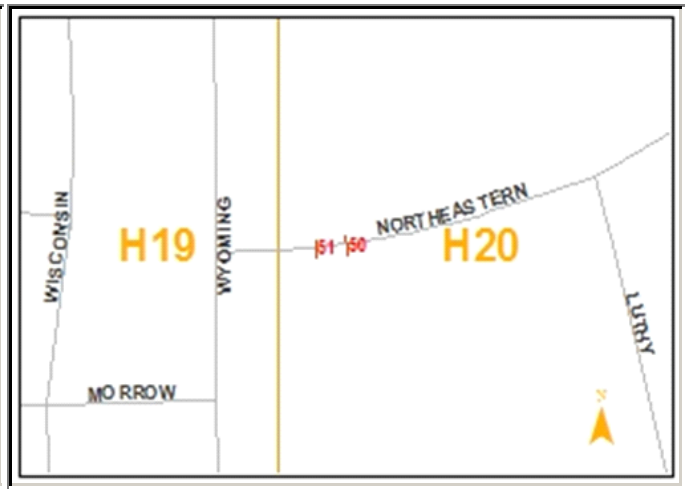




NO	40
ZONE	E12
LENGTH, ft	
WIDTH, in	
YEAR BUILT	
PROJECT #	

NORTHEASTERN E WYOMING NE-FAR

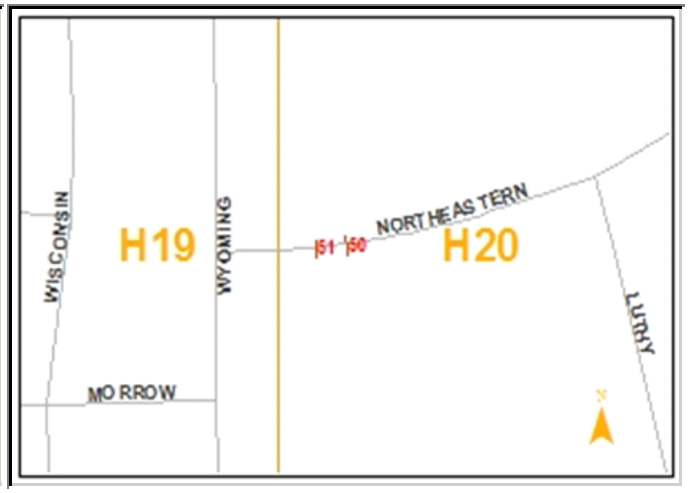




NO	50
ZONE	H20
LENGTH, ft	43
WIDTH, in	42
YEAR BUILT	2006
PROJECT #	26-5768.91-06

NORTHEASTERN E WYOMING NE

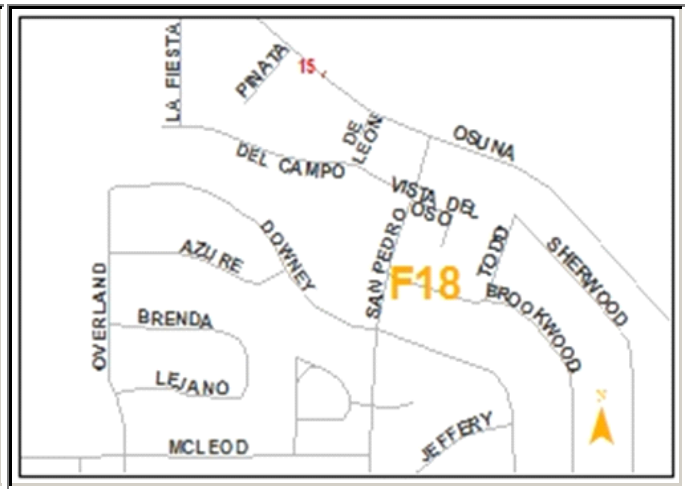




NO	51
ZONE	H20
LENGTH, ft	41
WIDTH, in	42
YEAR BUILT	2006
PROJECT #	26-5768.91-06

OSUNA W SAN PEDRO NE





NO	15
ZONE	F18
LENGTH, ft	41
WIDTH, in	42
YEAR BUILT	1971
PROJECT #	10-176-71

PASEO DEL NORTE NORTH OF PARDISE NW





NO	55
ZONE	B11
LENGTH, ft	57
WIDTH, in	42
YEAR BUILT	2007
PROJECT #	26-7497.82-07

PATHWAY E VASSAR NE

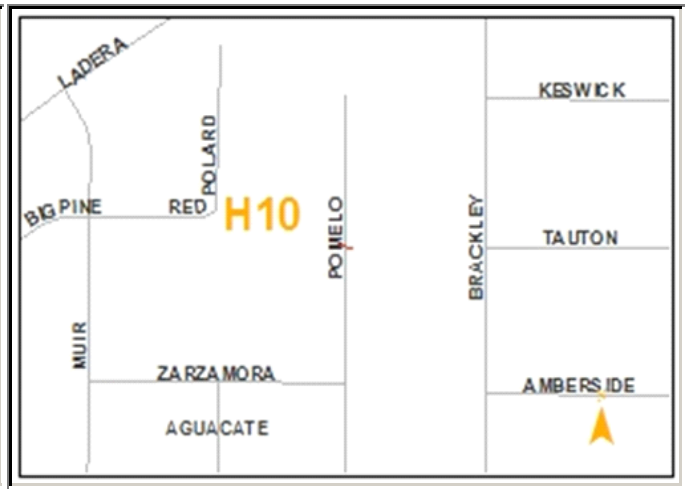




NO	17
ZONE	G16
LENGTH, ft	38
WIDTH, in	42
YEAR BUILT	2000
PROJECT #	26-5952.81-00

POMELO N ZARZAMORA NW

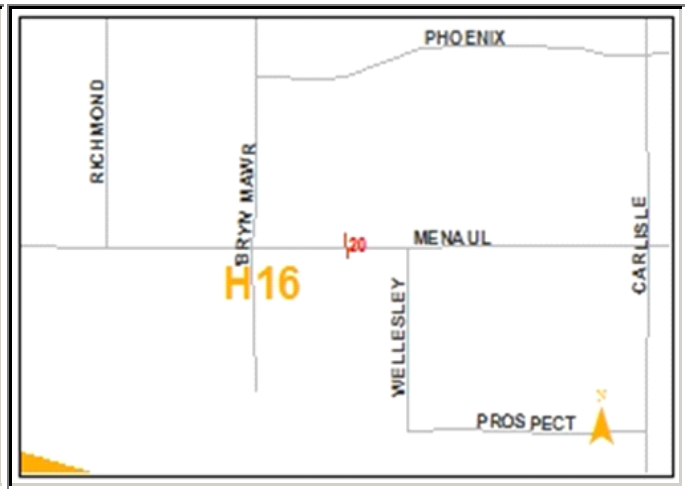




NO	19
ZONE	H10
LENGTH, ft	31
WIDTH, in	42
YEAR BUILT	2004
PROJECT #	26-6913.81-04

PRINCETON S MENAUL NE

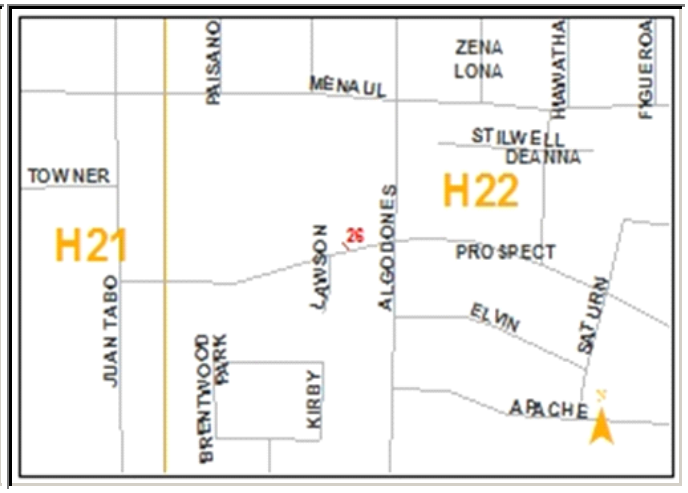




NO	21
ZONE	H16
LENGTH, ft	14
WIDTH, in	42
YEAR BUILT	1972
PROJECT #	08-171-72

PROSPECT E LAWSON NE

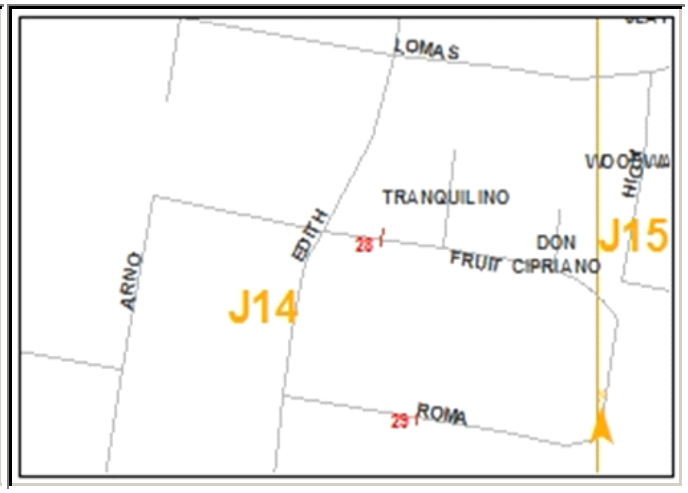




NO	26
ZONE	H22
LENGTH, ft	33
WIDTH, in	42
YEAR BUILT	1984
PROJECT #	26-1029-84

ROMA E EDITH NE

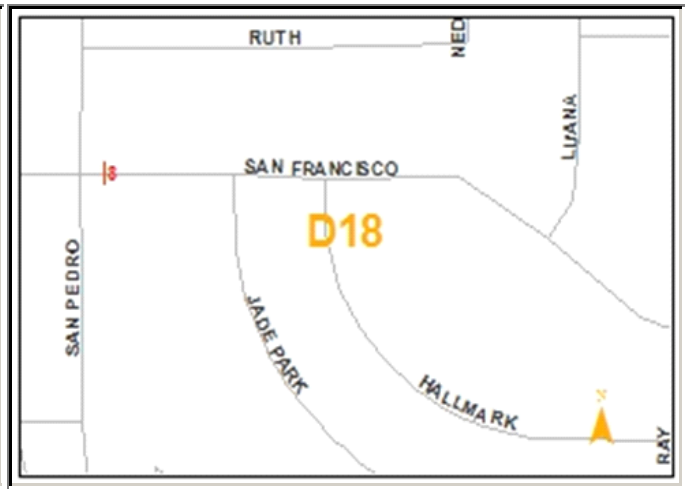




NO	29
ZONE	J14
LENGTH, ft	40
WIDTH, in	42
YEAR BUILT	1974
PROJECT #	10-002-74

SAN FRANCISCO E SAN PEDRO NE

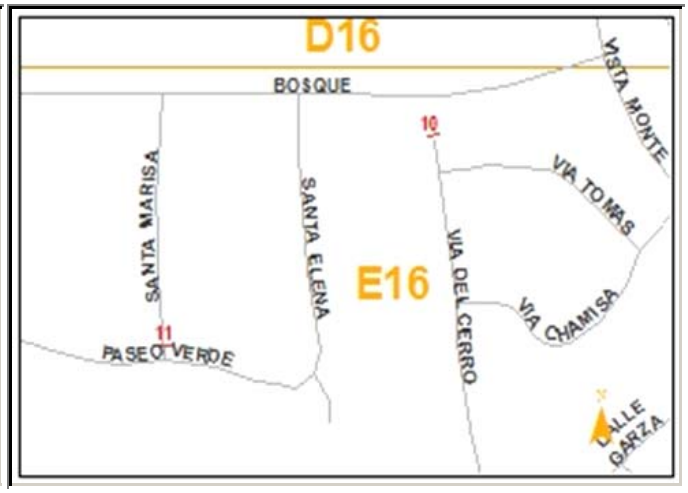




NO	8
ZONE	D18
LENGTH, ft	51
WIDTH, in	42
YEAR BUILT	2005
PROJECT #	26-7168.02-05

SANTA MARISA N PASEO VERDE NE

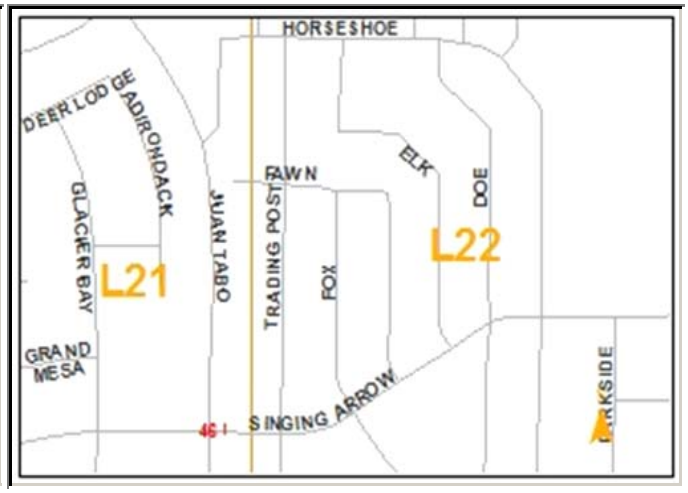




NO	11
ZONE	E16
LENGTH, ft	32
WIDTH, in	42
YEAR BUILT	2001
PROJECT #	26-6450.81-01

SINGING ARROW E JUAN TABO SE

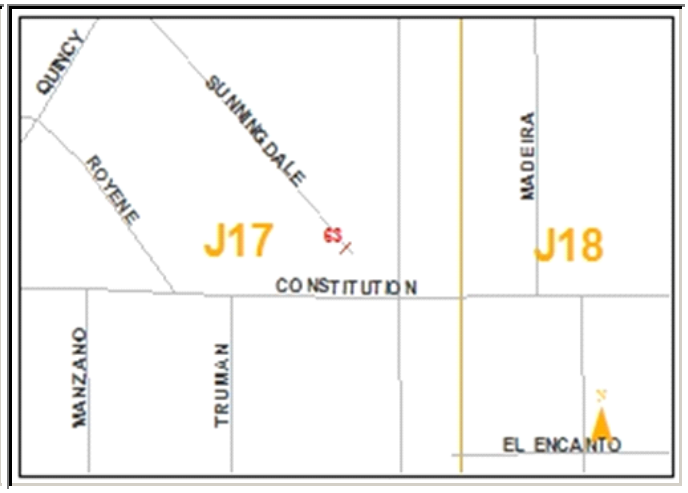




NO	46
ZONE	L22
LENGTH, ft	43
WIDTH, in	42
YEAR BUILT	1997
PROJECT #	26-4790.92-97

SUNNINGDALE E QUINCY NE

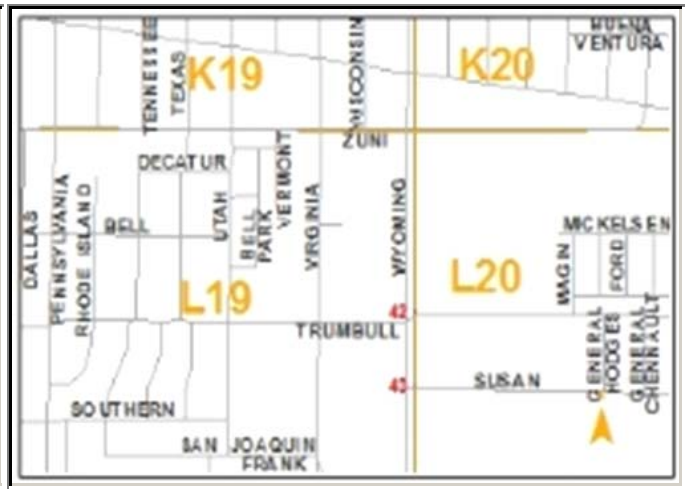




NO	63
ZONE	J17
LENGTH, ft	40
WIDTH, in	42
YEAR BUILT	1968
PROJECT #	08-006-68

SUSAN E WYOMING SE

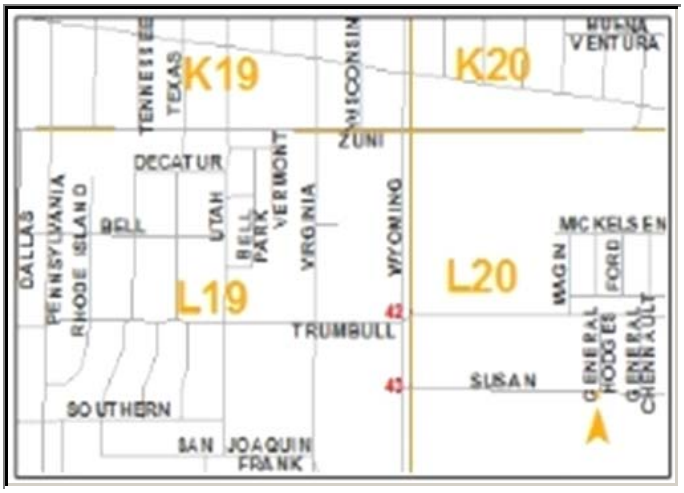




NO	43
ZONE	L20
LENGTH, ft	29
WIDTH, in	42
YEAR BUILT	1974
PROJECT #	12-001-74

TRUMBULL E WYOMING SE

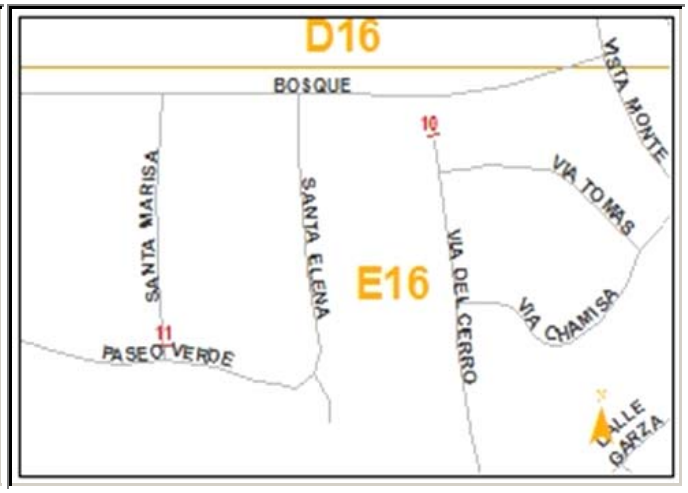




NO	42
ZONE	L20
LENGTH, ft	28
WIDTH, in	42
YEAR BUILT	1974
PROJECT #	12-001-74

VIADEL CERRO N VIA TOMAS NE

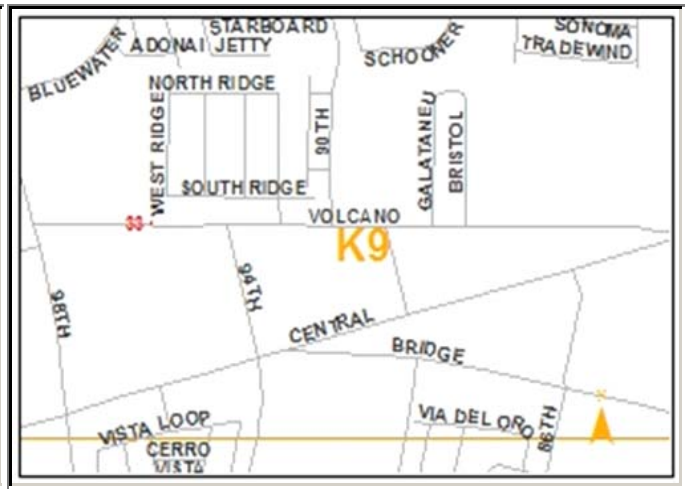




NO	10
ZONE	E16
LENGTH, ft	29
WIDTH, in	42
YEAR BUILT	2001
PROJECT #	26-6093.81-01

VOLCANO E 98TH ST NW





NO	33
ZONE	K09
LENGTH, ft	39
WIDTH, in	42
YEAR BUILT	1999
PROJECT #	26-5930.81-99

WATERSHED S WARM SPRINGS NW





NO	54
ZONE	H09
LENGTH, ft	54
WIDTH, in	42
YEAR BUILT	200200
PROJECT #	26-7429.81-07

Attachment 4

Impervious Area Added

FY 2020

DRAINAGE FILE	PROJECT NAME/DES	APPROVAL SOUGHT	REVIEW DATE	ACRES IMP	WQ POND AT CO	SQ FT IMP FEE IN LIEU	AMOUNT PAID FEE IN LIEU
A11D016A	MCMAHON CARWASH	CO-PERM	1/31/2020	0.93	Yes		
B18D020	TIERRA SERENA AKA GLENDESTO SUBDIVISION,	ROFG	8/26/2019	3.46	No		
C13D027D	9205 BLACK FARMS LOT 2 UNIT 2 - KELLY	CO PERM	9/3/2019	0.10	Yes		
C17D123	4455 ANAHEIM	CO-PERM	8/23/2019	0.57	Yes		
C17D127	HORIZON 3 OFFICE BUILDING (REVISION)	CO-PERM	6/30/2020	6.62	Yes	695.00	$5,560.00
C17D127	HORIZON 3 OFFICE BUILDING (REVISION)	TEMP-CO	3/25/2020				
C18D037H	THE COMMONS @ EAGLE ROCK BLDG D - 5501 EAGLE ROCK NE	CO-PERM	12/16/2019	0.06	Yes		
C18D037H	THE COMMONS @ EAGLE ROCK BLDG A - 5501 EAGLE ROCK NE	CO-PERM	5/18/2020	0.16	Yes		
C18D037H	THE COMMONS @ EAGLE ROCK BLDG D - 5501 EAGLE ROCK NE	CO-PERM-R	2/6/2020				
C18D064B	LEGACY NAA APARTMENT BUILDING 17	CO-PERM	12/24/2019	0.17	Yes		
C18D064B	LEGACY NAA APARTMENT BUILDING 17	CO-PERM	6/10/2020				
C18D070	BARLOW SHOP	CO-TEMP	6/16/2020	0.28	Yes		
C18D086	TINCAN ALLEY	CO-TEMP	4/3/2020	4.21	No	2,084.00	$16,672.00
C18D102	ALAMEDA CROSSING AKA:CAMPO DEL NORTE-REVISION	ROFG	5/12/2020	3.41	No	288,139.00	$25,324.00
C18D104	ALOHA RV	CO-PERM	2/5/2020	1.31	Yes		
C19D043A	NORTH DOMINGO BACA MULTIGENERATIONAL CENTER - 7521 CARMEL AVE N	CO-PERM	4/30/2020	0.60	Yes		
C19D043A	NORTH DOMINGO BACA MULTIGENERATIONAL CENTER - 7521 CARMEL AVE N	CO-TEMP	4/3/2020				
C19D065	ALLERGY CLINIC-7001 SIGNAL AVE.	CO-PERM	11/13/2019	1.01	No		
C19D065	ALLERGY CLINIC-7001 SIGNAL AVE.	CO-TEMP-R	7/1/2019				
C20D062	MARK 3S HOLLY DEVELOPMENT- WEST- REVISION	CO-PERM	8/15/2019	0.95	Yes		
C20D082	SWIM LABS	CO-PERM	5/18/2020	0.39	Yes		
D10D002B	LA CUENTISTA UNIT 2-ADDENDUM	ROFG	1/22/2020	18.40	No		
D10D003B14	6212 CAMINO ALTO CT NW	CO-PERM	8/8/2019	0.09	Yes		
D10D003B14	6212 CAMINO ALTO CT NW	CO-PERM-R	8/20/2019				
D10D003C3	8016 CANONCITO DR. NW (REVISION)	CO-PERM	2/20/2020	0.08	Yes		
D10D003F7	6408 PETIRROJO *	CO-PERM	10/7/2019	0.07	Yes		
D10D003G1	7835 AGUILA NW	CO-PERM	6/29/2020	0.08	Yes		
D10D003G2	7831 AGUILA NW	CO-PERM	2/6/2020	0.09	Yes		
D10D003H26	6520 PETIRROJO RD NW	CO-PERM	6/29/2020	0.09	Yes		
D10D003I1	6601 PETIRROJO NW (REVISION WITH POOL)	CO-PERM	5/28/2020				
D10D003I5	7912 AGUILA ST NW	CO-PERM	8/29/2019	0.09	Yes		
D10D003I7	6536 PAPAGAYO NW *	CO-PERM	9/9/2019	0.08	Yes		
D10D003M17	6508 KIMMICK *	CO PERM	10/2/2019	0.08	Yes		
D10D003M21	6505 PATO RD NW - LOT 21	CO-PERM	6/15/2020	0.07	Yes		
D10D003M25	6519 PATO RD NW - LOT 25	CO-PERM	6/8/2020	0.09	Yes		
D10D003M25	6519 PATO RD NW - LOT 25	CO-PERM-R	6/15/2020				
D10D003M28	6531 PATO RD NW - LOT 28 *	CO-PERM	9/23/2019	0.08	Yes		
D10D003M2C	6620 KIMMICK - LOT 3A *	CO-PERM	9/12/2019	0.09	Yes		
D10D003M2C	6620 KIMMICK - LOT 3A *	CO-PERM-R	9/18/2019	0.09	Yes		
D10D003M34	6605 SUJETO NW	CO-PERM	6/15/2020	0.09	Yes		
D10D003O1	6512 PAPAGAYO RD NW-REVISION	CO-PERM	7/3/2019	0.08	Yes		
D10D003P7	6509 PETIRROJO RD NW *	CO-PERM	8/26/2019	0.08	Yes		
D10D003R2	6332 CAMINO ALTO	CO-PERM	2/27/2020	0.09	Yes		
D10D003R3	6328 CAMINO ALTO NW *	CO-PERM	5/19/2020	0.09	Yes		
D10D003T16	6527 VISTA DEL PRADO (REVISION)	CO-PERM	2/27/2020	0.08	Yes		
D10D014	6809 RIMROCK MALLAK RESIDENCE *	CO PERM	8/19/2019	0.08	Yes		
D10D015	6515 RIM ROCK RD NW	CO PERM	8/19/2019	0.09	Yes		
D17D102A	PNM CRITICAL SPARES WAREHOUSE	CO-PERM	2/25/2020	0.36	Yes		
D18D054F	SANTA MONICA ESTATES, UNIT 2-ALL LOTS	ROFG	8/26/2019	2.40	No		
D18D056A	!!!OVERTURE SENIOR	CO-TEMP	5/29/2020	3.28	No	142,764.00	$32,360.00
D18D056A	!!!OVERTURE SENIOR	CO-TEMP	4/3/2020				
E10D050	5627 CINDER CONE	CO-PERM	11/1/2019	0.09	Yes		
E10D064	5616 CINDERCONE	CO-PERM	6/1/2020	0.09	Yes		
E10D065	6201 CASA BLANCA	CO-PERM	6/8/2020	0.08	Yes		
E12D006E	!!!BOSQUE PLAZA-GUARDIAN STORAGE	CO-PERM	9/25/2019	1.76	Yes		
E12D006F	LEGACY HOME HEALTH	CO-PERM	7/26/2019	1.11	Yes		
E12D006G	O'REILLY AUTO PARTS	CO-PERM	8/21/2019	0.59	Yes		
E17D001W	ACADEMY PARKWAY SELF STORAGE	CO-PERM	6/9/2020	3.10	Yes		
E18D050	MOUNTAIN WEST LODGING (HOME WOOD SUITES)	CO-PERM	8/26/2019	1.00	Yes		
E19D021A	HOLY CROSS TOWNHOMES	ROFG	8/13/2019	1.50	No		
F11D019	COORS VILLAGE (PRESBYTERIAN PLAN)	CO-PERM	10/8/2019	2.26	Yes		
F14D058A	1106 GRIEGOS RD NW	CO-PERM	11/6/2019	0.22	Yes		
F15D052E	ALBUQUERQUE NORTH STORAGE	CO-PERM	8/14/2019	2.24	No	3,576.00	$696.00
F16D051A	1525 RENAISSANCE BEHAVIORAL HEALTH HOSPITAL	CO-PERM	3/2/2020	2.50	Yes		
F16D051A	1525 RENAISSANCE BEHAVIORAL HEALTH HOSPITAL	CO-TEMP	2/7/2020				
F17D044C1	MAVERIK STORE-JEFFERSON/I-25-REVISION-FASTRAX	CO-PERM	12/6/2019	1.72	Yes	8,608.00	$1,952.00
F17D044C1	MAVERIK STORE-JEFFERSON/I-25-REVISION-FASTRAX	CO-TEMP	10/21/2019				
F17D070A	ALBUQUERQUE REPRO GRAPHICS	CO-PERM	11/6/2019	1.28	Yes		
F19D013A	MCDONALD'S-MONTGOMERY FASTRAX	CO-PERM	11/15/2019	1.00	No	5,308.00	$920.00
G11D014A	ST JOSEPH ON THE RIO GRANDE CHURCH	CO-PERM	10/8/2019	8.05	Yes		
G11D014A	ST JOSEPH ON THE RIO GRANDE CHURCH	CO-TEMP	11/1/2019				
G11D014A	ST JOSEPH ON THE RIO GRANDE CHURCH	CO-TEMP-EXTENSION	3/5/2020				
G11D069C	CHICK-FIL-A @ COORS PAVILION	CO-PERM	3/2/2020	0.85	Yes		
G11D071	GLOBAL STORAGE-COORS	CO-TEMP	6/30/2020	2.80	Yes		
G13D032	CAMPBELL COMPOUND, LOT 2 & 3	ROFG	4/20/2020	0.80	Yes		
G15D057	CLARKE EQUIPMENT	CO-PERM	8/9/2019	2.17	Yes		
G16D029	MAVERIK STORE	CO-PERM	12/20/2019	1.07	Yes		
G16D029	MAVERIK STORE	CO-TEMP	11/15/2019				
G16D097	3301 CANDELARIA RD NE	CO-PERM	6/23/2020	4.23	Yes		

FY 2019

DRAINAGE FILE	PROJECT NAME/DES	APPROVAL SOUGHT	REVIEW DATE	ACRES IMP	WQ POND AT CO	SQ FT IMP FEE IN LIEU	AMOUNT PAID FEE IN LIEU
G16D145A	ENTERTAINMENT FACILITY	CO-PERM	8/8/2019	2.07	Yes		
G16D154	NUSENDA CREDIT UNION	CO-PERM	8/26/2019	2.44	Yes		
G19D040	KALM BREWERY	CO-PERM	11/8/2019	0.12	No		
H09D001F	LADERA SELF STORAGE	CO-PERM	9/13/2019	1.60	Yes		
H09D001F	LADERA SELF STORAGE	CO-TEMP	8/12/2019				
H09D017F	DEL WEBB @ MIREHAVEN PH. 2	ROFG	9/6/2019	23.70	No		
H09D022A	STORMCLOUD SUBDV UNIT 4A & MIREHAVEN ARROYO @ STORMCLOUD	ROFG	8/23/2019	0.17	No		
H10D006B	ALBUQUERQUE RV & BOAT STORAGE	TEMP-CO	3/30/2020	5.40	Yes		
H11D059	U-HAUL AT WEST BLUFF	CO-PERM	9/13/2019	4.20	Yes		
H11D059	U-HAUL AT WEST BLUFF	CO-TEMP	8/27/2019				
H12D019A	MONTOYA STREET TOWNHOMES	ROFG	1/30/2020	0.26	Yes		
H14D001B	ABC BUILDING EXPANSION-REVISION	CO-PERM	10/10/2019	0.74	Yes		
H14D089	LA POSADA ALTERNATIVE HOUSING (Addition)	CO-PERM	7/15/2019	0.04	No	1,950.00	$336.00
H14D109	3308 4TH STREET APARTMENT BUILDING	CO-ERM	2/13/2020	0.70	Yes		
H17D115	21ST CENTURY ACADEMY	CO-PERM	8/13/2019	0.85	Yes		
H17D115	21ST CENTURY ACADEMY	CO-TEMP	8/6/2019				
H19D040	7212 MENAUL	CO-PERM	6/23/2020	0.42	Yes		
H21D012	BLAKES LOTABURGER #64	CO-PERM	1/24/2020	0.53	Yes		
H21D012	BLAKES LOTABURGER #64	CO-TEMP	1/6/2020				
J10D002G	7601 LOS VOLCANES RD NW BLDG B & C	CO-PERM	5/7/2020	18.33	Yes		
J10D002G	7601 LOS VOLCANES RD NW	CO-TEMP	2/25/2020				
J10D002G	7601 LOS VOLCANES RD NW	CO-TEMP	3/31/2020				
J10D002G	7601 LOS VOLCANES RD NW	CO-TEMP	3/31/2020				
J11D032	WECKS RESTAURANT	CO-PERM	12/18/2019	2.70	Yes		
J12D029	NORMAN HOME 2704 CORTE MIRABAL RD NW	CO-PERM	8/23/2019	0.17	Yes		
J13D010	COUNTRY CLUB PLAZA PHASE 3	CO-PERM	7/1/2019	1.96	Yes		
J13D010	COUNTRY CLUB PLAZA PHASE 3	CO-PERM-R	8/1/2019				
J13D010	COUNTRY CLUB PLAZA PHASE 3	CO-PERM-R	7/3/2019				
J13D017A	SAWMILL MARKET	CO-TEMP	2/10/2020	0.60	Yes		
J13D081	GONZALES RESIDENCE-REVISED - 2100 EDNA	CO-PERM	1/22/2020	0.26	Yes		
J14D183	SHELL BUILDING - 616 LOMAS	CO-PERM	1/10/2020	0.38	Yes		
J14D190	MONROE'S RESTURANT	CO-PERM	12/12/2019	0.54	Yes		
J18D048	TOWNHOUSES FOR AHMET TIRYAKI	CO-PERM	1/15/2020	0.42	Yes		
J19D049	!!!MAVERIK - 1401 WYOMING-FASTRAX	CO-PERM	5/1/2020	1.00	No	25,246.00	$4,376.00
J19D049	!!!MAVERIK - 1401 WYOMING-FASTRAX	CO-TEMP	1/15/2020				
J19D049	!!!MAVERIK - 1401 WYOMING-FASTRAX	CO-TEMP	3/13/2020				
J19D049	!!!MAVERIK - 1401 WYOMING-FASTRAX	CO-TEMP-EXT	3/13/2020				
J20D003	LOMAS CAR WASH - 9935 LOMAS	CO-PERM	12/10/2019	0.45	Yes	1,322.00	$232.00
J20D003	LOMAS CAR WASH - 9935 LOMAS	CO-TEMP	11/7/2019				
J20D037	!!!MURPHY EXPRESS-REVISION	CO-TEMP	7/3/2019	0.65	Yes		
K09D026C	FED EX GROUND - DAYTONA	CO-PERM	8/1/2019	12.98	Yes		
K10D045	UNSER CROSSING-DEFINED FITNESS	CO-PERM	12/23/2019	4.70	Yes		
K10D045	UNSER CROSSING-DEFINED FITNESS	CO-TEMP	12/18/2019				
K10D045	UNSER CROSSING-DEFINED FITNESS	CO-TEMP-EXTENSION	1/30/2020				
K10D045	UNSER CROSSING-DEFINED FITNESS	CO-TEMP-EXTENSION	3/4/2020				
K11D084	GENERATIONS AT WEST MESA	CO-PERM	11/21/2019	1.37	Yes		
K12D015D	DUNKIN DONUTS	PERM-CO	6/25/2020	0.28	No	9,178.00	$1,592.00
K12D015D	DUNKIN DONUTS	TEMP-CO	3/25/2020				
K13D076	!!!SLOT YARD HOUSE SUBDIVISION	CO-PERM	3/20/2020	0.30	Yes		
K14D017	!!!CENTRAL AND BROADWAY HOTEL & PARKING STRUCTURE	CO-PERM	11/19/2019	0.96	No	1,179.00	$9,432.00
K14D112	ZOCALO-400 COAL SW	CO-PERM	8/13/2019	0.64	Yes		
K16D011	YALE RETAIL-REVISION	PERM-CO	6/15/2020	0.34	No	14,958.00	$3,392.00
K17D106	DE ANZA COURTYARD HOMES - 4301 CENTRAL-BLDG C&F	CO-PERM	11/20/2019	1.75	No	76,666.00	$12,574.00
K17D106	DE ANZA COURTYARD HOMES - 4301 CENTRAL-BLDG G	CO-PERM	1/21/2020				
K17D106	DE ANZA - 4301 CENTRAL- BUILDINGS D&E	PERM-CO	10/18/2019				
K20D063	GARCIA APTS - 618, 620, 624 GARCIA ST NE	CO-PERM	7/15/2019	0.39	Yes		
K21D009H3	COPPER POINTE SUBDIVISION	CO-PERM	2/7/2020	0.58	No	1,588.00	$12,704.00
K21D009H3	COPPER POINTE SUBDIVISION	CO-TEMP	12/19/2019				
K22D059	MAVERIK STORE-JUAN TABO/COPPER (REVISION#1)	CO-PERM	4/29/2020	1.20	Yes		
K22D059	MAVERIK STORE-JUAN TABO/COPPER (REVISION#1)	CO-TEMP	1/17/2020				
L18D084	BURGER KING RESTAURANT	CO-PERM	12/20/2019	0.65	Yes		
L23D022	BEEHIVE HOMES @ FOUR HILLS PH 3&5 (REVISION)	CO-PERM	12/5/2019	0.31	Yes		
M09D031	SOLARE CHARTER SCHOOL PHASE 1	CO-PERM	6/5/2020	2.44	Yes		
M09D031	SOLARE CHARTER SCHOOL PHASE 1	CO-TEMP	2/21/2020				
M09D031	SOLARE CHARTER SCHOOL PHASE 1	CO-TEMP	4/22/2020				
M14D016	SAN JOSE PARISH HALL CHURCH-REVISION	CO-PERM	9/23/2019	0.20	Yes		
M14D016	SAN JOSE PARISH HALL CHURCH-REVISION	CO-TEMP	9/6/2019				
Q16DA5000	UNITED POLY SYSTEM - 5201 HAWKINGS DR SE	CO-PERM	6/11/2020	0.52	Yes		
R16D006	MESA DEL SOL MONTAGE UNITS 3B	ROFG	5/1/2020	27.00	Yes		
				Total Impervious Area (acres)		Total Impervious Area - Payment-in-Lieu (acres)	Total Payment-in-Lieu (Dollars)
				218.34		**13.39**	**$128,122.00**

Attachment 5

Map and Description of 311 Complaints

311 NPDES CALLS 7/1/2019 to 6/30 2020

311 Calls- Type

type

- Car Washing
- Carpet Cleaning
- Colord Liquid
- Construction
- Cooking Grease
- Dog Poops
- Foul Odor
- Grey Water
- Hazardous Material
- Large Items Dump
- Leaves
- MSGP permit
- Nusiance Water
- OIL
- Oil & Antifreeze
- Paint
- Power Wash
- Sewage
- Trash
- City Limits

N

0 1 2 4

Miles

106°50'W 106°49'W 106°48'W 106°47'W 106°46'W 106°45'W 106°44'W 106°43'W 106°42'W 106°41'W 106°40'W 106°39'W 106°38'W 106°37'W 106°36'W 106°35'W 106°34'W 106°33'W 106°32'W 106°31'W 106°30'W 106°29'W 106°28'W 106°27'W 106°26'W 106°25'W

35°13'N 35°12'N 35°11'N 35°10'N 35°9'N 35°8'N 35°7'N 35°6'N 35°5'N 35°4'N 35°3'N 35°2'N 35°1'N 35°0'N

FY 2020 NPDES 311 CALLS

Address	1129 ESPEJO NE

Inspection Date	7/18/2019			Reporting_Date	7/9/2019
Customer	JERRY QUINTANA	SOURCE	WEB	311CASE_ID	NA
Customer_Ph	453-3616			e_mail	mailto:jerryjquintana@eart
X_Link		Complaint type	OIL	Inspector	GS
Facility_Contac	JACK DAUGHERTY-SOLID			Facility_Ph_No	761-8324
Suspected_Facility	STREET			EVENT_ID	831
is it in gis	-1				

Complaint	CITY OF ALBUQUERQUE GARBAGE TRUCK HAD HYDRULIC FLUID SPILL ON THIS STREET
Field Observation	THERE WAS SEVERAL BIG SPOTS OF HYDRULIC FLUID ALONG THIS STREET COVERED BY SAND.
Initial Action	SOLID WASTE DEPT SWEEPT THE COVERED SAND ON 7/23



Address	CENTRAL AND 4TH ST NW

Inspection Date	7/12/2019			Reporting_Date	7/12/2019
Customer	BYRON LUERAS	SOURCE	DRIVE BY	311CASE_ID	DRIVE BY
Customer_Ph	768-3882			e_mail	balueras@cabq.gov
X_Link		Complaint type	Construction	Inspector	BL
Facility_Contac	SUPERVISOR			Facility_Ph_No	na
Suspected_Facility	KELLY CABLE			EVENT_ID	824
				is it in gis	-1

Complaint	I WAS DRIVING ON CENTRAL AND 4TH ST AND NOTICED KELLY CABLE POWER WASHING THE CUT CONCRETE, ASPHALT AND DIRT SEDIMENT INTO THE STORM DRAIN.
Field Observation	I SAW KELLY CABLE EMPLOYEE POWER WASHING THE CUT CONCRETE, ASPHALT AND DIRT SEDIMENT INTO THE STORM DRAIN.
Initial Action	INSPECTOR ASKED THEM TO STOP AND GAVE THEM A COPY OF THE ORDINANCE.



Address	CIVIC PLAZA AT 4TH AND MARQUETTE NW

Inspection Date	7/12/2019			Reporting_Date	7/12/2019
Customer	SHELLIE	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph				e_mail	
X_Link		Complaint type	Construction	Inspector	BL
Facility_Contac	NA			Facility_Ph_No	
Suspected_Facility	CIVIC PLAZA			EVENT_ID	825
is it in gis	-1				

Complaint	WASHOUT FROM SAW CUTTING THAT IS IN THE ROW.
Field Observation	THERE WAS DRY RESIDUE
Initial Action	INSPECTOR ASKED THE CONTRACTOR TO CLEAN UP THE SEDIMENT AFTER THEY ARE DONE WITH THE SAW CUT.



Address	**8425 JAMES NE**

Inspection Date	7/16/2019			Reporting_Date	7/13/2019
Customer	RICHARD LOPEZ	SOURCE	311	311CASE_ID	190713-000584
Customer_Ph	382-7390			e_mail	sergeant1789@gmail.com
X_Link		Complaint type	Hazardous Material	Inspector	GS
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	826
is it in gis	-1				

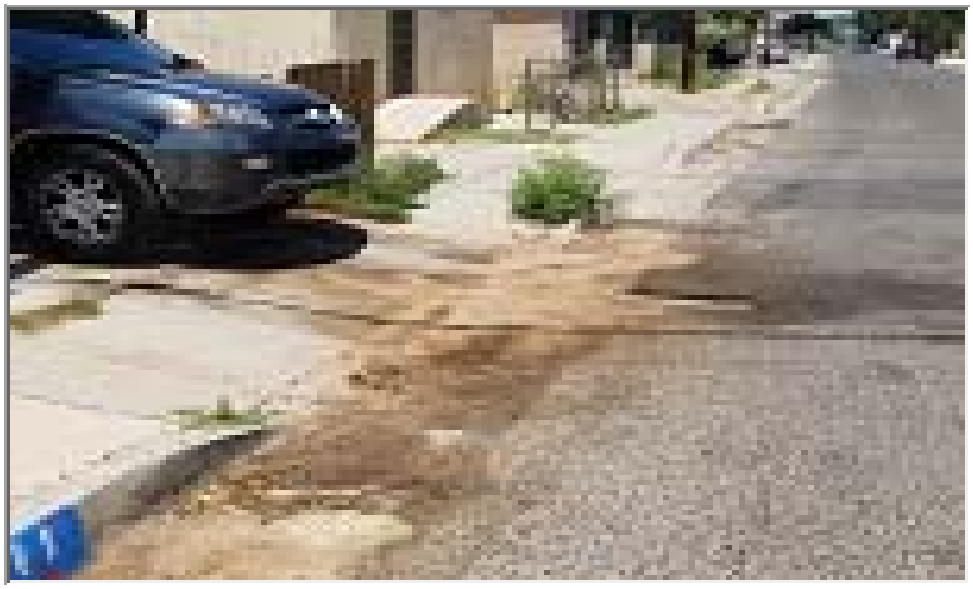
Complaint	DUMPING GASOLINE INTO STORM DRAIN
Field Observation	THERE WAS A BIG SPOT OF SOME KIND OF SPILL IN THE STREET
Initial Action	THE SPOT WAS GONE. THE INSPECTOR DISTRIBUTED POLLUTION PREVENTION BROCHURES AT THIS AREA.



Address	**511 8TH ST NW**

Inspection Date	7/15/2019			Reporting_Date	7/15/2019
Customer	ANONYMOUS	SOURCE	WALK IN	311CASE_ID	NA
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	OIL	Inspector	GS
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	STREET			EVENT_ID	827
is it in gis	-1				

Complaint	OIL SPILL ONTO THE CURB AND GUTTER AT THIS LOCATION
Field Observation	THERE WAS A LOT OF OIL SPILL AT THIS LOCATION. THE RESIDENT CLAIMED THAT A VEHICLE PARKED HERE AND LEAKED THE OIL A FEW DAYS AGO.
Initial Action	THE INSPECTOR COVERED THE OIL SPOTS WITH ABSORBENT AND DISTRIBUTED POLLUTION PREVENTION BROCHURES AT THIS NEIGHBORHOOD



Address	NA

Inspection Date	7/16/2019			Reporting_Date	7/16/2019
Customer	CHASE NORMAN	SOURCE	311	311CASE_ID	190716-001799
Customer_Ph	520-219-8929			e_mail	chase@aquadesign.net
X_Link		Complaint type	Grey Water	Inspector	GS
Facility_Contac	CHASE NORMAN	Facility_Ph_No		520-219-8929	
Suspected_Facility	HOME	EVENT_ID	828	is it in gis	-1

Complaint	WOULD LIKE TO KNOW IF HE CAN DUMP CHLORINATED FOUNTAIN WATER INTO THE STOTM DRAIN - HE SAID IT IS TRICOR CHLORINE
Field Observation	NA
Initial Action	WA TOLD HIM THAT HE CAN DISPOSE IT TO SANITARY LINE. HE CAN DISCHARGE IT TO STORM DRAIN AFTER REMOVING RESIDUAL CHLORINE.

Address	CIRCLE K AT 7524 MENAUL NE

Inspection Date	7/17/2019			Reporting_Date	7/17/2019
Customer		SOURCE	DRIVE BY	311CASE_ID	DRIVE BY
Customer_Ph				e_mail	
X_Link		Complaint type	Power Wash	Inspector	
Facility_Contac	MANAGER			Facility_Ph_No	934-4500
Suspected_Facility	CLEAN SLATE POWER WASH			EVENT_ID	829
is it in gis	-1				

Complaint	POWER WASHING GAS STATION LOT
Field Observation	INSPECTOR SAW A POWER WASH CO. WASHING THE LOT AND LETTING THE WASH WATER TO ENTER THE STORM DRAIN.
Initial Action	ASKED MANAGER TO STOP DUMPING INTO STORM DRAIN AND GAVE HIM A POLLUTION PREVENTION BROCHURE.



Address	**AUTOZONE AT 507 BRIDGE SW**

Inspection Date	7/17/2019			Reporting_Date	7/17/2019
Customer	ANONYMOUS	SOURCE	PH CALL	311CASE_ID	NA
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	OIL	Inspector	BL
Facility_Contac	MANAGER			Facility_Ph_No	
Suspected_Facility	AUTOZONE			EVENT_ID	830
is it in gis	-1				

Complaint	OIL IN FRONT OF A CURB, DRIVEWAY AND NEXT TO THE DUMPSTER
Field Observation	INSPECTOR SAW A LOT OF OIL DUMPED IN FRONT OF DUMPSTER.
Initial Action	THE INSPECTOR ASKED THE MANAGER TO CLEAN UP THE AREA.



Address	COLLET PARK ELEM. SCHOOL AT 2100 MORRIS NE

Inspection Date	8/6/2019			Reporting_Date	7/27/2019
Customer	CHARLES SPURGEON	SOURCE	311	311CASE_ID	190727-001377
Customer_Ph	299-8489			e_mail	
X_Link		Complaint type	Hazardous Material	Inspector	GS
Facility_Contac	PRINCIPAL-STEPHANK T			Facility_Ph_No	298-3010
Suspected_Facility	COLLETTE PARK ELEMENTRY SCH			EVENT_ID	832
is it in gis	-1				

Complaint	THERE IS A WHITE SUBSTANCE THAT IS COMING OUT FROM THE DRAIN AT COLLETTE PARK ELEMENTRY SCHOOL AND FLOWING INTO THE PIEDRA LISA ARROYO.
Field Observation	THERE WAS A TARACK OF WHITE RESIDUE COMING FROM THIS BUILDING INTO THE ARROYO.
Initial Action	THE SCHOOL PRINCIPAL STATED THAT THEIR FLOOR STRIPPING CONTRACTOR DUMPED THE WAX AND STRIPPING FLUID INTO THE STORM DRAIN. THE INSPECTOR ASKED HER NOT TO DUMP ANY HAZARD WASTE TO THE STORM DRAIN.



Address	KAEHR COATINGS AT 1425 CANDELARIA NE

Inspection Date	7/30/2019			Reporting_Date	7/30/2019
Customer	WA	SOURCE	PH CALL	311CASE_ID	NA
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	OIL	Inspector	GS
Facility_Contac	MANAGER			Facility_Ph_No	344-3591
Suspected_Facility	KAEHR COATINGS			EVENT_ID	833
is it in gis	-1				

Complaint	TRUCK LEAKED DIESEL FUEL AT THIS ADDRESS
Field Observation	THE SPILL AREA WAS COVERED BY THE BUSINESS
Initial Action	THE BUSINESS WILL REMOVE THE ABSORBENT AFTER ALL THE OIL WERE ABSORBED.



Address	EASEMENT BEHIND 4515 OVERLAND NE

Inspection Date	9/11/2019			Reporting_Date	8/1/2019
Customer	ANONYMOUS	SOURCE	WEB	311CASE_ID	NA
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Trash	Inspector	MA
Facility_Contac	NA	Facility_Ph_No			
Suspected_Facility	DRAINAGE EASEMENT	EVENT_ID	842	is it in gis	-1

Complaint	8 SHOPPING CARTS, COUCHES, SHOES, CLOTHING, MATTRESS
Field Observation	ALL THE REPORTED ITEMS WERE THERE.
Initial Action	ASKED THE ARROYO MAINTEMAMCE TO CLRAN IT UP AND THEY DID.



Address	QUINCY AND SUNNINGDALE NE

Inspection Date	8/5/2019			Reporting_Date	8/3/2019
Customer	ANONYMOUS	SOURCE	WEB	311CASE_ID	NA
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Construction	Inspector	BL
Facility_Contac	CONST SERVICES-COA	Facility_Ph_No			250-2704
Suspected_Facility	STORM INLET	EVENT_ID	834	is it in gis	-1

Complaint	CONCRETE WASHOUT AND SLURRY, MOSTLY FROM WASHING OUT A CONCRETE TRUCK.
Field Observation	THERE WAS A NEW ADA RAMP JUST BUILT AT THIS LOCATION AND THERE WAS CEMENT RESIDUES IN THE INLET.
Initial Action	INSPECTOR ASKED THE CONSTRUCTION SERVICES TO INVISTIGATE THIS AND PREVENT ANY FUTURE CONCRETE WASH INTO STORM INLET.



Address	MCMAHON AND GOLF COURSE NW

Inspection Date	8/14/2019			Reporting_Date	8/7/2019
Customer	LIZ LOPEZ	SOURCE	311	311CASE_ID	190807-001030
Customer_Ph	717-6788			e_mail	elopez46@hotmail.com
X_Link		Complaint type	Trash	Inspector	BL
Facility_Contac	NA	Facility_Ph_No		na	
Suspected_Facility	VACANT LAND	EVENT_ID	835	is it in gis	-1

Complaint	CALLER REQUESTING CLEAN UP AS THERE IS A MATTRESS AND OTHER GARBAGE AND DEBRIS NEAR THE "DIP"
Field Observation	INSPECTOR DID NOT SEE ANY OF THE REPORTED ITEMS AROUND THIS AREA
Initial Action	INSPECTER LEFT A PHONE MESSAGE FOR THE CALLER TO TELL THE EXACT LOCATION OF THE DUMP BUT SHE DID NOT RETURNED THE CALL.



Address	EL TACO DEL MEXICO FOOD TRUCK AT 1701 4TH ST SW

Inspection Date	8/16/2019			Reporting_Date	8/14/2019
Customer	ANONYMOUS	SOURCE	311	311CASE_ID	190814-000126
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Cooking Grease	Inspector	BL
Facility_Contac	NA			Facility_Ph_No	261-2479
Suspected_Facility	EL TACO DEL MEXICO FOOD TRU			EVENT_ID	837
is it in gis	-1				

Complaint	FOOD TRUCK DUMPING GREASE INTO THE DRAIN IN FRONT OF ADDRESS PROVIDED. EL TACO DEL MEXICO.
Field Observation	NO ONE WAS PRESENT AT THIS ADDRESS AND THE PH. NUMBER HAS NO VOICE MESSAGE BOX.THE TRUCK WAS PARKED AT 1701 4TH SW BUT THE ADDRESS ON THE TRUCK WAS 1110 4TH ST SW.
Initial Action	THE INSPECTOR WILL KEEP TRYING TO CONTACT WITH THIS BUSINESS



Address	MIRABELLA COMMUNITY AT PIKE AND SOUTHERN SE

Inspection Date	8/15/2019			Reporting_Date	8/15/2019
Customer	BYRON LUERAS	SOURCE	DRIVE BY	311CASE_ID	NA
Customer_Ph	768-3882			e_mail	balueras@cabq.gov
X_Link		Complaint type	Nusiance Water	Inspector	BL
Facility_Contac	MANAGER			Facility_Ph_No	888-4479
Suspected_Facility	MIRABELLA COMMUNITY			EVENT_ID	836
is it in gis	-1				

Complaint	IRRIGATION WATER IS RUNING ALONG THE GUTTER
Field Observation	INSPECTOR NOTICED THAT THERE IS A BROKEN IRRIGATION PIPE AT THIS LOCATION
Initial Action	INSPECTOR ASKED THE MANAGER TO FIX THE PIPE.



Address	RV AT YALE AND SAINT CYR SE

Inspection Date	8/21/2019			Reporting_Date	8/19/2019
Customer	ANONYMOUS	SOURCE	311	311CASE_ID	190819-002121
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Sewage	Inspector	BL
Facility_Contac	OWNER			Facility_Ph_No	na
Suspected_Facility	RV			EVENT_ID	838
is it in gis	-1				

Complaint	RESIDENT DUMPING SEWAGE INTO STREET
Field Observation	THERE WAS WHITE DRY RESIDUE ALONG THE GUTTER AT THIA AREA. THE OWNER MISTAKENLY WASHED SOME RESIDUAL SEWAGE FROM THE RV.
Initial Action	INSPECTOR ASKED THE OWNER TO STOP WASHING ANY SEWAGE INTO THE STREET AND GAVE HIM SOME OF THE POLLUTION PREVENTION BROCHURES.



Address	**8225 WASHINGTON NE**

Inspection Date	8/23/2019			Reporting_Date	8/23/2019
Customer	ANONYMOUS	SOURCE	PH CALL	311CASE_ID	NA
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Hazardous Material	Inspector	BL
Facility_Contac	CONTRACTOR			Facility_Ph_No	na
Suspected_Facility	BUSINESS			EVENT_ID	839
is it in gis	-1				

Complaint	DUMPING 500 GALLON MUDY WATER ONTO A STORM DRAIN BY A TANKER TRUCK
Field Observation	THERE WAS INDICATION OF THE DUMP
Initial Action	INSPECTOR ASKED THE CONTRACTOR TO STOP DUMPING ANY LIQUID INTO STORM INLETS.



Address	7TH AND MARQUETTE NW

Inspection Date	9/24/2019			Reporting_Date	8/28/2019
Customer	SANDY HANDLEY	SOURCE	311	311CASE_ID	190828-000094
Customer_Ph	980-3638			e_mail	shandley@cabq.gov
X_Link		Complaint type	Sewage	Inspector	MA
Facility_Contac	NA	Facility_Ph_No			na
Suspected_Facility	RV	EVENT_ID	840	is it in gis	-1

Complaint	RV PARKED AT STORM DRAIN DUMPING SOMETHING INTO THE DRAIN FROM THEIR HOSE.
Field Observation	THE RV HAS LEFT THIS LOCATION. THERE WAS NO SEWAGE IN THE INLET.
Initial Action	INSPECTOR PLACED NO DUMP SIGNS ON 4 INLETS AT THIS INTERSECTION



Address	4622 FAIRFAX NW

Inspection Date	9/6/2019			Reporting_Date	9/6/2019
Customer	ANONYMOUS	SOURCE	PH CALL	311CASE_ID	NA
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Grey Water	Inspector	MA
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	841
is it in gis	-1				

Complaint	DIRTY WATER COMING OUT OF A PIPE AND GOING TO THE STREET AT THIS ADDRESS
Field Observation	DIRTY WATER COMING OUT OF A PIPE AND GOING TO THE STREET AT THIS ADDRESS
Initial Action	THIS ADDRESS IS OUT OF CITY LIMIT. THE CALL FORWARDED TO THE COUNTY PUBLIC WORKS



Address	**10508 RAFAEL SW**

Inspection Date	9/18/2019			Reporting_Date	9/17/2019
Customer	JOSH LUCERO	SOURCE	311	311CASE_ID	190917-000784
Customer_Ph	250-4293			e_mail	jplucero@cabq.gov
X_Link		Complaint type	Trash	Inspector	MA
Facility_Contac	RESIDENT	Facility_Ph_No			na
Suspected_Facility	HOME	EVENT_ID	843	is it in gis	-1

Complaint	CITIZEN HAS PLACED A WATTLE BY THE CURB AND IS PARKING ON IT.
Field Observation	THE RESIDENT PLACED 6 FT STRAW WATTLE IN THE GUTTER AND USES IT AS A RAMP TO DRIVE TO HIS GARAGE.
Initial Action	UNABLE TO TALK TO THE RESIDENT EVEN AFTER SEVERAL ATTEMPT. DISTRIBUTED POLLUTION PREVENTION BROCHURES AT THIA AREA.



Address	**5009 BASIN NE**

Inspection Date	9/25/2019			Reporting_Date	9/19/2019
Customer	ANONYMOUS	SOURCE	311	311CASE_ID	190919-002102
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Construction	Inspector	VV
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	844
is it in gis	-1				

Complaint	A CONTRACTOR IN WHITE TRUCK IS DUMPING CHEMICALS INTO STORM DRAIN 5:45 ON 9/19. CONTRACTOR WAS DOING WORK AT CALDESAC HOME AND PULLED INTO DRIVAWAY WHILE DUMPING.
Field Observation	INSPECTOR OBSERVED DRY CEMENT RESIDUE ALONG THE GUTTER. IT LOOKS LIKE THE CONTRACTOR HAS WASHED OFF ALL THE CEMENT FROM TOOLS AND LET IT GO TO THE GUTTER
Initial Action	UNABLE TO TALK TO THE RESIDENT. DISTRIBUTED POLLUTION PREVENTION BROCHURES AT THIS AREA.



Address	**10120 CENTRAL SW**

Inspection Date	9/26/2019			Reporting_Date	9/26/2019
Customer	MARIELA B	SOURCE	WEB	311CASE_ID	NA
Customer_Ph	884-1468			e_mail	mailto:info@uptownpg.co
X_Link		Complaint type	Trash	Inspector	VV
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	VACANT LAND			EVENT_ID	845
				is it in gis	-1

Complaint	BEHIND THE DAY CARE THERE ARE HOMELESS CAMPING OUT AND PEOPLE DUMPING MATTRESSES AND CLOTHES AS WELL AS TRASH
Field Observation	THERE WERE A LOT OF TRASH AND DEBRIES ON THIS VACANT LAND.
Initial Action	INSPECTOR REPORTED TO 311 TO NOTIFY THE VACANT LAND OWNER TO CLEAN UP THE LAND, , ID # 190926-000795



Address	GENEVA-PARADISE NW

Inspection Date	10/2/2019			Reporting_Date	10/2/2019
Customer	VV	SOURCE	PH CALL	311CASE_ID	NA
Customer_Ph				e_mail	
X_Link		Complaint type	Grey Water	Inspector	VV
Facility_Contac	NA			Facility_Ph_No	
Suspected_Facility	INLET			EVENT_ID	846
is it in gis	-1				

Complaint	DUMPING GREY WATER IN TO INLET
Field Observation	A CONTRACTOR IS DUMPING GREY WATER IN TO INLET
Initial Action	PLACED TWO NO DUMP SIGNS ON THE INLET



Address	BRANDYWOOD PARK APTS AT 5851 ANDERSON SE

Inspection Date	10/7/2019			Reporting_Date	10/7/2019
Customer	BRANDYWOOD PAR	SOURCE	EMAIL	311CASE_ID	NA
Customer_Ph	892-7246			e_mail	
X_Link		Complaint type	Dog Poops	Inspector	BL
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	BRANDYWOOD PARK APARTME			EVENT_ID	847
is it in gis	-1				

Complaint	CORRALES HARVEST FEST REQUEST FOR DOG POOP SIGNS
Field Observation	NA
Initial Action	INSPECTOR DELIVERED 5 POSTERS.



Address	711 BRANDING IRON SE

Inspection Date	10/7/2019			Reporting_Date	10/7/2019
Customer	VERMA VILLEGAS	SOURCE	DRIVE BY	311CASE_ID	NA
Customer_Ph				e_mail	
X_Link		Complaint type	Nusiance Water	Inspector	VV
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	848
is it in gis	-1				

Complaint	BROKEN IRRIGATION SPRINKLER AND WATER RUNNING OUT TO THE STREET.
Field Observation	WATER RUNNING OUT OF THIS ADDRESS FROM A BROKEN SPRINKLER
Initial Action	INFORMED THE RESIDENT OF THE PROBLEM.



Address	609 ENCINO PL NE

Inspection Date	10/8/2019			Reporting_Date	10/8/2019
Customer	MARIA GALVEZ	SOURCE	EMAIL	311CASE_ID	NA
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Dog Poops	Inspector	VV
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	ENCINO MEAL SITE			EVENT_ID	849
is it in gis	-1				

Complaint	SHE SIGNED UP AT CORRALES HARVEST FEST TO RECEIVE A FEW POOP FAIRY SIGN
Field Observation	
Initial Action	INSPECTOR DELIVERED 2 SIGNS TO THIS ADDRESS



Address	MONTERRA APARTMENTS AT 4217 LOUISIANA NE

Inspection Date	10/9/2019			Reporting_Date	10/9/2019
Customer	MA	SOURCE	STOP BY	311CASE_ID	NA
Customer_Ph				e_mail	
X_Link		Complaint type	Trash	Inspector	MA
Facility_Contac	MANAGER			Facility_Ph_No	651-3026
Suspected_Facility	MONTERRA APARTMENTS			EVENT_ID	852
is it in gis	-1				

Complaint	TRASH SPREAD AROUND THE CONSTRUCTION DUMPSTER
Field Observation	TRASH SPREAD AROUND THE CONSTRUCTION DUMPSTER
Initial Action	INSPECTOR ASKED THE MANAGER TO CLEAN UP THE AREA AND DISTRIBUTED POLLUTION PREVENTION BROCHURES AT THIS AREA.



Address	**1716 BARBED WIRE SW**

Inspection Date	10/14/2019			Reporting_Date	10/14/2019
Customer	HORTENCIA MEDRA	SOURCE	311	311CASE_ID	191014-000576
Customer_Ph	352-0471			e_mail	na
X_Link		Complaint type	OIL	Inspector	MA
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	851
is it in gis	-1				

Complaint	OIL SPILL FROM CAR OIL. TRUCK BEING WORKED ON, ON THE SIDEWALK, AND IT LEAKED A LOT OF OIL WHICH WENT OVER THE NEIGHBORS SIDEWALK AND INTO THE GUTTER.
Field Observation	THERE WAS A LOT OF SPILLED OIL ALONG THEGUTTER COMING FROM THIS TRUCK
Initial Action	IT WAS AN ABANDOND TRUCK. INSPECTOR REPORTED TO 311 TO REMOVE THE VEHICLE. INSPECTOR DISTRIBUTED POLLUTION PREVENTION BROCHURES AT THIS STREET.



Address	OLD K MART LOT AT INDIAN SCHOOL AND CARLISLE NE

Inspection Date	10/22/2019			Reporting_Date	10/17/2019
Customer	DION FITZGERALD	SOURCE	WEB	311CASE_ID	NA
Customer_Ph	717 1075			e_mail	mailto:fitzgeralddion@yaho
X_Link		Complaint type	Sewage	Inspector	
Facility_Contac	NA	Facility_Ph_No		na	
Suspected_Facility	PRIVATE LOT	EVENT_ID	853	is it in gis	-1

Complaint	HUMAN WASTE. FROM RV'S PARKED AROUND OLD K MART BUILDING. IN THE FRONT OF BUILDING WHERE DOORS ARE. ITS RUNNING DOWN LOT. CALL 242 COPS 311. ???????.
Field Observation	INSPECTOR OBSERVED 3 RVS PARKED ON THE LOT WITH BIG DOGS GUARDING THEM. THERE WERE SEVERAL BIG OIL SPOTS ON THIS LOT AND SEVERAL PLASTIC CONTAINER FULL OF UNKNOWN LIQUID.
Initial Action	INSPECTOR ASKED THE CLEAN CITY TO CLEAN UP THE AREA AND THEY DID



Address	SMITH'S AT 4016 LOUISIANA NE

Inspection Date	9/24/2019			Reporting_Date	10/24/2019
Customer	ARTHUR MARTINEZ	SOURCE	EMAIL	311CASE_ID	NA
Customer_Ph	289-3457			e_mail	mailto:acmartinez@abcwua
X_Link		Complaint type	Sewage	Inspector	VV
Facility_Contac	MANAGERE			Facility_Ph_No	884-1860
Suspected_Facility	SMITH'S			EVENT_ID	854
is it in gis	-1				

Complaint	PRIVATE SANITARY LINE OVERFLOW
Field Observation	A CLOGED PRIVATE SANITARY LINE RUNING TO THE STREET
Initial Action	THE MANAGER CONTACTED ROTOR ROOTER TO UNPLUG THE LINE, AND CLEAN HARBORS TO CLEAN UP AND DISINFECT THE AFFECTED AREAS. THE CLEAN UP WAS DONE NEXT DAY



Address	**10805 RIO PUERCO SW**

Inspection Date	10/30/2019			Reporting_Date	10/27/2019
Customer	ANONYMOUS	SOURCE	311	311CASE_ID	191027-000389
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	OIL	Inspector	MA
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	855
is it in gis	-1				

Complaint	HOME OWNER POURING ANTIFREEZE AND OTHER HAZARDOUS WASTE INTO STORM DRAIN AT HOME.
Field Observation	THERE WAS A BIG OIL SPILL COVERED WITH DIRT IN FRONT OF THE TRUCK
Initial Action	THE INSPECTOR ASKED THE RESIDENT TO CLEAN UP THE AREA AND DISTRIBUTED POLLUTION PREVENTION BROCHURES AT THIS AREA.



Address	**591 5TH NW**

Inspection Date	10/28/2019			Reporting_Date	10/28/2019
Customer	MICHAEL ARCHULET	SOURCE	DRIVE BY	311CASE_ID	NA
Customer_Ph	221-1605			e_mail	mailto:mlarchuleta@cabq.g
X_Link		Complaint type	Nusiance Water	Inspector	MA
Facility_Contac	WA			Facility_Ph_No	842-9287
Suspected_Facility	WATER LINE			EVENT_ID	856
is it in gis	-1				

Complaint	WATER LINE BREAK
Field Observation	WATER WAS COMING OUT OF CRACKS THROUGH THE PAVEMENT INDICATING WATER LINE BREAK
Initial Action	NOTIFIED WA.



Address	**6408 BAKER NE**

Inspection Date	10/28/2019			Reporting_Date	10/28/2019
Customer	DONALD PINNOCK	SOURCE	PN CALL	311CASE_ID	NA
Customer_Ph	NA			e_mail	mailto:birdiedon@comcast.
X_Link		Complaint type	Trash	Inspector	VV
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	850
is it in gis	-1				

Complaint	DUMPING TRASH INTO THE ARROYO
Field Observation	THERE WAS A BIG PILE OF TRASH IN THE CHANNEL BEHIND THIS ADDRESS
Initial Action	INSPECTOR ASKED THE RESIDENT TO STOP DUMPING ANY TRASH INTO THE ARROYO IN THE FUTURE.



Address	1228 HUPMOBILE NE						
Inspection Date	10/31/2019			Reporting_Date	10/29/2019		
Customer	GLORIA DRAYER	SOURCE	EMAIL	311CASE_ID	NA		
Customer_Ph	275-6638			e_mail	gloria@yogasimpleandsacr		
X_Link		Complaint type	Dog Poops	Inspector	BL		
Facility_Contac	GLORIA DRAYER			Facility_Ph_No	275-6638		
Suspected_Facility	HOME			EVENT_ID	857	is it in gis	-1

Complaint	A YARD SIGN PLEASE. HOW DO I GO ABOUT GETTING SOME? ONE FOR THE FOOTHILLS I HIKE IN AND ONE FOR MY YARD.
Field Observation	NA
Initial Action	2 SIGNS WERE DELIVERED



Address	ALZHEIMER'S ASSO. AT 9500 MONTGOMERY NE

Inspection Date	11/6/2019			Reporting_Date	11/6/2019
Customer	VERMA VILLEGAS	SOURCE	DRIVE BY	311CASE_ID	NA
Customer_Ph	228-1835			e_mail	vvillegas@cabq.gov
X_Link		Complaint type	Paint	Inspector	VV
Facility_Contac	ALEJANDRO LOPEZ			Facility_Ph_No	823-2400
Suspected_Facility	BOB'S PAINTING INC			EVENT_ID	858
is it in gis	-1				

Complaint	OPEN PAINT CANS AND PAINTS COVERING SIDEWALK AT THIS ADDRESS
Field Observation	OPEN PAINT CANS AND PAINTS COVERING SIDEWALK AT THIS ADDRESS
Initial Action	INSPECTOR ASKED THE CONTRACTOR TO COVER HIS PAINT CANS AND CLEAN UP ALL PAINTS ON THE SIDEWALK AND THEY DID. SHE ALSO GAVE THEM SOME POLLUTION PREVENTION BROCHURES.



Address	**2ND AND MONTANO NW**

Inspection Date	11/7/2019			Reporting_Date	11/6/2019
Customer	DAVE HARRISON	SOURCE	EMAIL	311CASE_ID	NA
Customer_Ph	857-8053			e_mail	dsharrison@cabq.gov
X_Link		Complaint type	Sewage	Inspector	VV
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	8000 GAL FLUID TANKER			EVENT_ID	859
is it in gis	-1				

Complaint	A LARGE NON-POTABLE WATER TANKER OVERTURNED AT THIS LOCATION CARRING POSIBLY SANITARY WASTE.
Field Observation	THERE WAS A BIG FLUID PONDING AREA NEAR THE INLET, BUT THE INLET WAS PROTECTED BY ABSORBENT AND DIRT.THERE WAS A VACUM TRUCK SUCKING THE FLUID.
Initial Action	WA STARTED CLEAN UP AND DISINFECT THE AREA



Address	**14TH & SILVER NW**

Inspection Date	11/18/2019			Reporting_Date	11/6/2019
Customer	LUIS ORDONEZ-OLIV	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph	289-3310			e_mail	
X_Link		Complaint type	Foul Odor	Inspector	VV
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	STORM DRAIN			EVENT_ID	864
is it in gis	-1				

Complaint	STORM DRAIN INLET AT THE NW OF THIS LOCATION SMELLED OF SEWAGE. THE CONCERN HERE WOULD BE THAT THE STORM DRAIN MAY BE INADVERTENTLY CONNECTED TO THE SANITARY SEWER.
Field Observation	INSPECTORS WERE UNABLE TO FIND A CUSE FOR THE SEWAGE ODOR.
Initial Action	INSPECTORS WILL CHECK A FEW MHS IN THE FUTURE TO SEE IF THERE IS ANY SUCH CONNECTION.



Address	2812 ESPANOLA NE

Inspection Date	11/12/2019			Reporting_Date	11/11/2019
Customer	ANONYMOUS	SOURCE	WEB	311CASE_ID	NA
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Leaves	Inspector	MA
Facility_Contac	RESIDENT	Facility_Ph_No			na
Suspected_Facility	HOME	EVENT_ID	860	is it in gis	-1

Complaint	NEIGHBOR JUST BLOWS YARD WASTE INTO STREET AND GUTTERS
Field Observation	A LOT OF FALLING TREE LEAVES ALONG THE GUTTER AT THIS LOCATION.
Initial Action	UNABLE TO TALK TO THE RESIDENT, INSPECTOR LEFT POLLUTION PREVENTION BTOCHURES AT THIS AREA.



Address	**2733 JOHNVILLE PL NE**

Inspection Date	11/12/2019			Reporting_Date	11/11/2019
Customer	CATHY GINA	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	293-2992			e_mail	mailto:cathygina@gcservice
X_Link		Complaint type	Trash	Inspector	MA
Facility_Contac	MANAGER			Facility_Ph_No	880-1819
Suspected_Facility	HEI			EVENT_ID	861
is it in gis	-1				

Complaint	DIRT PILES, CONSTRUCTION MATERIAL/CONCRETE, GRAVEL
Field Observation	DIRT AND CONSTRICTION DEBRIS PILED AT THE END OF THE STREET.
Initial Action	ASKED HEI BUSINESS TO REMOVE THE DEBRIS THAT THEY DUMPED.



Address	DE ANZA MOTOR LODGE AT 4305 CENTRAL SE

Inspection Date	11/13/2019			Reporting_Date	11/14/2019
Customer	CHRISTINA RHODERI	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph	507-9879			e_mail	mailto:christina@thedeanz
X_Link		Complaint type	Dog Poops	Inspector	MA
Facility_Contac	MANAGER			Facility_Ph_No	507-9879
Suspected_Facility	DE ANZA MOTOR LODGE			EVENT_ID	862
is it in gis	-1				

Complaint	WE WOULD LIKE TO POST A FEW OF THE POOP FAIRY SIGNS AROUND OUR PROPERTY. IS IT POSSIBLE TO GET A COUPLE?
Field Observation	NA
Initial Action	INSPECTOR DELIVERED 2 SIGNS.



Address	5TH AND MARQUETTE NW

Inspection Date	11/15/2019			Reporting_Date	11/15/2019
Customer	VERMA VILLEGAS	SOURCE	DRIVE BY	311CASE_ID	DRIVE BY
Customer_Ph	228-1835			e_mail	vvillegas@cabq.gov
X_Link		Complaint type	Construction	Inspector	VV
Facility_Contac	SUPERVISOR	Facility_Ph_No			
Suspected_Facility	KELLY CABLE			EVENT_ID	863
is it in gis	-1				

Complaint	CONSTRUCTION WORK NEAR UNCOVERED STORM INLET
Field Observation	CONSTRUCTION WORK NEAR UNCOVERED STORM INLET
Initial Action	INSPECTOR ASKED THE SUPERVISOR TO COVER THE INLET AND THEY DID.



Address	LADERA AND LAKEWOOD

Inspection Date	11/18/2019			Reporting_Date	11/18/2019
Customer	VERMA VILLEGAS	SOURCE	DRIVE BY	311CASE_ID	DRIVE BY
Customer_Ph	228-1835			e_mail	vvillegas@cabq.gov
X_Link		Complaint type	Construction	Inspector	VV
Facility_Contac	SUPERVISOR			Facility_Ph_No	na
Suspected_Facility	MWI			EVENT_ID	865
is it in gis	-1				

Complaint	DIRTY WATER LEAVING THE WORK SITE AND ENTERING STORM INLET.
Field Observation	DIRTY WATER LEAVING THE WORK SITE AND ENTERING STORM INLET.
Initial Action	INSPECTOR ASKED THE SUPERVISOR TO STOP DRAINING TO THE INLET AND THEY DID. ALSO SHE GAVE THEM SOME POLLUTION PREVENTION BROCHURES.



Address	**11901 ALLISON NE**

Inspection Date	12/2/2019			Reporting_Date	11/27/2019
Customer	ANONYMOUS	SOURCE	311	311CASE_ID	191127-001151
Customer_Ph	NA			e_mail	
X_Link		Complaint type	Paint	Inspector	MA
Facility_Contac	RESIDENT			Facility_Ph_No	
Suspected_Facility	HOME			EVENT_ID	866
is it in gis	-1				

Complaint	DUMPING PAINT INTO STORM DRAIN
Field Observation	INSPECTOR DID NOT SEE ANY PAINT ALONG THE GUTTER.
Initial Action	INSPECTOR DISTRIBUTED POLLUTION PREVENTION BROCHURES AT THIS NEIGHBORHOOD.



Address	STARBUCKS AT 111 EUBANK BLVD SE

Inspection Date	12/3/2019			Reporting_Date	12/2/2019
Customer	ANONYMOUS	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Sewage	Inspector	VV
Facility_Contac	MANAGER			Facility_Ph_No	na
Suspected_Facility	STARBUCKS			EVENT_ID	867
is it in gis	-1				

Complaint	SANITARY LINE OVERFLOW TO STREET
Field Observation	THE SEWAGE WAS RUNING ALONG THE GUTTER FOR A BLOCK
Initial Action	INSPECTOR ASKED THE MANAGER TO FIX THE CLOGED SANITARY LINE AND THE DID.



Address	**WYOMING AND COPPER NE**

Inspection Date	12/2/2019			Reporting_Date	12/2/2019
Customer	ANONYMOUS	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Construction	Inspector	VV
Facility_Contac	SUPERVISOR			Facility_Ph_No	884-2088
Suspected_Facility	DEL RIO CONSTRUCTION			EVENT_ID	869
is it in gis	-1				

Complaint	DIRTY WATER LEAVES DIGGING SITES AND ENTER THE STORM INLETS.
Field Observation	DIRT WATER LEAVES DIGGING SITES AND ENTER THE STORM INLETS.
Initial Action	INSPECTOR ASKED THE CONTRACTOR TO STOP THE DRAINING WATER AND PROTECT THE INLETS.



Address	8015 LAVA REACH NW				
Inspection Date	12/2/2019			Reporting_Date	12/3/2019
Customer	DOLORES ESPINOSA	SOURCE	EMAIL	311CASE_ID	
Customer_Ph	NA			e_mail	doddie.espinosa@gmail.co
X_Link		Complaint type	Dog Poops	Inspector	MA
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	868
is it in gis	-1				

Complaint	PLEASE BE ADVISED THAT WE LIVE IN THE PARKWEST NEIGHBORHOOD AND SEE DOG POOP ALL ALONG LAVA BLUFF AVENUE. WOULD IT BE POSSIBLE TO GET ABOUT (6) OF THESE SIGNS TO PUT ALONG THIS ROAD?
Field Observation	NA
Initial Action	INSPECTOR DELIVERED 6 SIGNS



Address	LEYENDECKER PS AT 6801 MONTGOMERY NE

Inspection Date	12/5/2019			Reporting_Date	12/5/2019
Customer	MA & VV	SOURCE	DRIVE BY	311CASE_ID	DRIVE BY
Customer_Ph				e_mail	na
X_Link		Complaint type	Nusiance Water	Inspector	VV &M
Facility_Contac	CREW ON SITE			Facility_Ph_No	na
Suspected_Facility	WA PUMP STATION			EVENT_ID	870
is it in gis	-1				

Complaint	36 INCH PIPE BURST AT THIS FACILITY
Field Observation	WATER FLOWING OUT OF THIS PUMP STATION
Initial Action	WA CREW WAS WORKING TO FIX IT.



Address	1005 MARQUETTE NW

Inspection Date	12/6/2019			Reporting_Date	12/6/2019
Customer	WA	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph				e_mail	
X_Link		Complaint type	Grey Water	Inspector	VV & M
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	871
is it in gis	-1				

Complaint	POSSIBLE CAR WASHING SIDE JOB BUSINESS BEING CONDUCTED OUT OF A RESIDENCE
Field Observation	NO CAR WASHING ACTIVITIES WERE OBSERVED OR LOCATED. A SMALL PORTION OF THE DRIVEWAY WAS WET AND MINOR POOLING OF WATER WAS VISIBLE.
Initial Action	NO ACTION



Address	5TH AND BELLROSE NW

Inspection Date	12/10/2019			Reporting_Date	12/9/2019
Customer	BONNIE ROMERO	SOURCE	311	311CASE_ID	191209-000623
Customer_Ph	304-6101			e_mail	reckaway690@gmail.com
X_Link		Complaint type	Trash	Inspector	VV
Facility_Contac	NA	Facility_Ph_No		na	
Suspected_Facility	INLET	EVENT_ID	872	is it in gis	-1

Complaint	SHOVING SOMETHING IN THE INLET.
Field Observation	OBSERVED SOME TRASH ALONG THE GUTTER
Initial Action	INSPECTOR DISTRIBUTED POLLUTION PREVENTION BROCHURES AT THIS AREA.



Address	VECENERGY AT 3200 BROADWAY SE

Inspection Date	12/11/2019			Reporting_Date	12/11/2019
Customer	SARAH WEBB	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph	848-1582			e_mail	mailto:swebb@bernco.gov
X_Link		Complaint type	Construction	Inspector	MA
Facility_Contac	SUPERVISOR			Facility_Ph_No	246-4402
Suspected_Facility	VECENERGY OIL TERMINAL			EVENT_ID	873
is it in gis	-1				

Complaint	I NOTICED AN ILLICIT DISCHARGE TODAY WHEN DRIVING PAST VECENERGY AT 3200 BROADWAY SE IN THE CITY'S JURISDICTION. IT APPEARS TO BE CONCRETE WASHOUT THAT HAS LEFT VECENERGY PROPERTY AND ENTERED THE ROW.
Field Observation	A MODERATE AMOUNT OF CONCRETE WASHOUT WAS OBSERVED ON THE WEST SIDE OF THE PROPERTY AND DRAINING INTO THE RIGHT OF WAY.
Initial Action	INSPECTOR ASKED THE SITE SUPERVISOR TO CLEAN UP THE ARE AND THEY DID.



Address	WYOMING TERRACE MOBILE HOME PARK AT 9000 ZUNI SE

Inspection Date	12/11/2019			Reporting_Date	12/11/2019
Customer	ABCWUA	SOURCE	PH CALL	311CASE_ID	PH CALL
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Sewage	Inspector	MA
Facility_Contac	MANAGER			Facility_Ph_No	(435) 339-7103
Suspected_Facility	MOBILE HOME PARK			EVENT_ID	874
is it in gis	-1				

Complaint	SEVERAL SANITARY SEWER OVERFLOWE
Field Observation	MULTIPLE OVERFLOW LOCATIONS WERE LOCATED AND OBSERVED ON THE WEST SIDE OF THE PROPERTY, WHICH HAD FLOWED OUT TO WYOMING BLVD AND INTO THE NEAREST INLET. AT THIS TIME THE FLOW WAS NOT ACTIVE
Initial Action	THE MANAGER WAS AWARE OF THE OVERFLOW AND HAD CONTACTED A PLUMBING CO. TO FIX THE PROBLEM. ALSO SHE CONTACTED WITH A COMPANY TO CLEAN UP AND DISINFECT THE AREA.



Address	**STARBUCKS AT 111 EUBANK SE**

Inspection Date	12/12/2019			Reporting_Date	12/11/2019
Customer	SHELLIE EATON	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph				e_mail	
X_Link		Complaint type	Sewage	Inspector	VV
Facility_Contac	DISTRICT MANAGER			Facility_Ph_No	328-7211
Suspected_Facility	STARBUCKS			EVENT_ID	875
is it in gis	-1				

Complaint	SANITARY OVERFLOW
Field Observation	SEWAGE WAS OVERFLOWING FROM CLEAN OUT POINT AND RUNNING ALONG THE GUTTER
Initial Action	INSPECTOR ASKED THE MANAGER TO FIX THE OVERFLOW AND GAVE HER SOME POLLUTION PREVENTION BROCHURES.



Address	316 PARSIFAL ST NE

Inspection Date	12/13/2019			Reporting_Date	12/12/2019
Customer	SAMANTHA HUNT	SOURCE	311	311CASE_ID	191212-001942
Customer_Ph	234-5119			e_mail	samanthah76@gmail.com
X_Link		Complaint type	OIL	Inspector	VV
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	876
is it in gis	-1				

Complaint	OIL DUMPED IN DRIVEWAY RAN INTO GUTTER AND DOWN STREET TO DRAIN. OWNER FIXING TRUCK IN DRIVEWAY WHERE COMING FROM AT ADDRESS.
Field Observation	THERE WERE SEVERAL OIL STAINS AT THIS AREA. ALSO THERE WAS A BIG OIL SPOT COVERED WITH DIRT.
Initial Action	INSPECTOR ASKED THE RESIDENT TO CLEAN UP THE AREA AND DISTRIBUTED POLLUTION PREVENTION BROCHURES AT THIS NEIGHBORHOOD.



Address	ROSE GARDEN AT 6541 PARADISE NW

Inspection Date	1/17/2020			Reporting_Date	12/15/2019
Customer	PATRICK CHAVEZ	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph	362-7342			e_mail	pchavez@amafca.org
X_Link		Complaint type	Cooking Grease	Inspector	MA
Facility_Contac	MANAGER			Facility_Ph_No	615-5575
Suspected_Facility	ROSE GARDEN RESTURANT			EVENT_ID	877
is it in gis	-1				

Complaint	DUMPING COOKING GREASE TO THE STREET
Field Observation	THE AREA WAS COVERED WITH A LOT OF COOKING GREASE SPOTS.
Initial Action	INSPECTOR ASKED THE MANAGER TO CLEAN UP THE AREA AND GAVE HIM POLLUTION PREVENTION BROCHURES.



Address	GLENDALE AND SAN PEDRO

Inspection Date	12/19/2019			Reporting_Date	12/19/2019
Customer	KARLA BUSH	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	262-0769			e_mail	kfmelendez@gmail.com
X_Link		Complaint type	Construction	Inspector	VV
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	ARROYO-DITCH			EVENT_ID	878
is it in gis	-1				

Complaint	CEMENT AND CONSTRUCTION MATERIAL COMING OUT OF TIERRA SERNEA DIVISION BEING BUILT BY PULTE. I NOTIFIED THE HOA BUT THEY DID NOT CLEAN IT UP. IT IS GOING ONTO GLENDALE AVE AND RUNNING DOWN THE STREET. AFTER THE LAST RAIN THE DRAIN AT GLENDALE AND SAN PEDRO
Field Observation	THE DITCH WAS FILLED WITH DIRT
Initial Action	ASKED ARROYO MAINTAINANCE TO CLEAN UP THE DITCH AND THEY DID



Address	SAN LORENZO AND 9TH ST NW

Inspection Date	12/23/2019			Reporting_Date	12/20/2019
Customer	CAROL SALAZAR	SOURCE	311	311CASE_ID	191220-000228
Customer_Ph	203-9005			e_mail	bossy1st@gmail.com
X_Link		Complaint type	Sewage	Inspector	MA
Facility_Contac	NA	Facility_Ph_No			na
Suspected_Facility	INLETS	EVENT_ID	879	is it in gis	-1

Complaint	TRANSIENT CAMPED OUT AND USING STORM DRAIN AS RESTROOM.
Field Observation	THERE WERE TWO TRANSIENTS PRESENT AT THIS AREA. NO TRASH OR FECES WERE OBSERVED.
Initial Action	INTERSECTION



Address	**9800 MONTGOMERY NE**

Inspection Date	12/23/2019			Reporting_Date	12/21/2019
Customer	BRYAN WOLFE -WA	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph				e_mail	
X_Link		Complaint type	Sewage	Inspector	VV
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	BUSINESS			EVENT_ID	880
is it in gis	-1				

Complaint	THE ISSUE IS THAT SEWER, AT TIMES, BACKS UP AND MAKES IT INTO OUR STORM DRAIN.
Field Observation	INSPECTOR DID NOT SEE ANY SANITARY OVERFLOW.
Initial Action	NO ACTION



Address	APARTMENT COMPLEX AT 504 CANDELARIA NW

Inspection Date	12/24/2019			Reporting_Date	12/24/2019
Customer	A. CHRIS MARTINEZ-	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph	803-1286			e_mail	acmartinez@abcwua.org
X_Link		Complaint type	Sewage	Inspector	VV
Facility_Contac	MADDOX MANAGEMEN			Facility_Ph_No	242-0989
Suspected_Facility	APARTMENT COMPLEX			EVENT_ID	881
is it in gis	-1				

Complaint	SANITARY SEWER OVEFLOW
Field Observation	SANITARY SEWER OVEFLOW
Initial Action	INSPECTOR ASKED THE MANAGER TO FIX THE OVERFLOW AND THEY DID.



Address	AMAFCA FACILITY AT 5050 BROADWAY SW

Inspection Date	12/27/2019			Reporting_Date	12/24/2019
Customer	NOLAN BENNETT-A	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph	301-6941			e_mail	mailto:nbennett@amafca.o
X_Link		Complaint type	OIL	Inspector	MA
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	STREET			EVENT_ID	882
is it in gis	-1				

Complaint	OIL DUMP AT THIS LOCATION
Field Observation	THERE WERE SEVERAL OIL CONTAINERS AT THIS LOCATION. ALSO SOME OIL DUMPED OVER AMAFCA'S BARICADES.
Initial Action	INSPECTOR PICKED UP ALL THE OIL CONTAINERS AND DISPOSED THEM.AMAFCA WILL REMOVE THEIR OIL STAINED BARICADES



Address	**STARBUCKS AT 111 EUBANK SE**

Inspection Date	1/31/2020			Reporting_Date	12/31/2019
Customer	VV	SOURCE	DRIVE BY	311CASE_ID	DRIVE BY
Customer_Ph	228-1835			e_mail	vvillegas@cabq.gov
X_Link		Complaint type	Sewage	Inspector	VV
Facility_Contac	MANAGER			Facility_Ph_No	
Suspected_Facility	STARBUCKS			EVENT_ID	883
is it in gis	-1				

Complaint	SANITARY SEWER OVERFLOW
Field Observation	SANITARY SEWER OVERFLOW
Initial Action	INSPECTOR ASKED THE MANAGER TO FIX THE OVERFLOW AND THEY DID.



Address	**6716 LOFTUS NE**

Inspection Date	1/6/2020			Reporting_Date	12/31/2019
Customer	SEECLICKFIX	SOURCE	311	311CASE_ID	191231-000160
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	OIL	Inspector	MA
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	884
is it in gis	-1				

Complaint	HAZARDOUS MATERIAL WITHIN PROPERTY NEXT TO DRIVEWAY
Field Observation	MULTIPLE OIL CONTAINERS AND OIL CATCH PAN ON THE PROPERTY
Initial Action	INSPECTOR WAS UNABLE TO TALK TO THE RESIDENT AFTER SEVERAL ATTEMPT.



Address	ABQ STONEWORKX AT 10110 SNOW HEIGHTS NE

Inspection Date	1/13/2020			Reporting_Date	1/4/2020
Customer	CHALRES SPURGEON	SOURCE	311	311CASE_ID	200104-000413
Customer_Ph	299-8489			e_mail	
X_Link		Complaint type	COLORD LIQUID	Inspector	MA
Facility_Contac	WILL GARCIA			Facility_Ph_No	712-2532
Suspected_Facility	ABQ STONE WORKS			EVENT_ID	885
is it in gis	-1				

Complaint	WHITE LIQUID RUNNING FROM STONE WORKS DOWN ARROYO
Field Observation	THE WHITE LIQUID WAS LOOSE GYPSUM THAT WASHED OFF TO THE ARROYO FROM REPAIR WORKS.
Initial Action	THE INSPECTOR ASKED THE OWNER TO STOP DISCHARGING ANY DIRTY WATER TO THE ARROYO AND CLEAN UP THE ARREA.THEY AGREED TO DO SO.ALSO THE INSPECTOR GAVE HIM POLLUTION PREVENTION BROCHURES.



Address	LA VIDA LLENA APARTMENTS AT 4551 JUAN TABO NE

Inspection Date	1/15/2020			Reporting_Date	1/15/2020
Customer	PAULINA AGUILERA-	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph	289-3155			e_mail	paguilera-eaton@abcwua.o
X_Link		Complaint type	Nusiance Water	Inspector	VV
Facility_Contac	MANAGER			Facility_Ph_No	
Suspected_Facility	LA VIDA LLENA APARTMENTS			EVENT_ID	886
is it in gis	-1				

Complaint	WATER RUNNING DOWN THE STREET ON LAGRIMA DE ORO ALL THE TIME
Field Observation	THERE WAS WATER COMING OUT THROUGH A SIDEWALK CULVERT FROM HAHN PARK. IT WAS THE LEAK FROM COOLING TOWER OF THIS APARTMENT COMPLEX.
Initial Action	THE MANAGER SAID THAT THEY WILL CONNECT THE OVERFLOW WATER FROM COOLING TOWER TO SANITARY LINE IN THE COMING DAYS.



Address	**STINSON & SAGE SW**

Inspection Date	1/16/2020			Reporting_Date	1/15/2020
Customer	VERONICA HERRERA	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph	NA			e_mail	veronicabherrera@gmail.co
X_Link		Complaint type	Construction	Inspector	MA
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	VACANT LOTS			EVENT_ID	887
is it in gis	-1				

Complaint	RUN OFF FROM CONSTRUCTION DEBRIES STORED ON PRIVATE PROPERTES TO THE CITY RIGHT OF WAY.
Field Observation	THIS AREA IS OUT OF CITY LIMIT AND THERE WAS NO RUNOFF FROM THESE STOKE PILES OF DIRT.
Initial Action	NO ACTION



Address	1944 CHEROKEE NW

Inspection Date	1/28/2020			Reporting_Date	1/27/2020
Customer	ANONYMOUS	SOURCE	311	311CASE_ID	200127-001623
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	OIL	Inspector	VM-M
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	888
is it in gis	-1				

Complaint	CAR LEAKING A LOT OF OIL IN TO THE DRAIN. VEHICLE IS A "HUMVEE" RIGHT ON THE CORNER. THERE HAS BEEN SOME DIRT THROWN AROUND IT TO PREVENT THE OIL FROM GOING IN TO THE DRAIN, BUT IT STILL CONTINUES TO GO IN TO THE DRAIN.
Field Observation	THERE WAS A CAR LEAKING TRANSMISSION FLUID AT THIS ADDRESS.
Initial Action	THE INSPECTORS COVERED THE OIL SPOTS WITH OIL ABSORBENT AND ASKED THE RESIDENT TO CLEAN UP THE AREA AND DISTRIBUTED POLLUTION PREVENTION BROCHURES AT THIS AREA. ALSO PLACED A NO DUMP SIGN ON THE CLOSEST STORM INLET.



Address	**RUDY'S BBQ AT 10136 COORS NW**

Inspection Date	1/29/2020			Reporting_Date	1/28/2020
Customer	ARTHUR CHRIS MAR	SOURCE	EMAIL	311CASE_ID	NA
Customer_Ph	803-1286			e_mail	acmartinez@abcwua.org
X_Link		Complaint type	Grey Water	Inspector	
Facility_Contac	MANAGER			Facility_Ph_No	321-4635
Suspected_Facility	RUDY'S BBQ			EVENT_ID	889
is it in gis	-1				

Complaint	I HAVE NOTICED ON MANY OCCASIONS GREY WATER COMING FROM BEHIND RUDY'S BBQ. THE PARKING LOT HAS HEAVY STAINING AND MAY BE MAKING IT TO THE STORM DRAINAGE SYSTEM.
Field Observation	THERE WAS GREY WATER COMING OUT FROM BACK OF THE BUILDING
Initial Action	INSPECTOR ASKED THE MANAGER TO STOP RELEASING ANY GREY WATER TO THE STREET. SHE GAVE THE MANAGER OUR POLLUTION PREVENTION BROCHURES AND PLACED NO DUMP SIGN ON THE INLET.



Address	**4125 LEAD AV SE**

Inspection Date	2/4/2020			Reporting_Date	2/3/2020
Customer	JOSE REYNALDO	SOURCE	311	311CASE_ID	200203-000103
Customer_Ph	363-7272			e_mail	jreyn383@gmail.com
X_Link		Complaint type	OIL	Inspector	VV-MA
Facility_Contac	MANAGER	Facility_Ph_No			
Suspected_Facility	APARMENT COMPLEX	EVENT_ID	890	is it in gis	-1

Complaint	COMMERCIAL VEHICLE LEAKING OILS AND FLUIDS INTO THE STORM DRAIN - PROPERTY MANAGER IS JEANNIE GABALDON APT 204 KEITHS PROPERIES MEDLEY FORKLIFT SERVICE IS THE TRUCK COMPANY LIVES 201 ON THE EAST SIDE OF THE PARKING LOT ON THE WEST SIDE HE HAS PHOTOGRAPHS
Field Observation	THERE WAS MINOR OIL SPOT AT THE PARKING PLACE
Initial Action	INSPECTOR SPOKE TO THE MANAGER AND ASKED THEM TO KEEP THE AREA CLEAN. ALSO THE INSPECTOR DISTRIBUTED POLLUTION PREVENTION BROCHURES AT THIS COMPLEX.



Address	12TH ST AND ORCHARD NW

Inspection Date	3/6/2020			Reporting_Date	2/6/2020
Customer	VV	SOURCE	DRIVE BY	311CASE_ID	NA
Customer_Ph				e_mail	
X_Link		Complaint type	Construction	Inspector	VV
Facility_Contac	GLADIS VALLEJOS-WA			Facility_Ph_No	289-3310
Suspected_Facility	STREET			EVENT_ID	891
is it in gis	-1				

Complaint	CONSTRUCTION LEFT OVER DIRT ON THE STREET
Field Observation	WA CONSTRUCTION LEFT OVER DIRT ON THE STREET
Initial Action	INSPECTOR ASKED WA TO CLEAN UP THE AREA AND THEY DID.



Address	ASPEN'S APARTMENTS AT 9677 EAGLE RANCH NW

Inspection Date	2/7/2020			Reporting_Date	2/6/2020
Customer	ANONYMOUS	SOURCE	EMAIL	311CASE_ID	NA
Customer_Ph	NA			e_mail	dareavis@gmail.com
X_Link		Complaint type	Dog Poops	Inspector	VV-MA
Facility_Contac	MANAGER			Facility_Ph_No	na
Suspected_Facility	ASPEN'S APARTMENTS			EVENT_ID	893
is it in gis	-1				

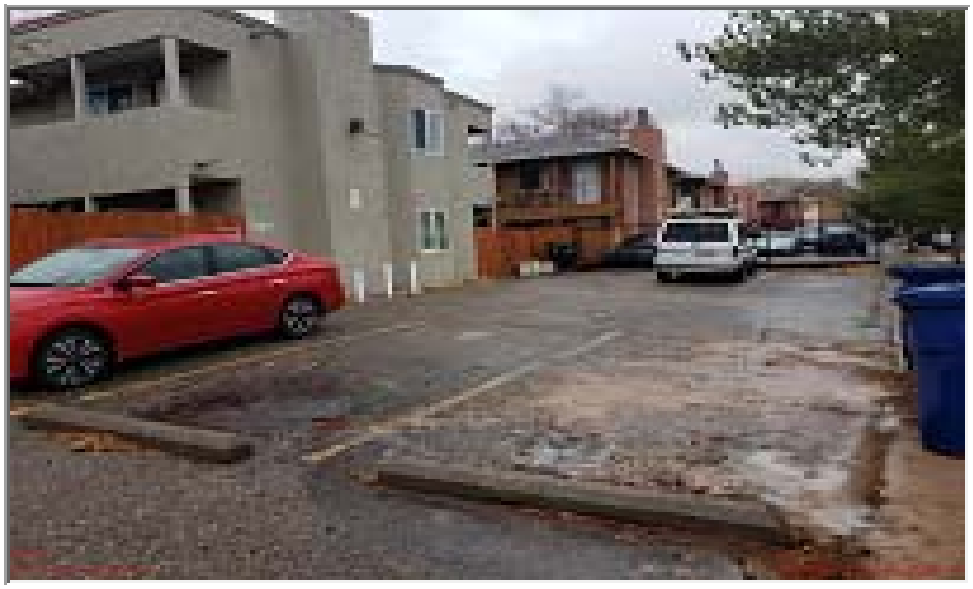
Complaint	PET WASTE STATIONS NOT MAINTAINED
Field Observation	THE PET WASTE TRASH CANS WERE FULL AND SOME BAGS WERE FALLING OUT OF CANS ON THE GROUND.
Initial Action	AROUND



Address	**12729 DUNES SE**

Inspection Date	2/10/2020			Reporting_Date	2/7/2020
Customer	BRYAN WOLF	SOURCE	PH CALL	311CASE_ID	NA
Customer_Ph				e_mail	
X_Link		Complaint type	Sewage	Inspector	
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	APARTMENT COMPLEX			EVENT_ID	892
is it in gis	-1				

Complaint	PRIVATE SANITARY LINE OVERFLOW
Field Observation	THERE WAS AN OPEN CLEAN OUT VALVE BUT IT WAS NOT OVERFLOWING. UNABLE TO FIND THE MANAGER.
Initial Action	NO ACTION NEEDED SINCE THERE WAS NO FURTHER OVERFLOW



Address	314 SAN LORENZO NW

Inspection Date	2/10/2020			Reporting_Date	2/8/2020
Customer	SANDY TILL	SOURCE	WEB	311CASE_ID	NA
Customer_Ph	415-218-1970			e_mail	sandramtill@gmail.com
X_Link		Complaint type	Large Items Dump	Inspector	VV
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	894
is it in gis	-1				

Complaint	FOAM BED/COACH AND FRAME
Field Observation	THERE WAS A MATRES ON THE SIDEWALK LEFT TO BE PICKED UP BY SOLIDWASTE.
Initial Action	INSPECTOR DISTRIBUTED POLLUTION PREVENTION BROCHURES AT THIS NEIGHBORHOOD.



Address	4224 RIDGEMONT NW

Inspection Date	2/11/2020			Reporting_Date	2/10/2020
Customer	MATTHEW YOUNG	SOURCE	311	311CASE_ID	200210-001996
Customer_Ph	506-3178			e_mail	
X_Link		Complaint type	ANTIFREEZE	Inspector	MA
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	STREET			EVENT_ID	895
is it in gis	-1				

Complaint	RADIATOR FLUID SPILLED ON THE STREET AND DOWN THE STREET / APS BUS BROKE DOWN
Field Observation	THE BUS WAS GONE AND THERE WAS NO FLUIDS ON THE STREET DUE TO THE RAIN.
Initial Action	NO ACTION



Address	PULTE TIERRA SERNA AT 6632 YAWKEY NW

Inspection Date	2/18/2020			Reporting_Date	2/14/2020
Customer	KARLA MELENDEZ	SOURCE	EMAIL	311CASE_ID	NA
Customer_Ph	NA			e_mail	kfmelendez@gmail.com
X_Link		Complaint type	Construction	Inspector	VV
Facility_Contac	SUPERVISOR			Facility_Ph_No	na
Suspected_Facility	PULTE CONST CO			EVENT_ID	896
is it in gis	-1				

Complaint	PULTE NEEDS TO CLEAN UP THE ARE NEAR THEIR CONSTRUCTION SITE
Field Observation	THERE WAS SOME SILT A LONG THE GUTTER
Initial Action	THE SUPERVISOR SAID THAT THEY WILL CLEAN UP THE AREA AND IMPROVE THEIR BMP



Address	**315 OLD COORS SE**

Inspection Date	2/18/2020			Reporting_Date	2/14/2020
Customer	ANONYMOUS	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Large Items Dump	Inspector	VV
Facility_Contac	NA	Facility_Ph_No			
Suspected_Facility	VACANT LAND			EVENT_ID	897
is it in gis	-1				

Complaint	SHOPPING CARTS FULL OF TRASH DUE TO A HIMELESS CAMP SETUP ON THE PROPERTY NEXT TO IT
Field Observation	THERE WAS A HOMLESS CAMP AT THIS AREA ON A PRIVATE LOT, BUT NO CARTS WITH TRASH WERE OBSERVED.
Initial Action	INSPECTOR INFORMED THE AUTHORITY IN CHARGE OF HOMELESS POPULATION REGARDING THIS CALL



Address	**708 MILDRED ST NE**

Inspection Date	3/10/2020			Reporting_Date	2/18/2020
Customer	EUGENE CHAVEZ	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	681-2805			e_mail	maxblue1230@yahoo.com
X_Link		Complaint type	Trash	Inspector	NA
Facility_Contac	NA	Facility_Ph_No			
Suspected_Facility	DRAINAGE EASEMENT	EVENT_ID	898	is it in gis	-1

Complaint	ALLEY WAY HIS FULL OF OVER GROWN TREES AND TRASH... HAS GATE ON EITHER SIDE OF THE ALLEY WAY.. IT DRAINS WATER FROM PARK.... IT IS NOT ILLEGAL DUMPING BUT NEEDS TO BE CLEANED....
Field Observation	NA
Initial Action	ARROYO MAINTENANCE CREW CLEANED UP THIS EASEMENT



Address	MISTER CAR WASH AT MENAUL AND SNOW HEIGHTS NE

Inspection Date	2/19/2020			Reporting_Date	2/19/2020
Customer	VV-MA	SOURCE	DRIVE BY	311CASE_ID	DRIVE BY
Customer_Ph				e_mail	
X_Link		Complaint type	Grey Water	Inspector	VV-MA
Facility_Contac	MANAGER			Facility_Ph_No	na
Suspected_Facility	MISTER CAR WASH			EVENT_ID	899
is it in gis	-1				

Complaint	WATER LEAVING THE PROPERTY IN TO THE STREET.
Field Observation	WATER WAS RUNNING OUT OF THE BUILDING TO THE STREET
Initial Action	INSPECTOR ASKED THE MANAGER TO STOP THE LEAK.



Address	OUTH POINTE VILLAGE MOBILE HOME PARK AT 11100 GIBSON S

Inspection Date	2/21/2020			Reporting_Date	2/19/2020
Customer	CONCETTA TRUJILLO	SOURCE	EMAIL	311CASE_ID	NA
Customer_Ph	924-3833			e_mail	cmtrujillo@cabq.gov
X_Link		Complaint type	Sewage	Inspector	MA
Facility_Contac	MANAGER			Facility_Ph_No	na
Suspected_Facility	SOUTH POINTE VILLAGE MHP			EVENT_ID	901
is it in gis	-1				

Complaint	I JUST RECEIVED A COMPLAINT THAT SOMEONE HAS A BLUE HOSE WITH RAW SEWAGE RUNNING ONTO THE STREET IN THE MOBILE HOME PARK.
Field Observation	NO ACTIVE SEWAGE FLOW TO THE STREET. IT WAS A SANITARY LINE BACK UP WITHIN THE THE MOBILE PARK
Initial Action	IT WAS FIXED AND NO LONGER THERE IS ANY RUNNING SEWAGE AT THE AREA. THE INSPECTOR HANDED POLLUTION PREVENTION PAMPHALETS TO THE MANAGE.



Address	8TH AND ALTA MONTE NW

Inspection Date	2/24/2020			Reporting_Date	2/24/2020
Customer	NICK SILVAS	SOURCE	311	311CASE_ID	200224-001026
Customer_Ph	341-0867			e_mail	nicknprod@yahoo.com
X_Link		Complaint type	OIL	Inspector	VV
Facility_Contac	RESIDENT	Facility_Ph_No		na	
Suspected_Facility	SIDEWALK	EVENT_ID	900	is it in gis	-1

Complaint	SEMI (PLATE # 3337-FTJ) LEAKING OIL IN TO STORM DRAIN
Field Observation	THERE WAS A A BIG DRY OIL SPOT ON THE SIDEWALK AT THIS LOCATION
Initial Action	THE MECHANIC TOLD THE INSPECTOR THAT THE TRUCK HAS BEEN FIXED AND DOES NOT LEAK ANY MORE. INSPECTOR HANDED HON POLLUTION PREVENTION PAMPHLETS.



Address	O'REILLY'S AUTO PARTS CENTRAL AND MOON

Inspection Date	2/27/2020			Reporting_Date	2/26/2020
Customer	SHELLIE EATON	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph				e_mail	
X_Link		Complaint type	OIL	Inspector	MA-VV
Facility_Contac	MANAGER			Facility_Ph_No	na
Suspected_Facility	O'REILLY'S AUYTO PARTS			EVENT_ID	902
is it in gis	-1				

Complaint	IDDE FROM THIS BUSINESS
Field Observation	INSPECTOR DID NOT OBSERVE ANY IDDE, PROBABLY THEY CLEANED IT UP BECAUSE THE AREA LOOKED CLEAN. INSPECTOR INSPECTED INSIDE THE STORE AND THEY WERE IN COMPLIANCE.
Initial Action	INSPECTOR HANDED TO THE MANAGER SOME POLLUTION PREVENTION PAMPHLETS



Address	ENVIRO WORKS AT 2010 COMMERCIAL SE

Inspection Date	2/27/2020			Reporting_Date	2/27/2020
Customer	ANONYMOUS	SOURCE	311	311CASE_ID	200227-000149
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Grey Water	Inspector	VV
Facility_Contac	MANAGER			Facility_Ph_No	na
Suspected_Facility	ENVIRO WORKS			EVENT_ID	903
is it in gis	-1				

Complaint	LIQUID FROM COMMERCIAL VEHICLES IS ON THE STREET AND LEAKING INTO THE GUTTER.
Field Observation	THIS BUSINESS WAS WASHING A TRUCK ON THEIR PTOPERTY AND NO WATER WAS RUNING TO THE STREET.
Initial Action	INSPECTOR HANDED SOME POLLUTION PREVENTON BROCHURES TO THE MANAGER AND PLACED NO DUMP SIGN ON THE INLETS AT THIS AREA



Address	**BLUFFSIDE & CALLE DEL VISTA NW**

Inspection Date	3/12/2020			Reporting_Date	3/4/2020
Customer	ANONYMOUS	SOURCE	311	311CASE_ID	200304-000506
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Leaves	Inspector	MA
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	INLETS			EVENT_ID	904
is it in gis	-1				

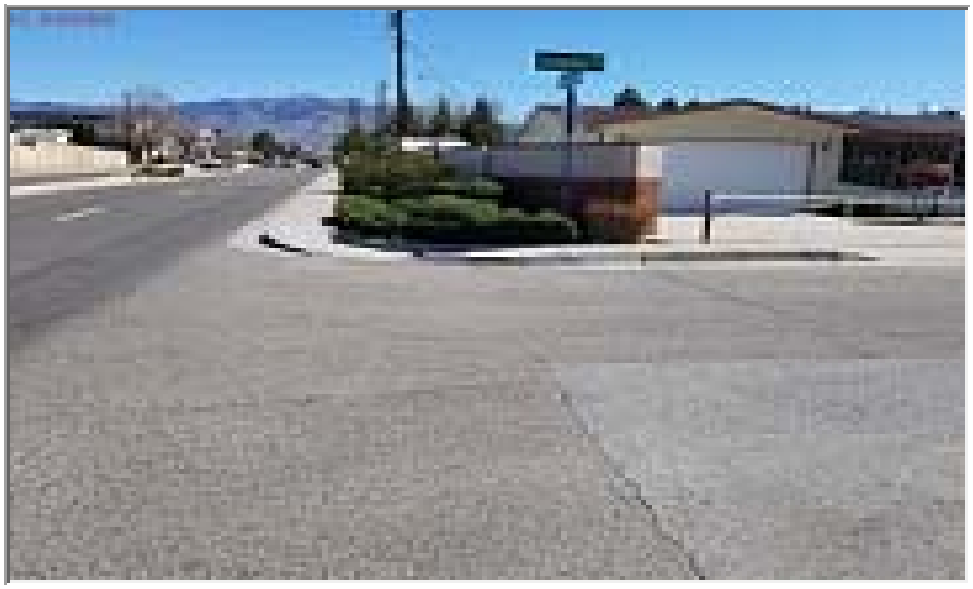
Complaint	NEIGHBOR IS BLOWING LEAVES INTO THE STORM DRAIN
Field Observation	THERE WERE SOME LEAVES INSIDE THE INLETS AT THIS AREA
Initial Action	INSPECTOR DISTRIBUTED POLLUTION PREVENTION BROCHURES AT THIS AREA



Address	CANDELARIA AND INDIANA NE

Inspection Date	3/16/2020			Reporting_Date	3/4/2020
Customer	ANONYMOUS	SOURCE	300	311CASE_ID	200304-000703
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Sewage	Inspector	MA
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	STREET			EVENT_ID	905
is it in gis	-1				

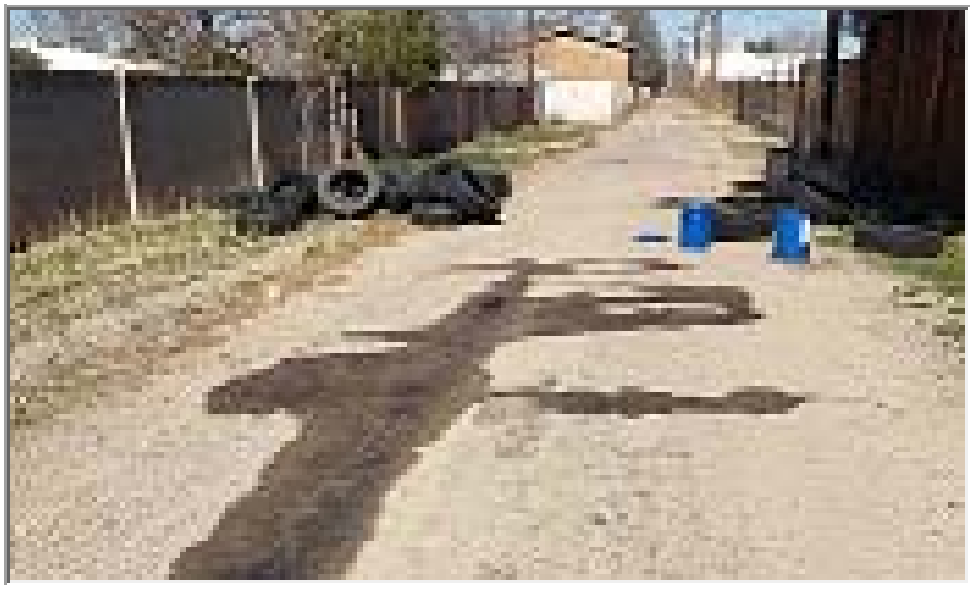
Complaint	FECES SPILL RV
Field Observation	THERE WAS AN RV PARKED AT 2937 INDIANA NE BUT THERE WAS NO ANY VISIBLE FECES AROUND IT. THE OWNER STATED THAT THE RV NEVER BEEN USED IN TWO YEARS.
Initial Action	INSPECTOR HANDED THE RESIDENT WITH POLLUTION PREVENTION BROCHURES.



Address	5812 PAULINE NW- ALLEY BEHIND

Inspection Date	3/5/2020			Reporting_Date	3/5/2020
Customer	PAUL OLSON	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph	768-2633			e_mail	polson@cabq.gov
X_Link		Complaint type	OIL	Inspector	NA
Facility_Contac	NA	Facility_Ph_No			na
Suspected_Facility	ALLEY	EVENT_ID	906	is it in gis	-1

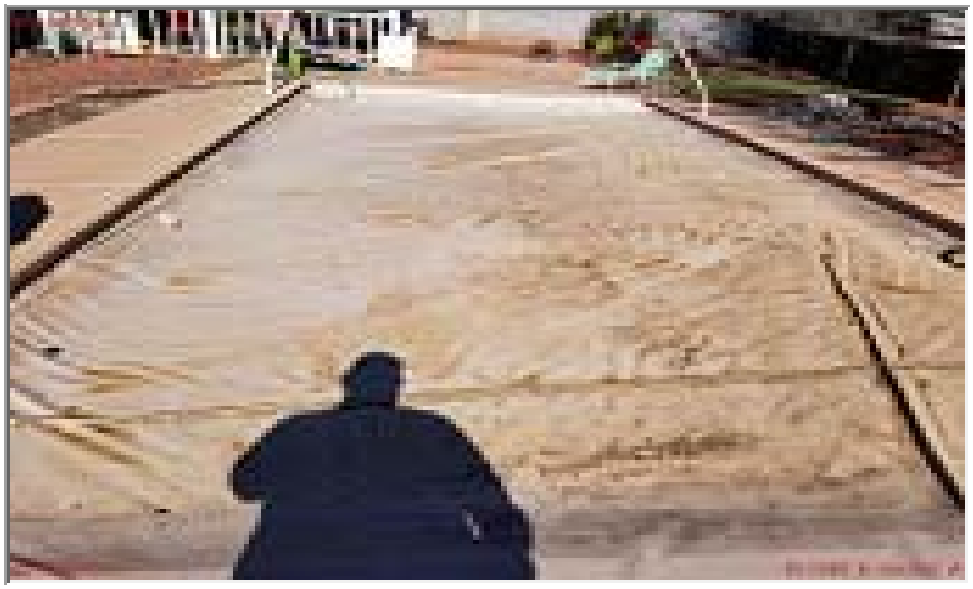
Complaint	(3 TO 4) 5 GALLOON BUCKETS OF OIL. MAY HAVE LIDS
Field Observation	THERE WERE TWO EMPTY USED OIL BUCKETS AND AROUND 30 USED TIRES IN THE ALLEY.
Initial Action	SOLID WAST PICKED THE BUCKETS UP USING ACT CO CONTRACT.



Address	**5207 FAIRFAX NW**

Inspection Date	3/9/2020			Reporting_Date	3/7/2020
Customer	JENNY TOWNSEND	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	209-612-1179			e_mail	number1jackfan@yahoo.co
X_Link		Complaint type	Nusiance Wate	Inspector	VV-MA
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	908
is it in gis	-1				

Complaint	POOL WATER DUMPING IT INTO THE GROUND AND IT'S COMING TO MY YARD AND WEAKENING THE CEMENT FENCE WALL
Field Observation	THE NEIGHBOR HAS A SMSLL SWIMMING POOL DRAINING IT TO THEIR OWN YARD.
Initial Action	THIS IS A PRIVATE ISSUE.THE INSPECTOR HANDED THE NEOGHBORS SOME STORM POLLUTION PREVENTION BROCHURES.



Address	**SURESTAY HOTEL AT 1635 CANDELARIA NE**

Inspection Date	3/9/2020			Reporting_Date	3/9/2020
Customer	VV-MA	SOURCE	DRIVE BY	311CASE_ID	DRIVE BY
Customer_Ph				e_mail	
X_Link		Complaint type	Nusiance Water	Inspector	VV-MA
Facility_Contac	MANAGER			Facility_Ph_No	344-5311
Suspected_Facility	SURESTAY HOTEL			EVENT_ID	907
is it in gis	-1				

Complaint	WATER RUNING ALONG THE GUTTER
Field Observation	THE HOTEL WAS DRAINING THEIR SWIMMING POOL
Initial Action	THE INSPECTOR ASKED THE MANAGER TO STOP RELEASING CHLORINATED WATER INTO THE STORM DRAIN. ALSO THE INSPECTOR HANDED HIM SOME POLLUTION PREVENTION BROCHURES.



Address	**11500 TOMASIT NE**

Inspection Date	3/12/2020			Reporting_Date	3/10/2020
Customer	ANONYMOUS	SOURCE	311	311CASE_ID	200310-002108
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	OIL	Inspector	VV-MA
Facility_Contac	RESIDENT	Facility_Ph_No			na
Suspected_Facility	HOME	EVENT_ID	909	is it in gis	-1

Complaint	AN INDIVIDUAL IS FLUSHING AUTOMOTOVE FLUIDS WHICH ARE MIXED WITH WATER INTO THE STORM DRAIN.
Field Observation	THERE WAS A CAR LEAKING OIL. THE RESIDENT SAID THAT THE OWNER WILL REMOVE THE CAR IN A FEW DAYS. THERE WAS OIL ABSORBENTS COVERING THE OIL.
Initial Action	THE INSPECTOR DISTRIBUTED POLLUTION PREVENTION BROCHURES AT THIS AREA.



Address	**9528 CORDOVA NE**

Inspection Date	3/12/2020			Reporting_Date	3/12/2020
Customer	ANONYMOUS	SOURCE	PH CALL	311CASE_ID	PH CALL
Customer_Ph	842-9287			e_mail	na
X_Link		Complaint type	Sewage	Inspector	VV
Facility_Contac	MANAGER	Facility_Ph_No			286-7795
Suspected_Facility		EVENT_ID	910	is it in gis	-1

Complaint	PRIVATE SANITARY SEWER OVERFLOW
Field Observation	THERE WAS SOME SEWAGE AROUND AN OPEN INSPECTION VALVE AT THIS ADDRESS, BUT THERE WAS NO SEWAGE OVERFLOW.
Initial Action	THE OWNER HAS UNPLUGED THE LINE AND CLEANED UP THE AREA.



Address	JACK & RASCAL'S PET AT 4401 MONTANO NW

Inspection Date	3/16/2020			Reporting_Date	3/16/2020
Customer	ARTHUR MARTINEZ-	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph	803-1286			e_mail	mailto:acmartinez@abcwua
X_Link		Complaint type	Grey Water	Inspector	VV-M
Facility_Contac	MANAGER			Facility_Ph_No	na
Suspected_Facility	JACK & RASCAL'S PET			EVENT_ID	911
is it in gis	-1				

Complaint	A LOT OF WATER IN THE PARKING LOT BEHIND THIS ADDRESS ON 3/13/20. IT APPEARS THEY ARE WASHING SOMETHING OUTSIDE OF THE BACKDOOR THAT CONTAIN A LOT OF PET FUR
Field Observation	THERE WAS A LOT OF PET HAIR ON THE SIDEWALK ON THE BACK OF THIS BUSINESS.
Initial Action	THE INSPECTIR ASKED THE MANAGER TO STOP DUMPING PET WASH WATER IN TO THE STREET.INSPECTOR HANDED HER SOME POLLUTION PREVENTION BROCHRES AND PLACED NO DUMP SIGN ON THE INLET.



Address	VENTANA RANCH PARK AT UNIVERSE-PARADISE

Inspection Date	3/17/2020			Reporting_Date	3/17/2020
Customer	NICOLE SHAW	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	206-6151			e_mail	n_desbah@hotmail.com
X_Link		Complaint type	Large Items Dump	Inspector	MA
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	OPEN SPACE			EVENT_ID	912
is it in gis	-1				

Complaint	PERSONAL TRASH DUMPED IN WATERWAY. BLACK TRASH BAG.NORTH OF THE VENTANA RANCH PARK
Field Observation	THERE WAS A BIG BAG FULL OF TRASH
Initial Action	INSPECTOR TOOK THE BAG TO 4TH STREET FUEL PUMPS AND DISPOSED OF IT IN A CITY ROLL OFF BIN



Address	JACK IN THE BOX AT 10100 CENTRAL SE

Inspection Date	3/19/2020			Reporting_Date	3/19/2020
Customer	BYRON LUERAS	SOURCE	DRIVE BY	311CASE_ID	DRIVE BY
Customer_Ph				e_mail	
X_Link		Complaint type	Nusiance Water	Inspector	MA
Facility_Contac	MANAGER			Facility_Ph_No	na
Suspected_Facility	JACK IN THE BOX			EVENT_ID	913
				is it in gis	-1

Complaint	WATER WASTE INTO THE CITY RIGHT-OF-WAY
Field Observation	IT WAS A BROKEN IRRIGATION PIPE
Initial Action	MANAGER SHUT DOWN THE VALVE AND STOPED THE LEAK.



Address	WELLESLY AND VAIL SE

Inspection Date	3/27/2020			Reporting_Date	3/26/2020
Customer	CHRIS	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	261-8211			e_mail	mailto:cwillarm@yahoo.co
X_Link		Complaint type	Large Items Dump	Inspector	MA-M
Facility_Contac	NA	Facility_Ph_No			na
Suspected_Facility	APARTMENT COMPLEX	EVENT_ID	914	is it in gis	-1

Complaint	FURNITURE, COUCHES, LOVESEATS, TV, RECLINER AND DRESSRS
Field Observation	MOST OF THE ITEMS WERE STILL THERE
Initial Action	CREATED A 311 REQUEST TO REMOVE THE ITEMS AND ALSO CALLED CLEAN CITY FOR THE SAME PURPOSE.



Address	9019 OLD MILL ST NW

Inspection Date	3/27/2020			Reporting_Date	3/27/2020
Customer	JOE CICCONETTI	SOURCE	311	311CASE_ID	200327-000739
Customer_Ph	382-6286			e_mail	mailto:jcfccicc76@gmail.co
X_Link		Complaint type	Grey Water	Inspector	MA
Facility_Contac	CALLER	Facility_Ph_No		382-6286	
Suspected_Facility	HOME	EVENT_ID	915	is it in gis	-1

Complaint	CALLER WANTS TO KNOW IF HE CAN POUR OFF THE WASTEWATER FROM HIS RESIDENTIAL WATER SOFTENER INTO THE STORM DRAINS OR INTO HIS YARD ; WAS DIRECTED TO CONTACT STORMWATER DIV BY THE WATER UTILITY.
Field Observation	NA
Initial Action	INSPECTOR ASKED HIM NOT TO DUMP IT INTO STORM WATER INLETS. THE CALLER SAID HE WILL USE SANITARY CLEANOUTS TO DUMP HIS WASTE.



Address	HARPER AND BARSTOW NE

Inspection Date	3/30/2020			Reporting_Date	3/30/2020
Customer	JENNIFER ABBOTT	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	291-0793			e_mail	mailto:jdabbott@swcp.com
X_Link		Complaint type	Large Items Dump	Inspector	MA
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	STREET			EVENT_ID	916
is it in gis	-1				

Complaint	NORTH PINO ARROYO -- 2 SLEEPING BAGS ON WALK PATH ADJACENT TO ARROYO, CLOSE TO BARSTOW.
Field Observation	INSPECTOE DID NOT OBSERVE ANY DUMP AT THIS AREA
Initial Action	NO ACTION



Address	/EST SIDE STREET MAINTA. YARD 3 (11800 SUNSET GARDENS SW

Inspection Date	3/31/2020			Reporting_Date	3/31/2020
Customer	VERMA VILLEGAS	SOURCE	DRIVE BY	311CASE_ID	DRIVE BY
Customer_Ph				e_mail	
X_Link		Complaint type	Construction	Inspector	VV
Facility_Contac	SUPERVISOR			Facility_Ph_No	na
Suspected_Facility	CITY YARD			EVENT_ID	917
				is it in gis	-1

Complaint	WATTLES AT THE POND ENTRANCE NEED MAINTENANCE
Field Observation	PARTS OF WATTLES AT THE POND ENTRANCE ARE MISSING
Initial Action	INSPECTOR ASKED THE SUPERVISOR TO MAINTAIN THE WATTLES AND THEY DID



Address	AT WEST SIDE STREET MAINTA. YARD 3 (11800 SUNSET GARDEN

Inspection Date	3/31/2020			Reporting_Date	3/31/2020
Customer	VERMA VILLEGAS	SOURCE	DRIVE BY	311CASE_ID	DRIVE BY
Customer_Ph				e_mail	
X_Link		Complaint type	Hazardous Material	Inspector	VV
Facility_Contac	CAPTIN			Facility_Ph_No	na
Suspected_Facility	FIRE ACADEMY			EVENT_ID	918
				is it in gis	-1

Complaint	SLUDGE DUMPED TO THE POND 119
Field Observation	SLUDGE DUMPED TO THE POND 119
Initial Action	INSPECTOR ASKED THE FIRE ACADEMY TO REMOVE ALL THE DUMPED SLUDGE AND THEY DID.



Address	906 ALTA MONTE NW

Inspection Date	4/3/2020			Reporting_Date	4/2/2020
Customer	NICK SILVAS	SOURCE	311	311CASE_ID	200402-001510
Customer_Ph	341-0867			e_mail	na
X_Link		Complaint type	OIL	Inspector	
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	STREET			EVENT_ID	919
is it in gis	-1				

Complaint	OIL HAS NOT BEEN CLEANED UP
Field Observation	THERE WAS STILL DRIED OIL STAINS ON THE STREET
Initial Action	NO FURTHER ACTION NEEDED



Address	**2903 FLORAL NW**

Inspection Date	4/6/2020			Reporting_Date	4/6/2020
Customer	VERMA VILLEGAS	SOURCE	DRIVE BY	311CASE_ID	DRIVE BY
Customer_Ph				e_mail	
X_Link		Complaint type	Nusiance Water	Inspector	VV-BL
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	920
is it in gis	-1				

Complaint	ESCAPING IRRIGATION WATER TO STREET
Field Observation	ESCAPING IRRIGATION WATER TO STREET. THEY ARE USING MRGCD DITCH WATER FOR IRRIGATION AND THEY CAN NOT CONTROL THE FLOW.
Initial Action	NO ACTION NEEDED



Address	6139 CUESTA PL NW

Inspection Date	4/8/2020			Reporting_Date	4/7/2020
Customer	HAROLD GREEAR	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	280-3937			e_mail	mailto:haroldgreear@comc
X_Link		Complaint type	Carpet Cleaning	Inspector	MA
Facility_Contac	RESIDENT			Facility_Ph_No	270-4214
Suspected_Facility	CARPET CLEANING BUSINESS			EVENT_ID	922
is it in gis	-1				

Complaint	WASTE WATER FROM CARPET CLEANING BUSINESS. WE GOT IT STOPPED ONCE BUT IT'S BACK AND IT'S NASTY.
Field Observation	RESIDENT (OWNER OF BUSINESS) DENIED DUMPING CARPET CLEANING WATER IN TO THE STREET
Initial Action	INSPECTOR WARRANT HIM OF ANY FUTURE DUMPING OF CARPET CLEANING WATER INTO THE STREET.



Address	BEL AIR PARK APARTMEN AT 4500 AZTEC NE

Inspection Date	4/8/2020			Reporting_Date	4/8/2020
Customer	ANONYMOUS	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	NA			e_mail	
X_Link		Complaint type	Carpet Cleaning	Inspector	MM
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	AMERICAN CARPET STEAMER			EVENT_ID	921
is it in gis	-1				

Complaint	10:45 AM 4/8/2020 DUMPED INTO STREET, WENTINTO DRAIN, DIRTY CARPET CLEANING WATER FROM AMERICAN CARPET STEAMER AT BEL AIR PARK APARTMENT COMPLEX BY LAND LOAED
Field Observation	NO SERVICE VEHICLE WAS PRESENT.THERE WAS SOME PONDING WATER AT THIS AREA.
Initial Action	UNABLE TO ACCESS THIS CLEANING COMPANY



Address	**10524 SUPERNOVA NW**

Inspection Date	4/10/2020			Reporting_Date	4/9/2020
Customer	CHERYL RAGAN	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	951-756-9863			e_mail	mailto:ragancheryl@rocket
X_Link		Complaint type	Car Washing	Inspector	MA
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	923
is it in gis	-1				

Complaint	RESIDENTIAL HOUSING RUNNING A CAR WASH DETAIL POWER WASHING BUSINESS FROM HIS DRIVEWAY. CAR WASH CHEMICALS, WAS, SHAMPOOS, DIRT OIL
Field Observation	INSPECTOR SPOKE TO THE RESIDENT ABOUT THE INCIDENT AND HE SAID THAT HE DID WASH HIS CAR YESTERDAY.
Initial Action	INSPECTOR ASKED HIM NOT TO LET HIS CAR WASH WATER LEAVE HIS PROPERTY TO THE STREET. ALSO HE GAVE HIM SOME POLLUTION PREVENTION BROCHURES.



Address	**7615 SALTBRUSH SW**

Inspection Date	4/20/2020			Reporting_Date	4/19/2020
Customer	BERNADETTE	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	620-9655			e_mail	mailto:Bern70@msn.com
X_Link		Complaint type	Oil & Antifreeze	Inspector	VV
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	924
is it in gis	-1				

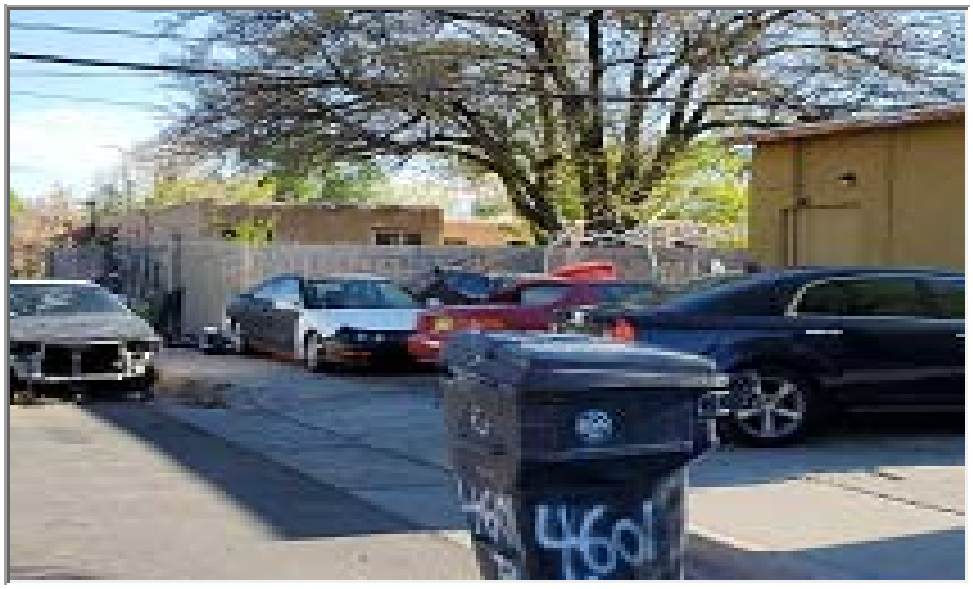
Complaint	ANTIFREEZE AND MOTOR OIL IS DRAINED ONTO DRIVEWAY AND INTO STREET. IT APPEARS THEY ARE RUNNING A MECHANIC SHOP FROM THIS ADDRESS
Field Observation	THE AREA WAS TOO DIRTY WITH OIL SPOTS EVERY WHERE. SEVERL INOPERABLE VEHICLES WERE PARKED AT THIS ADDRESS. NOBODY WAS HOME AT THE INSPECTION TIME.
Initial Action	REPORTED THIS CASE TO 311 FOR ZONE VIOLATION



Address	**4601 GIBSON SE**

Inspection Date	4/22/2020			Reporting_Date	4/21/2020
Customer	STEVE SMITH	SOURCE	WEB-311	311CASE_ID	200404-001048
Customer_Ph	NA			e_mail	mailto:Scrambler1987@aol.
X_Link		Complaint type	Oil & Antifreeze	Inspector	MA
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	925
is it in gis	-1				

Complaint	MOTOR OIL, OLD GAS AND ANTIFREEZE. THEY ARE RUNNING A JUNK YARD OUT OF THE SIDE OF THE HOUSE AND DUMPING AUTOMOTIVE FLUIDS INTO THE STORM DRAINS EVERY WEEKEND
Field Observation	THERE WERE SEVERAL ABONDEOND VEHICLES AT THIS AREA.THE RESIDENTS WERE NOT COOPERATING WITH THE INSPECTOR.
Initial Action	CREATED A NEW 311 CASE FOR ZONE VIOLATION.



Address	7519 ESMAIL CT NE

Inspection Date	4/22/2020			Reporting_Date	4/21/2020
Customer	STANICEELLIOT	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph	NA			e_mail	staniceelliott@cabq.gov
X_Link		Complaint type	Construction	Inspector	MA
Facility_Contac	OWNER & CONTRACTOR	Facility_Ph_No			450-8304
Suspected_Facility	BOLIVA CONCRETE INC.	EVENT_ID	926	is it in gis	-1

Complaint	THIS HOUSE IS UNDER CONSTRUCTION. CEMENT WORKERS CLEANED OUT CEMENT MIXER AND POURED IT IN THE GUTTER.
Field Observation	OBSERVED A LARGE AMOUNT OF CONCRETE STAINING AND AGGREGATE IN DIFFERENT LOCATIONS WITHIN THE CONSTRUCTION SITE. THIS IS UNDER 1 ACRE AND NO NPDES REQUIRED
Initial Action	INSPECTOR SPOKE TO THE OWNER AND CONTRACTOR TO CLEAN UP THE AREA AND THEY DID.



Address	LOS TOMASES AND PHOENIX

Inspection Date	4/22/2020			Reporting_Date	4/22/2020
Customer	MM	SOURCE	DRIVE BY	311CASE_ID	DRIVE BY
Customer_Ph				e_mail	
X_Link		Complaint type	Trash	Inspector	MM
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	927
is it in gis	-1				

Complaint	DUMPING DIRT INTO A POND
Field Observation	DUMPING DIRT INTO A POND
Initial Action	THE INSPECTOR ASKED HER NO TO DUMP ANY THING INTO THE POND AND SHE AGREED.ALSO HE GAVE HER SOME POLLUTION PREVENTION BROCHURES.



Address	CASA BONITA APARTMENTS AT 4528 CARLISLE NE #1025

Inspection Date	4/29/2020			Reporting_Date	4/25/2020
Customer	RIK ELLIS	SOURCE	311	311CASE_ID	200425-001114
Customer_Ph	216-0663			e_mail	mailto:rikellisglobal@gmail.
X_Link		Complaint type	Carpet Cleaning	Inspector	MM
Facility_Contac	MANAGER			Facility_Ph_No	
Suspected_Facility	EAGLE CARPET CARE			EVENT_ID	928
is it in gis	-1				

Complaint	EAGLE CARPET CARE HAD DUMPED THEIR WASTE WATER FROM THEIR VAN INTO THE STORM DRAIN INLET
Field Observation	THERE WAS A LIGHT FLOW IN GRANTLINE CHANNEL
Initial Action	INSPECTOR ASKED THE MANAGER TO STOP DUMPING ANY CARPET CLEANING WASTE WATER TO THE STORM DRAINS AND HE AGREED.



Address	**TRUMBULL & SAN PEDRO SE**

Inspection Date	4/28/2020			Reporting_Date	4/28/2020
Customer	CHRISTOPHER SANF	SOURCE	311	311CASE_ID	200428-000009
Customer_Ph	219-6480			e_mail	
X_Link		Complaint type	Sewage	Inspector	MA
Facility_Contac	NA	Facility_Ph_No			na
Suspected_Facility	STREET	EVENT_ID	929	is it in gis	-1

Complaint	LARGE AMOUNT OF SEWER SPILLED FROM RV - TRUMBULL AV SE & SAN PEDRO DR SE
Field Observation	I OBSERVED A DUMP SITE OF WHAT APPEARED TO BE POSSIBLE DRIED LIQUID WASTE, THERE WAS NO ODOR PRESENT AT THE TIME
Initial Action	NO FURTHER ACTION NEEDED



Address	**ARROYO DEL OSO PARK**

Inspection Date	5/5/2020			Reporting_Date	5/4/2020
Customer	AUBREY C ECKERT	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	362-6147			e_mail	aubreyeckert@gmail.com
X_Link		Complaint type	Trash	Inspector	MA
Facility_Contac	SUPERVISOR			Facility_Ph_No	na
Suspected_Facility	CITY PARK			EVENT_ID	930
is it in gis	-1				

Complaint	DIRT, POTTING SOIL, YARD WASTE
Field Observation	THERE WERE 3 TRUCK LOADS OF YARD WASTE DUMPED INSIDE THE PARK
Initial Action	NOTIFIED THE PARK OF THIS INCIDENT AND ASKED TO CLEAN IT UP.



Address	TARGET AT 6100 PASEO DEL NORTE NE

Inspection Date	5/27/2020			Reporting_Date	5/20/2020
Customer	RAPHAEL COBARRU	SOURCE	311	311CASE_ID	200520-002382
Customer_Ph	(972) 776-1788			e_mail	raphael.cobarrubias@kimle
X_Link		Complaint type	MSGP permit	Inspector	VV
Facility_Contac	NA			Facility_Ph_No	(972) 776-1788
Suspected_Facility	TARGET			EVENT_ID	931
is it in gis	-1				

Complaint	1
Field Observation	THIS SITE IS PARKING LOT OF TARGET
Initial Action	REFERED TO PLANING DEPT FOR THE NEEDED PRMITD



Address	MURIEL AND HAINES NE- BEHIND STORAGE UNIT

Inspection Date	5/22/2020			Reporting_Date	5/20/2020
Customer	DENISE ARTHUR	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	294-7226			e_mail	mailto:denise56arthur@gm
X_Link		Complaint type	Large Items Dump	Inspector	MA
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	ALLEY			EVENT_ID	932
is it in gis	-1				

Complaint	FURNITURE, TRASH
Field Observation	THERE WERE SEVERAL BIG ITEMS AND TRASH AT THIS LOCATION
Initial Action	CREATED A NEW 311 (200522-002028) TO CLEAN CITIES TRASH PICK-UP



Address	ACEQUIA ON ASPEN WEST OF RIO GRANDE NW

Inspection Date	5/28/2020			Reporting_Date	5/22/2020
Customer	EDMUND	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	577-1858			e_mail	mailto:ed@boniface.com
X_Link		Complaint type	Trash	Inspector	MA
Facility_Contac	MRGCD			Facility_Ph_No	na
Suspected_Facility	IRRIGATION DITCH			EVENT_ID	934
is it in gis	-1				

Complaint	TRASH
Field Observation	THERE WERE FLOATING DEBRIS AT THE CULVER ENTRANCE
Initial Action	INSPECTOR REPORTED THIS CASE TO MRGCD WEB SITE.



Address	JULIE CHANNEL AT 7410 MONTGOMERY NE

Inspection Date	5/26/2020			Reporting_Date	5/26/2020
Customer	HEATHER CARDENAS	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	881-7111			e_mail	mailto:mes2012llc@gmail.c
X_Link		Complaint type	Trash	Inspector	MA
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	CHANNEL			EVENT_ID	933
is it in gis	-1				

Complaint	BLANKETS AND VARIOUS TRASH. THE TRASH IS UNDER THE BRIDGE THE CROSSES MONTGOMERY IN THE JULIE DIVERSION CHANNEL
Field Observation	THERE WAS A LOT OF TRASH IN THE CHANNEL
Initial Action	FORWARDED TO ARROYO MAINTENANCE FOR CLEAN UP



Address	STORM INLET AT CANDELARIA AND JUAN TABO

Inspection Date	6/11/2020			Reporting_Date	6/8/2020
Customer	ANONYMOUS	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Trash	Inspector	MA
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	STORM INLET			EVENT_ID	936
is it in gis	-1				

Complaint	STORMWATER DEBRIS FROM RECENT RAIN HAS CLOGGED THESE INLETS
Field Observation	THE GRATE WAS CLOGED WITH DEBRIES
Initial Action	FORWARDED TO STORM MAINTENANCE FOR CLEAN UP



Address	1420 WILLYS KNIGHT NE

Inspection Date	6/16/2020			Reporting_Date	6/8/2020
Customer	ANTHONY SIMOES	SOURCE	300	311CASE_ID	200608-001196
Customer_Ph	269-9175			e_mail	mailto:anthshouse100@hot
X_Link		Complaint type	Construction	Inspector	MA
Facility_Contac	RESIDENT	Facility_Ph_No			na
Suspected_Facility	HOME	EVENT_ID	939	is it in gis	-1

Complaint	CALLER ADVISED CONCRETE WAS POURED FRIDAY, IT'S DRY NOW AND DRAINED INTO DRAIN. PLEASE CONTACT.STREET MAINTENANCE WAS NOT AT THIS LOCATION ON FRIDAY. WORK MUST HAVE BEEN DONE BY CONCTRACTOR.
Field Observation	THERE WAS DRY RESIDUE OF CEMENT ON THE STREET AT THIS LOCATION. THIS PROPERTY POSTED FOR SAIL.
Initial Action	THE REALTOR SAID HE ASKED 311 TO SWEEP THE AREA.THE INSPECTOR ASKED HIM TO CLEANUP THE AREA.



Address	6324 EVERITT NW

Inspection Date	6/9/2020			Reporting_Date	6/9/2020
Customer	ANONYMOUS	SOURCE	311	311CASE_ID	200609-000203
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Construction	Inspector	MA
Facility_Contac	RESIDENT			Facility_Ph_No	839-4215
Suspected_Facility	HOME			EVENT_ID	935
is it in gis	-1				

Complaint	DRY CEMENT DRAINED INTO DRAIN AND DOWN STREET
Field Observation	OBSERVED HEAVY CONCRETE STAINING ON THE SOUTH SIDE OF THE STREET. THE RESIDENT ADMITED THAT HIS CONTRACTOR DID WASH THE CONCRETE TO THE STREET.
Initial Action	ASKED THE RESIDENT TO CLEAN UP THE AREA AND THE INSPECTOR GAVE HIM SOME POLLUTION PREVENTION BROCHURES.



Address	CASA DEL SOL APTS AT 1400 PENNSYLVANIA NE

Inspection Date	6/15/2020			Reporting_Date	6/13/2020
Customer	JUAN CHAVEZ	SOURCE	311	311CASE_ID	200613-001133
Customer_Ph	615-0202			e_mail	na
X_Link		Complaint type	Sewage	Inspector	MA
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	STORM LINE			EVENT_ID	938
is it in gis	-1				

Complaint	CALLER HAD A PLUMBER GO OUT TO CHECK WITH A CAMERA. WANTS TO MAKE SURE SEWAGE IS NOT LEAKING IN THE STORM DRAIN.
Field Observation	ACCODING TO GIS DATA, THERE IS NO STORM LINE AT THIS LOCATION
Initial Action	NO ACTION NEEDED



Address	VILLAS DEL SOL APTS AT 200 FIGUEROA NE

Inspection Date	6/15/2020			Reporting_Date	6/14/2020
Customer	ANONYMOUS	SOURCE	PH CALL	311CASE_ID	PH CALL
Customer_Ph	842-9287			e_mail	na
X_Link		Complaint type	Sewage	Inspector	VV-M
Facility_Contac	MANAGER			Facility_Ph_No	na
Suspected_Facility	VILLAS DEL SOL APTS			EVENT_ID	937
is it in gis	-1				

Complaint	SEWAGE COMING OUT OF CLEANOUTS AT THE APTS
Field Observation	INSPESTOR OBSERVE SEVERAL CLEANOUTS UNCOVERED WITH RUNING CLEAN WATER THROUGH THEM.IT WAS POSSIBLE THAT THE SOURCE OF THE WATER WAS BROKEN IRRIGATION LINE.
Initial Action	MANAGER SAID THAT SHE WILL INVISTIGATE THE SOURCE AND LET THE INSPECTOR KNOW.



Address	3211 COORS SW

Inspection Date	6/25/2020			Reporting_Date	6/18/2020
Customer	ANONYMOUS	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	Trash	Inspector	
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	BUSINESS			EVENT_ID	946
is it in gis	-1				

Complaint	THE POND BEHIND THE STORE IS COVERED WITH TRASH AND THE TREES ARE OUT OF HAND. COULD WE PLEASE GET THIS CLEANED UP AND HAVE ALL THE TREES TRIMMED. THE HOMELESS ARE IN THE AREA AND THE NEIGHBORHOOD COMMUNITY BEHIND THE STORE ARE WORRIED OF BREAK INS.
Field Observation	THIS IS A PRIVATE POND IN NEED OF MAINTENANCE
Initial Action	REALTOR PROMISED TO CLEAN IT UP



Address	VALERO GAS STATION AT 4221 OSUNA NE

Inspection Date	6/22/2020			Reporting_Date	6/22/2020
Customer	EHD PAUL	SOURCE	PH	311CASE_ID	PH
Customer_Ph	NA			e_mail	na
X_Link		Complaint type	OIL	Inspector	MA
Facility_Contac	MANAGER			Facility_Ph_No	na
Suspected_Facility	VALERO GAS STATION			EVENT_ID	940
is it in gis	-1				

Complaint	ABOUT AN HOUR AGO A GENERATOR LEAKED – POSSIBLE DIESEL/COOLANT AND SO FAR IS CONTAINED ON THEIR PROPERTY.
Field Observation	THE LARGE OIL SPOTS WERE FROM AN OIL LEAKING VEHICLE PARKED AT THE GAS STATION. ALL THE OIL SPOTS WERE COVERED WITH OIL ABSORBENT.
Initial Action	NO FURTHER ACTION NEEDED



Address	4212 DOUGLAS MACARTHUR NE

Inspection Date	6/24/2020			Reporting_Date	6/23/2020
Customer	MARK JONES	SOURCE	311	311CASE_ID	200623-002430
Customer_Ph	881-6416			e_mail	na
X_Link		Complaint type	Construction	Inspector	VV
Facility_Contac	CONTRACTOR			Facility_Ph_No	na
Suspected_Facility	CONTRACTOR			EVENT_ID	941
is it in gis	-1				

Complaint	CALLER REPORTING BLACK GROUT THAT WAS DUMPED INTO DRAINAGE. WOULD LIKE THIS ADDRESSED WITHIN 24 HRS.
Field Observation	THERE WAS SOME BLACK STAINS ON THE GUTTER AT THIS ADDRESS
Initial Action	INSPECTOR ASKED THE CONTRACTOR TO CLEAN IT UP AND HE DID THE NEXT DAY.



Address	4TH ST. AND SANTA FE SW

Inspection Date	6/25/2020			Reporting_Date	6/24/2020
Customer	CSD-RAUL VASQUEZ	SOURCE	EMAIL	311CASE_ID	EMAIL
Customer_Ph				e_mail	
X_Link		Complaint type	Construction	Inspector	MA
Facility_Contac	NA			Facility_Ph_No	na
Suspected_Facility	ABCWUA			EVENT_ID	942
is it in gis	-1				

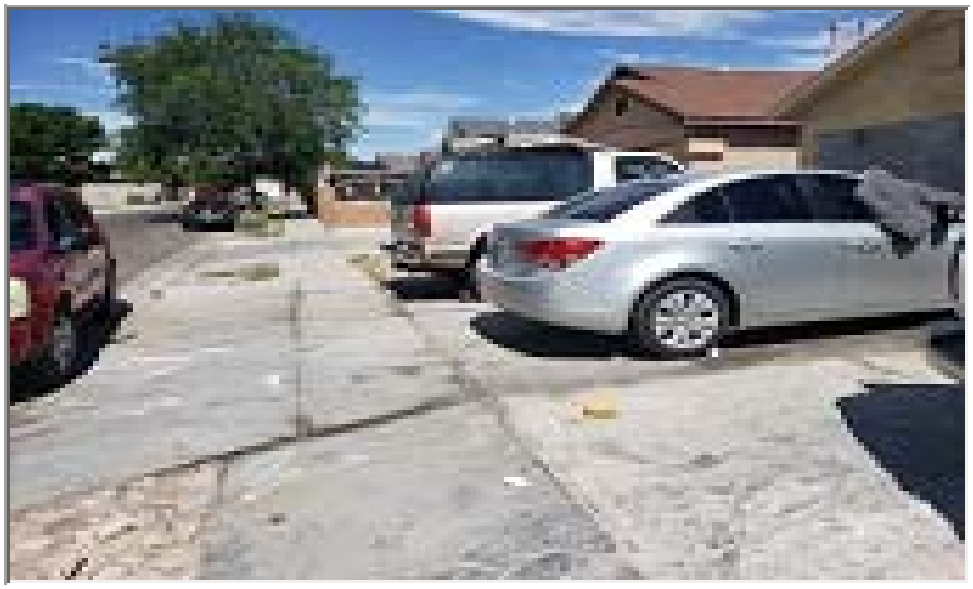
Complaint	MUD AT THIS INTERSECTION
Field Observation	THERE WERE MUDY TIRE MARKS AT THIS INTERSECTION
Initial Action	INSPECTOR CHECKED THE INLETS AT THIS AREA AND THEY WERE OKAY. THE SOURCE OF MUD WAS A COMPLETED PROJECT BY WA.



Address	**7615 SALTBRUSH SW**

Inspection Date	6/29/2020			Reporting_Date	6/25/2020
Customer	BERNADETTE MONT	SOURCE	WEB	311CASE_ID	WEB
Customer_Ph	620-9655			e_mail	Bern70@icloud.fom
X_Link		Complaint type	OIL	Inspector	VV
Facility_Contac	RESIDENT			Facility_Ph_No	na
Suspected_Facility	HOME			EVENT_ID	943
is it in gis	-1				

Complaint	MOTOR OIL AND POSSIBLY OTHER AUTOMOTIVE FLUIDS ARE BEING DRAINED ONTO DRIVEWAY. THEY APPEAR TO BE RUNNING A MECHANIC SHOP OUT OF THE HOME.
Field Observation	6 VEHICLES PARKED BOTH IN DRIVEWAY AND IN THE STREET IN FRONT OF HOME. THERE WERE OIL STAINS AT THIS AREA. INSPECTOR SPOKE WITH A PERSON LIVING HERE BUT HE REFUSED TO GIVE ANY INFO.
Initial Action	REPORTED THIS CASE TO CODE ENFORCEMENT.LEFT POLLUTION PREVENTION BROCHURES AT THIS RESIDENT.



Attachment 6

Household Hazardous Waste Collection

ACT Environmental Services
208 Murray Road SE
Albuquerque, NM 87105
(505) 445-9400 ext. 410 Office
E-mail: agarcia@ACTenviro.com

HHW Chemical Waste Inventory:

Project Name:	Albuquerque/Bernalillo County Household Hazardous Waste Collection Event 5000 Balloon Fiesta Parkway Albuquerque, NM 87113
Job Date:	August 24, 2019
Client:	City of Albuquerque/Bernalillo County
Report Date:	April 1, 2020
Author:	Amy Garcia
Site Contact(s):	Jake Daugherty

On August 24, 2019, ACT Environmental Services and the City of Albuquerque/Bernalillo County, in a joint effort collected, segregated, packaged, labeled, transported and disposed of 27,270 pounds of Household Hazardous Waste, and 4,200 pounds of Non-Regulated Solid Waste from 538 residents from residents within the Albuquerque/Bernalillo County at an average of 58.49 pounds of waste per customer.

This work was performed per the Scope of Work given to ACT by the City of Albuquerque/Bernalillo County. A copy of each HHW Chemical Waste Manifest/Bill of Ladings was provided to the City Representative at the time of collection.

DOT Hazard Class	Subsidiary Risk	Types of Chemicals	Total Gross Weight	Number of Drums X Size of Drums	Treatment Technology
Non-Haz		Used motor oil & Antifreeze	5,424 lbs.	3 X 275 Portable Totes	Recycle
Non-RCRA/Non-DOT Regulated Material Liquid		Solid waste, empty containers, trash	4,200 lbs.	2 X 40 Yard Bins	Landfill
Non-RCRA/Non-DOT Regulated Material Liquid		Latex Paint	8,600 lbs.	2 X 40 Yard Bins	Landfill
2.1 – Flammable Gas		Aerosol Spray Cans	1,396 lbs.	2 X 275 Cubic Yard Box	Incineration
2.2 – Compressed Gases		Refrigerant Gases	5 lbs.	1 X 5 Gallon Poly	Incineration
3 – Flammable Liquid		Xylene, Toluene	5,536 lbs.	13 X 55 Gallon Metal Drum	Energy Recovery / Fuel Blending
3 – Flammable Liquid	6.1 - Toxic	Captian, Diazinon	3,064 lbs.	18 X 55 Gallon Poly Drum, 1 X 15 Gallon Poly Drum & 1 x 5 Gallon Poly Drum	Incineration
4.1 – Flammable Solid		Highway Flares	6 lbs.	1 X 5 Gallon Poly Drum	Incineration
4.3 – Dangerous when Wet		Calcium Carbide	10 lbs.	1 X 5 Gallon Poly Drum	Incineration
5.1 – Oxidizing Liquids		Hydrogen Peroxide/Sodium Hypochlorite	101 lbs.	1 X 30 Gallon Poly Drum	Incineration
5.1 – Oxidizing Solids		Potassium Nitrate/Sodium Hypochlorite	92 lbs.	1 X 3 0 Gallon Poly Drum	Incineration
6.1 – Toxic Solid		Captian, Diazinon	817 lbs.	5 X 55 Gallon Poly Drum	Incineration
8 – Corrosive (Acids)		Hydrochloric Acid, Sulfuric Acid	597 lbs.	5 X 55 Gallon Poly Drum	Incineration
8 – Corrosive (Basic)		Sodium Hydroxide, Potassium Hydroxide	729 lbs.	4 X 55 Gallon Poly Drum	Incineration
8 – Corrosive (Batteries)		Automotive Lead Batteries, NiCad, Lithium Ion, Alkaline	715 lbs.	1 x Wooden Pallet, 1 x 30 Gallon Poly Drum, 6 x 5 Gallon Poly Drums	Recycle
8 – Mercury		Mercury	7 lbs.	1 X 5 Gallon Poly	Recycle

				Drum	
8 (5.1) – Nitric Acid		Nitric Acid	9 lbs.	1 x 5 Gallon Poly Drum	Incineration
9 – Environmentally Hazardous		Fluorescent Light Bulbs	162 lbs.	4 x Cylinder Box & 2 x 15 Gallon Poly Drum	Recycle

Treatment Technology	Weight
Recycle	6,308 lbs.
Energy Recovery / Fuel Blending	5,536 lbs.
Incineration	6,826 lbs.
Landfill	12,800 lbs.

Waste Total	Cost	Cost/lbs.
31,470 lbs.	$35,620.00	**$1.13/lbs.**

538 – Albuquerque/Bernalillo County Participants

We are committed to working with you in fulfilling the environmental needs of our communities. Every community, no matter how large or small, deserves to have a clean and safe environment, as well as financial peace of mind!

Amy Garcia
ACTEnviro - TSS

FY20 Total HHW (lbs) Diverted from Landfill

Calandar Year	Month	Recycled Waste																	
		Reuse Center	RC0014 Waste Oil	RC5056 Motor Fluids	RC0016 Lead Acid Batteries	RC6006 Mercury	ACT15687 Household Paint, xylene, tolulene etc	RC0011 Aerosols	RC7485 Alkaline Batteries	RC7486 Lithium Batteries	RC6254 NiCad Batteries	ACT46232 Compact Bulbs, CFL	ACT46233 HID Lamps	ACT46235 4 Foot Lamps	RC7658 8 Foot Lamps	ACT50491 Non PCB Ballast	ACT58121 Fire Extinguisher	ACT58246 Fertilizer	RC0012 Acids
2019	Jul	9,468	12,743	16,194	1,087	0	0	3,315	1,299	0	0	953			81				172
	Aug	7,464	14,416	14,800	1,135	0		1,757	466				223	516	95				210
	Sep	7,920	31,507	14,283	1,057	0		3,783	871	0				825	313				411
	Oct	6,678	317	18,566	0			1,715	445		0			727	106				537
	Nov	3,252		21,147	0	0	480		467			499			69				176
	Dec	2,976		9,635				772	409			721			112				189
MID YEAR		37,758	58,983	94,625	3,279	0	480	11,342	3,957	0	0	2,173	223	2,068	776				1,695
2020	Jan	2,382		15,649	0	0		1,616	474	462		307		465	113	2,115	240	350	501
	Feb	2,280		13,635	26		997	787	448	120		123		661	70				0
	Mar	4,032		14,659		0	0	1,595	0	0	0	0		579	53				196
	Apr	0		21,014	0		1,370	875	0	0		0		365	34	0		0	819
	May	0		34,082	232		0	1,617	457			300		386	62				1,275
	Jun	0		37,501	1,162	14	473	2,194	378	0	0	201		593	123			0	1,184
TOTAL (lbs)		46,452	58,983	231,165	4,699	14	3,320	20,026	5,714	582	0	3,104	223	5,117	1,231				5,670

* Misc = Compact Bulbs, 4 ft lamps, Ballast, PCB Capacitors, Carbides, Phosphides, Fertilizers, CO2 Cylinders, etc…

TOTAL	418,989
TOTAL Recycled Waste	344,633
% Recycled	82.3%

PO Amount:	$1,000,500.00
Paid Amount:	$944,743.25
Amount left on PO:	$55,756.75

PO# DSW0016901

* Information on this report is gathered from the Reuse forms sent by mail from ACT and the breakdown of items processed list sent by email monthly by Nicole

Sent for Destruction						
RC0013 Bases	RC0015 Flamables Toxics Incenerated	RC6002 Toxic-Solid (Poisons)	RC7129 Compressed Gas	RC7182 Oxidizers	Misc*	TOTAL
143	914	403				46,772
227	426	310				42,045
164	980	346		0		62,460
	711	196				29,998
217	263	0	120	120		26,810
	139		20	80		15,053
751	3,433	1,255		200	0	223,138
278	518	155		772		26,397
0	251	199				19,597
0	638	0		0		21,752
1,663	2,371	1,391				29,902
1,449	3,998	1,403		115		45,376
1,997	4,630	2,095		0	282	52,827
6,138	15,839	6,498		1,087	282	418,989

	Total Pounds Recycled	Tons Recycled	Total Destroyed	Amount Paid
July	45,140	22.57	0.82	$102,037.50
August	40,872	20.44	0.59	$97,977.00
September	60,559	30.28	0.95	$80,771.25
October	28,554	14.28	0.72	$78,985.00
November	25,914	12.96	0.45	$62,614.25
December	14,625	7.31	0.21	$47,934.50
January	24,173	12.09	1.11	$66,612.00
February	19,147	9.57	0.23	$56,121.00
March	20,918	10.46	0.42	$61,742.75
April	23,658	11.83	3.12	$67,646.25
May	37,136	18.57	4.12	$101,687.75
June	42,639	21.32	5.09	$120,614.00
	380,630	**190.32**	**17.76**	$944,743.25

MATERIAL REUSE CENTER

Month	Partcipants	Containers	Pounds	Savings			
Jul-19	239	1578	9,468	$9,468		178	171
Aug-19	302	1244	7,464	$7,464			
Sep-19	582	1320	7,920	$7,920			
Oct-19	189	1113	6,678	$6,678			
Nov-19	246	542	3,252	$3,252			
Dec-19	287	496	2,976	$2,976			
Mid-year Subtotal	**1845**	**6,293**	**37,758**	**$37,758**			
Jan-20	207	397	2,382	$2,382			
Feb-20	185	380	2,280	$2,280			
Mar-20	227	672	4,032	$4,032			
Apr-20	0	0	0	$0	Closed due to COVID-19		
May-20	0	0	0	$0	Closed due to COVID-19		
Jun-20	0	0	0	$0	Closed due to COVID-19		
Total FY20	**2464**	**7,742**	**46,452**	**$46,452**			

Pounds = number of containers x 6 lbs/container

*count out the participation forms that are mailed to us by ACT and enter that number under participants and then all up all items taken from the program. Enter that number under the containers section. The pounds and savings will auto-populate based on a formula of each item being on average 6 lbs. If ACT requests more forms, talk to Mila Romero at the Edith Yards.

151	160	105	203	189	171	250	1578

Attachment 7

Dry Weather Screening Results

DRY WEATHER OUTFALLS SCREENING 2020
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3	MENAUL POND INFLOW CHANNEL	NE	H-15	3
4	BARELAS PUMPING PLANT INFLOW	SW	L-13	4
5	KIRTLAND CHANNEL AT MULBERRY NE	SE	M-15	5
6	SAN ANTONIO ARROYO AT RIO GRANDE	NW	F-12	6
7	CALABACILLAS ARROYO AT RIO GRANDE	NW	C-14	7
8	HAHN ARROYO AT CARLISLE NE	NE	G-16	8
9	EMBUDO AT PENNSYLVANIA SOUTH OF MENUAL NE	NE	J-19	9
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21	NAMASTE AND COORS NW	NW	F-11	21
22	SNOW GOOSE AT OXBOW BLUFF NW	NW	G-11	22
23	SEQUOIA NW AT RIO GRANDE	NW	G-11	23
24	REDLANDS - GRANDE VISTA NW	NW	G-12	24
25	PASEO DEL REY - OURAY - VISTA GRANDE NW	NW	H-11	25
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29	SAN JOSE DRAIN AT RIO BRAVO SW	SW	P-13	29
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32	LABAJADA-ATRISCO-SOUTH 36 IN PIPE	NW	J-11	32
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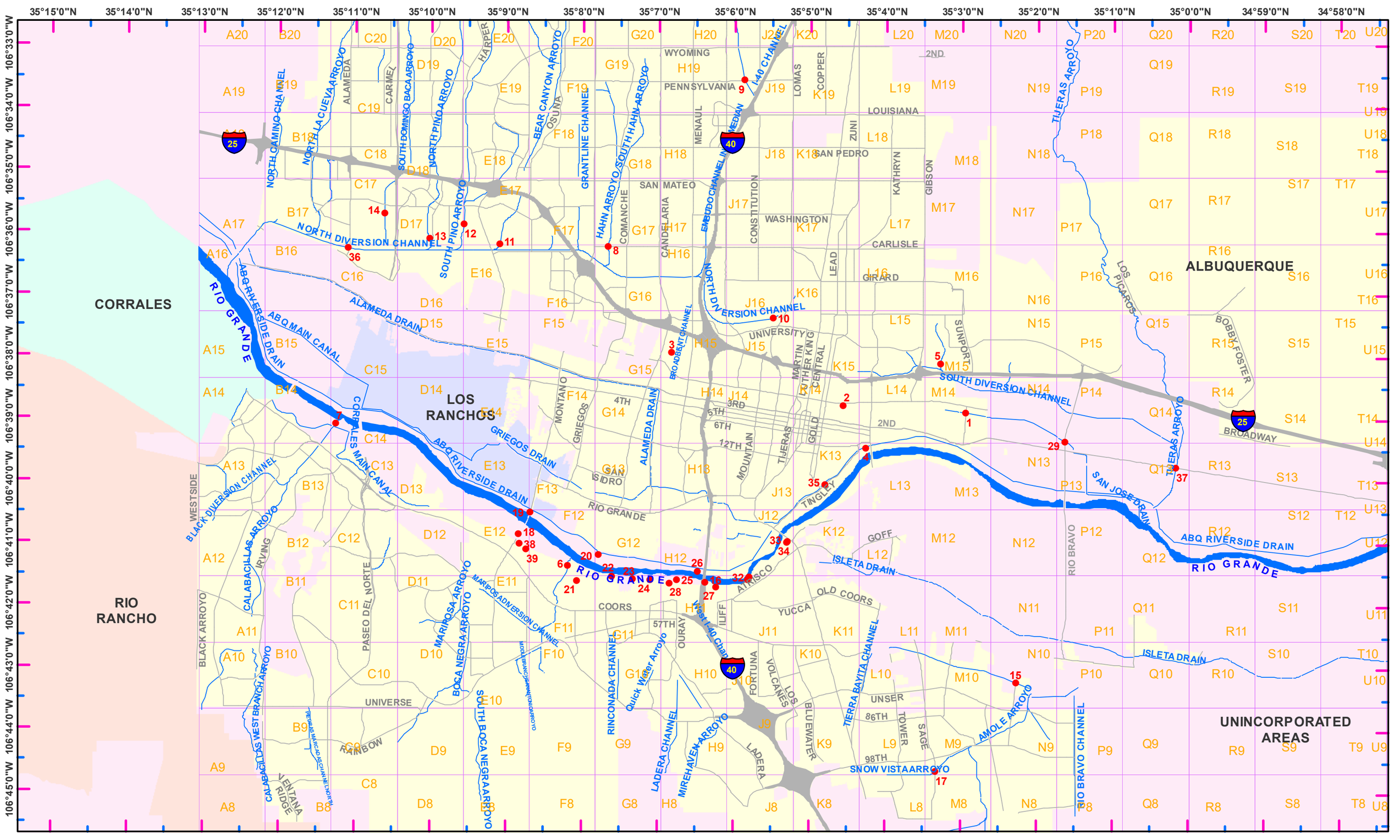
37	TIJERAS ARROYO AT 2ND ST SW	SW	Q-12	37
38	MIRANDELA BY PUEBLO PARK SE OF COORS AND MONTANO NW BOSQUE	NW	E12	38
39	SCHOOL AND MIRANDELA SE OF COORS AND MONTANO	NW	E12	39

Dry Weather Screening 2020 Location Map



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0 0.5 1 2 3 4

Miles

LOCATION	**SAN JOSE DRAIN AT WOODWARD SE**

OUTFALL_NO	1	QUAD	SE	GRID	M-14	SAMPLED	☐
DATE_INSP	2/28/2020	TIME	10:48	Inspected by	VV-MA		
WEATHER	CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	48	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



1

LOCATION	**BROADWAY POND INFLOW CHANNEL**

OUTFALL_NO	2	QUAD	SE	GRID	K-14	SAMPLED	☑
DATE_INSP	2/3/2020	TIME	9:32	Inspected by	VV-MA		
WEATHER	CLOUDY	flow		FLOW_CFS	0.01		
APPEARANCE	Clear	OBSERV GROSS POLLUTANT	none				
Source of Flow	Blowdown from cooling tower of Lovelace Medical Center at 601 MLK NE						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab	Hall Environmental Analysis Lab				

AIR_TEMP_F	43	Lab_Report	2002037
WATER_TEMP_F	44		
pH	8.21	E_coli_Coliform_mpn/100ml	7.5
CONDUCTIVITY_Umos/cm	730	Oil_Grease_mg/l	<9.88
BOD_mg/l	<2	Ammonia_mg/l	<2.0
COD_mg/l	<10	Nitrite_NO2_mg/l	<0.1
TSS_mg/l	<1.0	Nitrate_NO3_mg/l	0.42
TDS_mg/l	468	TKN_Tot_Kjeld_N_mg/l	<1.0
		Phosphorus_total_mg/l_P	0.64



2

LOCATION	**MENAUL POND INFLOW CHANNEL**						
OUTFALL_NO	3	QUAD	NE	GRID	H-15	SAMPLED	☐
DATE_INSP	2/28/2020	TIME	1:39	Inspected by	VV-MA		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	57	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



3

LOCATION	**BARELAS PUMP STATION (PS#32) INFLOW**

OUTFALL_NO	4	QUAD	SW	GRID	L-13	SAMPLED	☐
DATE_INSP	2/4/2020	TIME	10:43	Inspected by	VV-MA		
WEATHER	CLOUDY	flow	YES	FLOW_CFS	0.3		
APPEARANCE	clear	OBSERV GROSS POLLUTANT	none				
Source of Flow	groundwater infiltration through the pipe joints						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	49	Lab_Report					
WATER_TEMP_F							

pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l	
BOD_mg/l		Ammonia_mg/l	
COD_mg/l		Nitrite_NO2_mg/l	
TSS_mg/l		Nitrate_NO3_mg/l	
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l	
		Phosphorus_total_mg/l_P	



4

LOCATION	**KIRTLAND CHANNEL AT MULBERRY NE**

OUTFALL_NO	5	QUAD	SE	GRID	M-15	SAMPLED	☐
DATE_INSP	2/28/2020	TIME	11:20	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	52	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



5

LOCATION	**SAN ANTONIO ARROYO AT RIO GRANDE**

OUTFALL_NO	6	QUAD	NW	GRID	F-12	SAMPLED	☐
DATE_INSP	2/19/2020	TIME	11:03	Inspected by	MA-VV		
WEATHER	CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	45	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



6

LOCATION	**CALABACILLAS ARROYO AT RIO GRANDE**

OUTFALL_NO	7	QUAD	NW	GRID	C-14	SAMPLED	☐
DATE_INSP	2/19/2020	TIME	9:07	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	43	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



7

LOCATION	**HAHN ARROYO AT CARLISLE NE**

OUTFALL_NO	8	QUAD	NE	GRID	G-16	SAMPLED	☑
DATE_INSP	2/28/2020	TIME	1:56	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0.01		
APPEARANCE	clear	OBSERV GROSS POLLUTANT	none				
Source of Flow	WA water well wash						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab	Hall Environmental Analysis Lab				
AIR_TEMP_F	57	Lab_Report	2002C86				
WATER_TEMP_F							

pH	8.51	E_coli_Coliform_mpn/100ml	7.3
CONDUCTIVITY_Umos/cm	750	Oil_Grease_mg/l	<9.68
BOD_mg/l	4.2	Ammonia_mg/l	<1.0
COD_mg/l	10.0	Nitrite_NO2_mg/l	<0.1
TSS_mg/l	<4.0	Nitrate_NO3_mg/l	0.18
TDS_mg/l	515	TKN_Tot_Kjeld_N_mg/l	<1.0
		Phosphorus_total_mg/l_P	0.054



LOCATION	**EMBUDO AT PENNSYLVANIA SOUTH OF MENUAL NE**

OUTFALL_NO	9	QUAD	NE	GRID	J-19	SAMPLED	☐
DATE_INSP	2/28/2020	TIME	1:06	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	55	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



9

LOCATION	**HIGHLANDS SYSTEM OUTFALL AT UNM HOSPITAL**

OUTFALL_NO	10	QUAD	NE	GRID	J-16	SAMPLED	☐
DATE_INSP	2/28/2020	TIME	12:07	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	clear	OBSERV GROSS POLLUTANT	none				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	54	Lab_Report					
WATER_TEMP_F							

pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l	
BOD_mg/l		Ammonia_mg/l	
COD_mg/l		Nitrite_NO2_mg/l	
TSS_mg/l		Nitrate_NO3_mg/l	
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l	
		Phosphorus_total_mg/l_P	



10

LOCATION	**BEAR CANYON ARROYO AT NDC**

OUTFALL_NO	11	QUAD	NE	GRID	G-16	SAMPLED	☐
DATE_INSP	3/3/2020	TIME	12:20	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	58	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



11

LOCATION	**SOUTH PINO ARROYO AT WASHINGTON NE**

OUTFALL_NO	12	QUAD	NE	GRID	D-17	SAMPLED	☐
DATE_INSP	2/28/2020	TIME	2:51	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	59	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



12

LOCATION	**NORTH PINO ARROYO AT NDC**

OUTFALL_NO	13	QUAD	NE	GRID	D-17	SAMPLED	☐
DATE_INSP	2/3/2020	TIME	2:08	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	59	Lab_Report					
WATER_TEMP_F							

pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l	
BOD_mg/l		Ammonia_mg/l	
COD_mg/l		Nitrite_NO2_mg/l	
TSS_mg/l		Nitrate_NO3_mg/l	
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l	
		Phosphorus_total_mg/l_P	

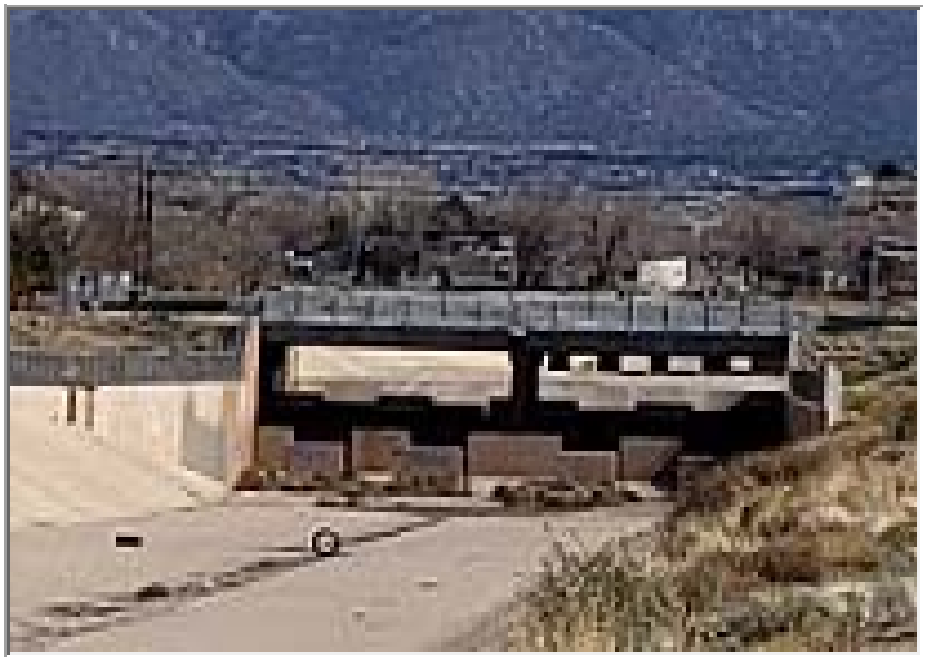


13

LOCATION	**SOUTH DOMINGO BACA ARROYO AT WASHINGTON NE**

OUTFALL_NO	14	QUAD	NE	GRID	C-17	SAMPLED	☐
DATE_INSP	3/3/2020	TIME	11:59	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	57	Lab_Report					
WATER_TEMP_F							

pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l	
BOD_mg/l		Ammonia_mg/l	
COD_mg/l		Nitrite_NO2_mg/l	
TSS_mg/l		Nitrate_NO3_mg/l	
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l	
		Phosphorus_total_mg/l_P	



LOCATION	**AMOLE DEL NORTE CHANNEL AT BLAKE RD SW**

OUTFALL_NO	15	QUAD	SW	GRID	N-10	SAMPLED	☑
DATE_INSP	2/28/2020	TIME	9:17	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	YES	FLOW_CFS	0.05		
APPEARANCE	clear	OBSERV GROSS POLLUTANT	none				
Source of Flow	broken irrigation pipes and water cooling tower						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab	Hall Environmental Analysis Lab				

AIR_TEMP_F	43	Lab_Report	2002C86
WATER_TEMP_F	45		
pH	8.26	E_coli_Coliform_mpn/100ml	<1
CONDUCTIVITY_Umos/cm	490	Oil_Grease_mg/l	<9.73
BOD_mg/l	<2	Ammonia_mg/l	<1
COD_mg/l	<10	Nitrite_NO2_mg/l	<0.1
TSS_mg/l	<4.0	Nitrate_NO3_mg/l	1.3
TDS_mg/l	404	TKN_Tot_Kjeld_N_mg/l	<1.0
		Phosphorus_total_mg/l_P	<0.01



15

LOCATION	**WEST BLUFF NW OUTFALL AT RIO GRANDE**

OUTFALL_NO	16	QUAD	NW	GRID	H-11	SAMPLED	☐
DATE_INSP	2/3/2020	TIME	11:56	Inspected by	MA-VV		
WEATHER	CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	52	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



16

LOCATION	**SNOW VISTA ARROYO AT SAGE SW**

OUTFALL_NO	17	QUAD	SW	GRID	M-09	SAMPLED	☐
DATE_INSP	2/28/2020	TIME	9:02	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	41	Lab_Report					
WATER_TEMP_F							

pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l	
BOD_mg/l		Ammonia_mg/l	
COD_mg/l		Nitrite_NO2_mg/l	
TSS_mg/l		Nitrate_NO3_mg/l	
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l	
		Phosphorus_total_mg/l_P	



17

LOCATION	**MONTANO EAST OF COORS NW**

OUTFALL_NO	18	QUAD	NW	GRID	E-12	SAMPLED	☐
DATE_INSP	2/19/2020	TIME	9:39	Inspected by	MA-VV		
WEATHER	CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	43	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



18

LOCATION	**MONTANO NW PS-47 WEST OF RIO GRANDE BLVD**

OUTFALL_NO	19	QUAD	NW	GRID	F-12	SAMPLED	☐
DATE_INSP	3/3/2020	TIME	10:59	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	55	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



19

LOCATION	**CANDELARIA NW PS-40 AT RIO GRANDE**

OUTFALL_NO	20	QUAD	NW	GRID	G-12	SAMPLED	☐
DATE_INSP	3/3/2020	TIME	10:09	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	50	Lab_Report					
WATER_TEMP_F	0						
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



20

LOCATION	NAMASTE AND COORS NW

OUTFALL_NO	21	QUAD	NW	GRID	F-11	SAMPLED	☐
DATE_INSP	3/19/2020	TIME	11:20	Inspected by	MA-VV		
WEATHER	CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	48	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



21

LOCATION	**SNOW GOOSE AT OXBOW BLUFF NW**

OUTFALL_NO	22	QUAD	NW	GRID	G-11	SAMPLED	☐
DATE_INSP	3/3/2020	TIME	9:49	Inspected by	VV-MA		
WEATHER	SUNNY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	43	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



LOCATION	**SEQUOIA NW AT RIO GRANDE**

OUTFALL_NO	23	QUAD	NW	GRID	G-11	SAMPLED	☐
DATE_INSP	2/3/2020	TIME	1:39	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	59	Lab_Report					
WATER_TEMP_F							

pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l	
BOD_mg/l		Ammonia_mg/l	
COD_mg/l		Nitrite_NO2_mg/l	
TSS_mg/l		Nitrate_NO3_mg/l	
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l	
		Phosphorus_total_mg/l_P	



23

LOCATION	**REDLANDS - GRANDE VISTA NW**

OUTFALL_NO	24	QUAD	NW	GRID	G-12	SAMPLED	☐
DATE_INSP	2/3/2020	TIME	1:30	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	59	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



LOCATION	**PASEO DEL REY - OURAY - VISTA GRANDE NW**

OUTFALL_NO	25	QUAD	NW	GRID	H-11	SAMPLED	☐
DATE_INSP	2/3/2020	TIME	1:25	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	59	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



25

LOCATION	**DURANES NW PS AT RIO GRANDE**

OUTFALL_NO	26	QUAD	NW	GRID	H-12	SAMPLED	☑
DATE_INSP	3/3/2020	TIME	8:53	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	YES	FLOW_CFS	0.1		
APPEARANCE	clear	OBSERV GROSS POLLUTANT	none				
Source of Flow	WA Water well wash discharge						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab	Hall Environmental Analysis Lab				

AIR_TEMP_F	46	Lab_Report	2003079
WATER_TEMP_F	43		
pH	8.26	E_coli_Coliform_mpn/100ml	45.7
CONDUCTIVITY_Umos/cm	640	Oil_Grease_mg/l	<9.61
BOD_mg/l	2.2	Ammonia_mg/l	<1.0
COD_mg/l	21.0	Nitrite_NO2_mg/l	<0.1
TSS_mg/l	5.0	Nitrate_NO3_mg/l	0.3
TDS_mg/l	414	TKN_Tot_Kjeld_N_mg/l	<1.0
		Phosphorus_total_mg/l_P	0.096



26

LOCATION	**CALLE DEL VISTA-ATRISCO NW**

OUTFALL_NO	27	QUAD	NW	GRID	H-11	SAMPLED	☐
DATE_INSP	2/3/2020	TIME	11:46	Inspected by	MA-VV		
WEATHER	CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	53	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



27

LOCATION	**WESTCLIFFE AND JOSEPHINE NW**

OUTFALL_NO	28	QUAD	NW	GRID	H-12	SAMPLED	☐
DATE_INSP	2/3/2020	TIME	12:58	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	57	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



28

LOCATION	**SAN JOSE DRAIN AT RIO BRAVO SW**

OUTFALL_NO	29	QUAD	SW	GRID	P-13	SAMPLED	☐
DATE_INSP	2/28/2020	TIME	10:28	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	48	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



29

LOCATION	ATRISCO-ATRISCO PL-RIVERVIEW NW

OUTFALL_NO	30	QUAD	NW	GRID	J-11	SAMPLED	☐
DATE_INSP	2/3/2020	TIME	11:33	Inspected by	MA-VV		
WEATHER	CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	52	Lab_Report					
WATER_TEMP_F							

pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l	
BOD_mg/l		Ammonia_mg/l	
COD_mg/l		Nitrite_NO2_mg/l	
TSS_mg/l		Nitrate_NO3_mg/l	
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l	
		Phosphorus_total_mg/l_P	



30

LOCATION	**LABAJADA-ATRISCO-NORTH 30 IN PIPE**

OUTFALL_NO	31	QUAD	NW	GRID	J-11	SAMPLED	☐
DATE_INSP	2/3/2020	TIME	11:18	Inspected by	MA-VV		
WEATHER	CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	52	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



31

LOCATION	**LABAJADA-ATRISCO-SOUTH 36 IN PIPE**

OUTFALL_NO	32	QUAD	NW	GRID	J-11	SAMPLED	☐
DATE_INSP	2/3/2020	TIME	11:18	Inspected by	MA-VV		
WEATHER	CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	52	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



32

LOCATION	**CENTRAL-SUNSET-OSAGE PS-44 TWO PIPES 36 AND 42 IN**

OUTFALL_NO	33	QUAD	NW	GRID	J-12	SAMPLED	☐
DATE_INSP	1/31/2020	TIME	12:54	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	46	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



33

LOCATION	**CENTRAL-SUNSET-OSAGE NW PS-44-6 IN PIPE**

OUTFALL_NO	34	QUAD	NW	GRID	J-12	SAMPLED	☐
DATE_INSP	1/31/2020	TIME	1:07	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	YES	FLOW_CFS	0.5		
APPEARANCE	clear	OBSERV GROSS POLLUTANT	none				
Source of Flow	groundwater						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	46	Lab_Report					
WATER_TEMP_F							

pH		E_coli_Coliform_mpn/100ml	
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l	
BOD_mg/l		Ammonia_mg/l	
COD_mg/l		Nitrite_NO2_mg/l	
TSS_mg/l		Nitrate_NO3_mg/l	
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l	
		Phosphorus_total_mg/l_P	



34

LOCATION	**ALCALDE SW PS-41 AT RIO GRANDE**

OUTFALL_NO	35	QUAD	SW	GRID	K-13	SAMPLED	☐
DATE_INSP	2/3/2020	TIME	10:54	Inspected by	MA-VV		
WEATHER	CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	50	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



35

LOCATION	**NDC AT EDITH NE**

OUTFALL_NO	36	QUAD	NE	GRID	A-17	SAMPLED	☑
DATE_INSP	3/3/2020	TIME	11:33	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	YES	FLOW_CFS	0.5		
APPEARANCE	clear	OBSERV GROSS POLLUTANT	papers and plastics				
Source of Flow	WA water well wash discharge						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab	Hall Environmental Analysis Lab				
AIR_TEMP_F	55	Lab_Report	2003079				
WATER_TEMP_F	65						
pH	9.01	E_coli_Coliform_mpn/100ml	<1				
CONDUCTIVITY_Umos/cm	520	Oil_Grease_mg/l	<9.77				
BOD_mg/l	2.9	Ammonia_mg/l	<1.0				
COD_mg/l	22.6	Nitrite_NO2_mg/l	<0.1				
TSS_mg/l	5.0	Nitrate_NO3_mg/l	<0.1				
TDS_mg/l	310	TKN_Tot_Kjeld_N_mg/l	<0.1				
		Phosphorus_total_mg/l_P	0.052				



36

LOCATION	**TIJERAS ARROYO AT 2ND ST SW**

OUTFALL_NO	37	QUAD	SW	GRID	Q-12	SAMPLED	☐
DATE_INSP	2/28/2020	TIME	10:13	Inspected by	MA-VV		
WEATHER	P. CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	47	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



37

LOCATION	**MIRANDELA BY PUEBLO PARK SE OF COORS AND MONTANO NW**

OUTFALL_NO	38	QUAD	NW	GRID	E12	SAMPLED	☐
DATE_INSP	2/19/2020	TIME	9:49	Inspected by	MA-VV		
WEATHER	CLOUDY	flow	NO FLOW	FLOW_CFS	0		
APPEARANCE	na	OBSERV GROSS POLLUTANT	na				
Source of Flow	na						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab					
AIR_TEMP_F	43	Lab_Report					
WATER_TEMP_F							
pH		E_coli_Coliform_mpn/100ml					
CONDUCTIVITY_Umos/cm		Oil_Grease_mg/l					
BOD_mg/l		Ammonia_mg/l					
COD_mg/l		Nitrite_NO2_mg/l					
TSS_mg/l		Nitrate_NO3_mg/l					
TDS_mg/l		TKN_Tot_Kjeld_N_mg/l					
		Phosphorus_total_mg/l_P					



38

LOCATION	**BOSQUE SCHOOL AND MIRANDELA SE OF COORS AND MONTANO NW**

OUTFALL_NO	39	QUAD	NW	GRID	E12	SAMPLED	☑
DATE_INSP	2/19/2020	TIME	10:01	Inspected by	MA-VV		
WEATHER	CLOUDY	flow	YES	FLOW_CFS	0.01		
APPEARANCE	clear	OBSERV GROSS POLLUTANT	none				
Source of Flow	unable to track the source.						
link	X:\MD\SHARE\MD-Storm\7_NPDES\311_SWQ_	Lab	Hall Environmental Analysis Lab				

AIR_TEMP_F	44	Lab_Report	2002786
WATER_TEMP_F	41		
pH	6.95	E_coli_Coliform_mpn/100ml	14.4
CONDUCTIVITY_Umos/cm	130	Oil_Grease_mg/l	<9.78
BOD_mg/l	7.5	Ammonia_mg/l	<1.0
COD_mg/l	40.6	Nitrite_NO2_mg/l	<0.5
TSS_mg/l	19	Nitrate_NO3_mg/l	<0.5
TDS_mg/l	100	TKN_Tot_Kjeld_N_mg/l	1.1
		Phosphorus_total_mg/l_P	0.33



39

Attachment 8

Industrial High Risk Visual Monitoring Results

Weston Solutions, Inc.
3840 Commons Ave. NE
Albuquerque, NM 87109
505-837-6520 Fax 505-837-6595
www.westonsolutions.com

October 11, 2019

Ms. Kathy Verhage, P.E.
Department of Municipal Development - Storm Drainage Design
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

REFERENCE: PROJECT NO. 8013 CITYWIDE ON-CALL NPDES AND MS4 ENGINEERING SUPPORT SERVICES 3rd QUARTER 2019 UPDATE FOR TASK 4 VISUAL STORM WATER INSPECTIONS

Dear Ms. Verhage:

This letter describes the results of the 2019 Quarter 3 (July 1 through September 30) Visual Storm Water Inspections for ten City of Albuquerque (City) facilities that are subject to the requirements of the U.S. Environmental Protection Agency's (EPA) Municipal Separate Storm Sewer System (MS4) Permit and the Multi Sector General Permit for Storm Water Discharges Associated with Industrial Activity (MSGP) at City-owned facilities. The purpose of this memo is to document the City's compliance with the requirements for quarterly stormwater monitoring. To comply with the MS4 and MSGP's requirements for stormwater monitoring, the City tasked Weston Solutions to perform the quarterly visual inspections in order to identify potential impacted stormwater discharges at the 10 City-owned facilities. The following facilities meet the definition of an industrial facility in the MSGP based on audits of City-owned facilities performed between 2012 and 2019.

- Arroyo Del Oso Golf Course
- Balloon Fiesta Park and Golf Training Center
- Albuquerque BioPark Zoo
- Fire Department Mechanic Shop
- 4th Street Fuel Station
- Pino Yards Complex
- Street Maintenance Satellite #2
- 6th Street Park Management
- Eagle Rock Convenience Center
- Edith Yards Maintenance Facility

Figure 1 identifies these facilities along with the Weston inspection team responsible for inspecting each facility outfall.

Figure 1: Facility Site Locations

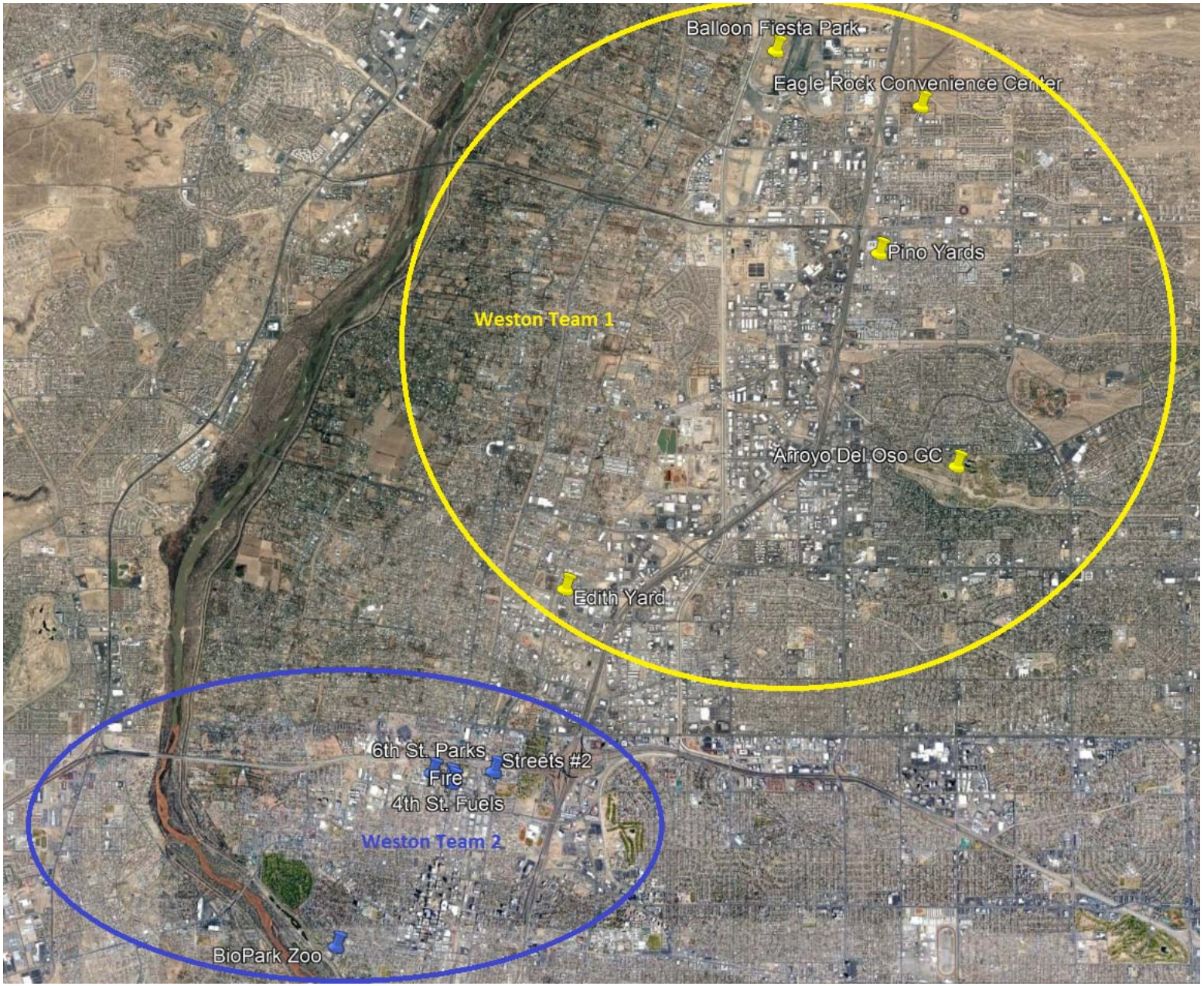


Table 1 summarizes the inspection status during the 3rd Quarter of 2019.

Table 1: Outfall ID and Designees Site	Outfall ID	2019 Quarter 1 Status
Weston Team 1		
Balloon Fiesta Park and Golf Training Center	BFP1	Site not visited
	BFP2	Site not visited
	BFP3	Site not visited
	BFP4	Site not visited
	BFP5	Site not visited
Pino Yards Complex	PY1	Site not visited
	PY2	Site not visited
	PY3	Site not visited
Arroyo Del Oso Golf Course	ADO1	Site not visited
	ADO2	Site not visited
Eagle Rock Convenience Center	ER01/ER02	Site not visited
	ER03	Site not visited
ABQ BioPark Zoo	BP1	Sample collected
Weston Team 2		
4th Street Fuel Station	FS1	Sample collected
Fire Department Mechanic Shop	FM1	Sample collected
	FM2	Sample collected
Street Maintenance Satellite #2	SS2	Sample collected
Edith Yards Maintenance Facility	EY01	Sample collected
	EY02	Sample collected
	EY03	Sample collected
6th Street Park Management	6PM1	Visited, dry-no sample

The facilities identified as "Site not visited" were not inspected since no qualifying storm events occurred during the quarter.

Background

The MSGP establishes requirements for monitoring the quality of stormwater discharges depending on the nature of activities performed at the various industrial facilities. Although benchmark monitoring is not required, the MSGP does require quarterly visual inspection of stormwater quality. Visual inspection consists of the collection of grab samples from each outfall (subject to demonstration of substantially identical outfalls) and examination for the presence of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, or other indicators of stormwater pollution.

The following criteria regarding the precipitation event must be met for a visual inspection of stormwater to occur:

- During daylight hours
- Within 30 minutes of start of storm water discharge (or as soon as practicable thereafter)
- At least 72 hours after the previous storm water discharge event

Weston follows the City's existing stormwater monitoring protocol outlining the locations and descriptions of all outfalls to be monitored. The protocol identifies contact persons at each facility for use in notifying City personnel when members of the stormwater monitoring team are mobilizing to that location. A standard visual assessment form is used by all staff to document the inspection activities.

Quarter 3 Monitoring Results

The results from the 3rd Quarter 2019 visual inspections including monitoring reports and photo logs can be found in the Attachment A. From July 1 – September 30, 2019 the following occurred:

- Weston Sites Group 1 mobilized once during the quarter to collect samples from storm events on July 1, 2019. Visual samples were collected from one of the fourteen outfalls that fall under Group 1.
- Weston Sites Group 2 mobilized once during the quarter to collect samples from a storm event July 1, 2019. Seven visual samples were collected from the eight outfalls over the course of the one mobilization.

Although there were several recordable precipitation events through this period, the vast majority did not meet the criteria for visual sampling since they occurred in the early evening, overnight or on weekends, or did not produce enough rainfall to be considered a qualifying event. Many sites received no rain due to the localized nature of the storms that did occur. Non qualifying event data is provided in Attachment B.

Any outfalls not inspected in the 3rd Quarter will be addressed during Quarter 4 of 2019 pending suitable weather conditions.

Observed Problems

No problems were observed during this reporting period.

We appreciate the opportunity to provide professional consulting services to you and we look forward to assisting you in the next quarter. Please contact Sarah Luckie at (720) 937-5905 (Sarah.Luckie@WestonSolutions.com) or Brad Sumrall at (505) 837-6566 (Brad.Sumrall@WestonSolutions.com) if you have any questions or need additional information.

Sincerely,
WESTON SOLUTIONS, INC.

L. Brad Sumrall, P.E.
Albuquerque Operations Manager

Enclosures:

ATTACHMENT A: Q3 INSPECTION FORMS AND PHOTO LOGS

ATTACHMENT B: NON-QUALIFYING EVENT DATA

ATTACHMENT A: Q3 INSPECTION FORMS AND PHOTO LOGS

STREETS SATELLITE #2

City of Albuquerque
Street Maintenance Satellite #2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 7/1/19
Time: 1538
Inspector: Andrew Brenner
Signature: Andrew F Brenner

Weather: Cloudy, slightly rainy
Storm Precip:
Last 72 Hour Precip: No
Photo: Yes

Outfall ID:	SS2
Flow Observed:	☒ Yes ☐ No
Description of Monitoring Site:	Runoff flowing into storm drain
Flow Estimate (include units and method of estimation) :	<1cfs
Other Observations:	
Color (Describe):	yellowish
Turbidity:	☐ Clear ☐ Slightly Cloudy ☒ Very Cloudy ☐ Opaque
Floating Solids:	☒ Yes ☐ No
Suspended Solids:	☐ Yes ☒ No
Settled Solids:	☐ Yes ☒ No
Sheen Present:	☐ Yes ☒ No
Odor:	☐ Yes ☒ No
Foam Present:	☐ Yes ☒ No
Describe:	

Additional Comments:

Date:	07-01-2019
Event:	MS4 Visual Storm Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Street Maintenance Satellite #2	
	

PINO YARDS

BALLOON FIESTA PARK/ GOLF TRAINING CENTER

ARROYO DEL OSO GOLF COURSE

FIRE DEPARTMENT MECHANIC

City of Albuquerque

Fire Department Mechanic Shop

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☒ Q3 ☐ Q4

Date: 7/1/19
Time: 1547
Inspector: Andrew Brenner
Signature: Andrew F Brenner

Weather: Cloudy, slightly rainy
Storm Precip:
Last 72 Hour Precip: No
Photo: Yes

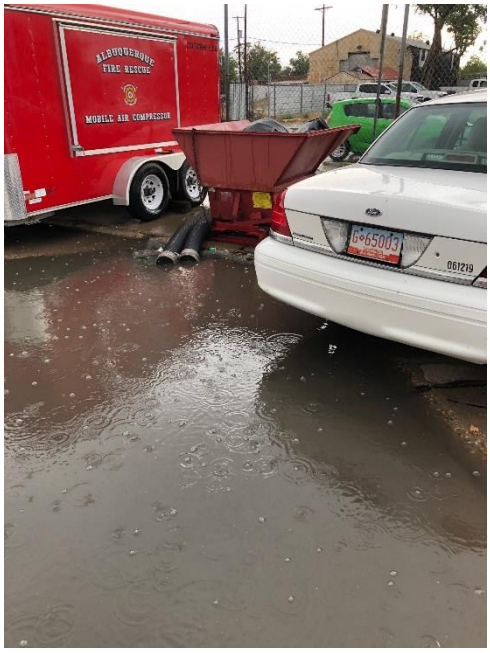
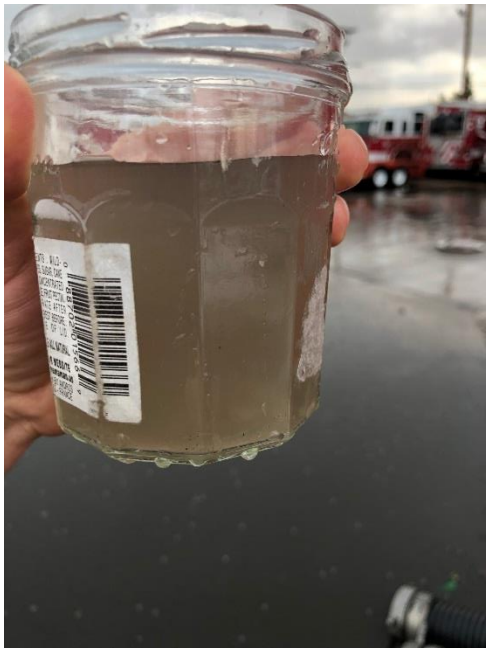
Outfall ID:	FM1	FM2
Flow Observed:	☒ Yes ☐ No	☒ Yes ☐ No
Description of Monitoring Site:	runoff was flowing	runoff was collecting behind (east) of wattle
Flow Estimate (include units and method of estimation) :	< 1 cfs	< 1 cfs
Other Observations:		
Color (Describe):	light yellow / gray	gray
Turbidity:	☐ Clear ☒ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☒ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☒ No	☐ Yes ☒ No
Suspended Solids:	☒ Yes ☐ No	☒ Yes ☐ No
Settled Solids:	☐ Yes ☒ No	☐ Yes ☒ No
Sheen Present:	☐ Yes ☒ No	☐ Yes ☒ No
Odor:	☐ Yes ☒ No	☐ Yes ☒ No
Foam Present:	☐ Yes ☒ No	☐ Yes ☒ No
Describe:		

Additional Comments:

WESTON SOLUTIONS

Date:	07-01-2019
Event:	MS4 Visual Storm Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Fire Department Mechanic Shop	
	

4TH STREET FUELS

City of Albuquerque
4th Street Fuel Station

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☒ Q3 ☐ Q4

Date: 7/1/19
Time: 1545
Inspector: Andrew Brenner
Signature: Andrew F Brenner

Weather: Cloudy, slightly rainy
Storm Precip:
Last 72 Hour Precip: No
Photo: Yes

Outfall ID:	FS1
Flow Observed:	☒ Yes ☐ No
Description of Monitoring Site:	runoff flowing into storm drain
Flow Estimate (include units and method of estimation) :	<1cfs
Other Observations:	
Color (Describe):	Light gray
Turbidity:	☐ Clear ☒ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☒ No
Suspended Solids:	☐ Yes ☒ No
Settled Solids:	☐ Yes ☒ No
Sheen Present:	☐ Yes ☒ No
Odor:	☐ Yes ☒ No
Foam Present:	☐ Yes ☒ No
Describe:	

Additional Comments:

Date: 07-01-2019

Event: MS4 Visual Storm Monitoring

Inspector: Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

4th Street Fuel Station	
	

ABQ BIOPARK ZOO

City of Albuquerque
ABQ BioPark Zoo

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☒ Q3 ☐ Q4

Date: 7/1/19
Time: 1609
Inspector: Andrew Brenner
Signature: Andrew F Brenner

Weather: Cloudy
Storm Precip:
Last 72 Hour Precip: No
Photo: Yes

Outfall ID:	BP1
Flow Observed:	☒ Yes ☐ No
Description of Monitoring Site:	slight flow coming from outlet. Debris appeared to be partially blocking flow
Flow Estimate (include units and method of estimation) :	< 1 cfs
Other Observations:	
Color (Describe):	yellow ish
Turbidity:	☐ Clear ☐ Slightly Cloudy ☒ Very Cloudy ☐ Opaque
Floating Solids:	☒ Yes ☐ No
Suspended Solids:	☐ Yes ☒ No
Settled Solids:	☐ Yes ☒ No
Sheen Present:	☐ Yes ☒ No
Odor:	☐ Yes ☒ No
Foam Present:	☐ Yes ☒ No
Describe:	floating solids appeared to be organic matter

Additional Comments:

Date:	07-01-2019
Event:	MS4 Visual Storm Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

ABQ BioPark Zoo	
	

6TH STREET PARKS MANAGEMENT

City of Albuquerque
6th Street Park Management

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☒ Q3 ☐ Q4

Date: 7/1/19
Time: 1553
Inspector: Andrew Brenner
Signature: Andrew F Brenner

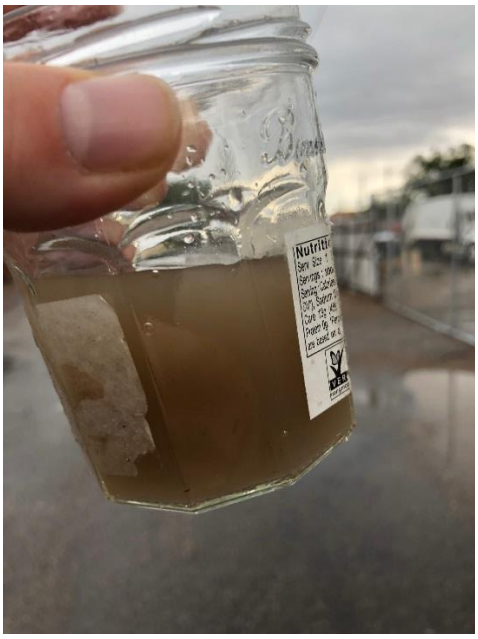
Weather: Cloudy
Storm Precip:
Last 72 Hour Precip: No
Photo: Yes

Outfall ID:	6PM1
Flow Observed:	☐ Yes ☒ No
Description of Monitoring Site:	runoff ~~pools~~ ponded but no flowing
Flow Estimate (include units and method of estimation) :	
Other Observations:	
Color (Describe):	
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☐ No
Suspended Solids:	☐ Yes ☐ No
Settled Solids:	☐ Yes ☐ No
Sheen Present:	☐ Yes ☐ No
Odor:	☐ Yes ☐ No
Foam Present:	☐ Yes ☐ No
Describe:	

Additional Comments:

Date:	07-01-2019
Event:	MS4 Visual Storm Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

6th Street Park Management	
	

EAGLE ROCK CONVENIENCE CENTER

EDITH YARD

City of Albuquerque Solid Waste Management Department

Edith Yards Maintenance Facility

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☒ Q3 ☐ Q4

Date: 7/1/19
Time: 3:37 pm
Inspector: D. Cooper
Signature: [signature]

Weather: Rain
Storm Precip: Yes
Last 72 Hour Precip: No
Photo: Attached

Outfall ID:	EY01	EY02	EY03
Flow Observed:	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Description of Monitoring Site:	Drop Inlet	Drop Inlet	Drop Inlet
Flow Estimate (include units and method of estimation) :	< 1 cfs (visual)	< 1 cfs (visual)	< 1 cfs (visual)
Other Observations:		Sheen and odor of water noticeable	Rain stopped by this point
Color (Describe):	Light Tan	Dark Gray	Light Brown
Turbidity:	☐ Clear ☒ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☒ Opaque	☐ Clear ☐ Slightly Cloudy ☒ Very Cloudy ☐ Opaque
Floating Solids:	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No
Suspended Solids:	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No
Settled Solids:	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Sheen Present:	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No
Odor:	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Foam Present:	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Describe:	Slight oil odor	"Garbage" odor to water	Slight oil odor

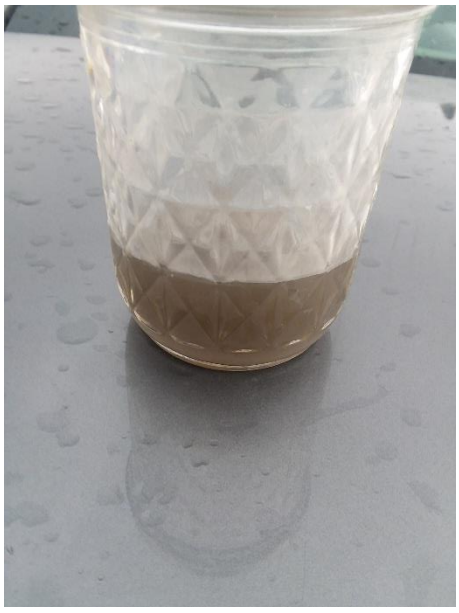
Additional Comments:

Date: 07-01-2019

Event: MS4 Visual Storm Monitoring

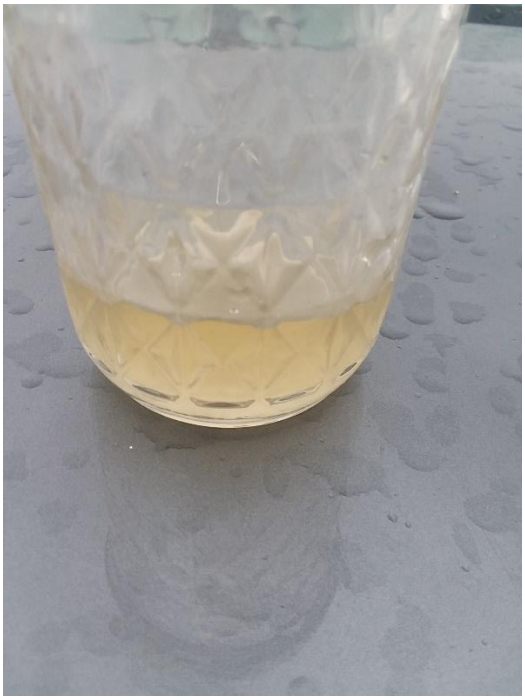
Inspector: David “Sonny” Cooper (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Edith Yards Maintenance Facility	
	
	









ATTACHMENT B: NON-QUALIFYING DATA

Albuquerque, NM

Albuquerque International Sunport

4:54 PM MDT on October 04, 2019 (GMT -0600)

Weather History for KABQ - July, 2019

From:

July

1

2019

To:

September

30

2019

Get History

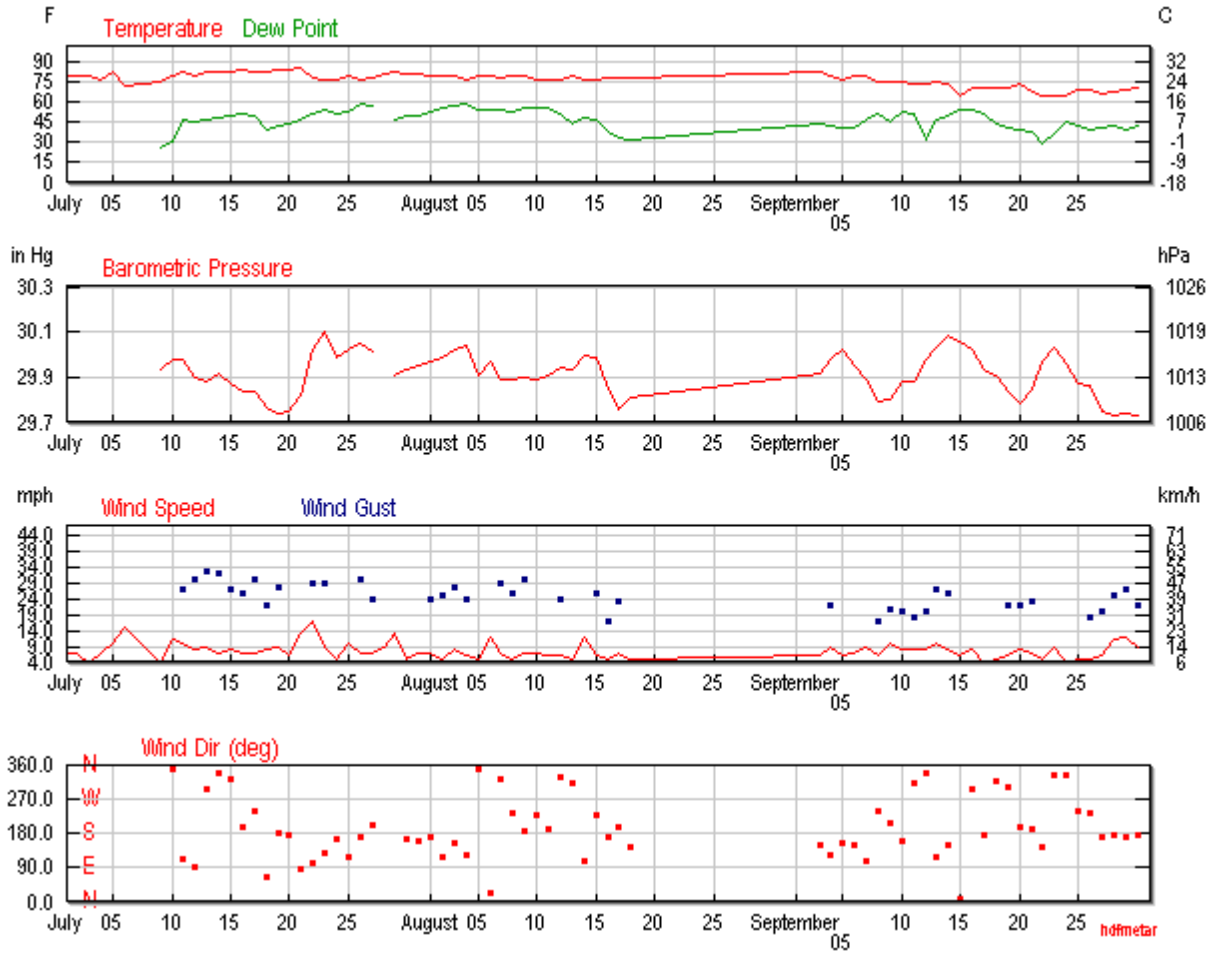
Daily | Weekly | Monthly | **Custom**

	Max	Avg	Min	Sum
Temperature				
Max Temperature	**100** °F	**90** °F	**69** °F	
Mean Temperature	**87** °F	**78** °F	**65** °F	
Min Temperature	**75** °F	**65** °F	**51** °F	
Degree Days				

/

	Max	Avg	Min	Sum
Heating Degree Days (base 65)	0	0	0	0
Cooling Degree Days (base 65)	22	13	0	952
Growing Degree Days (base 50)	36	27	14	1819
Dew Point				
Dew Point	**65** °F	**47** °F	**16** °F	
Precipitation				
Precipitation	**1.06** in	**0.05** in	**0.00** in	**2.80** in
Snowdepth	**0.0** in	**0.0** in	**0.0** in	-
Wind				
Wind	**45** mph	**8** mph	**0** mph	
Gust Wind	**59** mph	**25** mph	**16** mph	
Sea Level Pressure				
Sea Level Pressure	**30.32** in	**29.91** in	**29.60** in	

Custom Weather History Graph



Search for Another Location

Airport or City:

KABQ

Submit

Weather History & Observations

2019	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Press. (in)			Visibility (mi)			Wind (mph)			Precip. (in)	Events
Jul	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	

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2019	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Press. (in)			Visibility (mi)			Wind (mph)			Precip. (in)	Events
	93	80	66	-	-	-	53	37	21	-	-	-	-	-	-	45	7	51	0.15	
	93	80	66	-	-	-	63	39	15	-	-	-	-	-	-	29	7	33	T	
	94	81	67	-	-	-	52	30	8	-	-	-	-	-	-	17	4	24	0.00	
	94	78	62	-	-	-	26	18	10	-	-	-	-	-	-	15	7	21	0.00	
	95	83	70	-	-	-	33	21	8	-	-	-	-	-	-	38	10	44	0.00	
	83	73	62	-	-	-	51	44	36	-	-	-	-	-	-	30	15	36	0.69	
	91	76	60	34	26	22	34	22	9	30.00	29.93	29.86	10	10	10	13	4	14	0.00	
	97	81	65	49	31	23	33	21	8	30.20	29.98	29.91	10	10	10	32	11	43	0.00	
	95	84	72	58	48	41	50	33	16	30.07	29.98	29.89	10	10	10	28	10	39	0.00	
	94	81	67	49	46	38	49	32	15	30.01	29.90	29.78	10	10	10	37	8	59	0.00	
	97	83	69	50	47	42	44	31	17	30.10	29.88	29.80	10	10	10	31	9	39	0.00	Thunderstorm
	96	84	72	54	49	43	49	34	19	30.19	29.92	29.81	10	10	10	33	7	41	0.00	Thunderstorm
	97	84	71	57	51	46	57	38	19	30.05	29.87	29.75	10	10	10	25	8	29	0.00	Thunderstorm
	96	85	74	58	52	47	54	37	19	30.07	29.84	29.74	10	10	10	28	7	33	0.03	Rain , Thunderstorm
	96	83	69	60	50	42	68	43	17	30.08	29.84	29.74	10	10	10	32	7	43	T	Rain
	99	84	69	46	40	31	40	25	9	29.86	29.77	29.67	10	10	10	17	8	24	0.00	
	100	85	69	49	43	34	40	26	11	29.97	29.74	29.66	10	10	10	29	9	37	0.00	
	100	85	69	47	45	41	41	28	14	29.82	29.75	29.68	10	10	10	24	6	29	0.00	
	99	87	75	52	47	40	39	27	14	29.93	29.82	29.75	10	10	10	36	13	45	0.00	
	89	79	69	57	52	49	66	47	28	30.15	30.02	29.93	10	10	10	37	17	43	0.00	
	87	77	67	58	55	52	63	47	30	30.27	30.10	29.99	10	10	10	23	9	29	T	Thunderstorm
	91	78	66	57	52	45	59	37	15	30.12	29.99	29.86	10	10	10	12	5	-	0.00	

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2019	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Press. (in)			Visibility (mi)			Wind (mph)			Precip. (in)	Events
	95	**80**	**66**	**65**	**54**	**46**	**93**	**48**	**14**	**30.32**	**30.02**	**29.81**	**10**	**9**	**1**	**30**	**10**	**41**	**1.06**	Rain , Thunderstorm
	91	**78**	**66**	**63**	**59**	**55**	**84**	**59**	**22**	**30.28**	**30.05**	**29.86**	**10**	**10**	**10**	**25**	**7**	**34**	**0.00**	Rain , Thunderstorm
	91	**79**	**67**	**62**	**58**	**51**	**81**	**56**	**30**	**30.18**	**30.01**	**29.88**	**10**	**10**	**10**	**26**	**7**	**31**	**T**	Rain , Thunderstorm
	95	**82**	**68**	-	-	-	**76**	**47**	**17**	-	-	-	-	-	-	**29**	**9**	**35**	**0.00**	
	93	**84**	**74**	**56**	**48**	**40**	**49**	**33**	**16**	**30.00**	**29.91**	**29.82**	**10**	**10**	**10**	**37**	**13**	**49**	**0.00**	
	92	**82**	**71**	**55**	**51**	**45**	**53**	**38**	**22**	**30.17**	**29.93**	**29.83**	**10**	**10**	**10**	**22**	**5**	**28**	**0.00**	
	93	**82**	**71**	**59**	**51**	**45**	**57**	**39**	**21**	**30.18**	**29.95**	**29.83**	**10**	**10**	**8**	**30**	**7**	**39**	**0.01**	Rain , Thunderstorm

2019	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Press. (in)			Visibility (mi)			Wind (mph)			Precip. (in)	Events
Aug	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
	94	**81**	**68**	**60**	**54**	**46**	**66**	**44**	**21**	**30.21**	**29.97**	**29.85**	**10**	**10**	**10**	**25**	**7**	**33**	**T**	Rain , Thunderstorm
	95	**81**	**67**	**62**	**56**	**51**	**78**	**51**	**24**	**30.26**	**29.99**	**29.84**	**10**	**10**	**10**	**24**	**5**	**29**	**0.02**	Rain , Thunderstorm
	92	**80**	**67**	**65**	**58**	**53**	**93**	**62**	**30**	**30.26**	**30.02**	**29.86**	**10**	**10**	**6**	**28**	**8**	**35**	**0.31**	Rain , Thunderstorm
	87	**77**	**66**	**63**	**59**	**53**	**87**	**62**	**37**	**30.21**	**30.04**	**29.94**	**10**	**10**	**10**	**30**	**6**	**36**	**0.00**	Thunderstorm
	94	**80**	**66**	**59**	**55**	**49**	**73**	**48**	**22**	**30.01**	**29.91**	**29.80**	**10**	**10**	**10**	**13**	**5**	**16**	**0.00**	
	90	**80**	**70**	**58**	**55**	**53**	**66**	**49**	**31**	**30.22**	**29.97**	**29.83**	**10**	**10**	**10**	**32**	**12**	**39**	**T**	Rain , Thunderstorm
	91	**79**	**66**	**58**	**55**	**51**	**73**	**50**	**27**	**29.98**	**29.89**	**29.79**	**10**	**10**	**10**	**22**	**7**	**29**	**0.00**	
	93	**80**	**67**	**57**	**54**	**50**	**66**	**46**	**26**	**30.14**	**29.89**	**29.75**	**10**	**10**	**10**	**31**	**5**	**39**	**T**	Rain , Thunderstorm
	91	**80**	**69**	**63**	**56**	**50**	**68**	**47**	**26**	**30.14**	**29.90**	**29.78**	**10**	**10**	**7**	**30**	**7**	**39**	**0.03**	Rain , Thunderstorm
	88	**78**	**67**	**62**	**56**	**49**	**76**	**52**	**27**	**30.04**	**29.89**	**29.80**	**10**	**10**	**10**	**22**	**7**	**28**	**0.00**	Rain

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2019	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Press. (in)			Visibility (mi)			Wind (mph)			Precip. (in)	Events
	89	**78**	**66**	**61**	**57**	**53**	**76**	**54**	**31**	**30.16**	**29.91**	**29.84**	**10**	**10**	**10**	**25**	**6**	**34**	**0.05**	Rain , Thunderstorm
	92	**78**	**63**	**61**	**52**	**41**	**87**	**53**	**18**	**30.13**	**29.94**	**29.85**	**10**	**10**	**10**	**20**	**6**	**30**	**0.00**	
	94	**81**	**67**	**53**	**44**	**36**	**57**	**35**	**13**	**30.00**	**29.93**	**29.86**	**10**	**10**	**10**	**15**	**5**	**18**	**0.00**	
	88	**77**	**65**	**58**	**49**	**40**	**58**	**39**	**20**	**30.11**	**30.00**	**29.93**	**10**	**10**	**10**	**28**	**12**	**34**	**T**	Rain
	92	**77**	**61**	**53**	**47**	**38**	**67**	**42**	**17**	**30.10**	**29.99**	**29.88**	**10**	**10**	**10**	**29**	**6**	**38**	**0.00**	
	95	**79**	**62**	**47**	**39**	**30**	**52**	**32**	**11**	**29.96**	**29.85**	**29.73**	**10**	**10**	**10**	**15**	**5**	**19**	**0.00**	
	93	**79**	**65**	**41**	**34**	**23**	**37**	**23**	**8**	**29.84**	**29.76**	**29.69**	**10**	**10**	**10**	**21**	**7**	**28**	**0.00**	
	94	**79**	**64**	**40**	**32**	**27**	**34**	**22**	**10**	**29.89**	**29.81**	**29.75**	**10**	**10**	**10**	**14**	**5**	**20**	**0.00**	

2019	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Press. (in)			Visibility (mi)			Wind (mph)			Precip. (in)	Events
Sep	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	low	high	avg	high	sum	
	96	**83**	**69**	**48**	**44**	**40**	**38**	**26**	**14**	**30.15**	**29.92**	**29.77**	**10**	**10**	**9**	**29**	**6**	**43**	**T**	Rain , Thunderstorm
	91	**81**	**70**	**48**	**43**	**38**	**41**	**29**	**16**	**30.04**	**29.98**	**29.91**	**10**	**10**	**10**	**21**	**9**	**26**	**0.00**	
	90	**78**	**65**	**44**	**41**	**36**	**44**	**31**	**18**	**30.12**	**30.02**	**29.93**	**10**	**10**	**10**	**15**	**6**	**19**	**0.00**	
	94	**81**	**67**	**47**	**42**	**37**	**39**	**27**	**15**	**30.05**	**29.95**	**29.86**	**10**	**10**	**10**	**16**	**7**	**20**	**0.00**	
	93	**81**	**69**	**56**	**48**	**43**	**53**	**36**	**19**	**30.04**	**29.89**	**29.75**	**10**	**10**	**10**	**29**	**9**	**34**	**T**	Thunderstorm
	87	**76**	**65**	**56**	**52**	**47**	**73**	**49**	**25**	**29.88**	**29.79**	**29.69**	**10**	**10**	**10**	**20**	**6**	**24**	**T**	
	88	**76**	**64**	**54**	**46**	**37**	**63**	**40**	**17**	**30.09**	**29.80**	**29.71**	**10**	**10**	**10**	**22**	**10**	**27**	**0.00**	
	86	**76**	**65**	**60**	**53**	**45**	**73**	**49**	**25**	**30.11**	**29.88**	**29.74**	**10**	**10**	**8**	**18**	**8**	**24**	**0.02**	Rain , Thunderstorm
	88	**74**	**61**	**57**	**52**	**41**	**81**	**46**	**13**	**30.05**	**29.88**	**29.77**	**10**	**10**	**10**	**13**	**8**	**18**	**0.00**	
	85	**75**	**64**	**48**	**32**	**23**	**49**	**31**	**12**	**30.06**	**29.98**	**29.88**	**10**	**10**	**10**	**18**	**8**	**24**	**0.00**	
	87	**76**	**65**	**54**	**47**	**24**	**63**	**41**	**19**	**30.12**	**30.03**	**29.94**	**10**	**10**	**10**	**25**	**10**	**31**	**0.00**	
	85	**75**	**64**	**54**	**51**	**44**	**63**	**45**	**26**	**30.31**	**30.08**	**29.95**	**10**	**10**	**10**	**22**	**8**	**27**	**T**	Thunderstorm

2019	Temp. (°F)			Dew Point (°F)			Humidity (%)			Sea Level Press. (in)			Visibility (mi)			Wind (mph)			Precip. (in)	Events
	69	65	60	59	55	50	90	71	51	30.14	30.06	30.01	10	10	4	16	6	21	0.12	Rain
	81	71	60	58	55	48	90	62	33	30.22	30.02	29.86	10	10	2	32	8	39	0.30	Rain , Thunderstorm
	83	72	60	57	52	44	90	58	26	30.01	29.93	29.85	10	10	10	10	4	14	0.00	
	85	71	57	52	44	35	67	42	17	29.99	29.91	29.85	10	10	10	15	5	21	0.00	
	86	72	58	51	42	37	49	34	19	30.00	29.84	29.72	10	10	10	24	6	28	T	Rain , Thunderstorm
	85	74	62	52	40	28	65	39	13	29.87	29.78	29.69	10	10	10	24	8	31	0.00	
	82	69	55	51	38	32	63	42	20	30.07	29.85	29.75	10	10	10	26	7	34	T	Rain
	80	66	51	49	30	16	77	43	9	30.03	29.97	29.87	10	10	7	12	5	15	0.00	
	79	66	52	51	37	22	80	50	19	30.25	30.03	29.94	10	10	10	29	9	39	0.01	Rain , Thunderstorm
	78	65	51	51	46	42	86	58	30	30.06	29.96	29.85	10	10	10	13	4	16	0.00	
	84	70	56	47	43	36	67	44	20	29.95	29.87	29.80	10	10	10	14	5	18	0.00	
	84	70	56	46	40	34	62	41	19	29.97	29.86	29.76	10	10	10	20	5	22	0.00	
	78	67	55	45	42	39	55	42	28	29.83	29.75	29.67	10	10	10	17	6	21	0.00	
	82	69	55	45	43	39	61	42	23	29.80	29.73	29.66	10	10	10	25	11	31	0.00	
	83	70	57	46	40	33	57	38	19	29.82	29.74	29.67	10	10	10	28	12	33	0.00	
	87	72	57	58	43	34	59	33	11	29.82	29.73	29.60	10	10	10	22	9	29	0.00	

Albuquerque, NM

Albuquerque International Sunport

3:18 PM MDT on July 25, 2019 (GMT -0600)

Weather History for KABQ - July, 2019

July

13

2019

View
Saturday, July 13, 2019

Daily | Weekly | Monthly | Custom

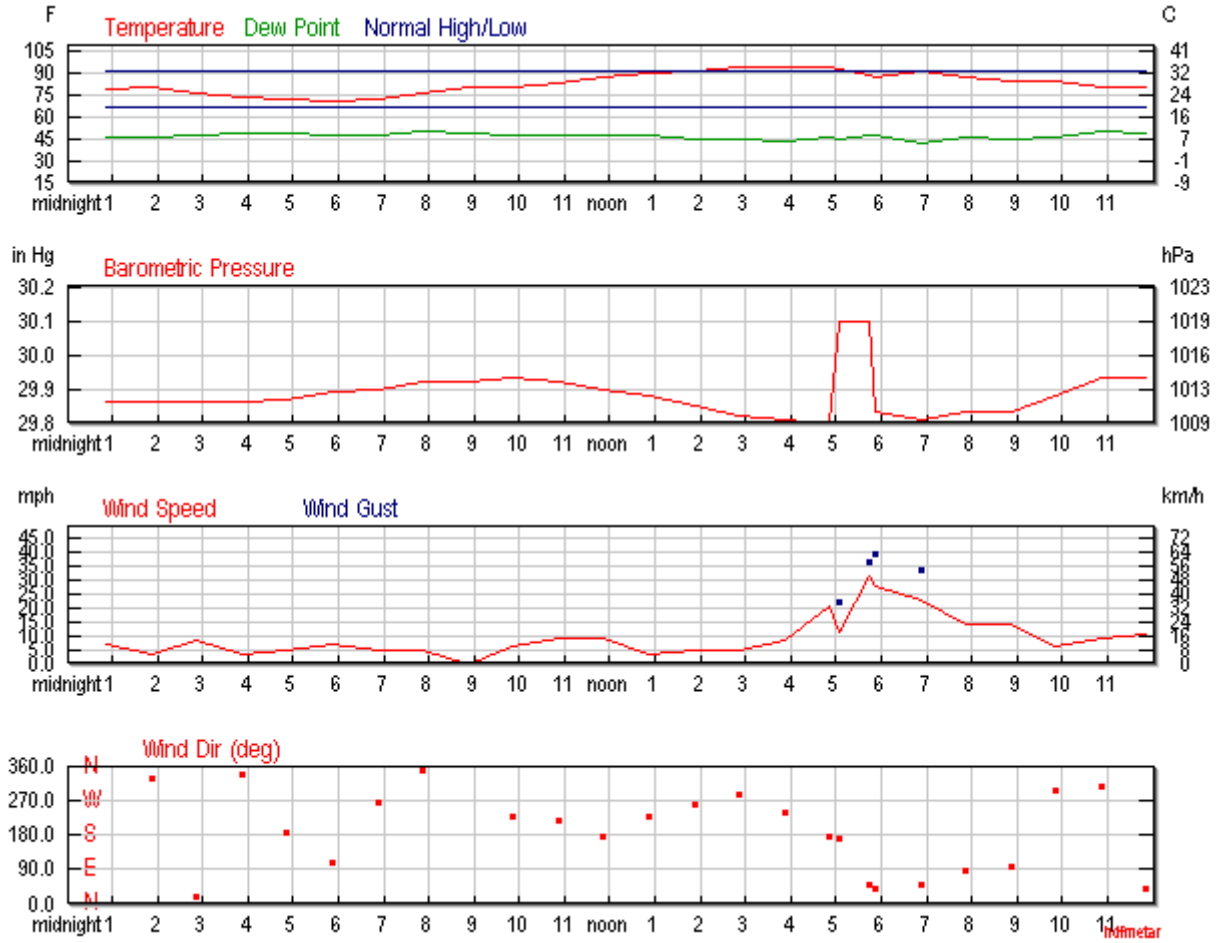
	Actual	Average	Record
Temperature			
Mean Temperature	**83** °F	-	
Max Temperature	**97** °F	-	- ()
Min Temperature	**69** °F	-	- ()
Cooling Degree Days	18		
Month to date cooling degree days	183		
Year to date cooling degree days	490		
Since 1 June cooling degree days	456		
Growing Degree Days	33 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**47** °F		
Average Humidity	31		
Maximum Humidity	44		
Minimum Humidity	17		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.85		
Year to date precipitation	3.92		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.88** in		
Wind			
Wind Speed	**9** mph (WNW)		
Max Wind Speed	**31** mph		
Max Gust Speed	**39** mph		
Visibility	**10** miles		
Events	Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



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Astronomy

Jul. 13, 2019	Rise	Set

Jul. 13, 2019	Rise	Set
Actual Time	6:02 AM MDT	8:21 PM MDT
Civil Twilight	5:33 AM MDT	8:50 PM MDT
Nautical Twilight	4:57 AM MDT	9:26 PM MDT
Astronomical Twilight	4:18 AM MDT	10:05 PM MDT
Moon	5:48 PM MDT (7/13)	3:22 AM MDT (7/13)
Length of Visible Light	15h 17m	
Length of Day	14h 19m	

Waxing Gibbous, 90% of the Moon is Illuminated

Jul 13	Jul 16	Jul 24	Jul 31	Aug 7
Waxing Gibbous	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**79.0** °F	**46.0** °F	31%	**29.86** in	**10.0** mi	East	**6.9** mph	-	N/A		Scattered Clouds
1:52 AM	**80.1** °F	**46.0** °F	30%	**29.86** in	**10.0** mi	NNW	**3.5** mph	-	N/A		Mostly Cloudy
2:52 AM	**77.0** °F	**48.0** °F	36%	**29.86** in	**10.0** mi	NNE	**8.1** mph	-	N/A		Scattered Clouds
3:52 AM	**73.9** °F	**48.9** °F	41%	**29.86** in	**10.0** mi	NNW	**3.5** mph	-	N/A		Mostly Cloudy
4:52 AM	**73.0** °F	**48.9** °F	42%	**29.87** in	**10.0** mi	South	**4.6** mph	-	N/A		Partly Cloudy
5:52 AM	**71.1** °F	**48.0** °F	44%	**29.89** in	**10.0** mi	ESE	**6.9** mph	-	N/A		Scattered Clouds
6:52 AM	**73.0** °F	**48.0** °F	41%	**29.90** in	**10.0** mi	West	**4.6** mph	-	N/A		Partly Cloudy
7:52 AM	**75.9** °F	**50.0** °F	40%	**29.92** in	**10.0** mi	North	**4.6** mph	-	N/A		Partly Cloudy

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 AM	**80.1** °F	**48.9** °F	34%	**29.92** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
9:52 AM	**81.0** °F	**48.0** °F	31%	**29.93** in	**10.0** mi	SW	**5.8** mph	-	N/A		Scattered Clouds
10:52 AM	**84.0** °F	**48.0** °F	28%	**29.92** in	**10.0** mi	SW	**9.2** mph	-	N/A		Scattered Clouds
11:52 AM	**87.1** °F	**48.0** °F	26%	**29.90** in	**10.0** mi	South	**9.2** mph	-	N/A		Scattered Clouds
12:52 PM	**90.0** °F	**46.9** °F	23%	**29.88** in	**10.0** mi	SW	**3.5** mph	-	N/A		Scattered Clouds
1:52 PM	**91.0** °F	**45.0** °F	20%	**29.85** in	**10.0** mi	West	**4.6** mph	-	N/A		Scattered Clouds
2:52 PM	**93.9** °F	**44.1** °F	18%	**29.82** in	**10.0** mi	WNW	**4.6** mph	-	N/A		Scattered Clouds
3:52 PM	**93.9** °F	**43.0** °F	17%	**29.81** in	**10.0** mi	WSW	**8.1** mph	-	N/A		Scattered Clouds
4:52 PM	**93.9** °F	**46.0** °F	19%	**29.80** in	**10.0** mi	South	**20.7** mph	**32.2** mph	N/A		Mostly Cloudy
5:04 PM	**93.0** °F	**45.0** °F	19%	**30.10** in	**10.0** mi	South	**11.5** mph	**21.9** mph	N/A	Thunderstorm	Mostly Cloudy
5:44 PM	**89.1** °F	**46.9** °F	23%	**30.10** in	**10.0** mi	NE	**31.1** mph	**36.8** mph	N/A	Thunderstorm	Mostly Cloudy
5:52 PM	**88.0** °F	**48.0** °F	25%	**29.83** in	**10.0** mi	NE	**27.6** mph	**39.1** mph	N/A		Mostly Cloudy
6:52 PM	**91.0** °F	**42.1** °F	18%	**29.81** in	**10.0** mi	NE	**23.0** mph	**33.4** mph	N/A		Mostly Cloudy
7:52 PM	**87.1** °F	**46.0** °F	24%	**29.83** in	**10.0** mi	East	**13.8** mph	-	N/A		Mostly Cloudy
8:52 PM	**84.9** °F	**45.0** °F	25%	**29.83** in	**10.0** mi	East	**13.8** mph	-	N/A		Mostly Cloudy
9:52 PM	**84.9** °F	**46.0** °F	26%	**29.88** in	**10.0** mi	WNW	**5.8** mph	-	N/A		Mostly Cloudy
10:52 PM	**81.0** °F	**50.0** °F	34%	**29.93** in	**10.0** mi	NW	**9.2** mph	-	N/A		Mostly Cloudy
11:52 PM	**81.0** °F	**48.9** °F	33%	**29.93** in	**10.0** mi	NE	**10.4** mph	-	N/A		Mostly Cloudy

Albuquerque, NM

Albuquerque International Sunport

3:44 PM MDT on July 25, 2019 (GMT -0600)

Weather History for KABQ - July, 2019

July

14

2019

View

Sunday, July 14, 2019

Daily | Weekly | Monthly | Custom

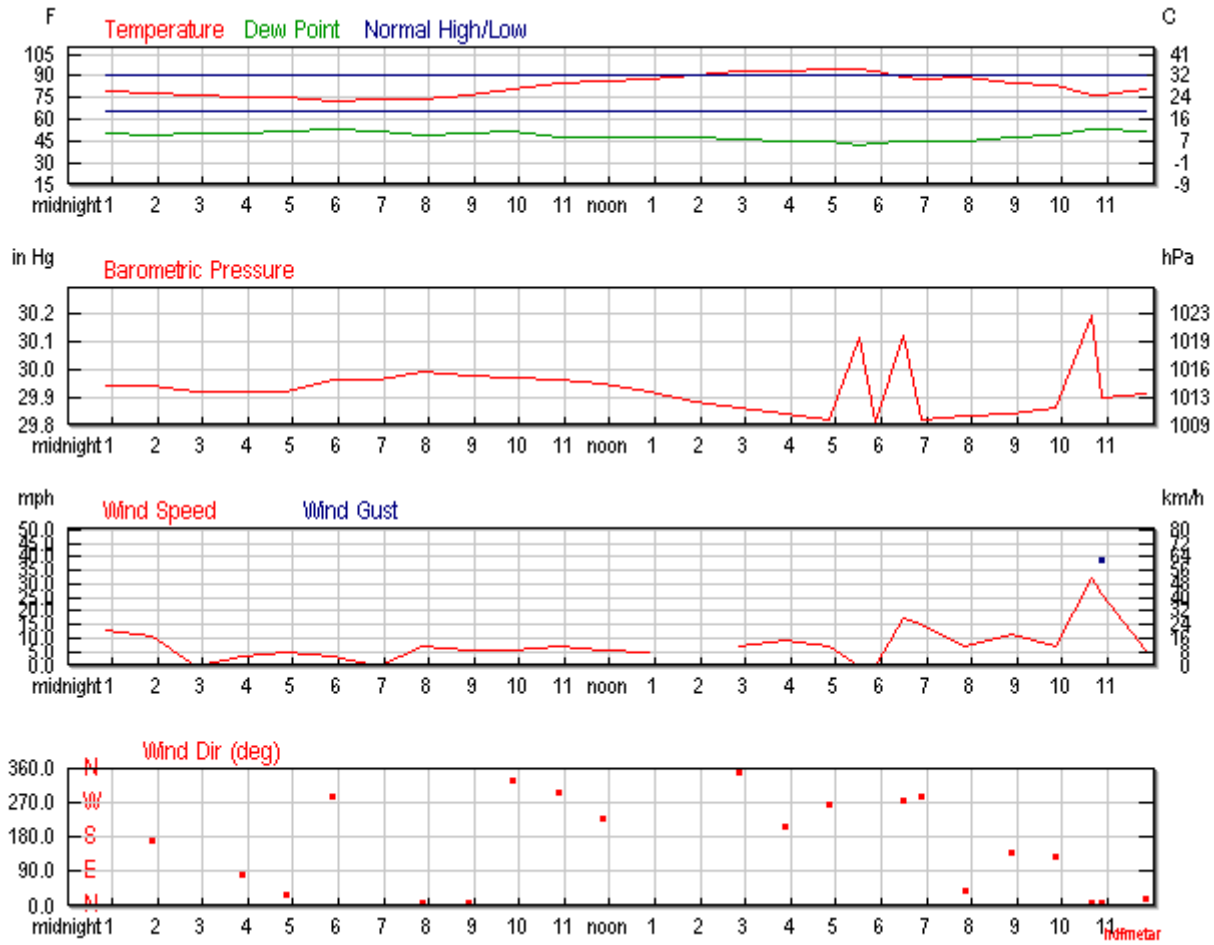
	Actual	Average	Record
Temperature			
Mean Temperature	**84** °F	-	
Max Temperature	**96** °F	-	- ()
Min Temperature	**72** °F	-	- ()
Cooling Degree Days	19		
Month to date cooling degree days	202		
Year to date cooling degree days	509		
Since 1 June cooling degree days	475		
Growing Degree Days	34 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**49** °F		
Average Humidity	34		
Maximum Humidity	49		
Minimum Humidity	19		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.85		
Year to date precipitation	3.92		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.92** in		
Wind			
Wind Speed	**7** mph (NNW)		
Max Wind Speed	**33** mph		
Max Gust Speed	**41** mph		
Visibility	**10** miles		
Events	Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



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Astronomy

Jul. 14, 2019	**Rise**	**Set**

Jul. 14, 2019	Rise	Set
Actual Time	6:02 AM MDT	8:21 PM MDT
Civil Twilight	5:33 AM MDT	8:50 PM MDT
Nautical Twilight	4:58 AM MDT	9:25 PM MDT
Astronomical Twilight	4:19 AM MDT	10:04 PM MDT
Moon	6:46 PM MDT (7/14)	4:05 AM MDT (7/14)
Length of Visible Light	15h 16m	
Length of Day	14h 18m	

Waxing Gibbous, 95% of the Moon is Illuminated

Jul 14	Jul 16	Jul 24	Jul 31	Aug 7
Waxing Gibbous	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**80.1** °F	**51.1** °F	36%	**29.94** in	**10.0** mi	South	**12.7** mph	-	N/A		Overcast
1:52 AM	**79.0** °F	**50.0** °F	36%	**29.94** in	**10.0** mi	South	**10.4** mph	-	N/A		Overcast
2:52 AM	**77.0** °F	**51.1** °F	40%	**29.92** in	**10.0** mi	Calm	Calm	-	N/A		Overcast
3:52 AM	**75.9** °F	**51.1** °F	42%	**29.92** in	**10.0** mi	East	**3.5** mph	-	N/A		Mostly Cloudy
4:52 AM	**75.9** °F	**52.0** °F	43%	**29.92** in	**10.0** mi	NNE	**4.6** mph	-	N/A		Scattered Clouds
5:52 AM	**73.0** °F	**54.0** °F	51%	**29.96** in	**10.0** mi	WNW	**3.5** mph	-	N/A		Scattered Clouds
6:52 AM	**75.0** °F	**52.0** °F	44%	**29.96** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
7:52 AM	**75.0** °F	**50.0** °F	41%	**29.99** in	**10.0** mi	North	**6.9** mph	-	N/A		Partly Cloudy

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 AM	**78.1** °F	**51.1** °F	39%	**29.98** in	**10.0** mi	North	**5.8** mph	-	N/A		Partly Cloudy
9:52 AM	**82.0** °F	**52.0** °F	35%	**29.97** in	**10.0** mi	NNW	**5.8** mph	-	N/A		Scattered Clouds
10:52 AM	**86.0** °F	**48.9** °F	28%	**29.96** in	**10.0** mi	WNW	**6.9** mph	-	N/A		Scattered Clouds
11:52 AM	**87.1** °F	**48.9** °F	27%	**29.95** in	**10.0** mi	SW	**5.8** mph	-	N/A		Scattered Clouds
12:52 PM	**89.1** °F	**48.9** °F	25%	**29.92** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Scattered Clouds
1:52 PM	**91.9** °F	**48.0** °F	22%	**29.88** in	**23006.0** mi	North	-	-	N/A		Scattered Clouds
2:52 PM	**93.9** °F	**46.9** °F	20%	**29.86** in	**10.0** mi	North	**6.9** mph	-	N/A		Scattered Clouds
3:52 PM	**93.9** °F	**46.0** °F	19%	**29.84** in	**10.0** mi	SSW	**9.2** mph	**17.3** mph	N/A		Scattered Clouds
4:52 PM	**95.0** °F	**46.0** °F	19%	**29.82** in	**10.0** mi	West	**6.9** mph	-	N/A		Scattered Clouds
5:30 PM	**95.0** °F	**42.8** °F	16%	**30.11** in	**10.0** mi	Calm	Calm	-	N/A	Thunderstorm	Scattered Clouds
5:52 PM	**93.9** °F	**44.1** °F	18%	**29.81** in	**10.0** mi	Calm	Calm	-	N/A	Thunderstorm	Mostly Cloudy
6:28 PM	**90.0** °F	**46.0** °F	22%	**30.12** in	**10.0** mi	West	**17.3** mph	-	N/A		Mostly Cloudy
6:52 PM	**89.1** °F	**46.0** °F	22%	**29.82** in	**10.0** mi	WNW	**15.0** mph	-	N/A		Mostly Cloudy
7:52 PM	**90.0** °F	**45.0** °F	21%	**29.83** in	**10.0** mi	NE	**6.9** mph	-	N/A		Mostly Cloudy
8:52 PM	**86.0** °F	**48.9** °F	28%	**29.84** in	**10.0** mi	SE	**11.5** mph	-	N/A		Mostly Cloudy
9:52 PM	**84.0** °F	**50.0** °F	31%	**29.86** in	**10.0** mi	SE	**6.9** mph	-	N/A		Scattered Clouds
10:39 PM	**78.1** °F	**54.0** °F	43%	**30.19** in	**10.0** mi	North	**32.2** mph	**40.3** mph	N/A		Mostly Cloudy
10:52 PM	**77.0** °F	**54.0** °F	45%	**29.90** in	**10.0** mi	North	**26.5** mph	**39.1** mph	N/A		Mostly Cloudy
11:52 PM	**81.0** °F	**52.0** °F	36%	**29.91** in	**10.0** mi	NNE	**5.8** mph	-	N/A		Scattered Clouds

Albuquerque, NM

Albuquerque International Sunport

3:45 PM MDT on July 25, 2019 (GMT -0600)

Weather History for KABQ - July, 2019

July

15

2019

View

Monday, July 15, 2019

Daily | Weekly | Monthly | Custom

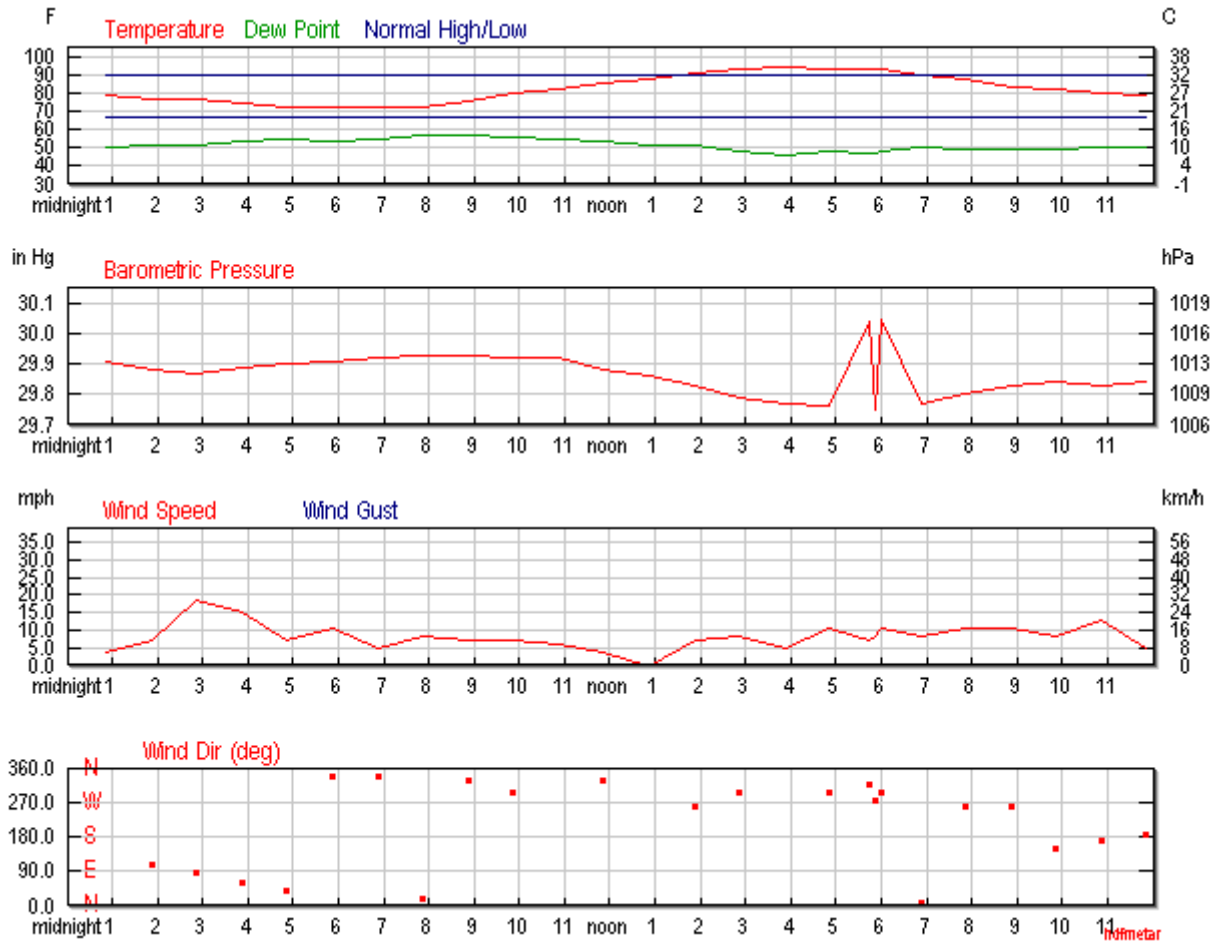
	Actual	Average	Record
Temperature			
Mean Temperature	**84** °F	-	
Max Temperature	**97** °F	-	- ()
Min Temperature	**71** °F	-	- ()
Cooling Degree Days	19		
Month to date cooling degree days	221		
Year to date cooling degree days	528		
Since 1 June cooling degree days	494		
Growing Degree Days	34 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**51** °F		
Average Humidity	38		
Maximum Humidity	57		
Minimum Humidity	19		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.85		
Year to date precipitation	3.92		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.87** in		
Wind			
Wind Speed	**8** mph (NW)		
Max Wind Speed	**25** mph		
Max Gust Speed	**29** mph		
Visibility	**10** miles		
Events	Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



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Astronomy

Jul. 15, 2019	Rise	Set

Jul. 15, 2019	Rise	Set
Actual Time	6:03 AM MDT	8:20 PM MDT
Civil Twilight	5:34 AM MDT	8:49 PM MDT
Nautical Twilight	4:59 AM MDT	9:25 PM MDT
Astronomical Twilight	4:20 AM MDT	10:03 PM MDT
Moon	7:39 PM MDT (7/15)	4:53 AM MDT (7/15)
Length of Visible Light	15h 15m	
Length of Day	14h 17m	

Waxing Gibbous, 99% of the Moon is Illuminated

Jul 15	Jul 16	Jul 24	Jul 31	Aug 7
Waxing Gibbous	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**79.0** °F	-	**50.0** °F	36%	**29.91** in	**10.0** mi	NNE	**3.5** mph	-	N/A		Scattered Clouds
1:52 AM	**77.0** °F	-	**51.1** °F	40%	**29.88** in	**10.0** mi	ESE	**6.9** mph	-	N/A		Scattered Clouds
2:52 AM	**77.0** °F	-	**51.1** °F	40%	**29.87** in	**10.0** mi	East	**18.4** mph	**28.8** mph	N/A		Scattered Clouds
3:52 AM	**75.0** °F	-	**54.0** °F	48%	**29.89** in	**10.0** mi	ENE	**15.0** mph	-	N/A		Scattered Clouds
4:52 AM	**73.0** °F	-	**55.0** °F	53%	**29.90** in	**10.0** mi	NE	**6.9** mph	-	N/A		Partly Cloudy
5:52 AM	**72.0** °F	-	**54.0** °F	53%	**29.91** in	**10.0** mi	NNW	**10.4** mph	-	N/A		Scattered Clouds

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
6:52 AM	**72.0** °F	-	**55.0** °F	55%	**29.92** in	**10.0** mi	NNW	**4.6** mph	-	N/A		Partly Cloudy
7:52 AM	**73.0** °F	-	**57.0** °F	57%	**29.93** in	**10.0** mi	NNE	**8.1** mph	-	N/A		Partly Cloudy
8:52 AM	**75.9** °F	-	**57.0** °F	52%	**29.93** in	**10.0** mi	NNW	**6.9** mph	-	N/A		Partly Cloudy
9:52 AM	**80.1** °F	**80.2** °F	**55.9** °F	43%	**29.92** in	**10.0** mi	WNW	**6.9** mph	-	N/A		Partly Cloudy
10:52 AM	**82.9** °F	**82.0** °F	**55.0** °F	38%	**29.92** in	**10.0** mi	Variable	**5.8** mph	-	N/A		Partly Cloudy
11:52 AM	**86.0** °F	**84.2** °F	**54.0** °F	33%	**29.88** in	**10.0** mi	NNW	**3.5** mph	-	N/A		Scattered Clouds
12:52 PM	**88.0** °F	-	**52.0** °F	29%	**29.86** in	**10.0** mi	Calm	Calm	-	N/A		Partly Cloudy
1:52 PM	**91.0** °F	-	**51.1** °F	25%	**29.83** in	**10.0** mi	West	**6.9** mph	-	N/A		Partly Cloudy
2:52 PM	**93.9** °F	-	**48.0** °F	21%	**29.79** in	**10.0** mi	WNW	**8.1** mph	-	N/A		Scattered Clouds
3:52 PM	**95.0** °F	-	**46.0** °F	19%	**29.77** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Mostly Cloudy
4:52 PM	**93.0** °F	-	**48.0** °F	21%	**29.76** in	**10.0** mi	WNW	**10.4** mph	-	N/A		Mostly Cloudy
5:45 PM	**93.0** °F	-	**46.9** °F	20%	**30.04** in	**10.0** mi	NW	**6.9** mph	-	N/A	Thunderstorm	Mostly Cloudy
5:52 PM	**93.0** °F	-	**46.9** °F	20%	**29.75** in	**10.0** mi	West	**8.1** mph	-	N/A	Thunderstorm	Mostly Cloudy
5:59 PM	**93.0** °F	-	**48.0** °F	21%	**30.05** in	**10.0** mi	WNW	**10.4** mph	-	N/A		Mostly Cloudy
6:52 PM	**90.0** °F	-	**50.0** °F	25%	**29.77** in	**10.0** mi	North	**8.1** mph	-	N/A		Mostly Cloudy
7:52 PM	**88.0** °F	-	**48.9** °F	26%	**29.80** in	**10.0** mi	West	**10.4** mph	**25.3** mph	N/A		Mostly Cloudy
8:52 PM	**84.0** °F	-	**48.9** °F	29%	**29.83** in	**10.0** mi	West	**10.4** mph	-	N/A		Mostly Cloudy
9:52 PM	**82.0** °F	-	**48.9** °F	31%	**29.84** in	**10.0** mi	SSE	**8.1** mph	-	N/A		Scattered Clouds
10:52 PM	**80.1** °F	-	**50.0** °F	35%	**29.83** in	**10.0** mi	South	**12.7** mph	-	N/A		Mostly Cloudy
11:52 PM	**79.0** °F	-	**50.0** °F	36%	**29.84** in	**10.0** mi	South	**4.6** mph	-	N/A		Mostly Cloudy

Albuquerque, NM

Albuquerque International Sunport

4:19 PM MDT on July 25, 2019 (GMT -0600)

Weather History for KABQ - July, 2019

July

16

2019

View

Tuesday, July 16, 2019

Daily | Weekly | Monthly | Custom

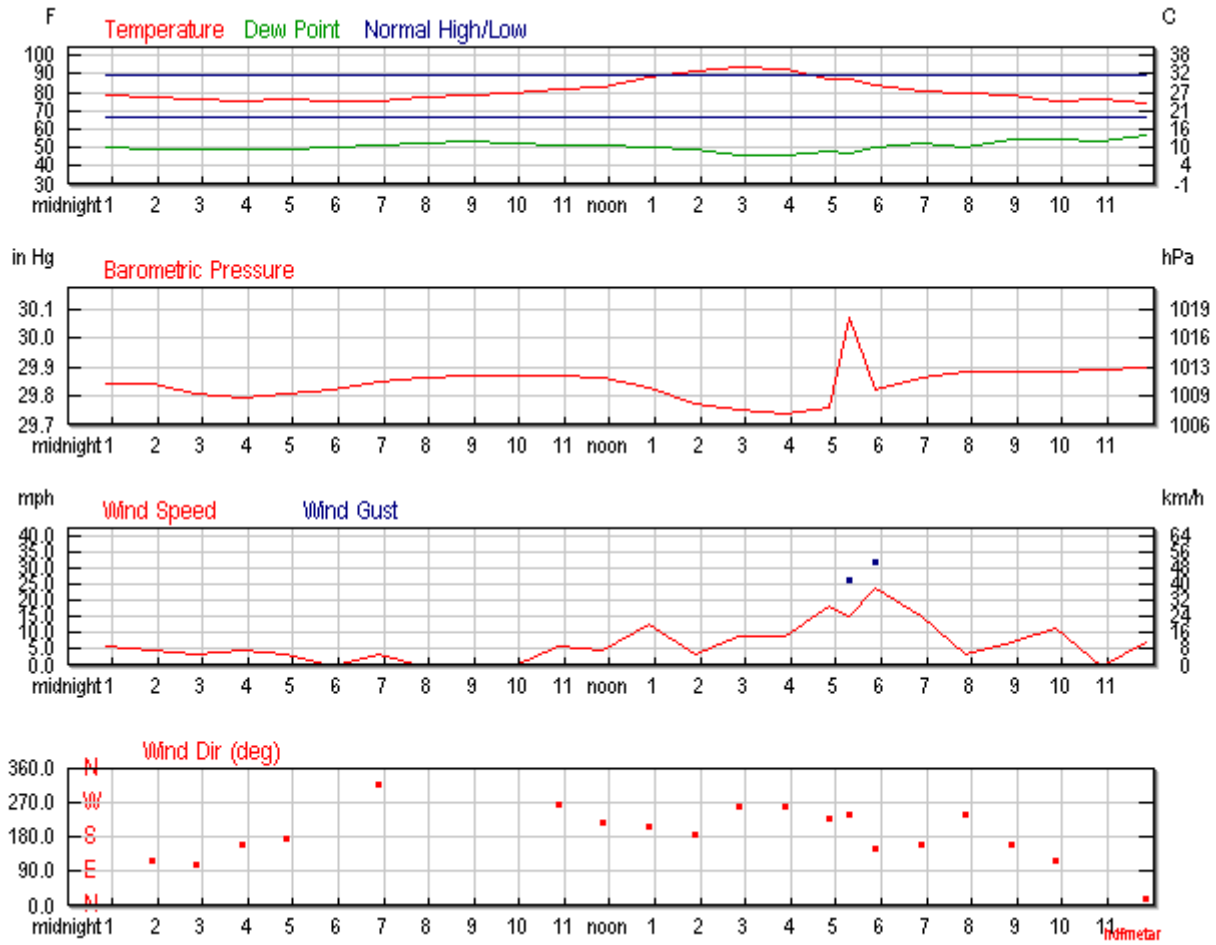
	Actual	Average	Record
Temperature			
Mean Temperature	**85** °F	-	
Max Temperature	**96** °F	-	- ()
Min Temperature	**74** °F	-	- ()
Cooling Degree Days	20		
Month to date cooling degree days	241		
Year to date cooling degree days	548		
Since 1 June cooling degree days	514		
Growing Degree Days	36 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**52** °F		
Average Humidity	37		
Maximum Humidity	54		
Minimum Humidity	19		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.88		
Year to date precipitation	3.95		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.84** in		
Wind			
Wind Speed	**7** mph (SSW)		
Max Wind Speed	**28** mph		
Max Gust Speed	**33** mph		
Visibility	**10** miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



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Astronomy

Jul. 16, 2019	**Rise**	**Set**

Jul. 16, 2019	Rise	Set
Actual Time	6:04 AM MDT	8:20 PM MDT
Civil Twilight	5:35 AM MDT	8:49 PM MDT
Nautical Twilight	4:59 AM MDT	9:24 PM MDT
Astronomical Twilight	4:21 AM MDT	10:03 PM MDT
Moon	8:28 PM MDT (7/16)	5:45 AM MDT (7/16)
Length of Visible Light	15h 13m	
Length of Day	14h 16m	

Full, 100% of the Moon is Illuminated

Jul 16	Jul 16	Jul 24	Jul 31	Aug 7
Full	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**79.0** °F	-	**51.1** °F	38%	**29.84** in	**10.0** mi	SSW	**5.8** mph	-	N/A		Mostly Cloudy
1:52 AM	**78.1** °F	-	**50.0** °F	37%	**29.84** in	**10.0** mi	ESE	**4.6** mph	-	N/A		Mostly Cloudy
2:52 AM	**77.0** °F	-	**50.0** °F	39%	**29.81** in	**10.0** mi	ESE	**3.5** mph	-	N/A		Mostly Cloudy
3:52 AM	**75.9** °F	-	**50.0** °F	40%	**29.79** in	**10.0** mi	SSE	**4.6** mph	-	N/A		Mostly Cloudy
4:52 AM	**77.0** °F	-	**50.0** °F	39%	**29.81** in	**10.0** mi	South	**3.5** mph	-	N/A		Mostly Cloudy
5:52 AM	**75.9** °F	-	**51.1** °F	42%	**29.82** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
6:52 AM	**75.9** °F	-	**52.0** °F	43%	**29.85** in	**10.0** mi	NW	**3.5** mph	-	N/A		Mostly Cloudy
7:52 AM	**78.1** °F	-	**53.1** °F	42%	**29.86** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 AM	**79.0** °F	-	**54.0** °F	42%	**29.87** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
9:52 AM	**81.0** °F	**80.4** °F	**53.1** °F	38%	**29.87** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
10:52 AM	**82.9** °F	-	**52.0** °F	34%	**29.87** in	**10.0** mi	West	**5.8** mph	-	N/A		Mostly Cloudy
11:52 AM	**84.0** °F	-	**52.0** °F	33%	**29.86** in	**10.0** mi	SW	**4.6** mph	-	N/A		Mostly Cloudy
12:52 PM	**89.1** °F	-	**51.1** °F	27%	**29.83** in	**10.0** mi	SSW	**12.7** mph	**17.3** mph	N/A		Mostly Cloudy
1:52 PM	**93.0** °F	-	**50.0** °F	23%	**29.77** in	**10.0** mi	South	**3.5** mph	-	N/A		Partly Cloudy
2:52 PM	**95.0** °F	-	**46.9** °F	19%	**29.75** in	**10.0** mi	West	**9.2** mph	-	N/A		Partly Cloudy
3:52 PM	**93.9** °F	-	**46.9** °F	20%	**29.74** in	**10.0** mi	West	**9.2** mph	-	N/A		Mostly Cloudy
4:52 PM	**88.0** °F	-	**48.9** °F	26%	**29.76** in	**10.0** mi	SW	**18.4** mph	**26.5** mph	N/A	Thunderstorm	Mostly Cloudy
5:18 PM	**88.0** °F	-	**48.0** °F	25%	**30.07** in	**10.0** mi	WSW	**15.0** mph	**26.5** mph	N/A		Mostly Cloudy
5:52 PM	**84.9** °F	-	**51.1** °F	31%	**29.82** in	**10.0** mi	SSE	**24.2** mph	**32.2** mph	N/A		Mostly Cloudy
6:52 PM	**82.0** °F	**81.2** °F	**53.1** °F	37%	**29.86** in	**10.0** mi	SSE	**15.0** mph	-	**0.03** in		Mostly Cloudy
7:52 PM	**81.0** °F	-	**51.1** °F	35%	**29.88** in	**10.0** mi	WSW	**3.5** mph	-	N/A		Mostly Cloudy
8:52 PM	**79.0** °F	-	**55.9** °F	45%	**29.88** in	**10.0** mi	SSE	**6.9** mph	-	**0.00** in	Rain	Light Rain
9:52 PM	**75.9** °F	-	**55.9** °F	50%	**29.88** in	**10.0** mi	ESE	**11.5** mph	-	**0.00** in		Mostly Cloudy
10:52 PM	**77.0** °F	-	**54.0** °F	45%	**29.89** in	**10.0** mi	Calm	Calm	-	**0.00** in		Mostly Cloudy
11:52 PM	**75.0** °F	-	**57.9** °F	55%	**29.90** in	**10.0** mi	NNE	**6.9** mph	-	N/A		Mostly Cloudy

Albuquerque, NM

Albuquerque International Sunport

4:24 PM MDT on July 25, 2019 (GMT -0600)

Weather History for KABQ - July, 2019

July

17

2019

View

Wednesday, July 17, 2019

Daily | Weekly | Monthly | Custom

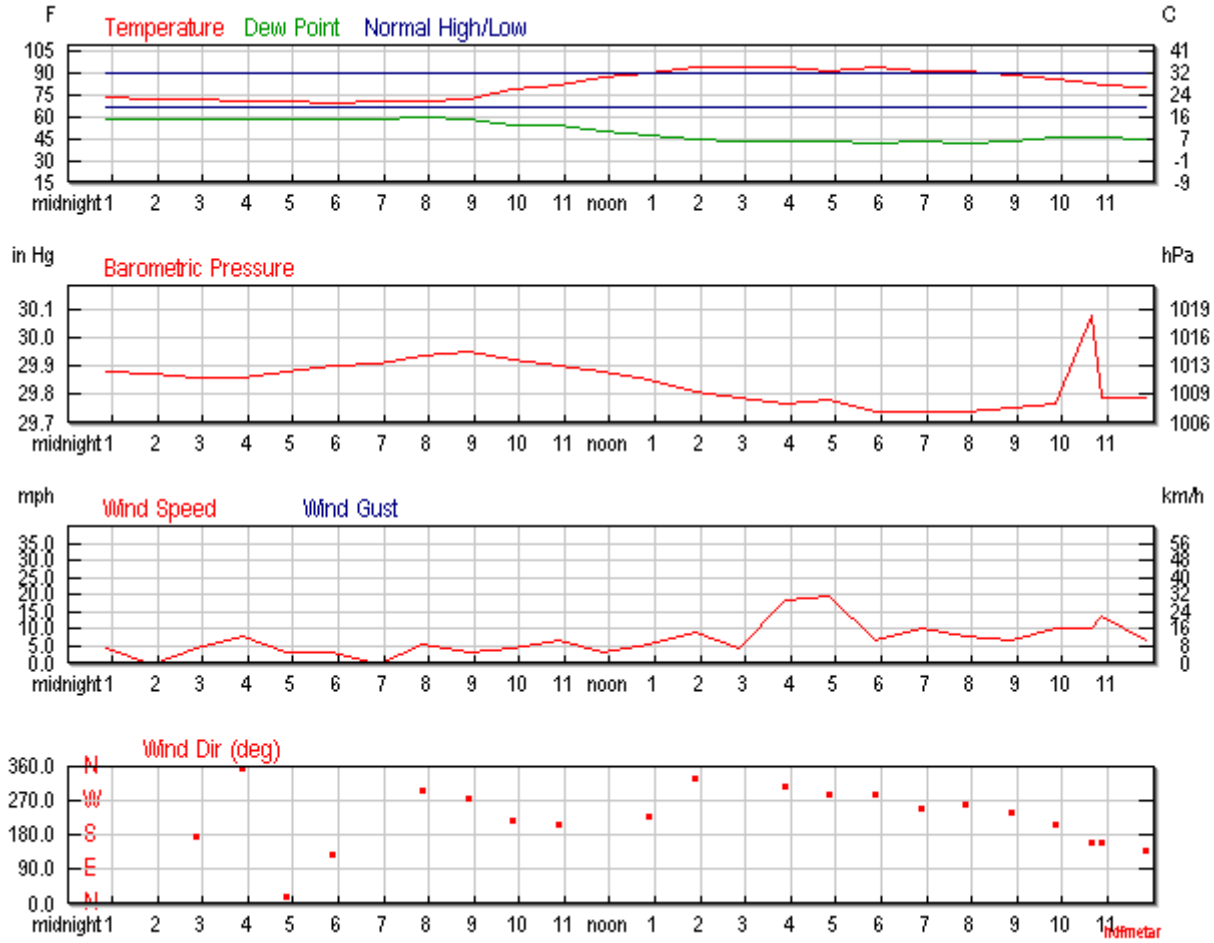
	Actual	Average	Record
Temperature			
Mean Temperature	**83** °F	-	
Max Temperature	**96** °F	-	- ()
Min Temperature	**69** °F	-	- ()
Cooling Degree Days	18		
Month to date cooling degree days	259		
Year to date cooling degree days	566		
Since 1 June cooling degree days	532		
Growing Degree Days	32 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**50** °F		
Average Humidity	43		
Maximum Humidity	68		
Minimum Humidity	17		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.88		
Year to date precipitation	3.95		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.84** in		
Wind			
Wind Speed	**7** mph (WSW)		
Max Wind Speed	**32** mph		
Max Gust Speed	**43** mph		
Visibility	**10** miles		
Events	Rain		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



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Astronomy

Jul. 17, 2019	**Rise**	**Set**

Jul. 17, 2019	Rise	Set
Actual Time	6:04 AM MDT	8:19 PM MDT
Civil Twilight	5:36 AM MDT	8:48 PM MDT
Nautical Twilight	5:00 AM MDT	9:24 PM MDT
Astronomical Twilight	4:22 AM MDT	10:02 PM MDT
Moon	9:11 PM MDT (7/17)	6:40 AM MDT (7/17)
Length of Visible Light	15h 12m	
Length of Day	14h 15m	

Full, 99% of the Moon is Illuminated

Jul 17	Jul 24	Jul 31	Aug 7	Aug 15
Full	Last Quarter	New	First Quarter	Full

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**73.9** °F	-	**59.0** °F	59%	**29.88** in	**10.0** mi	East	**4.6** mph	-	N/A		Mostly Cloudy
1:52 AM	**73.0** °F	-	**59.0** °F	61%	**29.87** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
2:52 AM	**72.0** °F	-	**59.0** °F	64%	**29.86** in	**10.0** mi	South	**4.6** mph	-	**0.00** in	Rain	Light Rain
3:52 AM	**71.1** °F	-	**57.9** °F	63%	**29.86** in	**10.0** mi	North	**8.1** mph	-	**0.00** in		Mostly Cloudy
4:52 AM	**71.1** °F	-	**57.9** °F	63%	**29.88** in	**10.0** mi	NNE	**3.5** mph	-	N/A		Scattered Clouds
5:52 AM	**69.1** °F	-	**57.9** °F	68%	**29.90** in	**10.0** mi	SE	**3.5** mph	-	N/A		Scattered Clouds
6:52 AM	**71.1** °F	-	**57.9** °F	63%	**29.91** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
7:52 AM	**71.1** °F	-	**60.1** °F	68%	**29.94** in	**10.0** mi	WNW	**5.8** mph	-	N/A		Mostly Cloudy

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 AM	**72.0** °F	-	**59.0** °F	64%	**29.95** in	**10.0** mi	West	**3.5** mph	-	N/A		Mostly Cloudy
9:52 AM	**79.0** °F	-	**55.0** °F	44%	**29.92** in	**10.0** mi	SW	**4.6** mph	-	N/A		Scattered Clouds
10:52 AM	**82.0** °F	**81.3** °F	**54.0** °F	38%	**29.90** in	**10.0** mi	SSW	**6.9** mph	-	N/A		Scattered Clouds
11:52 AM	**87.1** °F	-	**50.0** °F	28%	**29.88** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Partly Cloudy
12:52 PM	**90.0** °F	-	**46.9** °F	23%	**29.85** in	**10.0** mi	SW	**5.8** mph	-	N/A		Partly Cloudy
1:52 PM	**93.9** °F	-	**45.0** °F	18%	**29.81** in	**10.0** mi	NNW	**9.2** mph	-	N/A		Partly Cloudy
2:52 PM	**93.9** °F	-	**43.0** °F	17%	**29.79** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Mostly Cloudy
3:52 PM	**93.9** °F	-	**43.0** °F	17%	**29.77** in	**10.0** mi	NW	**18.4** mph	-	N/A		Mostly Cloudy
4:52 PM	**91.0** °F	-	**43.0** °F	19%	**29.78** in	**10.0** mi	WNW	**19.6** mph	**29.9** mph	N/A		Mostly Cloudy
5:52 PM	**93.9** °F	-	**42.1** °F	17%	**29.74** in	**10.0** mi	WNW	**6.9** mph	-	N/A		Mostly Cloudy
6:52 PM	**91.9** °F	-	**43.0** °F	18%	**29.74** in	**10.0** mi	WSW	**10.4** mph	-	N/A		Mostly Cloudy
7:52 PM	**91.0** °F	-	**42.1** °F	18%	**29.74** in	**10.0** mi	West	**8.1** mph	-	N/A		Mostly Cloudy
8:52 PM	**89.1** °F	-	**43.0** °F	20%	**29.75** in	**10.0** mi	WSW	**6.9** mph	-	N/A		Mostly Cloudy
9:52 PM	**86.0** °F	-	**46.0** °F	25%	**29.77** in	**10.0** mi	SSW	**10.4** mph	-	N/A		Mostly Cloudy
10:38 PM	**82.9** °F	-	**46.0** °F	27%	**30.08** in	**10.0** mi	SSE	**10.4** mph	-	N/A		Mostly Cloudy
10:52 PM	**82.0** °F	-	**46.0** °F	28%	**29.79** in	**10.0** mi	SSE	**13.8** mph	-	N/A		Mostly Cloudy
11:52 PM	**80.1** °F	-	**45.0** °F	29%	**29.79** in	**10.0** mi	SE	**6.9** mph	-	N/A		Mostly Cloudy

Albuquerque, NM

Albuquerque International Sunport

4:25 PM MDT on July 25, 2019 (GMT -0600)

Weather History for KABQ - July, 2019

July

23

2019

View

Tuesday, July 23, 2019

Daily | Weekly | Monthly | Custom

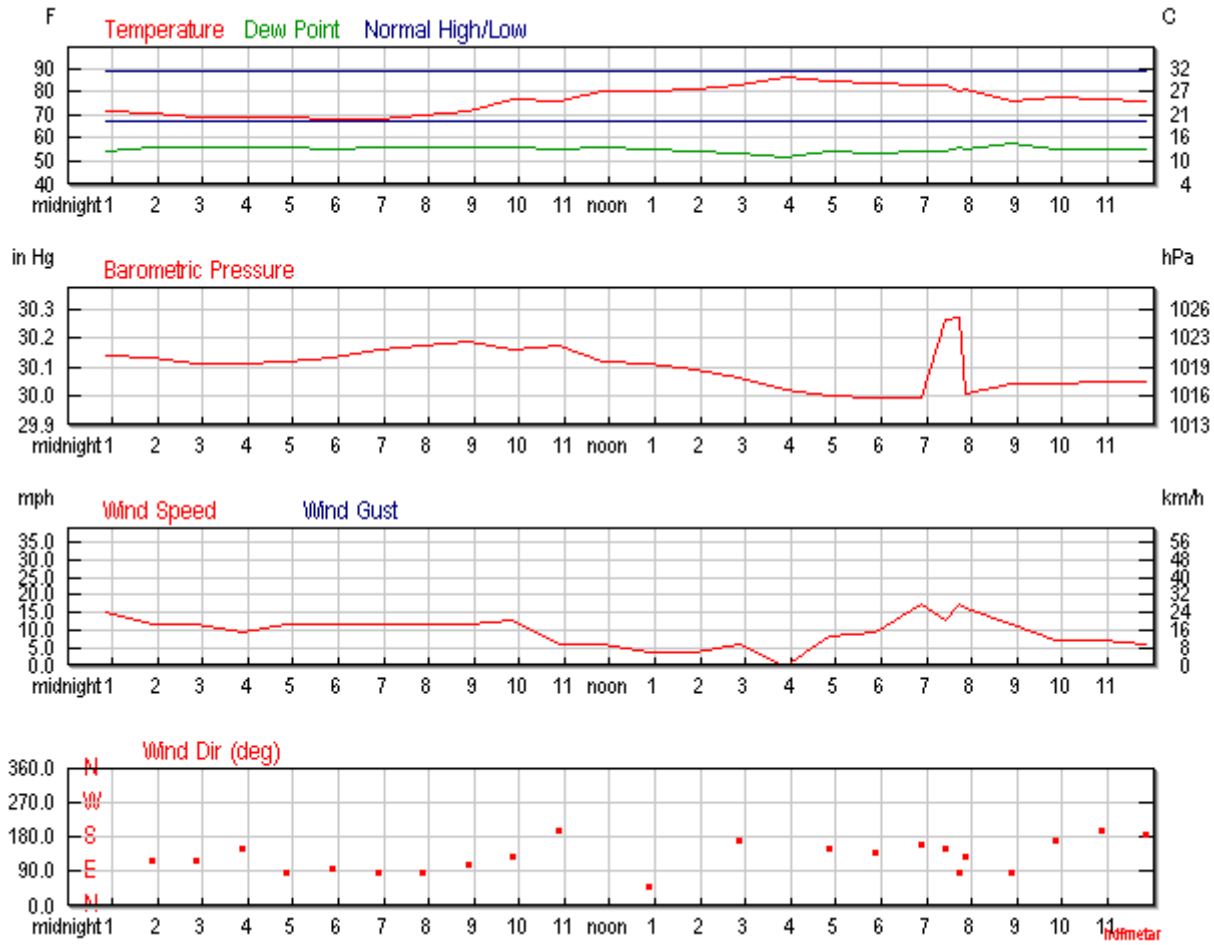
	Actual	Average	Record
Temperature			
Mean Temperature	**77** °F	-	
Max Temperature	**87** °F	-	- ()
Min Temperature	**67** °F	-	- ()
Cooling Degree Days	12		
Month to date cooling degree days	366		
Year to date cooling degree days	673		
Since 1 June cooling degree days	639		
Growing Degree Days	26 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**55** °F		
Average Humidity	47		
Maximum Humidity	63		
Minimum Humidity	30		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.88		
Year to date precipitation	3.95		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**30.10** in		
Wind			
Wind Speed	**9** mph (SE)		
Max Wind Speed	**23** mph		
Max Gust Speed	**29** mph		
Visibility	**10** miles		
Events	Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



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Astronomy

Jul. 23, 2019	**Rise**	**Set**

Jul. 23, 2019	Rise	Set
Actual Time	6:09 AM MDT	8:16 PM MDT
Civil Twilight	5:40 AM MDT	8:44 PM MDT
Nautical Twilight	5:05 AM MDT	9:19 PM MDT
Astronomical Twilight	4:28 AM MDT	9:56 PM MDT
Moon	No Moon Rise	12:11 PM MDT (7/23)
Length of Visible Light	15h 04m	
Length of Day	14h 07m	

Waning Gibbous, 63% of the Moon is Illuminated

Jul 23	Jul 24	Jul 31	Aug 7	Aug 15
Waning Gibbous	Last Quarter	New	First Quarter	Full

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**72.0** °F	-	**54.0** °F	53%	**30.14** in	**10.0** mi	ESE	**15.0** mph	-	N/A		Overcast
1:52 AM	**71.1** °F	-	**55.9** °F	59%	**30.13** in	**10.0** mi	ESE	**11.5** mph	-	N/A		Mostly Cloudy
2:52 AM	**69.1** °F	-	**55.9** °F	63%	**30.11** in	**10.0** mi	ESE	**11.5** mph	-	N/A		Mostly Cloudy
3:52 AM	**69.1** °F	-	**55.9** °F	63%	**30.11** in	**10.0** mi	SSE	**9.2** mph	-	N/A		Mostly Cloudy
4:52 AM	**69.1** °F	-	**55.9** °F	63%	**30.12** in	**10.0** mi	East	**11.5** mph	-	N/A		Mostly Cloudy
5:52 AM	**68.0** °F	-	**55.0** °F	63%	**30.13** in	**10.0** mi	East	**11.5** mph	-	N/A		Mostly Cloudy
6:52 AM	**68.0** °F	-	**55.9** °F	65%	**30.16** in	**10.0** mi	East	**11.5** mph	-	N/A		Scattered Clouds

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
7:52 AM	**70.0** °F	-	**55.9** °F	61%	**30.17** in	**10.0** mi	East	**11.5** mph	-	N/A		Scattered Clouds
8:52 AM	**72.0** °F	-	**55.9** °F	57%	**30.19** in	**10.0** mi	ESE	**11.5** mph	-	N/A		Mostly Cloudy
9:52 AM	**77.0** °F	-	**55.9** °F	48%	**30.16** in	**10.0** mi	SE	**12.7** mph	-	N/A		Mostly Cloudy
10:52 AM	**75.9** °F	-	**55.0** °F	48%	**30.17** in	**10.0** mi	SSW	**5.8** mph	-	N/A		Mostly Cloudy
11:52 AM	**80.1** °F	**80.2** °F	**55.9** °F	43%	**30.12** in	**10.0** mi	Variable	**5.8** mph	-	N/A		Mostly Cloudy
12:52 PM	**80.1** °F	**80.1** °F	**55.0** °F	42%	**30.11** in	**10.0** mi	NE	**3.5** mph	-	N/A		Mostly Cloudy
1:52 PM	**81.0** °F	**80.5** °F	**54.0** °F	39%	**30.09** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Mostly Cloudy
2:52 PM	**82.9** °F	**81.8** °F	**53.1** °F	36%	**30.06** in	**10.0** mi	South	**5.8** mph	-	N/A		Mostly Cloudy
3:52 PM	**86.0** °F	-	**52.0** °F	31%	**30.02** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
4:52 PM	**84.9** °F	**83.3** °F	**54.0** °F	34%	**30.00** in	**10.0** mi	SSE	**8.1** mph	-	N/A		Mostly Cloudy
5:52 PM	**84.0** °F	**82.5** °F	**53.1** °F	34%	**29.99** in	**10.0** mi	SE	**9.2** mph	-	N/A		Mostly Cloudy
6:52 PM	**82.9** °F	**81.9** °F	**54.0** °F	37%	**29.99** in	**10.0** mi	SSE	**17.3** mph	-	N/A		Scattered Clouds
7:24 PM	**82.9** °F	**81.9** °F	**54.0** °F	37%	**30.26** in	**10.0** mi	SSE	**12.7** mph	-	N/A	Thunderstorm	Scattered Clouds
7:44 PM	**80.1** °F	**80.2** °F	**55.9** °F	43%	**30.27** in	**10.0** mi	East	**17.3** mph	-	N/A	Thunderstorm	Scattered Clouds
7:52 PM	**81.0** °F	**80.7** °F	**55.0** °F	41%	**30.01** in	**10.0** mi	SE	**16.1** mph	**28.8** mph	**0.00** in		Mostly Cloudy
8:52 PM	**75.9** °F	-	**57.9** °F	54%	**30.04** in	**10.0** mi	East	**11.5** mph	-	N/A		Mostly Cloudy
9:52 PM	**78.1** °F	-	**55.0** °F	45%	**30.04** in	**10.0** mi	South	**6.9** mph	-	N/A		Mostly Cloudy
10:52 PM	**77.0** °F	-	**55.0** °F	47%	**30.05** in	**10.0** mi	SSW	**6.9** mph	-	N/A		Mostly Cloudy
11:52 PM	**75.9** °F	-	**55.0** °F	48%	**30.05** in	**10.0** mi	South	**5.8** mph	-	N/A		Scattered Clouds

Albuquerque, NM

Albuquerque International Sunport

4:01 PM MDT on August 01, 2019 (GMT -0600)

Weather History for KABQ - July, 2019

July

25

2019

View

Thursday, July 25, 2019

Daily | Weekly | Monthly | Custom

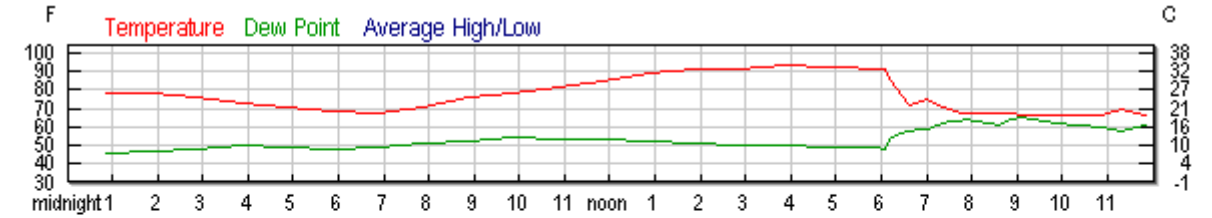
	Actual	Average	Record
Temperature			
Mean Temperature	**80** °F	-	
Max Temperature	**95** °F	-	- ()
Min Temperature	**66** °F	-	- ()
Cooling Degree Days	16		
Growing Degree Days	30 (Base 50)		
Moisture			
Dew Point	**54** °F		
Average Humidity	48		
Maximum Humidity	93		

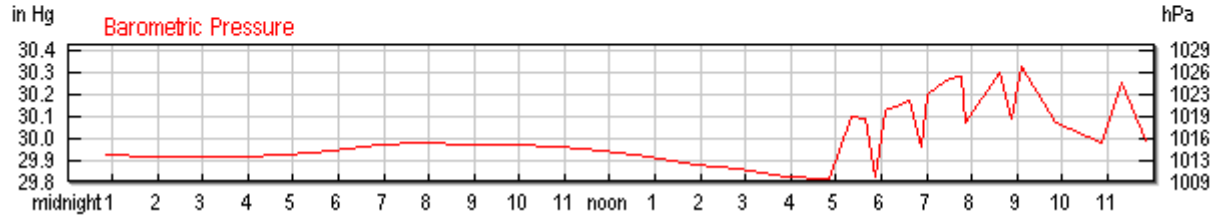
	Actual	Average	Record
Minimum Humidity	14		
Precipitation			
Precipitation	-	-	- ()
Sea Level Pressure			
Sea Level Pressure	**30.02** in		
Wind			
Wind Speed	**10** mph (ESE)		
Max Wind Speed	**30** mph		
Max Gust Speed	**41** mph		
Visibility	**9** miles		
Events	Rain , Thunderstorm		

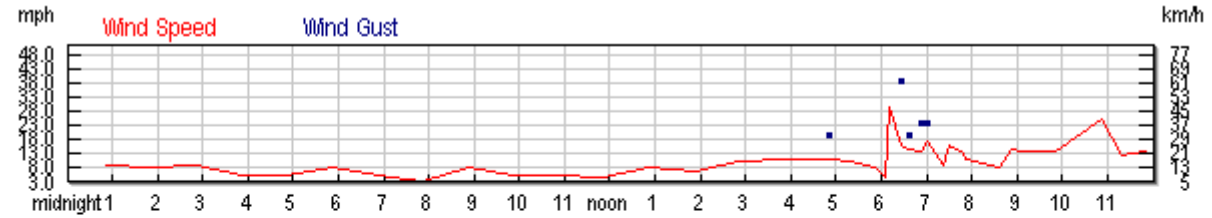
T = Trace of Precipitation, MM = Missing Value

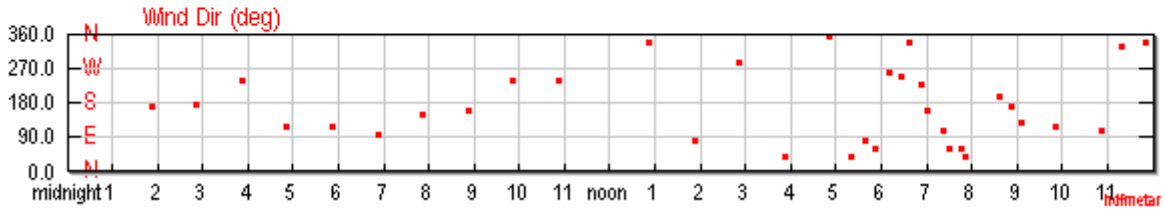
Source: NWS Daily Summary

Daily Weather History Graph









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Airport or City:

KABQ

Submit

Astronomy

Jul. 25, 2019	**Rise**	**Set**
Actual Time	6:10 AM MDT	8:15 PM MDT

Jul. 25, 2019	Rise	Set
Civil Twilight	5:42 AM MDT	8:43 PM MDT
Nautical Twilight	5:07 AM MDT	9:17 PM MDT
Astronomical Twilight	4:30 AM MDT	9:54 PM MDT
Moon	12:48 AM MDT (7/25)	2:05 PM MDT (7/25)
Length of Visible Light	15h 01m	
Length of Day	14h 04m	

Last Quarter, 43% of the Moon is Illuminated

Jul 25	Jul 31	Aug 7	Aug 15	Aug 23
Last Quarter	New	First Quarter	Full	Last Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**78.1** °F	-	**46.0** °F	32%	**29.92** in	**10.0** mi	SE	**9.2** mph	-	N/A		Mostly Cloudy
1:52 AM	**78.1** °F	-	**46.9** °F	33%	**29.91** in	**10.0** mi	South	**8.1** mph	-	N/A		Mostly Cloudy
2:52 AM	**75.9** °F	-	**48.0** °F	37%	**29.91** in	**10.0** mi	South	**9.2** mph	-	N/A		Mostly Cloudy
3:52 AM	**73.0** °F	-	**50.0** °F	44%	**29.91** in	**10.0** mi	WSW	**5.8** mph	-	N/A		Mostly Cloudy
4:52 AM	**71.1** °F	-	**48.9** °F	45%	**29.92** in	**10.0** mi	ESE	**5.8** mph	-	N/A		Scattered Clouds
5:52 AM	**69.1** °F	-	**48.0** °F	47%	**29.94** in	**10.0** mi	ESE	**8.1** mph	-	N/A		Scattered Clouds
6:52 AM	**68.0** °F	-	**48.9** °F	50%	**29.97** in	**10.0** mi	East	**5.8** mph	-	N/A		Partly Cloudy
7:52 AM	**71.1** °F	-	**51.1** °F	49%	**29.98** in	**10.0** mi	SSE	**3.5** mph	-	N/A		Partly Cloudy
8:52 AM	**75.9** °F	-	**52.0** °F	43%	**29.97** in	**10.0** mi	SSE	**8.1** mph	-	N/A		Partly Cloudy

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
9:52 AM	78.1 °F	-	54.0 °F	43%	29.97 in	10.0 mi	WSW	5.8 mph	-	N/A		Scattered Clouds
10:52 AM	82.0 °F	81.2 °F	53.1 °F	37%	29.96 in	10.0 mi	WSW	5.8 mph	-	N/A		Mostly Cloudy
11:52 AM	84.9 °F	83.2 °F	53.1 °F	33%	29.94 in	10.0 mi	Variable	4.6 mph	-	N/A		Scattered Clouds
12:52 PM	89.1 °F	-	52.0 °F	28%	29.91 in	10.0 mi	NNW	8.1 mph	-	N/A		Scattered Clouds
1:52 PM	91.0 °F	-	51.1 °F	25%	29.88 in	10.0 mi	East	6.9 mph	-	N/A		Scattered Clouds
2:52 PM	91.9 °F	-	50.0 °F	24%	29.86 in	10.0 mi	WNW	10.4 mph	-	N/A		Mostly Cloudy
3:52 PM	93.9 °F	-	50.0 °F	22%	29.82 in	10.0 mi	NE	11.5 mph	17.3 mph	N/A		Mostly Cloudy
4:52 PM	93.0 °F	-	48.9 °F	22%	29.81 in	10.0 mi	North	11.5 mph	19.6 mph	N/A		Mostly Cloudy
5:21 PM	93.0 °F	-	48.9 °F	22%	30.10 in	10.0 mi	NE	10.4 mph	-	N/A	Thunderstorm	Mostly Cloudy
5:39 PM	91.9 °F	-	48.9 °F	23%	30.09 in	10.0 mi	East	9.2 mph	-	N/A		Mostly Cloudy
5:52 PM	91.9 °F	-	48.9 °F	23%	29.82 in	10.0 mi	ENE	8.1 mph	-	N/A		Mostly Cloudy
6:04 PM	91.0 °F	-	48.0 °F	23%	30.12 in	10.0 mi	Variable	4.6 mph	-	N/A	Thunderstorm	Mostly Cloudy
6:11 PM	86.0 °F	84.0 °F	53.1 °F	32%	30.13 in	9.0 mi	West	29.9 mph	41.4 mph	N/A	Thunderstorm	Unknown
6:26 PM	77.0 °F	-	57.0 °F	50%	30.15 in	4.0 mi	WSW	16.1 mph	39.1 mph	0.00 in	Rain , Thunderstorm	Light Thunderstorms and Rain
6:38 PM	72.0 °F	-	57.9 °F	61%	30.17 in	0.8 mi	NNW	15.0 mph	19.6 mph	0.24 in	Rain , Thunderstorm	Heavy Thunderstorms and Rain
6:52 PM	73.9 °F	-	59.0 °F	59%	29.96 in	2.0 mi	SW	13.8 mph	24.2 mph	0.67 in	Rain , Thunderstorm	Light Thunderstorms and Rain
7:00 PM	75.0 °F	-	59.0 °F	57%	30.20 in	10.0 mi	SSE	17.3 mph	24.2 mph	0.00 in	Rain , Thunderstorm	Light Thunderstorms and Rain
7:22 PM	71.1 °F	-	62.1 °F	73%	30.25 in	10.0 mi	ESE	9.2 mph	-	0.00 in	Rain , Thunderstorm	Light Rain
7:30 PM	70.0 °F	-	63.0 °F	78%	30.27 in	9.0 mi	ENE	16.1 mph	-	0.00 in	Rain , Thunderstorm	Light Thunderstorms and Rain

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
7:45 PM	**68.0** °F	-	**63.0** °F	84%	**30.28** in	**3.0** mi	ENE	**13.8** mph	-	**0.07** in	Rain , Thunderstorm	Heavy Thunderstorms and Rain
7:52 PM	**68.0** °F	-	**64.0** °F	87%	**30.07** in	**3.0** mi	NE	**11.5** mph	-	**0.10** in	Rain , Thunderstorm	Thunderstorms and Rain
8:37 PM	**68.0** °F	-	**61.0** °F	78%	**30.30** in	**5.0** mi	SSW	**8.1** mph	-	**0.11** in	Rain , Thunderstorm	Rain
8:52 PM	**68.0** °F	-	**64.0** °F	87%	**30.09** in	**9.0** mi	South	**15.0** mph	-	**0.14** in	Rain , Thunderstorm	Light Rain
9:06 PM	**66.9** °F	-	**64.9** °F	93%	**30.32** in	**9.0** mi	SE	**13.8** mph	-	**0.01** in	Rain	Light Rain
9:52 PM	**66.0** °F	-	**62.1** °F	87%	**30.07** in	**8.0** mi	ESE	**13.8** mph	-	**0.11** in	Rain	Rain
10:52 PM	**66.9** °F	-	**60.1** °F	79%	**29.98** in	**10.0** mi	ESE	**25.3** mph	**36.8** mph	**0.04** in	Rain	Light Rain
11:20 PM	**70.0** °F	-	**57.9** °F	65%	**30.25** in	**10.0** mi	NNW	**12.7** mph	-	**0.00** in		Overcast
11:52 PM	**66.9** °F	-	**61.0** °F	81%	**29.99** in	**10.0** mi	NNW	**13.8** mph	-	**0.00** in		Mostly Cloudy

Albuquerque, NM

Albuquerque International Sunport

4:02 PM MDT on August 01, 2019 (GMT -0600)

Weather History for KABQ - July, 2019

July

26

2019

View

Friday, July 26, 2019

Daily | Weekly | Monthly | Custom

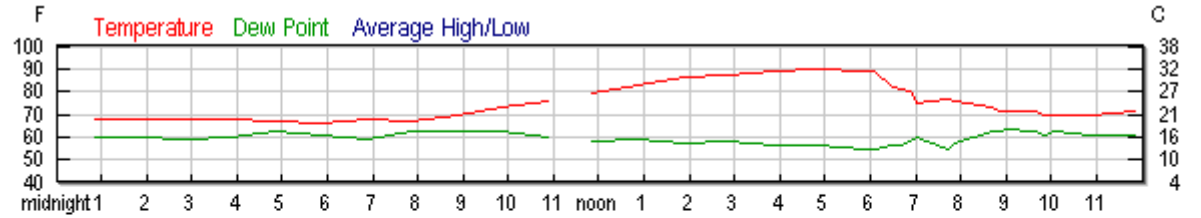
	Actual	Average	Record
Temperature			
Mean Temperature	**78** °F	-	
Max Temperature	**91** °F	-	- ()
Min Temperature	**66** °F	-	- ()
Cooling Degree Days	14		
Growing Degree Days	28 (Base 50)		
Moisture			
Dew Point	**59** °F		
Average Humidity	59		
Maximum Humidity	84		

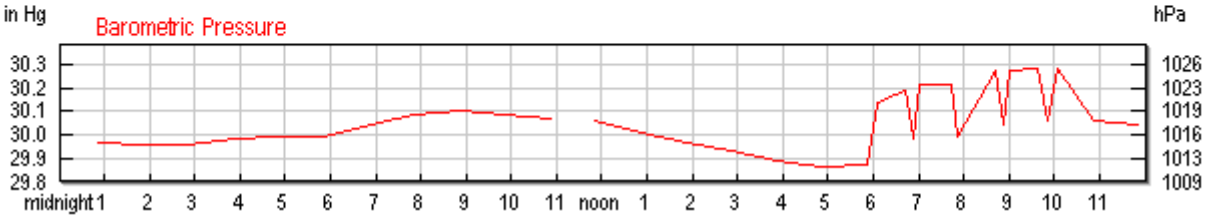
	Actual	Average	Record
Minimum Humidity	22		
Precipitation			
Precipitation	-	-	- ()
Sea Level Pressure			
Sea Level Pressure	**30.05** in		
Wind			
Wind Speed	**7** mph (South)		
Max Wind Speed	**25** mph		
Max Gust Speed	**34** mph		
Visibility	**10** miles		
Events	Rain , Thunderstorm		

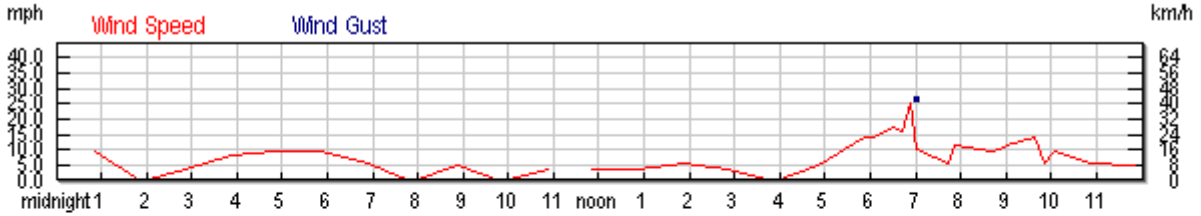
T = Trace of Precipitation, MM = Missing Value

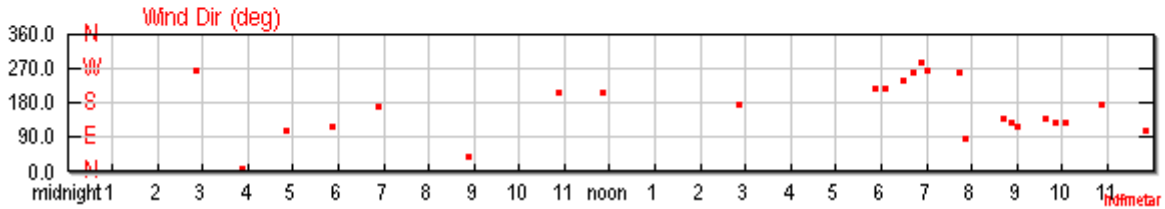
Source: NWS Daily Summary

Daily Weather History Graph









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KABQ

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Astronomy

Jul. 26, 2019	Rise	Set
Actual Time	6:11 AM MDT	8:14 PM MDT

Jul. 26, 2019	Rise	Set
Civil Twilight	5:42 AM MDT	8:42 PM MDT
Nautical Twilight	5:08 AM MDT	9:16 PM MDT
Astronomical Twilight	4:31 AM MDT	9:53 PM MDT
Moon	1:20 AM MDT (7/26)	3:05 PM MDT (7/26)
Length of Visible Light	14h 59m	
Length of Day	14h 03m	

Waning Crescent, 33% of the Moon is Illuminated

Jul 26	Jul 31	Aug 7	Aug 15	Aug 23
Waning Crescent	New	First Quarter	Full	Last Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**68.0** °F	-	**60.1** °F	76%	**29.97** in	**10.0** mi	North	**9.2** mph	-	N/A		Overcast
1:52 AM	**68.0** °F	-	**60.1** °F	76%	**29.96** in	**10.0** mi	Calm	Calm	-	N/A		Overcast
2:52 AM	**68.0** °F	-	**59.0** °F	73%	**29.96** in	**10.0** mi	West	**3.5** mph	-	N/A		Overcast
3:52 AM	**68.0** °F	-	**60.1** °F	76%	**29.98** in	**10.0** mi	North	**8.1** mph	-	N/A		Mostly Cloudy
4:52 AM	**66.9** °F	-	**62.1** °F	84%	**29.99** in	**10.0** mi	ESE	**9.2** mph	-	N/A		Mostly Cloudy
5:52 AM	**66.0** °F	-	**61.0** °F	84%	**29.99** in	**10.0** mi	ESE	**9.2** mph	-	N/A		Mostly Cloudy
6:52 AM	**68.0** °F	-	**59.0** °F	73%	**30.04** in	**10.0** mi	South	**5.8** mph	-	N/A		Mostly Cloudy
7:52 AM	**66.9** °F	-	**62.1** °F	84%	**30.09** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
8:52 AM	**70.0** °F	-	**62.1** °F	76%	**30.10** in	**10.0** mi	NE	**4.6** mph	-	N/A		Scattered Clouds

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
9:52 AM	73.0 °F	-	62.1 °F	68%	30.09 in	10.0 mi	Calm	Calm	-	N/A		Scattered Clouds
10:52 AM	75.9 °F	-	60.1 °F	58%	30.07 in	10.0 mi	SSW	3.5 mph	-	N/A		Mostly Cloudy
11:12 AM	-	-	-	N/A%	-	-	North	-	-	N/A		Unknown
11:52 AM	79.0 °F	-	57.9 °F	48%	30.06 in	10.0 mi	SSW	3.5 mph	-	N/A		Scattered Clouds
12:52 PM	82.9 °F	82.8 °F	59.0 °F	44%	30.01 in	10.0 mi	Variable	3.5 mph	-	N/A		Scattered Clouds
1:52 PM	86.0 °F	84.9 °F	57.0 °F	37%	29.97 in	10.0 mi	Variable	5.8 mph	-	N/A		Partly Cloudy
2:52 PM	87.1 °F	86.1 °F	57.9 °F	37%	29.93 in	10.0 mi	South	3.5 mph	-	N/A		Partly Cloudy
3:52 PM	89.1 °F	87.3 °F	55.9 °F	32%	29.89 in	10.0 mi	Calm	Calm	-	N/A		Scattered Clouds
4:52 PM	90.0 °F	88.1 °F	55.9 °F	31%	29.86 in	10.0 mi	Variable	4.6 mph	-	N/A		Scattered Clouds
5:52 PM	89.1 °F	87.1 °F	55.0 °F	31%	29.87 in	10.0 mi	SW	13.8 mph	-	N/A		Mostly Cloudy
6:06 PM	89.1 °F	87.1 °F	55.0 °F	31%	30.14 in	10.0 mi	SW	13.8 mph	-	N/A	Thunderstorm	Thunderstorm
6:29 PM	82.0 °F	81.6 °F	55.9 °F	41%	30.17 in	10.0 mi	WSW	17.3 mph	27.6 mph	0.00 in	Thunderstorm	Mostly Cloudy
6:43 PM	81.0 °F	80.8 °F	55.9 °F	42%	30.19 in	10.0 mi	West	16.1 mph	-	0.00 in	Thunderstorm	Thunderstorm
6:52 PM	80.1 °F	80.6 °F	57.9 °F	47%	29.98 in	10.0 mi	WNW	25.3 mph	34.5 mph	0.00 in	Rain , Thunderstorm	Light Thunderstorms and Rain
7:02 PM	75.0 °F	-	60.1 °F	60%	30.21 in	10.0 mi	West	10.4 mph	26.5 mph	0.00 in	Rain , Thunderstorm	Light Thunderstorms and Rain
7:44 PM	77.0 °F	-	55.0 °F	47%	30.21 in	10.0 mi	West	5.8 mph	-	0.00 in	Thunderstorm	Mostly Cloudy
7:52 PM	75.9 °F	-	57.0 °F	52%	29.99 in	10.0 mi	East	11.5 mph	-	0.00 in	Thunderstorm	Mostly Cloudy
8:42 PM	73.0 °F	-	62.1 °F	68%	30.27 in	10.0 mi	SE	9.2 mph	-	N/A	Thunderstorm	Mostly Cloudy
8:52 PM	71.1 °F	-	62.1 °F	73%	30.04 in	10.0 mi	SE	10.4 mph	-	N/A	Thunderstorm	Mostly Cloudy
9:01 PM	71.1 °F	-	63.0 °F	75%	30.27 in	10.0 mi	ESE	11.5 mph	-	0.00 in	Rain	Light Rain
9:39 PM	71.1 °F	-	62.1 °F	73%	30.28 in	10.0 mi	SE	13.8 mph	-	0.00 in	Thunderstorm	Mostly Cloudy
9:52 PM	70.0 °F	-	61.0 °F	73%	30.06 in	10.0 mi	SE	5.8 mph	-	0.00 in	Thunderstorm	Mostly Cloudy

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
10:05 PM	**70.0** °F	-	**62.1** °F	76%	**30.28** in	**10.0** mi	SE	**9.2** mph	-	N/A		Mostly Cloudy
10:52 PM	**70.0** °F	-	**61.0** °F	73%	**30.06** in	**10.0** mi	South	**5.8** mph	-	N/A		Overcast
11:52 PM	**71.1** °F	-	**61.0** °F	70%	**30.04** in	**10.0** mi	ESE	**4.6** mph	-	N/A		Overcast

Albuquerque, NM

Albuquerque International Sunport

4:03 PM MDT on August 01, 2019 (GMT -0600)

Weather History for KABQ - July, 2019

July

27

2019

View

Saturday, July 27, 2019

Daily | Weekly | Monthly | Custom

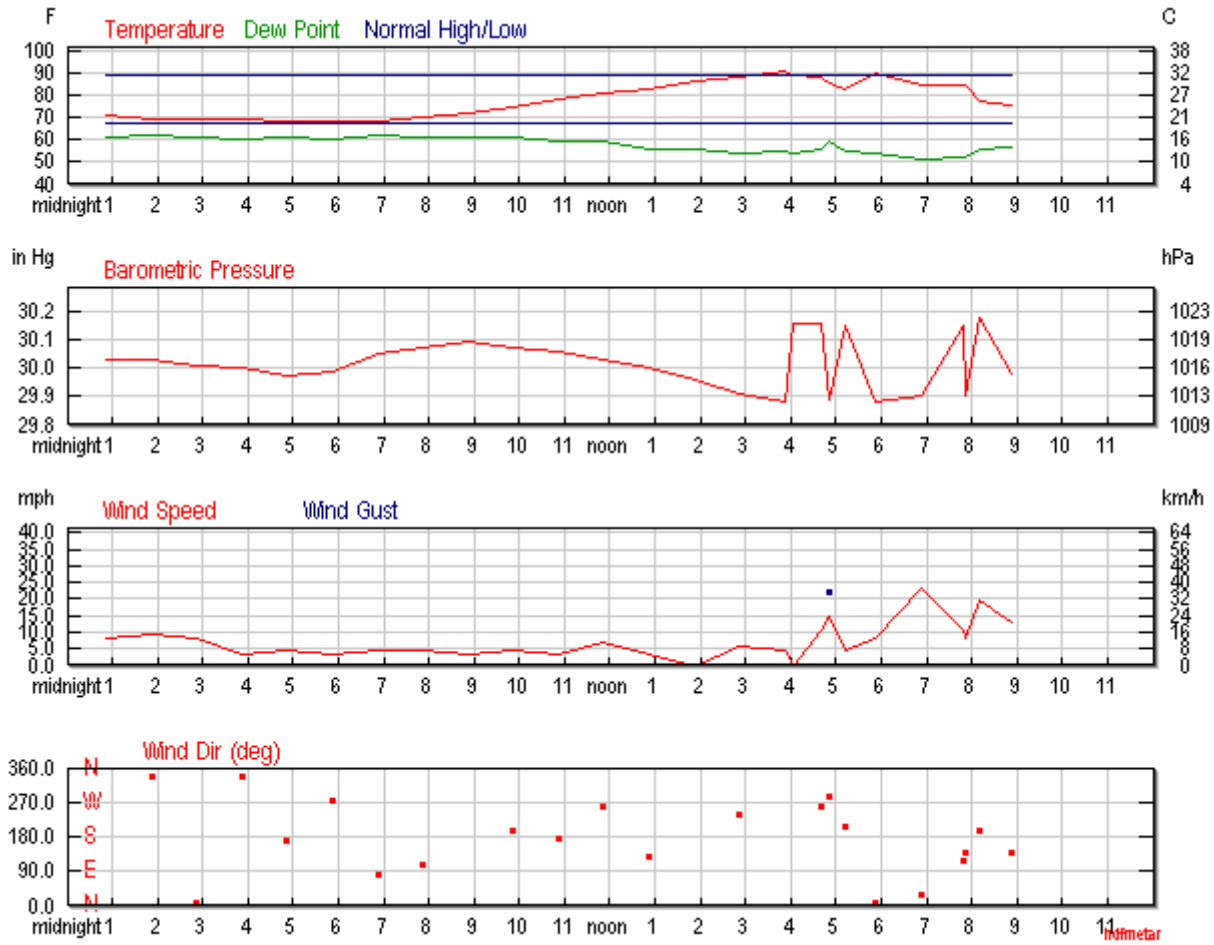
	Actual	Average	Record
Temperature			
Mean Temperature	**79** °F	-	
Max Temperature	**91** °F	-	- ()
Min Temperature	**67** °F	-	- ()
Cooling Degree Days	14		
Month to date cooling degree days	425		
Year to date cooling degree days	732		
Since 1 June cooling degree days	698		
Growing Degree Days	30 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**58** °F		
Average Humidity	56		
Maximum Humidity	81		
Minimum Humidity	30		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	1.94		
Year to date precipitation	5.01		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**30.01** in		
Wind			
Wind Speed	**7** mph (SSW)		
Max Wind Speed	**26** mph		
Max Gust Speed	**31** mph		
Visibility	**10** miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



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Airport or City:

KABQ

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Astronomy

Jul. 27, 2019	**Rise**	**Set**

Jul. 27, 2019	Rise	Set
Actual Time	6:11 AM MDT	8:13 PM MDT
Civil Twilight	5:43 AM MDT	8:41 PM MDT
Nautical Twilight	5:09 AM MDT	9:15 PM MDT
Astronomical Twilight	4:32 AM MDT	9:52 PM MDT
Moon	1:57 AM MDT (7/27)	4:08 PM MDT (7/27)
Length of Visible Light	14h 57m	
Length of Day	14h 01m	

Waning Crescent, 24% of the Moon is Illuminated

Jul 27	Jul 31	Aug 7	Aug 15	Aug 23
Waning Crescent	New	First Quarter	Full	Last Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**71.1** °F	-	**61.0** °F	70%	**30.03** in	**10.0** mi	North	**8.1** mph	-	N/A		Overcast
1:52 AM	**69.1** °F	-	**62.1** °F	78%	**30.03** in	**10.0** mi	NNW	**9.2** mph	-	N/A		Overcast
2:52 AM	**69.1** °F	-	**61.0** °F	75%	**30.01** in	**10.0** mi	North	**8.1** mph	-	N/A		Overcast
3:52 AM	**69.1** °F	-	**60.1** °F	73%	**30.00** in	**10.0** mi	NNW	**3.5** mph	-	N/A		Mostly Cloudy
4:52 AM	**68.0** °F	-	**61.0** °F	78%	**29.97** in	**10.0** mi	South	**4.6** mph	-	N/A		Mostly Cloudy
5:52 AM	**68.0** °F	-	**60.1** °F	76%	**29.99** in	**10.0** mi	West	**3.5** mph	-	N/A		Scattered Clouds
6:52 AM	**68.0** °F	-	**62.1** °F	81%	**30.05** in	**10.0** mi	East	**4.6** mph	-	N/A		Scattered Clouds
7:52 AM	**70.0** °F	-	**61.0** °F	73%	**30.07** in	**10.0** mi	ESE	**4.6** mph	-	N/A		Scattered Clouds

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 AM	72.0 °F	-	61.0 °F	68%	30.09 in	10.0 mi	Variable	3.5 mph	-	N/A		Partly Cloudy
9:52 AM	75.0 °F	-	61.0 °F	62%	30.07 in	10.0 mi	SSW	4.6 mph	-	N/A		Partly Cloudy
10:52 AM	78.1 °F	-	59.0 °F	52%	30.06 in	10.0 mi	South	3.5 mph	-	N/A		Partly Cloudy
11:52 AM	81.0 °F	81.3 °F	59.0 °F	47%	30.03 in	10.0 mi	West	6.9 mph	-	N/A		Partly Cloudy
12:52 PM	82.9 °F	82.1 °F	55.9 °F	39%	30.00 in	10.0 mi	SE	3.5 mph	-	N/A		Partly Cloudy
1:52 PM	86.0 °F	84.7 °F	55.9 °F	36%	29.96 in	10.0 mi	Calm	Calm	-	N/A		Partly Cloudy
2:52 PM	88.0 °F	85.9 °F	54.0 °F	31%	29.91 in	10.0 mi	WSW	5.8 mph	-	N/A		Partly Cloudy
3:52 PM	91.0 °F	88.9 °F	55.0 °F	29%	29.88 in	10.0 mi	Variable	4.6 mph	-	N/A		Mostly Cloudy
4:03 PM	89.1 °F	86.9 °F	54.0 °F	30%	30.16 in	10.0 mi	Calm	Calm	-	N/A	Thunderstorm	Mostly Cloudy
4:41 PM	88.0 °F	86.5 °F	55.9 °F	34%	30.16 in	10.0 mi	West	10.4 mph	16.1 mph	0.00 in	Rain , Thunderstorm	Light Thunderstorms and Rain
4:52 PM	84.9 °F	84.4 °F	59.0 °F	41%	29.89 in	10.0 mi	WNW	15.0 mph	21.9 mph	0.00 in	Rain , Thunderstorm	Light Thunderstorms and Rain
5:12 PM	82.9 °F	82.0 °F	55.0 °F	38%	30.15 in	10.0 mi	SSW	4.6 mph	-	0.00 in	Rain	Light Rain
5:52 PM	90.0 °F	87.7 °F	54.0 °F	29%	29.88 in	10.0 mi	North	8.1 mph	-	0.00 in		Mostly Cloudy
6:52 PM	84.0 °F	-	51.1 °F	32%	29.90 in	10.0 mi	NNE	23.0 mph	31.1 mph	N/A		Mostly Cloudy
7:49 PM	84.2 °F	-	51.8 °F	33%	30.15 in	10.0 mi	ESE	10.4 mph	-	N/A	Thunderstorm	Mostly Cloudy
7:52 PM	84.0 °F	-	52.0 °F	33%	29.90 in	10.0 mi	SE	8.1 mph	-	N/A	Thunderstorm	Mostly Cloudy
8:11 PM	77.0 °F	-	55.9 °F	48%	30.18 in	10.0 mi	SSW	19.6 mph	27.6 mph	N/A		Mostly Cloudy
8:52 PM	75.9 °F	-	57.0 °F	52%	29.98 in	10.0 mi	SE	12.7 mph	-	0.00 in		Mostly Cloudy

Albuquerque, NM

Albuquerque International Sunport

4:03 PM MDT on August 01, 2019 (GMT -0600)

Weather History for KABQ - July, 2019

July

31

2019

View

Wednesday, July 31, 2019

Daily | Weekly | Monthly | Custom

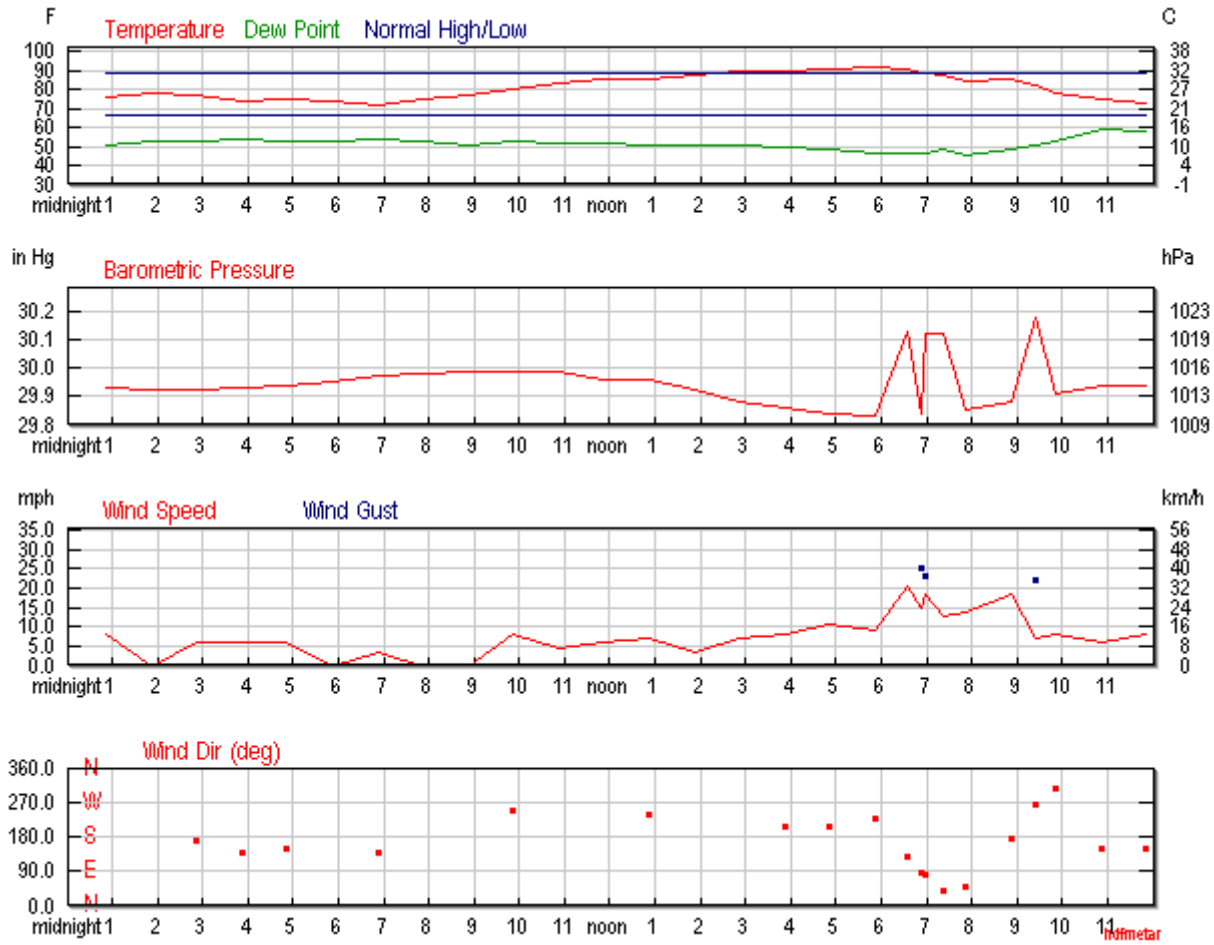
	Actual	Average	Record
Temperature			
Mean Temperature	**82** °F	-	
Max Temperature	**93** °F	-	- ()
Min Temperature	**71** °F	-	- ()
Cooling Degree Days	17		
Month to date cooling degree days	495		
Year to date cooling degree days	802		
Since 1 June cooling degree days	768		
Growing Degree Days	31 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**51** °F		
Average Humidity	39		
Maximum Humidity	57		
Minimum Humidity	21		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	1.95		
Year to date precipitation	5.02		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.95** in		
Wind			
Wind Speed	**7** mph (SSE)		
Max Wind Speed	**30** mph		
Max Gust Speed	**39** mph		
Visibility	**10** miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KABQ

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Astronomy

Jul. 31, 2019	**Rise**	**Set**

Jul. 31, 2019	Rise	Set
Actual Time	6:14 AM MDT	8:10 PM MDT
Civil Twilight	5:47 AM MDT	8:38 PM MDT
Nautical Twilight	5:13 AM MDT	9:11 PM MDT
Astronomical Twilight	4:36 AM MDT	9:47 PM MDT
Moon	5:33 AM MDT (7/31)	8:10 PM MDT (7/31)
Length of Visible Light	14h 51m	
Length of Day	13h 55m	

Waning Crescent, 0% of the Moon is Illuminated

Jul 31	Jul 31	Aug 7	Aug 15	Aug 23
Waning Crescent	New	First Quarter	Full	Last Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**75.9** °F	-	**51.1** °F	42%	**29.93** in	**10.0** mi	SE	**8.1** mph	-	N/A		Mostly Cloudy
1:52 AM	**78.1** °F	-	**53.1** °F	42%	**29.92** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
2:52 AM	**77.0** °F	-	**53.1** °F	43%	**29.92** in	**10.0** mi	South	**5.8** mph	-	N/A		Mostly Cloudy
3:52 AM	**73.9** °F	-	**54.0** °F	50%	**29.93** in	**10.0** mi	SE	**5.8** mph	-	N/A		Partly Cloudy
4:52 AM	**75.0** °F	-	**53.1** °F	46%	**29.94** in	**10.0** mi	SSE	**5.8** mph	-	N/A		Partly Cloudy
5:52 AM	**73.9** °F	-	**53.1** °F	48%	**29.95** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
6:52 AM	**72.0** °F	-	**54.0** °F	53%	**29.97** in	**10.0** mi	SE	**3.5** mph	-	N/A		Mostly Cloudy
7:52 AM	**75.0** °F	-	**53.1** °F	46%	**29.98** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 AM	**77.0** °F	-	**51.1** °F	40%	**29.99** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
9:52 AM	**80.1** °F	**79.9** °F	**53.1** °F	39%	**29.99** in	**10.0** mi	WSW	**8.1** mph	-	N/A		Mostly Cloudy
10:52 AM	**82.9** °F	-	**52.0** °F	34%	**29.99** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Mostly Cloudy
11:52 AM	**86.0** °F	-	**52.0** °F	31%	**29.96** in	**10.0** mi	Variable	**5.8** mph	-	N/A		Mostly Cloudy
12:52 PM	**86.0** °F	-	**51.1** °F	30%	**29.96** in	**10.0** mi	WSW	**6.9** mph	-	N/A		Mostly Cloudy
1:52 PM	**88.0** °F	-	**51.1** °F	28%	**29.92** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Mostly Cloudy
2:52 PM	**90.0** °F	-	**51.1** °F	26%	**29.88** in	**10.0** mi	Variable	**6.9** mph	-	N/A		Mostly Cloudy
3:52 PM	**90.0** °F	-	**50.0** °F	25%	**29.86** in	**10.0** mi	SSW	**8.1** mph	**21.9** mph	N/A		Scattered Clouds
4:52 PM	**91.0** °F	-	**48.9** °F	23%	**29.84** in	**10.0** mi	SSW	**10.4** mph	-	N/A		Scattered Clouds
5:52 PM	**91.9** °F	-	**46.9** °F	21%	**29.83** in	**10.0** mi	SW	**9.2** mph	-	N/A		Scattered Clouds
6:35 PM	**91.0** °F	-	**46.0** °F	21%	**30.13** in	**10.0** mi	SE	**20.7** mph	**25.3** mph	N/A	Thunderstorm	Scattered Clouds
6:52 PM	**89.1** °F	-	**46.9** °F	23%	**29.84** in	**10.0** mi	East	**15.0** mph	**25.3** mph	N/A	Thunderstorm	Scattered Clouds
6:59 PM	**89.1** °F	-	**46.0** °F	22%	**30.12** in	**10.0** mi	East	**18.4** mph	**23.0** mph	N/A	Thunderstorm	Scattered Clouds
7:23 PM	**87.1** °F	-	**48.0** °F	26%	**30.12** in	**10.0** mi	NE	**12.7** mph	-	N/A		Mostly Cloudy
7:52 PM	**84.9** °F	-	**45.0** °F	25%	**29.85** in	**10.0** mi	NE	**13.8** mph	-	N/A		Mostly Cloudy
8:52 PM	**86.0** °F	-	**48.9** °F	28%	**29.88** in	**10.0** mi	South	**18.4** mph	**21.9** mph	N/A		Mostly Cloudy
9:25 PM	**82.0** °F	-	**51.1** °F	34%	**30.18** in	**10.0** mi	West	**6.9** mph	**21.9** mph	**0.00** in		Mostly Cloudy
9:52 PM	**78.1** °F	-	**53.1** °F	42%	**29.91** in	**8.0** mi	NW	**8.1** mph	-	**0.01** in	Rain	Light Rain
10:52 PM	**75.0** °F	-	**59.0** °F	57%	**29.94** in	**10.0** mi	SSE	**5.8** mph	-	**0.00** in		Scattered Clouds

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
11:52 PM	**73.0** °F	-	**57.9** °F	59%	**29.94** in	**10.0** mi	SSE	**8.1** mph	-	N/A		Scattered Clouds

Albuquerque, NM

Albuquerque International Sunport

11:08 AM MDT on August 22, 2019 (GMT -0600)

Weather History for KABQ - August, 2019

August

1

2019

View
Thursday, August 1, 2019

Daily | Weekly | Monthly | Custom

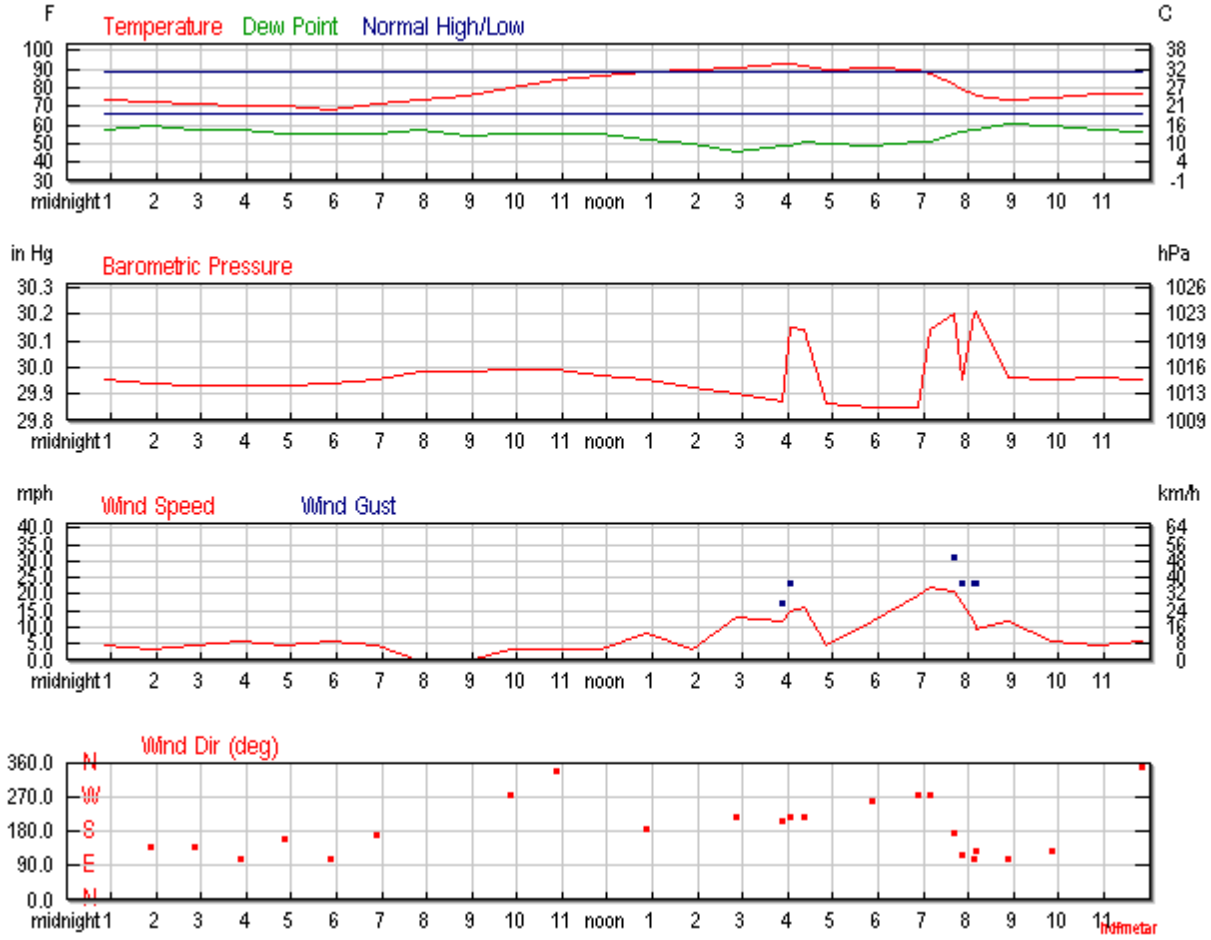
	Actual	Average	Record
Temperature			
Mean Temperature	**81** °F	-	
Max Temperature	**94** °F	-	- ()
Min Temperature	**68** °F	-	- ()
Cooling Degree Days	16		
Month to date cooling degree days	16		
Year to date cooling degree days	818		
Since 1 June cooling degree days	784		
Growing Degree Days	30 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**54** °F		
Average Humidity	44		
Maximum Humidity	66		
Minimum Humidity	21		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	T		
Year to date precipitation	5.02		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.97** in		
Wind			
Wind Speed	**7** mph (South)		
Max Wind Speed	**25** mph		
Max Gust Speed	**33** mph		
Visibility	**10** miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KABQ

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Astronomy

Aug. 01, 2019	**Rise**	**Set**

Aug. 01, 2019	Rise	Set
Actual Time	6:15 AM MDT	8:09 PM MDT
Civil Twilight	5:47 AM MDT	8:37 PM MDT
Nautical Twilight	5:14 AM MDT	9:10 PM MDT
Astronomical Twilight	4:38 AM MDT	9:46 PM MDT
Moon	6:44 AM MDT (8/1)	8:59 PM MDT (8/1)
Length of Visible Light	14h 49m	
Length of Day	13h 53m	

New Moon, 1% of the Moon is Illuminated

Aug 1	Aug 7	Aug 15	Aug 23	Aug 30
New Moon	First Quarter	Full	Last Quarter	New

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**73.9** °F	-	**57.0** °F	55%	**29.95** in	**10.0** mi	ESE	**4.6** mph	-	N/A		Scattered Clouds
1:52 AM	**72.0** °F	-	**59.0** °F	64%	**29.94** in	**10.0** mi	SE	**3.5** mph	-	N/A		Mostly Cloudy
2:52 AM	**71.1** °F	-	**57.9** °F	63%	**29.93** in	**10.0** mi	SE	**4.6** mph	-	N/A		Mostly Cloudy
3:52 AM	**70.0** °F	-	**57.0** °F	63%	**29.93** in	**10.0** mi	ESE	**5.8** mph	-	N/A		Mostly Cloudy
4:52 AM	**70.0** °F	-	**55.0** °F	59%	**29.93** in	**10.0** mi	SSE	**4.6** mph	-	N/A		Mostly Cloudy
5:52 AM	**68.0** °F	-	**55.0** °F	63%	**29.94** in	**10.0** mi	ESE	**5.8** mph	-	N/A		Scattered Clouds
6:52 AM	**71.1** °F	-	**55.0** °F	57%	**29.95** in	**10.0** mi	South	**4.6** mph	-	N/A		Scattered Clouds

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
7:52 AM	**73.0** °F	-	**57.9** °F	59%	**29.98** in	**10.0** mi	Calm	Calm	-	N/A		Partly Cloudy
8:52 AM	**75.9** °F	-	**54.0** °F	46%	**29.98** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
9:52 AM	**80.1** °F	**80.1** °F	**55.0** °F	42%	**29.99** in	**10.0** mi	West	**3.5** mph	-	N/A		Scattered Clouds
10:52 AM	**84.0** °F	**82.9** °F	**55.0** °F	37%	**29.99** in	**10.0** mi	NNW	**3.5** mph	-	N/A		Partly Cloudy
11:52 AM	**86.0** °F	**84.5** °F	**55.0** °F	35%	**29.97** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Partly Cloudy
12:52 PM	**88.0** °F	-	**52.0** °F	29%	**29.95** in	**10.0** mi	South	**8.1** mph	-	N/A		Partly Cloudy
1:52 PM	**89.1** °F	-	**50.0** °F	26%	**29.92** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Partly Cloudy
2:52 PM	**91.0** °F	-	**46.0** °F	21%	**29.90** in	**10.0** mi	SW	**12.7** mph	**19.6** mph	N/A		Partly Cloudy
3:52 PM	**93.0** °F	-	**48.9** °F	22%	**29.87** in	**10.0** mi	SSW	**11.5** mph	**17.3** mph	N/A		Scattered Clouds
4:02 PM	**93.0** °F	-	**48.9** °F	22%	**30.15** in	**10.0** mi	SW	**15.0** mph	**23.0** mph	N/A	Thunderstorm	Scattered Clouds
4:23 PM	**91.9** °F	-	**51.1** °F	25%	**30.14** in	**10.0** mi	SW	**16.1** mph	-	N/A		Scattered Clouds
4:52 PM	**90.0** °F	-	**50.0** °F	25%	**29.86** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Scattered Clouds
5:52 PM	**91.0** °F	-	**48.9** °F	23%	**29.85** in	**10.0** mi	West	**11.5** mph	-	N/A		Mostly Cloudy
6:52 PM	**89.1** °F	-	**51.1** °F	27%	**29.85** in	**10.0** mi	West	**19.6** mph	-	N/A		Mostly Cloudy
7:08 PM	**87.1** °F	-	**51.1** °F	29%	**30.14** in	**10.0** mi	West	**21.9** mph	**31.1** mph	N/A	Thunderstorm	Thunderstorm
7:42 PM	**82.0** °F	**81.4** °F	**55.0** °F	39%	**30.20** in	**10.0** mi	South	**20.7** mph	**31.1** mph	**0.00** in	Rain , Thunderstorm	Light Rain
7:52 PM	**79.0** °F	-	**55.9** °F	45%	**29.95** in	**10.0** mi	ESE	**17.3** mph	**23.0** mph	**0.00** in	Thunderstorm	Mostly Cloudy
8:07 PM	**77.0** °F	-	**57.0** °F	50%	**30.20** in	**10.0** mi	ESE	**11.5** mph	**23.0** mph	N/A	Thunderstorm	Mostly Cloudy
8:11 PM	**75.9** °F	-	**57.0** °F	52%	**30.21** in	**10.0** mi	SE	**9.2** mph	**23.0** mph	N/A		Mostly Cloudy

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 PM	**73.9** °F	-	**60.1** °F	62%	**29.96** in	**10.0** mi	ESE	**11.5** mph	-	N/A		Mostly Cloudy
9:52 PM	**75.0** °F	-	**59.0** °F	57%	**29.95** in	**10.0** mi	SE	**5.8** mph	-	N/A		Scattered Clouds
10:52 PM	**77.0** °F	-	**57.9** °F	52%	**29.96** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Scattered Clouds
11:52 PM	**77.0** °F	-	**55.9** °F	48%	**29.95** in	**10.0** mi	North	**5.8** mph	-	N/A		Scattered Clouds

Albuquerque, NM

Albuquerque International Sunport

11:08 AM MDT on August 22, 2019 (GMT -0600)

Weather History for KABQ - August, 2019

August

2

2019

View
Thursday, August 1, 2019

Daily | Weekly | Monthly | Custom

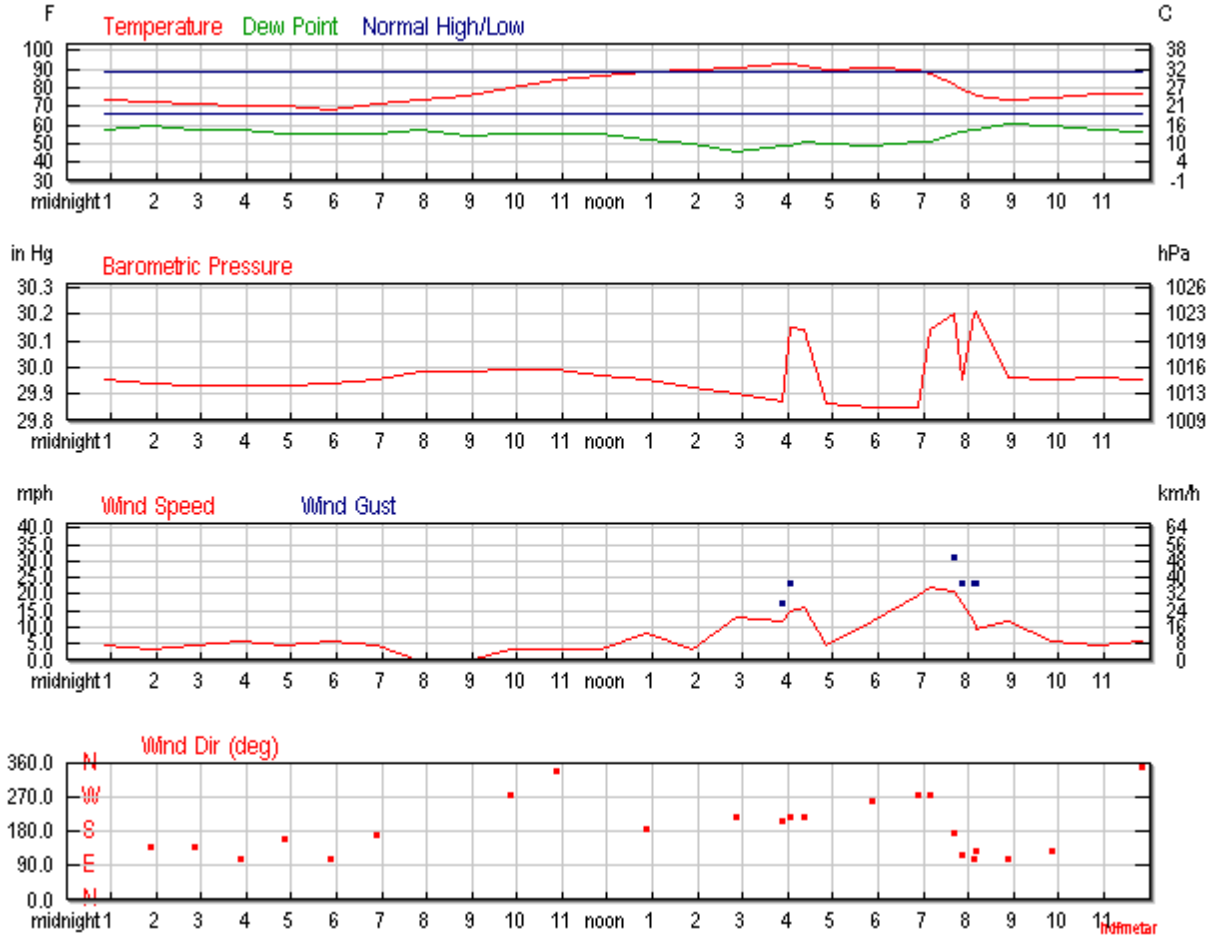
	Actual	Average	Record
Temperature			
Mean Temperature	**81** °F	-	
Max Temperature	**94** °F	-	- ()
Min Temperature	**68** °F	-	- ()
Cooling Degree Days	16		
Month to date cooling degree days	16		
Year to date cooling degree days	818		
Since 1 June cooling degree days	784		
Growing Degree Days	30 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**54** °F		
Average Humidity	44		
Maximum Humidity	66		
Minimum Humidity	21		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	T		
Year to date precipitation	5.02		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.97** in		
Wind			
Wind Speed	**7** mph (South)		
Max Wind Speed	**25** mph		
Max Gust Speed	**33** mph		
Visibility	**10** miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



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Airport or City:

KABQ

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Astronomy

Aug. 01, 2019	**Rise**	**Set**

Aug. 01, 2019	Rise	Set
Actual Time	6:15 AM MDT	8:09 PM MDT
Civil Twilight	5:47 AM MDT	8:37 PM MDT
Nautical Twilight	5:14 AM MDT	9:10 PM MDT
Astronomical Twilight	4:38 AM MDT	9:46 PM MDT
Moon	6:44 AM MDT (8/1)	8:59 PM MDT (8/1)
Length of Visible Light	14h 49m	
Length of Day	13h 53m	

New Moon, 1% of the Moon is Illuminated

Aug 1	Aug 7	Aug 15	Aug 23	Aug 30
New Moon	First Quarter	Full	Last Quarter	New

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**73.9** °F	-	**57.0** °F	55%	**29.95** in	**10.0** mi	ESE	**4.6** mph	-	N/A		Scattered Clouds
1:52 AM	**72.0** °F	-	**59.0** °F	64%	**29.94** in	**10.0** mi	SE	**3.5** mph	-	N/A		Mostly Cloudy
2:52 AM	**71.1** °F	-	**57.9** °F	63%	**29.93** in	**10.0** mi	SE	**4.6** mph	-	N/A		Mostly Cloudy
3:52 AM	**70.0** °F	-	**57.0** °F	63%	**29.93** in	**10.0** mi	ESE	**5.8** mph	-	N/A		Mostly Cloudy
4:52 AM	**70.0** °F	-	**55.0** °F	59%	**29.93** in	**10.0** mi	SSE	**4.6** mph	-	N/A		Mostly Cloudy
5:52 AM	**68.0** °F	-	**55.0** °F	63%	**29.94** in	**10.0** mi	ESE	**5.8** mph	-	N/A		Scattered Clouds
6:52 AM	**71.1** °F	-	**55.0** °F	57%	**29.95** in	**10.0** mi	South	**4.6** mph	-	N/A		Scattered Clouds

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
7:52 AM	**73.0** °F	-	**57.9** °F	59%	**29.98** in	**10.0** mi	Calm	Calm	-	N/A		Partly Cloudy
8:52 AM	**75.9** °F	-	**54.0** °F	46%	**29.98** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
9:52 AM	**80.1** °F	**80.1** °F	**55.0** °F	42%	**29.99** in	**10.0** mi	West	**3.5** mph	-	N/A		Scattered Clouds
10:52 AM	**84.0** °F	**82.9** °F	**55.0** °F	37%	**29.99** in	**10.0** mi	NNW	**3.5** mph	-	N/A		Partly Cloudy
11:52 AM	**86.0** °F	**84.5** °F	**55.0** °F	35%	**29.97** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Partly Cloudy
12:52 PM	**88.0** °F	-	**52.0** °F	29%	**29.95** in	**10.0** mi	South	**8.1** mph	-	N/A		Partly Cloudy
1:52 PM	**89.1** °F	-	**50.0** °F	26%	**29.92** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Partly Cloudy
2:52 PM	**91.0** °F	-	**46.0** °F	21%	**29.90** in	**10.0** mi	SW	**12.7** mph	**19.6** mph	N/A		Partly Cloudy
3:52 PM	**93.0** °F	-	**48.9** °F	22%	**29.87** in	**10.0** mi	SSW	**11.5** mph	**17.3** mph	N/A		Scattered Clouds
4:02 PM	**93.0** °F	-	**48.9** °F	22%	**30.15** in	**10.0** mi	SW	**15.0** mph	**23.0** mph	N/A	Thunderstorm	Scattered Clouds
4:23 PM	**91.9** °F	-	**51.1** °F	25%	**30.14** in	**10.0** mi	SW	**16.1** mph	-	N/A		Scattered Clouds
4:52 PM	**90.0** °F	-	**50.0** °F	25%	**29.86** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Scattered Clouds
5:52 PM	**91.0** °F	-	**48.9** °F	23%	**29.85** in	**10.0** mi	West	**11.5** mph	-	N/A		Mostly Cloudy
6:52 PM	**89.1** °F	-	**51.1** °F	27%	**29.85** in	**10.0** mi	West	**19.6** mph	-	N/A		Mostly Cloudy
7:08 PM	**87.1** °F	-	**51.1** °F	29%	**30.14** in	**10.0** mi	West	**21.9** mph	**31.1** mph	N/A	Thunderstorm	Thunderstorm
7:42 PM	**82.0** °F	**81.4** °F	**55.0** °F	39%	**30.20** in	**10.0** mi	South	**20.7** mph	**31.1** mph	**0.00** in	Rain , Thunderstorm	Light Rain
7:52 PM	**79.0** °F	-	**55.9** °F	45%	**29.95** in	**10.0** mi	ESE	**17.3** mph	**23.0** mph	**0.00** in	Thunderstorm	Mostly Cloudy
8:07 PM	**77.0** °F	-	**57.0** °F	50%	**30.20** in	**10.0** mi	ESE	**11.5** mph	**23.0** mph	N/A	Thunderstorm	Mostly Cloudy
8:11 PM	**75.9** °F	-	**57.0** °F	52%	**30.21** in	**10.0** mi	SE	**9.2** mph	**23.0** mph	N/A		Mostly Cloudy

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 PM	**73.9** °F	-	**60.1** °F	62%	**29.96** in	**10.0** mi	ESE	**11.5** mph	-	N/A		Mostly Cloudy
9:52 PM	**75.0** °F	-	**59.0** °F	57%	**29.95** in	**10.0** mi	SE	**5.8** mph	-	N/A		Scattered Clouds
10:52 PM	**77.0** °F	-	**57.9** °F	52%	**29.96** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Scattered Clouds
11:52 PM	**77.0** °F	-	**55.9** °F	48%	**29.95** in	**10.0** mi	North	**5.8** mph	-	N/A		Scattered Clouds

Albuquerque, NM

Albuquerque International Sunport

11:16 AM MDT on August 22, 2019 (GMT -0600)

Weather History for KABQ - August, 2019

August

3

2019

View
Saturday, August 3, 2019

Daily | Weekly | Monthly | Custom

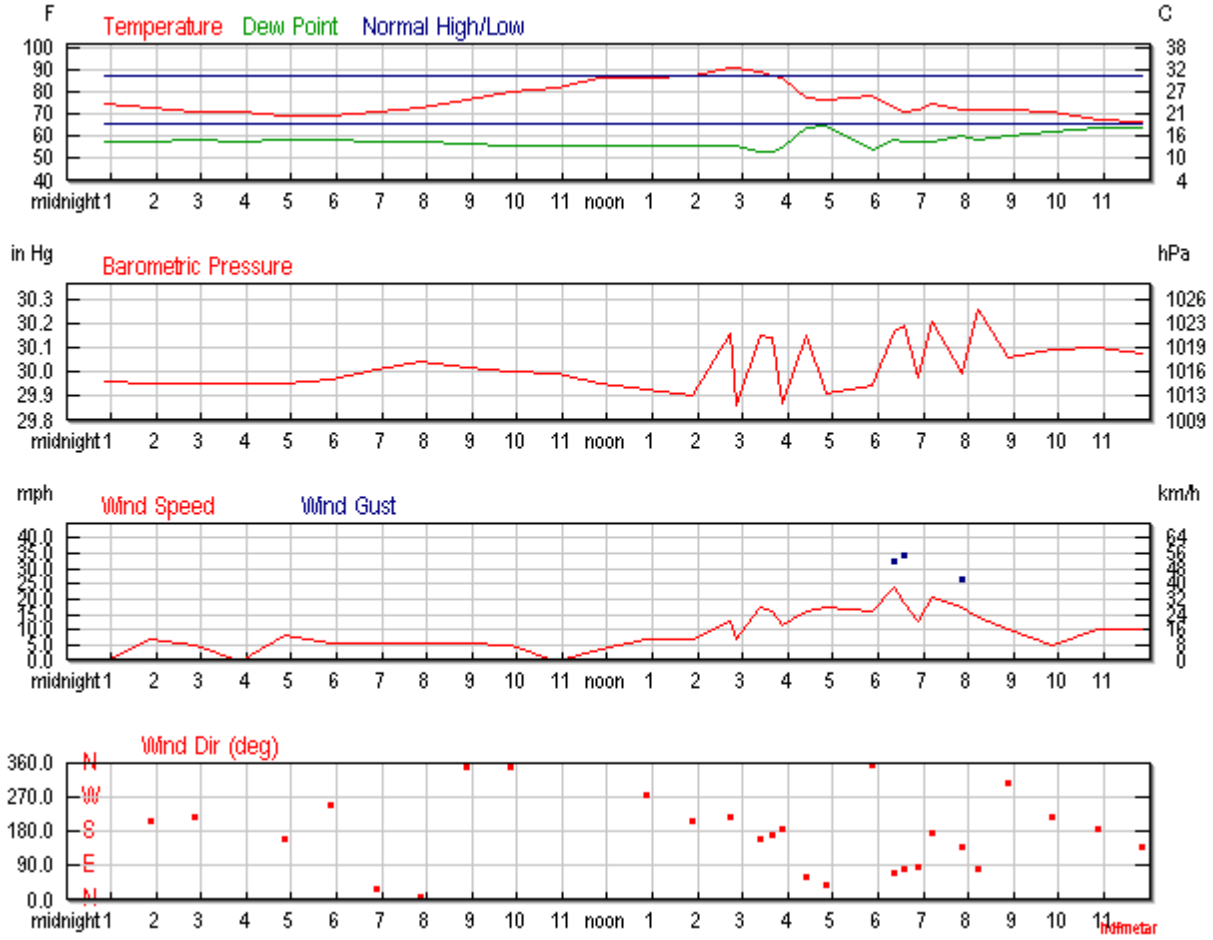
	Actual	Average	Record
Temperature			
Mean Temperature	**80** °F	-	
Max Temperature	**92** °F	-	- ()
Min Temperature	**67** °F	-	- ()
Cooling Degree Days	15		
Month to date cooling degree days	47		
Year to date cooling degree days	849		
Since 1 June cooling degree days	815		
Growing Degree Days	29 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**58** °F		
Average Humidity	62		
Maximum Humidity	93		
Minimum Humidity	30		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.33		
Year to date precipitation	5.35		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**30.02** in		
Wind			
Wind Speed	**8** mph (SSE)		
Max Wind Speed	**28** mph		
Max Gust Speed	**35** mph		
Visibility	**10** miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



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Astronomy

Aug. 03, 2019	**Rise**	**Set**

Aug. 03, 2019	Rise	Set
Actual Time	6:17 AM MDT	8:07 PM MDT
Civil Twilight	5:49 AM MDT	8:35 PM MDT
Nautical Twilight	5:15 AM MDT	9:08 PM MDT
Astronomical Twilight	4:40 AM MDT	9:44 PM MDT
Moon	9:08 AM MDT (8/3)	10:21 PM MDT (8/3)
Length of Visible Light	14h 45m	
Length of Day	13h 50m	

Waxing Crescent, 10% of the Moon is Illuminated

Aug 3	Aug 7	Aug 15	Aug 23	Aug 30
Waxing Crescent	First Quarter	Full	Last Quarter	New

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**75.0** °F	-	**57.9** °F	55%	**29.96** in	**10.0** mi	Calm	Calm	-	N/A		Overcast
1:52 AM	**73.0** °F	-	**57.9** °F	59%	**29.95** in	**10.0** mi	SSW	**6.9** mph	-	N/A		Mostly Cloudy
2:52 AM	**71.1** °F	-	**59.0** °F	66%	**29.95** in	**10.0** mi	SW	**4.6** mph	-	N/A		Mostly Cloudy
3:52 AM	**71.1** °F	-	**57.9** °F	63%	**29.95** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
4:52 AM	**70.0** °F	-	**59.0** °F	68%	**29.95** in	**10.0** mi	SSE	**8.1** mph	-	N/A		Mostly Cloudy
5:52 AM	**70.0** °F	-	**59.0** °F	68%	**29.97** in	**10.0** mi	WSW	**5.8** mph	-	N/A		Mostly Cloudy
6:52 AM	**71.1** °F	-	**57.9** °F	63%	**30.01** in	**10.0** mi	NNE	**5.8** mph	-	N/A		Mostly Cloudy
7:52 AM	**73.0** °F	-	**57.9** °F	59%	**30.04** in	**10.0** mi	North	**5.8** mph	-	N/A		Mostly Cloudy

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 AM	**77.0** °F	-	**57.0** °F	50%	**30.02** in	**10.0** mi	North	**5.8** mph	-	N/A		Mostly Cloudy
9:52 AM	**80.1** °F	**80.2** °F	**55.9** °F	43%	**30.00** in	**10.0** mi	North	**4.6** mph	-	N/A		Scattered Clouds
10:52 AM	**82.0** °F	**81.6** °F	**55.9** °F	41%	**29.99** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
11:52 AM	**87.1** °F	**85.7** °F	**55.9** °F	35%	**29.95** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Scattered Clouds
12:52 PM	**87.1** °F	**85.7** °F	**55.9** °F	35%	**29.93** in	**10.0** mi	West	**6.9** mph	-	N/A		Partly Cloudy
1:52 PM	**88.0** °F	**86.5** °F	**55.9** °F	34%	**29.90** in	**10.0** mi	SSW	**6.9** mph	-	N/A		Scattered Clouds
2:43 PM	**91.9** °F	**90.3** °F	**55.9** °F	30%	**30.16** in	**10.0** mi	SW	**12.7** mph	**18.4** mph	N/A	Thunderstorm	Scattered Clouds
2:52 PM	**91.9** °F	**90.3** °F	**55.9** °F	30%	**29.86** in	**10.0** mi	Variable	**6.9** mph	-	N/A	Thunderstorm	Scattered Clouds
3:24 PM	**90.0** °F	**87.5** °F	**53.1** °F	28%	**30.15** in	**10.0** mi	SSE	**17.3** mph	**24.2** mph	**0.00** in	Thunderstorm	Thunderstorm
3:39 PM	**88.0** °F	**85.7** °F	**53.1** °F	30%	**30.14** in	**10.0** mi	South	**16.1** mph	-	**0.00** in	Thunderstorm	Mostly Cloudy
3:52 PM	**87.1** °F	**85.3** °F	**55.0** °F	33%	**29.87** in	**10.0** mi	South	**11.5** mph	-	**0.00** in	Rain , Thunderstorm	Light Thunderstorms and Rain
4:25 PM	**78.1** °F	-	**64.0** °F	62%	**30.15** in	**6.0** mi	ENE	**16.1** mph	-	**0.24** in	Rain , Thunderstorm	Light Rain
4:52 PM	**77.0** °F	-	**64.9** °F	66%	**29.91** in	**10.0** mi	NE	**17.3** mph	-	**0.24** in	Thunderstorm	Mostly Cloudy
5:52 PM	**79.0** °F	-	**54.0** °F	42%	**29.94** in	**10.0** mi	North	**16.1** mph	**31.1** mph	N/A	Thunderstorm	Mostly Cloudy
6:20 PM	**73.0** °F	-	**59.0** °F	61%	**30.17** in	**8.0** mi	ENE	**24.2** mph	**32.2** mph	**0.01** in	Rain , Thunderstorm	Rain
6:34 PM	**71.1** °F	-	**57.9** °F	63%	**30.19** in	**6.0** mi	East	**18.4** mph	**34.5** mph	**0.06** in	Rain , Thunderstorm	Light Rain
6:52 PM	**72.0** °F	-	**57.9** °F	61%	**29.98** in	**10.0** mi	East	**12.7** mph	-	**0.06** in	Thunderstorm	Thunderstorm
7:11 PM	**75.0** °F	-	**57.9** °F	55%	**30.21** in	**10.0** mi	South	**20.7** mph	**31.1** mph	**0.00** in	Rain	Light Rain
7:52 PM	**72.0** °F	-	**60.1** °F	66%	**29.99** in	**10.0** mi	SE	**17.3** mph	**26.5** mph	**0.00** in		Mostly Cloudy
8:14 PM	**72.0** °F	-	**59.0** °F	64%	**30.26** in	**10.0** mi	East	**13.8** mph	-	N/A		Mostly Cloudy
8:52 PM	**72.0** °F	-	**60.1** °F	66%	**30.06** in	**10.0** mi	NW	**10.4** mph	-	**0.00** in	Rain	Light Rain

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
9:52 PM	**71.1** °F	-	**62.1** °F	73%	**30.09** in	**10.0** mi	SW	**4.6** mph	-	**0.01** in	Rain	Light Rain
10:52 PM	**68.0** °F	-	**64.0** °F	87%	**30.10** in	**10.0** mi	South	**10.4** mph	-	**0.00** in		Mostly Cloudy
11:52 PM	**66.9** °F	-	**64.0** °F	90%	**30.08** in	**10.0** mi	SE	**10.4** mph	-	N/A		Mostly Cloudy

Albuquerque, NM

Albuquerque International Sunport

11:17 AM MDT on August 22, 2019 (GMT -0600)

Weather History for KABQ - August, 2019

August

4

2019

View
Sunday, August 4, 2019

Daily | Weekly | Monthly | Custom

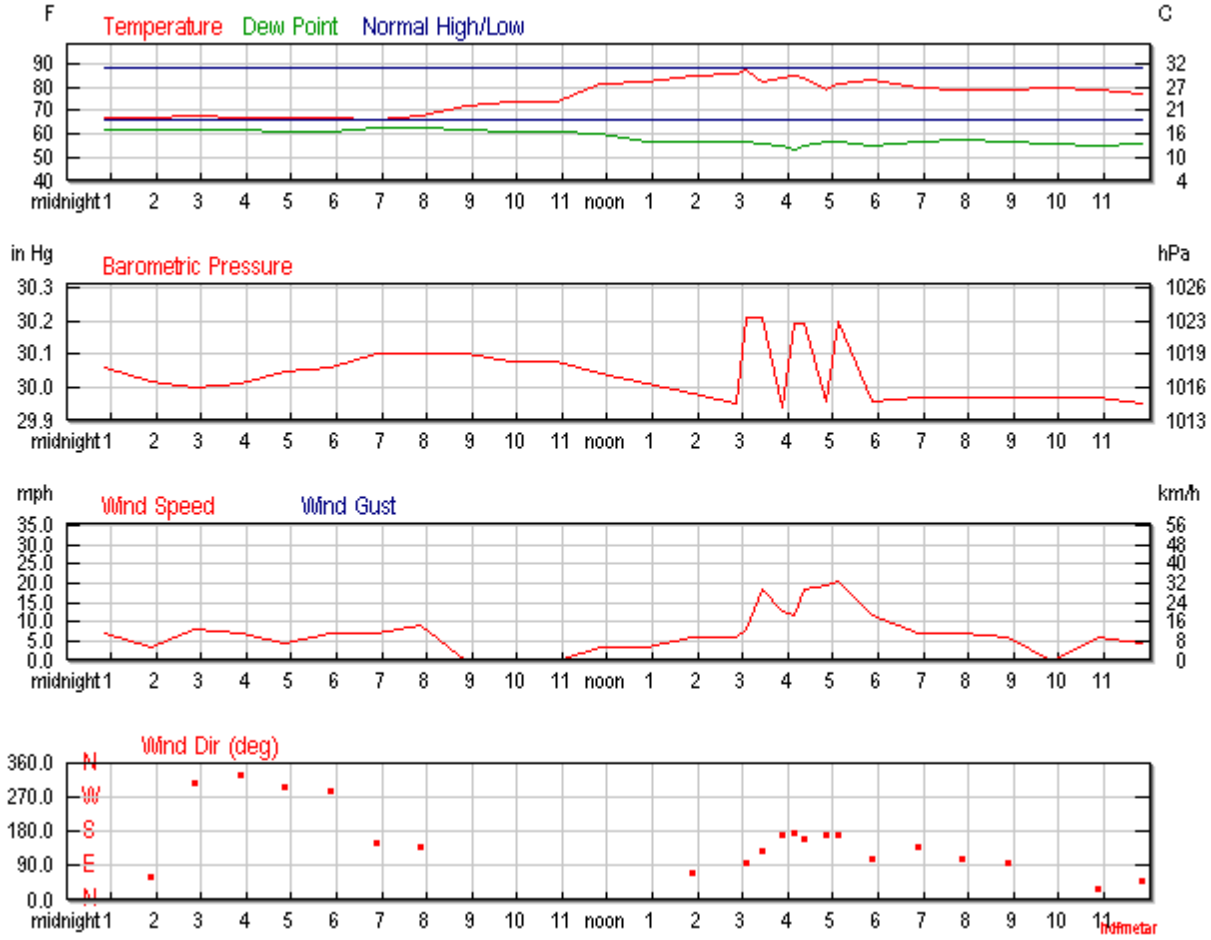
	Actual	Average	Record
Temperature			
Mean Temperature	**77** °F	-	
Max Temperature	**87** °F	-	- ()
Min Temperature	**66** °F	-	- ()
Cooling Degree Days	12		
Month to date cooling degree days	59		
Year to date cooling degree days	861		
Since 1 June cooling degree days	827		
Growing Degree Days	26 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**59** °F		
Average Humidity	62		
Maximum Humidity	87		
Minimum Humidity	37		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.33		
Year to date precipitation	5.35		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**30.04** in		
Wind			
Wind Speed	**6** mph (SE)		
Max Wind Speed	**30** mph		
Max Gust Speed	**36** mph		
Visibility	**10** miles		
Events	Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KABQ

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Astronomy

Aug. 04, 2019	**Rise**	**Set**

Aug. 04, 2019	Rise	Set
Actual Time	6:17 AM MDT	8:06 PM MDT
Civil Twilight	5:50 AM MDT	8:34 PM MDT
Nautical Twilight	5:16 AM MDT	9:07 PM MDT
Astronomical Twilight	4:41 AM MDT	9:42 PM MDT
Moon	10:18 AM MDT (8/4)	10:57 PM MDT (8/4)
Length of Visible Light	14h 43m	
Length of Day	13h 48m	

Waxing Crescent, 18% of the Moon is Illuminated

Aug 4	Aug 7	Aug 15	Aug 23	Aug 30
Waxing Crescent	First Quarter	Full	Last Quarter	New

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**66.9** °F	-	**62.1** °F	84%	**30.06** in	**10.0** mi	SSE	**6.9** mph	-	N/A		Overcast
1:52 AM	**66.9** °F	-	**62.1** °F	84%	**30.02** in	**10.0** mi	ENE	**3.5** mph	-	N/A		Overcast
2:52 AM	**68.0** °F	-	**62.1** °F	81%	**30.00** in	**10.0** mi	NW	**8.1** mph	-	N/A		Overcast
3:52 AM	**66.9** °F	-	**62.1** °F	84%	**30.01** in	**10.0** mi	NNW	**6.9** mph	-	N/A		Overcast
4:52 AM	**66.9** °F	-	**61.0** °F	81%	**30.05** in	**10.0** mi	WNW	**4.6** mph	-	N/A		Overcast
5:52 AM	**66.9** °F	-	**61.0** °F	81%	**30.06** in	**10.0** mi	WNW	**6.9** mph	-	N/A		Overcast
6:52 AM	**66.0** °F	-	**63.0** °F	90%	**30.10** in	**10.0** mi	SSE	**6.9** mph	-	N/A		Mostly Cloudy
7:52 AM	**68.0** °F	-	**63.0** °F	84%	**30.10** in	**10.0** mi	SE	**9.2** mph	-	N/A		Mostly Cloudy

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 AM	**72.0** °F	-	**62.1** °F	71%	**30.10** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
9:52 AM	**73.9** °F	-	**61.0** °F	64%	**30.08** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
10:52 AM	**73.9** °F	-	**61.0** °F	64%	**30.08** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
11:52 AM	**81.0** °F	**81.6** °F	**60.1** °F	49%	**30.04** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Scattered Clouds
12:52 PM	**82.0** °F	**81.7** °F	**57.0** °F	42%	**30.01** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Scattered Clouds
1:52 PM	**84.9** °F	**83.9** °F	**57.0** °F	38%	**29.98** in	**10.0** mi	ENE	**5.8** mph	-	N/A		Scattered Clouds
2:52 PM	**86.0** °F	**84.9** °F	**57.0** °F	37%	**29.95** in	**10.0** mi	Variable	**5.8** mph	-	N/A		Scattered Clouds
3:05 PM	**87.1** °F	**85.9** °F	**57.0** °F	36%	**30.21** in	**10.0** mi	East	**8.1** mph	-	N/A	Thunderstorm	Thunderstorm
3:25 PM	**82.0** °F	**81.6** °F	**55.9** °F	41%	**30.21** in	**10.0** mi	SE	**18.4** mph	-	N/A		Scattered Clouds
3:52 PM	**84.0** °F	**82.9** °F	**55.0** °F	37%	**29.94** in	**10.0** mi	South	**12.7** mph	**23.0** mph	N/A		Mostly Cloudy
4:08 PM	**84.9** °F	**83.2** °F	**53.1** °F	33%	**30.19** in	**10.0** mi	South	**11.5** mph	-	N/A	Thunderstorm	Mostly Cloudy
4:21 PM	**84.0** °F	**82.9** °F	**55.0** °F	37%	**30.19** in	**10.0** mi	SSE	**18.4** mph	-	N/A	Thunderstorm	Thunderstorm
4:52 PM	**79.0** °F	-	**57.0** °F	47%	**29.96** in	**10.0** mi	South	**19.6** mph	-	N/A	Thunderstorm	Mostly Cloudy
5:07 PM	**81.0** °F	**81.0** °F	**57.0** °F	44%	**30.20** in	**10.0** mi	South	**20.7** mph	**25.3** mph	N/A		Mostly Cloudy
5:52 PM	**82.9** °F	**82.0** °F	**55.0** °F	38%	**29.96** in	**10.0** mi	ESE	**11.5** mph	-	N/A		Mostly Cloudy
6:52 PM	**80.1** °F	**80.4** °F	**57.0** °F	45%	**29.97** in	**10.0** mi	SE	**6.9** mph	-	N/A		Mostly Cloudy
7:52 PM	**79.0** °F	-	**57.9** °F	48%	**29.97** in	**10.0** mi	ESE	**6.9** mph	-	N/A		Mostly Cloudy
8:52 PM	**79.0** °F	-	**57.0** °F	47%	**29.97** in	**10.0** mi	East	**5.8** mph	-	N/A		Mostly Cloudy
9:52 PM	**80.1** °F	**80.2** °F	**55.9** °F	43%	**29.97** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
10:52 PM	**79.0** °F	-	**55.0** °F	44%	**29.97** in	**10.0** mi	NNE	**5.8** mph	-	N/A		Scattered Clouds
11:52 PM	**77.0** °F	-	**55.9** °F	48%	**29.95** in	**10.0** mi	NE	**4.6** mph	-	N/A		Scattered Clouds

Albuquerque, NM

Albuquerque International Sunport

11:23 AM MDT on August 22, 2019 (GMT -0600)

Weather History for KABQ - August, 2019

August

6

2019

View
Tuesday, August 6, 2019

Daily | Weekly | Monthly | Custom

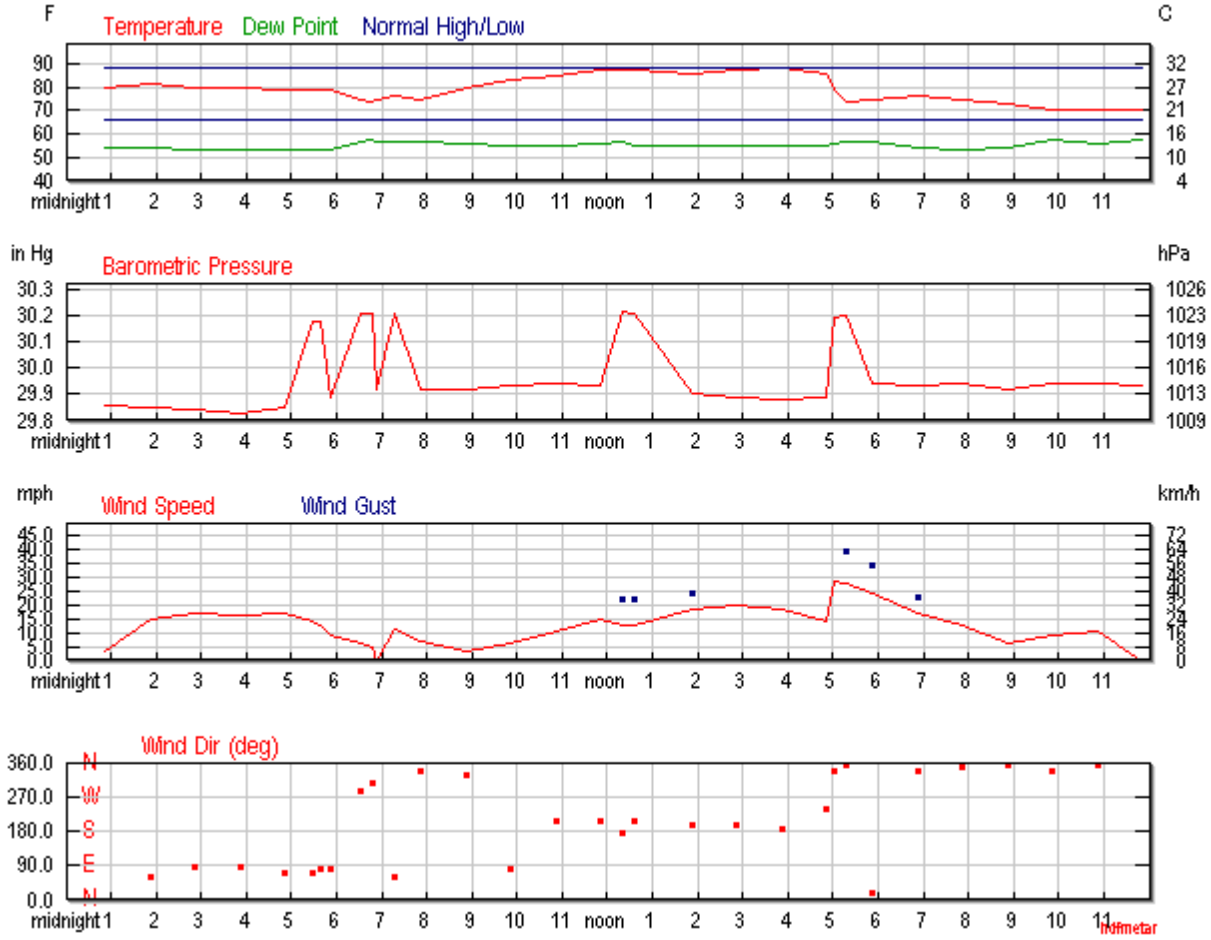
	Actual	Average	Record
Temperature			
Mean Temperature	**80** °F	-	
Max Temperature	**90** °F	-	- ()
Min Temperature	**70** °F	-	- ()
Cooling Degree Days	15		
Month to date cooling degree days	89		
Year to date cooling degree days	891		
Since 1 June cooling degree days	857		
Growing Degree Days	30 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**55** °F		
Average Humidity	49		
Maximum Humidity	66		
Minimum Humidity	31		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.33		
Year to date precipitation	5.35		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.97** in		
Wind			
Wind Speed	**12** mph (NNE)		
Max Wind Speed	**32** mph		
Max Gust Speed	**39** mph		
Visibility	**10** miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KABQ

Submit

Astronomy

Aug. 06, 2019	**Rise**	**Set**

Aug. 06, 2019	Rise	Set
Actual Time	6:19 AM MDT	8:04 PM MDT
Civil Twilight	5:51 AM MDT	8:32 PM MDT
Nautical Twilight	5:18 AM MDT	9:05 PM MDT
Astronomical Twilight	4:43 AM MDT	9:40 PM MDT
Moon	12:33 PM MDT (8/6)	No Moon Set
Length of Visible Light	14h 40m	
Length of Day	13h 45m	

Waxing Crescent, 39% of the Moon is Illuminated

Aug 6	Aug 7	Aug 15	Aug 23	Aug 30
Waxing Crescent	First Quarter	Full	Last Quarter	New

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**80.1** °F	**80.0** °F	**54.0** °F	40%	**29.86** in	**10.0** mi	East	**3.5** mph	-	N/A		Mostly Cloudy
1:52 AM	**81.0** °F	**80.5** °F	**54.0** °F	39%	**29.85** in	**10.0** mi	ENE	**15.0** mph	-	N/A		Mostly Cloudy
2:52 AM	**80.1** °F	**79.9** °F	**53.1** °F	39%	**29.84** in	**10.0** mi	East	**17.3** mph	-	N/A		Scattered Clouds
3:52 AM	**80.1** °F	**79.9** °F	**53.1** °F	39%	**29.83** in	**10.0** mi	East	**16.1** mph	-	**0.00** in		Scattered Clouds
4:52 AM	**79.0** °F	-	**53.1** °F	40%	**29.85** in	**10.0** mi	ENE	**17.3** mph	-	N/A		Mostly Cloudy
5:28 AM	**79.0** °F	-	**53.1** °F	40%	**30.18** in	**10.0** mi	ENE	**13.8** mph	-	N/A	Thunderstorm	Mostly Cloudy
5:39 AM	**79.0** °F	-	**53.1** °F	40%	**30.18** in	**10.0** mi	East	**12.7** mph	-	N/A	Thunderstorm	Thunderstorm

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
5:52 AM	**79.0** °F	-	**53.1** °F	40%	**29.89** in	**10.0** mi	East	**9.2** mph	-	N/A	Thunderstorm	Thunderstorm
6:31 AM	**75.0** °F	-	**57.0** °F	53%	**30.21** in	**10.0** mi	WNW	**5.8** mph	-	N/A	Thunderstorm	Mostly Cloudy
6:47 AM	**73.4** °F	-	**57.2** °F	57%	**30.21** in	**10.0** mi	NW	**4.6** mph	-	N/A	Thunderstorm	Thunderstorm
6:52 AM	**75.0** °F	-	**57.0** °F	53%	**29.92** in	**10.0** mi	Calm	Calm	-	N/A	Thunderstorm	Thunderstorm
7:17 AM	**75.9** °F	-	**57.0** °F	52%	**30.21** in	**10.0** mi	ENE	**11.5** mph	-	N/A		Mostly Cloudy
7:52 AM	**75.0** °F	-	**57.0** °F	53%	**29.92** in	**10.0** mi	NNW	**6.9** mph	-	N/A		Mostly Cloudy
8:52 AM	**80.1** °F	**80.2** °F	**55.9** °F	43%	**29.92** in	**10.0** mi	NNW	**3.5** mph	-	N/A		Scattered Clouds
9:52 AM	**82.9** °F	**82.0** °F	**55.0** °F	38%	**29.93** in	**10.0** mi	East	**5.8** mph	-	N/A		Scattered Clouds
10:52 AM	**84.9** °F	**83.6** °F	**55.0** °F	36%	**29.94** in	**10.0** mi	SSW	**10.4** mph	-	N/A		Scattered Clouds
11:52 AM	**87.1** °F	**85.7** °F	**55.9** °F	35%	**29.93** in	**10.0** mi	SSW	**15.0** mph	**21.9** mph	N/A		Scattered Clouds
12:20 PM	**87.1** °F	**85.9** °F	**57.0** °F	36%	**30.22** in	**10.0** mi	South	**12.7** mph	**21.9** mph	N/A	Thunderstorm	Scattered Clouds
12:35 PM	**87.1** °F	**85.3** °F	**55.0** °F	33%	**30.21** in	**10.0** mi	SSW	**12.7** mph	**21.9** mph	N/A		Scattered Clouds
1:52 PM	**86.0** °F	**84.5** °F	**55.0** °F	35%	**29.90** in	**10.0** mi	SSW	**18.4** mph	**24.2** mph	N/A		Scattered Clouds
2:52 PM	**87.1** °F	**85.3** °F	**55.0** °F	33%	**29.89** in	**10.0** mi	SSW	**19.6** mph	-	N/A		Mostly Cloudy
3:52 PM	**88.0** °F	**86.1** °F	**55.0** °F	32%	**29.88** in	**10.0** mi	South	**18.4** mph	**25.3** mph	N/A		Mostly Cloudy
4:52 PM	**86.0** °F	**84.5** °F	**55.0** °F	35%	**29.89** in	**10.0** mi	WSW	**13.8** mph	-	N/A		Mostly Cloudy
5:01 PM	**79.0** °F	-	**55.9** °F	45%	**30.19** in	**10.0** mi	NNW	**28.8** mph	**36.8** mph	**0.00** in	Rain	Light Rain
5:17 PM	**73.9** °F	-	**57.0** °F	55%	**30.20** in	**10.0** mi	North	**27.6** mph	**39.1** mph	**0.00** in	Rain	Light Rain
5:52 PM	**75.0** °F	-	**57.0** °F	53%	**29.94** in	**10.0** mi	NNE	**24.2** mph	**34.5** mph	**0.00** in	Rain	Light Rain

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
6:52 PM	**75.9** °F	-	**54.0** °F	46%	**29.93** in	**10.0** mi	NNW	**17.3** mph	**23.0** mph	**0.00** in		Mostly Cloudy
7:52 PM	**75.0** °F	-	**53.1** °F	46%	**29.94** in	**10.0** mi	North	**12.7** mph	-	N/A		Mostly Cloudy
8:52 PM	**73.0** °F	-	**54.0** °F	51%	**29.92** in	**10.0** mi	North	**5.8** mph	-	N/A		Mostly Cloudy
9:52 PM	**70.0** °F	-	**57.9** °F	65%	**29.94** in	**10.0** mi	NNW	**9.2** mph	-	N/A		Scattered Clouds
10:52 PM	**70.0** °F	-	**55.9** °F	61%	**29.94** in	**10.0** mi	North	**10.4** mph	-	N/A		Mostly Cloudy
11:52 PM	**70.0** °F	-	**57.9** °F	65%	**29.93** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy

Albuquerque, NM

Albuquerque International Sunport

11:24 AM MDT on August 22, 2019 (GMT -0600)

Weather History for KABQ - August, 2019

August

8

2019

View
Thursday, August 8, 2019

Daily | Weekly | Monthly | Custom

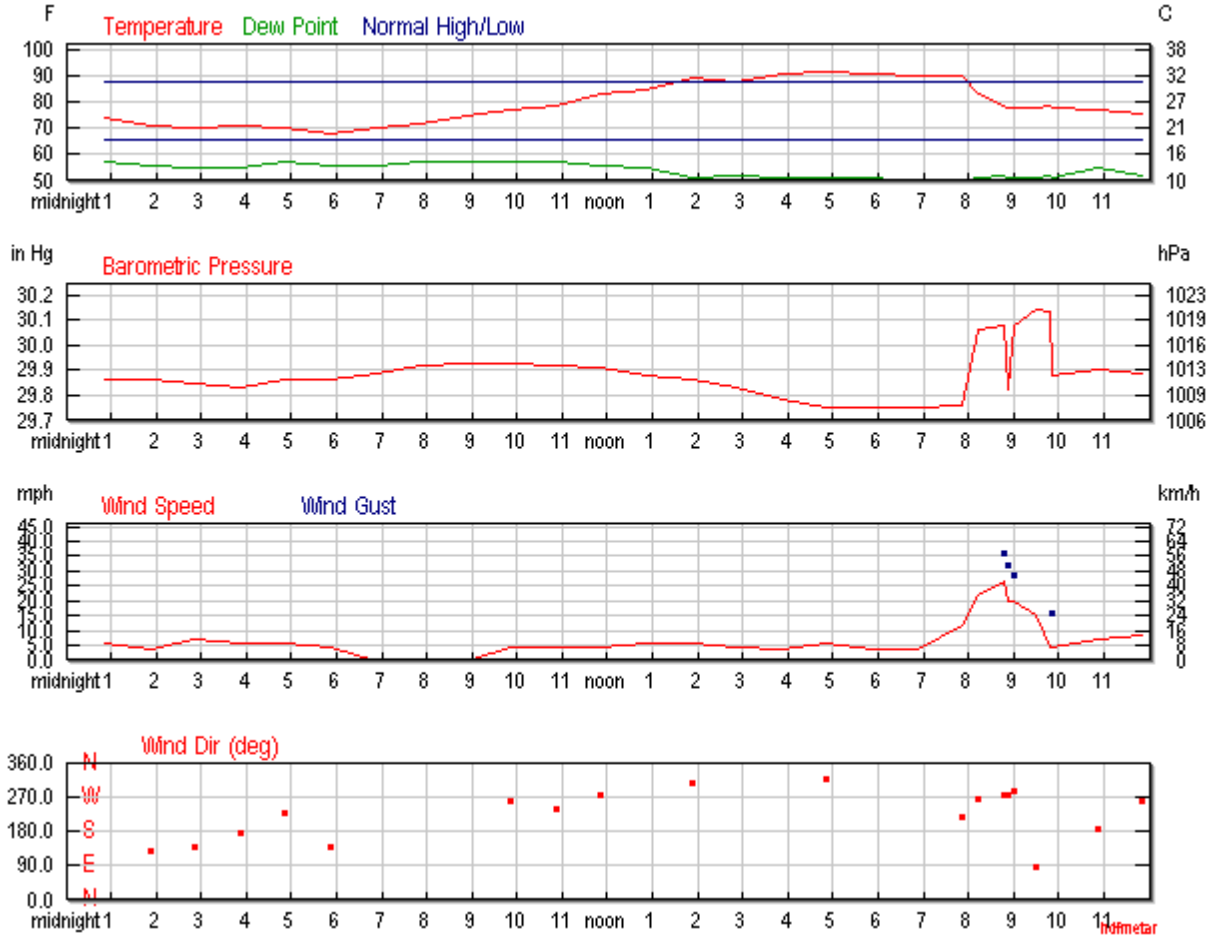
	Actual	Average	Record
Temperature			
Mean Temperature	**80** °F	-	
Max Temperature	**93** °F	-	- ()
Min Temperature	**67** °F	-	- ()
Cooling Degree Days	15		
Month to date cooling degree days	118		
Year to date cooling degree days	920		
Since 1 June cooling degree days	886		
Growing Degree Days	30 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**54** °F		
Average Humidity	46		
Maximum Humidity	66		
Minimum Humidity	26		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.33		
Year to date precipitation	5.35		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.89** in		
Wind			
Wind Speed	**5** mph (WSW)		
Max Wind Speed	**31** mph		
Max Gust Speed	**39** mph		
Visibility	**10** miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KABQ

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Astronomy

Aug. 08, 2019	**Rise**	**Set**

Aug. 08, 2019	Rise	Set
Actual Time	6:20 AM MDT	8:02 PM MDT
Civil Twilight	5:53 AM MDT	8:29 PM MDT
Nautical Twilight	5:20 AM MDT	9:02 PM MDT
Astronomical Twilight	4:45 AM MDT	9:37 PM MDT
Moon	2:41 PM MDT (8/8)	12:43 AM MDT (8/8)
Length of Visible Light	14h 36m	
Length of Day	13h 41m	

First Quarter, 61% of the Moon is Illuminated

Aug 8	Aug 15	Aug 23	Aug 30	Sep 5
First Quarter	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**73.9** °F	-	**57.0** °F	55%	**29.86** in	**10.0** mi	SSW	**5.8** mph	-	N/A		Scattered Clouds
1:52 AM	**71.1** °F	-	**55.9** °F	59%	**29.86** in	**10.0** mi	SE	**3.5** mph	-	N/A		Mostly Cloudy
2:52 AM	**70.0** °F	-	**55.0** °F	59%	**29.85** in	**10.0** mi	SE	**6.9** mph	-	N/A		Mostly Cloudy
3:52 AM	**71.1** °F	-	**55.0** °F	57%	**29.83** in	**10.0** mi	South	**5.8** mph	-	N/A		Scattered Clouds
4:52 AM	**70.0** °F	-	**57.0** °F	63%	**29.86** in	**10.0** mi	SW	**5.8** mph	-	N/A		Scattered Clouds
5:52 AM	**68.0** °F	-	**55.9** °F	65%	**29.86** in	**10.0** mi	SE	**4.6** mph	-	N/A		Mostly Cloudy
6:52 AM	**70.0** °F	-	**55.9** °F	61%	**29.89** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
7:52 AM	**72.0** °F	-	**57.0** °F	59%	**29.92** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
8:52 AM	**75.0** °F	-	**57.0** °F	53%	**29.93** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
9:52 AM	**77.0** °F	-	**57.0** °F	50%	**29.93** in	**10.0** mi	West	**4.6** mph	-	N/A		Mostly Cloudy
10:52 AM	**79.0** °F	-	**57.0** °F	47%	**29.92** in	**10.0** mi	WSW	**4.6** mph	-	N/A		Mostly Cloudy
11:52 AM	**82.9** °F	**82.1** °F	**55.9** °F	39%	**29.91** in	**10.0** mi	West	**4.6** mph	-	N/A		Mostly Cloudy
12:52 PM	**84.9** °F	**83.6** °F	**55.0** °F	36%	**29.88** in	**10.0** mi	Variable	**5.8** mph	-	N/A		Mostly Cloudy
1:52 PM	**89.1** °F	-	**51.1** °F	27%	**29.86** in	**10.0** mi	NW	**5.8** mph	-	N/A		Mostly Cloudy
2:52 PM	**88.0** °F	-	**52.0** °F	29%	**29.83** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Scattered Clouds
3:52 PM	**91.0** °F	-	**51.1** °F	25%	**29.78** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Scattered Clouds
4:52 PM	**91.9** °F	-	**51.1** °F	25%	**29.75** in	**10.0** mi	NW	**5.8** mph	-	N/A		Mostly Cloudy
5:52 PM	**91.0** °F	-	**51.1** °F	25%	**29.75** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Mostly Cloudy
6:52 PM	**90.0** °F	-	**50.0** °F	25%	**29.75** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Mostly Cloudy
7:52 PM	**90.0** °F	-	**50.0** °F	25%	**29.76** in	**10.0** mi	SW	**11.5** mph	-	N/A		Mostly Cloudy
8:12 PM	**82.9** °F	-	**51.1** °F	33%	**30.06** in	**10.0** mi	West	**21.9** mph	**27.6** mph	N/A		Mostly Cloudy
8:47 PM	**78.8** °F	-	**51.8** °F	39%	**30.08** in	**10.0** mi	West	**26.5** mph	**35.7** mph	N/A	Thunderstorm	Mostly Cloudy
8:52 PM	**78.1** °F	-	**51.1** °F	39%	**29.82** in	**10.0** mi	West	**19.6** mph	**32.2** mph	N/A	Thunderstorm	Mostly Cloudy
9:02 PM	**78.1** °F	-	**51.1** °F	39%	**30.08** in	**10.0** mi	WNW	**19.6** mph	**28.8** mph	N/A		Mostly Cloudy
9:31 PM	**78.1** °F	-	**51.1** °F	39%	**30.14** in	**10.0** mi	East	**15.0** mph	-	N/A	Thunderstorm	Thunderstorm
9:49 PM	**78.8** °F	-	**51.8** °F	39%	**30.13** in	**10.0** mi	Variable	**4.6** mph	**16.1** mph	N/A		Mostly Cloudy
9:52 PM	**78.1** °F	-	**51.1** °F	39%	**29.88** in	**10.0** mi	Variable	**4.6** mph	**16.1** mph	N/A		Mostly Cloudy
10:52 PM	**77.0** °F	-	**55.0** °F	47%	**29.90** in	**10.0** mi	South	**6.9** mph	-	**0.00** in	Rain	Light Rain
11:52 PM	**75.9** °F	-	**52.0** °F	43%	**29.89** in	**10.0** mi	West	**8.1** mph	-	**0.00** in		Mostly Cloudy

Albuquerque, NM

Albuquerque International Sunport

11:26 AM MDT on August 22, 2019 (GMT -0600)

Weather History for KABQ - August, 2019

August

9

2019

View
Friday, August 9, 2019

Daily | Weekly | Monthly | Custom

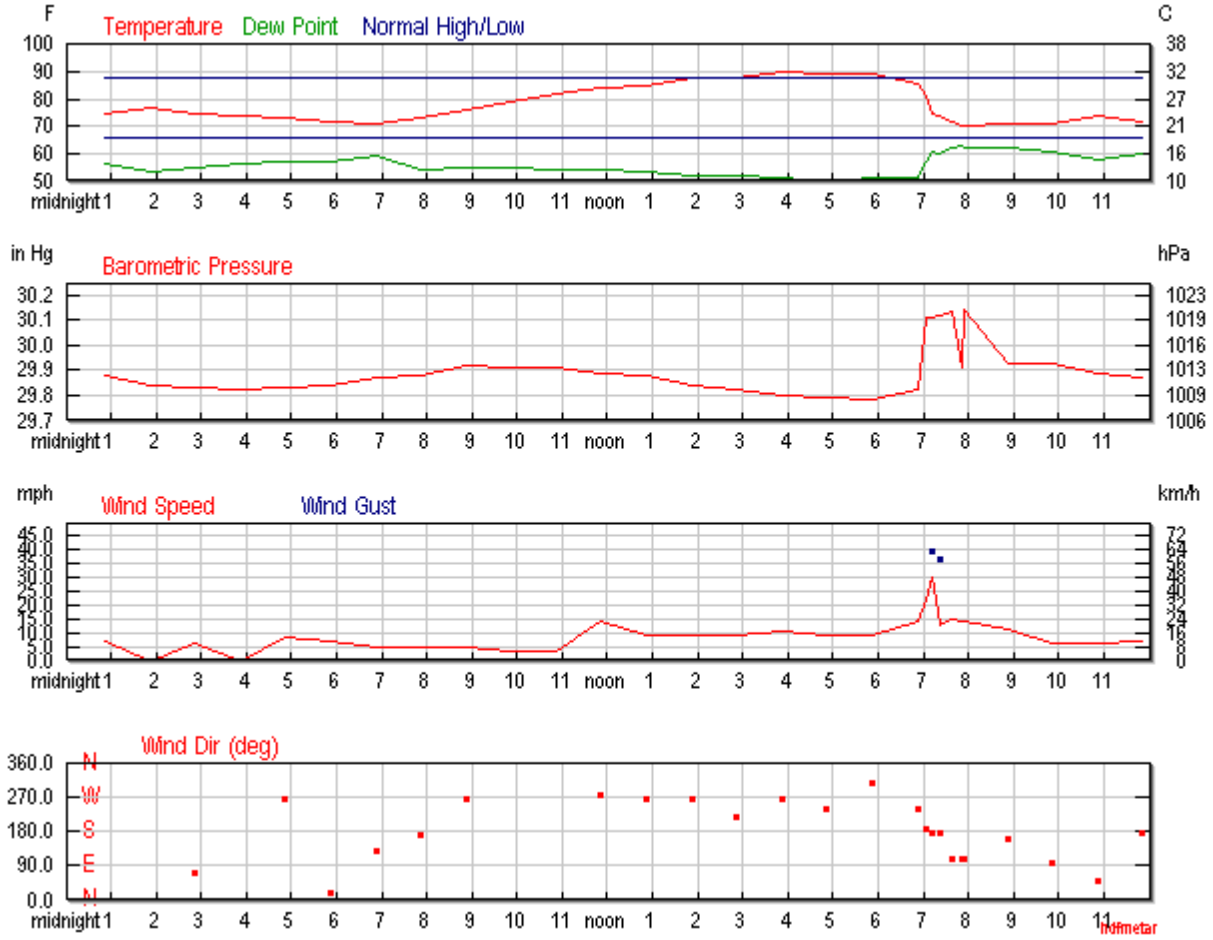
	Actual	Average	Record
Temperature			
Mean Temperature	**80** °F	-	
Max Temperature	**91** °F	-	- ()
Min Temperature	**69** °F	-	- ()
Cooling Degree Days	15		
Month to date cooling degree days	133		
Year to date cooling degree days	935		
Since 1 June cooling degree days	901		
Growing Degree Days	30 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**56** °F		
Average Humidity	47		
Maximum Humidity	68		
Minimum Humidity	26		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.36		
Year to date precipitation	5.38		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.90** in		
Wind			
Wind Speed	**7** mph (South)		
Max Wind Speed	**30** mph		
Max Gust Speed	**39** mph		
Visibility	**10** miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

Airport or City:

KABQ

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Astronomy

Aug. 09, 2019	**Rise**	**Set**

Aug. 09, 2019	Rise	Set
Actual Time	6:21 AM MDT	8:01 PM MDT
Civil Twilight	5:54 AM MDT	8:28 PM MDT
Nautical Twilight	5:21 AM MDT	9:01 PM MDT
Astronomical Twilight	4:46 AM MDT	9:36 PM MDT
Moon	3:42 PM MDT (8/9)	1:22 AM MDT (8/9)
Length of Visible Light	14h 34m	
Length of Day	13h 39m	

Waxing Gibbous, 71% of the Moon is Illuminated

Aug 9	Aug 15	Aug 23	Aug 30	Sep 5
Waxing Gibbous	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**75.0** °F	-	**55.9** °F	51%	**29.88** in	**10.0** mi	East	**6.9** mph	-	N/A		Overcast
1:52 AM	**77.0** °F	-	**53.1** °F	43%	**29.84** in	**10.0** mi	Calm	Calm	-	N/A		Overcast
2:52 AM	**75.0** °F	-	**55.0** °F	50%	**29.83** in	**10.0** mi	ENE	**5.8** mph	-	N/A		Mostly Cloudy
3:52 AM	**73.9** °F	-	**55.9** °F	53%	**29.82** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
4:52 AM	**73.0** °F	-	**57.0** °F	57%	**29.83** in	**10.0** mi	West	**8.1** mph	-	N/A		Mostly Cloudy
5:52 AM	**72.0** °F	-	**57.0** °F	59%	**29.84** in	**10.0** mi	NNE	**6.9** mph	-	N/A		Mostly Cloudy
6:52 AM	**71.1** °F	-	**59.0** °F	66%	**29.87** in	**10.0** mi	SE	**4.6** mph	-	N/A		Mostly Cloudy
7:52 AM	**73.0** °F	-	**54.0** °F	51%	**29.88** in	**10.0** mi	South	**4.6** mph	-	N/A		Mostly Cloudy

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 AM	**75.9** °F	-	**55.0** °F	48%	**29.92** in	**10.0** mi	West	**4.6** mph	-	N/A		Overcast
9:52 AM	**79.0** °F	-	**55.0** °F	44%	**29.91** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Mostly Cloudy
10:52 AM	**82.0** °F	**81.3** °F	**54.0** °F	38%	**29.91** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Mostly Cloudy
11:52 AM	**84.0** °F	**82.6** °F	**54.0** °F	35%	**29.89** in	**10.0** mi	West	**13.8** mph	-	N/A		Mostly Cloudy
12:52 PM	**84.9** °F	**83.2** °F	**53.1** °F	33%	**29.88** in	**10.0** mi	West	**9.2** mph	-	N/A		Mostly Cloudy
1:52 PM	**88.0** °F	-	**52.0** °F	29%	**29.84** in	**10.0** mi	West	**9.2** mph	-	N/A		Mostly Cloudy
2:52 PM	**88.0** °F	-	**52.0** °F	29%	**29.82** in	**10.0** mi	SW	**9.2** mph	-	N/A		Mostly Cloudy
3:52 PM	**90.0** °F	-	**51.1** °F	26%	**29.80** in	**10.0** mi	West	**10.4** mph	-	N/A		Mostly Cloudy
4:52 PM	**89.1** °F	-	**50.0** °F	26%	**29.79** in	**10.0** mi	WSW	**9.2** mph	**16.1** mph	N/A		Mostly Cloudy
5:52 PM	**89.1** °F	-	**51.1** °F	27%	**29.78** in	**10.0** mi	NW	**9.2** mph	-	N/A		Mostly Cloudy
6:52 PM	**86.0** °F	-	**51.1** °F	30%	**29.82** in	**10.0** mi	WSW	**13.8** mph	-	N/A		Mostly Cloudy
7:05 PM	**81.0** °F	**81.0** °F	**57.0** °F	44%	**30.11** in	**10.0** mi	South	**21.9** mph	**27.6** mph	**0.00** in	Rain	Light Rain
7:12 PM	**75.0** °F	-	**61.0** °F	62%	**30.11** in	**7.0** mi	South	**29.9** mph	**39.1** mph	**0.00** in	Rain , Thunderstorm	Rain
7:22 PM	**73.9** °F	-	**60.1** °F	62%	**30.12** in	**8.0** mi	South	**12.7** mph	**36.8** mph	N/A	Rain , Thunderstorm	Light Thunderstorms and Rain
7:37 PM	**72.0** °F	-	**62.1** °F	71%	**30.13** in	**10.0** mi	ESE	**15.0** mph	-	N/A	Rain , Thunderstorm	Light Rain
7:52 PM	**70.0** °F	-	**63.0** °F	78%	**29.91** in	**10.0** mi	ESE	**13.8** mph	-	N/A	Rain , Thunderstorm	Light Rain
7:55 PM	**70.0** °F	-	**62.1** °F	76%	**30.14** in	**10.0** mi	ESE	**13.8** mph	-	N/A	Rain	Light Rain
8:52 PM	**71.1** °F	-	**62.1** °F	73%	**29.93** in	**10.0** mi	SSE	**11.5** mph	-	N/A		Mostly Cloudy
9:52 PM	**71.1** °F	-	**61.0** °F	70%	**29.93** in	**10.0** mi	East	**5.8** mph	-	N/A	Rain	Light Rain
10:52 PM	**73.9** °F	-	**57.9** °F	57%	**29.89** in	**10.0** mi	NE	**5.8** mph	-	N/A		Mostly Cloudy
11:52 PM	**72.0** °F	-	**60.1** °F	66%	**29.87** in	**10.0** mi	South	**6.9** mph	-	N/A		Mostly Cloudy

Albuquerque, NM

Albuquerque International Sunport

11:27 AM MDT on August 22, 2019 (GMT -0600)

Weather History for KABQ - August, 2019

August

10

2019

View
Saturday, August 10, 2019

Daily | Weekly | Monthly | Custom

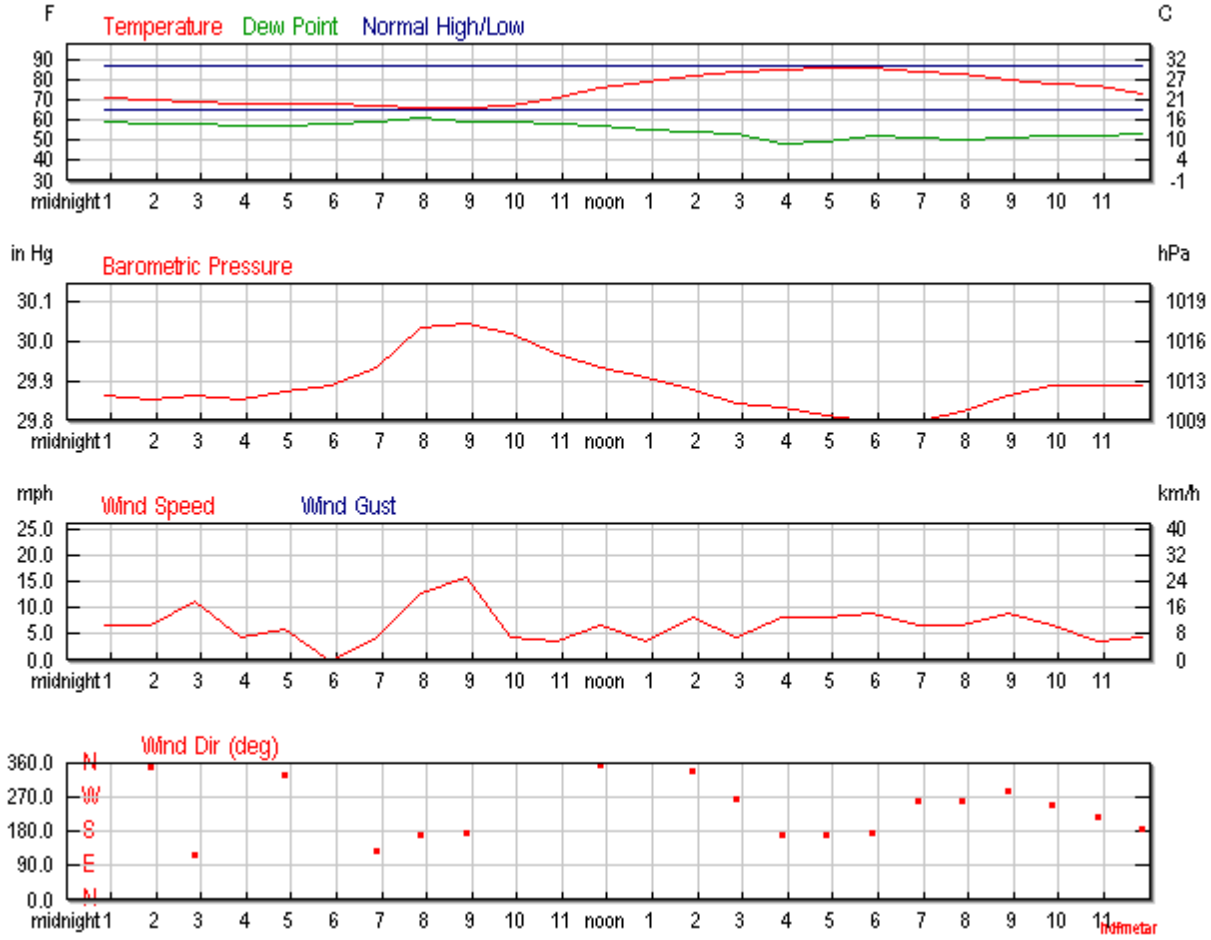
	Actual	Average	Record
Temperature			
Mean Temperature	**78** °F	-	
Max Temperature	**88** °F	-	- ()
Min Temperature	**67** °F	-	- ()
Cooling Degree Days	13		
Month to date cooling degree days	146		
Year to date cooling degree days	948		
Since 1 June cooling degree days	914		
Growing Degree Days	27 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**56** °F		
Average Humidity	52		
Maximum Humidity	76		
Minimum Humidity	27		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.36		
Year to date precipitation	5.38		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.89** in		
Wind			
Wind Speed	**7** mph (SW)		
Max Wind Speed	**22** mph		
Max Gust Speed	**28** mph		
Visibility	**10** miles		
Events	Rain		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



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KABQ

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Astronomy

Aug. 10, 2019	**Rise**	**Set**

Aug. 10, 2019	Rise	Set
Actual Time	6:22 AM MDT	8:00 PM MDT
Civil Twilight	5:55 AM MDT	8:27 PM MDT
Nautical Twilight	5:22 AM MDT	9:00 PM MDT
Astronomical Twilight	4:48 AM MDT	9:34 PM MDT
Moon	4:41 PM MDT (8/10)	2:04 AM MDT (8/10)
Length of Visible Light	14h 32m	
Length of Day	13h 38m	

Waxing Gibbous, 80% of the Moon is Illuminated

Aug 10	Aug 15	Aug 23	Aug 30	Sep 5
Waxing Gibbous	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**72.0** °F	-	**60.1** °F	66%	**29.86** in	**10.0** mi	North	**6.9** mph	-	N/A		Overcast
1:52 AM	**71.1** °F	-	**59.0** °F	66%	**29.85** in	**10.0** mi	North	**6.9** mph	-	N/A		Overcast
2:52 AM	**70.0** °F	-	**59.0** °F	68%	**29.86** in	**10.0** mi	ESE	**11.5** mph	-	N/A		Overcast
3:52 AM	**69.1** °F	-	**57.9** °F	68%	**29.85** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Mostly Cloudy
4:52 AM	**69.1** °F	-	**57.9** °F	68%	**29.87** in	**10.0** mi	NNW	**5.8** mph	-	N/A		Overcast
5:52 AM	**69.1** °F	-	**59.0** °F	70%	**29.89** in	**10.0** mi	Calm	Calm	-	N/A		Overcast
6:52 AM	**68.0** °F	-	**60.1** °F	76%	**29.93** in	**10.0** mi	SE	**4.6** mph	-	N/A		Overcast
7:52 AM	**66.9** °F	-	**62.1** °F	84%	**30.03** in	**10.0** mi	South	**12.7** mph	-	N/A	Rain	Light Rain

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 AM	**66.9** °F	-	**60.1** °F	79%	**30.04** in	**10.0** mi	South	**16.1** mph	-	N/A		Overcast
9:52 AM	**68.0** °F	-	**60.1** °F	76%	**30.02** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Overcast
10:52 AM	**72.0** °F	-	**59.0** °F	64%	**29.97** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Mostly Cloudy
11:52 AM	**77.0** °F	-	**57.9** °F	52%	**29.93** in	**10.0** mi	North	**6.9** mph	-	N/A		Mostly Cloudy
12:52 PM	**80.1** °F	**80.2** °F	**55.9** °F	43%	**29.91** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Mostly Cloudy
1:52 PM	**82.9** °F	**82.0** °F	**55.0** °F	38%	**29.88** in	**10.0** mi	NNW	**8.1** mph	-	N/A		Mostly Cloudy
2:52 PM	**84.9** °F	**83.3** °F	**54.0** °F	34%	**29.84** in	**10.0** mi	West	**4.6** mph	-	N/A		Scattered Clouds
3:52 PM	**86.0** °F	-	**48.9** °F	28%	**29.83** in	**10.0** mi	South	**8.1** mph	-	N/A		Scattered Clouds
4:52 PM	**87.1** °F	-	**50.0** °F	28%	**29.81** in	**10.0** mi	South	**8.1** mph	-	N/A		Scattered Clouds
5:52 PM	**87.1** °F	**84.9** °F	**53.1** °F	31%	**29.80** in	**10.0** mi	South	**9.2** mph	-	N/A		Mostly Cloudy
6:52 PM	**84.9** °F	-	**52.0** °F	32%	**29.80** in	**10.0** mi	West	**6.9** mph	-	N/A		Mostly Cloudy
7:52 PM	**84.0** °F	-	**51.1** °F	32%	**29.82** in	**10.0** mi	West	**6.9** mph	-	N/A		Scattered Clouds
8:52 PM	**81.0** °F	-	**52.0** °F	36%	**29.86** in	**10.0** mi	WNW	**9.2** mph	-	N/A		Scattered Clouds
9:52 PM	**79.0** °F	-	**53.1** °F	40%	**29.89** in	**10.0** mi	WSW	**6.9** mph	-	N/A		Mostly Cloudy
10:52 PM	**78.1** °F	-	**53.1** °F	42%	**29.89** in	**10.0** mi	SW	**3.5** mph	-	N/A		Scattered Clouds
11:52 PM	**73.9** °F	-	**54.0** °F	50%	**29.89** in	**10.0** mi	South	**4.6** mph	-	N/A		Scattered Clouds

Albuquerque, NM

Albuquerque International Sunport

11:28 AM MDT on August 22, 2019 (GMT -0600)

Weather History for KABQ - August, 2019

August

11

2019

View
Sunday, August 11, 2019

Daily | Weekly | Monthly | Custom

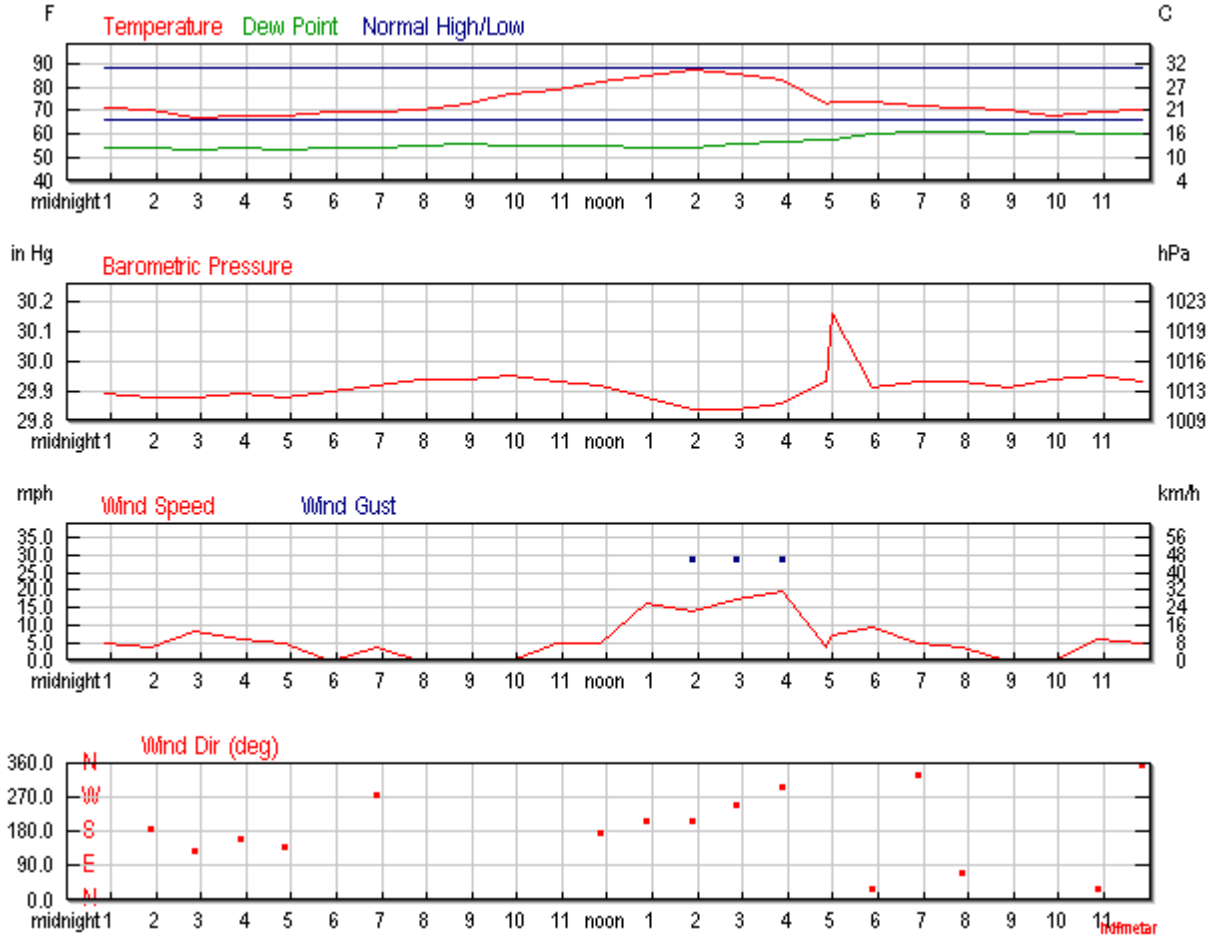
	Actual	Average	Record
Temperature			
Mean Temperature	**78** °F	-	
Max Temperature	**89** °F	-	- ()
Min Temperature	**66** °F	-	- ()
Cooling Degree Days	13		
Month to date cooling degree days	159		
Year to date cooling degree days	961		
Since 1 June cooling degree days	927		
Growing Degree Days	28 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**57** °F		
Average Humidity	54		
Maximum Humidity	76		
Minimum Humidity	31		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.41		
Year to date precipitation	5.43		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.91** in		
Wind			
Wind Speed	**6** mph (SSW)		
Max Wind Speed	**25** mph		
Max Gust Speed	**34** mph		
Visibility	**10** miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



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Airport or City:

KABQ

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Astronomy

Aug. 11, 2019	**Rise**	**Set**

Aug. 11, 2019	Rise	Set
Actual Time	6:23 AM MDT	7:59 PM MDT
Civil Twilight	5:56 AM MDT	8:26 PM MDT
Nautical Twilight	5:23 AM MDT	8:59 PM MDT
Astronomical Twilight	4:49 AM MDT	9:33 PM MDT
Moon	5:35 PM MDT (8/11)	2:50 AM MDT (8/11)
Length of Visible Light	14h 30m	
Length of Day	13h 36m	

Waxing Gibbous, 87% of the Moon is Illuminated

Aug 11	Aug 15	Aug 23	Aug 30	Sep 5
Waxing Gibbous	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**71.1** °F	-	**54.0** °F	55%	**29.89** in	**10.0** mi	South	**4.6** mph	-	N/A		Scattered Clouds
1:52 AM	**70.0** °F	-	**54.0** °F	57%	**29.88** in	**10.0** mi	South	**3.5** mph	-	N/A		Scattered Clouds
2:52 AM	**66.9** °F	-	**53.1** °F	61%	**29.88** in	**10.0** mi	SE	**8.1** mph	-	N/A		Scattered Clouds
3:52 AM	**68.0** °F	-	**54.0** °F	61%	**29.89** in	**10.0** mi	SSE	**5.8** mph	-	N/A		Scattered Clouds
4:52 AM	**68.0** °F	-	**53.1** °F	59%	**29.88** in	**10.0** mi	SE	**4.6** mph	-	N/A		Scattered Clouds
5:52 AM	**69.1** °F	-	**54.0** °F	58%	**29.90** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
6:52 AM	**69.1** °F	-	**54.0** °F	58%	**29.92** in	**10.0** mi	West	**3.5** mph	-	N/A		Scattered Clouds
7:52 AM	**70.0** °F	-	**55.0** °F	59%	**29.94** in	**10.0** mi	Calm	Calm	-	N/A		Partly Cloudy
8:52 AM	**73.0** °F	-	**55.9** °F	55%	**29.94** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
9:52 AM	**77.0** °F	-	**55.0** °F	47%	**29.95** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
10:52 AM	**79.0** °F	-	**55.0** °F	44%	**29.93** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Scattered Clouds
11:52 AM	**82.0** °F	**81.4** °F	**55.0** °F	39%	**29.92** in	**10.0** mi	South	**4.6** mph	-	N/A		Mostly Cloudy
12:52 PM	**84.9** °F	**83.3** °F	**54.0** °F	34%	**29.88** in	**10.0** mi	SSW	**16.1** mph	**21.9** mph	N/A		Mostly Cloudy
1:52 PM	**87.1** °F	**85.1** °F	**54.0** °F	32%	**29.84** in	**10.0** mi	SSW	**13.8** mph	**28.8** mph	N/A		Mostly Cloudy
2:52 PM	**86.0** °F	**84.7** °F	**55.9** °F	36%	**29.84** in	**10.0** mi	WSW	**17.3** mph	**28.8** mph	N/A	Thunderstorm	Mostly Cloudy
3:52 PM	**82.9** °F	**82.4** °F	**57.0** °F	41%	**29.86** in	**10.0** mi	WNW	**19.6** mph	**28.8** mph	N/A	Thunderstorm	Mostly Cloudy
4:52 PM	**73.0** °F	-	**57.9** °F	59%	**29.93** in	**10.0** mi	Variable	**3.5** mph	-	**0.05** in	Thunderstorm	Mostly Cloudy
5:00 PM	**73.9** °F	-	**57.9** °F	57%	**30.16** in	**10.0** mi	Variable	**6.9** mph	-	N/A		Mostly Cloudy
5:52 PM	**73.9** °F	-	**60.1** °F	62%	**29.91** in	**10.0** mi	NNE	**9.2** mph	-	N/A		Mostly Cloudy
6:52 PM	**72.0** °F	-	**61.0** °F	68%	**29.93** in	**10.0** mi	NNW	**4.6** mph	-	**0.00** in	Rain	Light Rain
7:52 PM	**71.1** °F	-	**61.0** °F	70%	**29.93** in	**10.0** mi	ENE	**3.5** mph	-	**0.00** in		Mostly Cloudy
8:52 PM	**70.0** °F	-	**60.1** °F	71%	**29.91** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
9:52 PM	**68.0** °F	-	**61.0** °F	78%	**29.94** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
10:52 PM	**69.1** °F	-	**60.1** °F	73%	**29.95** in	**10.0** mi	NNE	**5.8** mph	-	N/A		Scattered Clouds
11:52 PM	**70.0** °F	-	**60.1** °F	71%	**29.93** in	**10.0** mi	North	**4.6** mph	-	N/A		Mostly Cloudy

Albuquerque, NM

Albuquerque International Sunport

11:28 AM MDT on August 22, 2019 (GMT -0600)

Weather History for KABQ - August, 2019

August

14

2019

View
Wednesday, August 14, 2019

Daily | Weekly | Monthly | Custom

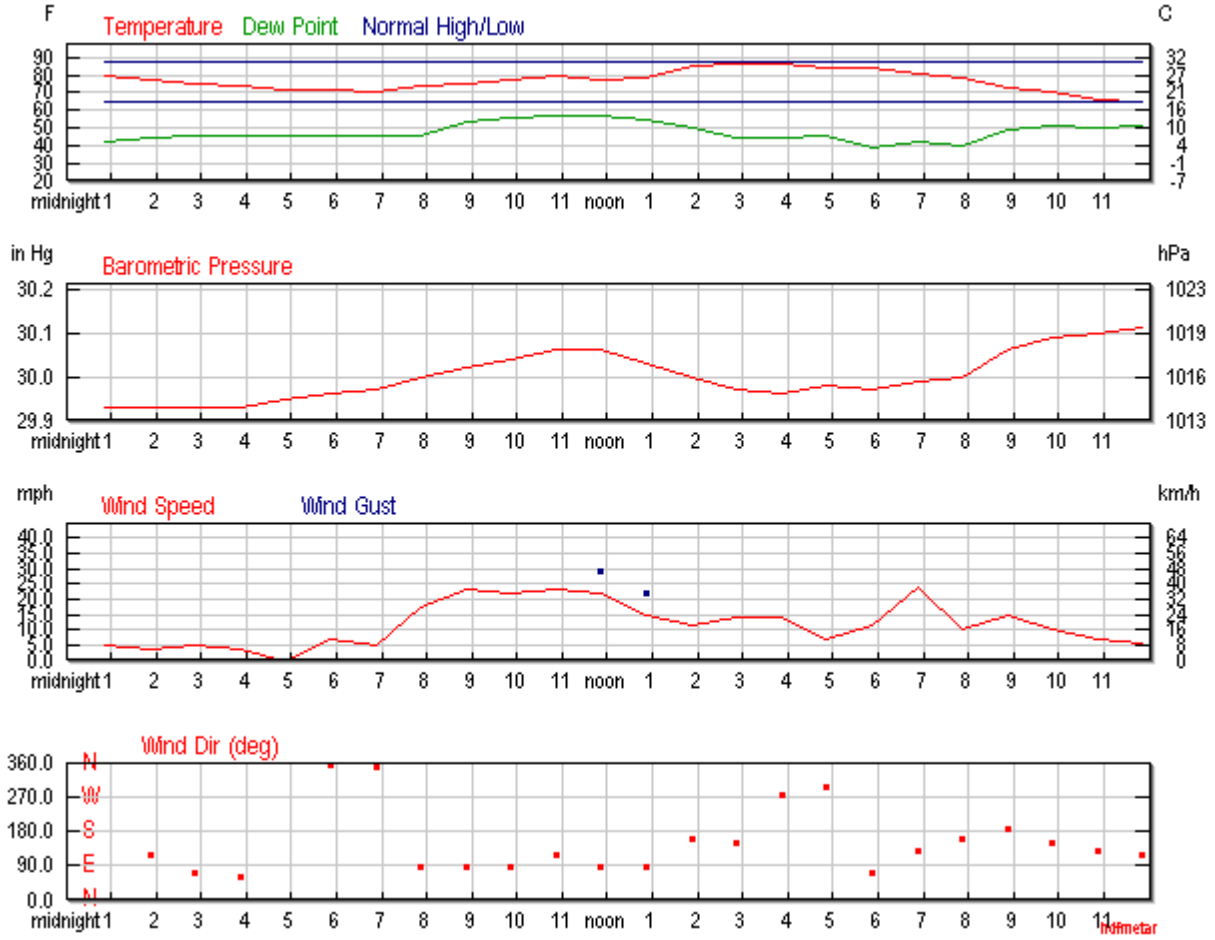
	Actual	Average	Record
Temperature			
Mean Temperature	**77** °F	-	
Max Temperature	**88** °F	-	- ()
Min Temperature	**65** °F	-	- ()
Cooling Degree Days	12		
Month to date cooling degree days	200		
Year to date cooling degree days	1002		
Since 1 June cooling degree days	968		
Growing Degree Days	27 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**49** °F		
Average Humidity	39		
Maximum Humidity	58		
Minimum Humidity	20		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.41		
Year to date precipitation	5.43		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**30.00** in		
Wind			
Wind Speed	**12** mph (ESE)		
Max Wind Speed	**28** mph		
Max Gust Speed	**34** mph		
Visibility	**10** miles		
Events	Rain		

T = Trace of Precipitation, MM = Missing Value

Source: NWS Daily Summary

Daily Weather History Graph



Search for Another Location

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Astronomy

Aug. 14, 2019	**Rise**	**Set**

Aug. 14, 2019	Rise	Set
Actual Time	6:25 AM MDT	7:56 PM MDT
Civil Twilight	5:58 AM MDT	8:23 PM MDT
Nautical Twilight	5:26 AM MDT	8:55 PM MDT
Astronomical Twilight	4:52 AM MDT	9:28 PM MDT
Moon	7:49 PM MDT (8/14)	5:29 AM MDT (8/14)
Length of Visible Light	14h 24m	
Length of Day	13h 30m	

Waxing Gibbous, 99% of the Moon is Illuminated

Aug 14	Aug 15	Aug 23	Aug 30	Sep 5
Waxing Gibbous	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**80.1** °F	-	**43.0** °F	27%	**29.93** in	**10.0** mi	East	**4.6** mph	-	N/A		Scattered Clouds
1:52 AM	**78.1** °F	-	**45.0** °F	31%	**29.93** in	**10.0** mi	ESE	**3.5** mph	-	N/A		Mostly Cloudy
2:52 AM	**75.9** °F	-	**46.0** °F	35%	**29.93** in	**10.0** mi	ENE	**4.6** mph	-	N/A		Scattered Clouds
3:52 AM	**75.0** °F	-	**46.0** °F	36%	**29.93** in	**10.0** mi	ENE	**3.5** mph	-	N/A		Scattered Clouds
4:52 AM	**73.0** °F	-	**46.9** °F	39%	**29.95** in	**10.0** mi	Calm	Calm	-	N/A		Partly Cloudy
5:52 AM	**72.0** °F	-	**46.0** °F	40%	**29.96** in	**10.0** mi	North	**6.9** mph	-	N/A		Partly Cloudy
6:52 AM	**71.1** °F	-	**46.9** °F	42%	**29.97** in	**10.0** mi	North	**4.6** mph	-	N/A		Scattered Clouds
7:52 AM	**75.0** °F	-	**46.9** °F	37%	**30.00** in	**10.0** mi	East	**17.3** mph	-	N/A		Mostly Cloudy

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 AM	**75.9** °F	-	**54.0** °F	46%	**30.02** in	**10.0** mi	East	**23.0** mph	**29.9** mph	**0.00** in	Rain	Light Rain
9:52 AM	**78.1** °F	-	**57.0** °F	48%	**30.04** in	**10.0** mi	East	**21.9** mph	-	**0.00** in		Mostly Cloudy
10:52 AM	**80.1** °F	**80.6** °F	**57.9** °F	47%	**30.06** in	**10.0** mi	ESE	**23.0** mph	**28.8** mph	N/A		Scattered Clouds
11:52 AM	**78.1** °F	-	**57.9** °F	50%	**30.06** in	**10.0** mi	East	**21.9** mph	**28.8** mph	N/A		Scattered Clouds
12:52 PM	**79.0** °F	-	**55.0** °F	44%	**30.03** in	**10.0** mi	East	**15.0** mph	**21.9** mph	N/A		Scattered Clouds
1:52 PM	**86.0** °F	-	**51.1** °F	30%	**30.00** in	**10.0** mi	SSE	**11.5** mph	-	N/A		Scattered Clouds
2:52 PM	**87.1** °F	-	**45.0** °F	23%	**29.97** in	**10.0** mi	SSE	**13.8** mph	-	N/A		Mostly Cloudy
3:52 PM	**87.1** °F	-	**45.0** °F	23%	**29.96** in	**10.0** mi	West	**13.8** mph	**17.3** mph	N/A		Mostly Cloudy
4:52 PM	**84.9** °F	-	**46.9** °F	27%	**29.98** in	**10.0** mi	WNW	**6.9** mph	-	N/A		Mostly Cloudy
5:52 PM	**84.9** °F	-	**39.9** °F	20%	**29.97** in	**10.0** mi	ENE	**11.5** mph	-	N/A		Mostly Cloudy
6:52 PM	**82.0** °F	-	**43.0** °F	25%	**29.99** in	**10.0** mi	SE	**24.2** mph	**34.5** mph	N/A		Mostly Cloudy
7:52 PM	**79.0** °F	-	**41.0** °F	26%	**30.00** in	**10.0** mi	SSE	**10.4** mph	-	N/A		Scattered Clouds
8:52 PM	**73.9** °F	-	**50.0** °F	43%	**30.06** in	**10.0** mi	South	**15.0** mph	-	N/A		Partly Cloudy
9:52 PM	**71.1** °F	-	**52.0** °F	51%	**30.09** in	**10.0** mi	SSE	**10.4** mph	-	N/A		Partly Cloudy
10:52 PM	**66.9** °F	-	**51.1** °F	57%	**30.10** in	**10.0** mi	SE	**6.9** mph	-	N/A		Partly Cloudy
11:52 PM	**66.0** °F	-	**52.0** °F	60%	**30.11** in	**10.0** mi	ESE	**5.8** mph	-	N/A		Partly Cloudy

Albuquerque, NM

Albuquerque International Sunport

11:29 AM MDT on August 22, 2019 (GMT -0600)

Weather History for KABQ - August, 2019

August

20

2019

View
Tuesday, August 20, 2019

Daily | Weekly | Monthly | Custom

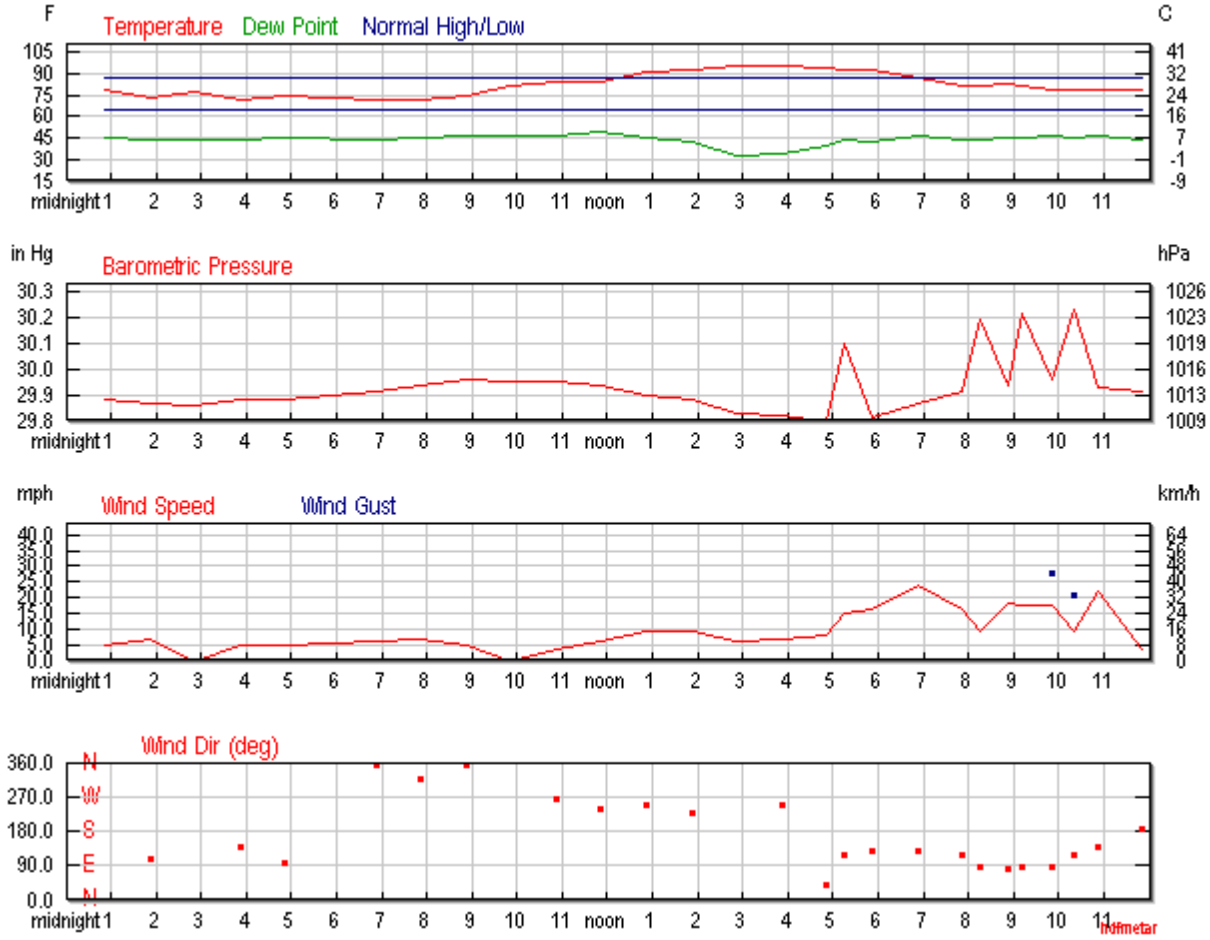
	Actual	Average	Record
Temperature			
Mean Temperature	**84** °F	-	
Max Temperature	**97** °F	-	- ()
Min Temperature	**70** °F	-	- ()
Cooling Degree Days	18		
Month to date cooling degree days	288		
Year to date cooling degree days	1090		
Since 1 June cooling degree days	1056		
Growing Degree Days	34 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**44** °F		
Average Humidity	27		
Maximum Humidity	41		
Minimum Humidity	11		
Precipitation			
Precipitation	**0.00** in	-	- ()
Month to date precipitation	0.41		
Year to date precipitation	5.43		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.94** in		
Wind			
Wind Speed	**7** mph ()		
Max Wind Speed	**29** mph		
Max Gust Speed	**36** mph		
Visibility	**10.0** miles		
Events	Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: Averaged Metar Reports

Daily Weather History Graph



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Airport or City:

KABQ

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Astronomy

Aug. 20, 2019	**Rise**	**Set**

Aug. 20, 2019	Rise	Set
Actual Time	6:30 AM MDT	7:49 PM MDT
Civil Twilight	6:03 AM MDT	8:15 PM MDT
Nautical Twilight	5:31 AM MDT	8:47 PM MDT
Astronomical Twilight	4:58 AM MDT	9:19 PM MDT
Moon	10:50 PM MDT (8/20)	11:00 AM MDT (8/20)
Length of Visible Light	14h 11m	
Length of Day	13h 18m	

Waning Gibbous, 77% of the Moon is Illuminated

Aug 20	Aug 23	Aug 30	Sep 5	Sep 13
Waning Gibbous	Last Quarter	New	First Quarter	Full

Hourly Weather History & Observations

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**78.1** °F	**45.0** °F	31%	**29.88** in	**10.0** mi	South	**4.6** mph	-	N/A		Scattered Clouds
1:52 AM	**73.0** °F	**44.1** °F	35%	**29.87** in	**10.0** mi	ESE	**6.9** mph	-	N/A		Partly Cloudy
2:52 AM	**77.0** °F	**44.1** °F	31%	**29.86** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
3:52 AM	**72.0** °F	**44.1** °F	37%	**29.88** in	**10.0** mi	SE	**4.6** mph	-	N/A		Partly Cloudy
4:52 AM	**73.9** °F	**45.0** °F	35%	**29.88** in	**10.0** mi	East	**4.6** mph	-	N/A		Partly Cloudy
6:52 AM	**71.1** °F	**44.1** °F	38%	**29.91** in	**10.0** mi	North	**5.8** mph	-	N/A		Partly Cloudy
7:52 AM	**71.1** °F	**45.0** °F	39%	**29.94** in	**10.0** mi	NW	**6.9** mph	-	N/A		Mostly Cloudy
8:52 AM	**73.9** °F	**46.0** °F	37%	**29.96** in	**10.0** mi	North	**4.6** mph	-	N/A		Mostly Cloudy

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
9:52 AM	**81.0** °F	**46.0** °F	29%	**29.95** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
10:52 AM	**84.0** °F	**46.9** °F	27%	**29.95** in	**10.0** mi	West	**3.5** mph	-	N/A		Mostly Cloudy
11:52 AM	**84.0** °F	**48.9** °F	29%	**29.94** in	**10.0** mi	WSW	**5.8** mph	-	N/A		Mostly Cloudy
12:52 PM	**91.0** °F	**45.0** °F	20%	**29.90** in	**10.0** mi	WSW	**9.2** mph	-	N/A		Partly Cloudy
1:52 PM	**93.0** °F	**42.1** °F	17%	**29.88** in	**10.0** mi	SW	**9.2** mph	-	N/A		Partly Cloudy
2:52 PM	**95.0** °F	**33.1** °F	11%	**29.83** in	**10.0** mi	Variable	**5.8** mph	-	N/A		Partly Cloudy
3:52 PM	**95.0** °F	**34.0** °F	12%	**29.82** in	**10.0** mi	WSW	**6.9** mph	-	N/A		Partly Cloudy
4:52 PM	**93.9** °F	**39.9** °F	15%	**29.80** in	**10.0** mi	NE	**8.1** mph	**19.6** mph	N/A		Scattered Clouds
5:16 PM	**93.0** °F	**44.1** °F	18%	**30.10** in	**10.0** mi	ESE	**15.0** mph	-	N/A		Scattered Clouds
5:52 PM	**91.9** °F	**43.0** °F	18%	**29.81** in	**10.0** mi	SE	**16.1** mph	-	N/A		Scattered Clouds
6:52 PM	**87.1** °F	**46.0** °F	24%	**29.87** in	**10.0** mi	SE	**24.2** mph	**33.4** mph	N/A		Scattered Clouds
7:52 PM	**82.0** °F	**44.1** °F	26%	**29.91** in	**10.0** mi	ESE	**16.1** mph	-	N/A		Scattered Clouds
8:16 PM	**81.0** °F	**44.1** °F	27%	**30.19** in	**10.0** mi	East	**9.2** mph	-	N/A	Thunderstorm	Scattered Clouds
8:52 PM	**82.9** °F	**45.0** °F	26%	**29.94** in	**10.0** mi	East	**18.4** mph	-	N/A		Scattered Clouds
9:12 PM	**82.0** °F	**45.0** °F	27%	**30.22** in	**10.0** mi	East	**17.3** mph	**25.3** mph	N/A	Thunderstorm	Scattered Clouds
9:52 PM	**78.1** °F	**46.9** °F	33%	**29.96** in	**10.0** mi	East	**17.3** mph	**27.6** mph	N/A	Thunderstorm	Mostly Cloudy
10:20 PM	**79.0** °F	**45.0** °F	30%	**30.23** in	**10.0** mi	ESE	**9.2** mph	**20.7** mph	N/A		Mostly Cloudy
10:52 PM	**78.1** °F	**46.0** °F	32%	**29.93** in	**10.0** mi	SE	**21.9** mph	-	N/A		Mostly Cloudy
11:52 PM	**78.1** °F	**44.1** °F	30%	**29.91** in	**10.0** mi	South	**3.5** mph	-	N/A		Scattered Clouds

Albuquerque, NM

Albuquerque International Sunport

11:30 AM MDT on August 22, 2019 (GMT -0600)

Weather History for KABQ - August, 2019

August

21

2019

View
Wednesday, August 21, 2019

Daily | Weekly | Monthly | Custom

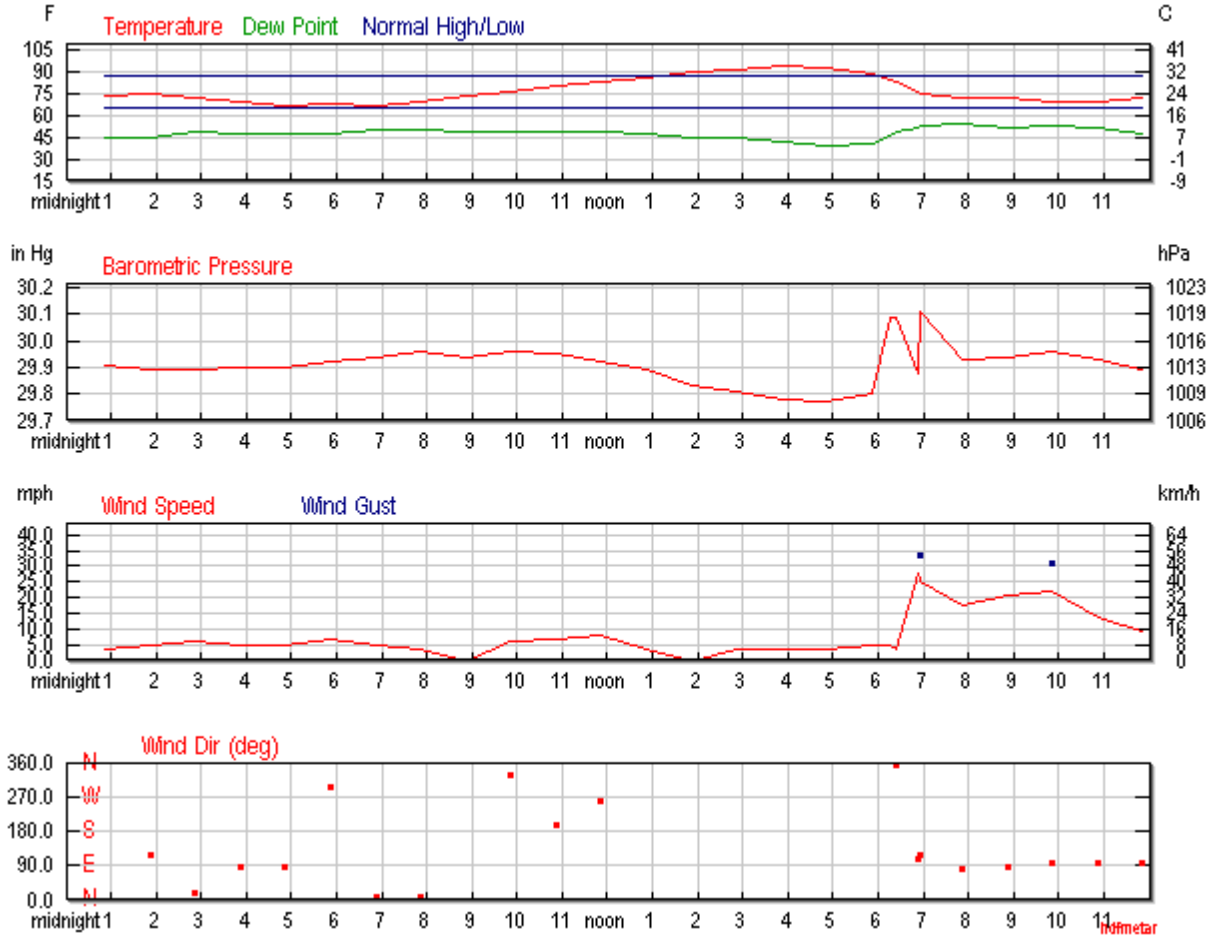
	Actual	Average	Record
Temperature			
Mean Temperature	**80** °F	-	
Max Temperature	**95** °F	-	- ()
Min Temperature	**66** °F	-	- ()
Cooling Degree Days	16		
Month to date cooling degree days	304		
Year to date cooling degree days	1106		
Since 1 June cooling degree days	1072		
Growing Degree Days	30 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**48** °F		
Average Humidity	38		
Maximum Humidity	57		
Minimum Humidity	15		
Precipitation			
Precipitation	**T** in	-	- ()
Month to date precipitation	0.41		
Year to date precipitation	5.43		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.92** in		
Wind			
Wind Speed	**6** mph ()		
Max Wind Speed	**33** mph		
Max Gust Speed	**41** mph		
Visibility	**10.0** miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: Averaged Metar Reports

Daily Weather History Graph



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Airport or City:

KABQ

Submit

Astronomy

Aug. 21, 2019	**Rise**	**Set**

Aug. 21, 2019	Rise	Set
Actual Time	6:30 AM MDT	7:47 PM MDT
Civil Twilight	6:04 AM MDT	8:14 PM MDT
Nautical Twilight	5:32 AM MDT	8:45 PM MDT
Astronomical Twilight	4:59 AM MDT	9:18 PM MDT
Moon	11:20 PM MDT (8/21)	11:56 AM MDT (8/21)
Length of Visible Light	14h 09m	
Length of Day	13h 16m	

Waning Gibbous, 68% of the Moon is Illuminated

Aug 21	Aug 23	Aug 30	Sep 5	Sep 13
Waning Gibbous	Last Quarter	New	First Quarter	Full

Hourly Weather History & Observations

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**73.9** °F	**45.0** °F	35%	**29.91** in	**10.0** mi	East	**3.5** mph	-	N/A		Scattered Clouds
1:52 AM	**75.0** °F	**45.0** °F	34%	**29.89** in	**10.0** mi	ESE	**4.6** mph	-	N/A		Partly Cloudy
2:52 AM	**72.0** °F	**48.9** °F	44%	**29.89** in	**10.0** mi	NNE	**5.8** mph	-	N/A		Partly Cloudy
3:52 AM	**69.1** °F	**46.9** °F	45%	**29.90** in	**10.0** mi	East	**4.6** mph	-	N/A		Partly Cloudy
4:52 AM	**66.9** °F	**48.0** °F	51%	**29.90** in	**10.0** mi	East	**4.6** mph	-	N/A		Partly Cloudy
5:52 AM	**68.0** °F	**48.0** °F	49%	**29.92** in	**10.0** mi	WNW	**6.9** mph	-	N/A		Partly Cloudy
6:52 AM	**66.9** °F	**50.0** °F	54%	**29.94** in	**10.0** mi	North	**4.6** mph	-	N/A		Partly Cloudy
7:52 AM	**69.1** °F	**50.0** °F	51%	**29.96** in	**10.0** mi	North	**3.5** mph	-	N/A		Partly Cloudy

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 AM	**73.9** °F	**48.9** °F	41%	**29.94** in	**10.0** mi	Calm	Calm	-	N/A		Partly Cloudy
9:52 AM	**75.9** °F	**48.9** °F	38%	**29.96** in	**10.0** mi	NNW	**5.8** mph	-	N/A		Scattered Clouds
10:52 AM	**80.1** °F	**48.9** °F	34%	**29.95** in	**10.0** mi	SSW	**6.9** mph	-	N/A		Mostly Cloudy
11:52 AM	**82.9** °F	**48.9** °F	31%	**29.92** in	**10.0** mi	West	**8.1** mph	-	N/A		Partly Cloudy
12:52 PM	**86.0** °F	**46.9** °F	26%	**29.89** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Partly Cloudy
1:52 PM	**90.0** °F	**45.0** °F	21%	**29.83** in	**10.0** mi	Calm	Calm	-	N/A		Partly Cloudy
2:52 PM	**91.0** °F	**45.0** °F	20%	**29.81** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Partly Cloudy
3:52 PM	**93.9** °F	**42.1** °F	17%	**29.78** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Scattered Clouds
4:52 PM	**93.0** °F	**39.0** °F	15%	**29.77** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Mostly Cloudy
5:52 PM	**89.1** °F	**41.0** °F	19%	**29.80** in	**10.0** mi	Variable	**4.6** mph	**18.4** mph	N/A		Mostly Cloudy
6:16 PM	**84.9** °F	**46.0** °F	26%	**30.09** in	**10.0** mi	Variable	**4.6** mph	-	**0.00** in		Mostly Cloudy
6:25 PM	**84.0** °F	**48.9** °F	29%	**30.09** in	**10.0** mi	North	**3.5** mph	-	**0.00** in	Rain , Thunderstorm	Light Rain
6:52 PM	**77.0** °F	**52.0** °F	42%	**29.88** in	**10.0** mi	ESE	**27.6** mph	**33.4** mph	**0.00** in	Thunderstorm	Mostly Cloudy
6:57 PM	**75.0** °F	**53.1** °F	46%	**30.11** in	**10.0** mi	ESE	**25.3** mph	**33.4** mph	**0.00** in	Rain	Light Rain
7:52 PM	**72.0** °F	**55.0** °F	55%	**29.93** in	**10.0** mi	East	**17.3** mph	-	**0.00** in		Mostly Cloudy
8:52 PM	**72.0** °F	**52.0** °F	49%	**29.94** in	**10.0** mi	East	**20.7** mph	**28.8** mph	N/A		Mostly Cloudy
9:52 PM	**69.1** °F	**53.1** °F	57%	**29.96** in	**10.0** mi	East	**21.9** mph	**31.1** mph	N/A		Partly Cloudy
10:52 PM	**69.1** °F	**52.0** °F	54%	**29.93** in	**10.0** mi	East	**13.8** mph	-	N/A		Partly Cloudy
11:52 PM	**72.0** °F	**48.0** °F	43%	**29.89** in	**10.0** mi	East	**9.2** mph	-	N/A		Scattered Clouds

Albuquerque, NM

Albuquerque International Sunport

12:37 PM MDT on September 05, 2019 (GMT -0600)

Weather History for KABQ - August, 2019

August

22

2019

View
Thursday, August 22, 2019

Daily | Weekly | Monthly | Custom

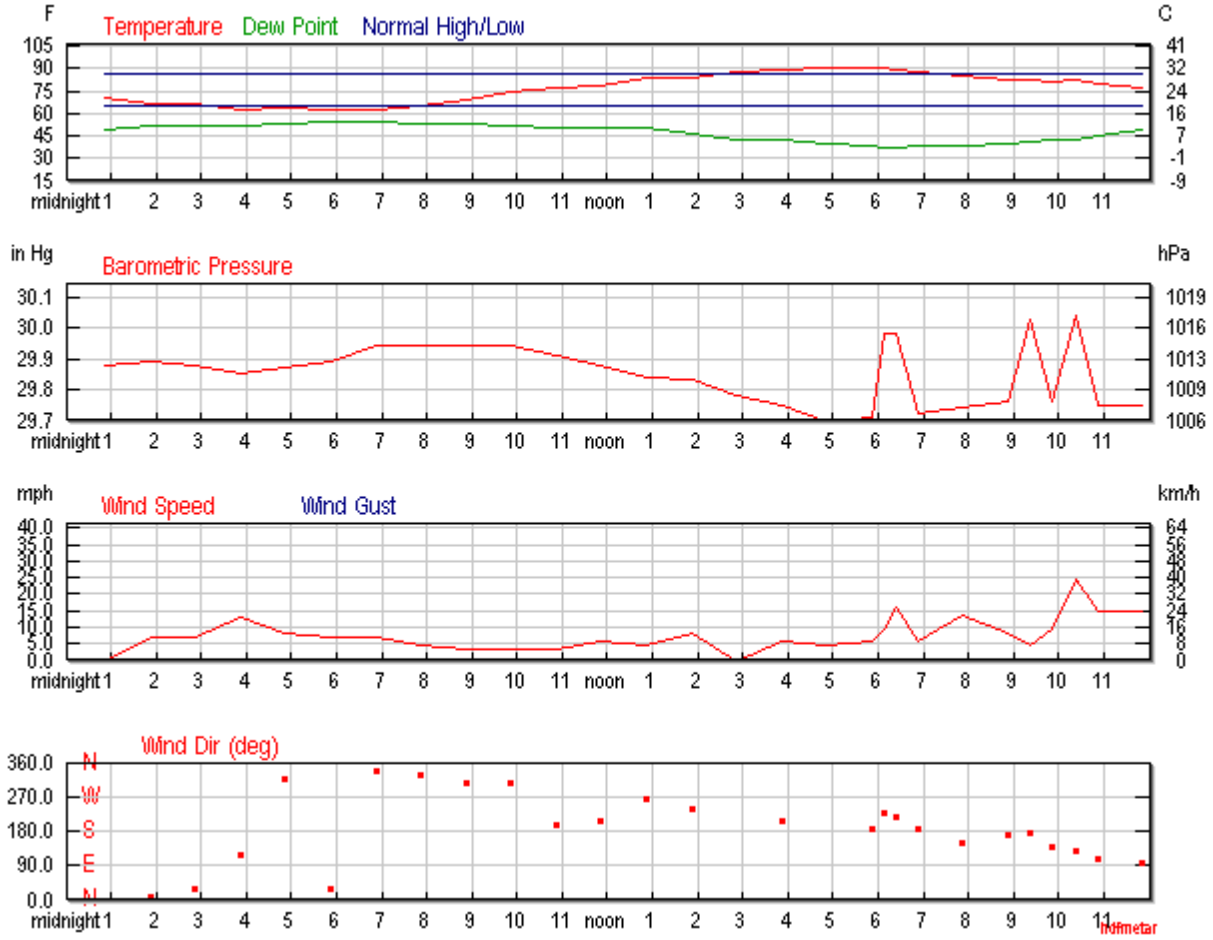
	Actual	Average	Record
Temperature			
Mean Temperature	**77** °F	-	
Max Temperature	**91** °F	-	- ()
Min Temperature	**62** °F	-	- ()
Cooling Degree Days	12		
Month to date cooling degree days	316		
Year to date cooling degree days	1118		
Since 1 June cooling degree days	1084		
Growing Degree Days	27 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**46** °F		
Average Humidity	38		
Maximum Humidity	75		
Minimum Humidity	15		
Precipitation			
Precipitation	**0.00** in	-	- ()
Month to date precipitation	0.41		
Year to date precipitation	5.43		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.85** in		
Wind			
Wind Speed	**6** mph ()		
Max Wind Speed	**24** mph		
Max Gust Speed	**31** mph		
Visibility	**10.0** miles		
Events	Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: Averaged Metar Reports

Daily Weather History Graph



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Airport or City:

KABQ

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Astronomy

Aug. 22, 2019	**Rise**	**Set**

Aug. 22, 2019	Rise	Set
Actual Time	6:31 AM MDT	7:46 PM MDT
Civil Twilight	6:05 AM MDT	8:12 PM MDT
Nautical Twilight	5:33 AM MDT	8:44 PM MDT
Astronomical Twilight	5:00 AM MDT	9:16 PM MDT
Moon	11:54 PM MDT (8/22)	12:54 PM MDT (8/22)
Length of Visible Light	14h 07m	
Length of Day	13h 14m	

Waning Gibbous, 59% of the Moon is Illuminated

Aug 22	Aug 23	Aug 30	Sep 5	Sep 13
Waning Gibbous	Last Quarter	New	First Quarter	Full

Hourly Weather History & Observations

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**71.1** °F	**48.9** °F	45%	**29.88** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
1:52 AM	**66.9** °F	**52.0** °F	59%	**29.89** in	**10.0** mi	North	**6.9** mph	-	N/A		Scattered Clouds
2:52 AM	**66.9** °F	**52.0** °F	59%	**29.88** in	**10.0** mi	NNE	**6.9** mph	-	N/A		Scattered Clouds
3:52 AM	**63.0** °F	**52.0** °F	67%	**29.85** in	**10.0** mi	ESE	**12.7** mph	-	N/A		Partly Cloudy
4:52 AM	**64.0** °F	**53.1** °F	67%	**29.87** in	**10.0** mi	NW	**8.1** mph	-	N/A		Clear
5:52 AM	**62.1** °F	**54.0** °F	75%	**29.89** in	**10.0** mi	NNE	**6.9** mph	-	N/A		Clear
6:52 AM	**62.1** °F	**54.0** °F	75%	**29.94** in	**10.0** mi	NNW	**6.9** mph	-	N/A		Partly Cloudy
7:52 AM	**64.9** °F	**53.1** °F	65%	**29.94** in	**10.0** mi	NNW	**4.6** mph	-	N/A		Partly Cloudy

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 AM	**69.1** °F	**53.1** °F	57%	**29.94** in	**10.0** mi	NW	**3.5** mph	-	N/A		Partly Cloudy
9:52 AM	**73.9** °F	**52.0** °F	46%	**29.94** in	**10.0** mi	NW	**3.5** mph	-	N/A		Partly Cloudy
10:52 AM	**77.0** °F	**51.1** °F	40%	**29.91** in	**10.0** mi	SSW	**3.5** mph	-	N/A		Partly Cloudy
11:52 AM	**79.0** °F	**51.1** °F	38%	**29.88** in	**10.0** mi	SSW	**5.8** mph	-	N/A		Partly Cloudy
12:52 PM	**84.2** °F	**50.0** °F	30%	**29.84** in	**10.0** mi	West	**4.6** mph	-	N/A		Scattered Clouds
1:52 PM	**84.2** °F	**46.4** °F	27%	**29.83** in	**10.0** mi	WSW	**8.1** mph	**18.4** mph	N/A		Scattered Clouds
2:52 PM	**87.8** °F	**42.8** °F	21%	**29.78** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
3:52 PM	**89.1** °F	**43.0** °F	20%	**29.75** in	**10.0** mi	SSW	**5.8** mph	-	N/A		Scattered Clouds
4:52 PM	**91.0** °F	**39.9** °F	17%	**29.70** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Scattered Clouds
5:52 PM	**90.0** °F	**37.9** °F	16%	**29.71** in	**10.0** mi	South	**5.8** mph	-	N/A		Mostly Cloudy
6:07 PM	**90.0** °F	**37.0** °F	15%	**29.98** in	**10.0** mi	SW	**9.2** mph	-	N/A	Thunderstorm	Mostly Cloudy
6:24 PM	**89.1** °F	**37.0** °F	16%	**29.98** in	**10.0** mi	SW	**16.1** mph	**31.1** mph	N/A	Thunderstorm	Thunderstorm
6:52 PM	**88.0** °F	**37.9** °F	17%	**29.72** in	**10.0** mi	South	**5.8** mph	-	N/A	Thunderstorm	Mostly Cloudy
7:52 PM	**84.9** °F	**39.0** °F	20%	**29.74** in	**10.0** mi	SSE	**13.8** mph	-	N/A		Mostly Cloudy
8:52 PM	**82.0** °F	**39.9** °F	22%	**29.76** in	**10.0** mi	South	**8.1** mph	-	N/A		Mostly Cloudy
9:23 PM	**82.0** °F	**41.0** °F	23%	**30.03** in	**10.0** mi	South	**4.6** mph	-	N/A	Thunderstorm	Mostly Cloudy
9:52 PM	**81.0** °F	**42.1** °F	25%	**29.76** in	**10.0** mi	SE	**9.2** mph	-	N/A	Thunderstorm	Mostly Cloudy
10:23 PM	**82.0** °F	**42.1** °F	24%	**30.04** in	**10.0** mi	SE	**24.2** mph	**29.9** mph	N/A		Mostly Cloudy
10:52 PM	**80.1** °F	**45.0** °F	29%	**29.75** in	**10.0** mi	ESE	**15.0** mph	-	N/A		Mostly Cloudy
11:52 PM	**77.0** °F	**48.9** °F	37%	**29.75** in	**10.0** mi	East	**15.0** mph	-	N/A		Scattered Clouds

Albuquerque, NM

Albuquerque International Sunport

12:38 PM MDT on September 05, 2019 (GMT -0600)

Weather History for KABQ - August, 2019

August

23

2019

View
Friday, August 23, 2019

Daily | Weekly | Monthly | Custom

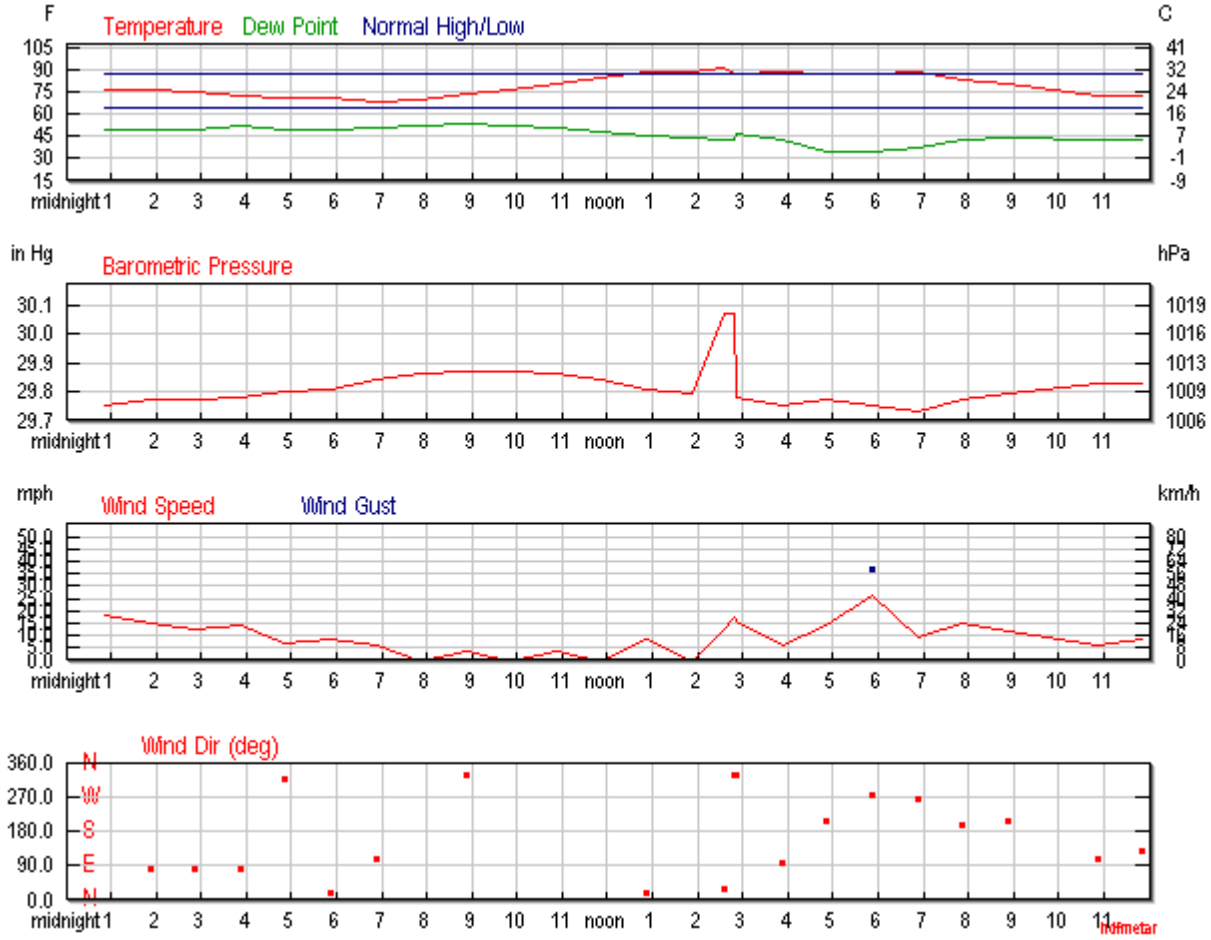
	Actual	Average	Record
Temperature			
Mean Temperature	**80** °F	-	
Max Temperature	**91** °F	-	- ()
Min Temperature	**67** °F	-	- ()
Cooling Degree Days	14		
Month to date cooling degree days	331		
Year to date cooling degree days	1133		
Since 1 June cooling degree days	1099		
Growing Degree Days	30 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**46** °F		
Average Humidity	33		
Maximum Humidity	55		
Minimum Humidity	15		
Precipitation			
Precipitation	**0.02** in	-	- ()
Month to date precipitation	0.43		
Year to date precipitation	5.45		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.82** in		
Wind			
Wind Speed	**9** mph ()		
Max Wind Speed	**32** mph		
Max Gust Speed	**45** mph		
Visibility	**10.0** miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: Averaged Metar Reports

Daily Weather History Graph



Search for Another Location

Airport or City:

KABQ

Submit

Astronomy

Aug. 23, 2019	**Rise**	**Set**

Aug. 23, 2019	Rise	Set
Actual Time	6:32 AM MDT	7:45 PM MDT
Civil Twilight	6:05 AM MDT	8:11 PM MDT
Nautical Twilight	5:34 AM MDT	8:42 PM MDT
Astronomical Twilight	5:01 AM MDT	9:15 PM MDT
Moon	No Moon Rise	1:54 PM MDT (8/23)
Length of Visible Light	14h 05m	
Length of Day	13h 12m	

Waning Gibbous, 49% of the Moon is Illuminated

Aug 23	Aug 30	Sep 5	Sep 13	Sep 21
Waning Gibbous	New	First Quarter	Full	Last Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**77.0** °F	**50.0** °F	39%	**29.75** in	**10.0** mi	East	**18.4** mph	-	N/A		Mostly Cloudy
1:52 AM	**75.9** °F	**50.0** °F	40%	**29.77** in	**10.0** mi	East	**15.0** mph	-	N/A		Mostly Cloudy
2:52 AM	**75.0** °F	**50.0** °F	41%	**29.77** in	**10.0** mi	East	**12.7** mph	-	N/A		Mostly Cloudy
3:52 AM	**73.0** °F	**52.0** °F	48%	**29.78** in	**10.0** mi	East	**13.8** mph	-	N/A		Scattered Clouds
4:52 AM	**71.1** °F	**48.9** °F	45%	**29.80** in	**10.0** mi	NW	**6.9** mph	-	N/A		Mostly Cloudy
5:52 AM	**71.1** °F	**50.0** °F	47%	**29.81** in	**10.0** mi	NNE	**8.1** mph	-	N/A		Mostly Cloudy
6:52 AM	**68.0** °F	**51.1** °F	55%	**29.84** in	**10.0** mi	ESE	**5.8** mph	-	N/A		Mostly Cloudy
7:52 AM	**70.0** °F	**52.0** °F	53%	**29.86** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 AM	**73.9** °F	**53.1** °F	48%	**29.87** in	**10.0** mi	NNW	**3.5** mph	-	N/A		Partly Cloudy
9:52 AM	**77.0** °F	**52.0** °F	42%	**29.87** in	**10.0** mi	Calm	Calm	-	N/A		Partly Cloudy
10:52 AM	**80.1** °F	**51.1** °F	36%	**29.86** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Partly Cloudy
11:52 AM	**84.0** °F	**48.0** °F	28%	**29.84** in	**10.0** mi	Calm	Calm	-	N/A		Partly Cloudy
12:52 PM	**88.0** °F	**46.0** °F	23%	**29.81** in	**10.0** mi	NNE	**8.1** mph	-	N/A		Partly Cloudy
1:52 PM	**89.1** °F	**44.1** °F	21%	**29.79** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
2:35 PM	**91.9** °F	**42.1** °F	18%	**30.07** in	**10.0** mi	NNE	**12.7** mph	**16.1** mph	N/A	Thunderstorm	Mostly Cloudy
2:50 PM	**87.8** °F	**42.8** °F	21%	**30.07** in	**10.0** mi	NNW	**17.3** mph	-	N/A		Mostly Cloudy
2:52 PM	**87.1** °F	**46.9** °F	25%	**29.78** in	**9.0** mi	NNW	**16.1** mph	**20.7** mph	**0.00** in	Rain	Light Rain
3:52 PM	**89.1** °F	**43.0** °F	20%	**29.75** in	**10.0** mi	East	**5.8** mph	-	**0.02** in		Mostly Cloudy
4:52 PM	**87.1** °F	**34.0** °F	15%	**29.77** in	**10.0** mi	SSW	**13.8** mph	**44.9** mph	N/A		Mostly Cloudy
5:52 PM	**87.1** °F	**34.0** °F	15%	**29.75** in	**10.0** mi	West	**26.5** mph	**36.8** mph	N/A		Mostly Cloudy
6:52 PM	**89.1** °F	**37.9** °F	16%	**29.73** in	**10.0** mi	West	**9.2** mph	-	N/A		Scattered Clouds
7:52 PM	**82.9** °F	**43.0** °F	24%	**29.77** in	**10.0** mi	SSW	**15.0** mph	-	N/A		Scattered Clouds
8:52 PM	**81.0** °F	**44.1** °F	27%	**29.79** in	**10.0** mi	SSW	**11.5** mph	-	N/A		Scattered Clouds
10:52 PM	**73.0** °F	**43.0** °F	34%	**29.83** in	**10.0** mi	ESE	**5.8** mph	-	N/A		Partly Cloudy
11:52 PM	**72.0** °F	**43.0** °F	35%	**29.83** in	**10.0** mi	SE	**8.1** mph	-	N/A		Scattered Clouds

Albuquerque, NM

Albuquerque International Sunport

12:38 PM MDT on September 05, 2019 (GMT -0600)

Weather History for KABQ - August, 2019

August

27

2019

View
Tuesday, August 27, 2019

Daily | Weekly | Monthly | Custom

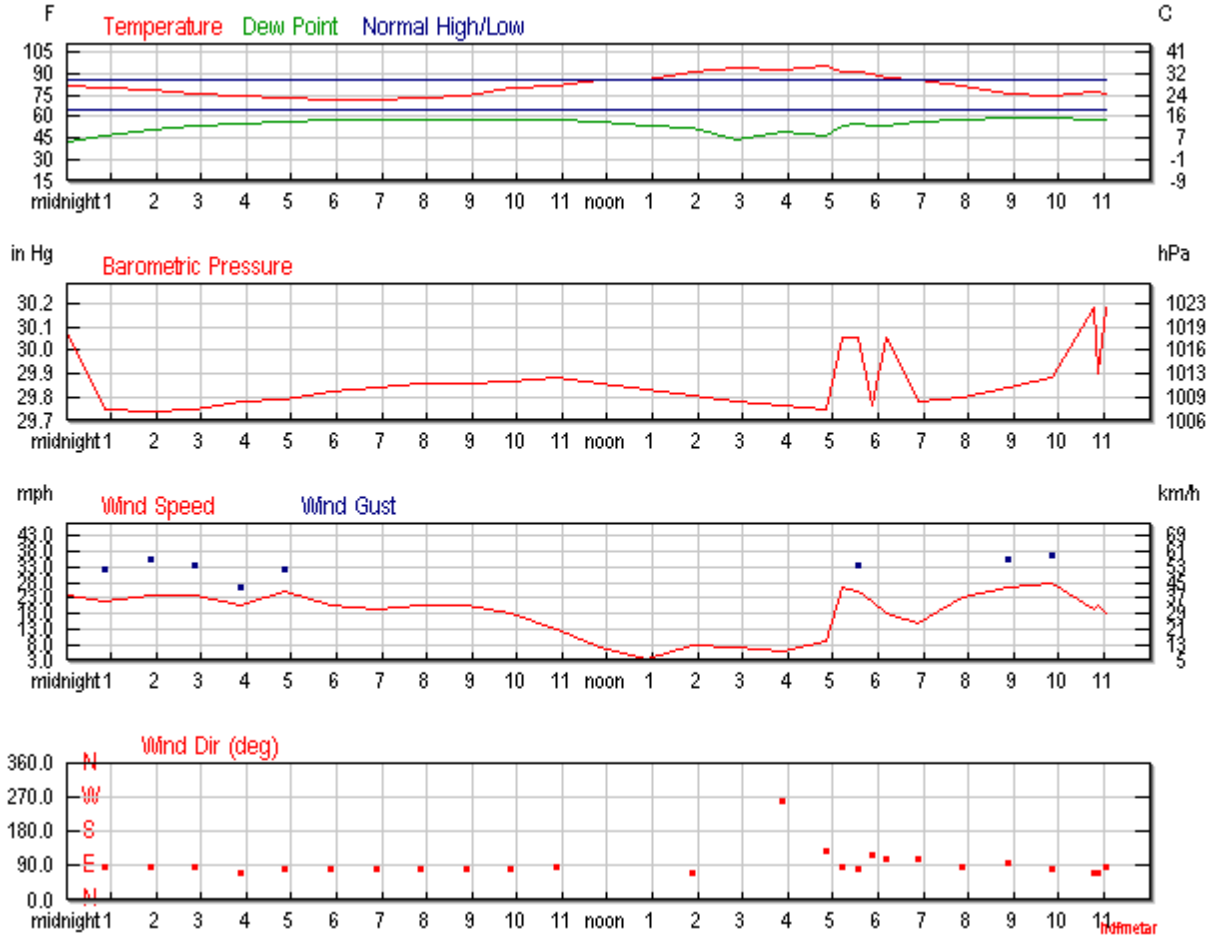
	Actual	Average	Record
Temperature			
Mean Temperature	**83** °F	-	
Max Temperature	**95** °F	-	- ()
Min Temperature	**71** °F	-	- ()
Cooling Degree Days	18		
Month to date cooling degree days	395		
Year to date cooling degree days	1197		
Since 1 June cooling degree days	1163		
Growing Degree Days	33 (Base 50)		
Moisture			

	Actual	Average	Record
Dew Point	**54** °F		
Average Humidity	41		
Maximum Humidity	61		
Minimum Humidity	18		
Precipitation			
Precipitation	**T** in	-	- ()
Month to date precipitation	0.43		
Year to date precipitation	5.45		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Since 1 June snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.87** in		
Wind			
Wind Speed	**18** mph ()		
Max Wind Speed	**30** mph		
Max Gust Speed	**39** mph		
Visibility	**9.9** miles		
Events	Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: Averaged Metar Reports

Daily Weather History Graph



Search for Another Location

Airport or City:

KABQ

Submit

Astronomy

Aug. 27, 2019	**Rise**	**Set**

Aug. 27, 2019	Rise	Set
Actual Time	6:35 AM MDT	7:40 PM MDT
Civil Twilight	6:09 AM MDT	8:06 PM MDT
Nautical Twilight	5:38 AM MDT	8:37 PM MDT
Astronomical Twilight	5:05 AM MDT	9:09 PM MDT
Moon	3:11 AM MDT (8/27)	5:55 PM MDT (8/27)
Length of Visible Light	13h 56m	
Length of Day	13h 04m	

Waning Crescent, 10% of the Moon is Illuminated

Aug 27	Aug 30	Sep 5	Sep 13	Sep 21
Waning Crescent	New	First Quarter	Full	Last Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:05 AM	**82.0** °F	-	**42.1** °F	24%	**30.06** in	**8.0** mi	East	**24.2** mph	**32.2** mph	N/A		Scattered Clouds
12:52 AM	**80.1** °F	-	**46.9** °F	31%	**29.75** in	**10.0** mi	East	**21.9** mph	**32.2** mph	N/A		Partly Cloudy
1:52 AM	**78.1** °F	-	**51.1** °F	39%	**29.74** in	**10.0** mi	East	**24.2** mph	**35.7** mph	N/A		Partly Cloudy
2:52 AM	**75.9** °F	-	**54.0** °F	46%	**29.75** in	**10.0** mi	East	**24.2** mph	**33.4** mph	N/A		Partly Cloudy
3:52 AM	**75.0** °F	-	**55.0** °F	50%	**29.78** in	**10.0** mi	ENE	**20.7** mph	**26.5** mph	N/A		Scattered Clouds
4:52 AM	**73.0** °F	-	**55.9** °F	55%	**29.79** in	**10.0** mi	East	**25.3** mph	**32.2** mph	N/A		Mostly Cloudy
5:52 AM	**72.0** °F	-	**57.0** °F	59%	**29.82** in	**10.0** mi	East	**20.7** mph	-	N/A		Scattered Clouds

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
6:52 AM	**71.1** °F	-	**57.0** °F	61%	**29.84** in	**10.0** mi	East	**19.6** mph	-	N/A		Scattered Clouds
7:52 AM	**73.0** °F	-	**57.0** °F	57%	**29.86** in	**10.0** mi	East	**20.7** mph	-	N/A		Scattered Clouds
8:52 AM	**75.0** °F	-	**57.0** °F	53%	**29.86** in	**10.0** mi	East	**20.7** mph	-	N/A		Scattered Clouds
9:52 AM	**80.1** °F	**80.4** °F	**57.0** °F	45%	**29.87** in	**10.0** mi	East	**18.4** mph	-	N/A		Partly Cloudy
10:52 AM	**82.0** °F	**81.7** °F	**57.0** °F	42%	**29.88** in	**10.0** mi	East	**12.7** mph	-	N/A		Partly Cloudy
11:52 AM	**84.9** °F	**83.7** °F	**55.9** °F	37%	**29.86** in	**10.0** mi	Variable	**6.9** mph	-	N/A		Partly Cloudy
12:52 PM	**86.0** °F	**84.2** °F	**54.0** °F	33%	**29.83** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Partly Cloudy
1:52 PM	**91.0** °F	-	**52.0** °F	26%	**29.81** in	**10.0** mi	ENE	**8.1** mph	-	N/A		Scattered Clouds
2:52 PM	**93.9** °F	-	**44.1** °F	18%	**29.78** in	**10.0** mi	Variable	**6.9** mph	-	N/A		Scattered Clouds
3:52 PM	**93.0** °F	-	**48.9** °F	22%	**29.76** in	**10.0** mi	West	**5.8** mph	-	N/A		Scattered Clouds
4:52 PM	**95.0** °F	-	**46.9** °F	19%	**29.75** in	**10.0** mi	SE	**9.2** mph	-	N/A	Thunderstorm	Scattered Clouds
5:13 PM	**91.0** °F	**88.7** °F	**54.0** °F	28%	**30.05** in	**9.0** mi	East	**26.5** mph	**31.1** mph	N/A	Thunderstorm	Scattered Clouds
5:34 PM	**91.0** °F	**88.9** °F	**55.0** °F	29%	**30.05** in	**10.0** mi	East	**25.3** mph	**33.4** mph	N/A		Scattered Clouds
5:52 PM	**89.1** °F	**86.9** °F	**54.0** °F	30%	**29.76** in	**10.0** mi	ESE	**21.9** mph	-	N/A	Thunderstorm	Scattered Clouds
6:10 PM	**87.1** °F	**85.1** °F	**54.0** °F	32%	**30.05** in	**10.0** mi	ESE	**18.4** mph	-	N/A		Scattered Clouds
6:52 PM	**84.9** °F	**83.7** °F	**55.9** °F	37%	**29.78** in	**10.0** mi	ESE	**15.0** mph	-	N/A		Scattered Clouds
7:52 PM	**81.0** °F	**81.0** °F	**57.0** °F	44%	**29.80** in	**10.0** mi	East	**23.0** mph	**29.9** mph	N/A		Scattered Clouds

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 PM	**75.9** °F	-	**59.0** °F	56%	**29.84** in	**10.0** mi	East	**26.5** mph	**35.7** mph	N/A		Scattered Clouds
9:52 PM	**75.0** °F	-	**59.0** °F	57%	**29.88** in	**10.0** mi	East	**27.6** mph	**36.8** mph	N/A		Mostly Cloudy
10:48 PM	**77.0** °F	-	**57.2** °F	50%	**30.18** in	**10.0** mi	ENE	**19.6** mph	-	N/A	Thunderstorm	Thunderstorm
10:52 PM	**77.0** °F	-	**57.9** °F	52%	**29.90** in	**10.0** mi	ENE	**20.7** mph	-	N/A	Thunderstorm	Thunderstorm
11:03 PM	**75.9** °F	-	**57.9** °F	54%	**30.18** in	**10.0** mi	East	**18.4** mph	-	N/A		Mostly Cloudy

Albuquerque, NM

Albuquerque International Sunport

12:41 PM MDT on September 05, 2019 (GMT -0600)

Weather History for KABQ - September, 2019

September

1

2019

View
Sunday, September 1, 2019

Daily | Weekly | Monthly | Custom

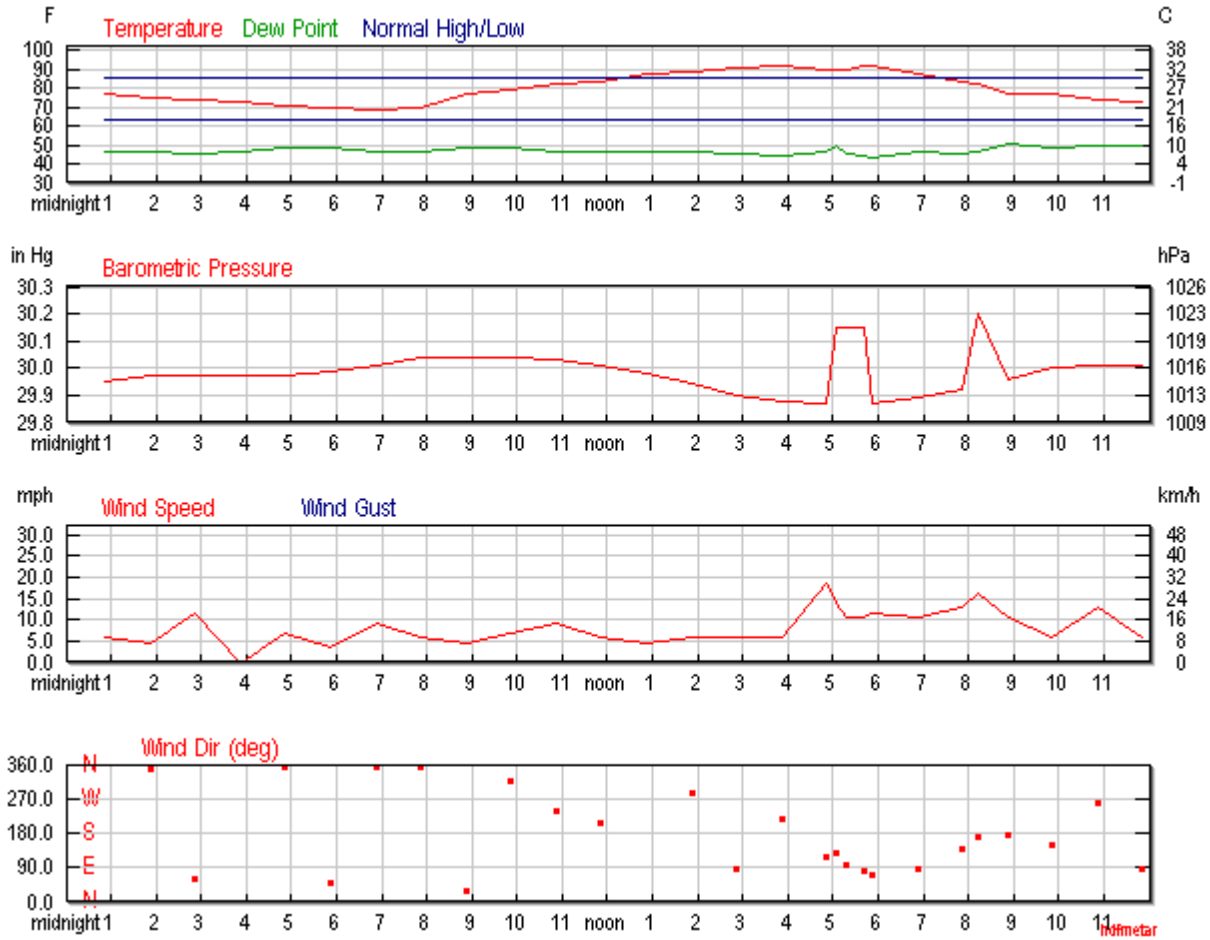
	Actual	Average	Record
Temperature			
Mean Temperature	**82** °F	-	
Max Temperature	**95** °F	-	- ()
Min Temperature	**69** °F	-	- ()
Cooling Degree Days	17		
Month to date cooling degree days	17		
Year to date cooling degree days	1281		
Growing Degree Days	32 (Base 50)		
Moisture			
Dew Point	**47** °F		

	Actual	Average	Record
Average Humidity	32		
Maximum Humidity	47		
Minimum Humidity	18		
Precipitation			
Precipitation	**T** in	-	- ()
Month to date precipitation	T		
Year to date precipitation	5.45		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**30.00** in		
Wind			
Wind Speed	**7** mph ()		
Max Wind Speed	**22** mph		
Max Gust Speed	**25** mph		
Visibility	**10.0** miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: Averaged Metar Reports

Daily Weather History Graph



ather Underground

Search for Another Location

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KABQ

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Astronomy

Sep. 01, 2019	**Rise**	**Set**
Actual Time	6:38 AM MDT	7:33 PM MDT

Sep. 01, 2019	Rise	Set
Civil Twilight	6:13 AM MDT	7:59 PM MDT
Nautical Twilight	5:42 AM MDT	8:29 PM MDT
Astronomical Twilight	5:10 AM MDT	9:01 PM MDT
Moon	9:07 AM MDT (9/1)	9:28 PM MDT (9/1)
Length of Visible Light	13h 46m	
Length of Day	12h 54m	

Waxing Crescent, 8% of the Moon is Illuminated

Sep 1	Sep 5	Sep 13	Sep 21	Sep 28
Waxing Crescent	First Quarter	Full	Last Quarter	New

Hourly Weather History & Observations

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**77.0** °F	**46.0** °F	33%	**29.95** in	**10.0** mi	WNW	**5.8** mph	-	N/A		Partly Cloudy
1:52 AM	**75.0** °F	**46.9** °F	37%	**29.97** in	**10.0** mi	North	**4.6** mph	-	N/A		Scattered Clouds
2:52 AM	**73.9** °F	**45.0** °F	35%	**29.97** in	**10.0** mi	ENE	**11.5** mph	-	N/A		Mostly Cloudy
3:52 AM	**73.0** °F	**46.9** °F	39%	**29.97** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
4:52 AM	**71.1** °F	**48.0** °F	44%	**29.97** in	**10.0** mi	North	**6.9** mph	-	N/A		Mostly Cloudy
5:52 AM	**70.0** °F	**48.0** °F	46%	**29.99** in	**10.0** mi	NE	**3.5** mph	-	N/A		Scattered Clouds
6:52 AM	**69.1** °F	**46.9** °F	45%	**30.01** in	**10.0** mi	North	**9.2** mph	-	N/A		Scattered Clouds
7:52 AM	**70.0** °F	**46.9** °F	44%	**30.04** in	**10.0** mi	North	**5.8** mph	-	N/A		Scattered Clouds
8:52 AM	**77.0** °F	**48.0** °F	36%	**30.04** in	**10.0** mi	NNE	**4.6** mph	-	N/A		Scattered Clouds

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
9:52 AM	**79.0** °F	**48.9** °F	35%	**30.04** in	**10.0** mi	NW	**6.9** mph	-	N/A		Scattered Clouds
10:52 AM	**82.0** °F	**46.9** °F	29%	**30.03** in	**10.0** mi	WSW	**9.2** mph	-	N/A		Partly Cloudy
11:52 AM	**82.9** °F	**46.9** °F	28%	**30.01** in	**10.0** mi	SSW	**5.8** mph	-	N/A		Partly Cloudy
12:52 PM	**87.1** °F	**46.9** °F	25%	**29.98** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Partly Cloudy
1:52 PM	**89.1** °F	**46.0** °F	22%	**29.94** in	**10.0** mi	WNW	**5.8** mph	-	N/A		Partly Cloudy
2:52 PM	**91.0** °F	**45.0** °F	20%	**29.90** in	**10.0** mi	East	**5.8** mph	-	N/A		Partly Cloudy
3:52 PM	**91.9** °F	**44.1** °F	19%	**29.88** in	**10.0** mi	SW	**5.8** mph	-	N/A		Scattered Clouds
4:52 PM	**90.0** °F	**46.0** °F	22%	**29.87** in	**10.0** mi	ESE	**18.4** mph	**21.9** mph	N/A		Scattered Clouds
5:03 PM	**90.0** °F	**50.0** °F	25%	**30.15** in	**10.0** mi	SE	**13.8** mph	-	**0.00** in	Rain , Thunderstorm	Light Rain
5:18 PM	**90.0** °F	**45.0** °F	21%	**30.15** in	**10.0** mi	East	**10.4** mph	-	**0.00** in		Scattered Clouds
5:41 PM	**91.9** °F	**44.1** °F	19%	**30.15** in	**10.0** mi	East	**10.4** mph	-	**0.00** in	Thunderstorm	Scattered Clouds
5:52 PM	**91.9** °F	**43.0** °F	18%	**29.87** in	**10.0** mi	ENE	**11.5** mph	-	**0.00** in		Scattered Clouds
6:52 PM	**88.0** °F	**46.0** °F	23%	**29.89** in	**10.0** mi	East	**10.4** mph	-	N/A		Scattered Clouds
7:52 PM	**82.9** °F	**45.0** °F	26%	**29.92** in	**10.0** mi	SE	**12.7** mph	-	N/A		Mostly Cloudy
8:12 PM	**82.0** °F	**46.9** °F	29%	**30.20** in	**10.0** mi	South	**16.1** mph	-	N/A		Mostly Cloudy
8:52 PM	**77.0** °F	**51.1** °F	40%	**29.96** in	**10.0** mi	South	**10.4** mph	-	N/A		Mostly Cloudy
9:52 PM	**77.0** °F	**48.9** °F	37%	**30.00** in	**10.0** mi	SSE	**5.8** mph	-	N/A		Scattered Clouds
10:52 PM	**73.9** °F	**50.0** °F	43%	**30.01** in	**10.0** mi	West	**12.7** mph	-	N/A		Scattered Clouds
11:52 PM	**73.0** °F	**50.0** °F	44%	**30.01** in	**10.0** mi	East	**5.8** mph	-	N/A		Scattered Clouds

Albuquerque, NM

Albuquerque International Sunport

12:42 PM MDT on September 05, 2019 (GMT -0600)

Weather History for KABQ - September, 2019

September

3

2019

View
Tuesday, September 3, 2019

Daily | Weekly | Monthly | Custom

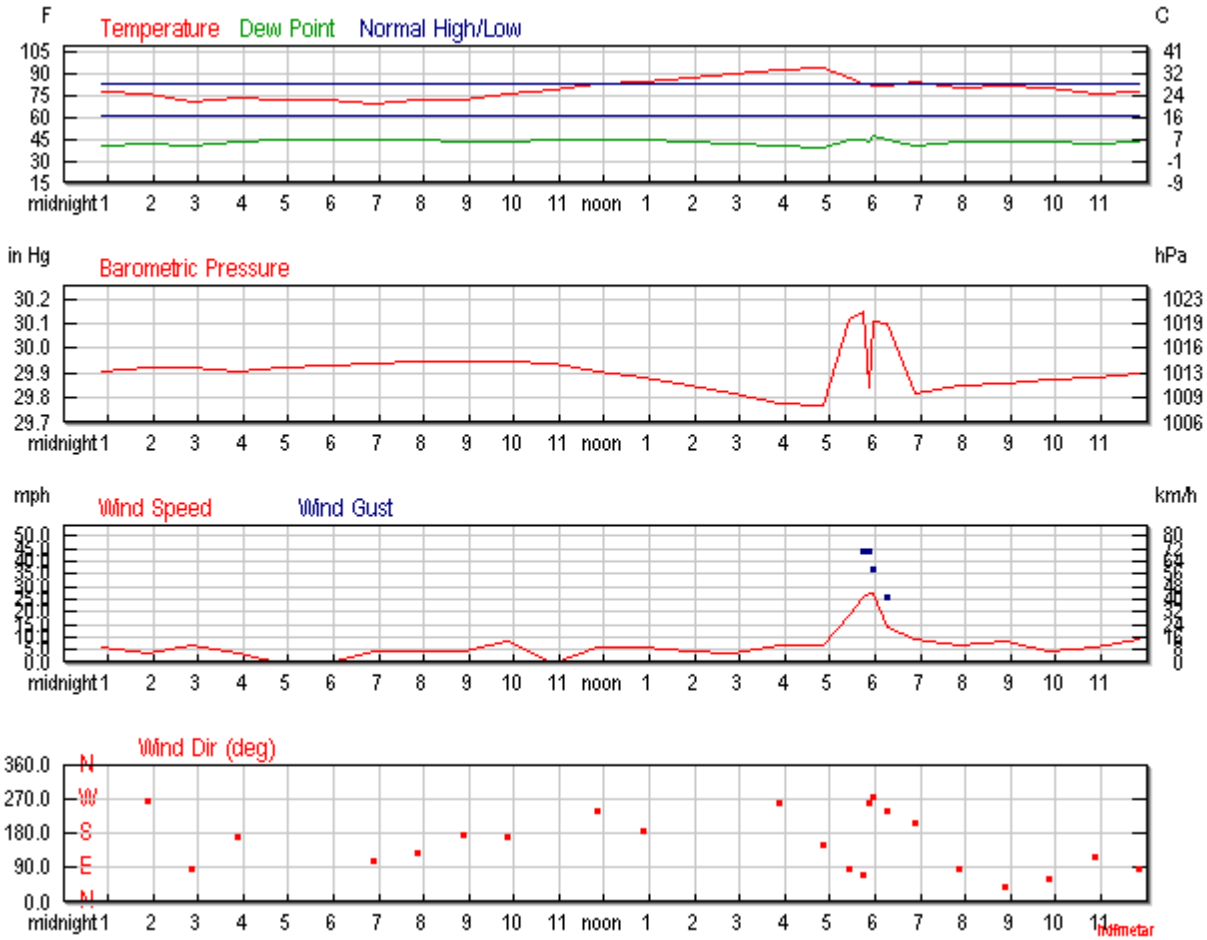
	Actual	Average	Record
Temperature			
Mean Temperature	**82** °F	-	
Max Temperature	**96** °F	-	- ()
Min Temperature	**69** °F	-	- ()
Cooling Degree Days	18		
Month to date cooling degree days	50		
Year to date cooling degree days	1314		
Growing Degree Days	32 (Base 50)		
Moisture			
Dew Point	**44** °F		

	Actual	Average	Record
Average Humidity	28		
Maximum Humidity	39		
Minimum Humidity	14		
Precipitation			
Precipitation	**T** in	-	- ()
Month to date precipitation	T		
Year to date precipitation	5.45		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.92** in		
Wind			
Wind Speed	**6** mph ()		
Max Wind Speed	**29** mph		
Max Gust Speed	**44** mph		
Visibility	**10.0** miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

Source: Averaged Metar Reports

Daily Weather History Graph



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Astronomy

Sep. 03, 2019	**Rise**	**Set**
Actual Time	6:40 AM MDT	7:30 PM MDT

Sep. 03, 2019	Rise	Set
Civil Twilight	6:14 AM MDT	7:56 PM MDT
Nautical Twilight	5:44 AM MDT	8:26 PM MDT
Astronomical Twilight	5:12 AM MDT	8:57 PM MDT
Moon	11:25 AM MDT (9/3)	10:41 PM MDT (9/3)
Length of Visible Light	13h 41m	
Length of Day	12h 50m	

Waxing Crescent, 25% of the Moon is Illuminated

Sep 3	Sep 5	Sep 13	Sep 21	Sep 28
Waxing Crescent	First Quarter	Full	Last Quarter	New

Hourly Weather History & Observations

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**79.0** °F	**42.1** °F	27%	**29.91** in	**10.0** mi	NNW	**5.8** mph	-	N/A		Partly Cloudy
1:52 AM	**77.0** °F	**43.0** °F	30%	**29.92** in	**10.0** mi	West	**3.5** mph	-	N/A		Partly Cloudy
2:52 AM	**72.0** °F	**42.1** °F	34%	**29.92** in	**10.0** mi	East	**6.9** mph	-	N/A		Partly Cloudy
3:52 AM	**75.0** °F	**44.1** °F	33%	**29.91** in	**10.0** mi	South	**3.5** mph	-	N/A		Clear
4:52 AM	**73.0** °F	**45.0** °F	37%	**29.92** in	**10.0** mi	Calm	Calm	-	N/A		Clear
5:52 AM	**73.0** °F	**45.0** °F	37%	**29.93** in	**10.0** mi	Calm	Calm	-	N/A		Clear
6:52 AM	**71.1** °F	**45.0** °F	39%	**29.94** in	**10.0** mi	ESE	**4.6** mph	-	N/A		Partly Cloudy
7:52 AM	**73.0** °F	**45.0** °F	37%	**29.95** in	**10.0** mi	SE	**4.6** mph	-	N/A		Clear
8:52 AM	**73.9** °F	**44.1** °F	34%	**29.95** in	**10.0** mi	South	**4.6** mph	-	N/A		Clear

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
9:52 AM	**78.1** °F	**44.1** °F	30%	**29.95** in	**10.0** mi	South	**8.1** mph	-	N/A		Clear
10:52 AM	**80.1** °F	**45.0** °F	29%	**29.94** in	**10.0** mi	Calm	Calm	-	N/A		Clear
11:52 AM	**84.0** °F	**46.0** °F	26%	**29.91** in	**10.0** mi	WSW	**5.8** mph	-	N/A		Partly Cloudy
12:52 PM	**86.0** °F	**45.0** °F	24%	**29.88** in	**10.0** mi	South	**5.8** mph	-	N/A		Partly Cloudy
1:52 PM	**89.1** °F	**44.1** °F	21%	**29.85** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Partly Cloudy
2:52 PM	**91.0** °F	**43.0** °F	19%	**29.82** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Partly Cloudy
3:52 PM	**93.9** °F	**41.0** °F	16%	**29.78** in	**10.0** mi	West	**6.9** mph	-	N/A		Partly Cloudy
4:52 PM	**95.0** °F	**39.9** °F	15%	**29.77** in	**10.0** mi	SSE	**6.9** mph	-	N/A		Scattered Clouds
5:26 PM	**89.1** °F	**46.0** °F	22%	**30.12** in	**9.0** mi	East	**18.4** mph	**33.4** mph	**0.00** in	Rain , Thunderstorm	Light Rain
5:45 PM	**84.9** °F	**45.0** °F	25%	**30.15** in	**10.0** mi	ENE	**25.3** mph	**43.7** mph	**0.00** in	Rain , Thunderstorm	Light Thunderstorms and Rain
5:52 PM	**84.0** °F	**44.1** °F	25%	**29.84** in	**10.0** mi	West	**27.6** mph	**43.7** mph	**0.00** in	Rain , Thunderstorm	Light Thunderstorms and Rain
5:58 PM	**82.9** °F	**48.0** °F	29%	**30.11** in	**10.0** mi	West	**27.6** mph	**36.8** mph	**0.00** in	Thunderstorm	Mostly Cloudy
6:16 PM	**82.9** °F	**46.0** °F	27%	**30.10** in	**10.0** mi	WSW	**13.8** mph	**25.3** mph	**0.00** in		Mostly Cloudy
6:52 PM	**86.0** °F	**41.0** °F	20%	**29.82** in	**10.0** mi	SSW	**9.2** mph	-	**0.00** in		Mostly Cloudy
7:52 PM	**82.0** °F	**44.1** °F	26%	**29.85** in	**10.0** mi	East	**6.9** mph	-	N/A		Mostly Cloudy
8:52 PM	**82.9** °F	**44.1** °F	25%	**29.86** in	**10.0** mi	NE	**8.1** mph	-	N/A		Scattered Clouds
9:52 PM	**82.0** °F	**44.1** °F	26%	**29.87** in	**10.0** mi	ENE	**4.6** mph	-	N/A		Scattered Clouds
10:52 PM	**78.1** °F	**43.0** °F	29%	**29.88** in	**10.0** mi	ESE	**5.8** mph	-	N/A		Partly Cloudy
11:52 PM	**79.0** °F	**44.1** °F	29%	**29.90** in	**10.0** mi	East	**9.2** mph	-	N/A		Partly Cloudy

Albuquerque, NM

Albuquerque International Sunport

1:34 PM MDT on September 20, 2019 (GMT -0600)

Weather History for KABQ - September, 2019

September

7

2019

View

Saturday, September 7, 2019

Daily | Weekly | Monthly | Custom

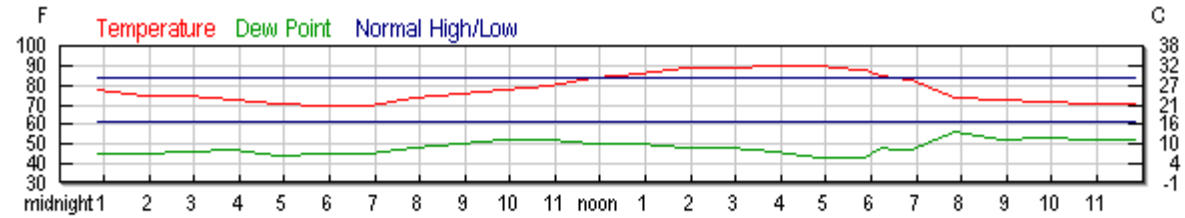
	Actual	Average	Record
Temperature			
Mean Temperature	**81** °F	-	
Max Temperature	**93** °F	-	- ()
Min Temperature	**69** °F	-	- ()
Cooling Degree Days	16		
Month to date cooling degree days	111		
Year to date cooling degree days	1375		
Growing Degree Days	28 (Base 50)		
Moisture			
Dew Point	**48** °F		

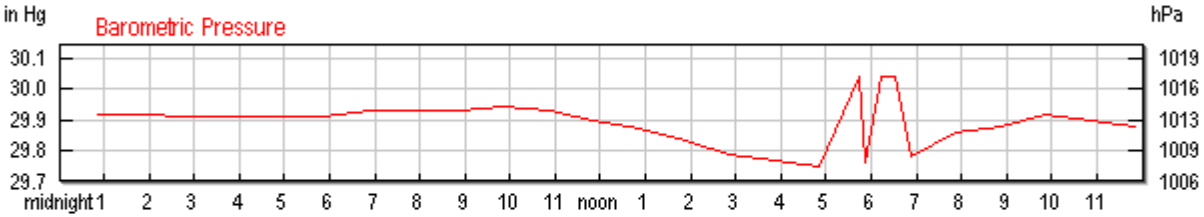
	Actual	Average	Record
Average Humidity	36		
Maximum Humidity	53		
Minimum Humidity	19		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	T		
Year to date precipitation	5.45		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.89** in		
Wind			
Wind Speed	**9** mph (ESE)		
Max Wind Speed	**29** mph		
Max Gust Speed	**34** mph		
Visibility	**10** miles		
Events	Thunderstorm		

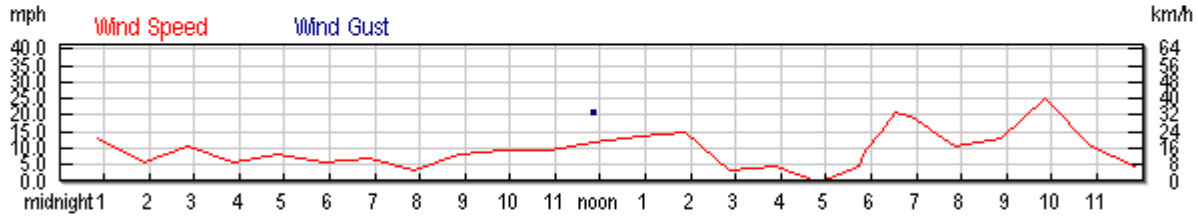
T = Trace of Precipitation, MM = Missing Value

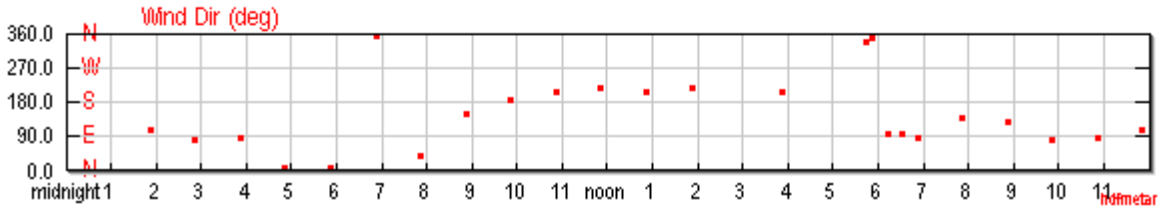
Source: NWS Daily Summary

Daily Weather History Graph









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Astronomy

Sep. 07, 2019	**Rise**	**Set**
Actual Time	6:43 AM MDT	7:24 PM MDT

Sep. 07, 2019	Rise	Set
Civil Twilight	6:17 AM MDT	7:50 PM MDT
Nautical Twilight	5:47 AM MDT	8:20 PM MDT
Astronomical Twilight	5:16 AM MDT	8:51 PM MDT
Moon	3:32 PM MDT (9/7)	12:47 AM MDT (9/7)
Length of Visible Light	13h 32m	
Length of Day	12h 41m	

Waxing Gibbous, 66% of the Moon is Illuminated

Sep 7	Sep 13	Sep 21	Sep 28	Oct 5
Waxing Gibbous	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**78.1** °F	**45.0** °F	31%	**29.92** in	**10.0** mi	East	**12.7** mph	-	N/A		Scattered Clouds
1:52 AM	**75.0** °F	**45.0** °F	34%	**29.92** in	**10.0** mi	ESE	**5.8** mph	-	N/A		Scattered Clouds
2:52 AM	**75.0** °F	**46.0** °F	36%	**29.91** in	**10.0** mi	East	**10.4** mph	-	N/A		Partly Cloudy
3:52 AM	**73.0** °F	**46.9** °F	39%	**29.91** in	**10.0** mi	East	**5.8** mph	-	N/A		Partly Cloudy
4:52 AM	**71.1** °F	**44.1** °F	38%	**29.91** in	**10.0** mi	North	**8.1** mph	-	N/A		Clear
5:52 AM	**70.0** °F	**45.0** °F	41%	**29.91** in	**10.0** mi	North	**5.8** mph	-	N/A		Partly Cloudy
6:52 AM	**70.0** °F	**45.0** °F	41%	**29.93** in	**10.0** mi	North	**6.9** mph	-	N/A		Scattered Clouds
7:52 AM	**73.9** °F	**48.0** °F	40%	**29.93** in	**10.0** mi	NE	**3.5** mph	-	N/A		Scattered Clouds
8:52 AM	**75.9** °F	**50.0** °F	40%	**29.93** in	**10.0** mi	SSE	**8.1** mph	-	N/A		Scattered Clouds

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
9:52 AM	**78.1** °F	**52.0** °F	40%	**29.94** in	**10.0** mi	South	**9.2** mph	-	N/A		Scattered Clouds
10:52 AM	**80.1** °F	**52.0** °F	38%	**29.93** in	**10.0** mi	SSW	**9.2** mph	**19.6** mph	N/A		Scattered Clouds
11:52 AM	**84.0** °F	**50.0** °F	31%	**29.90** in	**10.0** mi	SW	**11.5** mph	**20.7** mph	N/A		Scattered Clouds
12:52 PM	**86.0** °F	**50.0** °F	29%	**29.87** in	**10.0** mi	SSW	**13.8** mph	-	N/A		Scattered Clouds
1:52 PM	**89.1** °F	**48.0** °F	24%	**29.83** in	**10.0** mi	SW	**15.0** mph	-	N/A		Scattered Clouds
2:52 PM	**89.1** °F	**48.0** °F	24%	**29.79** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Scattered Clouds
3:52 PM	**90.0** °F	**46.0** °F	22%	**29.77** in	**10.0** mi	SSW	**4.6** mph	-	N/A		Scattered Clouds
4:52 PM	**90.0** °F	**43.0** °F	19%	**29.75** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
5:43 PM	**88.0** °F	**43.0** °F	21%	**30.04** in	**10.0** mi	NNW	**4.6** mph	-	N/A	Thunderstorm	Mostly Cloudy
5:52 PM	**88.0** °F	**43.0** °F	21%	**29.76** in	**10.0** mi	North	**9.2** mph	-	N/A	Thunderstorm	Mostly Cloudy
6:13 PM	**84.9** °F	**48.0** °F	28%	**30.04** in	**10.0** mi	East	**15.0** mph	-	N/A	Thunderstorm	Thunderstorm
6:33 PM	**84.0** °F	**46.9** °F	27%	**30.04** in	**10.0** mi	East	**20.7** mph	-	N/A		Mostly Cloudy
6:52 PM	**82.9** °F	**46.9** °F	28%	**29.78** in	**10.0** mi	East	**19.6** mph	-	N/A		Mostly Cloudy
7:52 PM	**73.9** °F	**55.9** °F	53%	**29.86** in	**10.0** mi	SE	**10.4** mph	-	**0.00** in		Mostly Cloudy
8:52 PM	**73.0** °F	**52.0** °F	48%	**29.88** in	**10.0** mi	SE	**12.7** mph	-	N/A		Mostly Cloudy
9:52 PM	**72.0** °F	**53.1** °F	51%	**29.92** in	**10.0** mi	East	**25.3** mph	**31.1** mph	N/A		Mostly Cloudy
10:52 PM	**71.1** °F	**52.0** °F	51%	**29.90** in	**10.0** mi	East	**10.4** mph	-	N/A		Mostly Cloudy
11:52 PM	**71.1** °F	**52.0** °F	51%	**29.88** in	**10.0** mi	ESE	**4.6** mph	-	N/A		Mostly Cloudy

Albuquerque, NM

Albuquerque International Sunport

1:35 PM MDT on September 20, 2019 (GMT -0600)

Weather History for KABQ - September, 2019

September

10

2019

View
Tuesday, September 10, 2019

Daily | Weekly | Monthly | Custom

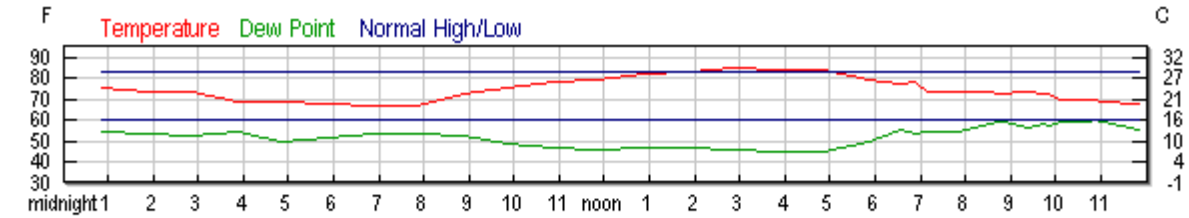
	Actual	Average	Record
Temperature			
Mean Temperature	**76** °F	-	
Max Temperature	**86** °F	-	- ()
Min Temperature	**65** °F	-	- ()
Cooling Degree Days	11		
Month to date cooling degree days	144		
Year to date cooling degree days	1408		
Growing Degree Days	22 (Base 50)		
Moisture			
Dew Point	**53** °F		

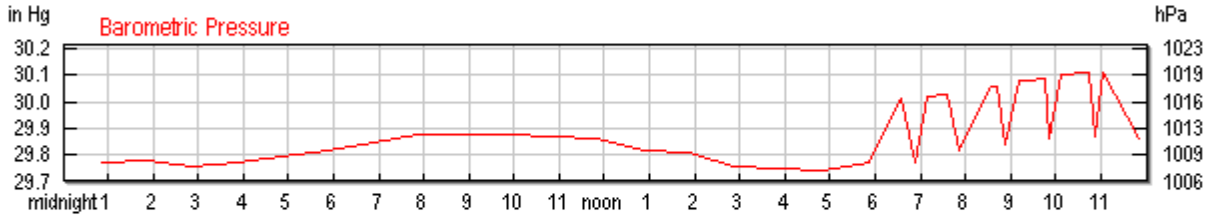
	Actual	Average	Record
Average Humidity	49		
Maximum Humidity	73		
Minimum Humidity	25		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.02		
Year to date precipitation	5.47		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.88** in		
Wind			
Wind Speed	**8** mph (SSE)		
Max Wind Speed	**18** mph		
Max Gust Speed	**24** mph		
Visibility	**10** miles		
Events	Rain , Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

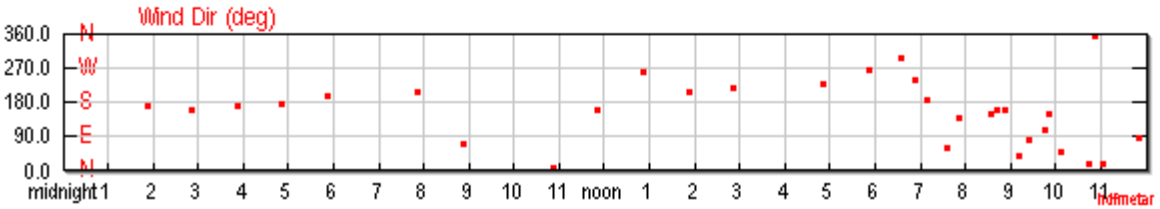
Source: NWS Daily Summary

Daily Weather History Graph









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Airport or City:

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Astronomy

Sep. 10, 2019	**Rise**	**Set**
Actual Time	6:45 AM MDT	7:20 PM MDT

Sep. 10, 2019	Rise	Set
Civil Twilight	6:20 AM MDT	7:46 PM MDT
Nautical Twilight	5:49 AM MDT	8:16 PM MDT
Astronomical Twilight	5:19 AM MDT	8:46 PM MDT
Moon	5:50 PM MDT (9/10)	3:24 AM MDT (9/10)
Length of Visible Light	13h 26m	
Length of Day	12h 35m	

Waxing Gibbous, 90% of the Moon is Illuminated

Sep 10	Sep 13	Sep 21	Sep 28	Oct 5
Waxing Gibbous	Full	Last Quarter	New	First Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**75.0** °F	**54.0** °F	48%	**29.77** in	**10.0** mi	SSW	**11.5** mph	**20.7** mph	N/A		Mostly Cloudy
1:52 AM	**73.0** °F	**53.1** °F	49%	**29.78** in	**10.0** mi	South	**12.7** mph	-	N/A		Mostly Cloudy
2:52 AM	**73.0** °F	**52.0** °F	48%	**29.76** in	**10.0** mi	SSE	**12.7** mph	-	N/A		Scattered Clouds
3:52 AM	**69.1** °F	**54.0** °F	58%	**29.77** in	**10.0** mi	South	**9.2** mph	-	N/A		Scattered Clouds
4:52 AM	**69.1** °F	**50.0** °F	51%	**29.79** in	**10.0** mi	South	**6.9** mph	-	N/A		Partly Cloudy
5:52 AM	**68.0** °F	**51.1** °F	55%	**29.82** in	**10.0** mi	SSW	**9.2** mph	-	N/A		Partly Cloudy
6:52 AM	**66.9** °F	**53.1** °F	61%	**29.85** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Mostly Cloudy
7:52 AM	**66.9** °F	**53.1** °F	61%	**29.88** in	**10.0** mi	SSW	**8.1** mph	-	N/A		Mostly Cloudy
8:52 AM	**72.0** °F	**52.0** °F	49%	**29.88** in	**10.0** mi	ENE	**8.1** mph	-	N/A		Mostly Cloudy

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
9:52 AM	**75.0** °F	**48.9** °F	40%	**29.88** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Mostly Cloudy
10:52 AM	**78.1** °F	**46.9** °F	33%	**29.87** in	**10.0** mi	North	**5.8** mph	-	N/A		Partly Cloudy
11:52 AM	**79.0** °F	**46.0** °F	31%	**29.86** in	**10.0** mi	SSE	**3.5** mph	-	N/A		Scattered Clouds
12:52 PM	**82.0** °F	**46.9** °F	29%	**29.82** in	**10.0** mi	West	**3.5** mph	-	N/A		Scattered Clouds
1:52 PM	**82.9** °F	**46.9** °F	28%	**29.81** in	**10.0** mi	SSW	**11.5** mph	-	N/A		Scattered Clouds
2:52 PM	**84.9** °F	**46.0** °F	26%	**29.76** in	**10.0** mi	SW	**10.4** mph	**19.6** mph	N/A		Scattered Clouds
3:52 PM	**84.0** °F	**45.0** °F	25%	**29.75** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
4:52 PM	**84.0** °F	**45.0** °F	25%	**29.74** in	**10.0** mi	SW	**12.7** mph	-	N/A		Mostly Cloudy
5:52 PM	**79.0** °F	**50.0** °F	36%	**29.77** in	**10.0** mi	West	**11.5** mph	**20.7** mph	N/A		Mostly Cloudy
6:35 PM	**77.0** °F	**55.0** °F	47%	**30.01** in	**10.0** mi	WNW	**8.1** mph	-	**0.00** in	Rain , Thunderstorm	Light Thunderstorms and Rain
6:52 PM	**78.1** °F	**53.1** °F	42%	**29.77** in	**10.0** mi	WSW	**13.8** mph	-	**0.00** in	Thunderstorm	Thunderstorm
7:09 PM	**73.9** °F	**54.0** °F	50%	**30.02** in	**10.0** mi	South	**10.4** mph	-	N/A	Thunderstorm	Mostly Cloudy
7:36 PM	**73.0** °F	**54.0** °F	51%	**30.03** in	**10.0** mi	ENE	**3.5** mph	-	N/A		Mostly Cloudy
7:52 PM	**73.9** °F	**54.0** °F	50%	**29.82** in	**10.0** mi	SE	**6.9** mph	-	N/A		Mostly Cloudy
8:34 PM	**73.0** °F	**57.9** °F	59%	**30.06** in	**10.0** mi	SSE	**10.4** mph	-	**0.00** in	Rain , Thunderstorm	Light Rain
8:41 PM	**72.0** °F	**59.0** °F	64%	**30.06** in	**10.0** mi	SSE	**8.1** mph	-	**0.00** in	Rain , Thunderstorm	Light Thunderstorms and Rain
8:52 PM	**72.0** °F	**59.0** °F	64%	**29.84** in	**10.0** mi	SSE	**5.8** mph	-	**0.00** in	Thunderstorm	Thunderstorm
9:11 PM	**73.0** °F	**57.0** °F	57%	**30.08** in	**10.0** mi	NE	**5.8** mph	-	N/A	Thunderstorm	Mostly Cloudy
9:25 PM	**73.0** °F	**55.9** °F	55%	**30.08** in	**10.0** mi	East	**5.8** mph	-	N/A		Mostly Cloudy
9:45 PM	**72.0** °F	**57.9** °F	61%	**30.09** in	**10.0** mi	ESE	**6.9** mph	-	N/A	Thunderstorm	Mostly Cloudy
9:52 PM	**72.0** °F	**57.0** °F	59%	**29.86** in	**10.0** mi	SSE	**6.9** mph	-	N/A	Thunderstorm	Mostly Cloudy

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
10:07 PM	**70.0** °F	**59.0** °F	68%	**30.10** in	**8.0** mi	NE	**6.9** mph	-	**0.02** in	Rain , Thunderstorm	Light Thunderstorms and Rain
10:44 PM	**70.0** °F	**59.0** °F	68%	**30.11** in	**10.0** mi	NNE	**6.9** mph	-	**0.02** in	Thunderstorm	Mostly Cloudy
10:52 PM	**70.0** °F	**60.1** °F	71%	**29.87** in	**10.0** mi	North	**8.1** mph	-	**0.02** in	Thunderstorm	Mostly Cloudy
11:02 PM	**69.1** °F	**59.0** °F	70%	**30.11** in	**10.0** mi	NNE	**5.8** mph	-	N/A		Mostly Cloudy
11:52 PM	**68.0** °F	**55.0** °F	63%	**29.86** in	**10.0** mi	East	**12.7** mph	-	N/A		Scattered Clouds

Albuquerque, NM

Albuquerque International Sunport

1:35 PM MDT on September 20, 2019 (GMT -0600)

Weather History for KABQ - September, 2019

September

14

2019

View
Saturday, September 14, 2019

Daily | Weekly | Monthly | Custom

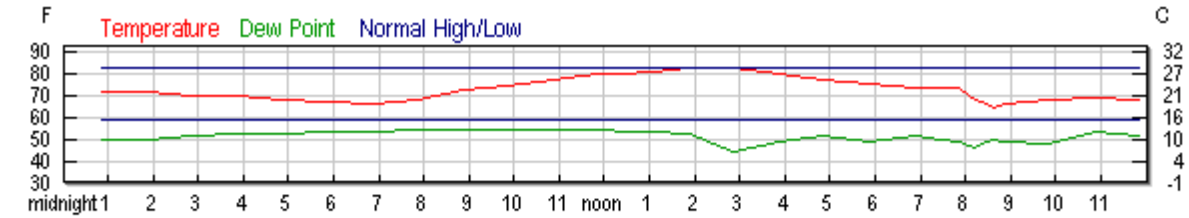
	Actual	Average	Record
Temperature			
Mean Temperature	**75** °F	-	
Max Temperature	**85** °F	-	- ()
Min Temperature	**64** °F	-	- ()
Cooling Degree Days	10		
Month to date cooling degree days	185		
Year to date cooling degree days	1449		
Growing Degree Days	24 (Base 50)		
Moisture			
Dew Point	**51** °F		

	Actual	Average	Record
Average Humidity	45		
Maximum Humidity	63		
Minimum Humidity	26		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.02		
Year to date precipitation	5.47		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**30.08** in		
Wind			
Wind Speed	**8** mph (SSE)		
Max Wind Speed	**22** mph		
Max Gust Speed	**27** mph		
Visibility	**10** miles		
Events	Thunderstorm		

T = Trace of Precipitation, MM = Missing Value

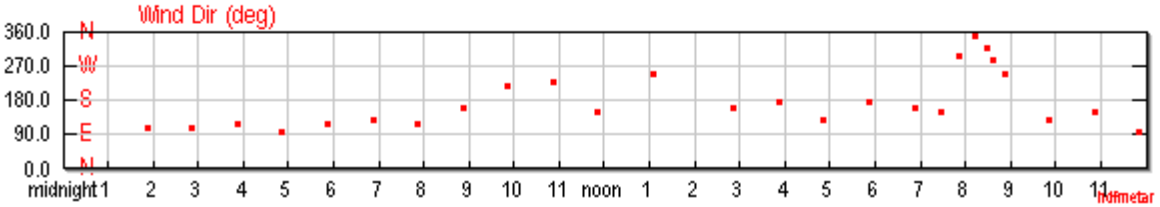
Source: NWS Daily Summary

Daily Weather History Graph









Search for Another Location

Airport or City:

KABQ

Submit

Astronomy

Sep. 14, 2019	**Rise**	**Set**
Actual Time	6:48 AM MDT	7:15 PM MDT

Sep. 14, 2019	Rise	Set
Civil Twilight	6:23 AM MDT	7:40 PM MDT
Nautical Twilight	5:53 AM MDT	8:10 PM MDT
Astronomical Twilight	5:22 AM MDT	8:40 PM MDT
Moon	7:57 PM MDT (9/14)	7:06 AM MDT (9/14)
Length of Visible Light	13h 17m	
Length of Day	12h 26m	

Full, 100% of the Moon is Illuminated

Sep 14	Sep 21	Sep 28	Oct 5	Oct 13
Full	Last Quarter	New	First Quarter	Full

Hourly Weather History & Observations

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**71.1** °F	-	**50.0** °F	47%	**30.04** in	**10.0** mi	ESE	**6.9** mph	-	N/A		Mostly Cloudy
1:52 AM	**71.1** °F	-	**50.0** °F	47%	**30.04** in	**10.0** mi	ESE	**8.1** mph	-	N/A		Scattered Clouds
2:52 AM	**70.0** °F	-	**51.1** °F	51%	**30.03** in	**10.0** mi	ESE	**6.9** mph	-	N/A		Mostly Cloudy
3:52 AM	**70.0** °F	-	**52.0** °F	53%	**30.02** in	**10.0** mi	ESE	**6.9** mph	-	N/A		Mostly Cloudy
4:52 AM	**68.0** °F	-	**52.0** °F	56%	**30.03** in	**10.0** mi	East	**6.9** mph	-	N/A		Scattered Clouds
5:52 AM	**66.9** °F	-	**53.1** °F	61%	**30.04** in	**10.0** mi	ESE	**5.8** mph	-	N/A		Scattered Clouds
6:52 AM	**66.0** °F	-	**53.1** °F	63%	**30.06** in	**10.0** mi	SE	**4.6** mph	-	N/A		Overcast
7:52 AM	**68.0** °F	-	**54.0** °F	61%	**30.07** in	**10.0** mi	ESE	**3.5** mph	-	N/A		Overcast

Time (MDT)	Temp.	Heat Index	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
8:52 AM	**72.0** °F	-	**54.0** °F	53%	**30.09** in	**10.0** mi	SSE	**5.8** mph	-	N/A		Overcast
9:52 AM	**73.9** °F	-	**54.0** °F	50%	**30.09** in	**10.0** mi	SW	**9.2** mph	-	N/A		Overcast
10:52 AM	**77.0** °F	-	**54.0** °F	45%	**30.07** in	**10.0** mi	SW	**12.7** mph	-	N/A		Overcast
11:52 AM	**80.1** °F	**80.0** °F	**54.0** °F	40%	**30.04** in	**10.0** mi	SSE	**4.6** mph	-	N/A		Overcast
12:37 PM	**80.1** °F	**79.9** °F	**53.1** °F	39%	**30.27** in	**10.0** mi	Variable	**6.9** mph	-	N/A		Overcast
12:52 PM	**81.0** °F	**80.4** °F	**53.1** °F	38%	**30.01** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Overcast
1:04 PM	**81.0** °F	**80.4** °F	**53.1** °F	38%	**30.26** in	**10.0** mi	WSW	**5.8** mph	-	N/A	Thunderstorm	Overcast
1:52 PM	**82.0** °F	-	**52.0** °F	35%	**29.99** in	**10.0** mi	Variable	**6.9** mph	-	N/A		Overcast
2:52 PM	**82.0** °F	-	**44.1** °F	26%	**29.95** in	**10.0** mi	SSE	**9.2** mph	-	**0.00** in		Overcast
3:52 PM	**80.1** °F	-	**48.9** °F	34%	**29.96** in	**10.0** mi	South	**18.4** mph	**25.3** mph	N/A		Overcast
4:52 PM	**77.0** °F	-	**51.1** °F	40%	**29.98** in	**10.0** mi	SE	**10.4** mph	-	N/A		Mostly Cloudy
5:52 PM	**75.0** °F	-	**48.9** °F	40%	**30.00** in	**10.0** mi	South	**17.3** mph	-	N/A		Mostly Cloudy
6:52 PM	**73.0** °F	-	**51.1** °F	46%	**30.04** in	**10.0** mi	SSE	**12.7** mph	-	N/A		Mostly Cloudy
7:27 PM	**73.0** °F	-	**50.0** °F	44%	**30.27** in	**10.0** mi	SSE	**8.1** mph	-	N/A	Thunderstorm	Overcast
7:52 PM	**73.0** °F	-	**48.9** °F	42%	**30.09** in	**10.0** mi	WNW	**10.4** mph	-	N/A	Thunderstorm	Overcast
8:13 PM	**68.0** °F	-	**46.0** °F	45%	**30.31** in	**10.0** mi	North	**11.5** mph	**27.6** mph	N/A	Thunderstorm	Thunderstorm
8:28 PM	**66.0** °F	-	**48.9** °F	54%	**30.31** in	**10.0** mi	NW	**15.0** mph	**24.2** mph	N/A	Thunderstorm	Overcast
8:37 PM	**64.0** °F	-	**50.0** °F	60%	**30.30** in	**10.0** mi	WNW	**9.2** mph	-	N/A		Mostly Cloudy
8:52 PM	**66.0** °F	-	**48.9** °F	54%	**30.09** in	**10.0** mi	WSW	**4.6** mph	-	N/A		Scattered Clouds
9:52 PM	**68.0** °F	-	**48.0** °F	49%	**30.07** in	**10.0** mi	SE	**10.4** mph	-	N/A		Overcast
10:52 PM	**69.1** °F	-	**53.1** °F	57%	**30.06** in	**10.0** mi	SSE	**15.0** mph	-	N/A		Overcast
11:52 PM	**68.0** °F	-	**51.1** °F	55%	**30.03** in	**10.0** mi	East	**5.8** mph	-	N/A		Overcast

Albuquerque, NM

Albuquerque International Sunport

1:36 PM MDT on September 20, 2019 (GMT -0600)

Weather History for KABQ - September, 2019

September

15

2019

View

Sunday, September 15, 2019

Daily | Weekly | Monthly | Custom

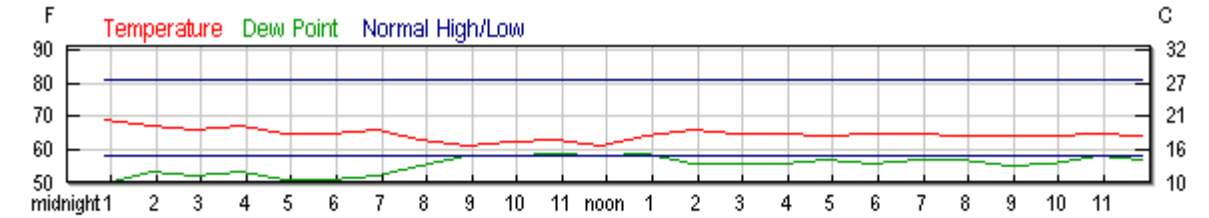
	Actual	Average	Record
Temperature			
Mean Temperature	**65** °F	-	
Max Temperature	**69** °F	-	- ()
Min Temperature	**60** °F	-	- ()
Growing Degree Days	14 (Base 50)		
Moisture			
Dew Point	**55** °F		
Average Humidity	71		
Maximum Humidity	90		
Minimum Humidity	51		

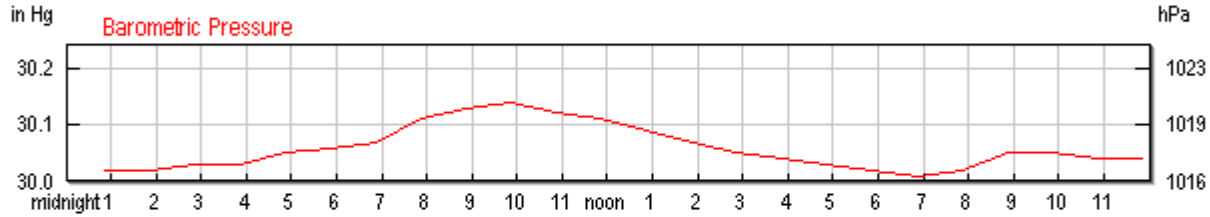
	Actual	Average	Record
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.14		
Year to date precipitation	5.59		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**30.06** in		
Wind			
Wind Speed	**6** mph (North)		
Max Wind Speed	**16** mph		
Max Gust Speed	**21** mph		
Visibility	**10** miles		
Events	Rain		

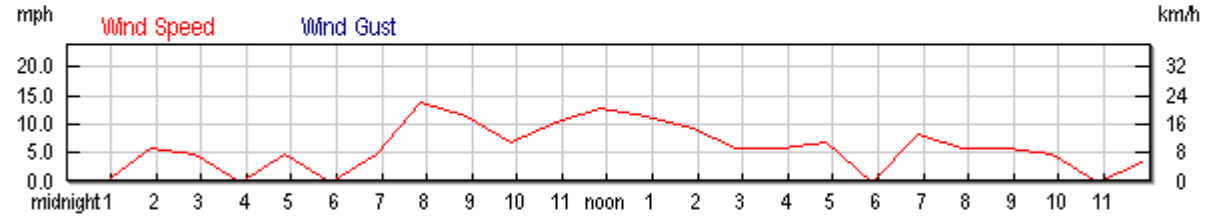
T = Trace of Precipitation, MM = Missing Value

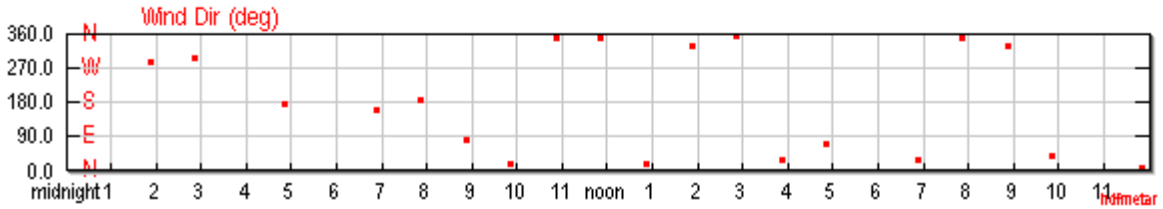
Source: NWS Daily Summary

Daily Weather History Graph









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KABQ

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Astronomy

Sep. 15, 2019	**Rise**	**Set**
Actual Time	6:49 AM MDT	7:13 PM MDT

Sep. 15, 2019	Rise	Set
Civil Twilight	6:23 AM MDT	7:38 PM MDT
Nautical Twilight	5:53 AM MDT	8:08 PM MDT
Astronomical Twilight	5:23 AM MDT	8:38 PM MDT
Moon	8:24 PM MDT (9/15)	8:01 AM MDT (9/15)
Length of Visible Light	13h 15m	
Length of Day	12h 24m	

Full, 98% of the Moon is Illuminated

Sep 15	Sep 21	Sep 28	Oct 5	Oct 13
Full	Last Quarter	New	First Quarter	Full

Hourly Weather History & Observations

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**69.1** °F	**50.0** °F	51%	**30.02** in	**10.0** mi	Calm	Calm	-	N/A		Overcast
1:52 AM	**66.9** °F	**53.1** °F	61%	**30.02** in	**10.0** mi	WNW	**5.8** mph	-	N/A		Overcast
2:52 AM	**66.0** °F	**52.0** °F	60%	**30.03** in	**10.0** mi	WNW	**4.6** mph	-	N/A		Overcast
3:52 AM	**66.9** °F	**53.1** °F	61%	**30.03** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
4:52 AM	**64.9** °F	**51.1** °F	61%	**30.05** in	**10.0** mi	South	**4.6** mph	-	N/A		Overcast
5:52 AM	**64.9** °F	**51.1** °F	61%	**30.06** in	**10.0** mi	Calm	Calm	-	N/A		Overcast
6:52 AM	**66.0** °F	**52.0** °F	60%	**30.07** in	**10.0** mi	SSE	**4.6** mph	-	N/A		Overcast
7:52 AM	**63.0** °F	**55.0** °F	75%	**30.11** in	**10.0** mi	South	**13.8** mph	-	**0.00** in	Rain	Light Rain
8:52 AM	**61.0** °F	**57.9** °F	90%	**30.13** in	**4.0** mi	East	**11.5** mph	-	**0.04** in	Rain	Rain

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
9:52 AM	**62.1** °F	**57.9** °F	86%	**30.14** in	**9.0** mi	NNE	**6.9** mph	-	**0.02** in		Overcast
10:52 AM	**63.0** °F	**59.0** °F	87%	**30.12** in	**10.0** mi	North	**10.4** mph	-	**0.00** in		Overcast
11:52 AM	**61.0** °F	**57.9** °F	90%	**30.11** in	**9.0** mi	North	**12.7** mph	-	**0.03** in	Rain	Light Rain
12:52 PM	**64.0** °F	**59.0** °F	84%	**30.09** in	**10.0** mi	NNE	**11.5** mph	-	**0.00** in		Overcast
1:52 PM	**66.0** °F	**55.9** °F	70%	**30.07** in	**10.0** mi	NNW	**9.2** mph	-	N/A		Overcast
2:52 PM	**64.9** °F	**55.9** °F	73%	**30.05** in	**10.0** mi	North	**5.8** mph	-	**0.01** in	Rain	Light Rain
3:52 PM	**64.9** °F	**55.9** °F	73%	**30.04** in	**9.0** mi	NNE	**5.8** mph	-	**0.01** in	Rain	Light Rain
4:52 PM	**64.0** °F	**57.0** °F	78%	**30.03** in	**10.0** mi	ENE	**6.9** mph	-	**0.01** in		Mostly Cloudy
5:52 PM	**64.9** °F	**55.9** °F	73%	**30.02** in	**10.0** mi	Calm	Calm	-	**0.00** in	Rain	Light Rain
6:52 PM	**64.9** °F	**57.0** °F	75%	**30.01** in	**10.0** mi	NNE	**8.1** mph	-	**0.00** in		Mostly Cloudy
7:52 PM	**64.0** °F	**57.0** °F	78%	**30.02** in	**10.0** mi	North	**5.8** mph	-	N/A		Overcast
8:52 PM	**64.0** °F	**55.0** °F	73%	**30.05** in	**10.0** mi	NNW	**5.8** mph	-	N/A		Overcast
9:52 PM	**64.0** °F	**55.9** °F	75%	**30.05** in	**10.0** mi	NE	**4.6** mph	-	N/A		Overcast
10:52 PM	**64.9** °F	**57.9** °F	78%	**30.04** in	**10.0** mi	Calm	Calm	-	N/A		Overcast
11:52 PM	**64.0** °F	**57.0** °F	78%	**30.04** in	**10.0** mi	North	**3.5** mph	-	N/A		Overcast

Albuquerque, NM

Albuquerque International Sunport

1:37 PM MDT on September 20, 2019 (GMT -0600)

Weather History for KABQ - September, 2019

September

16

2019

View
Monday, September 16, 2019

Daily | Weekly | Monthly | Custom

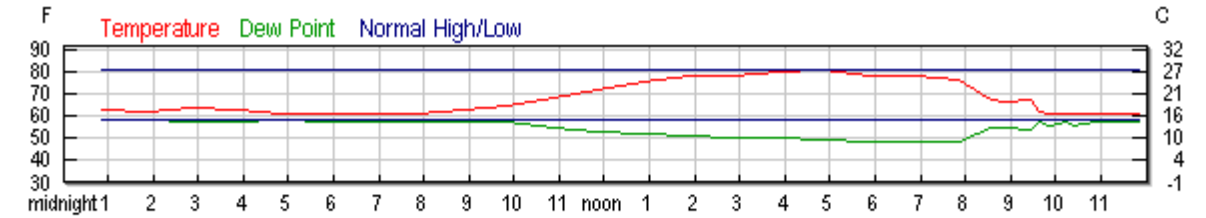
	Actual	Average	Record
Temperature			
Mean Temperature	**71** °F	-	
Max Temperature	**81** °F	-	- ()
Min Temperature	**60** °F	-	- ()
Cooling Degree Days	6		
Month to date cooling degree days	191		
Year to date cooling degree days	1455		
Growing Degree Days	20 (Base 50)		
Moisture			
Dew Point	**55** °F		

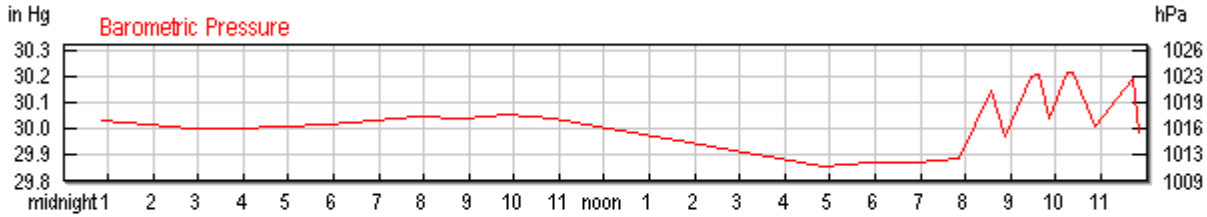
	Actual	Average	Record
Average Humidity	62		
Maximum Humidity	90		
Minimum Humidity	33		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.44		
Year to date precipitation	5.89		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**30.02** in		
Wind			
Wind Speed	**8** mph (WNW)		
Max Wind Speed	**32** mph		
Max Gust Speed	**39** mph		
Visibility	**10** miles		
Events	Rain , Thunderstorm		

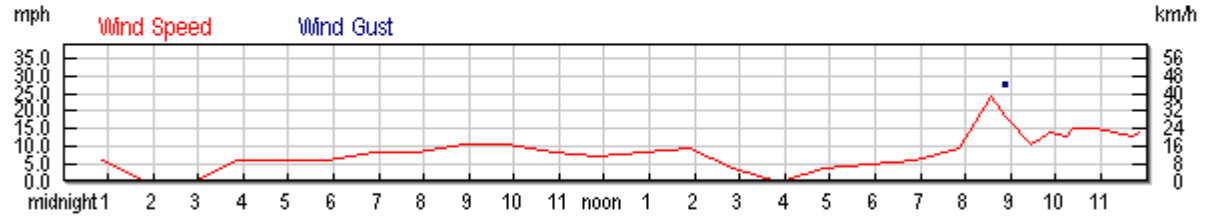
T = Trace of Precipitation, MM = Missing Value

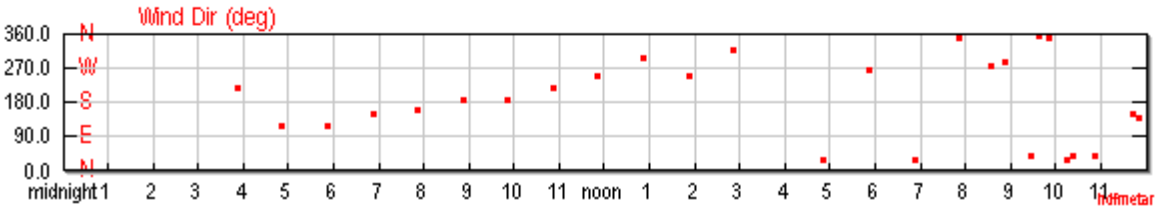
Source: NWS Daily Summary

Daily Weather History Graph









Search for Another Location

Airport or City:

KABQ

Submit

Astronomy

Sep. 16, 2019	**Rise**	**Set**
Actual Time	6:49 AM MDT	7:12 PM MDT

Sep. 16, 2019	Rise	Set
Civil Twilight	6:24 AM MDT	7:37 PM MDT
Nautical Twilight	5:54 AM MDT	8:07 PM MDT
Astronomical Twilight	5:24 AM MDT	8:37 PM MDT
Moon	8:52 PM MDT (9/16)	8:56 AM MDT (9/16)
Length of Visible Light	13h 12m	
Length of Day	12h 22m	

Waning Gibbous, 94% of the Moon is Illuminated

Sep 16	Sep 21	Sep 28	Oct 5	Oct 13
Waning Gibbous	Last Quarter	New	First Quarter	Full

Hourly Weather History & Observations

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**63.0** °F	**57.9** °F	84%	**30.03** in	**10.0** mi	SE	**5.8** mph	-	N/A		Overcast
1:52 AM	**62.1** °F	**57.9** °F	86%	**30.02** in	**10.0** mi	Calm	Calm	-	**0.01** in		Overcast
2:52 AM	**64.0** °F	**57.0** °F	78%	**30.00** in	**10.0** mi	Calm	Calm	-	N/A		Overcast
3:52 AM	**63.0** °F	**57.0** °F	81%	**30.00** in	**10.0** mi	SW	**5.8** mph	-	N/A		Mostly Cloudy
4:52 AM	**61.0** °F	**57.9** °F	90%	**30.01** in	**10.0** mi	ESE	**5.8** mph	-	N/A		Mostly Cloudy
5:52 AM	**61.0** °F	**57.0** °F	87%	**30.02** in	**10.0** mi	ESE	**5.8** mph	-	N/A		Mostly Cloudy
6:52 AM	**61.0** °F	**57.0** °F	87%	**30.03** in	**10.0** mi	SSE	**8.1** mph	-	N/A		Mostly Cloudy
7:52 AM	**61.0** °F	**57.0** °F	87%	**30.05** in	**10.0** mi	SSE	**8.1** mph	-	N/A		Mostly Cloudy
8:52 AM	**63.0** °F	**57.0** °F	81%	**30.04** in	**10.0** mi	South	**10.4** mph	-	N/A		Mostly Cloudy

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
9:52 AM	**64.9** °F	**57.0** °F	75%	**30.06** in	**10.0** mi	South	**10.4** mph	-	N/A		Mostly Cloudy
10:52 AM	**68.0** °F	**55.0** °F	63%	**30.04** in	**10.0** mi	SW	**8.1** mph	-	N/A		Scattered Clouds
11:52 AM	**72.0** °F	**53.1** °F	51%	**30.01** in	**10.0** mi	WSW	**6.9** mph	-	N/A		Scattered Clouds
12:52 PM	**75.0** °F	**52.0** °F	44%	**29.98** in	**10.0** mi	WNW	**8.1** mph	-	N/A		Scattered Clouds
1:52 PM	**78.1** °F	**51.1** °F	39%	**29.95** in	**10.0** mi	WSW	**9.2** mph	-	N/A		Scattered Clouds
2:52 PM	**78.1** °F	**50.0** °F	37%	**29.92** in	**10.0** mi	NW	**3.5** mph	-	N/A		Scattered Clouds
3:52 PM	**80.1** °F	**50.0** °F	35%	**29.89** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
4:52 PM	**81.0** °F	**48.9** °F	33%	**29.86** in	**10.0** mi	NNE	**3.5** mph	-	N/A		Scattered Clouds
5:52 PM	**78.1** °F	**48.0** °F	35%	**29.87** in	**10.0** mi	West	**4.6** mph	-	N/A		Scattered Clouds
6:52 PM	**78.1** °F	**48.0** °F	35%	**29.87** in	**10.0** mi	NNE	**5.8** mph	-	N/A		Scattered Clouds
7:52 PM	**75.9** °F	**48.0** °F	37%	**29.89** in	**10.0** mi	North	**9.2** mph	-	N/A		Mostly Cloudy
8:33 PM	**66.9** °F	**55.0** °F	66%	**30.15** in	**10.0** mi	West	**24.2** mph	**28.8** mph	N/A		Mostly Cloudy
8:52 PM	**66.0** °F	**55.0** °F	68%	**29.97** in	**10.0** mi	WNW	**18.4** mph	**27.6** mph	N/A		Mostly Cloudy
9:26 PM	**66.9** °F	**54.0** °F	63%	**30.20** in	**10.0** mi	NE	**10.4** mph	-	N/A	Thunderstorm	Mostly Cloudy
9:37 PM	**62.1** °F	**57.0** °F	84%	**30.21** in	**2.5** mi	North	**11.5** mph	-	**0.10** in	Rain , Thunderstorm	Heavy Thunderstorms and Rain
9:52 PM	**61.0** °F	**55.9** °F	83%	**30.04** in	**3.0** mi	North	**13.8** mph	-	**0.27** in	Rain , Thunderstorm	Heavy Thunderstorms and Rain
10:14 PM	**61.0** °F	**57.0** °F	87%	**30.22** in	**10.0** mi	NNE	**12.7** mph	-	**0.02** in	Rain , Thunderstorm	Light Rain
10:22 PM	**61.0** °F	**55.9** °F	83%	**30.22** in	**10.0** mi	NE	**15.0** mph	-	**0.02** in		Mostly Cloudy
10:52 PM	**61.0** °F	**57.0** °F	87%	**30.01** in	**10.0** mi	NE	**15.0** mph	-	**0.02** in		Mostly Cloudy
11:44 PM	**61.0** °F	**57.0** °F	87%	**30.19** in	**10.0** mi	SSE	**12.7** mph	-	**0.00** in		Mostly Cloudy
11:52 PM	**61.0** °F	**57.0** °F	87%	**29.99** in	**10.0** mi	SE	**13.8** mph	-	**0.00** in		Mostly Cloudy

Albuquerque, NM

Albuquerque International Sunport

1:38 PM MDT on September 20, 2019 (GMT -0600)

Weather History for KABQ - September, 2019

September

19

2019

View
Thursday, September 19, 2019

Daily | Weekly | Monthly | Custom

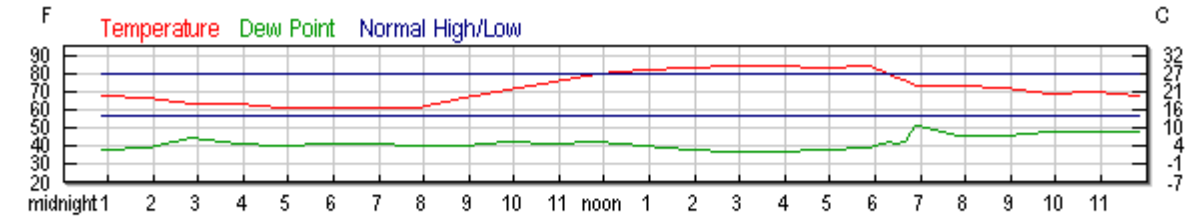
	Actual	Average	Record
Temperature			
Mean Temperature	**72** °F	-	
Max Temperature	**86** °F	-	- ()
Min Temperature	**58** °F	-	- ()
Cooling Degree Days	7		
Month to date cooling degree days	211		
Year to date cooling degree days	1475		
Growing Degree Days	22 (Base 50)		
Moisture			
Dew Point	**42** °F		

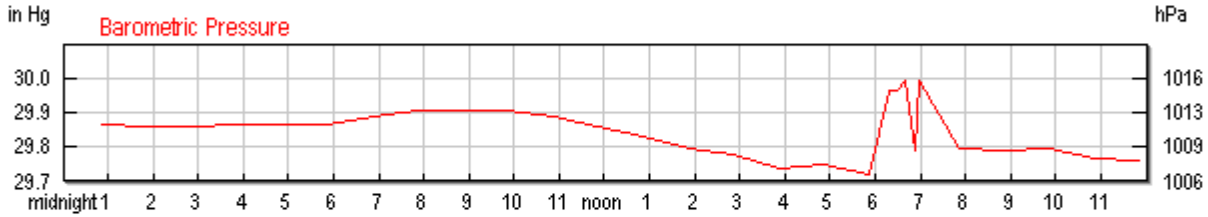
	Actual	Average	Record
Average Humidity	34		
Maximum Humidity	49		
Minimum Humidity	19		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.44		
Year to date precipitation	5.89		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.84** in		
Wind			
Wind Speed	**6** mph (NW)		
Max Wind Speed	**24** mph		
Max Gust Speed	**28** mph		
Visibility	**10** miles		
Events	Rain , Thunderstorm		

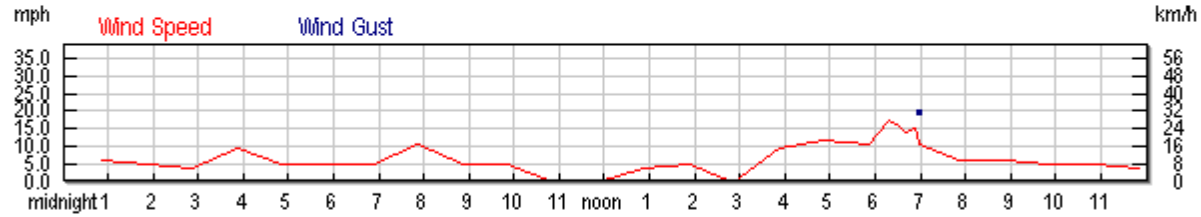
T = Trace of Precipitation, MM = Missing Value

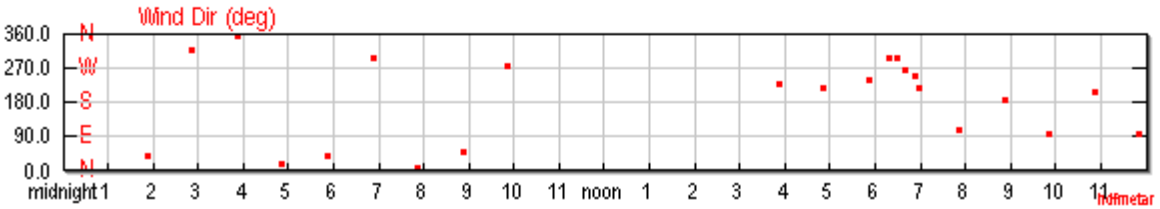
Source: NWS Daily Summary

Daily Weather History Graph









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Astronomy

Sep. 19, 2019	Rise	Set
Actual Time	6:52 AM MDT	7:07 PM MDT

Sep. 19, 2019	Rise	Set
Civil Twilight	6:26 AM MDT	7:33 PM MDT
Nautical Twilight	5:57 AM MDT	8:02 PM MDT
Astronomical Twilight	5:27 AM MDT	8:32 PM MDT
Moon	10:30 PM MDT (9/19)	11:47 AM MDT (9/19)
Length of Visible Light	13h 06m	
Length of Day	12h 15m	

Waning Gibbous, 74% of the Moon is Illuminated

Sep 19	Sep 21	Sep 28	Oct 5	Oct 13
Waning Gibbous	Last Quarter	New	First Quarter	Full

Hourly Weather History & Observations

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**68.0** °F	**37.9** °F	33%	**29.87** in	**10.0** mi	NNE	**5.8** mph	-	N/A		Clear
1:52 AM	**66.9** °F	**39.0** °F	36%	**29.86** in	**10.0** mi	NE	**4.6** mph	-	N/A		Clear
2:52 AM	**64.0** °F	**45.0** °F	50%	**29.86** in	**10.0** mi	NW	**3.5** mph	-	N/A		Partly Cloudy
3:52 AM	**63.0** °F	**41.0** °F	45%	**29.87** in	**10.0** mi	North	**9.2** mph	-	N/A		Partly Cloudy
4:52 AM	**61.0** °F	**39.9** °F	46%	**29.87** in	**10.0** mi	NNE	**4.6** mph	-	N/A		Partly Cloudy
5:52 AM	**61.0** °F	**41.0** °F	48%	**29.87** in	**10.0** mi	NE	**4.6** mph	-	N/A		Partly Cloudy
6:52 AM	**61.0** °F	**41.0** °F	48%	**29.89** in	**10.0** mi	WNW	**4.6** mph	-	N/A		Scattered Clouds
7:52 AM	**61.0** °F	**39.9** °F	46%	**29.91** in	**10.0** mi	North	**10.4** mph	-	N/A		Scattered Clouds
8:52 AM	**66.9** °F	**39.9** °F	37%	**29.91** in	**10.0** mi	NE	**4.6** mph	-	N/A		Scattered Clouds

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
9:52 AM	**71.1** °F	**42.1** °F	35%	**29.91** in	**10.0** mi	West	**4.6** mph	-	N/A		Partly Cloudy
10:52 AM	**75.9** °F	**41.0** °F	29%	**29.89** in	**10.0** mi	Calm	Calm	-	N/A		Partly Cloudy
11:52 AM	**80.1** °F	**42.1** °F	26%	**29.86** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
12:52 PM	**82.0** °F	**39.9** °F	22%	**29.83** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Partly Cloudy
1:52 PM	**82.9** °F	**37.9** °F	20%	**29.80** in	**10.0** mi	Variable	**4.6** mph	-	N/A		Partly Cloudy
2:52 PM	**84.0** °F	**37.0** °F	19%	**29.78** in	**10.0** mi	Calm	Calm	-	N/A		Partly Cloudy
3:52 PM	**84.9** °F	**37.0** °F	18%	**29.74** in	**10.0** mi	SW	**9.2** mph	**18.4** mph	N/A		Scattered Clouds
4:52 PM	**82.9** °F	**37.9** °F	20%	**29.75** in	**10.0** mi	SW	**11.5** mph	-	N/A		Mostly Cloudy
5:52 PM	**84.0** °F	**39.0** °F	20%	**29.72** in	**10.0** mi	WSW	**10.4** mph	-	N/A		Mostly Cloudy
6:19 PM	**80.1** °F	**42.1** °F	26%	**29.97** in	**10.0** mi	WNW	**17.3** mph	-	N/A		Mostly Cloudy
6:28 PM	**78.1** °F	**41.0** °F	27%	**29.97** in	**10.0** mi	WNW	**16.1** mph	-	N/A	Thunderstorm	Thunderstorm
6:41 PM	**77.0** °F	**42.1** °F	29%	**30.00** in	**10.0** mi	West	**13.8** mph	-	N/A		Mostly Cloudy
6:52 PM	**73.9** °F	**51.1** °F	45%	**29.79** in	**10.0** mi	WSW	**15.0** mph	**28.8** mph	**0.00** in	Rain	Light Rain
6:59 PM	**73.0** °F	**51.1** °F	46%	**30.00** in	**10.0** mi	SW	**10.4** mph	**19.6** mph	**0.00** in	Rain	Light Rain
7:52 PM	**73.9** °F	**46.0** °F	37%	**29.80** in	**10.0** mi	ESE	**5.8** mph	-	**0.00** in		Scattered Clouds
8:52 PM	**72.0** °F	**46.0** °F	40%	**29.79** in	**10.0** mi	South	**5.8** mph	-	N/A		Partly Cloudy
9:52 PM	**69.1** °F	**48.0** °F	47%	**29.80** in	**10.0** mi	East	**4.6** mph	-	N/A		Mostly Cloudy
10:52 PM	**70.0** °F	**48.0** °F	46%	**29.77** in	**10.0** mi	SSW	**4.6** mph	-	N/A		Scattered Clouds
11:52 PM	**68.0** °F	**48.0** °F	49%	**29.76** in	**10.0** mi	East	**3.5** mph	-	N/A		Scattered Clouds

Albuquerque, NM

Albuquerque International Sunport

11:35 AM MDT on October 04, 2019 (GMT -0600)

Weather History for KABQ - September, 2019

September

21

2019

View
Saturday, September 21, 2019

Daily | Weekly | Monthly | Custom

	Actual	Average	Record
Temperature			
Mean Temperature	**69** °F	-	
Max Temperature	**82** °F	-	- ()
Min Temperature	**55** °F	-	- ()
Cooling Degree Days	4		
Month to date cooling degree days	224		
Year to date cooling degree days	1488		
Growing Degree Days	18 (Base 50)		
Moisture			
Dew Point	**38** °F		

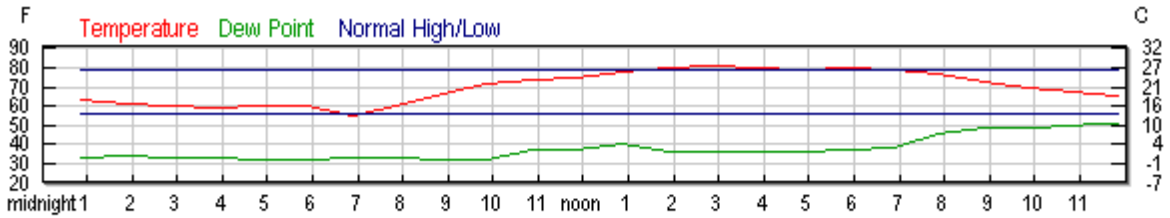
/

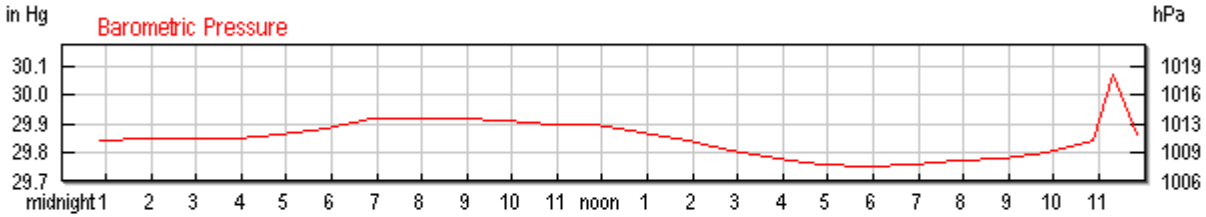
	Actual	Average	Record
Average Humidity	42		
Maximum Humidity	63		
Minimum Humidity	20		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.44		
Year to date precipitation	5.89		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**29.85** in		
Wind			
Wind Speed	**7** mph (South)		
Max Wind Speed	**26** mph		
Max Gust Speed	**34** mph		
Visibility	**10** miles		
Events	Rain		

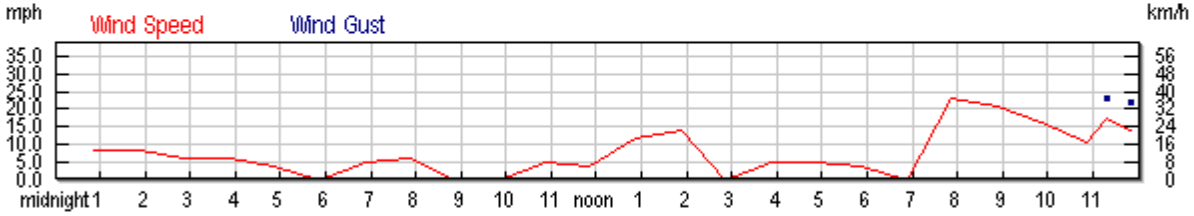
T = Trace of Precipitation, MM = Missing Value

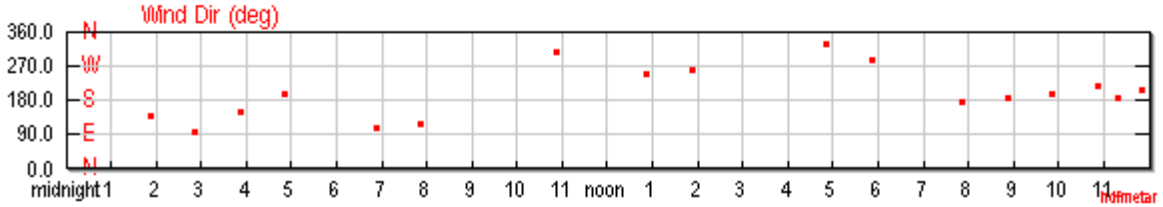
Source: NWS Daily Summary

Daily Weather History Graph









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Astronomy

Sep. 21, 2019	**Rise**	**Set**
Actual Time	6:53 AM MDT	7:04 PM MDT

Sep. 21, 2019	Rise	Set
Civil Twilight	6:28 AM MDT	7:30 PM MDT
Nautical Twilight	5:58 AM MDT	7:59 PM MDT
Astronomical Twilight	5:28 AM MDT	8:29 PM MDT
Moon	11:59 PM MDT (9/21)	1:48 PM MDT (9/21)
Length of Visible Light	13h 01m	
Length of Day	12h 11m	

Waning Gibbous, 54% of the Moon is Illuminated

Sep 21	Sep 21	Sep 28	Oct 5	Oct 13
Waning Gibbous	Last Quarter	New	First Quarter	Full

Hourly Weather History & Observations

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**63.0** °F	**33.1** °F	33%	**29.84** in	**10.0** mi	SE	**8.1** mph	-	N/A		Clear
1:52 AM	**61.0** °F	**34.0** °F	36%	**29.85** in	**10.0** mi	SE	**8.1** mph	-	N/A		Partly Cloudy
2:52 AM	**60.1** °F	**33.1** °F	36%	**29.85** in	**10.0** mi	East	**5.8** mph	-	N/A		Partly Cloudy
3:52 AM	**59.0** °F	**33.1** °F	38%	**29.85** in	**10.0** mi	SSE	**5.8** mph	-	N/A		Clear
4:52 AM	**60.1** °F	**32.0** °F	35%	**29.86** in	**10.0** mi	SSW	**3.5** mph	-	N/A		Clear
5:52 AM	**60.1** °F	**32.0** °F	35%	**29.88** in	**10.0** mi	Calm	Calm	-	N/A		Clear
6:52 AM	**55.0** °F	**33.1** °F	43%	**29.92** in	**10.0** mi	ESE	**4.6** mph	-	N/A		Partly Cloudy
7:52 AM	**60.1** °F	**33.1** °F	36%	**29.92** in	**10.0** mi	ESE	**5.8** mph	-	N/A		Partly Cloudy
8:52 AM	**66.0** °F	**32.0** °F	28%	**29.92** in	**10.0** mi	Calm	Calm	-	N/A		Partly Cloudy

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
9:52 AM	**72.0** °F	**32.0** °F	23%	**29.91** in	**10.0** mi	Calm	Calm	-	N/A		Partly Cloudy
10:52 AM	**73.9** °F	**37.0** °F	26%	**29.90** in	**10.0** mi	NW	**4.6** mph	-	N/A		Partly Cloudy
11:52 AM	**75.0** °F	**37.0** °F	25%	**29.90** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Partly Cloudy
12:52 PM	**78.1** °F	**39.9** °F	25%	**29.87** in	**10.0** mi	WSW	**11.5** mph	-	N/A		Partly Cloudy
1:52 PM	**80.1** °F	**36.0** °F	20%	**29.84** in	**10.0** mi	West	**13.8** mph	-	N/A		Partly Cloudy
2:52 PM	**81.0** °F	**36.0** °F	20%	**29.81** in	**10.0** mi	Calm	Calm	-	N/A		Scattered Clouds
3:52 PM	**80.1** °F	**36.0** °F	20%	**29.78** in	**10.0** mi	Variable	**4.6** mph	**18.4** mph	N/A		Scattered Clouds
4:52 PM	**79.0** °F	**36.0** °F	21%	**29.76** in	**10.0** mi	NNW	**4.6** mph	-	N/A		Scattered Clouds
5:52 PM	**80.1** °F	**37.0** °F	21%	**29.75** in	**10.0** mi	WNW	**3.5** mph	-	**0.00** in	Rain	Light Rain
6:52 PM	**79.0** °F	**37.9** °F	23%	**29.76** in	**10.0** mi	Calm	Calm	-	**0.00** in		Scattered Clouds
7:52 PM	**77.0** °F	**46.0** °F	33%	**29.77** in	**10.0** mi	South	**23.0** mph	**28.8** mph	N/A		Scattered Clouds
8:52 PM	**73.0** °F	**48.9** °F	42%	**29.78** in	**10.0** mi	South	**20.7** mph	-	N/A		Scattered Clouds
9:52 PM	**70.0** °F	**48.9** °F	47%	**29.80** in	**10.0** mi	SSW	**16.1** mph	-	N/A		Partly Cloudy
10:52 PM	**68.0** °F	**50.0** °F	52%	**29.84** in	**10.0** mi	SW	**10.4** mph	**20.7** mph	N/A		Partly Cloudy
11:20 PM	**66.0** °F	**51.1** °F	59%	**30.07** in	**10.0** mi	South	**17.3** mph	**23.0** mph	N/A		Partly Cloudy
11:52 PM	**64.9** °F	**51.1** °F	61%	**29.86** in	**10.0** mi	SSW	**13.8** mph	**21.9** mph	N/A		Partly Cloudy

Albuquerque, NM

Albuquerque International Sunport

11:38 AM MDT on October 04, 2019 (GMT -0600)

Weather History for KABQ - September, 2019

September

23

2019

View
Monday, September 23, 2019

Daily | Weekly | Monthly | Custom

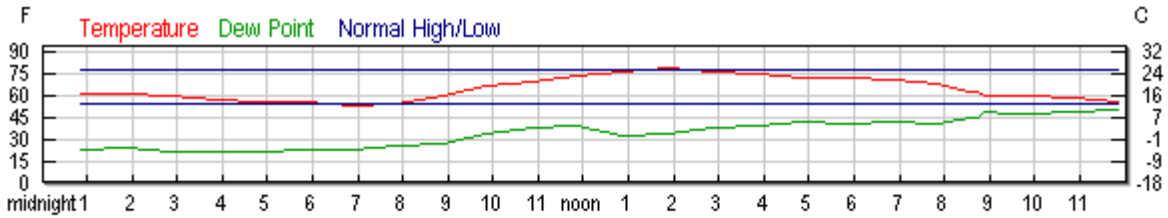
	Actual	Average	Record
Temperature			
Mean Temperature	**66** °F	-	
Max Temperature	**79** °F	-	- ()
Min Temperature	**52** °F	-	- ()
Cooling Degree Days	1		
Month to date cooling degree days	226		
Year to date cooling degree days	1490		
Growing Degree Days	16 (Base 50)		
Moisture			
Dew Point	**37** °F		

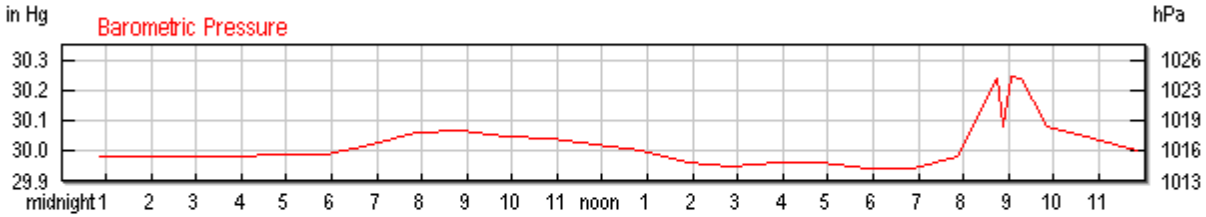
	Actual	Average	Record
Average Humidity	50		
Maximum Humidity	80		
Minimum Humidity	19		
Precipitation			
Precipitation	-	-	- ()
Month to date precipitation	0.45		
Year to date precipitation	5.90		
Snow			
Snow	**0.00** in	-	- ()
Month to date snowfall	0.0		
Snow Depth	**0.00** in		
Sea Level Pressure			
Sea Level Pressure	**30.03** in		
Wind			
Wind Speed	**9** mph (NNW)		
Max Wind Speed	**29** mph		
Max Gust Speed	**39** mph		
Visibility	**10** miles		
Events	Rain , Thunderstorm		

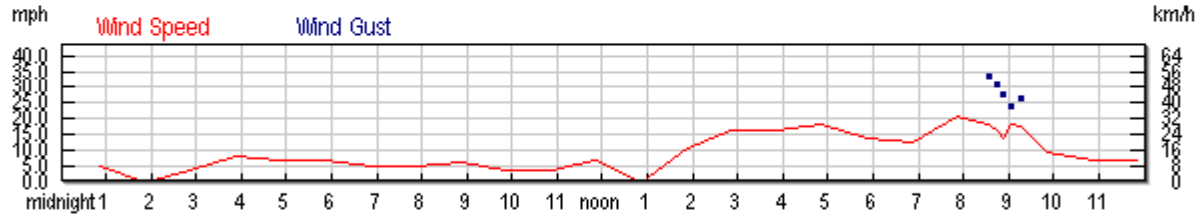
T = Trace of Precipitation, MM = Missing Value

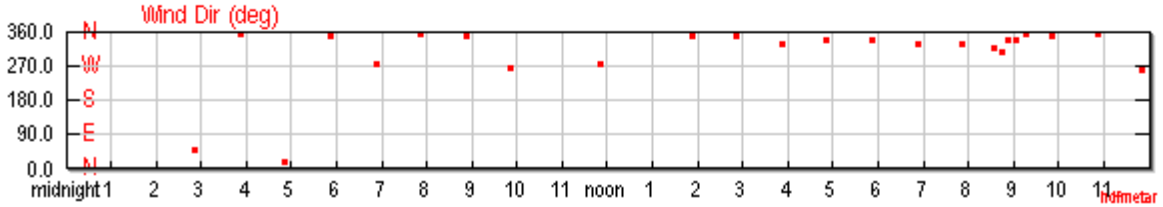
Source: NWS Daily Summary

Daily Weather History Graph









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Astronomy

Sep. 23, 2019	**Rise**	**Set**
Actual Time	6:55 AM MDT	7:02 PM MDT

Sep. 23, 2019	Rise	Set
Civil Twilight	6:29 AM MDT	7:27 PM MDT
Nautical Twilight	6:00 AM MDT	7:56 PM MDT
Astronomical Twilight	5:30 AM MDT	8:26 PM MDT
Moon	12:55 AM MDT (9/23)	3:43 PM MDT (9/23)
Length of Visible Light	12h 57m	
Length of Day	12h 06m	

Waning Crescent, 32% of the Moon is Illuminated

Sep 23	Sep 28	Oct 5	Oct 13	Oct 21
Waning Crescent	New	First Quarter	Full	Last Quarter

Hourly Weather History & Observations

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
12:52 AM	**62.1** °F	**23.0** °F	22%	**29.98** in	**10.0** mi	NNW	**4.6** mph	-	N/A		Clear
1:52 AM	**62.1** °F	**25.0** °F	24%	**29.98** in	**10.0** mi	Calm	Calm	-	N/A		Clear
2:52 AM	**60.1** °F	**21.9** °F	23%	**29.98** in	**10.0** mi	NE	**3.5** mph	-	N/A		Clear
3:52 AM	**57.9** °F	**21.9** °F	25%	**29.98** in	**10.0** mi	North	**8.1** mph	-	N/A		Clear
4:52 AM	**57.0** °F	**21.9** °F	26%	**29.99** in	**10.0** mi	NNE	**6.9** mph	-	N/A		Partly Cloudy
5:52 AM	**55.9** °F	**23.0** °F	28%	**29.99** in	**10.0** mi	North	**6.9** mph	-	N/A		Partly Cloudy
6:52 AM	**54.0** °F	**24.1** °F	31%	**30.02** in	**10.0** mi	West	**4.6** mph	-	N/A		Partly Cloudy
7:52 AM	**55.0** °F	**26.1** °F	33%	**30.06** in	**10.0** mi	North	**4.6** mph	-	N/A		Partly Cloudy
8:52 AM	**60.1** °F	**27.0** °F	28%	**30.07** in	**10.0** mi	North	**5.8** mph	-	N/A		Partly Cloudy

Time (MDT)	Temp.	Dew Point	Humidity	Pressure	Visibility	Wind Dir	Wind Speed	Gust Speed	Precip	Events	Conditions
9:52 AM	**66.9** °F	**34.0** °F	30%	**30.05** in	**10.0** mi	West	**3.5** mph	-	N/A		Scattered Clouds
10:52 AM	**70.0** °F	**39.0** °F	32%	**30.04** in	**10.0** mi	Variable	**3.5** mph	-	N/A		Partly Cloudy
11:52 AM	**73.9** °F	**39.9** °F	29%	**30.02** in	**10.0** mi	West	**6.9** mph	-	N/A		Partly Cloudy
12:52 PM	**77.0** °F	**33.1** °F	20%	**30.00** in	**10.0** mi	Calm	Calm	-	N/A		Mostly Cloudy
1:52 PM	**79.0** °F	**34.0** °F	20%	**29.96** in	**10.0** mi	North	**10.4** mph	-	N/A		Mostly Cloudy
2:52 PM	**77.0** °F	**39.0** °F	25%	**29.95** in	**10.0** mi	North	**16.1** mph	-	N/A		Partly Cloudy
3:52 PM	**75.9** °F	**39.9** °F	27%	**29.96** in	**10.0** mi	NNW	**16.1** mph	**24.2** mph	N/A		Mostly Cloudy
4:52 PM	**73.0** °F	**42.1** °F	33%	**29.96** in	**10.0** mi	NNW	**18.4** mph	-	N/A		Mostly Cloudy
5:52 PM	**73.0** °F	**41.0** °F	31%	**29.94** in	**10.0** mi	NNW	**13.8** mph	-	N/A		Scattered Clouds
6:52 PM	**71.1** °F	**42.1** °F	35%	**29.94** in	**10.0** mi	NNW	**12.7** mph	-	N/A		Scattered Clouds
7:52 PM	**68.0** °F	**41.0** °F	37%	**29.98** in	**10.0** mi	NNW	**20.7** mph	**28.8** mph	N/A		Mostly Cloudy
8:34 PM	**63.0** °F	**45.0** °F	52%	**30.19** in	**10.0** mi	NW	**18.4** mph	**33.4** mph	N/A	Thunderstorm	Mostly Cloudy
8:44 PM	**63.0** °F	**46.0** °F	54%	**30.24** in	**10.0** mi	NW	**16.1** mph	**31.1** mph	N/A	Thunderstorm	Thunderstorm
8:52 PM	**61.0** °F	**48.9** °F	64%	**30.08** in	**10.0** mi	NNW	**13.8** mph	**27.6** mph	**0.01** in	Rain , Thunderstorm	Thunderstorms and Rain
9:04 PM	**61.0** °F	**48.9** °F	64%	**30.25** in	**10.0** mi	NNW	**18.4** mph	**24.2** mph	**0.00** in	Rain , Thunderstorm	Light Rain
9:17 PM	**60.1** °F	**48.0** °F	64%	**30.24** in	**10.0** mi	North	**17.3** mph	**26.5** mph	**0.00** in		Mostly Cloudy
9:52 PM	**60.1** °F	**48.0** °F	64%	**30.08** in	**10.0** mi	North	**9.2** mph	-	**0.00** in	Rain	Light Rain
10:52 PM	**59.0** °F	**50.0** °F	72%	**30.04** in	**10.0** mi	North	**6.9** mph	-	**0.00** in		Mostly Cloudy
11:52 PM	**57.0** °F	**51.1** °F	81%	**30.00** in	**10.0** mi	West	**6.9** mph	-	N/A		Mostly Cloudy

/

6001 Indian School Road NE, Suite 310
Albuquerque, New Mexico 87110
tel: 505-243-3200
fax: 505-243-2700

November 5, 2019

Ms. Shellie Eaton, PE
Senior Engineer
City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Subject: Visual Stormwater Monitoring at the City of Albuquerque Facilities
Third Quarter 2019
CDM Smith Project No: 0668-229726.VISUAL MONITORING

Dear Ms. Eaton:

CDM Smith Inc. (CDM Smith) performed visual stormwater monitoring activities at select City of Albuquerque (CABQ) outfalls during the Third Quarter 2019. **Table 1** identifies the CABQ facilities for which CDM Smith is responsible for conducting quarterly visual monitoring. Monthly precipitation data from Weather Underground (WU; Albuquerque International Sunport Station) for the Third Quarter 2019 (July through September) is included in **Attachment A**. Daily weather reports for days when precipitation was observed (based on WU data) are included in **Attachment B**. The events with measurable precipitation occurring during this time are summarized in **Table2**.

Table 1 - City of Albuquerque Facilities - CDM Smith Quarterly Visual Monitoring

Zone	City of Albuquerque Facility
Zone 1	Los Altos Golf Course
	Lomas Fuel Station
	Arroyo Street Maintenance
	Street Satellite #1
	Los Altos Trails Parks Management
	Los Altos Parks Management
Zone 2	Daytona Transit Center
	Ladera Golf Course
	Streets Satellite #3
	Don Reservoir Convenience Center
Zone 3	Puerto del Sol Golf Course
	Yale Transit Center
Zone 4	Montessa Park Open Space
	Montessa Park Convenience Center

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Table 2 - Third Quarter 2019 Precipitation Events (July-September)

Date	Event Start Time	Storm Duration	Total Precipitation	Notes
7/1/2019	**3:30 PM**	**1 hr**	**0.24**	**Fast and heavy rain in specific parts of the city. Samples were collected for Zone 3. The other zones either did not receive enough rainfall to produce runoff or were already closed for the day.**
7/6/2019*	1:00 PM	2 hr	0.69	Heavy rain throughout the city starting around 1 PM. Non-qualifying storm event due to event falling outside of normal operating hours.
7/7/2019*	2:00 PM	< 15 min	0.01	Light rain across the city, minimal to trace amounts of rain. Non-qualifying event due to low precipitation total.
7/13/2019*	Evening	Unknown	0.4	Heavy rain in the north east quadrant of the city. It did not rain in any of the four zones. Non-qualifying event due to event falling outside of normal operating hours.
7/14/2019*	Evening	Unknown	0.73	Heavy rain in the north west quadrant of the city. It rained in part of Zone 2 - samples will not be collected in this zone until after Wednesday per the 72 hr rule. Non-qualifying storm event due to event falling outside of normal operating hours.
7/16/2019	5:00 PM	< 30 min	0.03	Light rain across the city, minimal to trace amounts of rain. Non-qualifying event due to event falling outside of normal operating hours and not enough rainfall.
7/25/2019	6:30 PM	3 hr	1.06	Heavy rain throughout the city. Non-qualifying event due to event falling outside of normal operating hours.
7/26/2019	6:30 PM	0.5 hr	0.01 - 0.81	Heavy rain scattered throughout the city - some zones received more rain than others. Non-qualifying event due to event falling outside of normal operating hours
7/27/2019*	4:00 PM	< 15 min	0.01 - 0.33	Scattered rain throughout the city - some zones received more rain than others. Non-qualifying event due to event falling outside of normal operating hours
8/2/2019	9:00 PM	<30 min	0.02	Scattered rain throughout the city - some zones received more rain than others. Non-qualifying event due to event falling outside of normal operating hours
8/3/2019*	4:30 PM	2 hr	0.31	Scattered rain throughout the city - some zones received more rain than others. Non-qualifying event due to event falling outside of normal operating hours
8/11/2019*	5:00 PM	1 hr	0.05	Scattered rain throughout the city - some zones received more rain than others. Non-qualifying event due to event falling outside of normal operating hours

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Table 2 - Third Quarter 2019 Precipitation Events (July-September)

Date	Event Start Time	Storm Duration	Total Precipitation	Notes
8/20/2019	Evening	Unknown	0.01-0.07	Scattered rain throughout the city - less than 0.1 inches in all zones. Non-qualifying event due to event falling outside of normal operating hours
8/21/2019	Evening	Unknown	0.01-0.07	Scattered rain throughout the city - less than 0.1 inches in all zones. Non-qualifying event due to event falling outside of normal operating hours
8/23/2019	4:00 PM	1 hr	0.02	Light rain, non-qualifying event due to not enough rainfall.
9/3/2019	5:30 PM	<30 min	0.02 - 0.08	Scattered rain throughout the city - some zones received more rain than others. Non-qualifying event due to event falling outside of normal operating hours
9/15/2019*	8:30 AM	7 hr	0.12	Scattered rain throughout the city - all zones received between 0.1 and 0.2 inches. Non-qualifying event due to event falling outside of normal operating hours

Note: Shaded rows indicate a non-qualifying event. Events in bold text indicate qualifying events. Stars indicate a weekend event. Any events with a total accumulation of 0.00" or T (Trace) were not included in this table. Storm Duration is based on hourly weather data. All weather data was sourced from Weather Underground

Certain criteria regarding the precipitation event must be met to qualify as an assessment event. Visual assessment of stormwater must occur:

- Within 30 minutes of the start of stormwater discharge (or as soon as practicable thereafter); and,
- At least 72 hours after the previous stormwater discharge event.

An additional limitation on the timing of sampling activities within the CABQ is described in the City's Storm Water Management Plan (SWMP, December 2016). Section 13.3.1.2 of the SWMP limits sampling to normal business hours – Monday through Friday, 7:30 am to 5:00 pm and sampling is not required on the following observed holidays: Thanksgiving Day and Christmas Day through New Year's Day. Therefore, storm events that occur outside of normal business hours or on a holiday are not considered qualifying events.

As seen in **Table 2**, of the 17 precipitation events with measurable precipitation that occurred in the Third Quarter of 2019, only one event (7/1/19) were considered qualifying per the criteria listed above. Furthermore, based on CDM Smith's past visual monitoring experience for CABQ facilities, stormwater discharges from facilities typically does not occur for precipitation events of less than 0.1 inches of measurable rainfall. There were eight events in the third quarter with

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precipitation greater than 0.1 inch of measurable rainfall that did not meet all the qualifying criteria for an assessment to take place.

CDM Smith's subcontractor, Bohannan Houston, Inc. (BHI) mobilized to all Zones on 7/1/19 to perform visual stormwater monitoring inspections at facility outfalls during precipitation events. As identified in **Table 3**, which summarizes Calendar Year 2019 visual stormwater monitoring, 2 of the 21 outfalls were monitored during the Third Quarter of 2019.

Table 3 - Calendar Year 2019 Visual Stormwater Monitoring

Zone	Facility	Outfalls	Quarter 1[1]	Quarter 2	Quarter 3	Quarter 4	Events Remaining[2]
1	Los Altos Golf Course	LA1	✓	✓	-		2
		LA2	✓	✓	-		2
	Lomas Fuel Station	L1	✓	✓	-		2
	Arroyo Street Maintenance	AM1	✓	✓	-		2
	Street Satellite #1	SS1A	-	✓	-		3
		SS1B	✓	✓	-		2
	Los Altos Trails Parks Management	LAM1	✓	✓	-		2
	Los Altos Parks Management	LAP1	-	-	-		4
2	Daytona Transit Center	D1	-	✓✓	-		2
		D2	✓	✓	-		2
	Ladera Golf Course	LGC1	-	-	-		4
		LGC2	-	-	-		4
	Streets Satellite #3	SS3	-	✓✓	-		2
	Don Reservoir Convenience Center	DR01	-	✓✓	-		2
3	Puerto del Sol Golf Course	PDS1	-	✓	✓		2
		PDS2	-	✓✓	-		2
	Yale Transit Center	Y1	✓	✓	✓		1
4	Montessa Park Open Space	MP1	✓	✓	-		2
		MP2	-	✓	-		3
	Montessa Park Convenience Center	MP01	✓	✓	-		2
		MP02	-	✓	-		3

Notes:

1. A "✓" indicates that a visual monitoring event was performed for the indicated outfall during the calendar quarter, "✓✓" indicates two visual monitoring events were performed during the quarter.
2. This column indicates the number of events remaining for Calendar Year 2019.

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Visual Monitoring observations for each of the eighteen outfalls observed during July 1st, 2019 are summarized below. Photographs of the visual monitoring samples are included in **Attachment D**.

- **Outfall LA1** (Los Altos Golf Course) is a concrete culvert discharging into riprap and vegetation before entering the storm drain channel. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*
- **Outfall LA2** (Los Altos Golf Course) collects runoff from the Los Altos Golf Course fueling, maintenance, and storage areas before discharging through the lowest ground elevation on the west of the facility premises. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*
- **Outfall L1** (Lomas Fuel Station) collects runoff from the CABQ fueling station, before discharging through the lowest ground elevation on the northwest of the facility premises. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*
- **Outfall AM1** (Arroyo Maintenance) is a culvert draining from the parking lot, located on the northwest corner of the facility, discharging to Altez Street. The outfall is surrounded by a waddle on the inside of the facility fence. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*
- **SS1A** (Street Satellite #1 A) is a wattle around a 4ft x 4ft gate that drains a parking lot. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*
- **SS1B** (Street Satellite #1 B) is a wattle around a 4ft x 4ft gate near a covered structure that drains a parking lot. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*
- **Outfall LAM1** (Los Altos Trails Parks Management) is a storm drain which collects runoff from the facility parking lot area before discharging to the arroyo and storm drain channel on the northeast corner of the facility premises. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*
- **Outfall D1** (Daytona Westside) is a storm drain manhole which collects runoff from the employee parking area. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*
- **Outfall D2** (Daytona Westside) is a storm drain manhole which collects runoff from the bus parking lot and maintenance building areas. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*
- **Outfall LGC1** (Ladera Golf Course) is a concrete riser on the north end of the golf course that drains a stormwater detention pond. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*

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- **Outfall LCG2** (Ladera Golf Course) is a runoff point before stormwater from the parking area enters the golf course pond. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*
- **SS3** (Streets Satellite #3) is a concrete spill way that discharges into a stormwater detention pond. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*
- **Outfall DR01** (Don Reservoir Convenience Center) is an inlet on the east side of the property that drains the vehicle storage area and all solid and hazardous municipal waste collection/storage areas. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*
- **Outfall Y1** (Yale Transit Center) is a grate leading to a storm drain which collects runoff from the bus parking lot and maintenance building areas. *Sampling Event 7/1/19***:** The sample was collected under moderate flow conditions. The sample was light brown, very cloudy, with suspended and settled solids. Both a foam and a fuel odor were present. Trash was also observed at the inlet of the drain.
- **PDS1** (Puerto del Sol Golf Course) is a grated inlet that drains the north-east corner of the golf course. *Sampling Event 7/1/19***:** The sample was collected under moderate flow conditions. The sample was brown, very cloudy with suspended and settled solids. No sheen or foam was present, but the smell of decaying vegetation was observed.
- **PDS2** (Puerto del Sol Golf Course) is a grated inlet that drains the east end of the golf course and the parking area. *Outfall was not sampled this quarter due to a locked access point.*
- **Outfall MP1** (Montessa Park Open Space) is a metal culvert collecting runoff from the facility parking lot and warehouse areas before discharging to the Tijeras Arroyo located on the northeast of the facility premises. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*
- **Outfall MP2** (Montessa Park Open Space) is a metal pipe/concrete culvert collecting runoff from the entire facility before discharging into the Tijeras Arroyo. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*
- **Outfall MP01** (Montessa Park Convenience Center) is a lowest-elevation point on the premises which collects runoff from the waste transfer and storage areas before discharging to Los Picaros Road. *Outfall was not sampled this quarter due to the storm ending before BHI could mobilize the site.*

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CDM Smith appreciates the opportunity of providing environmental consulting services to the CABQ. Please contact CDM Smith at (505) 243-3200 if you have any questions or comments regarding this report.

Sincerely,

Kelsey Bicknell
Project Engineer
CDM Smith Inc.

Dacia Tucholke
Project Manager
CDM Smith Inc.

Attachments:

A – Monthly Precipitation Summary for Third Quarter 2019 (Weather Underground, July 1, 2019 to September 30, 2019)
B – Daily Weather Reports for Precipitation Events Occurring in Third Quarter 2019 (Weather Underground)
C – Visual Stormwater Monitoring Inspection Forms
D – Stormwater Monitoring Sampling Photographs

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ATTACHMENT A

MONTHLY PRECIPITATION SUMMARY FOR THIRD QUARTER 2019
(WEATHER UNDERGROUND, JULY 1, 2019 TO SEPTEMBER 30, 2019)

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Temperature (° F)	Max	Average	Min	
Dew Point	65	47.12	15	
Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	1.06	0.06	0.00	1.94
Snowdepth	0.00	0.00	0.00	0.00
Wind	Max	Average	Min	
Wind	32	8.74	0	
Gust Wind	51	4.29	0	
Sea Level Pressure	Max	Average	Min	
Sea Level Pressure	24.99	24.77	24.57	

Daily Observations JULY 2019 (Albuquerque International Sunport)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipation (in)
Jul	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	93	76.4	69	59	50.5	44	64	42.3	19	24	8.3	0	24.8	24.7	24.7	0.00
2	91	79.1	66	55	47.9	37	63	37.5	15	22	8.4	0	24.8	24.7	24.6	0.15
3	94	81.0	67	50	38.0	22	51	26.0	8	13	4.7	0	24.7	24.6	24.6	0.00
4	93	80.7	65	37	31.5	24	27	17.6	10	13	6.7	0	24.7	24.7	24.6	0.00
5	94	83.8	73	47	28.8	23	34	14.7	8	18	9.3	3	24.8	24.8	24.7	0.00
6	82	70.5	63	61	54.9	47	90	61.0	36	25	15.0	0	24.9	24.9	24.8	0.00
7	79	69.5	63	61	57.3	53	90	67.0	42	13	6.5	0	24.9	24.8	24.7	0.69

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipation (in)
8	90	76.0	63	60	42.2	15	84	42.2	7	20	9.2	0	24.8	24.7	24.6	0.01
9	90	76.9	62	34	27.2	22	33	17.7	9	10	4.8	0	24.9	24.8	24.7	0.00
10	97	82.1	65	49	30.6	23	32	17.5	8	28	9.5	0	24.9	24.8	24.8	0.00
11	94	81.8	72	58	47.8	41	52	32.3	16	22	11.0	0	24.9	24.9	24.8	0.00
12	94	80.9	68	49	45.6	38	50	31.2	15	29	8.0	0	24.9	24.8	24.7	0.00
13	94	83.8	71	50	46.9	42	44	28.8	17	31	9.7	0	24.8	24.8	24.7	0.00
14	95	84.2	73	54	49.3	43	51	31.5	17	32	8.0	0	24.9	24.8	24.7	0.00
15	95	83.3	72	57	51.3	46	57	34.9	19	18	7.9	0	24.8	24.8	24.7	0.00
16	95	81.8	75	58	51.6	47	55	36.2	19	24	6.7	0	24.8	24.7	24.7	0.00
17	94	82.1	69	60	50.4	42	68	38.4	17	20	7.2	0	24.8	24.7	24.7	0.03
18	99	85.3	70	46	39.5	31	39	22.5	9	17	7.3	0	24.8	24.7	24.6	0.00
19	100	84.0	69	49	43.0	34	40	25.9	10	26	9.8	0	24.7	24.7	24.6	0.00
20	99	84.7	71	47	44.4	41	41	26.0	14	15	6.1	0	24.7	24.7	24.6	0.00
21	96	85.5	78	52	47.4	40	39	27.5	15	32	12.2	0	24.8	24.7	24.7	0.00
22	88	78.8	69	57	52.2	49	65	40.3	28	28	17.5	5	25.0	24.9	24.8	0.00
23	86	76.7	68	58	55.0	52	65	48.2	31	17	9.9	0	25.0	24.9	24.8	0.00
24	91	79.8	68	57	51.7	45	59	39.6	24	12	5.8	0	24.9	24.9	24.8	0.00
25	94	77.5	66	65	54.5	46	93	50.2	22	30	11.0	3	24.9	24.8	24.7	0.00
26	90	75.4	66	63	59.3	55	84	60.2	31	25	7.8	0	24.9	24.8	24.8	1.06
27	91	78.3	68	62	57.4	51	81	51.7	29	23	7.3	0	24.9	24.8	24.8	0.00
28	94	80.7	68	60	53.2	43	76	42.8	18	24	8.4	0	24.8	24.8	24.7	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipation (in)
29	92	81.8	74	56	49.1	40	48	34.0	17	26	13.9	5	24.9	24.8	24.7	0.00
30	92	82.1	72	55	51.1	45	53	35.7	22	14	5.3	0	24.9	24.8	24.7	0.00
31	92	82.1	72	59	51.2	45	59	35.9	21	21	7.9	0	24.9	24.8	24.7	0.00

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Note:
The July monthly records shown in this document are off by one day (and thus do not match the daily weather documentation). All of the precipitation values are correct, but shifted forward by one day.
For example, this document indicates that 0.69 in of rain fell on July 7th. This storm event actually occurred on July 6th. See the daily weather documentation and the Quarterly Precipitation Events spreadsheet for accurate dates.

Also, any dates on this document that show 0.0 in. precipitation indicate days where other zones received rain, but not at the Sunport. These precipitation values are recorded through CoCoRaHS in the daily weather documentation.

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+Try+Not+To+Smile+When+You+See+Her+Now&utm_content=http%3A%2F%2Fcdn.taboola.com%2Flibtrc%2Fstatic%2Fthumbnails%2F

Katharine Ross Is Almost 80, Try Not To Smile When You See Her Now
MisterStocks

(http://misterstocks.com/trending/who-are-the-richest-celebrities-from-hollywoods-golden-age?utm_source=taboola&utm_medium=theweatherchannel-wunderground&utm_campaign=2936975&utm_term=Katharine+Ross+Is+Almost+80%2C+Try+Not+To+Smile+When+You+See+Her+Now&utm_content=http%3A%2F%2Fcdn.taboola.com%2Flibtrc%2Fstatic%2Fthumbnails%2F
(https://plarium.com/landings/en/throne/cave_view_f002r_a_m_prelp008?publisherID=282392730&placement=theweatherchannel-wunderground&click_Id=CjA5OTIwMWZiMy01NWNlLTRiNTgtYTdiZC00MjczYTVjNTFlMTgtdHVjdDQ3YTgxNDQSF3BsYXJpdW1ldXJvcGUtdGhyb25lLXNj&adpartnerset=2180187&plid=131828&pxl=taboola_fr)

Play this for 1 minute and see why everyone is addicted!
Throne: Free Online Games

(https://plarium.com/landings/en/throne/cave_view_f002r_a_m_prelp008?publisherID=282392730&placement=theweatherchannel-wunderground&click_Id=CjA5OTIwMWZiMy01NWNlLTRiNTgtYTdiZC00MjczYTVjNTFlMTgtdHVjdDQ3YTgxNDQSF3BsYXJpdW1ldXJvcGUtdGhyb25lLXNj&adpartnerset=2180187&plid=131828&pxl=taboola_fr)
(https://wikibuy.com/blog/if-you-ever-order-food-delivery-youre-going-to-love-this-discount-hack-5e54e8c0ab4c?hno=true&utm_source=jaguar11&utm_campaign=2604914&utm_term=263773597)

This Checkout Trick Can Drop Your In-n-Out total Instantly
Wikibuy

Temperature (° F)	Max	Average	Min
Dew Point	65	47.65	23

Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.31	0.01	0.00	0.41
Snowdepth	0.00	0.00	0.00	0.00

Wind	Max	Average	Min
Wind	30	7.8	0
Gust Wind	45	3.1	0

Sea Level Pressure	Max	Average	Min
Sea Level Pressure	24.91	24.76	24.61

Daily Observations AUGUST 2019 (Albuquerque International Sunport)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipation (in)
Aug	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	93	80.5	68	60	54.3	46	64	43.2	21	22	8.6	0	24.9	24.8	24.7	0.01
2	93	78.4	67	62	56.2	51	76	49.1	24	21	6.9	0	24.9	24.8	24.7	0.00
3	92	77.2	67	65	58.2	53	90	54.6	28	24	10.1	0	24.9	24.8	24.8	0.02
4	87	76.9	66	63	58.5	53	90	55.9	33	21	7.7	0	24.9	24.8	24.8	0.31
5	93	81.2	67	59	54.8	49	73	43.3	22	10	5.0	0	24.9	24.8	24.7	0.00
6	88	79.3	70	58	55.2	53	65	44.2	32	29	12.7	0	24.8	24.8	24.8	0.00
7	90	77.5	67	58	54.6	51	73	47.7	26	17	6.8	0	24.8	24.8	24.7	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipation (in)
8	92	79.4	68	57	53.5	50	65	42.8	25	26	7.6	0	24.8	24.7	24.7	0.00
9	90	77.8	70	63	56.2	50	78	50.1	26	30	9.3	0	24.8	24.7	24.7	0.00
10	87	76.2	67	62	56.0	49	84	53.0	28	16	6.9	0	24.8	24.8	24.7	0.00
11	87	73.8	67	61	56.5	53	78	56.2	32	20	5.8	0	24.8	24.8	24.7	0.00
12	91	78.1	65	61	51.9	41	84	46.7	17	12	6.5	3	24.8	24.8	24.7	0.05
13	93	80.6	68	53	44.2	36	57	31.0	13	9	5.3	0	24.9	24.8	24.8	0.00
14	87	77.5	66	58	48.6	40	60	37.8	20	24	11.7	0	24.9	24.9	24.8	0.00
15	92	75.3	63	53	47.5	38	67	41.5	17	18	6.4	0	24.9	24.8	24.8	0.00
16	94	79.0	62	47	39.1	30	52	27.5	11	12	5.0	0	24.8	24.7	24.6	0.00
17	93	80.2	67	41	34.2	23	37	20.5	8	22	6.6	0	24.7	24.7	24.6	0.00
18	93	79.9	65	40	32.4	27	36	19.7	10	9	5.5	0	24.8	24.7	24.7	0.00
19	94	82.0	67	45	35.8	30	36	20.4	12	15	7.8	0	24.8	24.8	24.7	0.00
20	95	81.9	71	49	44.0	33	40	27.6	11	24	9.1	0	24.8	24.8	24.7	0.00
21	94	78.0	67	55	47.9	39	57	37.3	15	28	8.4	0	24.8	24.8	24.7	0.00
22	91	78.3	62	54	46.0	37	75	36.9	15	24	7.9	0	24.8	24.7	24.6	0.00
23	92	79.9	68	53	46.0	34	55	32.6	15	26	9.4	0	24.8	24.7	24.6	0.00
24	94	79.3	65	51	39.3	29	54	28.2	10	13	5.3	0	24.8	24.7	24.7	0.02
25	96	81.1	65	36	33.4	31	31	19.0	11	12	4.6	0	24.8	24.7	24.6	0.00
26	98	84.2	69	38	34.4	31	25	17.5	11	18	5.9	0	24.7	24.7	24.6	0.00
27	95	81.3	71	59	54.3	42	61	41.5	18	28	18.5	3	24.8	24.7	24.7	0.00
28	94	78.9	68	60	52.4	41	73	44.8	17	26	9.0	0	24.9	24.8	24.7	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipation (in)
29	93	80.4	68	47	42.3	25	45	28.2	9	18	7.3	0	24.8	24.8	24.7	0.00
30	95	80.8	67	54	44.5	35	53	31.0	13	17	6.7	0	24.8	24.8	24.7	0.00
31	94	80.9	70	51	45.2	29	46	30.9	10	24	7.4	0	24.9	24.8	24.7	0.00

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Note:
The August monthly records shown in this document are off by one day (and thus do not match the daily weather documentation). All of the precipitation values are correct, but shifted forward by one day.
For example, this document indicates that 0.69 in of rain fell on July 7th. This storm event actually occurred on July 6th. See the daily weather documentation and the Quarterly Precipitation Events spreadsheet for accurate dates.

Also, any dates on this document that show 0.0 in. precipitation indicate days where other zones received rain, but not at the Sunport. These precipitation values are recorded through CoCoRaHS in the daily weather documentation.

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wunderground&campaign=%7Bcampaign%7D&thumbnail=http%3A%2F%2Fcdn.taboola.com%2Flibtrc%2Fstatic%2Fthumbnails%2F20b438e86fc0ab8e955d9f3711518c34.jpg&title=CPAP+Makers+Scrambling+After+New+Snor
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One Thing All Liars Have in Common, Brace Yourself
TruthFinder People Search Subscription

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(http://trk.solarusa.expert/ae238788-704c-4da6-8b56-8d148bf4c745?campaignid=2206650&site=theweatherchannel-
wunderground&thumbnail=http%3A%2F%2Fcdn.taboola.com%2Flibtrc%2Fstatic%2Fthumbnails%2F082dce66879ccf0685a37589900460ee.png&title=New+Mexico+-
+New+Program+Giving+Solar+Panels+to+Homeowners+With+Electricity+Bills+Over+%24100%2Fmth&item=218376893&timestamp=2019-09-
30+16%3A30%3A46&platform=Desktop&taboolaclickid=CjA5OTIwMWZiMy01NWNlLTRiNTgtYTdiZC00MjczYTVjNTFlMTgtdHVjdDQ3YTgxNDQSHGFkc3Bhcmt4ZmluYW5jZS1maW5hbmNldXMtc2M)

New Mexico - New Program Giving Solar Panels to Homeowners With Electricity Bills Over $100/mth
Solar Solutions

(http://trk.solarusa.expert/ae238788-704c-4da6-8b56-8d148bf4c745?campaignid=2206650&site=theweatherchannel-
wunderground&thumbnail=http%3A%2F%2Fcdn.taboola.com%2Flibtrc%2Fstatic%2Fthumbnails%2F082dce66879ccf0685a37589900460ee.png&title=New+Mexico+-

Temperature (° F)	Max	Average	Min
Dew Point	60	44.15	16

Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.29	0.01	0.00	0.45
Snowdepth	0.00	0.00	0.00	0.00

Wind	Max	Average	Min
Wind	28	7.29	0
Gust Wind	44	2.26	0

Sea Level Pressure	Max	Average	Min
Sea Level Pressure	24.93	24.74	24.53

Daily Observations SEPTEMBER 2019 (Albuquerque International Sunport)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipation (in)
Sep	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	92	81.0	69	51	46.9	43	46	31.6	18	18	8.4	0	24.9	24.8	24.8	0.00
2	92	79.2	68	51	44.8	32	55	32.9	13	15	5.8	0	24.9	24.8	24.7	0.00
3	95	81.4	71	48	44.0	40	39	27.5	15	28	8.3	0	24.8	24.8	24.7	0.00
4	90	80.4	71	48	43.0	38	42	27.7	16	17	8.5	0	24.9	24.8	24.8	0.00
5	90	78.1	65	44	41.2	36	43	28.0	18	12	6.5	3	24.9	24.9	24.8	0.00
6	93	80.1	67	47	41.7	37	39	26.8	15	15	6.4	0	24.9	24.8	24.8	0.00
7	90	79.2	70	56	48.0	43	53	35.0	19	25	9.9	0	24.8	24.8	24.7	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipation (in)
8	86	75.2	65	56	52.4	47	73	47.5	26	14	6.1	0	24.8	24.7	24.6	0.00
9	87	77.0	64	54	45.4	36	63	35.6	17	16	9.8	3	24.7	24.7	24.6	0.00
10	85	74.1	67	60	53.1	45	71	50.0	25	14	7.9	0	24.8	24.7	24.6	0.00
11	86	74.9	62	57	51.7	41	81	48.5	21	13	7.2	0	24.8	24.7	24.7	0.02
12	83	74.1	65	48	32.0	23	49	23.4	12	15	8.5	0	24.9	24.8	24.8	0.00
13	87	75.3	65	54	46.9	24	61	38.9	19	22	9.3	0	24.9	24.9	24.8	0.00
14	82	72.7	64	54	51.0	44	63	47.4	26	18	8.8	3	24.9	24.9	24.8	0.00
15	69	64.6	61	59	55.4	50	90	72.9	51	14	6.0	0	24.9	24.8	24.8	0.00
16	81	67.2	61	58	54.6	48	90	68.0	33	24	8.9	0	24.8	24.8	24.7	0.13
17	82	69.8	60	57	52.3	44	87	57.8	26	8	4.2	0	24.8	24.8	24.7	0.29
18	84	72.3	59	52	43.4	35	70	39.5	17	13	4.7	0	24.8	24.8	24.7	0.00
19	85	72.7	61	51	42.2	37	50	35.4	18	17	6.9	0	24.8	24.7	24.6	0.00
20	84	73.0	63	52	40.7	28	63	35.4	13	17	7.5	0	24.7	24.6	24.6	0.00
21	81	69.6	55	51	38.2	32	61	33.5	20	23	7.6	0	24.8	24.7	24.6	0.00
22	80	66.1	51	49	29.7	16	80	33.9	10	10	5.2	0	24.8	24.8	24.7	0.00
23	79	64.8	54	51	36.6	22	81	38.4	20	21	9.8	0	24.9	24.8	24.7	0.00
24	78	64.0	51	51	46.3	42	86	56.4	30	9	3.8	0	24.8	24.8	24.7	0.01
25	84	69.6	56	47	43.0	36	67	41.8	21	9	4.5	0	24.8	24.7	24.7	0.00
26	84	71.2	57	46	39.6	34	62	34.1	19	10	5.2	0	24.8	24.7	24.6	0.00
27	77	68.2	56	45	41.8	39	55	39.4	28	13	6.3	0	24.7	24.6	24.5	0.00
28	81	68.3	55	45	42.5	39	62	41.0	24	23	10.7	3	24.6	24.6	24.5	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipation (in)
29	83	70.3	57	46	40.1	33	59	36.3	20	28	12.2	0	24.7	24.6	24.6	0.00
30	71	63.4	59	38	36.0	34	41	36.5	30	8	3.9	0	24.7	24.6	24.6	0.00

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Note:
The September monthly records shown in this document are off by one day (and thus do not match the daily weather documentation). All of the precipitation values are correct, but shifted forward by one day.
For example, this document indicates that 0.69 in of rain fell on July 7th. This storm event actually occurred on July 6th. See the daily weather documentation and the Quarterly Precipitation Events spreadsheet for accurate dates.

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What happens to all 2019 unsold cars and SUVs?
Ageful

(http://click.clktraker.com/aff_ad?campaign_id=6784&aff_id=8868&hostNameId=2951&utm_source=cpc&aff_sub=273392854&aff_sub2=1194714&aff_sub3=What+happens+to+all+2019+unsold+cars+and+SUVs%3F&aff_sub4=http%3A%2F%2Fcdn.taboola.co wunderground)
(https://www.myfinance.com/best-savings-accounts/?utm_campaign=tba_savmf_advbatt_p-na_des_ron_aa_allcset2myfin100&utm_source=taboola&utm_medium=cpc&utm_ntwk=n&utm_site=theweatherchannel-wunderground&utm_content=2+Savings+Accounts+Your+Bank+Doesn%27t+Want+You+To+Know+About&utm_placement_id=1194714)

2 Savings Accounts Your Bank Doesn't Want You To Know About
MyFinance

ATTACHMENT B

DAILY WEATHER REPORTS FOR PRECIPITATION EVENTS OCCURRING IN THIRD QUARTER 2019 (WEATHER UNDERGROUND)

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THERE IS NO ASSOCIATED WEBCAM WITH THIS STATION

JULY 1, 2019

2 samples collected in Zone 3. One outfall was closed.
Zone 4 did not receive runoff, storm cleared out before reaching it.

Weather History for KNMALBUQ648

Daily Mode | July | 1 | 2019

Previous **View** Next

Summary

July 1, 2019

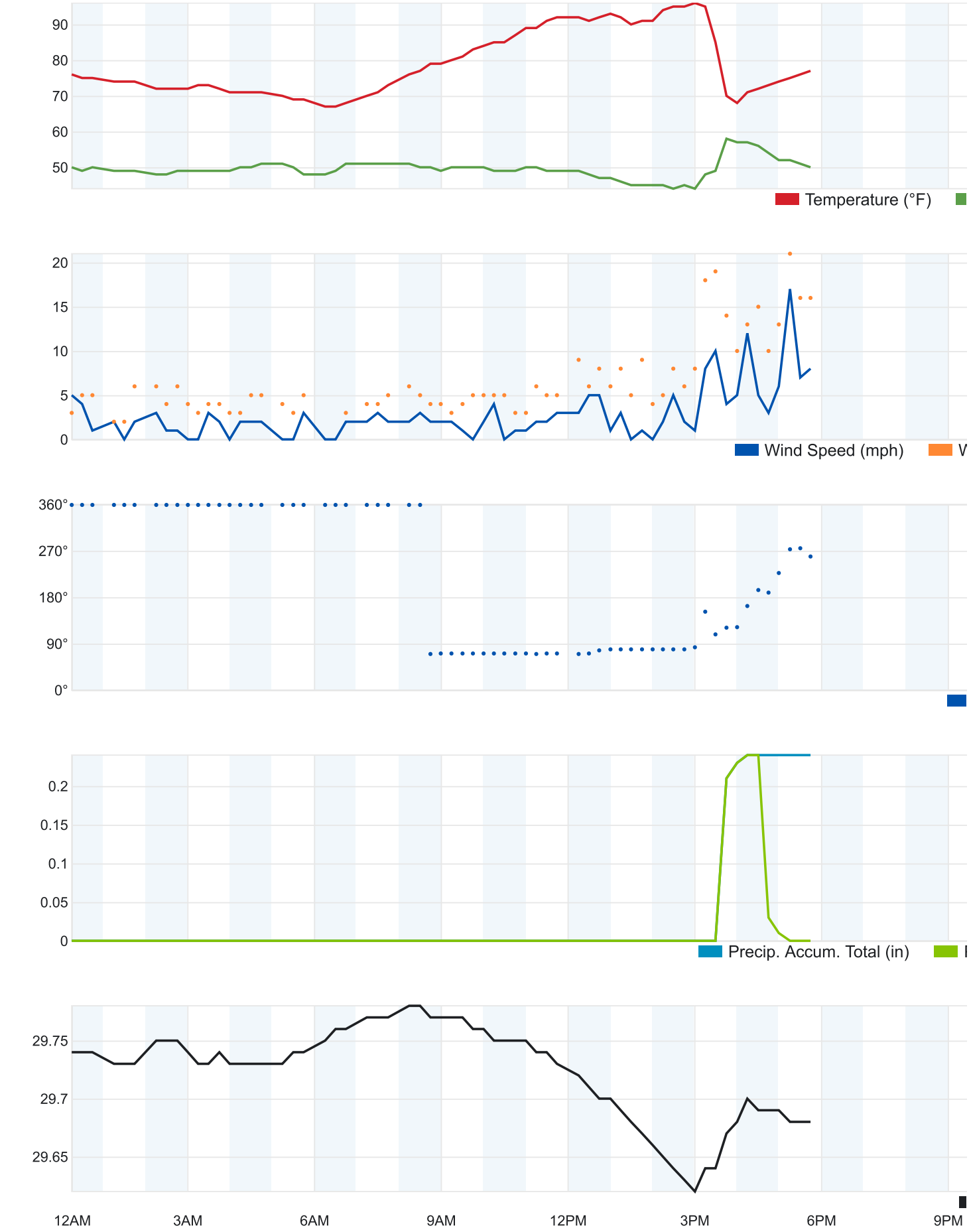
	High	Low	Average
Temperature	**96** °F	**67** °F	**79** °F
Dew Point	**58** °F	**44** °F	**49** °F
Humidity	**67** %	**17** %	**37** %
Precipitation	**0.24** in	--	--

	High	Low	Average
Wind Speed	**17.0** mph	**0.0** mph	**3.0** mph
Wind Gust	**21.0** mph	--	**6.0** mph
Wind Direction	--	--	**NE**
Pressure	**29.78** in	**29.62** in	--

Graph Table

July 1, 2019

12AM 3AM 6AM 9AM 12PM 3PM 6PM 9PM


90
80
70
60
50
Temperature (°F)
20
15
10
5
0
Wind Speed (mph)
360°
270°
180°
90°
0°
0.2
0.15
0.1
0.05
0
Precip. Accum. Total (in)
29.75
29.7
29.65
12AM
3AM
6AM
9AM
12PM
3PM
6PM
9PM

35.05 °N, **106.61** °W

Albuquerque International Sunport, New Mexico ★

87° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7-8?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7-8)

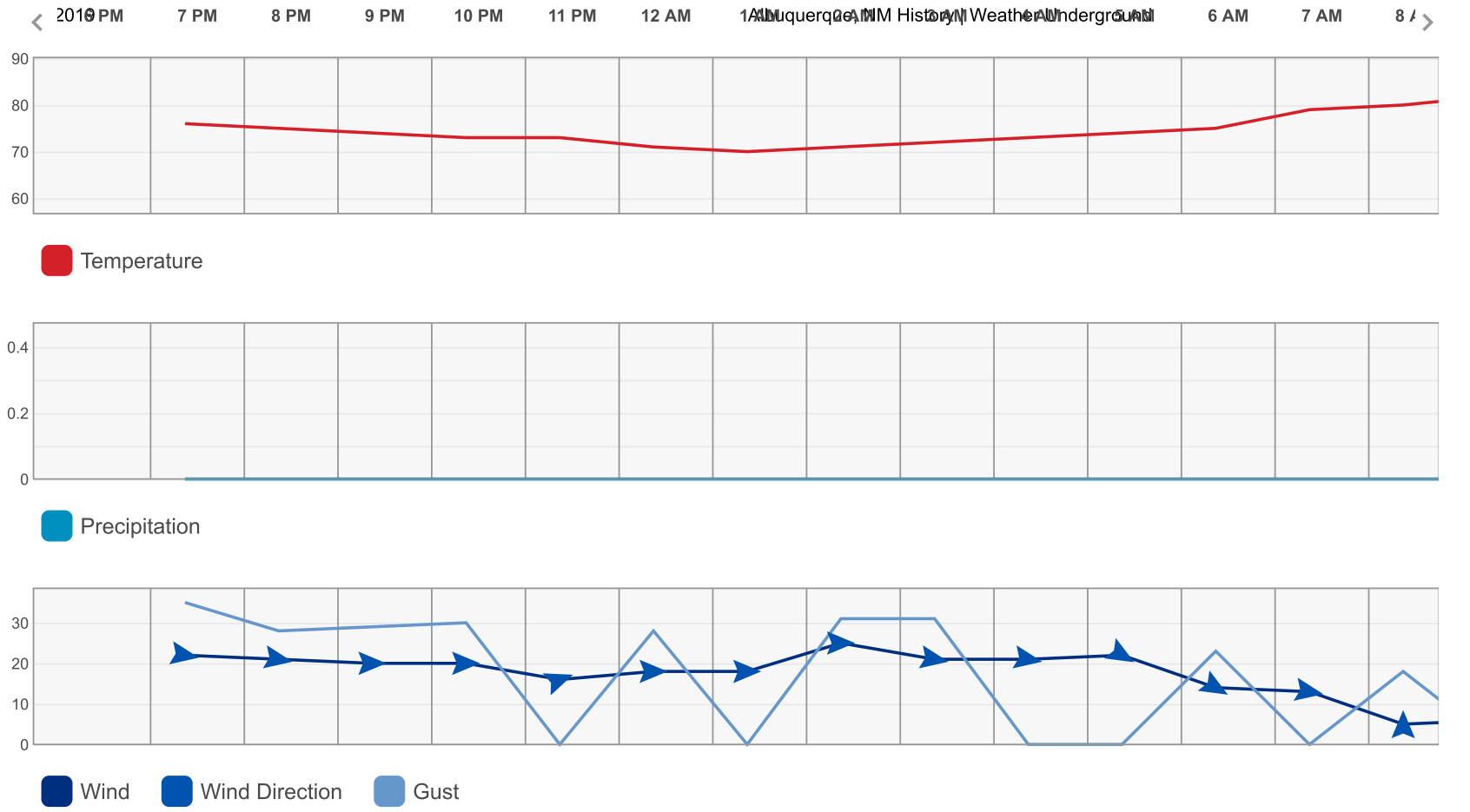
- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KNMALBUQ648)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KNMALBUQ648)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KNMALBUQ648)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7-8)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

JULY 6, 2019

Rainfall occurred outside of normal working hours - samples were not collected.

Daily | Weekly | Monthly

July | 6 | 2019 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	83	91	103
Low Temp	62	66	49
Day Average Temp	73	79	-

Precipitation (Inches)	Actual	Historic Avg.	Record

Temperature (° F)	Actual	Historic Avg.	Record
Precipitation	0.69	0.04	0.69
Month to Date	0.84	0.22	-
Year to Date	3.91	3.42	-
Degree Days (° F)	Actual	Historic Avg.	Record
Heating Degree Days	0	0	-
HDD Month to Date	0	0	-
HDD Since July 1	0	0	-
Cooling Degree Days	8	14	-
CDD Month to Date	85	80	-
CDD Year to Date	392	480	-
Growing Degree Days	0	-	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	0	-	-
High	0	-	-
Low	0	-	-
Average	0	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	30	-	-
Visibility	0	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	0	-	-

Temperature (° F)	Actual	Historic Avg.	Record

Astronomy	Day Length	Rise	Set
Actual Time	14h 25m	5:59 AM	8:25 PM
Civil Twilight		5:29 AM	8:54 PM
Nautical Twilight		4:53 AM	9:30 PM
Astronomical Twilight		4:13 AM	10:10 PM
Moon: waxing crescent		10:15 AM	11:48 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
6:52 PM	76 ° F	47 ° F	36 %	E	22 mph	35 mph	24.8 in	0.0 in	0.0 in	Fair / Windy
7:52 PM	75 ° F	47 ° F	37 %	E	21 mph	28 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy / Windy
8:52 PM	74 ° F	48 ° F	40 %	E	20 mph	29 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
9:52 PM	73 ° F	49 ° F	42 %	E	20 mph	30 mph	24.8 in	0.0 in	0.0 in	Cloudy
10:52 PM	73 ° F	50 ° F	44 %	ENE	16 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
11:52 PM	71 ° F	50 ° F	47 %	E	18 mph	28 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
12:52 AM	70 ° F	50 ° F	49 %	E	18 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
1:52 AM	71 ° F	51 ° F	49 %	E	25 mph	31 mph	24.9 in	0.0 in	0.0 in	Cloudy / Windy
2:52 AM	72 ° F	52 ° F	49 %	E	21 mph	31 mph	24.9 in	0.0 in	0.0 in	Cloudy / Windy
3:52 AM	73 ° F	53 ° F	49 %	E	21 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy / Windy
4:52 AM	74 ° F	54 ° F	50 %	ESE	22 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy / Windy
5:52 AM	75 ° F	53 ° F	46 %	ESE	14 mph	23 mph	24.9 in	0.0 in	0.0 in	Cloudy
6:52 AM	79 ° F	54 ° F	42 %	E	13 mph	0 mph	24.9 in	0.0 in	0.0 in	Mostly Cloudy
7:52 AM	80 ° F	54 ° F	40 %	VAR	5 mph	18 mph	24.9 in	0.0 in	0.0 in	Mostly Cloudy
8:52 AM	82 ° F	53 ° F	37 %	VAR	6 mph	0 mph	24.9 in	0.0 in	0.0 in	Mostly Cloudy
9:52 AM	76 ° F	60 ° F	58 %	E	9 mph	0 mph	24.8 in	0.0 in	0.0 in	Light Rain
10:52 AM	80 ° F	55 ° F	42 %	NNW	12 mph	0 mph	24.8 in	0.0 in	0.0 in	Thunder in the Vicinity
11:37 AM	74 ° F	56 ° F	53 %	NNW	20 mph	29 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
11:50 AM	72 ° F	57 ° F	60 %	N	22 mph	31 mph	24.8 in	0.0 in	0.0 in	Thunder / Windy
11:52 AM	72 ° F	57 ° F	59 %	N	25 mph	31 mph	24.8 in	0.0 in	0.0 in	Thunder / Windy
12:52 PM	66 ° F	57 ° F	73 %	N	20 mph	35 mph	24.8 in	0.0 in	0.0 in	T-Storm
1:14 PM	64 ° F	57 ° F	78 %	NNW	23 mph	33 mph	24.9 in	0.1 in	0.0 in	Heavy T-Storm / Windy
1:30 PM	63 ° F	58 ° F	84 %	NNE	15 mph	0 mph	24.9 in	0.3 in	0.0 in	Heavy T-Storm
1:38 PM	63 ° F	58 ° F	84 %	NE	12 mph	0 mph	24.9 in	0.4 in	0.0 in	Light Rain with Thunder
1:52 PM	63 ° F	60 ° F	90 %	SSE	9 mph	0 mph	24.9 in	0.4 in	0.0 in	Heavy T-Storm
2:03 PM	63 ° F	60 ° F	90 %	E	9 mph	0 mph	24.9 in	0.1 in	0.0 in	Rain
2:14 PM	63 ° F	60 ° F	90 %	ESE	3 mph	0 mph	24.9 in	0.2 in	0.0 in	Heavy T-Storm
2:29 PM	63 ° F	60 ° F	90 %	E	8 mph	0 mph	24.9 in	0.2 in	0.0 in	Light Rain
2:52 PM	64 ° F	61 ° F	90 %	ESE	6 mph	0 mph	24.9 in	0.2 in	0.0 in	Light Rain
3:52 PM	63 ° F	60 ° F	90 %	CALM	0 mph	0 mph	24.9 in	0.0 in	0.0 in	Light Rain
4:52 PM	63 ° F	59 ° F	87 %	ENE	8 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
5:52 PM	65 ° F	58 ° F	78 %	E	17 mph	0 mph	24.9 in	0.0 in	0.0 in	Light Rain

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$699 average annual savings for drivers who switch and save.
Progressive

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(http://clickster.io/api/visitors/57ac89e0a38746122f4af882/5bfdbcd9798e5022c54c8e5b/incoming?adi=solarwoman&adh=regpayinstall&addet=solarwoman-regpayinstall&cadid=1xTKh8eog9H&appr=lo81_01222019&utm_source=theweatherchannel-wunderground&plcid=1194714&adid=164295957&taboolaclickid=CjBiZjY1NWYzNC1hNGRkLTQ5ZmMtOGU1Yi1iOTI0NzFmMWYyNjItdHVjdDQxNTJhNzMSE3NtYXNobWVkaWEtc29sYXItc2M)

New Mexico Will Pay Homeowners to Install Solar
Smart Life Weekly

(http://clickster.io/api/visitors/57ac89e0a38746122f4af882/5bfdbcd9798e5022c54c8e5b/incoming?adi=solarwoman&adh=regpayinstall&addet=solarwoman-regpayinstall&cadid=1xTKh8eog9H&appr=lo81_01222019&utm_source=theweatherchannel-wunderground&plcid=1194714&adid=164295957&taboolaclickid=CjBiZjY1NWYzNC1hNGRkLTQ5ZmMtOGU1Yi1iOTI0NzFmMWYyNjItdHVjdDQxNTJhNzMSE3NtYXNobWVkaWEtc29sYXItc2M)
(https://wikibuy.com/blog/how-i-save-money-on-construction-supplies-c13a8e42b3cd?hno=true&utm_source=jaguar11&utm_campaign=1986200&utm_term=188971725)

This Checkout Trick Can Drop Your Home Depot Total Instantly
Wikibuy

35.05 °N, **106.61** °W

Albuquerque International Sunport, New Mexico ★

87° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7-8?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7-8)

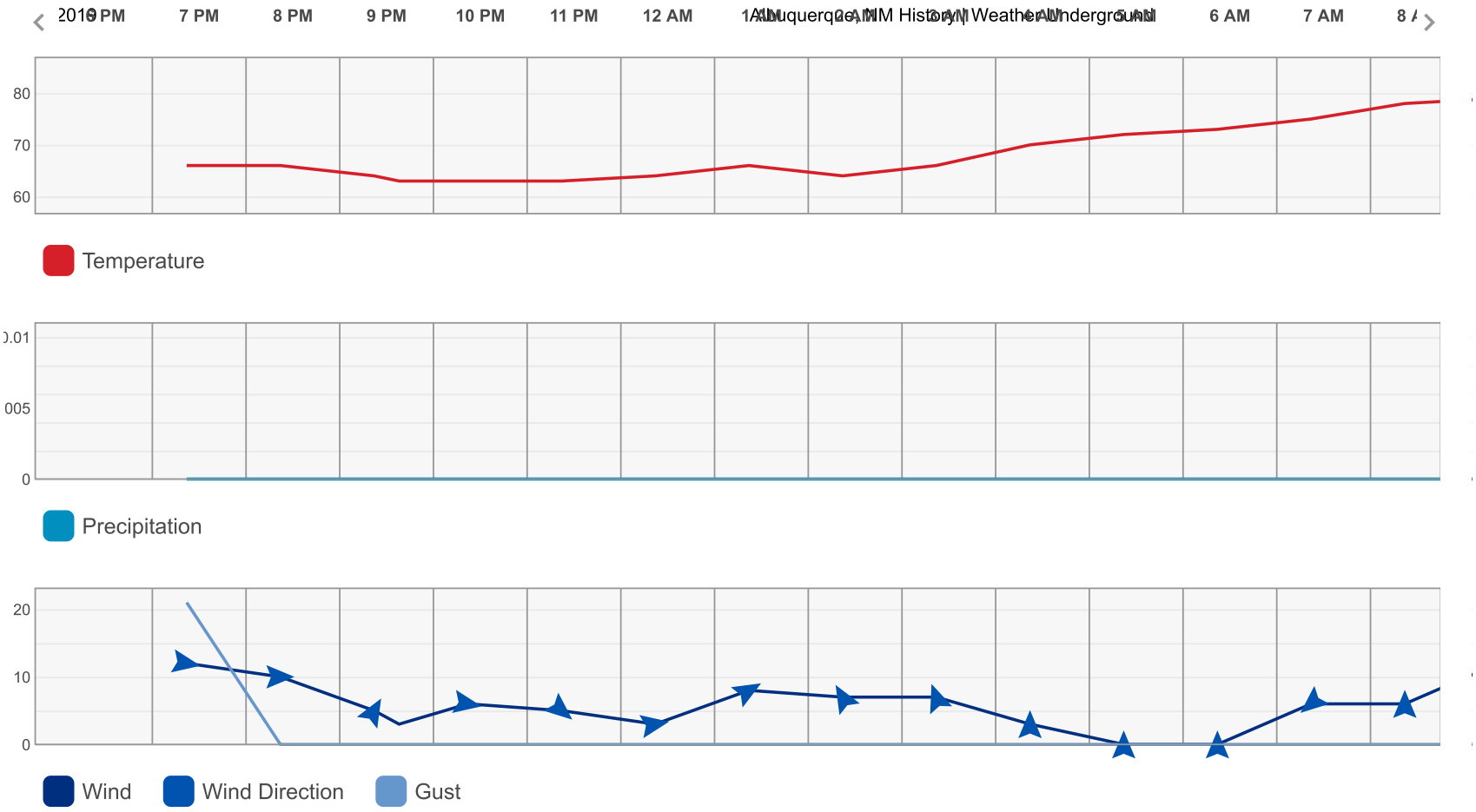
- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KNMALBUQ648)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KNMALBUQ648)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KNMALBUQ648)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7-8)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

JULY 7, 2019

Rainfall occurred outside of normal working hours - samples were not collected.

Daily | Weekly | Monthly

July | 7 | 2019 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	80	91	102
Low Temp	62	66	45
Day Average Temp	71	79	-

Precipitation (Inches)	Actual	Historic Avg.	Record

Temperature (° F)	Actual	Historic Avg.	Record
Precipitation	0.01	0.04	1.82
Month to Date	0.85	0.26	-
Year to Date	3.92	3.46	-
Degree Days (° F)	Actual	Historic Avg.	Record
Heating Degree Days	0	0	-
HDD Month to Date	0	0	-
HDD Since July 1	0	0	-
Cooling Degree Days	6	14	-
CDD Month to Date	91	94	-
CDD Year to Date	398	494	-
Growing Degree Days	0	-	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	0	-	-
High	0	-	-
Low	0	-	-
Average	0	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	24	-	-
Visibility	0	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	0	-	-

Temperature (° F)	Actual	Historic Avg.	Record

Astronomy	Day Length	Rise	Set
Actual Time	14h 24m	5:59 AM	8:24 PM
Civil Twilight		5:30 AM	8:54 PM
Nautical Twilight		4:54 AM	9:30 PM
Astronomical Twilight		4:14 AM	10:10 PM
Moon: waxing gibbous		-	-

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
6:52 PM	66 ° F	57 ° F	73 %	E	12 mph	21 mph	24.9 in	0.0 in	0.0 in	Cloudy
7:52 PM	66 ° F	57 ° F	73 %	E	10 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
8:52 PM	64 ° F	58 ° F	80 %	NNE	5 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
9:08 PM	63 ° F	58 ° F	84 %	VAR	3 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
9:52 PM	63 ° F	59 ° F	87 %	E	6 mph	0 mph	24.9 in	0.0 in	0.0 in	Mostly Cloudy
10:52 PM	63 ° F	59 ° F	87 %	SE	5 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
11:52 PM	64 ° F	59 ° F	84 %	E	3 mph	0 mph	24.9 in	0.0 in	0.7 in	Cloudy
12:52 AM	66 ° F	57 ° F	73 %	ENE	8 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
1:52 AM	64 ° F	59 ° F	84 %	NNW	7 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
2:52 AM	66 ° F	59 ° F	78 %	NNW	7 mph	0 mph	24.9 in	0.0 in	0.0 in	Mostly Cloudy
3:52 AM	70 ° F	60 ° F	71 %	VAR	3 mph	0 mph	24.9 in	0.0 in	0.0 in	Mostly Cloudy
4:52 AM	72 ° F	59 ° F	64 %	CALM	0 mph	0 mph	24.9 in	0.0 in	0.0 in	Partly Cloudy
5:52 AM	73 ° F	58 ° F	59 %		0 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
6:52 AM	75 ° F	56 ° F	51 %	SW	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
7:52 AM	78 ° F	54 ° F	43 %	VAR	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
8:52 AM	79 ° F	54 ° F	42 %	W	12 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
9:26 AM	78 ° F	53 ° F	42 %	W	8 mph	0 mph	24.7 in	0.0 in	0.0 in	Thunder in the Vicinity
9:52 AM	78 ° F	56 ° F	46 %	WSW	10 mph	0 mph	24.7 in	0.0 in	0.0 in	Thunder in the Vicinity

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
10:52 AM	75 ° F	56 ° F	51 %	W	9 mph	0 mph	24.7 in	0.0 in	0.0 in	Cloudy
11:52 AM	76 ° F	55 ° F	48 %	CALM	0 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
12:52 PM	76 ° F	56 ° F	50 %	S	7 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
1:41 PM	69 ° F	54 ° F	58 %	SW	13 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
1:52 PM	68 ° F	58 ° F	70 %	SW	10 mph	0 mph	24.8 in	0.0 in	0.0 in	Light Rain
2:52 PM	64 ° F	61 ° F	90 %	ESE	13 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
3:52 PM	66 ° F	58 ° F	75 %	W	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
4:52 PM	67 ° F	58 ° F	73 %	WNW	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
5:52 PM	67 ° F	58 ° F	73 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy

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$699 average annual savings for drivers who switch and save.
Progressive

(https://ad.doubleclick.net/ddm/trackclk/N4492.2069703TABOOLA/B21992396.236343246;dc_trk_aid=433567082;dc_trk_cid=99460260;dc_lat=;dc_rdid=;tag_for_child_directed_treatment=;tfua=?utm_source=taboola&utm_medium=referral)
(http://clickster.io/api/visitors/57ac89e0a38746122f4af882/5bfdbcd9798e5022c54c8e5b/incoming?adi=solarwoman&adh=regpayinstall&addet=solarwoman-regpayinstall&cadid=1xTKh8eog9H&appr=lo81_01222019&utm_source=theweatherchannel-wunderground&plcid=1194714&adid=164295957&taboolaclickid=CjBiZjY1NWYzNC1hNGRkLTQ5ZmMtOGU1Yi1iOTI0NzFmMWYyNjItdHVjdDQxNTJhNzMSE3NtYXNobWVkaWEtc29sYXItc2M)

New Mexico Will Pay Homeowners to Install Solar
Smart Life Weekly

(http://clickster.io/api/visitors/57ac89e0a38746122f4af882/5bfdbcd9798e5022c54c8e5b/incoming?adi=solarwoman&adh=regpayinstall&addet=solarwoman-regpayinstall&cadid=1xTKh8eog9H&appr=lo81_01222019&utm_source=theweatherchannel-wunderground&plcid=1194714&adid=164295957&taboolaclickid=CjBiZjY1NWYzNC1hNGRkLTQ5ZmMtOGU1Yi1iOTI0NzFmMWYyNjItdHVjdDQxNTJhNzMSE3NtYXNobWVkaWEtc29sYXItc2M)
(https://investingoutlook.co/article-get-out-of-cash.html?cid=MKT376375&eid=MKT377393&utm_source=taboola&utm_medium=referral)

Man Who Called DOW 20,000 Has Surprising New Prediction
Investing Outlook

(https://investingoutlook.co/article-get-out-of-cash.html?cid=MKT376375&eid=MKT377393&utm_source=taboola&utm_medium=referral)
(https://wikibuy.com/blog/how-i-save-money-on-construction-supplies-c13a8e42b3cd?hno=true&utm_source=jaguar11&utm_campaign=1986200&utm_term=188971725)

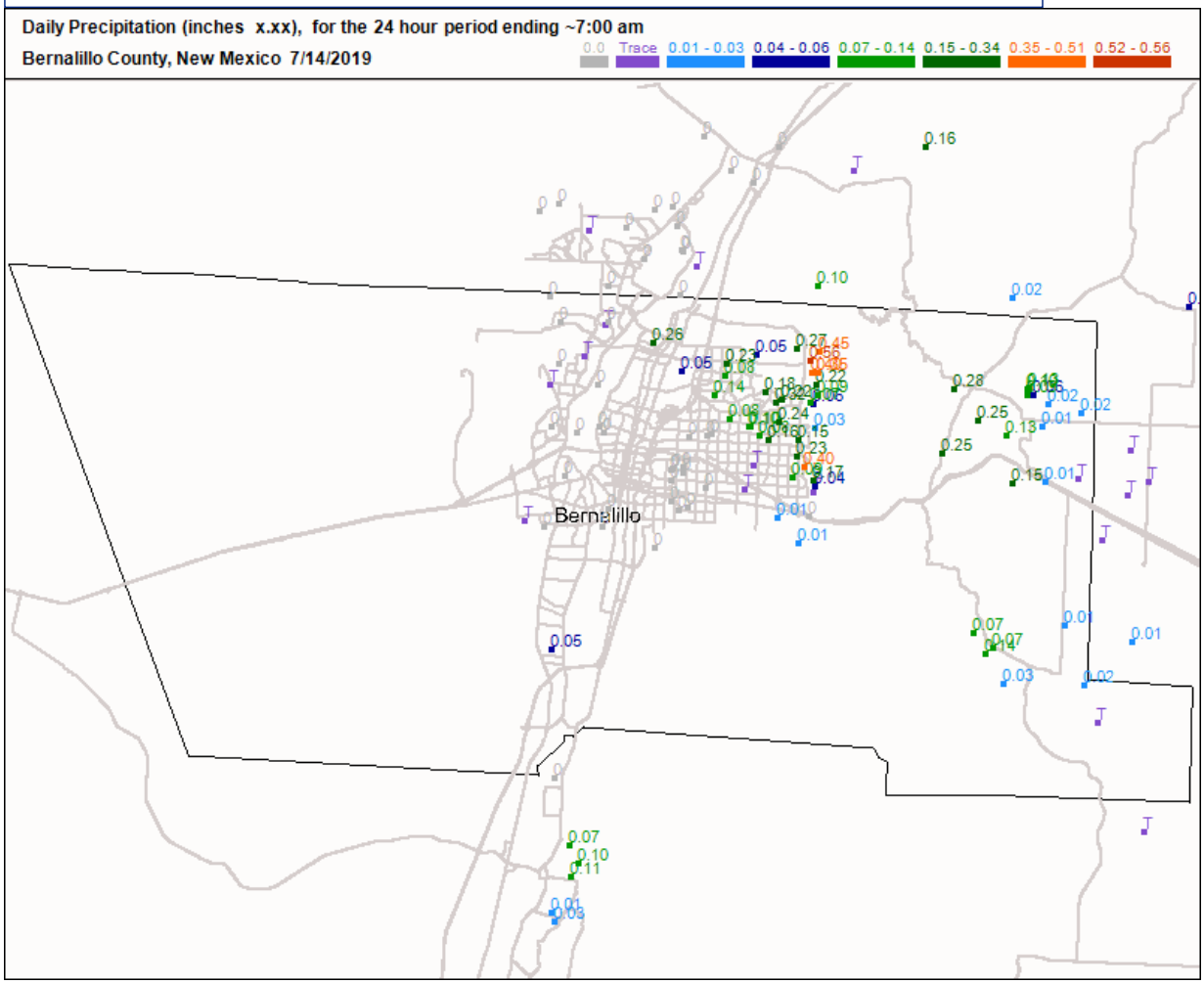
This Checkout Trick Can Drop Your Home Depot Total Instantly
Wikibuy

(https://wikibuy.com/blog/how-i-save-money-on-construction-supplies-c13a8e42b3cd?hno=true&utm_source=jaguar11&utm_campaign=1986200&utm_term=188971725)

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	7/14/2019	Standard	Get Map



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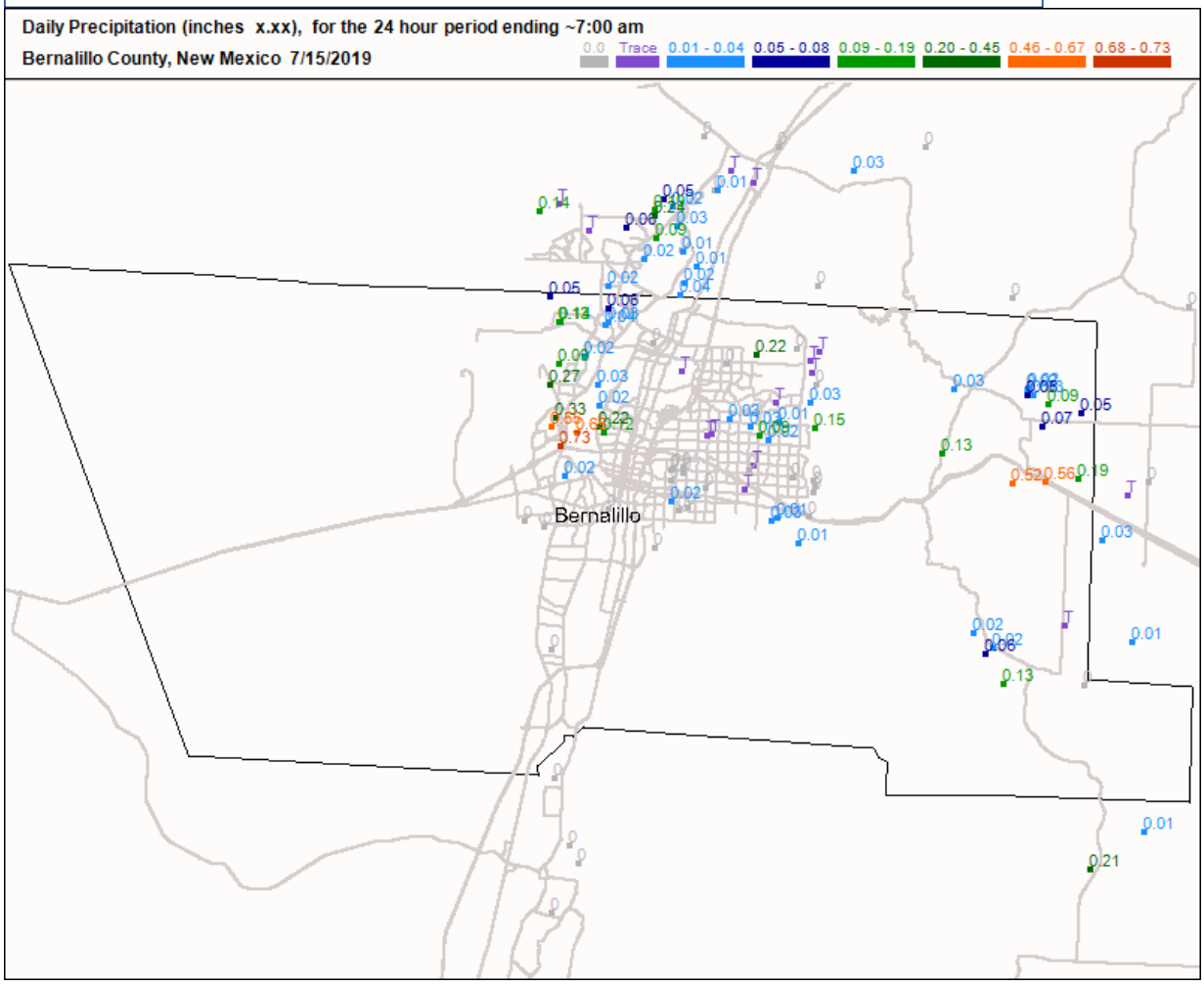
JULY 13, 2019

Wunderground (Sunport) reported 0 in. of runoff on this day. CoCoRaHS was used instead to show precipitation values. Rainfall occured outside of normal operating hours, samples were not collected.

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	7/15/2019	Standard	Get Map



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JULY 14, 2019

Wunderground (Sunport) reported 0 in. of runoff on this day. CoCoRaHS was used instead to show precipitation values. Rainfall occurred outside of normal operating hours, samples were not collected.

35.05 °N, **106.61** °W

Albuquerque International Sunport, New Mexico ★

72° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7-17?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7-17)

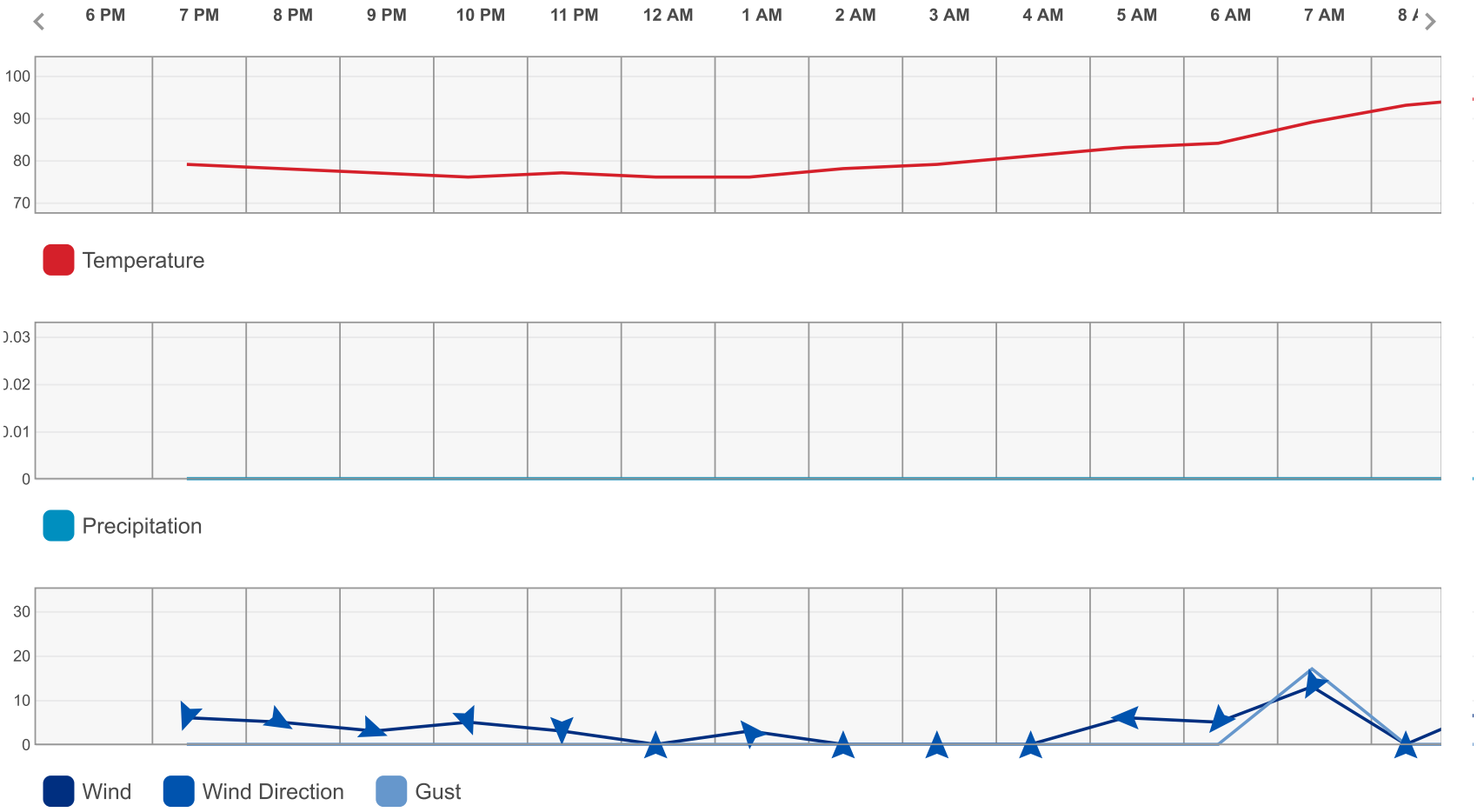
- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KNMALBUQ648)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KNMALBUQ648)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KNMALBUQ648)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7-17)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

JULY 16, 2019

Rainfall occurred outside of normal working hours. Not enough rainfall to produce runoff - samples were not collected.

Daily | Weekly | Monthly

July | 16 | 2019 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	96	90	104
Low Temp	74	67	51
Day Average Temp	85	78	-

Precipitation (Inches)	Actual	Historic Avg.	Record

Temperature (° F)	Actual	Historic Avg.	Record
Precipitation	0.03	0.04	0.96
Month to Date	0.88	0.68	-
Year to Date	3.95	3.88	-
Degree Days (° F)	Actual	Historic Avg.	Record
Heating Degree Days	0	0	-
HDD Month to Date	0	0	-
HDD Since July 1	0	0	-
Cooling Degree Days	20	13	-
CDD Month to Date	241	219	-
CDD Year to Date	548	619	-
Growing Degree Days	36	-	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	52	-	-
High	58	-	-
Low	47	-	-
Average	52	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	28	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	30.07	-	-

Temperature (° F)	Actual	Historic Avg.	Record

Astronomy	Day Length	Rise	Set
Actual Time	14h 16m	6:05 AM	8:21 PM
Civil Twilight		5:36 AM	8:50 PM
Nautical Twilight		5:00 AM	9:26 PM
Astronomical Twilight		4:22 AM	10:04 PM
Moon: full moon		8:28 PM	5:46 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
6:52 PM	79 ° F	51 ° F	38 %	SSW	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
7:52 PM	78 ° F	50 ° F	37 %	ESE	5 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
8:52 PM	77 ° F	50 ° F	39 %	ESE	3 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
9:52 PM	76 ° F	50 ° F	40 %	SSE	5 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
10:52 PM	77 ° F	50 ° F	39 %	S	3 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
11:52 PM	76 ° F	51 ° F	42 %	CALM	0 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
12:52 AM	76 ° F	52 ° F	43 %	NW	3 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
1:52 AM	78 ° F	53 ° F	42 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
2:52 AM	79 ° F	54 ° F	42 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
3:52 AM	81 ° F	53 ° F	38 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
4:52 AM	83 ° F	52 ° F	34 %	W	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
5:52 AM	84 ° F	52 ° F	33 %	SW	5 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
6:52 AM	89 ° F	51 ° F	27 %	SSW	13 mph	17 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
7:52 AM	93 ° F	50 ° F	23 %		0 mph	0 mph	24.7 in	0.0 in	0.0 in	Partly Cloudy
8:52 AM	95 ° F	47 ° F	19 %	W	9 mph	0 mph	24.7 in	0.0 in	0.0 in	Partly Cloudy
9:52 AM	94 ° F	47 ° F	20 %	W	9 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
10:52 AM	88 ° F	49 ° F	26 %	SW	18 mph	26 mph	24.7 in	0.0 in	0.0 in	Thunder in the Vicinity
11:18 AM	88 ° F	48 ° F	25 %	WSW	15 mph	26 mph	24.7 in	0.0 in	0.0 in	Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
11:52 AM	85 ° F	51 ° F	31 %	SSE	24 mph	32 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy / Windy
12:52 PM	82 ° F	53 ° F	37 %	SSE	15 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
1:52 PM	81 ° F	51 ° F	35 %	WSW	3 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
2:52 PM	79 ° F	56 ° F	45 %	SSE	7 mph	0 mph	24.8 in	0.0 in	0.0 in	Light Rain
3:52 PM	76 ° F	56 ° F	50 %	ESE	12 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
4:52 PM	77 ° F	54 ° F	45 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
5:52 PM	75 ° F	58 ° F	55 %	NNE	7 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy

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Progressive

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35.05 °N, **106.61** °W

Albuquerque International Sunport, New Mexico ★

68° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7-26?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7-26)

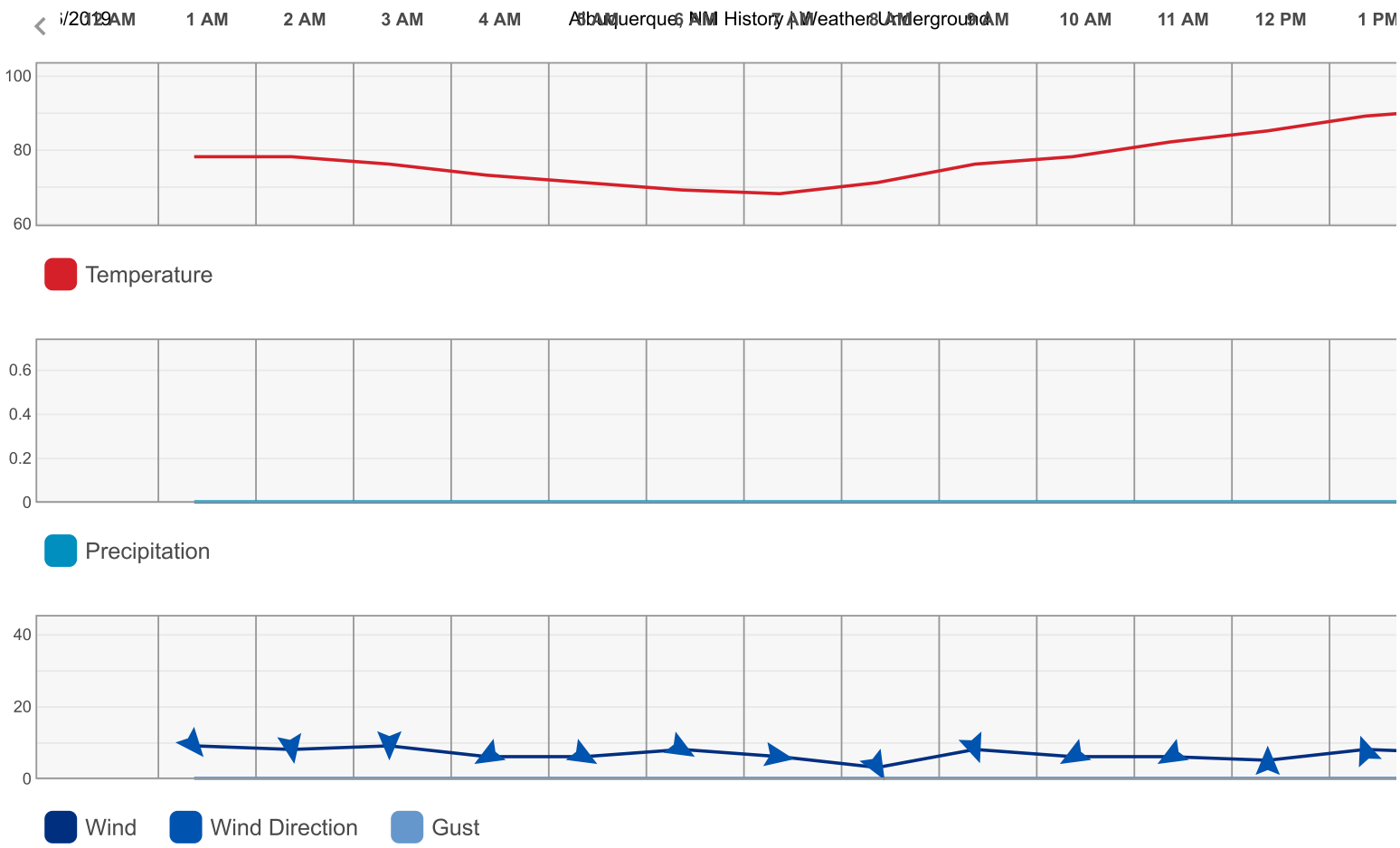
- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KNMALBUQ648)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KNMALBUQ648)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KNMALBUQ648)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-7-26)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily | Weekly | Monthly

July | 25 | 2019 | View

JULY 25, 2019

Rainfall occurred outside of normal working hours. Samples were not collected



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	95	0	103
Low Temp	66	0	53
Day Average Temp	80	0	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation	1.06	0	1.22
Month to Date	0	0	-
Year to Date	0	0	-
Degree Days (° F)	Actual	Historic Avg.	Record
Heating Degree Days	0	0	-
HDD Month to Date	0	0	-
HDD Since July 1	0	0	-

Temperature (° F)	Actual	Historic Avg.	Record
Cooling Degree Days	16	0	-
CDD Month to Date	0	0	-
CDD Year to Date	0	0	-
Growing Degree Days	30	-	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	54	-	-
High	65	-	-
Low	46	-	-
Average	54	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	30	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	30.32	-	-
Astronomy	Day Length	Rise	Set
Actual Time	14h 5m	6:11 AM	8:16 PM
Civil Twilight		5:43 AM	8:44 PM
Nautical Twilight		5:08 AM	9:19 PM
Astronomical Twilight		4:31 AM	9:56 PM
Moon: waning crescent		12:49 AM	2:06 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
12:52 AM	78 ° F	46 ° F	32 %	SE	9 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
1:52 AM	78 ° F	47 ° F	33 %	S	8 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
2:52 AM	76 ° F	48 ° F	37 %	S	9 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
3:52 AM	73 ° F	50 ° F	44 %	WSW	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
4:52 AM	71 ° F	49 ° F	45 %	ESE	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
5:52 AM	69 ° F	48 ° F	47 %	ESE	8 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
6:52 AM	68 ° F	49 ° F	50 %	E	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Fair

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
7:52 AM	71 ° F	51 ° F	49 %	SSE	3 mph	0 mph	24.8 in	0.0 in	0.0 in	Fair
8:52 AM	76 ° F	52 ° F	43 %	SSE	8 mph	0 mph	24.8 in	0.0 in	0.0 in	Fair
9:52 AM	78 ° F	54 ° F	43 %	WSW	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
10:52 AM	82 ° F	53 ° F	37 %	WSW	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
11:52 AM	85 ° F	53 ° F	33 %	VAR	5 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
12:52 PM	89 ° F	52 ° F	28 %	NNW	8 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
1:52 PM	91 ° F	51 ° F	25 %	E	7 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
2:52 PM	92 ° F	50 ° F	24 %	WNW	10 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
3:52 PM	94 ° F	50 ° F	22 %	NE	12 mph	17 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
4:52 PM	93 ° F	49 ° F	22 %	N	12 mph	20 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
5:21 PM	93 ° F	49 ° F	22 %	NE	10 mph	0 mph	24.7 in	0.0 in	0.0 in	Thunder in the
5:39 PM	92 ° F	49 ° F	23 %	E	9 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
5:52 PM	92 ° F	49 ° F	23 %	ENE	8 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
6:04 PM	91 ° F	48 ° F	23 %	VAR	5 mph	0 mph	24.7 in	0.0 in	0.0 in	Thunder in the
6:11 PM	86 ° F	53 ° F	32 %	W	30 mph	41 mph	24.7 in	0.0 in	0.0 in	Thunder / Winc
6:26 PM	77 ° F	57 ° F	50 %	WSW	16 mph	39 mph	24.8 in	0.0 in	0.0 in	Light Rain with
6:38 PM	72 ° F	58 ° F	61 %	NNW	15 mph	20 mph	24.8 in	0.2 in	0.0 in	Heavy T-Storm
6:52 PM	74 ° F	59 ° F	59 %	SW	14 mph	24 mph	24.8 in	0.7 in	0.0 in	Light Rain with
7:00 PM	75 ° F	59 ° F	57 %	SSE	17 mph	24 mph	24.8 in	0.0 in	0.0 in	Light Rain with
7:22 PM	71 ° F	62 ° F	73 %	ESE	9 mph	0 mph	24.8 in	0.0 in	0.0 in	T-Storm
7:30 PM	70 ° F	63 ° F	78 %	ENE	16 mph	0 mph	24.9 in	0.0 in	0.0 in	Light Rain with
7:45 PM	68 ° F	63 ° F	84 %	ENE	14 mph	0 mph	24.9 in	0.1 in	0.0 in	Heavy T-Storm
7:52 PM	68 ° F	64 ° F	87 %	NE	12 mph	0 mph	24.9 in	0.1 in	0.0 in	T-Storm
8:37 PM	68 ° F	61 ° F	78 %	SSW	8 mph	0 mph	24.9 in	0.1 in	0.0 in	T-Storm
8:52 PM	68 ° F	64 ° F	87 %	S	15 mph	0 mph	24.9 in	0.1 in	0.0 in	T-Storm
9:06 PM	67 ° F	65 ° F	93 %	SE	14 mph	0 mph	24.9 in	0.0 in	0.0 in	Light Rain
9:52 PM	66 ° F	62 ° F	87 %	ESE	14 mph	0 mph	24.9 in	0.1 in	0.0 in	Rain
10:52 PM	67 ° F	60 ° F	79 %	ESE	25 mph	37 mph	24.8 in	0.0 in	0.0 in	Light Rain / Wi
11:20 PM	70 ° F	58 ° F	65 %	NNW	13 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
11:52 PM	67 ° F	61 ° F	81 %	NNW	14 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy

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30 Old Toys Worth a Fortune

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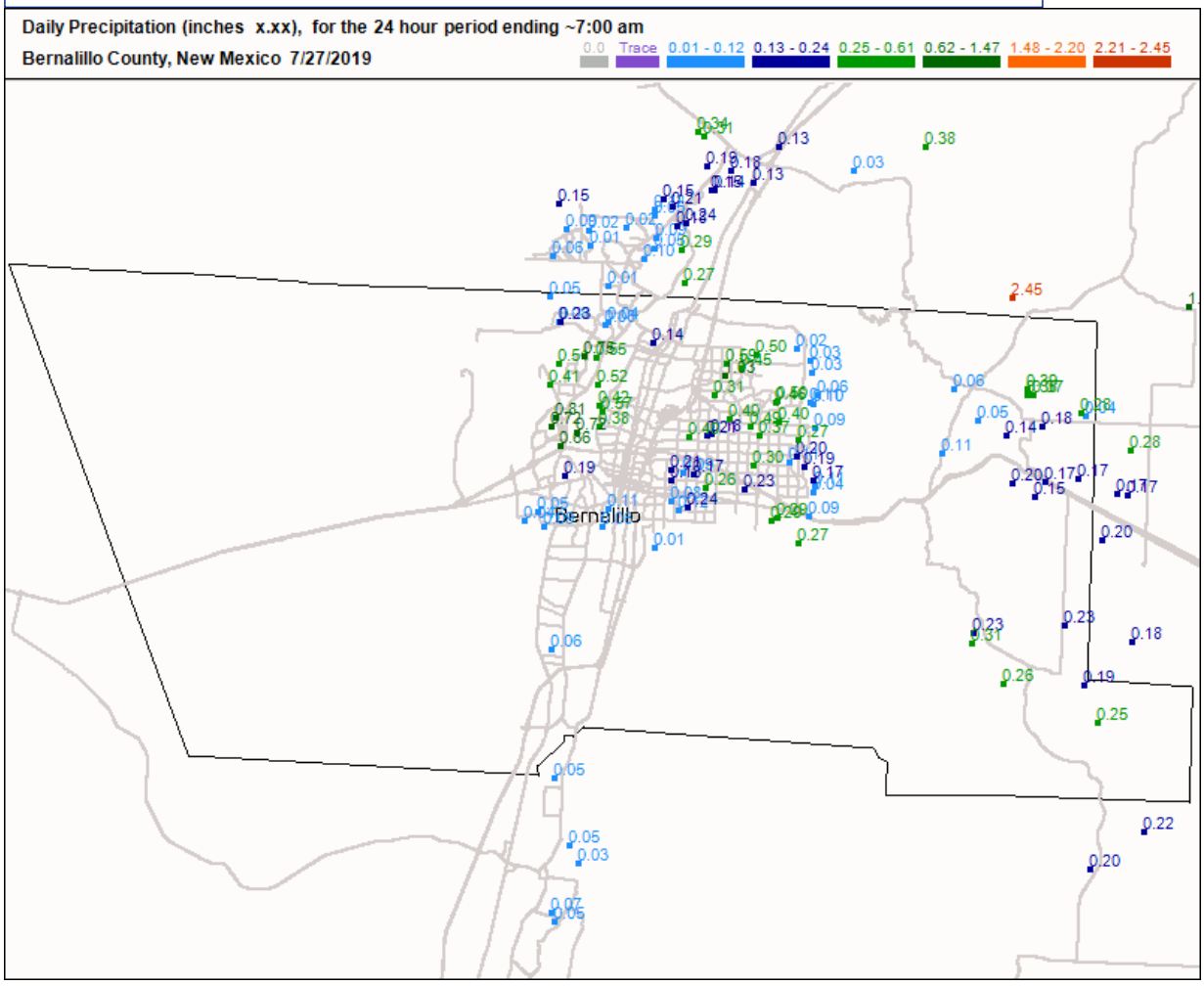
COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	7/27/2019	Standard	Get Map



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JULY 26, 2019

Wunderground (Sunport) reported 0 in. of runoff on this day. CoCoRaHS was used instead to show precipitation values. Rainfall occurred outside of normal operating hours, samples were not collected.

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

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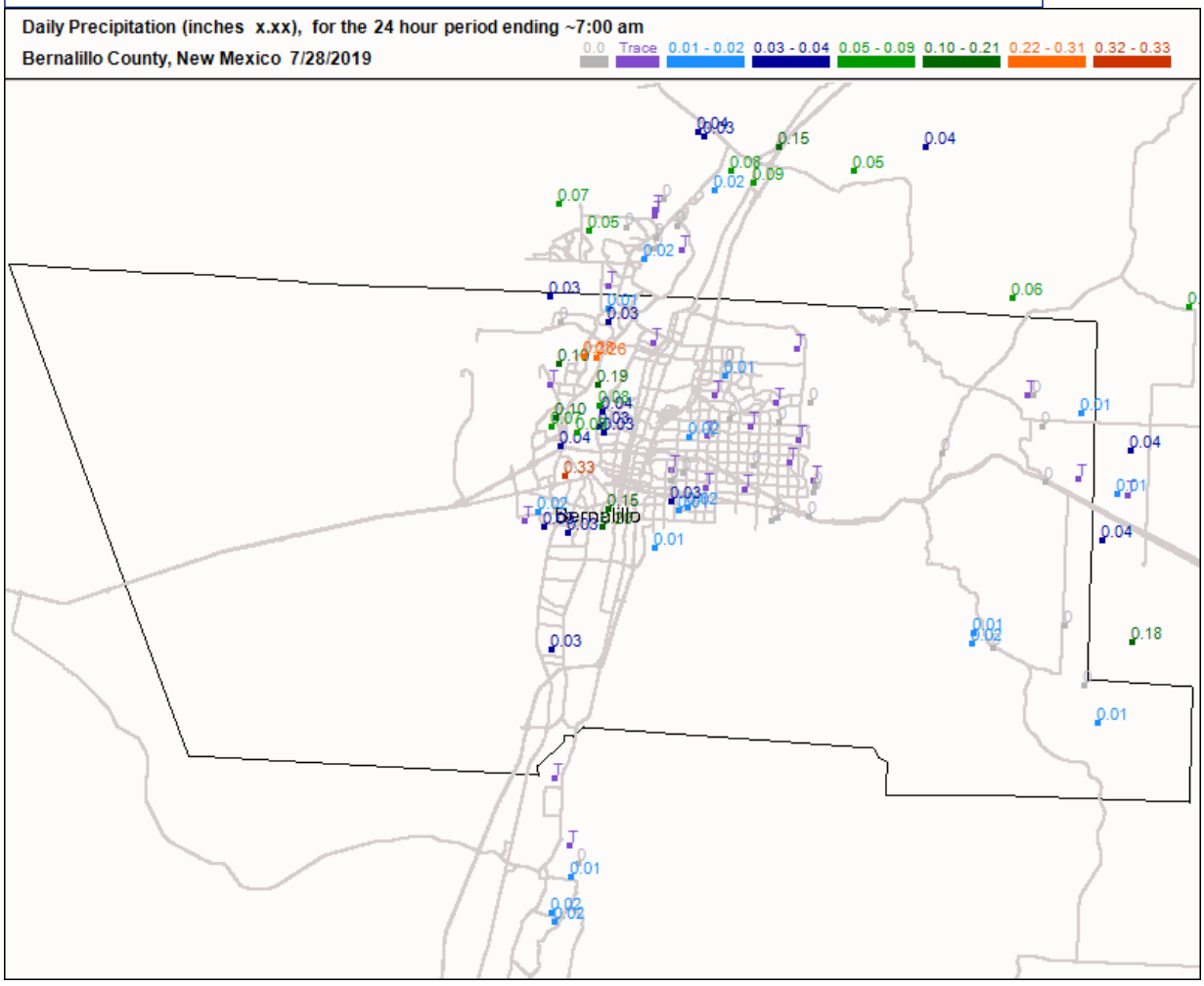
Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	7/28/2019	Standard	Get Map



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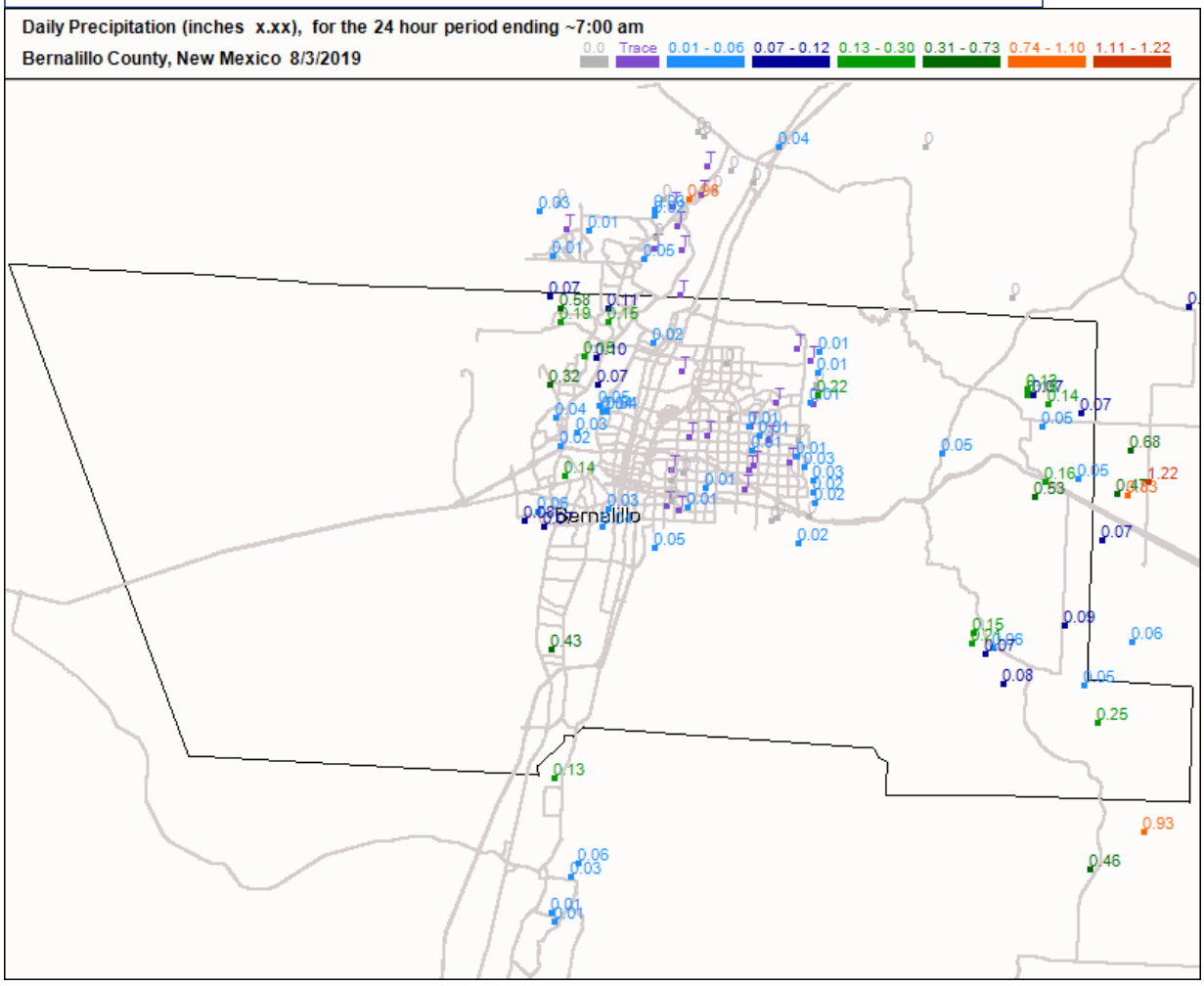
JULY 27, 2019

Wunderground (Sunport) reported 0 in. of runoff on this day. CoCoRaHS was used instead to show precipitation values. Rainfall occurred outside of normal operating hours, samples were not collected.

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Maps : Daily Precipitation

Map Type: Precipitation | Map Location: New Mexico | BR - Bernalillo | Date: 8/3/2019 | Colors: Standard | Get Map



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AUGUST 2, 2019

Wunderground (Sunport) reported 0 in. of runoff on this day. CoCoRaHS was used instead to show precipitation values. Rainfall occurred outside of normal operating hours, samples were not collected.

35.05 °N, **106.61** °W

Albuquerque International Sunport, New Mexico ★

81° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-8-5?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-8-5)

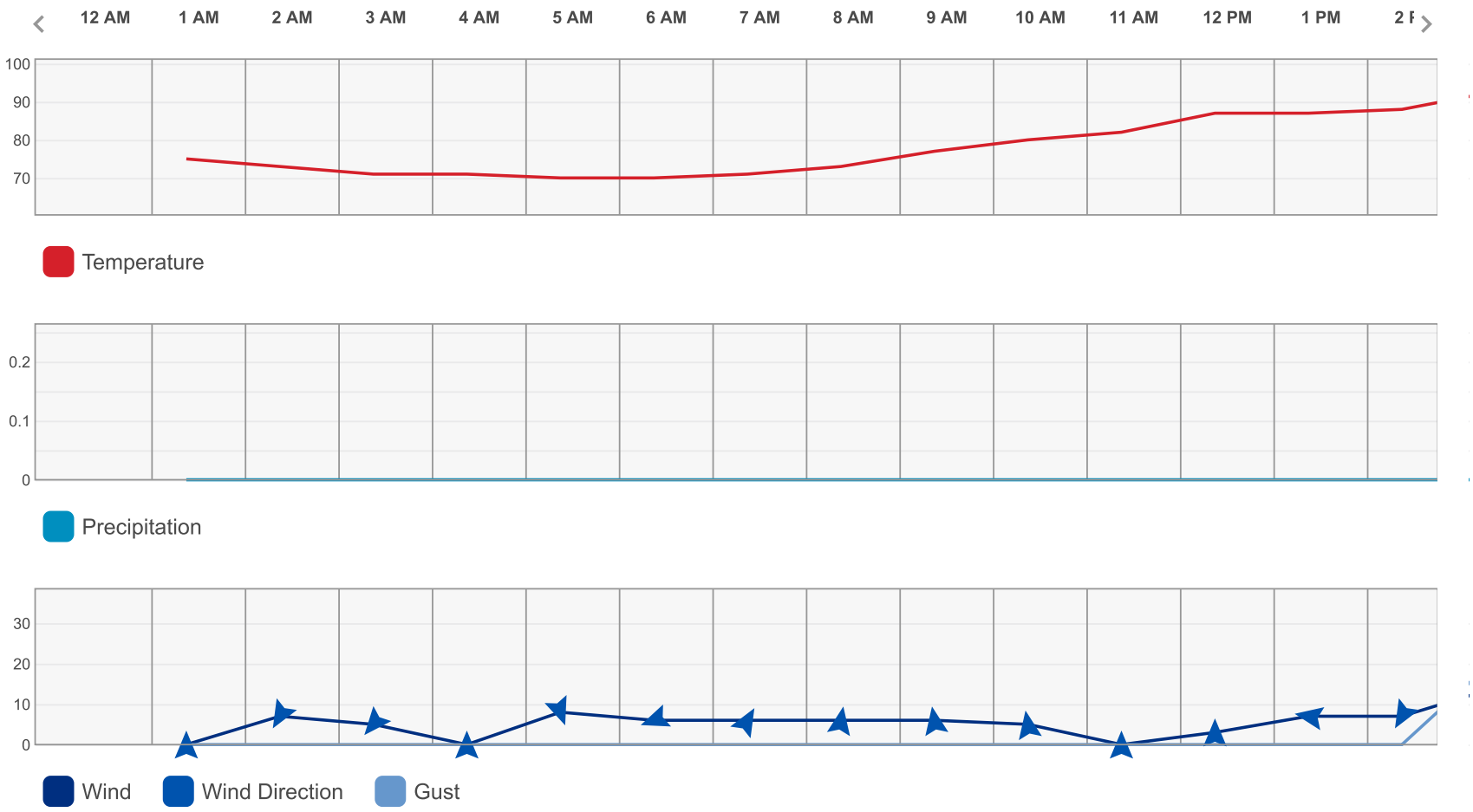
- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KNMALBUQ648)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KNMALBUQ648)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KNMALBUQ648)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ/DATE/2019-8)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-8-5)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

AUGUST 3, 2019

Rainfall occurred outside of normal working hours. Samples were not collected.

Daily | Weekly | Monthly

August | 3 | 2019 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	92	88	99
Low Temp	67	66	52
Day Average Temp	80	77	-

Precipitation (Inches)	Actual	Historic Avg.	Record

Temperature (° F)	Actual	Historic Avg.	Record
Precipitation	0.31	0.06	0.84
Month to Date	0.33	0.18	-
Year to Date	5.35	4.88	-
Degree Days (° F)	Actual	Historic Avg.	Record
Heating Degree Days	0	0	-
HDD Month to Date	0	0	-
HDD Since July 1	0	0	-
Cooling Degree Days	15	12	-
CDD Month to Date	47	36	-
CDD Year to Date	849	847	-
Growing Degree Days	29	-	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	58	-	-
High	65	-	-
Low	53	-	-
Average	58	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	28	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	30.26	-	-

Temperature (° F)	Actual	Historic Avg.	Record

Astronomy	Day Length	Rise	Set
Actual Time	13h 51m	6:18 AM	8:09 PM
Civil Twilight		5:50 AM	8:37 PM
Nautical Twilight		5:17 AM	9:10 PM
Astronomical Twilight		4:41 AM	9:46 PM
Moon: waxing crescent		9:08 AM	10:21 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
12:52 AM	75 ° F	58 ° F	55 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
1:52 AM	73 ° F	58 ° F	59 %	SSW	7 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
2:52 AM	71 ° F	59 ° F	66 %	SW	5 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
3:52 AM	71 ° F	58 ° F	63 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
4:52 AM	70 ° F	59 ° F	68 %	SSE	8 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
5:52 AM	70 ° F	59 ° F	68 %	WSW	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
6:52 AM	71 ° F	58 ° F	63 %	NNE	6 mph	0 mph	24.9 in	0.0 in	0.0 in	Mostly Cloudy
7:52 AM	73 ° F	58 ° F	59 %	N	6 mph	0 mph	24.9 in	0.0 in	0.0 in	Mostly Cloudy
8:52 AM	77 ° F	57 ° F	50 %	N	6 mph	0 mph	24.9 in	0.0 in	0.0 in	Mostly Cloudy
9:52 AM	80 ° F	56 ° F	43 %	N	5 mph	0 mph	24.9 in	0.0 in	0.0 in	Partly Cloudy
10:52 AM	82 ° F	56 ° F	41 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
11:52 AM	87 ° F	56 ° F	35 %	VAR	3 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
12:52 PM	87 ° F	56 ° F	35 %	W	7 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
1:52 PM	88 ° F	56 ° F	34 %	SSW	7 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
2:43 PM	92 ° F	56 ° F	30 %	SW	13 mph	18 mph	24.8 in	0.0 in	0.0 in	Thunder in the Vicinity
2:52 PM	92 ° F	56 ° F	30 %	VAR	7 mph	0 mph	24.8 in	0.0 in	0.0 in	Thunder in the Vicinity
3:24 PM	90 ° F	53 ° F	28 %	SSE	17 mph	24 mph	24.8 in	0.0 in	0.0 in	Thunder
3:39 PM	88 ° F	53 ° F	30 %	S	16 mph	0 mph	24.8 in	0.0 in	0.0 in	Thunder in the Vicinity

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
3:52 PM	87 ° F	55 ° F	33 %	S	12 mph	0 mph	24.8 in	0.0 in	0.0 in	Light Rain with Thunder
4:25 PM	78 ° F	64 ° F	62 %	ENE	16 mph	0 mph	24.8 in	0.2 in	0.0 in	T-Storm
4:52 PM	77 ° F	65 ° F	66 %	NE	17 mph	0 mph	24.8 in	0.2 in	0.0 in	Thunder in the Vicinity
5:52 PM	79 ° F	54 ° F	42 %	N	16 mph	31 mph	24.8 in	0.0 in	0.0 in	Thunder in the Vicinity
6:20 PM	73 ° F	59 ° F	61 %	ENE	24 mph	32 mph	24.8 in	0.0 in	0.0 in	T-Storm / Windy
6:34 PM	71 ° F	58 ° F	63 %	E	18 mph	35 mph	24.8 in	0.1 in	0.0 in	T-Storm
6:52 PM	72 ° F	58 ° F	61 %	E	13 mph	0 mph	24.8 in	0.1 in	0.0 in	Thunder
7:11 PM	75 ° F	58 ° F	55 %	S	21 mph	31 mph	24.8 in	0.0 in	0.0 in	Light Rain / Windy
7:52 PM	72 ° F	60 ° F	66 %	SE	17 mph	26 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
8:14 PM	72 ° F	59 ° F	64 %	E	14 mph	0 mph	24.9 in	0.0 in	0.0 in	Mostly Cloudy
8:52 PM	72 ° F	60 ° F	66 %	NW	10 mph	0 mph	24.9 in	0.0 in	0.0 in	Light Rain
9:52 PM	71 ° F	62 ° F	73 %	SW	5 mph	0 mph	24.9 in	0.0 in	0.0 in	Light Rain
10:52 PM	68 ° F	64 ° F	87 %	S	10 mph	0 mph	24.9 in	0.0 in	0.0 in	Mostly Cloudy
11:52 PM	67 ° F	64 ° F	90 %	SE	10 mph	0 mph	24.9 in	0.0 in	0.0 in	Mostly Cloudy

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New Mexico Program Giving Solar Panels To Homeowners With Electric Bills Over $99/month

Smart Life Weekly

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Look Closer...Unedited Photos Captured In Nature

History Daily

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Drone Captures What No One Was Supposed to See

EditorChoice

35.05 °N, **106.61** °W

Albuquerque International Sunport, NM ★

66° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-8-12?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-8-12)

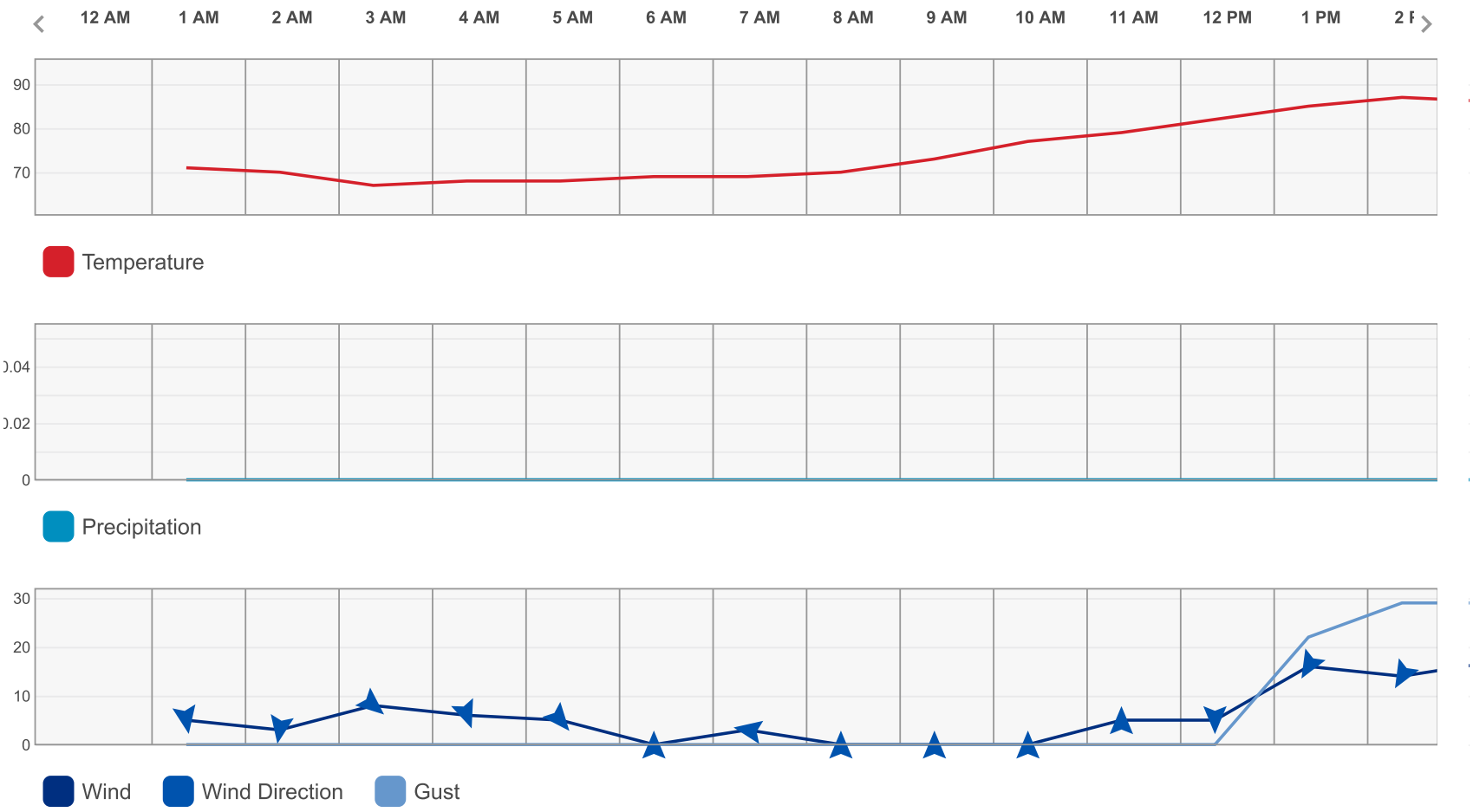
- TODAY (/WEATHER/KABQ)
- HOURLY (/HOURLY/KABQ)
- 10-DAY (/FORECAST/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ/DATE/2019-8)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-8-12)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

AUGUST 11, 2019

Rainfall occurred outside of normal working hours. Not enough rainfall to produce runoff - samples were not collected.

Daily | Weekly | Monthly

August | 11 | 2019 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	89	88	99
Low Temp	66	66	55
Day Average Temp	78	77	-
Precipitation (Inches)	Actual	Historic Avg.	Record

Temperature (° F)	Actual	Historic Avg.	Record
Precipitation	0.05	0.05	0.81
Month to Date	0.41	0.63	-
Year to Date	5.43	5.33	-
Degree Days (° F)	Actual	Historic Avg.	Record
Heating Degree Days	0	0	-
HDD Month to Date	0	0	-
HDD Since July 1	0	0	-
Cooling Degree Days	13	12	-
CDD Month to Date	159	132	-
CDD Year to Date	961	943	-
Growing Degree Days	28	-	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	57	-	-
High	61	-	-
Low	53	-	-
Average	57	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	25	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	30.16	-	-

Temperature (° F)	Actual	Historic Avg.	Record

Astronomy	Day Length	Rise	Set
Actual Time	13h 37m	6:24 AM	8:01 PM
Civil Twilight		5:57 AM	8:28 PM
Nautical Twilight		5:24 AM	9:01 PM
Astronomical Twilight		4:50 AM	9:35 PM
Moon: waxing gibbous		5:36 PM	2:50 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
12:52 AM	71 ° F	54 ° F	55 %	S	5 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
1:52 AM	70 ° F	54 ° F	57 %	S	3 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
2:52 AM	67 ° F	53 ° F	61 %	SE	8 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
3:52 AM	68 ° F	54 ° F	61 %	SSE	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
4:52 AM	68 ° F	53 ° F	59 %	SE	5 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
5:52 AM	69 ° F	54 ° F	58 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
6:52 AM	69 ° F	54 ° F	58 %	W	3 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
7:52 AM	70 ° F	55 ° F	59 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Fair
8:52 AM	73 ° F	56 ° F	55 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
9:52 AM	77 ° F	55 ° F	46 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
10:52 AM	79 ° F	55 ° F	44 %	VAR	5 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
11:52 AM	82 ° F	55 ° F	39 %	S	5 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
12:52 PM	85 ° F	54 ° F	34 %	SSW	16 mph	22 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
1:52 PM	87 ° F	54 ° F	32 %	SSW	14 mph	29 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
2:52 PM	86 ° F	56 ° F	36 %	WSW	17 mph	29 mph	24.7 in	0.0 in	0.0 in	Thunder in the Vicinity
3:52 PM	83 ° F	57 ° F	41 %	WNW	20 mph	29 mph	24.7 in	0.0 in	0.0 in	Thunder in the Vicinity
4:52 PM	73 ° F	58 ° F	59 %	VAR	3 mph	0 mph	24.8 in	0.1 in	0.0 in	Thunder in the Vicinity
5:00 PM	74 ° F	58 ° F	57 %	VAR	7 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
5:52 PM	74 ° F	60 ° F	62 %	NNE	9 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
6:52 PM	72 ° F	61 ° F	68 %	NNW	5 mph	0 mph	24.8 in	0.0 in	0.0 in	Light Rain
7:52 PM	71 ° F	61 ° F	70 %	ENE	3 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
8:52 PM	70 ° F	60 ° F	71 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
9:52 PM	68 ° F	61 ° F	78 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
10:52 PM	69 ° F	60 ° F	73 %	NNE	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
11:52 PM	70 ° F	60 ° F	71 %	N	5 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy

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$699 average annual savings for drivers who switch and save.
Progressive

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(https://plarium.com/landings/en/throne/pastoral003_f002_s_fb_m_prelp001?publisherID=260951695&placement=theweatherchannel-wunderground&adpartnerset=2570123&plid=137130&pxl=taboola_fr)

If You're Over 50 And Own A Computer, This Game Is A Must-Have!
Throne: Free Online Games

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(https://www.joinhoney.com/r/TB_US_190719_Amazon_RON_Broad_None_GhostAmazonStack19_AmazonGIF_SmartBid_18-65_All_NA_RedAmazonBoxFloatSpace_9446?utm_source=tabo&utm_medium=dis&utm_campaign=TB_US_190719_Amazon_RON_Broad_None_GhostAmazonStack19_AmazonGIF_SmartBid_18-65_All_NA_RedAmazonBoxFloatSpace_9446&utm_content=GhostAmazonStack19&url=https%3A%2F%2Fwww.joinhoney.com%2Fg-blog%2Fthe-amazon-tip-you-need-to-know-in-2019)

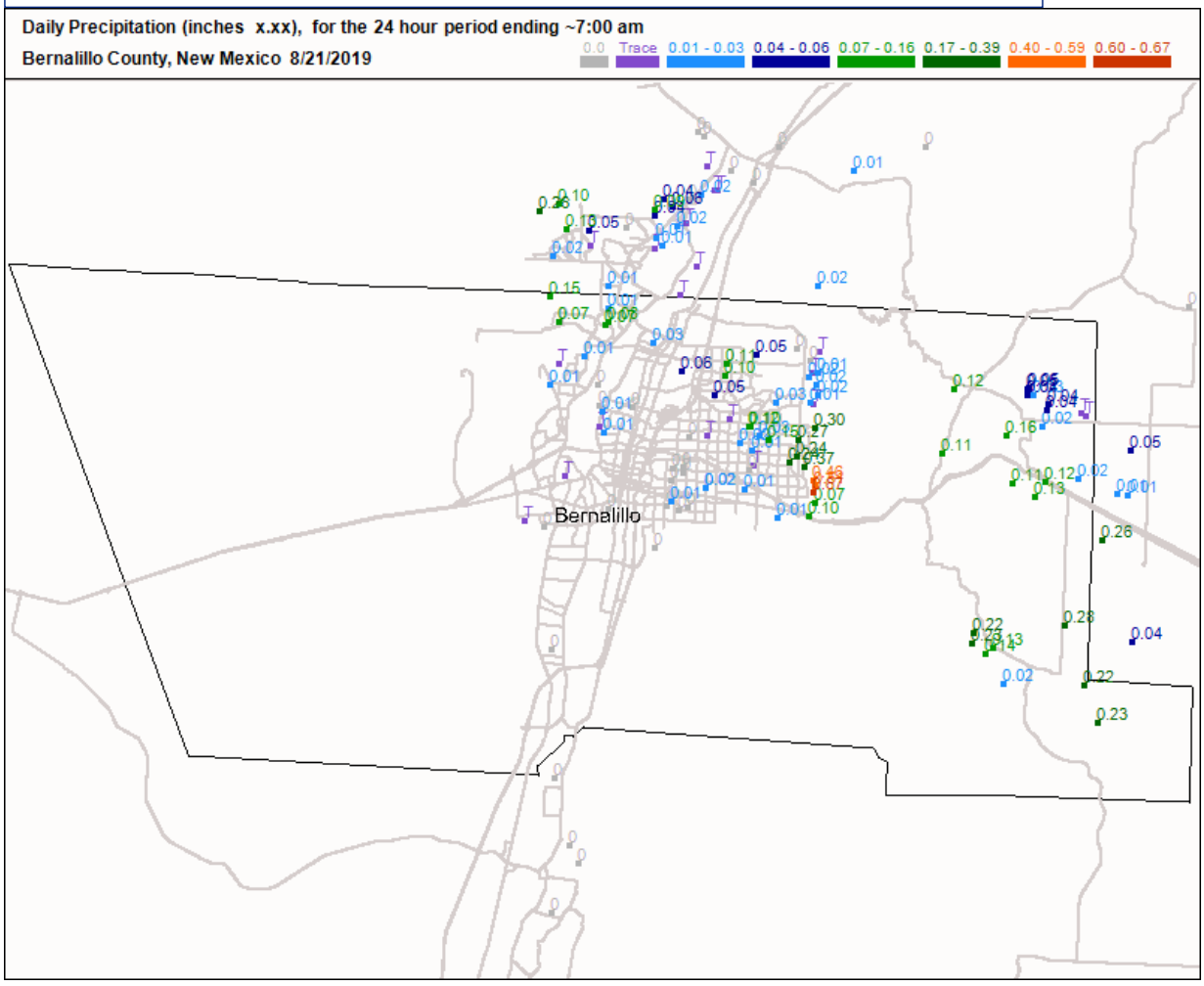
Amazon 2019: The New Upgrade You Should Know
Honey

(https://www.joinhoney.com/r/TB_US_190719_Amazon_RON_Broad_None_GhostAmazonStack19_AmazonGIF_SmartBid_18-65_All_NA_RedAmazonBoxFloatSpace_9446?utm_source=tabo&utm_medium=dis&utm_campaign=TB_US_190719_Amazon_RON_Broad_None_GhostAmazonStack19_AmazonGIF_SmartBid_18-65_All_NA_RedAmazonBoxFloatSpace_9446&utm_content=GhostAmazonStack19&url=https%3A%2F%2Fwww.joinhoney.com%2Fg-blog%2Fthe-amazon-tip-you-need-to-know-in-2019)

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	8/21/2019	Standard	Get Map



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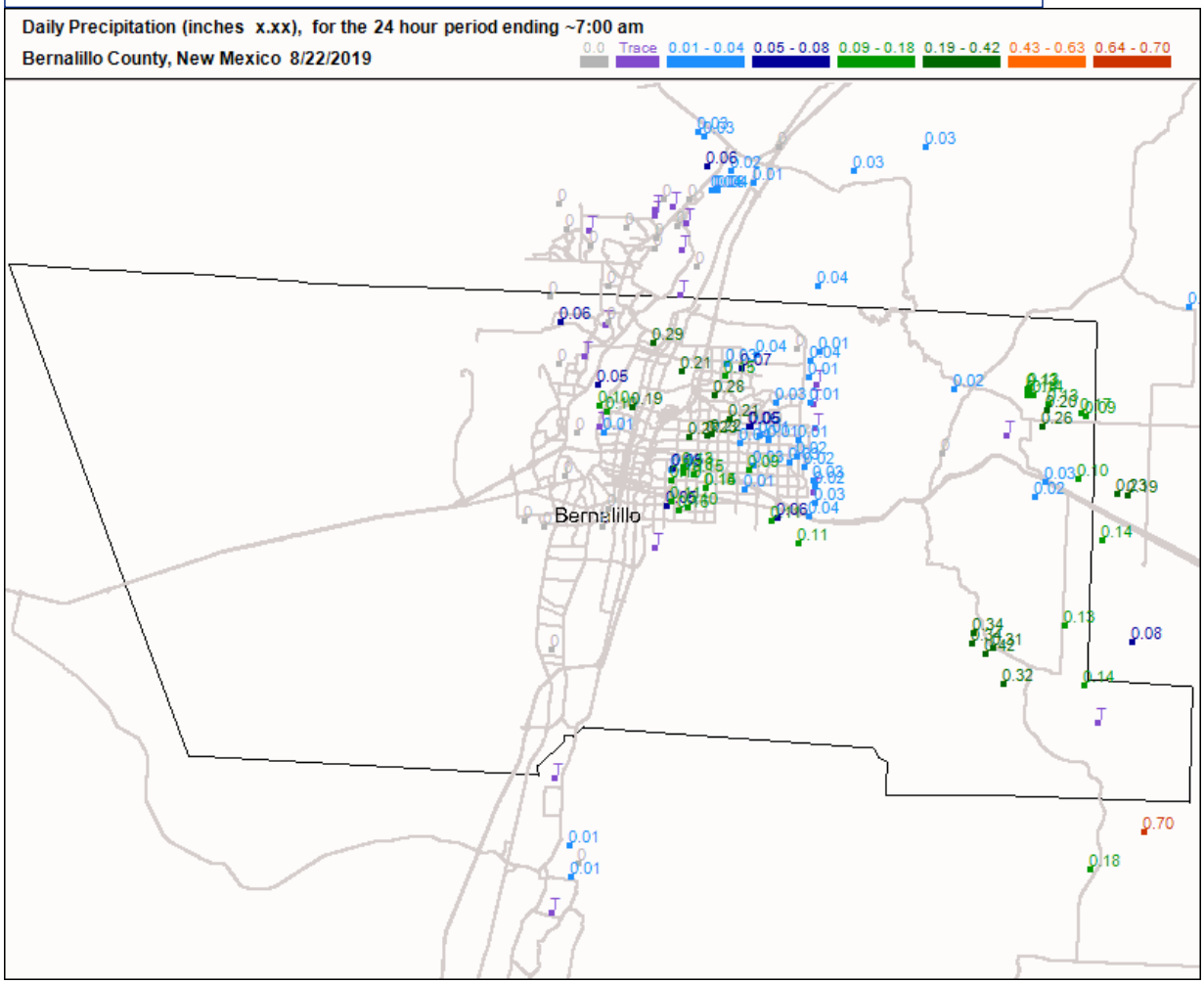
AUGUST 20, 2019

Wunderground (Sunport) reported 0 in. of runoff on this day. CoCoRaHS was used instead to show precipitation values. Rainfall occurred outside of normal operating hours, samples were not collected.

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	8/22/2019	Standard	Get Map



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AUGUST 21, 2019

Wunderground (Sunport) reported 0 in. of runoff on this day. CoCoRaHS was used instead to show precipitation values. Rainfall occurred outside of normal operating hours, samples were not collected.

35.05 °N, **106.61** °W

Albuquerque International Sunport, NM ★

99° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-8-26?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-8-26)

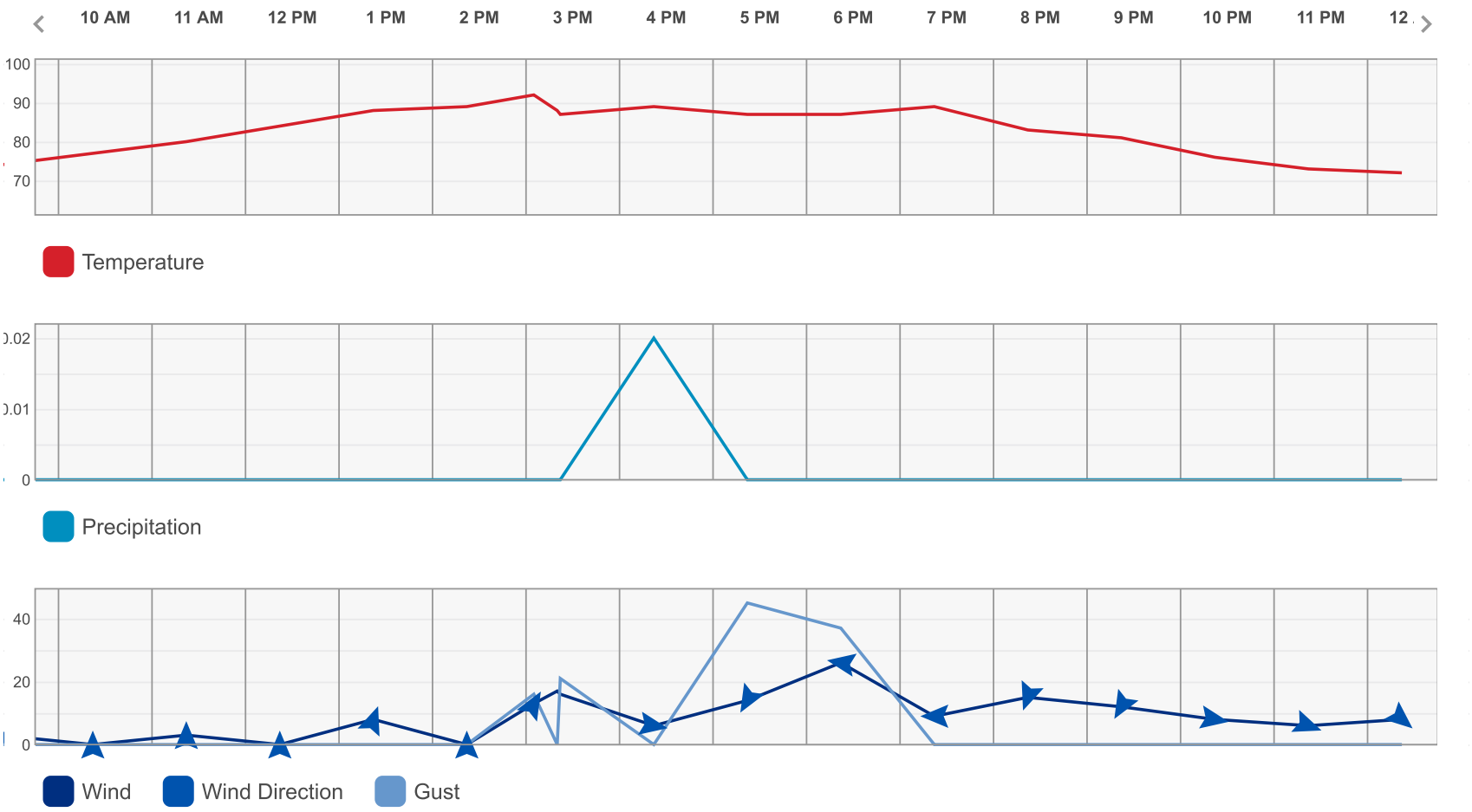
- TODAY (/WEATHER/US/NM/ALBUQUERQUE-INTERNATIONAL-SUNPORT/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE-INTERNATIONAL-SUNPORT/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE-INTERNATIONAL-SUNPORT/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ/DATE/2019-8)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-8-26)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

AUGUST 23, 2019

Not enough rainfall to produce runoff - samples were not collected.

Daily | Weekly | Monthly

August | 23 | 2019 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	91	87	97
Low Temp	67	65	54
Day Average Temp	80	76	-

Precipitation (Inches)	Actual	Historic Avg.	Record

Temperature (° F)	Actual	Historic Avg.	Record
Precipitation	0.02	0.04	0.72
Month to Date	0.43	1.24	-
Year to Date	5.45	5.94	-
Degree Days (° F)	Actual	Historic Avg.	Record
Heating Degree Days	0	0	-
HDD Month to Date	0	0	-
HDD Since July 1	0	0	-
Cooling Degree Days	14	11	-
CDD Month to Date	331	267	-
CDD Year to Date	1133	1078	-
Growing Degree Days	30	-	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	46	-	-
High	53	-	-
Low	34	-	-
Average	46	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	32	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	30.07	-	-

Temperature (° F)	Actual	Historic Avg.	Record

Astronomy	Day Length	Rise	Set
Actual Time	13h 13m	6:33 AM	7:47 PM
Civil Twilight		6:07 AM	8:13 PM
Nautical Twilight		5:35 AM	8:45 PM
Astronomical Twilight		5:03 AM	9:17 PM
Moon: waxing crescent		-	-

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
12:52 AM	77 ° F	50 ° F	39 %	E	18 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
1:52 AM	76 ° F	50 ° F	40 %	E	15 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
2:52 AM	75 ° F	50 ° F	41 %	E	13 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
3:52 AM	73 ° F	52 ° F	48 %	E	14 mph	0 mph	24.7 in	0.0 in	0.0 in	Partly Cloudy
4:52 AM	71 ° F	49 ° F	45 %	NW	7 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
5:52 AM	71 ° F	50 ° F	47 %	NNE	8 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
6:52 AM	68 ° F	51 ° F	55 %	ESE	6 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
7:52 AM	70 ° F	52 ° F	53 %	CALM	0 mph	0 mph	24.7 in	0.0 in	0.0 in	Partly Cloudy
8:52 AM	74 ° F	53 ° F	48 %	NNW	3 mph	0 mph	24.7 in	0.0 in	0.0 in	Fair
9:52 AM	77 ° F	52 ° F	42 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Fair
10:52 AM	80 ° F	51 ° F	36 %	VAR	3 mph	0 mph	24.8 in	0.0 in	0.0 in	Fair
11:52 AM	84 ° F	48 ° F	28 %	CALM	0 mph	0 mph	24.7 in	0.0 in	0.0 in	Fair
12:52 PM	88 ° F	46 ° F	23 %	NNE	8 mph	0 mph	24.7 in	0.0 in	0.0 in	Fair
1:52 PM	89 ° F	44 ° F	21 %	CALM	0 mph	0 mph	24.7 in	0.0 in	0.0 in	Partly Cloudy
2:35 PM	92 ° F	42 ° F	18 %	NNE	13 mph	16 mph	24.7 in	0.0 in	0.0 in	Thunder in the Vicinity
2:50 PM	88 ° F	43 ° F	21 %	NNW	17 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
2:52 PM	87 ° F	47 ° F	25 %	NNW	16 mph	21 mph	24.7 in	0.0 in	0.0 in	Light Rain
3:52 PM	89 ° F	43 ° F	20 %	E	6 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
4:52 PM	87 ° F	34 ° F	15 %	SSW	14 mph	45 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
5:52 PM	87 ° F	34 ° F	15 %	W	26 mph	37 mph	24.6 in	0.0 in	0.0 in	Mostly Cloudy / Windy
6:52 PM	89 ° F	38 ° F	16 %	W	9 mph	0 mph	24.6 in	0.0 in	0.0 in	Partly Cloudy
7:52 PM	83 ° F	43 ° F	24 %	SSW	15 mph	0 mph	24.7 in	0.0 in	0.0 in	Partly Cloudy
8:52 PM	81 ° F	44 ° F	27 %	SSW	12 mph	0 mph	24.7 in	0.0 in	0.0 in	Partly Cloudy
9:52 PM	76 ° F	43 ° F	31 %	E	8 mph	0 mph	24.7 in	0.0 in	0.0 in	Partly Cloudy
10:52 PM	73 ° F	43 ° F	34 %	ESE	6 mph	0 mph	24.7 in	0.0 in	0.0 in	Fair
11:52 PM	72 ° F	43 ° F	35 %	SE	8 mph	0 mph	24.7 in	0.0 in	0.0 in	Partly Cloudy

ola.com/en/?template=colorbox&utm_source=theweatherchannel-wunderground&utm_medium=referral&utm_content=thumbnails-b:History Thumbnails:)
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3 Dangerous Foods People Feed Their Dogs (Without Realizing It)

Dr. Marty ProPower Plus Supplement

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The Genius Hack Every Home Depot Shopper Should Know

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(https://tracking.truthfinder.com/?a=102&oc=27&c=396&subtheme=&s1=CM-RON&s2=AG-Desktop&s3=CRE-AshleyBlueShirt+AllLiars&s4=LP-396&s5=&utm_source=taboola&utm_medium=referral)

One Thing All Liars Have in Common, Brace Yourself

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(http://clickster.io/api/visitors/57ac89e0a38746122f4af882/5d2633f87ce4be7e6875b18d/incoming?adi=solarwoman&adh=regpayinstall&addet=solarwoman-regpayinstall&cadid=1O1RuCJH3tZ&utm_source=theweatherchannel-wunderground&plcid=1194714&adid=251728828&taboolaclickid=CjBiZjY1NWYzNC1hNGRkLTQ5ZmMtOGU1Yi1iOTI0NzFmMWYyNjItdHVjdDQxNTJhNzMSE3NtYXNobWVkaWEtc29sYXItc2M)

New Mexico Will Pay Homeowners to Install Solar

Smart Life Weekly

(http://clickster.io/api/visitors/57ac89e0a38746122f4af882/5d2633f87ce4be7e6875b18d/incoming?adi=solarwoman&adh=regpayinstall&addet=solarwoman-regpayinstall&cadid=1O1RuCJH3tZ&utm_source=theweatherchannel-wunderground&plcid=1194714&adid=251728828&taboolaclickid=CjBiZjY1NWYzNC1hNGRkLTQ5ZmMtOGU1Yi1iOTI0NzFmMWYyNjItdHVjdDQxNTJhNzMSE3NtYXNobWVkaWEtc29sYXItc2M)
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At Almost 90, Clu Gulager Is One Of The Oldest Living Western Stars

TummyTuckHipo

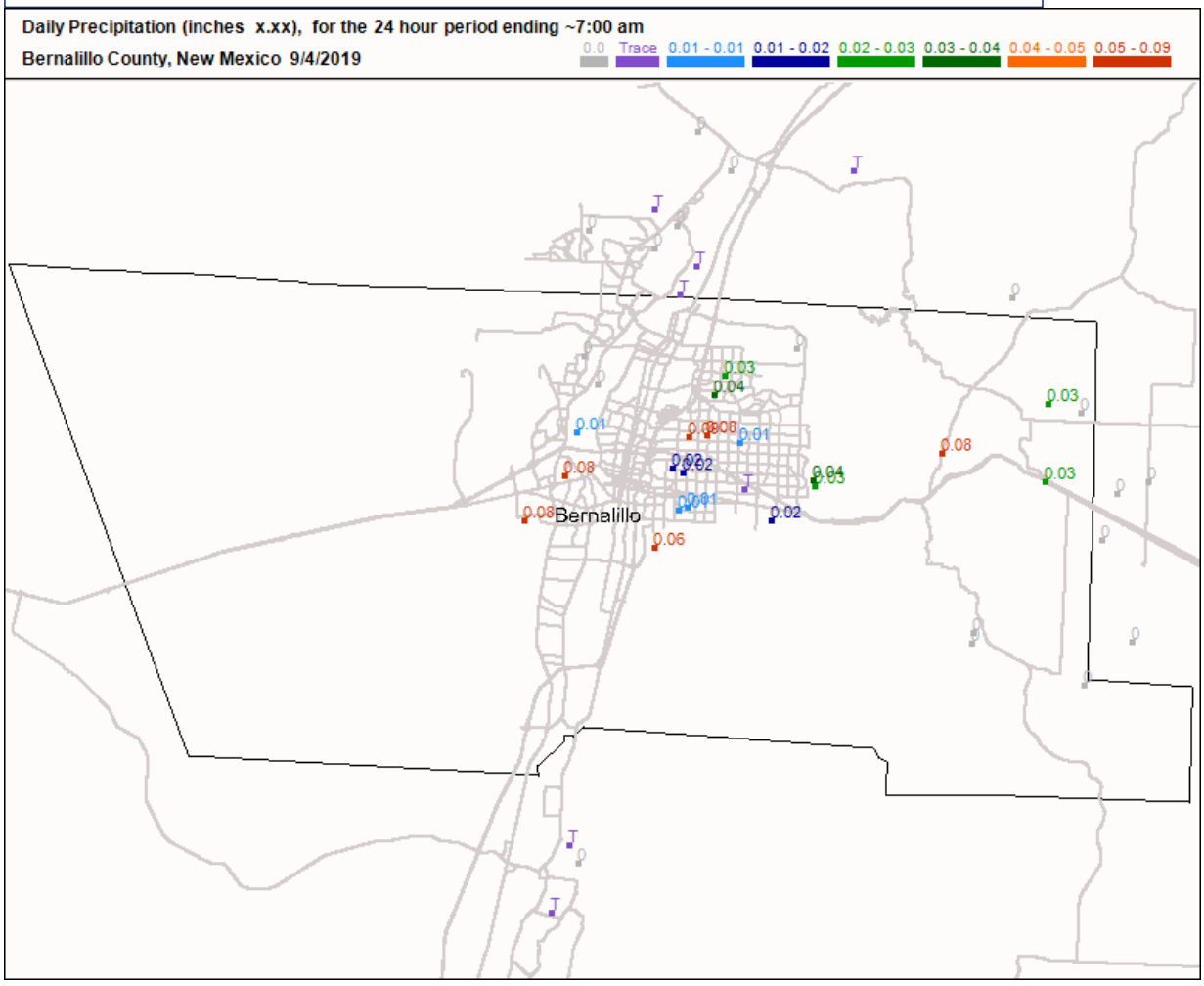
COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Select Language

Home | Countries | States | View Data | Maps My Data Entry | Login

Maps : Daily Precipitation

Map Type	Map Location		Date	Colors	
Precipitation	New Mexico	BR - Bernalillo	9/4/2019	Standard	Get Map



For questions or comments concerning this web page please contact info@cocorahs.org.
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SEPTEMBER 3, 2019

Wunderground (Sunport) reported 0 in. of runoff on this day. CoCoRaHS was used instead to show precipitation values. Rainfall occurred outside of normal operating hours, samples were not collected.

35.05 °N, **106.61** °W

Albuquerque International Sunport, NM ★

61° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-9-16?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-9-16)

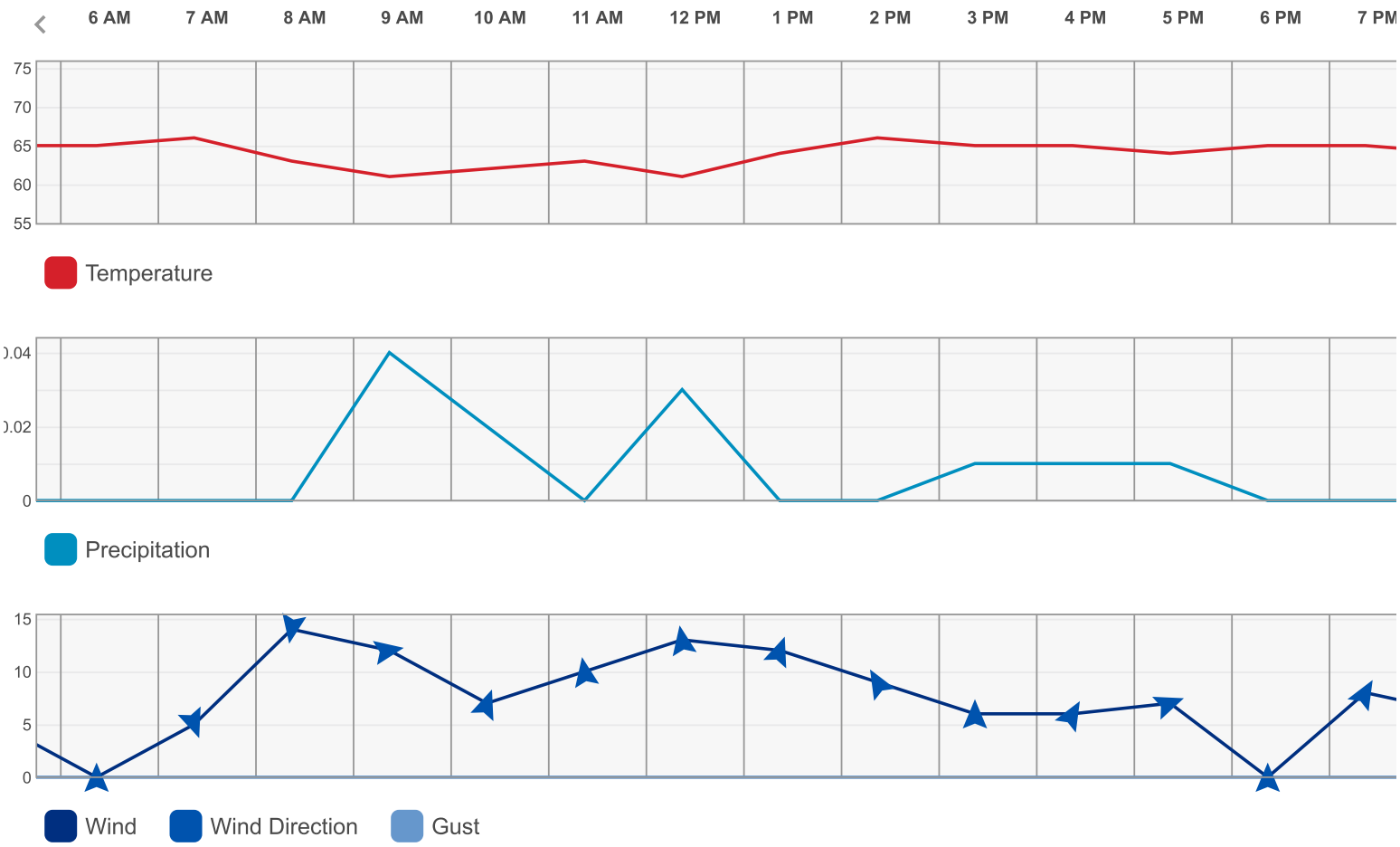
- TODAY (/WEATHER/US/NM/ALBUQUERQUE-INTERNATIONAL-SUNPORT/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE-INTERNATIONAL-SUNPORT/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE-INTERNATIONAL-SUNPORT/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ/DATE/2019-9)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-9-16)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily | Weekly | Monthly

September | 15 | 2019 | View

SEPTEMBER 15, 2019

Rainfall occurred outside of normal working hours. Samples were not collected



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	69	81	94
Low Temp	60	58	38
Day Average Temp	64	70	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation	0.12	0.03	0.42
Month to Date	0.14	0.54	-
Year to Date	5.59	6.82	-
Degree Days (° F)	Actual	Historic Avg.	Record
Heating Degree Days	0	1	-
HDD Month to Date	0	1	-
HDD Since July 1	0	1	-

Temperature (° F)	Actual	Historic Avg.	Record
Cooling Degree Days	0	5	-
CDD Month to Date	185	109	-
CDD Year to Date	1449	1266	-
Growing Degree Days	14	-	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	55	-	-
High	59	-	-
Low	50	-	-
Average	55	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	16	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	30.14	-	-
Astronomy	Day Length	Rise	Set
Actual Time	12h 25m	6:50 AM	7:15 PM
Civil Twilight		6:25 AM	7:41 PM
Nautical Twilight		5:55 AM	8:10 PM
Astronomical Twilight		5:24 AM	8:41 PM
Moon: waning gibbous		8:24 PM	8:01 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
12:52 AM	69 ° F	50 ° F	51 %	CALM	0 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
1:52 AM	67 ° F	53 ° F	61 %	WNW	6 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
2:52 AM	66 ° F	52 ° F	60 %	WNW	5 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
3:52 AM	67 ° F	53 ° F	61 %	CALM	0 mph	0 mph	24.9 in	0.0 in	0.0 in	Mostly Cloudy
4:52 AM	65 ° F	51 ° F	61 %	S	5 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
5:52 AM	65 ° F	51 ° F	61 %	CALM	0 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
6:52 AM	66 ° F	52 ° F	60 %	SSE	5 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
7:52 AM	63 ° F	55 ° F	75 %	S	14 mph	0 mph	24.9 in	0.0 in	0.0 in	Light Rain
8:52 AM	61 ° F	58 ° F	90 %	E	12 mph	0 mph	24.9 in	0.0 in	0.0 in	Rain
9:52 AM	62 ° F	58 ° F	86 %	NNE	7 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
10:52 AM	63 ° F	59 ° F	87 %	N	10 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
11:52 AM	61 ° F	58 ° F	90 %	N	13 mph	0 mph	24.9 in	0.0 in	0.0 in	Light Rain
12:52 PM	64 ° F	59 ° F	84 %	NNE	12 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
1:52 PM	66 ° F	56 ° F	70 %	NNW	9 mph	0 mph	24.9 in	0.0 in	0.0 in	Cloudy
2:52 PM	65 ° F	56 ° F	73 %	N	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Light Rain
3:52 PM	65 ° F	56 ° F	73 %	NNE	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Light Rain
4:52 PM	64 ° F	57 ° F	78 %	ENE	7 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
5:52 PM	65 ° F	56 ° F	73 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Light Rain
6:52 PM	65 ° F	57 ° F	75 %	NNE	8 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
7:52 PM	64 ° F	57 ° F	78 %	N	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
8:52 PM	64 ° F	55 ° F	72 %	NNW	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
9:52 PM	64 ° F	56 ° F	75 %	NE	5 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
10:52 PM	65 ° F	58 ° F	78 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
11:52 PM	64 ° F	57 ° F	78 %	N	3 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy

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Two Accounts Your Bank Doesn't Want You to Know About

MyFinance

(https://www.myfinance.com/best-savings-accounts/?utm_campaign=tba_savmf_advbatt_p-na_des_ron_aa_allcset2myfin100&utm_source=taboola&utm_medium=cpc&utm_ntwk=n&utm_site=theweatherchannel-wunderground&utm_content=Two+Accounts+Your+Bank+Doesn%27t+Want+You+to+Know+About&utm_placement_id=1194714)
(http://www.ancestry.com/s71805/t32653/rd.ashx?utm_source=taboola&utm_term=theweatherchannel-wunderground)

What's the Most Popular Surname in New Mexico?

Ancestry

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One Thing All Liars Have in Common, Brace Yourself

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These SUVs Are The Cream Of The Crop. Search Best New Sub Compact SUV

35.05 °N, **106.61** °W

Albuquerque International Sunport, NM ★

63° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-9-17?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-9-17)

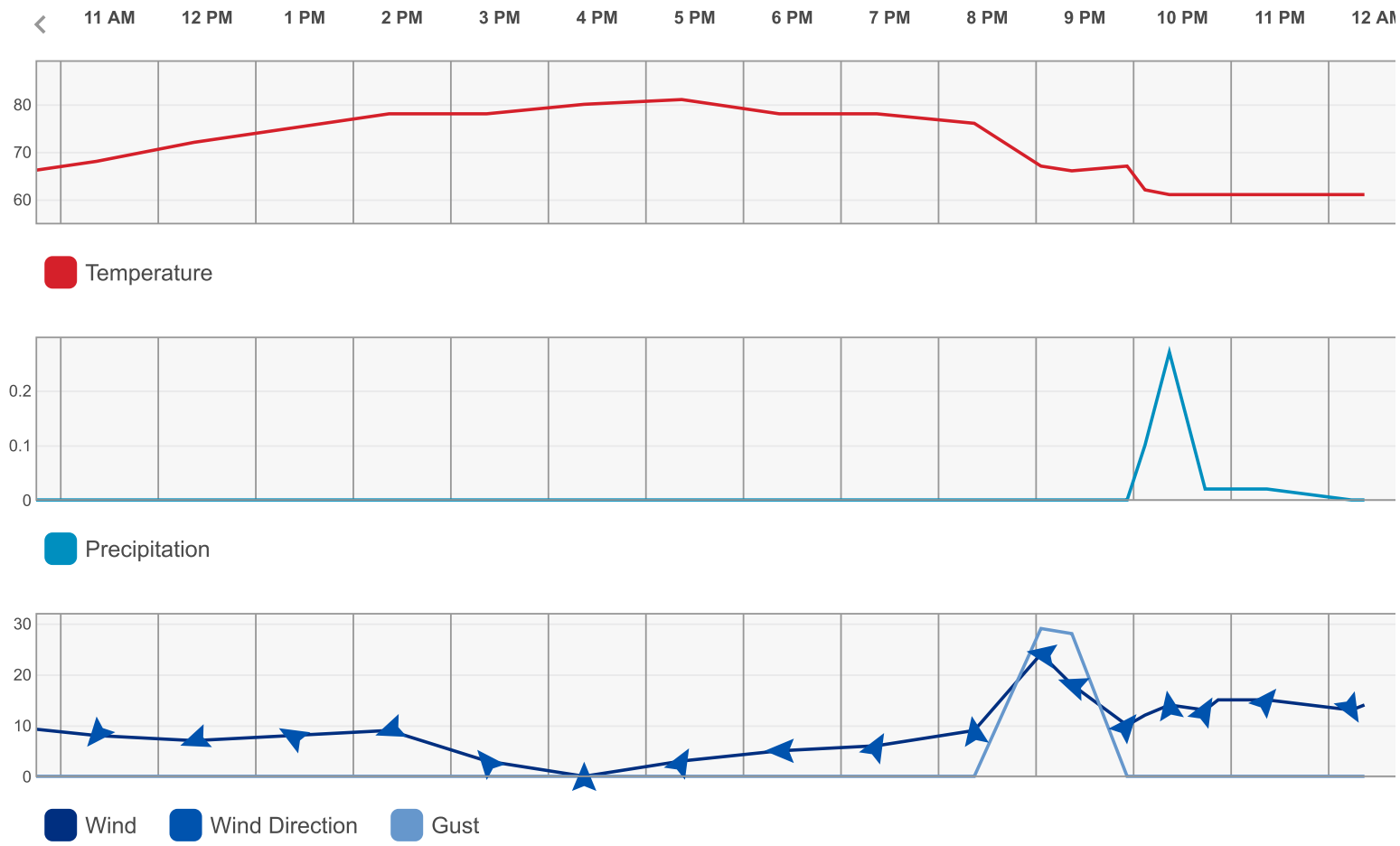
- TODAY (/WEATHER/US/NM/ALBUQUERQUE-INTERNATIONAL-SUNPORT/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE-INTERNATIONAL-SUNPORT/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE-INTERNATIONAL-SUNPORT/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ/DATE/2019-9)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-9-17)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily | Weekly | Monthly

September | 16 | 2019 | View

SEPTEMBER 16, 2019

Rainfall occurred outside of normal working hours. Samples were not collected



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	81	81	94
Low Temp	60	58	42
Day Average Temp	70	69	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation	0.3	0.03	0.66
Month to Date	0.44	0.57	-
Year to Date	5.89	6.85	-
Degree Days (° F)	Actual	Historic Avg.	Record
Heating Degree Days	0	1	-
HDD Month to Date	0	2	-
HDD Since July 1	0	2	-

Temperature (° F)	Actual	Historic Avg.	Record
Cooling Degree Days	6	5	-
CDD Month to Date	191	114	-
CDD Year to Date	1455	1271	-
Growing Degree Days	20	-	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	55	-	-
High	58	-	-
Low	48	-	-
Average	55	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	32	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	30.22	-	-
Astronomy	Day Length	Rise	Set
Actual Time	12h 23m	6:51 AM	7:14 PM
Civil Twilight		6:25 AM	7:39 PM
Nautical Twilight		5:56 AM	8:09 PM
Astronomical Twilight		5:25 AM	8:39 PM
Moon: waning gibbous		8:53 PM	8:56 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
12:52 AM	63 ° F	58 ° F	84 %	SE	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
1:52 AM	62 ° F	58 ° F	86 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
2:52 AM	64 ° F	57 ° F	78 %	CALM	0 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
3:52 AM	63 ° F	57 ° F	81 %	SW	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
4:52 AM	61 ° F	58 ° F	90 %	ESE	6 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy
5:52 AM	61 ° F	57 ° F	87 %	ESE	6 mph	0 mph	24.8 in	0.0 in	0.1 in	Mostly Cloudy
6:52 AM	61 ° F	57 ° F	87 %	SSE	8 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Precip Accum	Condition
7:52 AM	61 ° F	57 ° F	87 %	SSE	8 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
8:52 AM	63 ° F	57 ° F	81 %	S	10 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
9:52 AM	65 ° F	57 ° F	75 %	S	10 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
10:52 AM	68 ° F	55 ° F	63 %	SW	8 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
11:52 AM	72 ° F	53 ° F	51 %	WSW	7 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
12:52 PM	75 ° F	52 ° F	44 %	WNW	8 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
1:52 PM	78 ° F	51 ° F	39 %	WSW	9 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
2:52 PM	78 ° F	50 ° F	37 %	NW	3 mph	0 mph	24.8 in	0.0 in	0.0 in	Partly Cloudy
3:52 PM	80 ° F	50 ° F	35 %	CALM	0 mph	0 mph	24.7 in	0.0 in	0.0 in	Partly Cloudy
4:52 PM	81 ° F	49 ° F	33 %	NNE	3 mph	0 mph	24.7 in	0.0 in	0.0 in	Partly Cloudy
5:52 PM	78 ° F	48 ° F	35 %	W	5 mph	0 mph	24.7 in	0.0 in	0.0 in	Partly Cloudy
6:52 PM	78 ° F	48 ° F	35 %	NNE	6 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
7:52 PM	76 ° F	48 ° F	37 %	N	9 mph	0 mph	24.7 in	0.0 in	0.0 in	Mostly Cloudy
8:33 PM	67 ° F	55 ° F	66 %	W	24 mph	29 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
8:52 PM	66 ° F	55 ° F	68 %	WNW	18 mph	28 mph	24.8 in	0.0 in	0.0 in	Cloudy
9:26 PM	67 ° F	54 ° F	63 %	NE	10 mph	0 mph	24.8 in	0.0 in	0.0 in	Thunder in the
9:37 PM	62 ° F	57 ° F	84 %	N	12 mph	0 mph	24.8 in	0.1 in	0.0 in	Heavy T-Storm
9:52 PM	61 ° F	56 ° F	83 %	N	14 mph	0 mph	24.8 in	0.3 in	0.0 in	Heavy T-Storm
10:14 PM	61 ° F	57 ° F	87 %	NNE	13 mph	0 mph	24.8 in	0.0 in	0.0 in	T-Storm
10:22 PM	61 ° F	56 ° F	83 %	NE	15 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
10:52 PM	61 ° F	57 ° F	87 %	NE	15 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
11:44 PM	61 ° F	57 ° F	87 %	SSE	13 mph	0 mph	24.8 in	0.0 in	0.0 in	Mostly Cloudy
11:52 PM	61 ° F	57 ° F	87 %	SE	14 mph	0 mph	24.8 in	0.0 in	0.0 in	Cloudy

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If Your Indoor Cat Vomits (Do This Every Day)

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(http://www.ancestry.com/s71805/t32653/rd.ashx?utm_source=taboola&utm_term=theweatherchannel-wunderground)

What's the Most Popular Surname in New Mexico?

Ancestry

ATTACHMENT C

VISUAL MONITORING INSPECTION FORMS

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City of Albuquerque

Facility: Puerto del Sol Golf Course

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 ● Q3 o Q4

Date: 7/1/19

Time: 4:30

Inspector: Melanie Meroni

Weather: light rain

Storm Precip: 0.24 in

Last 72 hour Precip: none

Photo: Attached

Sample taken

Outfall ID:	PDS1		
Flow Observed:	● Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	grated inlet		
Flow Estimate (include units and method of estimation):	.25" deep 6' wide		
Other Observations:	ponding SE of inlet vegetation on inlet		
Color (describe):	Brown		
Turbidity:	o Clear o Slightly Cloudy ● Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes ● No	o Yes o No	o Yes o No
Suspended Solids:	● Yes o No	o Yes o No	o Yes o No
Settled Solids:	● Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes ● No	o Yes o No	o Yes o No
Odor:	● Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes ● No	o Yes o No	o Yes o No
Describe:	slight rotting vegetation smell		

Additional Comments: PDS2 was locked - no access

City of Albuquerque

Facility: Yale transit Center (Y2)

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 • Q3 o Q4

Date: 7/1/19
Time: 4:11 PM
Inspector: Melanie Meroni

Weather: light rain
Storm Precip: 0.24 in
Last 72 hour Precip: none
Photo: Attached

Sample taken

Outfall ID:	Y1		
Flow Observed:	✓ Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	Inlet		
Flow Estimate (include units and method of estimation):	1" by 5" wide steady/fast		
Other Observations:	trash @ inlet, horses present		
Color (describe):	light brown		
Turbidity:	o Clear o Slightly Cloudy ✓ Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes ✗ No	o Yes o No	o Yes o No
Suspended Solids:	✗ Yes o No	o Yes o No	o Yes o No
Settled Solids:	✗ Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes ✗ No	o Yes o No	o Yes o No
Odor:	✗ Yes o No	o Yes o No	o Yes o No
Foam Present:	✗ Yes o No	o Yes o No	o Yes o No
Describe:	gaseous smell dirt/asphalt particles		

Additional Comments: ponding along fenceline - some dirt & trash

Sample was not collected for outfall PDS2 during this event due to the gate being locked.

ATTACHMENT D

STORMWATER MONITORING SAMPLING PHOTOGRAPHS

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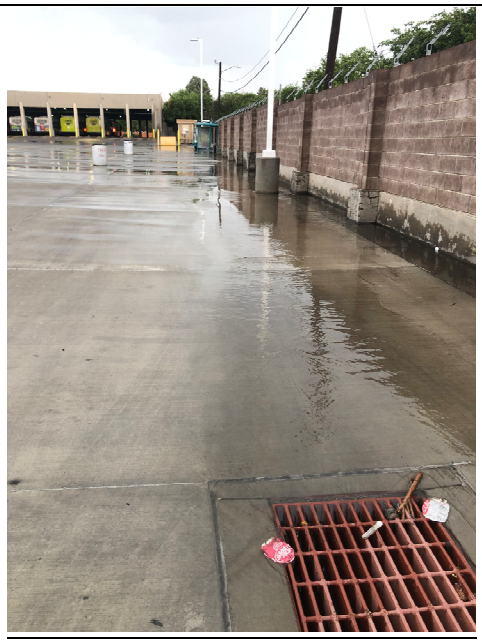
Third Quarter 2019 (July 7th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 1: Outfall Y1



Photograph 2: Sample Y1



Photograph 3: Outfall PDS 1



Photograph 4: Sample PDS 1

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Weston Solutions, Inc.
3840 Commons Ave. NE
Albuquerque, NM 87109
505-837-6520 Fax 505-837-6595
www.westonsolutions.com

January 23, 2020

Ms. Kathy Verhage, P.E.
Department of Municipal Development - Storm Drainage Design
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

REFERENCE: PROJECT NO. 8013 CITYWIDE ON-CALL NPDES AND MS4 ENGINEERING SUPPORT SERVICES 4th QUARTER 2019 UPDATE FOR TASK 4 VISUAL STORM WATER INSPECTIONS

Dear Ms. Verhage:

This letter describes the results of the 2019 Quarter 4 (October 1 through December 31) Visual Storm Water Inspections for ten City of Albuquerque (City) facilities that are subject to the requirements of the U.S. Environmental Protection Agency's (EPA) Municipal Separate Storm Sewer System (MS4) Permit and the Multi Sector General Permit for Storm Water Discharges Associated with Industrial Activity (MSGP) at City-owned facilities. The purpose of this memo is to document the City's compliance with the requirements for quarterly stormwater monitoring. To comply with the MS4 and MSGP's requirements for stormwater monitoring, the City tasked Weston Solutions to perform the quarterly visual inspections in order to identify potential impacted stormwater discharges at the 10 City-owned facilities. The following facilities meet the definition of an industrial facility in the MSGP based on audits of City-owned facilities performed between 2012 and 2019.

- Arroyo Del Oso Golf Course
- Balloon Fiesta Park and Golf Training Center
- Albuquerque BioPark Zoo
- Fire Department Mechanic Shop
- 4th Street Fuel Station
- Pino Yards Complex
- Street Maintenance Satellite #2
- 6th Street Park Management
- Eagle Rock Convenience Center
- Edith Yards Maintenance Facility

Figure 1 identifies these facilities along with the Weston inspection team responsible for inspecting each facility outfall.

Figure 1: Facility Site Locations

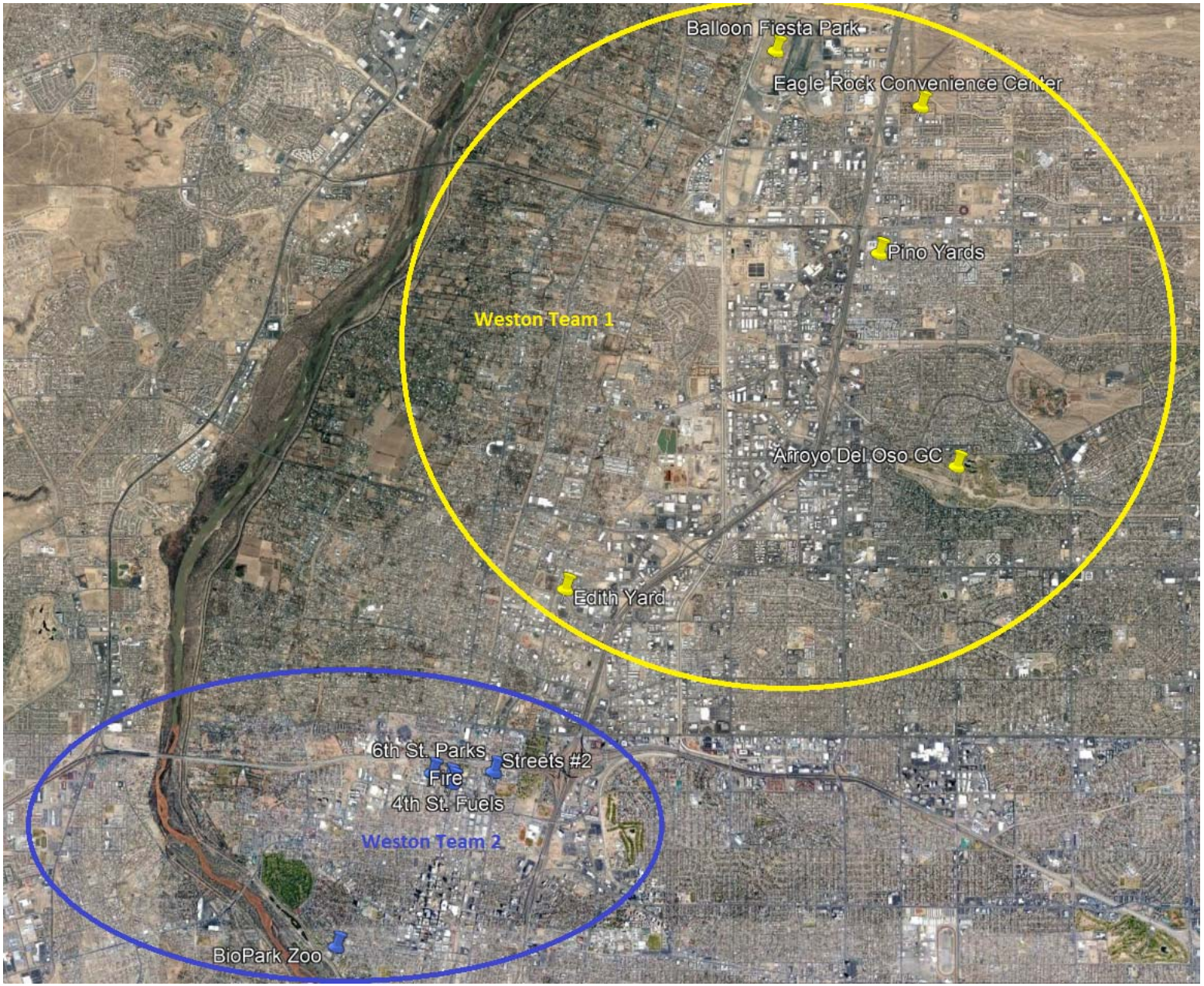


Table 1 summarizes the inspection status during the 4th Quarter of 2019.

Table 1: Outfall ID and Designees Site	Outfall ID	2019 Quarter 4 Status
Weston Team 1		
Balloon Fiesta Park and Golf Training Center	BFP1	Sample collected
	BFP2	Visited, dry-no sample
	BFP3	Visited, dry-no sample
	BFP4	Visited, dry-no sample
	BFP5	Visited, dry-no sample
Pino Yards Complex	PY1	Sample collected
	PY2	Sample collected
	PY3	Sample collected
Arroyo Del Oso Golf Course	ADO1	Visited, dry-no sample
	ADO2	Sample collected
Eagle Rock Convenience Center	ER01/ER02	Sample collected
	ER03	Sample collected
ABQ BioPark Zoo	BP1	Visited, dry-no sample
Weston Team 2		
4th Street Fuel Station	FS1	Sample collected
Fire Department Mechanic Shop	FM1	Sample collected
	FM2	Visited, dry-no sample
Street Maintenance Satellite #2	SS2	Sample collected
Edith Yards Maintenance Facility	EY01	Sample collected
	EY02	Sample collected
	EY03	Sample collected
6th Street Park Management	6PM1	Visited, dry-no sample

Background

The MSGP establishes requirements for monitoring the quality of stormwater discharges depending on the nature of activities performed at the various industrial facilities. Although benchmark monitoring is not required, the MSGP does require quarterly visual inspection of stormwater quality. Visual inspection consists of the collection of grab samples from each outfall (subject to demonstration of substantially identical outfalls) and examination for the presence of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, or other indicators of stormwater pollution.

The following criteria regarding the precipitation event must be met for a visual inspection of stormwater to occur:

- During daylight hours
- Within 30 minutes of start of storm water discharge (or as soon as practicable thereafter)
- At least 72 hours after the previous storm water discharge event

Weston follows the City's existing stormwater monitoring protocol outlining the locations and descriptions of all outfalls to be monitored. The protocol identifies contact persons at each facility for use in notifying City personnel when members of the stormwater monitoring team are mobilizing to that location. A standard visual assessment form is used by all staff to document the inspection activities.

January 23, 2020

Quarter 4 Monitoring Results

The results from the 4th Quarter 2019 visual inspections including monitoring reports and photo logs can be found in the Attachment A. From October 1 – December 31, 2019 the following occurred:

- Weston Sites Team 1 mobilized once during the quarter to collect samples from storm events on November 6, 2019. Visual samples were collected from seven of the fourteen outfalls that fall under Team 1.
- Weston Sites Team 2 mobilized once during the quarter to collect samples from a storm event on November 6, 2019. Six visual samples were collected from the eight outfalls over the course of the one mobilization.

Although there were several recordable precipitation events through this period, the vast majority did not meet the criteria for visual sampling since they occurred in the early evening, overnight or on weekends, or did not produce enough rainfall to be considered a qualifying event. Many sites received no rain due to the localized nature of the storms that did occur. Non-qualifying event data is provided in Attachment B.

Any outfalls not inspected in the 4th Quarter will be addressed during Quarter 1 of 2020 pending suitable weather conditions.

Observed Problems

For previously submitted memos, Weather Underground (WU) has provided historical information for any non-qualifying event, as found in Attachment B. Within Quarter 4 of 2019, the WU website changed the formatting of their data presentation. The following lists differences in previous and current format:

- When reviewing historical data, searching a date range is no longer an option as was the case previously. The new format only allows for retrieval of, at the longest, one month of record at a time.
- Monthly data no longer notes Sea Level Pressure (in), Visibility (mi), or an Event (fog, rain, snow, etc.).
- Daily data no longer notes Windchill, Visibility (mi), or Events (fog, rain, snow, etc.) at the time of measurement.

There are discrepancies in the data for Quarter 4 of 2019 between the monthly precipitation quantities and daily precipitation amounts when comparing days of data. Upon further research, WU determines a specific day's total precipitation by calculating the total amount of precipitation from 11:51:00 AM of the previous day to 11:52:00 AM on the day in question. For example, October 5th's total daily precipitation includes precipitation amounts from October 4th at 11:51:00 AM to October 5th at 11:52:00 AM. The following are assumed:

- Total precipitation is measured in inches
- Precipitation totals are the sum of all significantly measurable amounts and any trace amounts measured.

We appreciate the opportunity to provide professional consulting services to you and we look forward to assisting you in the next quarter. Please contact Shannon Archuleta at (505) 837-6536 (Shannon.Archuleta@WestonSolutions.com) or Brad Sumrall at (505) 837-6566 (Brad.Sumrall@WestonSolutions.com) if you have any questions or need additional information.

Sincerely,
WESTON SOLUTIONS, INC.

L. Brad Sumrall, P.E.
Technical Director

Enclosures:

ATTACHMENT A: Q4 INSPECTION FORMS AND PHOTO LOGS

ATTACHMENT B: NON-QUALIFYING EVENT DATA

ATTACHMENT A: Q4 INSPECTION FORMS AND PHOTO LOGS

BALLOON FIESTA PARK/ GOLF TRAINING CENTER

City of Albuquerque

Balloon Fiesta Park and Golf Training Center

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☐ Q3 ☒ Q4

Date: 11/6/2019
Time: 10:21 am
Inspector: Shannon Archuleta
Signature: Shan Arch

Weather: Drizzle/overcast
Storm Precip:
Last 72 Hour Precip: 0
Photo: Attached

Outfall ID:	BFP1	BFP2	BFP3
Flow Observed:	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No
Description of Monitoring Site:	Light flow/ Medium flow		
Flow Estimate (include units and method of estimation) :	~1 cfs		Puddles of water, no flow
Other Observations:	Some sediment at mid of flow, Settled		
Color (Describe):	Slight brown yellow		
Turbidity:	☐ Clear ☒ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No
Suspended Solids:	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No
Settled Solids:	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No
Sheen Present:	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No
Odor:	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No
Foam Present:	☐ Yes ☒ No	☐ Yes ☐ No	☐ Yes ☐ No
Describe:	mostly transparent, see photos	No access to grass drain inlet, fenced off, golf center	No flow observed

Additional Comments: Upon reaching BFP, most/all of precip had stopped, slow & decreasing flow

WESTON SOLUTIONS

City of Albuquerque

Balloon Fiesta Park and Golf Training Center

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☐ Q3 ☒ Q4

Date: 11/4/2019
Time: 10:30 pm
Inspector: Shannon Achuta
Signature: Shan Ach

Weather: Drizzle/Overcast
Storm Precip:
Last 72 Hour Precip: 0
Photo: attached

Outfall ID:	BFP4	BFP5
Flow Observed:	☐ Yes ☒ No	☐ Yes ☒ No
Description of Monitoring Site:		
Flow Estimate (include units and method of estimation) :		
Other Observations:		
Color (Describe):		
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☐ No	☐ Yes ☐ No
Suspended Solids:	☐ Yes ☐ No	☐ Yes ☐ No
Settled Solids:	☐ Yes ☐ No	☐ Yes ☐ No
Sheen Present:	☐ Yes ☐ No	☐ Yes ☐ No
Odor:	☐ Yes ☐ No	☐ Yes ☐ No
Foam Present:	☐ Yes ☐ No	☐ Yes ☐ No
Describe:	No flow observed	No flow observed

Additional Comments: Only puddles of water

WESTON SOLUTIONS

Date:	November 6, 2019
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Shannon Archuleta (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Balloon Fiesta Park	
 (BFP1)	 (BFP1)

PINO YARDS

City of Albuquerque
Pino Yards Complex

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☐ Q3 ☒ Q4

Date: 11/6/2019
Time: 10:36 am
Inspector: David "Sonny" Cooper
Signature: David Cooper

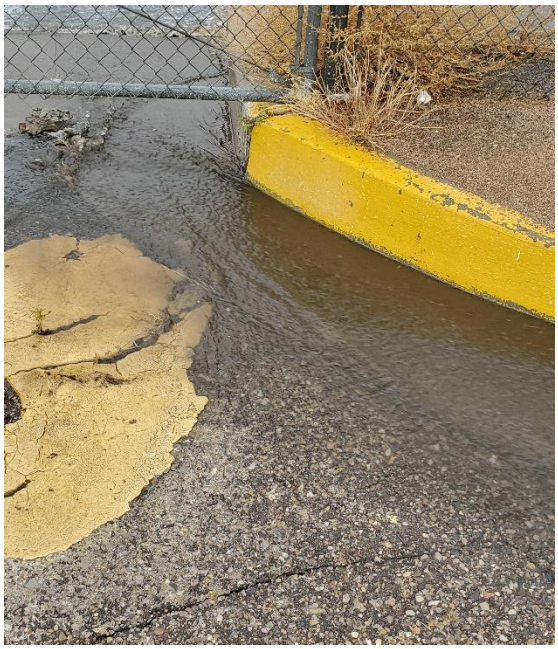
Weather: Rain
Storm Precip:
Last 72 Hour Precip: 0
Photo: Attached

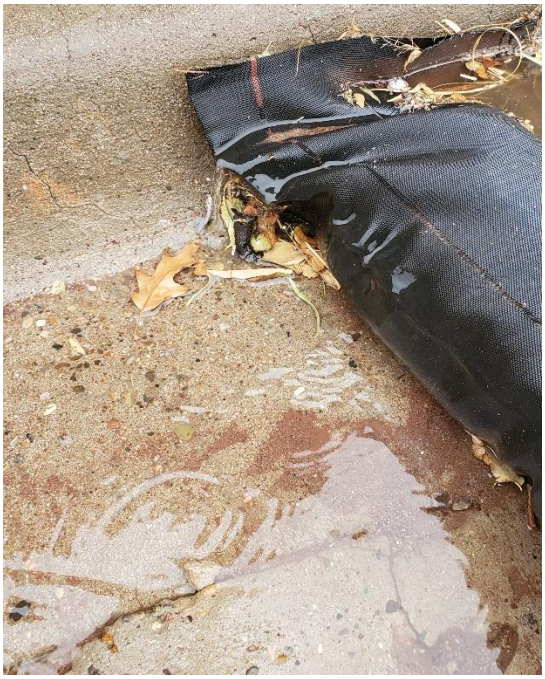
Outfall ID:	PY1	PY2	PY3
Flow Observed:	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Description of Monitoring Site:	Pond Rundown	Right inlet	Left inlet
Flow Estimate (include units and method of estimation) :	≈ 1 to 3 cfs visual	< 1 cfs visual	< 1 cfs visual
Other Observations:	Sheen visable on flow	Slight sheen in flow, flow around wattle	flow around wattle, sheen in flow
Color (Describe):	Tan	Light tan	Light tan
Turbidity:	☐ Clear ☐ Slightly Cloudy ☒ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No
Suspended Solids:	☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No
Settled Solids:	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Sheen Present:	☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No
Odor:	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No
Foam Present:	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Describe:			Slight oil odor

Additional Comments:

Date:	November 6, 2019
Event:	MS4 Stormwater Visual Monitoring
Inspector:	David “Sonny” Cooper (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

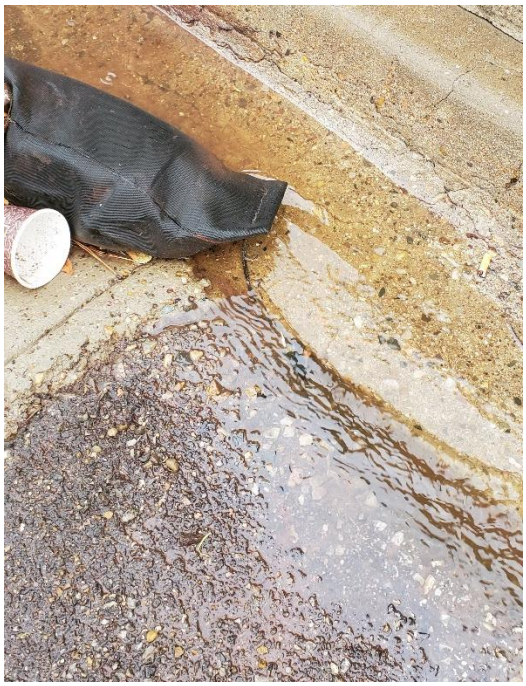
Pino Yards Complex	
	
	

















ARROYO DEL OSO GOLF COURSE

City of Albuquerque

Arroyo Del Oso Golf Course

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☐ Q3 ☒ Q4

Date: 11/6/2019
Time: 10:59am
Inspector: David "Sonny" Cooper
Signature: David Cooper

Weather: Drizzle
Storm Precip:
Last 72 Hour Precip: 0
Photo: Attached.

Outfall ID:	ADO1	ADO2
Flow Observed:	☐ Yes ☒ No	☒ Yes ☐ No
Description of Monitoring Site:	Upstream Bridge	
Flow Estimate (include units and method of estimation) :	Flow infiltrating before reaching bridge	< 1 cfs (visual)
Other Observations:		
Color (Describe):		Clear
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☒ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☐ No	☐ Yes ☒ No
Suspended Solids:	☐ Yes ☐ No	☒ Yes ☐ No
Settled Solids:	☐ Yes ☐ No	☐ Yes ☒ No
Sheen Present:	☐ Yes ☐ No	☐ Yes ☒ No
Odor:	☐ Yes ☐ No	☐ Yes ☒ No
Foam Present:	☐ Yes ☐ No	☐ Yes ☒ No
Describe:		

Additional Comments:

Date:	November 6, 2019
Event:	MS4 Stormwater Visual Monitoring
Inspector:	David “Sonny” Cooper (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Arroyo Del Oso Golf Course









EAGLE ROCK CONVENIENCE CENTER

City of Albuquerque Solid Waste Management Department
Eagle Rock Convenience Center

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☐ Q3 ☒ Q4

Date: 11/6/2019
Time: 10:58 am
Inspector: Shannon Archuleta
Signature: Shan Arch

Weather: Drizzle
Storm Precip:
Last 72 Hour Precip: 0
Photo: Attached

Outfall ID:	ER01/ER02 (circle one)	ER03
Flow Observed:	☒ Yes ☐ No	☒ Yes ☐ No
Description of Monitoring Site:	Closest to building (South)	Retension pond
Flow Estimate (include units and method of estimation) :	<1 cfs	<1cfs
Other Observations:	water collected/ flowing contained garbage/debris	water in pond Black in color
Color (Describe):	Black/Brown	Light Tan
Turbidity:	☐ Clear ☐ Slightly Cloudy ☒ Very Cloudy ☐ Opaque	☐ Clear ☒ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☒ Yes ☐ No	☐ Yes ☒ No
Suspended Solids:	☐ Yes ☐ No	☐ Yes ☒ No
Settled Solids:	☒ Yes ☐ No	☒ Yes ☐ No
Sheen Present:	☒ Yes ☐ No	☐ Yes ☒ No
Odor:	☐ Yes ☒ No	☐ Yes ☒ No
Foam Present:	☐ Yes ☒ No	☐ Yes ☒ No
Describe:	Obvious sheen, floating organic debris, sediment on bottom	some sediment settled in jar but free of debris

ER02
NO FLOW
Furthest from Building (N)
N/A
—
—
—
—

Additional Comments: ER01: High turbidity

WESTON SOLUTIONS

Date:	November 6, 2019
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Shannon Archuleta (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

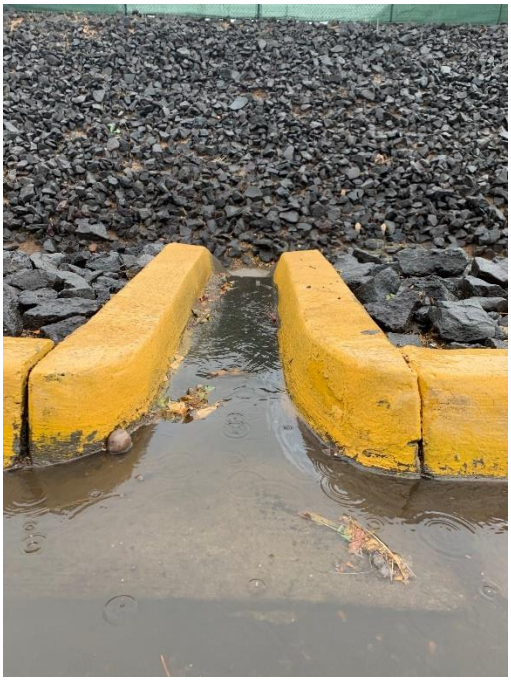
Eagle Rock Convenience Center



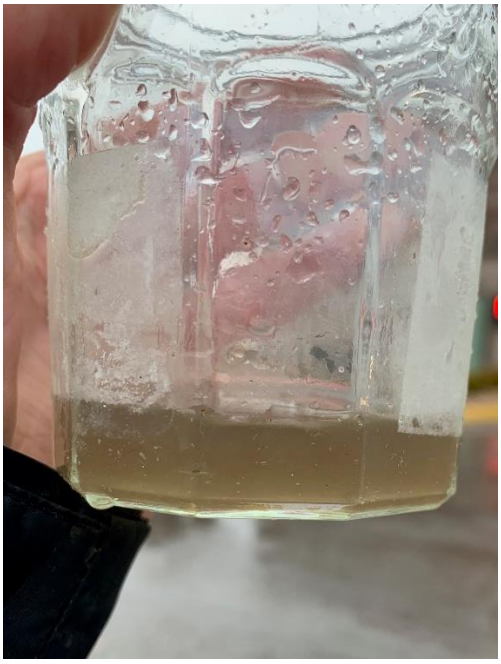


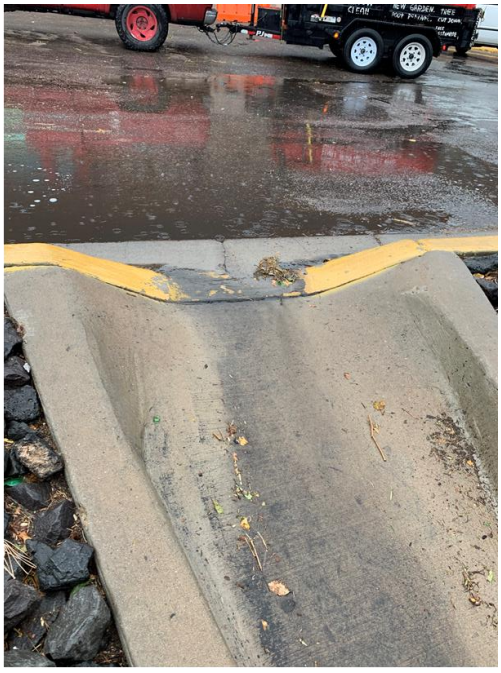












ABQ BIOPARK ZOO

City of Albuquerque
ABQ BioPark Zoo

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☐ Q3 ☒ Q4

Date: 11/6/19
Time: 1018
Inspector: Andrew Brenner
Signature: Andrew E Brenner

Weather: rain
Storm Precip:
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	BP1
Flow Observed:	☐ Yes ☒ No
Description of Monitoring Site:	
Flow Estimate (include units and method of estimation) :	
Other Observations:	
Color (Describe):	
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☐ No
Suspended Solids:	☐ Yes ☐ No
Settled Solids:	☐ Yes ☐ No
Sheen Present:	☐ Yes ☐ No
Odor:	☐ Yes ☐ No
Foam Present:	☐ Yes ☐ No
Describe:	

Additional Comments:

Date:	November 6, 2019
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

ABQ BioPark	
	

4TH STREET FUELS

City of Albuquerque
4th Street Fuel Station

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☐ Q3 ☒ Q4

Date: 11/6/19
Time: 1042
Inspector: Andrew Brenner
Signature: Andrew E Brenner

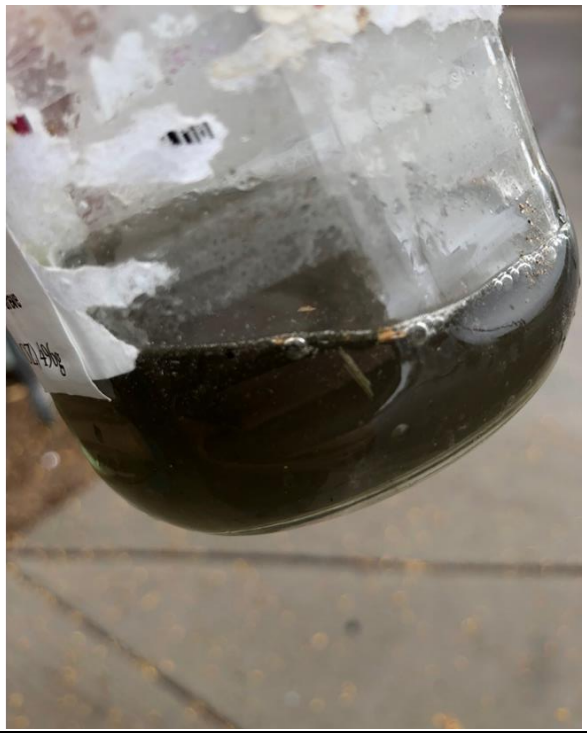
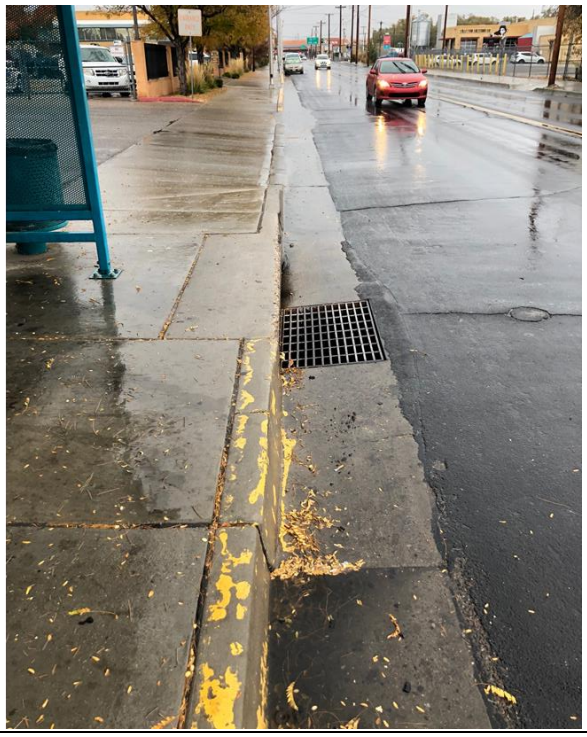
Weather: rain
Storm Precip:
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	FS1
Flow Observed:	☒ Yes ☐ No
Description of Monitoring Site:	~~rain~~ AFG leaves from trees were at sampling area
Flow Estimate (include units and method of estimation) :	< 1cfs
Other Observations:	—
Color (Describe):	black
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☒ Opaque
Floating Solids:	☒ Yes ☐ No
Suspended Solids:	☒ Yes ☐ No
Settled Solids:	☐ Yes ☒ No
Sheen Present:	☐ Yes ☒ No
Odor:	☐ Yes ☒ No
Foam Present:	☐ Yes ☒ No
Describe:	cars were fueling at site

Additional Comments:

Date:	November 6, 2019
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

4th Street Fuel Station	
	

FIRE DEPARTMENT MECHANIC

City of Albuquerque

Fire Department Mechanic Shop

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☐ Q3 ☒ Q4

Date: 11/6/19
Time: 1045
Inspector: Andrew Brenner
Signature: Andrew F Brenner

Weather: rain
Storm Precip:
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	FM1	FM2
Flow Observed:	☒ Yes ☐ No	☒ Yes ☐ No
Description of Monitoring Site:	slight flow observed	slight flow observed - backup behind wattle
Flow Estimate (include units and method of estimation) :	< 1cfs	< 1cfs
Other Observations:	- gra AFB	-
Color (Describe):	gray	gray
Turbidity:	☐ Clear ☐ Slightly Cloudy ☒ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☒ Very Cloudy ☐ Opaque
Floating Solids:	☒ Yes ☐ No	☒ Yes ☐ No
Suspended Solids:	☒ Yes ☐ No	☒ Yes ☐ No
Settled Solids:	☐ Yes ☒ No	☐ Yes ☒ No
Sheen Present:	☒ Yes ☐ No	☒ Yes ☐ No
Odor:	☐ Yes ☒ No	☐ Yes ☒ No
Foam Present:	☐ Yes ☒ No	☐ Yes ☒ No
Describe:	discharge had a dark gray color	-

Additional Comments:

Date:	November 6, 2019
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Fire Department Mechanic Shop









STREETS SATELLITE #2

City of Albuquerque

Street Maintenance Satellite #2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☐ Q3 ☒ Q4

Date: 11/6/19
Time: 1036
Inspector: Andrew Brenner
Signature: Andrew E Brenner

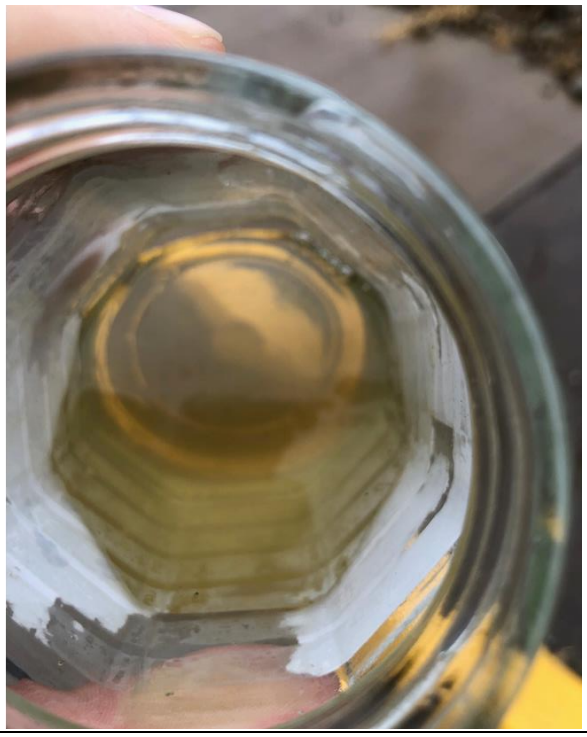
Weather: rain
Storm Precip:
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	SS2
Flow Observed:	☒ Yes ☐ No
Description of Monitoring Site:	no debris was observed at sampling point
Flow Estimate (include units and method of estimation) :	< 1cfs
Other Observations:	—
Color (Describe):	yellow
Turbidity:	☐ Clear ☒ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☒ No
Suspended Solids:	☐ Yes ☒ No
Settled Solids:	☐ Yes ☒ No
Sheen Present:	☐ Yes ☒ No
Odor:	☐ Yes ☒ No
Foam Present:	☐ Yes ☒ No
Describe:	—

Additional Comments:

Date:	November 6, 2019
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Street Maintenance Satellite #2	
	

EDITH YARD

City of Albuquerque Solid Waste Management Department
Edith Yards Maintenance Facility

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☐ Q3 ☒ Q4

Date: 11/6/2019
Time: 10:14 am
Inspector: David "Sonny" Cooper
Signature: David Cooper

Weather: Rain
Storm Precip:
Last 72 Hour Precip: 0
Photo: Attached

Outfall ID:	EY01	EY02	EY03
Flow Observed:	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Description of Monitoring Site:		Drop Inlet	Drop Inlet
Flow Estimate (include units and method of estimation) :		<1cfs	<1cfs
Other Observations:	not enough to Sample	Sheen Visable	Sheen Visable
Color (Describe):		Dark Gray	Dark Gray
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☒ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☒ Opaque
Floating Solids:	☐ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Suspended Solids:	☐ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Settled Solids:	☐ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Sheen Present:	☐ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Odor:	☐ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
Foam Present:	☐ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No
Describe:		Slight oil Odor	Slight oil Odor

Additional Comments:

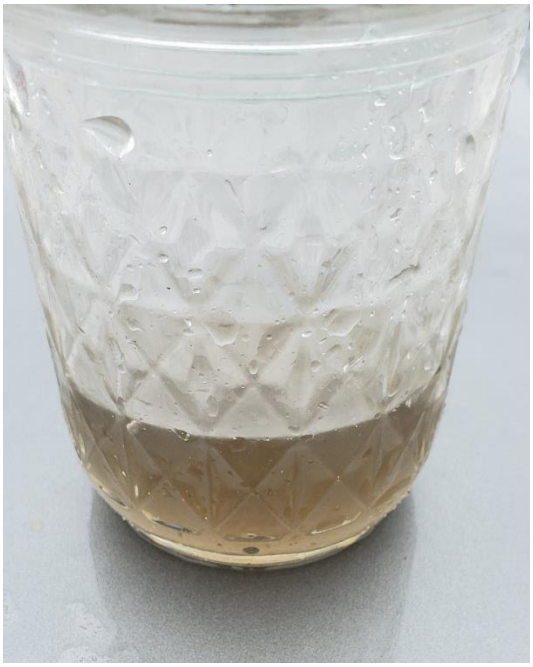
Date:	November 6, 2019
Event:	MS4 Stormwater Visual Monitoring
Inspector:	David “Sonny” Cooper (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Edith Yards Maintenance Facility















6TH STREET PARKS MANAGEMENT

City of Albuquerque
6th Street Park Management

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☐ Q1 ☐ Q2 ☐ Q3 ☒ Q4

Date: 11/6/19
Time: 1049
Inspector: Andrew Brenner
Signature: Andrew E Brenner

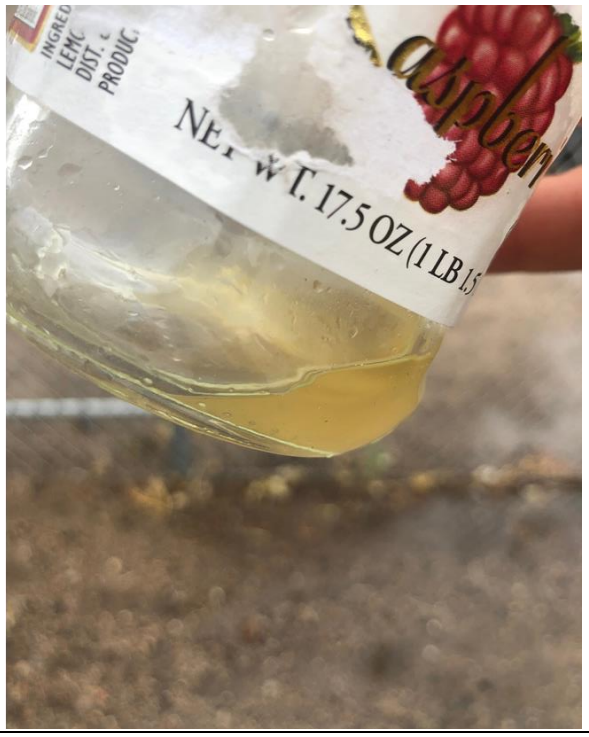
Weather: rain
Storm Precip:
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	6PM1
Flow Observed:	☐ Yes ☒ No
Description of Monitoring Site:	discharge pooled at sampling point
Flow Estimate (include units and method of estimation) :	—
Other Observations:	—
Color (Describe):	yellow
Turbidity:	☐ Clear ☒ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☒ No
Suspended Solids:	☐ Yes ☒ No
Settled Solids:	☐ Yes ☒ No
Sheen Present:	☐ Yes ☒ No
Odor:	☐ Yes ☒ No
Foam Present:	☐ Yes ☒ No
Describe:	sample collected from pooled discharge

Additional Comments:

Date:	November 6, 2019
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

6th Street Park Management	
	

ATTACHMENT B: NON-QUALIFYING DATA

Search Locations Log in (/log…

Albuquerque, NM
41 °F Mostly Cloudy

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

41° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

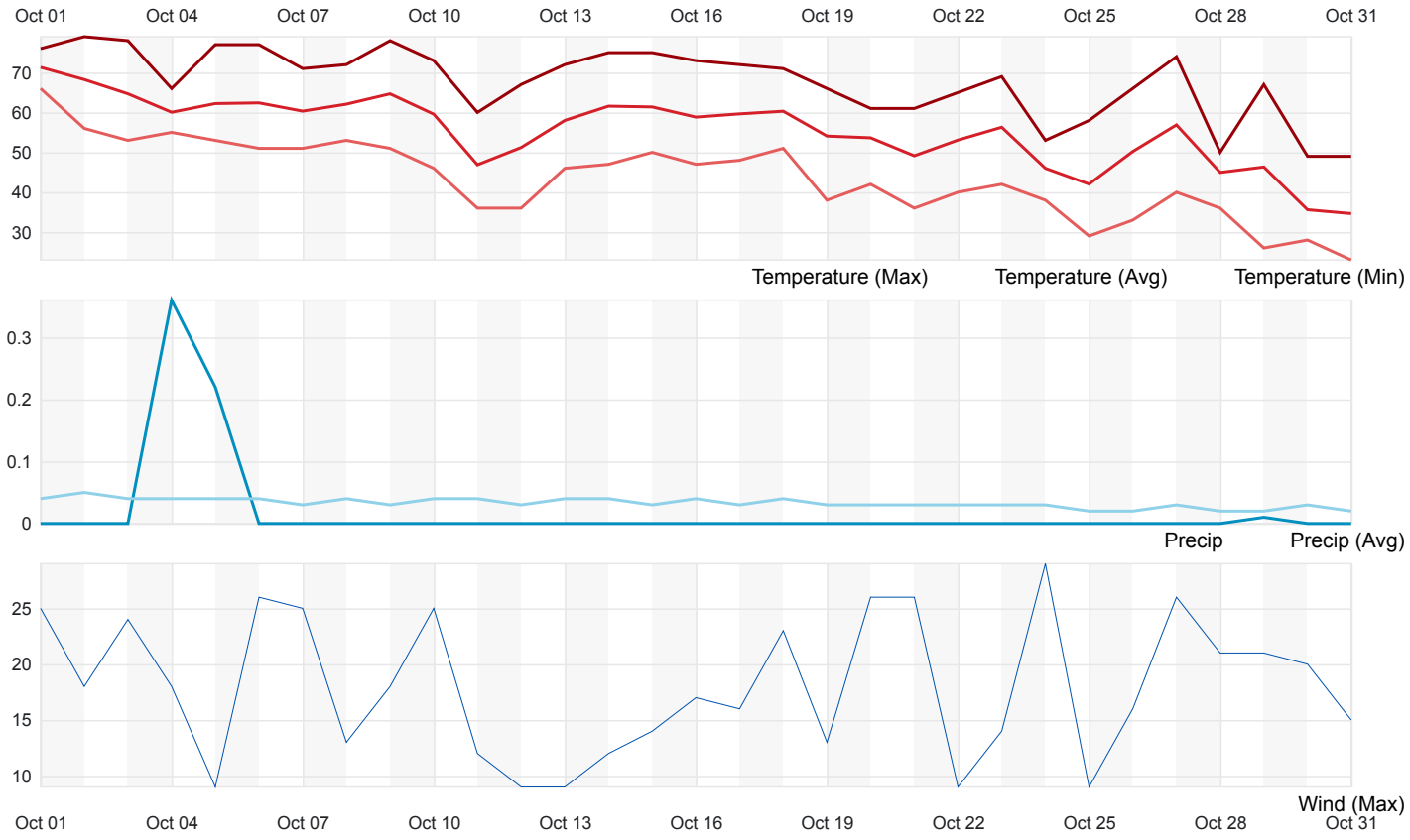
HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily Weekly **Monthly**

(/history/daily/us/nm/albuquerque/KABQ/date/2019-10-2) (/history/weekly/us/nm/albuquerque/KABQ/date/2019-10-2) **10-2)**

October 2019 View



Summary

Temperature (° F)	Max	Average	Min
Max Temperature	79	67.74	49
Avg Temperature	71.33	55.36	34.63
Min Temperature	66	43.45	23

Dew Point (° F)	Max	Average	Min
Dew Point	59	24.4	-9

Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.36	0.02	0.00	0.59
Snowdepth	0.00	0.00	0.00	0.00

Wind	Max	Average	Min
Wind	29	8.52	0
Gust Wind	40	3.4	0

Sea Level Pressure	Max	Average	Min
Sea Level Pressure	25.01	24.72	24.37

Daily Observations

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Oct	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	76	71.3	66	59	49.5	36	75	49.5	26	25	15.5	9	24.6	24.6	24.6	0.00
2	79	68.3	56	38	31.1	24	47	27.0	13	18	5.8	0	24.8	24.7	24.7	0.00
3	78	64.7	53	52	35.5	21	78	36.8	17	24	11.6	0	24.8	24.8	24.7	0.00
4	66	60.0	55	59	55.5	51	96	85.4	65	18	7.0	0	24.8	24.8	24.7	0.36
5	77	62.2	53	57	49.1	35	97	68.8	22	9	5.3	0	24.9	24.8	24.7	0.22
6	77	62.4	51	44	33.3	14	69	39.8	10	26	7.9	0	24.9	24.8	24.8	0.00
7	71	60.3	51	44	40.0	36	61	47.9	35	25	9.3	0	25.0	24.9	24.8	0.00
8	72	62.1	53	48	45.4	42	75	55.7	38	13	6.7	0	24.8	24.7	24.6	0.00
9	78	64.7	51	51	35.0	19	89	44.0	11	18	9.0	3	24.6	24.6	24.5	0.00
10	73	59.6	46	34	18.7	-9	50	23.7	8	25	14.0	0	24.8	24.6	24.5	0.00
11	60	46.9	36	10	1.1	-3	29	16.0	9	12	6.5	0	24.9	24.9	24.8	0.00
12	67	51.2	36	33	20.7	9	47	31.0	22	9	5.2	0	24.8	24.7	24.7	0.00
13	72	58.0	46	33	29.0	24	61	37.2	17	9	4.2	0	24.8	24.7	24.7	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
14	75	61.6	47	35	30.8	25	59	34.5	17	12	4.6	0	24.8	24.7	24.6	0.00
15	75	61.4	50	31	20.2	9	44	23.2	8	14	5.7	0	24.9	24.8	24.7	0.00
16	73	58.8	47	25	20.5	15	39	24.5	11	17	6.7	0	24.9	24.8	24.8	0.00
17	72	59.6	48	39	28.2	19	43	31.6	18	16	6.2	0	24.8	24.6	24.5	0.00
18	71	60.3	51	40	31.5	18	66	36.5	15	23	12.3	0	24.6	24.5	24.5	0.00
19	66	54.1	38	24	15.1	8	43	23.3	11	13	6.4	0	24.7	24.6	24.5	0.00
20	61	53.6	42	27	14.6	-4	38	22.7	10	26	14.3	6	24.7	24.6	24.5	0.00
21	61	49.1	36	13	8.0	3	29	19.8	12	26	9.4	3	24.9	24.7	24.7	0.00
22	65	53.1	40	26	19.0	13	37	26.8	19	9	4.5	0	24.9	24.8	24.8	0.00
23	69	56.3	42	27	21.0	11	51	28.4	12	14	5.5	0	24.8	24.7	24.6	0.00
24	53	46.0	38	25	21.2	14	57	38.4	27	29	16.0	3	24.9	24.8	24.7	0.00
25	58	42.0	29	24	19.3	14	75	44.7	19	9	3.9	0	25.0	24.9	24.8	0.00
26	66	50.2	33	21	17.2	12	52	29.1	17	16	5.7	0	24.8	24.6	24.5	0.00
27	74	56.9	40	26	15.8	12	38	22.2	11	26	14.4	7	24.6	24.5	24.4	0.00
28	50	45.0	36	35	24.0	15	62	45.0	26	21	13.0	3	24.7	24.6	24.5	0.00
29	67	46.3	26	17	11.6	-1	58	30.6	11	21	8.3	0	24.6	24.5	24.4	0.01
30	49	35.6	28	20	0.8	-9	61	25.6	14	20	13.4	7	25.0	24.8	24.6	0.00
31	49	34.6	23	-3	-6.2	-8	31	18.8	9	15	5.7	0	25.0	24.9	24.9	0.00

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(http://topixblackbeat.com/quiz/18829/?utm_campaign=18829&utm_term=theweatherchannel-wunderground&utm_source=taboola)
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(https://wikibuy.com/blog/how-i-save-money-on-construction-supplies-c13a8e42b3cd?hno=true&utm_source=jaguar11&utm_campaign=1986200&utm_term=188971727)

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(https://gundrymd.com/cmd.php?ad=921295&utm_source=taboola&utm_medium=referral)

Cardio Doctor: Have All Day Energy Naturally (Do This Daily)
Gundry MD MCT Wellness Supplement

Search Locations Log in (/log…

Albuquerque, NM
42 °F Mostly Cloudy

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

42° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

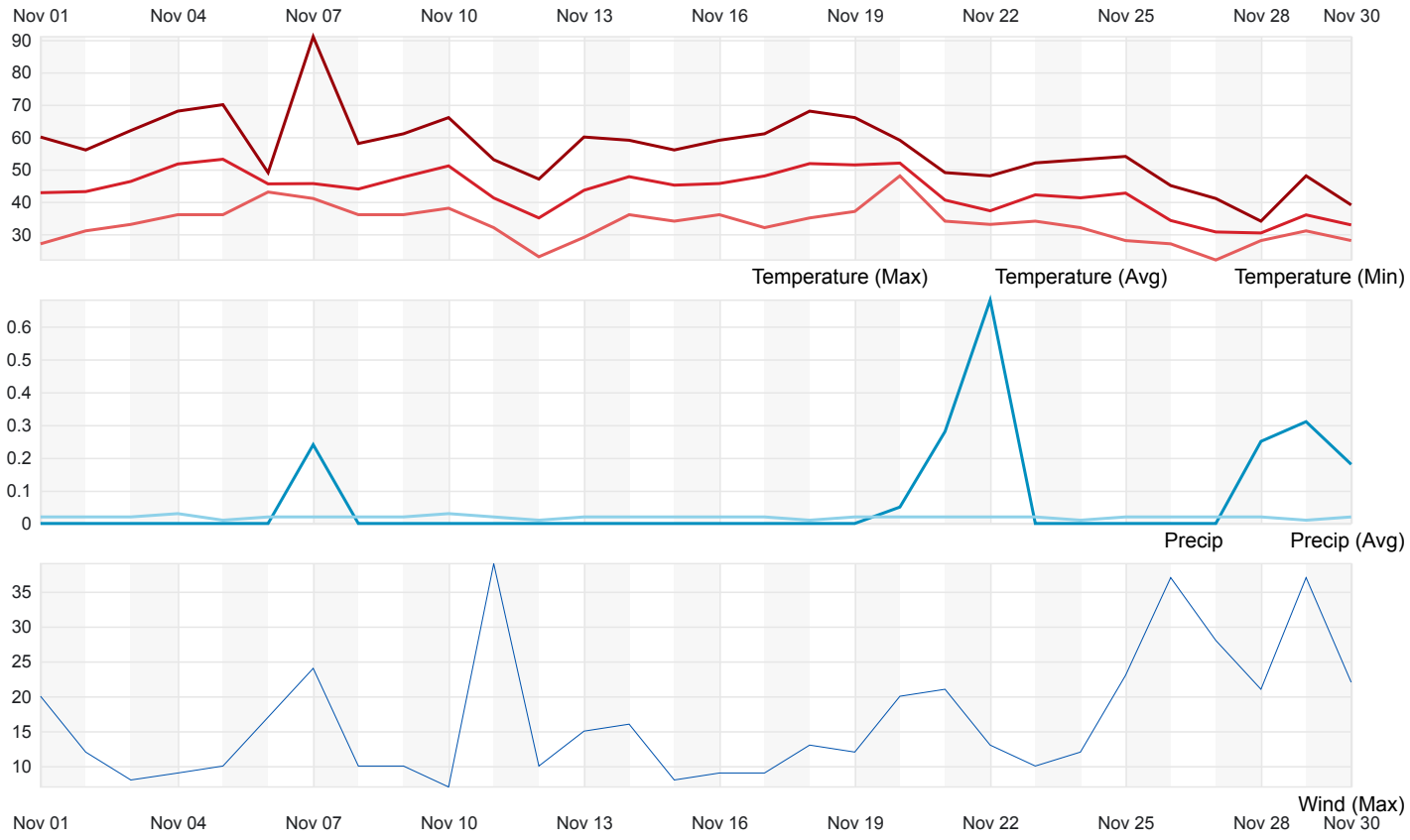
HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily Weekly **Monthly**

(/history/daily/us/nm/albuquerque/KABQ/date/2019-11-2) (/history/weekly/us/nm/albuquerque/KABQ/date/2019-11-2) **(/history/monthly/us/nm/albuquerque/KABQ/date/2019-11-2)**

November 2019 View



Summary

Temperature (° F)	Max	Average	Min
Max Temperature	91	56.4	34
Avg Temperature	53.13	43.33	30.35
Min Temperature	48	33.2	22
Dew Point (° F)	Max	Average	Min
Dew Point	61	23.41	-10
Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.68	0.07	0.00	1.99
Snowdepth	0.00	0.00	0.00	0.00
Wind	Max	Average	Min
Wind	39	7.22	0
Gust Wind	55	2.58	0
Sea Level Pressure	Max	Average	Min
Sea Level Pressure	25.02	24.74	24.23

Daily Observations

Time	Temperature (° F)	Dew Point (° F)	Humidity (%)	Wind Speed (mph)	Pressure (Hg)	Precipitation (in)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Nov	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	60	42.8	27	14	-3.6	-10	30	16.5	6	20	3.9	0	24.9	24.9	24.8	0.00
2	56	43.1	31	20	14.7	9	61	34.7	16	12	4.8	0	25.0	24.9	24.9	0.00
3	62	46.3	33	15	11.0	7	46	26.1	13	8	4.2	0	24.8	24.8	24.7	0.00
4	68	51.7	36	15	10.6	7	37	21.2	10	9	3.4	0	24.8	24.7	24.7	0.00
5	70	53.1	36	20	14.2	7	34	22.2	14	10	4.3	0	24.9	24.8	24.8	0.00
6	49	45.5	43	45	33.1	14	100	69.4	27	17	7.3	0	24.9	24.8	24.8	0.00
7	91	45.6	41	61	40.1	36	100	83.3	36	24	10.2	0	25.0	24.9	24.8	0.24
8	58	43.9	36	39	35.4	33	89	73.8	42	10	5.0	0	25.0	24.9	24.9	0.00
9	61	47.6	36	34	25.7	21	76	46.0	22	10	4.2	0	24.9	24.9	24.8	0.00
10	66	51.1	38	30	26.0	22	60	40.2	19	7	2.6	0	24.8	24.7	24.7	0.00
11	53	41.2	32	29	22.8	15	57	48.8	35	39	17.3	0	25.0	24.8	24.7	0.00
12	47	35.0	23	25	18.8	14	68	53.0	36	10	5.6	0	25.0	24.9	24.8	0.00
13	60	43.5	29	26	20.7	13	75	45.4	20	15	4.4	0	24.8	24.7	24.6	0.00
14	59	47.8	36	23	18.3	14	46	32.3	20	16	6.2	0	24.9	24.9	24.8	0.00
15	56	45.1	34	25	23.5	21	64	43.9	28	8	3.8	0	24.9	24.9	24.8	0.00
16	59	45.6	36	25	24.3	23	62	44.6	27	9	2.7	0	24.8	24.8	24.7	0.00
17	61	48.0	32	22	19.0	17	59	33.9	18	9	4.1	0	24.9	24.8	24.7	0.00
18	68	51.8	35	25	21.0	16	46	31.7	19	13	5.8	0	24.8	24.7	24.7	0.00
19	66	51.4	37	37	24.2	23	57	37.2	20	12	4.8	0	24.7	24.6	24.5	0.00
20	59	51.9	48	49	45.0	41	96	78.3	53	20	11.8	3	24.6	24.5	24.4	0.05
21	49	40.5	34	43	37.0	32	96	87.9	74	21	10.3	0	24.7	24.6	24.5	0.28
22	48	37.2	33	35	32.7	28	100	85.8	48	13	4.7	0	24.8	24.7	24.7	0.68
23	52	42.1	34	31	28.7	27	82	60.7	41	10	5.1	0	24.9	24.8	24.8	0.00
24	53	41.2	32	31	26.1	19	79	57.1	33	12	5.5	0	24.8	24.8	24.7	0.00
25	54	42.7	28	31	24.0	18	72	49.5	30	23	10.8	0	24.6	24.4	24.2	0.00
26	45	34.2	27	31	14.0	6	76	45.5	28	37	18.4	0	24.7	24.4	24.3	0.00
27	41	30.7	22	27	19.4	12	93	65.6	35	28	14.5	0	24.7	24.6	24.6	0.00
28	34	30.4	28	31	26.7	22	93	86.3	72	21	11.6	0	24.7	24.6	24.6	0.25
29	48	35.9	31	41	32.6	22	100	88.2	66	37	7.3	0	24.6	24.5	24.3	0.31
30	39	32.8	28	22	16.3	11	72	52.5	33	22	12.0	3	24.8	24.7	24.6	0.18

Search Locations

Log in (/log...

Recent Cities
Albuquerque, NM (weather/us/nm/albuquerque/35.05,-106.61)

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

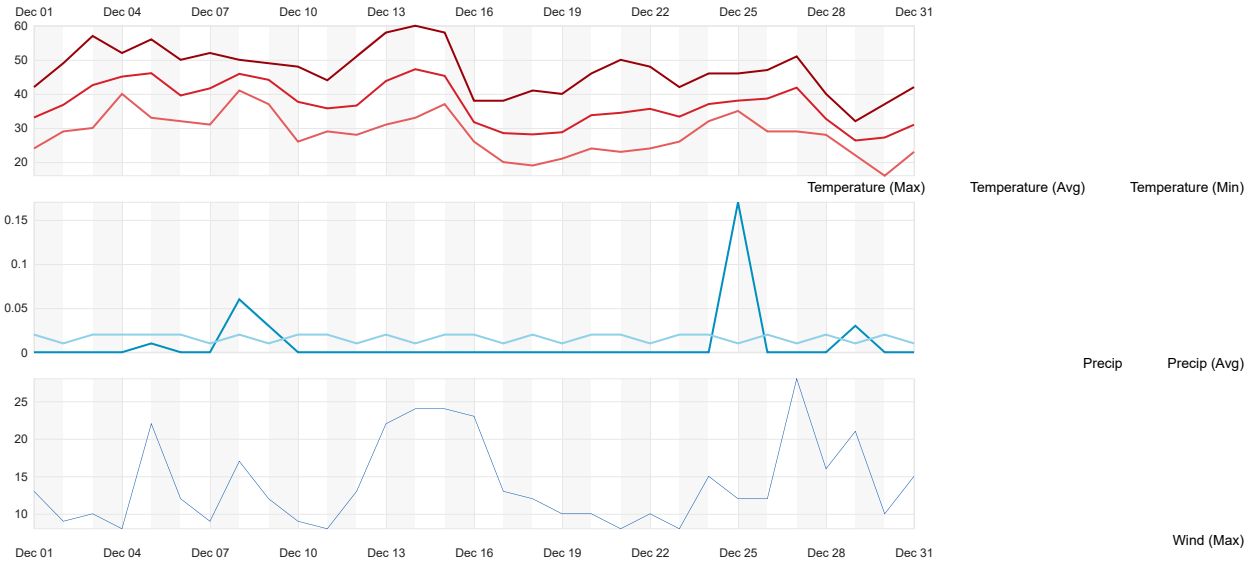
34° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily (/history/daily/us/nm/albuquerque/KABQ/date/2019-12-2) | Weekly (/history/weekly/us/nm/albuquerque/KABQ/date/2019-12-2) | **Monthly** (/history/monthly/us/nm/albuquerque/KABQ/date/2019-12-2)

December | 2019 | View



Summary

Temperature (° F)	Max	Average	Min	
Max Temperature	60	47.1	32	
Avg Temperature	47.25	37.04	26.33	
Min Temperature	41	28.32	16	
Dew Point (° F)	Max	Average	Min	
Dew Point	43	22.28	2	
Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.17	0.01	0.00	0.30
Snowdepth	0.00	0.00	0.00	0.00
Wind	Max	Average	Min	
Wind	28	6.26	0	
Gust Wind	36	1.3	0	
Sea Level Pressure	Max	Average	Min	

Temperature (° F)	Max	Average	Min
Sea Level Pressure	25.03	24.74	24.37

Daily Observations

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Dec	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	42	33.1	24	23	19.0	15	71	56.8	41	13	4.1	0	24.9	24.9	24.8	0.00
2	49	36.8	29	26	22.4	19	72	57.9	32	9	3.8	0	24.9	24.9	24.8	0.00
3	57	42.6	30	31	27.5	23	75	57.2	33	10	3.0	0	24.9	24.8	24.8	0.00
4	52	45.1	40	39	34.8	30	82	67.5	54	8	4.2	0	24.8	24.7	24.7	0.00
5	56	46.1	33	39	33.4	28	89	64.0	37	22	10.5	3	24.9	24.7	24.7	0.01
6	50	39.5	32	30	28.3	27	82	65.9	41	12	3.0	0	25.0	24.9	24.9	0.00
7	52	41.6	31	34	30.5	27	85	66.2	45	9	2.9	0	24.9	24.8	24.8	0.00
8	50	45.9	41	43	38.4	35	93	76.3	59	17	8.1	0	24.7	24.6	24.6	0.06
9	49	44.1	37	35	30.5	26	73	59.3	42	12	5.4	0	24.7	24.6	24.6	0.03
10	48	37.7	26	26	23.7	21	85	59.6	36	9	2.8	0	24.9	24.8	24.7	0.00
11	44	35.8	29	34	27.0	21	85	70.8	57	8	3.3	0	24.9	24.9	24.8	0.00
12	51	36.6	28	34	25.6	20	100	70.2	29	13	2.3	0	24.9	24.8	24.8	0.00
13	58	43.8	31	30	26.3	24	79	52.8	28	22	7.9	0	24.8	24.7	24.6	0.00
14	60	47.3	33	34	30.1	25	75	53.3	31	24	10.0	0	24.6	24.5	24.4	0.00
15	58	45.3	37	33	25.1	16	76	49.0	19	24	11.2	3	24.6	24.5	24.4	0.00
16	38	31.7	26	18	10.5	5	56	42.6	25	23	11.0	0	24.9	24.8	24.6	0.00
17	38	28.5	20	13	9.0	2	68	46.5	22	13	7.0	0	25.0	25.0	24.9	0.00
18	41	28.1	19	9	5.4	2	62	40.1	22	12	4.5	0	25.0	24.9	24.8	0.00
19	40	28.8	21	12	9.4	6	60	46.0	27	10	4.2	0	24.8	24.7	24.7	0.00
20	46	33.8	24	14	11.9	8	58	42.2	24	10	5.0	0	25.0	24.9	24.8	0.00
21	50	34.5	23	16	14.2	12	65	45.8	25	8	3.5	0	25.0	24.9	24.9	0.00
22	48	35.6	24	19	16.5	14	69	47.9	28	10	4.5	0	24.9	24.9	24.8	0.00
23	42	33.3	26	18	15.9	14	66	50.0	34	8	2.9	0	24.8	24.7	24.7	0.00
24	46	37.0	32	36	26.6	15	100	69.7	35	15	5.7	0	24.7	24.6	24.5	0.00
25	46	38.0	35	36	32.4	26	100	82.5	46	12	6.8	0	24.6	24.6	24.5	0.17
26	47	38.6	29	30	28.0	26	92	67.8	44	12	5.4	0	24.7	24.7	24.6	0.00
27	51	41.8	29	34	31.4	25	88	67.7	48	28	16.3	5	24.6	24.5	24.4	0.00
28	40	32.7	28	30	25.2	17	100	75.7	45	16	8.8	0	24.5	24.4	24.4	0.00
29	32	26.3	22	16	10.6	7	66	52.4	38	21	12.3	6	24.7	24.6	24.5	0.03
30	37	27.2	16	14	9.4	6	74	49.3	30	10	5.9	0	24.8	24.8	24.7	0.00
31	42	31.0	23	16	11.5	7	60	45.7	31	15	7.6	0	24.8	24.7	24.7	0.00

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35.05 °N, **106.61** °W

Albuquerque, NM Weather History

48° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

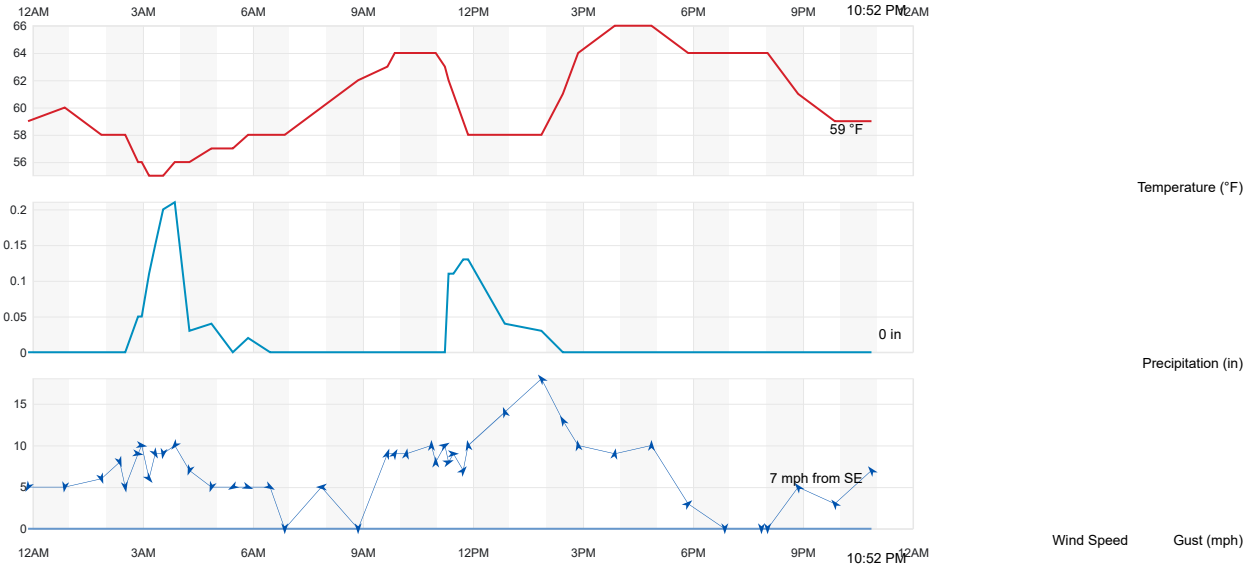
HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily | Weekly | Monthly

(/history/daily/us/nm/albuquerque/kabq/date/2019-10-4) (/history/daily/us/nm/albuquerque/kabq/date/2019-10-4) (/history/daily/us/nm/albuquerque/kabq/date/2019-10)

October | 4 | 2019 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	66	74	87
Low Temp	55	51	32
Day Average Temp	60.05	62	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.36	0.04	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	55.5	-	-
High	59	-	-
Low	51	-	-
Average	55.5	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	18	-	-

Temperature (° F)	Actual	Historic Avg.	Record
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.82	-	-
Astronomy	Day Length	Rise	Set
Actual Time	11h 43m	7:04 AM	6:48 PM
Civil Twilight		6:39 AM	7:13 PM
Nautical Twilight		6:09 AM	7:42 PM
Astronomical Twilight		5:40 AM	8:12 PM
Moon: waxing crescent		12:25 PM	10:30 PM

Daily Observations

11:52 PM	59 °F	52 °F	78 %	NNE	5 mph	0 mph	24.82 in	0.0 in	Cloudy
12:52 AM	60 °F	52 °F	75 %	N	5 mph	0 mph	24.81 in	0.0 in	Cloudy
1:52 AM	58 °F	52 °F	81 %	NNW	6 mph	0 mph	24.80 in	0.0 in	Cloudy
2:22 AM	58 °F	51 °F	78 %	NNW	8 mph	0 mph	24.80 in	0.0 in	Thunder in the Vicinity
2:31 AM	58 °F	51 °F	78 %	N	5 mph	0 mph	24.80 in	0.0 in	Thunder
2:52 AM	56 °F	53 °F	90 %	W	9 mph	0 mph	24.80 in	0.1 in	Heavy T-Storm
2:58 AM	56 °F	53 °F	90 %	W	10 mph	0 mph	24.81 in	0.1 in	Heavy T-Storm
3:10 AM	55 °F	54 °F	96 %	NW	6 mph	0 mph	24.81 in	0.1 in	Heavy T-Storm
3:20 AM	55 °F	53 °F	93 %	NNW	9 mph	0 mph	24.81 in	0.1 in	T-Storm
3:33 AM	55 °F	54 °F	96 %	N	9 mph	0 mph	24.81 in	0.2 in	Light Rain
3:52 AM	56 °F	54 °F	93 %	NE	10 mph	0 mph	24.80 in	0.2 in	Light Rain
4:16 AM	56 °F	54 °F	93 %	NNE	7 mph	0 mph	24.81 in	0.0 in	Light Rain
4:52 AM	57 °F	55 °F	93 %	NNE	5 mph	0 mph	24.80 in	0.0 in	Cloudy
5:27 AM	57 °F	55 °F	93 %	ENE	5 mph	0 mph	24.80 in	0.0 in	Light Rain
5:52 AM	58 °F	55 °F	90 %	WNW	5 mph	0 mph	24.81 in	0.0 in	Light Rain
6:28 AM	58 °F	56 °F	93 %	WNW	5 mph	0 mph	24.82 in	0.0 in	Cloudy
6:52 AM	58 °F	56 °F	93 %	CALM	0 mph	0 mph	24.81 in	0.0 in	Cloudy
7:52 AM	60 °F	57 °F	90 %	E	5 mph	0 mph	24.82 in	0.0 in	Cloudy
8:52 AM	62 °F	57 °F	84 %	CALM	0 mph	0 mph	24.82 in	0.0 in	Cloudy
9:40 AM	63 °F	57 °F	81 %	SSW	9 mph	0 mph	24.82 in	0.0 in	Mostly Cloudy
9:52 AM	64 °F	58 °F	80 %	SSW	9 mph	0 mph	24.81 in	0.0 in	Mostly Cloudy
10:11 AM	64 °F	57 °F	78 %	S	9 mph	0 mph	24.81 in	0.0 in	Cloudy
10:52 AM	64 °F	57 °F	78 %	S	10 mph	0 mph	24.80 in	0.0 in	Cloudy
10:59 AM	64 °F	57 °F	78 %	S	8 mph	0 mph	24.80 in	0.0 in	Thunder in the Vicinity
11:14 AM	63 °F	58 °F	84 %	WSW	10 mph	0 mph	24.80 in	0.0 in	Light Rain with Thunder
11:20 AM	62 °F	59 °F	90 %	WSW	8 mph	0 mph	24.80 in	0.1 in	Light Rain with Thunder
11:28 AM	61 °F	59 °F	93 %	W	9 mph	0 mph	24.80 in	0.1 in	Light Rain with Thunder
11:44 AM	59 °F	56 °F	90 %	SW	7 mph	0 mph	24.80 in	0.1 in	Light Rain
11:52 AM	58 °F	55 °F	90 %	S	10 mph	0 mph	24.80 in	0.1 in	Light Rain
12:52 PM	58 °F	55 °F	90 %	SSE	14 mph	0 mph	24.79 in	0.0 in	Light Rain
1:52 PM	58 °F	55 °F	90 %	SE	18 mph	0 mph	24.77 in	0.0 in	Light Rain
2:27 PM	61 °F	57 °F	87 %	SSE	13 mph	0 mph	24.75 in	0.0 in	Cloudy
2:52 PM	64 °F	57 °F	78 %	S	10 mph	0 mph	24.75 in	0.0 in	Partly Cloudy
3:52 PM	66 °F	54 °F	65 %	S	9 mph	0 mph	24.75 in	0.0 in	Partly Cloudy
4:52 PM	66 °F	56 °F	70 %	S	10 mph	0 mph	24.73 in	0.0 in	Partly Cloudy
5:52 PM	64 °F	57 °F	78 %	SW	3 mph	0 mph	24.74 in	0.0 in	Partly Cloudy
6:52 PM	64 °F	57 °F	78 %	CALM	0 mph	0 mph	24.76 in	0.0 in	Partly Cloudy
7:52 PM	64 °F	58 °F	80 %	CALM	0 mph	0 mph	24.76 in	0.0 in	Mostly Cloudy
8:02 PM	64 °F	58 °F	80 %	CALM	0 mph	0 mph	24.77 in	0.0 in	Mostly Cloudy
8:52 PM	61 °F	58 °F	90 %	SE	5 mph	0 mph	24.77 in	0.0 in	Partly Cloudy
9:52 PM	59 °F	56 °F	90 %	SE	3 mph	0 mph	24.79 in	0.0 in	Fair
10:52 PM	59 °F	56 °F	90 %	SE	7 mph	0 mph	24.79 in	0.0 in	Patches of Fog

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

48° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
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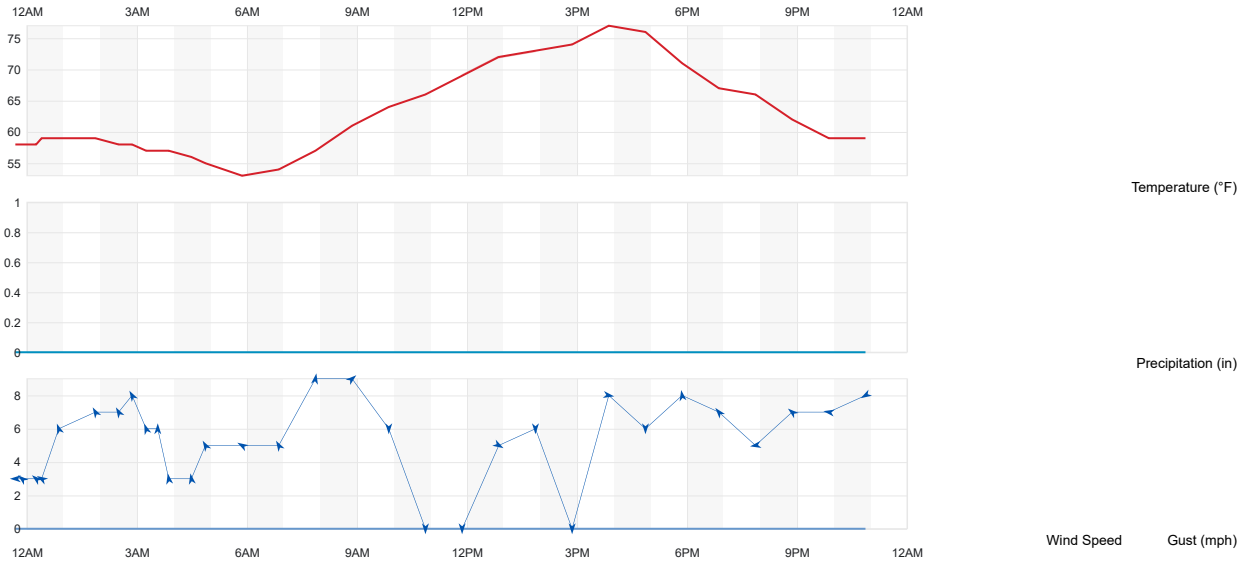
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily | Weekly | Monthly

(/history/daily/us/nm/albuquerque/kabq/date/2019-10-5) (/history/daily/us/nm/albuquerque/kabq/date/2019-10-5) (/history/daily/us/nm/albuquerque/kabq/date/2019-10)

October | 5 | 2019 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	77	73	91
Low Temp	53	50	34
Day Average Temp	62.23	62	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.22	0.04	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	49.1	-	-
High	57	-	-
Low	35	-	-
Average	49.1	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	9	-	-

Temperature (° F)	Actual	Historic Avg.	Record
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.85	-	-
Astronomy	Day Length	Rise	Set
Actual Time	11h 41m	7:05 AM	6:46 PM
Civil Twilight		6:39 AM	7:12 PM
Nautical Twilight		6:10 AM	7:41 PM
Astronomical Twilight		5:41 AM	8:10 PM
Moon: waxing gibbous		1:20 PM	11:23 PM

Daily Observations

11:41 PM	58 °F	56 °F	93 %	E	3 mph	0 mph	24.79 in	0.0 in	Partly Cloudy
11:52 PM	58 °F	56 °F	93 %	SE	3 mph	0 mph	24.79 in	0.0 in	Mostly Cloudy
12:15 AM	58 °F	56 °F	93 %	SE	3 mph	0 mph	24.79 in	0.0 in	Mostly Cloudy
12:24 AM	59 °F	56 °F	90 %	ESE	3 mph	0 mph	24.79 in	0.0 in	Mostly Cloudy
12:52 AM	59 °F	57 °F	93 %	SSE	6 mph	0 mph	24.79 in	0.0 in	Cloudy
1:52 AM	59 °F	57 °F	93 %	SSE	7 mph	0 mph	24.80 in	0.0 in	Cloudy
2:30 AM	58 °F	57 °F	97 %	SSE	7 mph	0 mph	24.79 in	0.0 in	Cloudy
2:52 AM	58 °F	56 °F	93 %	SSE	8 mph	0 mph	24.79 in	0.0 in	Cloudy
3:15 AM	57 °F	56 °F	96 %	SSE	6 mph	0 mph	24.80 in	0.0 in	Mostly Cloudy
3:34 AM	57 °F	56 °F	96 %	S	6 mph	0 mph	24.80 in	0.0 in	Cloudy
3:52 AM	57 °F	55 °F	93 %	S	3 mph	0 mph	24.80 in	0.0 in	Mostly Cloudy
4:29 AM	56 °F	55 °F	97 %	S	3 mph	0 mph	24.80 in	0.0 in	Partly Cloudy
4:52 AM	55 °F	54 °F	96 %	SSE	5 mph	0 mph	24.80 in	0.0 in	Fair
5:52 AM	53 °F	52 °F	96 %	ESE	5 mph	0 mph	24.82 in	0.0 in	Fair
6:52 AM	54 °F	52 °F	93 %	SSE	5 mph	0 mph	24.82 in	0.0 in	Fair
7:52 AM	57 °F	52 °F	83 %	S	9 mph	0 mph	24.84 in	0.0 in	Patches of Fog
8:52 AM	61 °F	47 °F	60 %	SW	9 mph	0 mph	24.85 in	0.0 in	Fair
9:52 AM	64 °F	48 °F	56 %	VAR	6 mph	0 mph	24.85 in	0.0 in	Fair
10:52 AM	66 °F	49 °F	54 %	CALM	0 mph	0 mph	24.84 in	0.0 in	Fair
11:52 AM	69 °F	46 °F	44 %	CALM	0 mph	0 mph	24.81 in	0.0 in	Fair
12:52 PM	72 °F	43 °F	35 %	WNW	5 mph	0 mph	24.80 in	0.0 in	Fair
1:52 PM	73 °F	40 °F	30 %	VAR	6 mph	0 mph	24.77 in	0.0 in	Fair
2:52 PM	74 °F	38 °F	27 %	CALM	0 mph	0 mph	24.76 in	0.0 in	Fair
3:52 PM	77 °F	35 °F	22 %	W	8 mph	0 mph	24.74 in	0.0 in	Fair
4:52 PM	76 °F	35 °F	23 %	VAR	6 mph	0 mph	24.73 in	0.0 in	Fair
5:52 PM	71 °F	40 °F	32 %	S	8 mph	0 mph	24.73 in	0.0 in	Fair
6:52 PM	67 °F	42 °F	40 %	SE	7 mph	0 mph	24.74 in	0.0 in	Partly Cloudy
7:52 PM	66 °F	42 °F	42 %	E	5 mph	0 mph	24.74 in	0.0 in	Fair
8:52 PM	62 °F	44 °F	52 %	SE	7 mph	0 mph	24.75 in	0.0 in	Fair
9:52 PM	59 °F	46 °F	62 %	E	7 mph	0 mph	24.76 in	0.0 in	Fair
10:52 PM	59 °F	44 °F	58 %	ENE	8 mph	0 mph	24.76 in	0.0 in	Fair

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Albuquerque, NM
41 °F Mostly Cloudy

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

41° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
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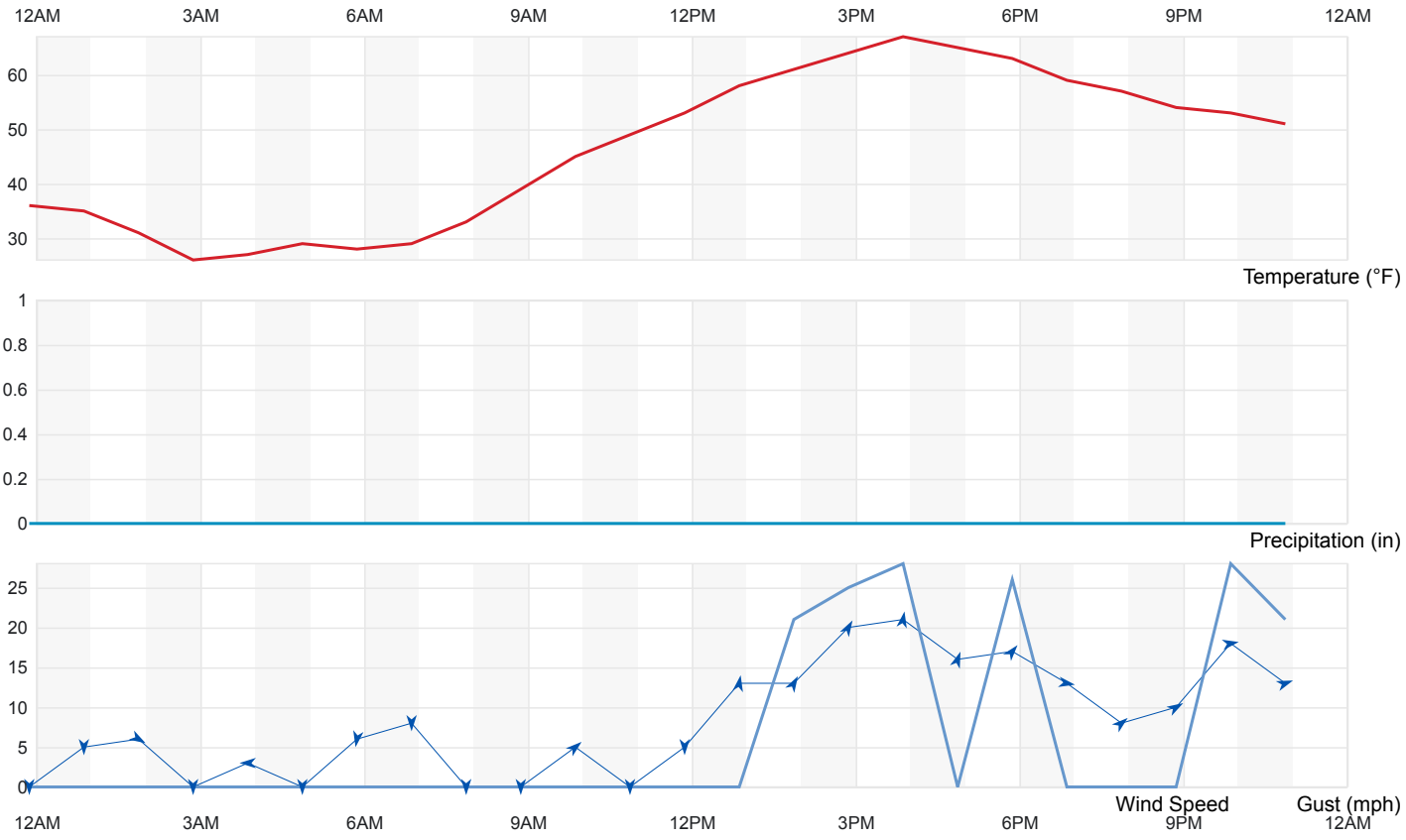
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily Weekly Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2019-10-29) (/history/daily/us/nm/albuquerque/KABQ/date/2019-10-29) (/history/daily/us/nm/albuquerque/KABQ/date/2019-10)

October 29 2019 View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	67	64	80
Low Temp	26	41	21
Day Average Temp	46.33	53	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.01	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	11.58	-	-
High	17	-	-
Low	-1	-	-
Average	11.58	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	21	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.62	-	-
Astronomy	Day Length	Rise	Set
Actual Time	10h 51m	7:25 AM	6:17 PM
Civil Twilight		6:59 AM	6:43 PM
Nautical Twilight		6:29 AM	7:12 PM
Astronomical Twilight		6:00 AM	7:42 PM
Moon: waxing crescent		8:00 AM	6:45 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
11:52 PM	36 °F	15 °F	43 %	CALM	0 mph	0 mph	24.62 in	0.0 in	Fair
12:52 AM	35 °F	17 °F	48 %	N	5 mph	0 mph	24.61 in	0.0 in	Fair
1:52 AM	31 °F	16 °F	54 %	WNW	6 mph	0 mph	24.59 in	0.0 in	Fair
2:52 AM	26 °F	13 °F	58 %	CALM	0 mph	0 mph	24.59 in	0.0 in	Fair
3:52 AM	27 °F	12 °F	53 %	E	3 mph	0 mph	24.59 in	0.0 in	Fair
4:52 AM	29 °F	14 °F	54 %	CALM	0 mph	0 mph	24.58 in	0.0 in	Fair
5:52 AM	28 °F	15 °F	58 %	N	6 mph	0 mph	24.58 in	0.0 in	Fair
6:52 AM	29 °F	15 °F	56 %	N	8 mph	0 mph	24.58 in	0.0 in	Fair

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
7:52 AM	33 °F	16 °F	50 %	CALM	0 mph	0 mph	24.59 in	0.0 in	Fair
8:52 AM	39 °F	16 °F	39 %	CALM	0 mph	0 mph	24.59 in	0.0 in	Fair
9:52 AM	45 °F	16 °F	31 %	SW	5 mph	0 mph	24.57 in	0.0 in	Fair
10:52 AM	49 °F	16 °F	27 %	CALM	0 mph	0 mph	24.56 in	0.0 in	Fair
11:52 AM	53 °F	14 °F	21 %	VAR	5 mph	0 mph	24.52 in	0.0 in	Fair
12:52 PM	58 °F	16 °F	19 %	S	13 mph	0 mph	24.47 in	0.0 in	Fair
1:52 PM	61 °F	15 °F	17 %	SSW	13 mph	21 mph	24.43 in	0.0 in	Fair
2:52 PM	64 °F	13 °F	14 %	SSW	20 mph	25 mph	24.40 in	0.0 in	Fair
3:52 PM	67 °F	12 °F	12 %	S	21 mph	28 mph	24.37 in	0.0 in	Fair / Windy
4:52 PM	65 °F	8 °F	11 %	SSW	16 mph	0 mph	24.37 in	0.0 in	Fair
5:52 PM	63 °F	8 °F	11 %	SW	17 mph	26 mph	24.40 in	0.0 in	Fair
6:52 PM	59 °F	4 °F	11 %	W	13 mph	0 mph	24.44 in	0.0 in	Fair
7:52 PM	57 °F	4 °F	12 %	SW	8 mph	0 mph	24.48 in	0.0 in	Fair
8:52 PM	54 °F	4 °F	13 %	WSW	10 mph	0 mph	24.51 in	0.0 in	Fair
9:52 PM	53 °F	0 °F	11 %	W	18 mph	28 mph	24.53 in	0.0 in	Partly Cloudy
10:52 PM	51 °F	-1 °F	12 %	WSW	13 mph	21 mph	24.54 in	0.0 in	Partly Cloudy

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At 89, Clint Eastwood Now Sadly Lives In This Modest House
Trading Blvd

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Take A Look At What Happens When You Use WD-40 As Engine Oil
Drivepedia

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This Is Why You Should Put Crumpled Ball Of Aluminium Foil In Your Dryer
House Coast

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10 Habits That Damage Your Kidney (Most People Ignore)
Gloriousa

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

47° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

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- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
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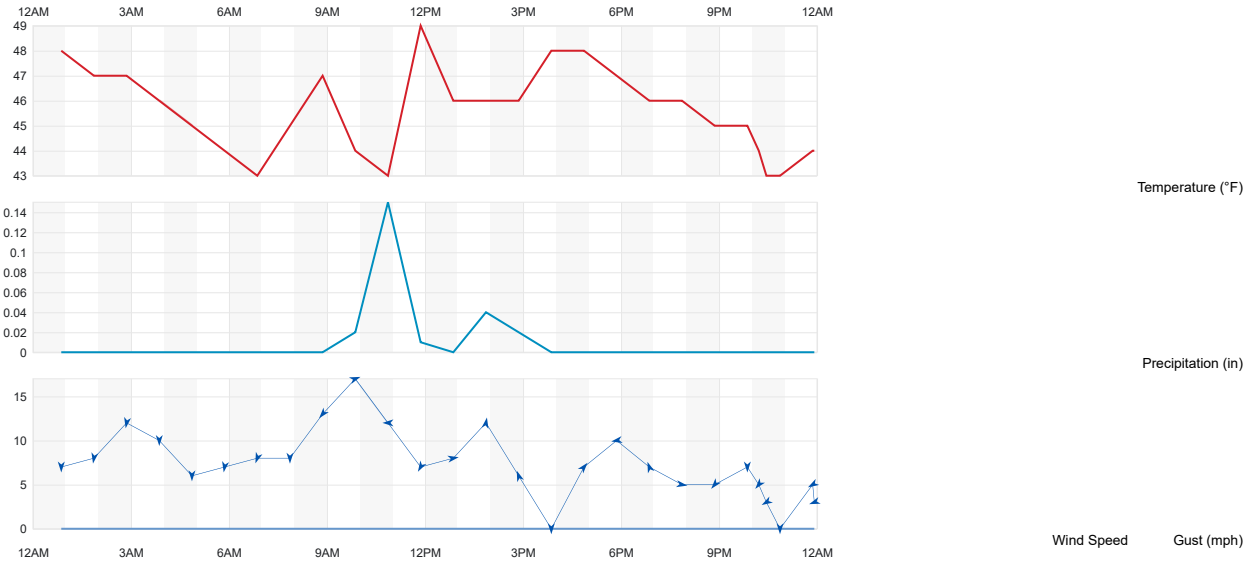
Daily | Weekly | Monthly

(/history/daily/us/nm/albuquerque/kabq/date/2019-11-6) (/history/monthly/us/nm/albuquerque/kabq/date/2019-11-6) (/history/monthly/us/nm/albuquerque/kabq/date/2019-11)

November | 6 | 2019 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	49	60	78
Low Temp	43	38	19
Day Average Temp	45.52	49	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 07:52:00)	0.00	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	33.15	-	-
High	45	-	-
Low	14	-	-
Average	33.15	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	17	-	-

Temperature (° F)	Actual	Historic Avg.	Record
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.9	-	-
Astronomy	Day Length	Rise	Set
Actual Time	10h 36m	6:33 AM	5:09 PM
Civil Twilight		6:06 AM	5:35 PM
Nautical Twilight		5:36 AM	6:05 PM
Astronomical Twilight		5:07 AM	6:35 PM
Moon: waxing gibbous		2:33 PM	12:56 AM

Daily Observations

12:52 AM	48 °F	15 °F	27 %	N	7 mph	0 mph	24.80 in	0.0 in	Mostly Cloudy
1:52 AM	47 °F	15 °F	28 %	N	8 mph	0 mph	24.80 in	0.0 in	Mostly Cloudy
2:52 AM	47 °F	14 °F	27 %	N	12 mph	0 mph	24.80 in	0.0 in	Partly Cloudy
3:52 AM	46 °F	14 °F	28 %	N	10 mph	0 mph	24.80 in	0.0 in	Mostly Cloudy
4:52 AM	45 °F	15 °F	30 %	N	6 mph	0 mph	24.80 in	0.0 in	Cloudy
5:52 AM	44 °F	15 °F	31 %	N	7 mph	0 mph	24.80 in	0.0 in	Mostly Cloudy
6:52 AM	43 °F	15 °F	32 %	NNE	8 mph	0 mph	24.80 in	0.0 in	Mostly Cloudy
7:52 AM	45 °F	15 °F	30 %	N	8 mph	0 mph	24.82 in	0.0 in	Mostly Cloudy
8:52 AM	47 °F	18 °F	32 %	NE	13 mph	0 mph	24.81 in	0.0 in	Cloudy
9:52 AM	44 °F	27 °F	51 %	WSW	17 mph	0 mph	24.90 in	0.0 in	Light Rain
10:52 AM	43 °F	35 °F	74 %	E	12 mph	0 mph	24.88 in	0.1 in	Light Rain
11:52 AM	49 °F	43 °F	80 %	NNE	7 mph	0 mph	24.82 in	0.0 in	Light Rain
12:52 PM	46 °F	44 °F	93 %	W	8 mph	0 mph	24.80 in	0.0 in	Light Rain
1:52 PM	46 °F	44 °F	93 %	S	12 mph	0 mph	24.82 in	0.0 in	Cloudy
2:52 PM	46 °F	44 °F	93 %	SSE	6 mph	0 mph	24.82 in	0.0 in	Light Rain
3:52 PM	48 °F	44 °F	86 %	CALM	0 mph	0 mph	24.79 in	0.0 in	Cloudy
4:52 PM	48 °F	45 °F	89 %	SW	7 mph	0 mph	24.79 in	0.0 in	Cloudy
5:52 PM	47 °F	44 °F	90 %	E	10 mph	0 mph	24.78 in	0.0 in	Light Rain
6:52 PM	46 °F	44 °F	93 %	SSE	7 mph	0 mph	24.78 in	0.0 in	Mostly Cloudy
7:52 PM	46 °F	44 °F	93 %	W	5 mph	0 mph	24.79 in	0.0 in	Mostly Cloudy
8:52 PM	45 °F	43 °F	93 %	NE	5 mph	0 mph	24.80 in	0.0 in	Partly Cloudy
9:52 PM	45 °F	43 °F	93 %	N	7 mph	0 mph	24.81 in	0.0 in	Fair
10:13 PM	44 °F	43 °F	96 %	NE	5 mph	0 mph	24.81 in	0.0 in	Fog
10:27 PM	43 °F	43 °F	100 %	ENE	3 mph	0 mph	24.82 in	0.0 in	Fog
10:52 PM	43 °F	43 °F	100 %	CALM	0 mph	0 mph	24.82 in	0.0 in	Fog
11:52 PM	44 °F	43 °F	96 %	ENE	5 mph	0 mph	24.82 in	0.0 in	Fog
11:55 PM	44 °F	43 °F	96 %	ENE	3 mph	0 mph	24.82 in	0.0 in	Cloudy

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New Mexico Launches New Policy For Cars Used Less Than 50 Miles/Day
Smarter Finances

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35.05 °N, **106.61** °W

Albuquerque, NM Weather History

47° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

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Daily Weekly Monthly

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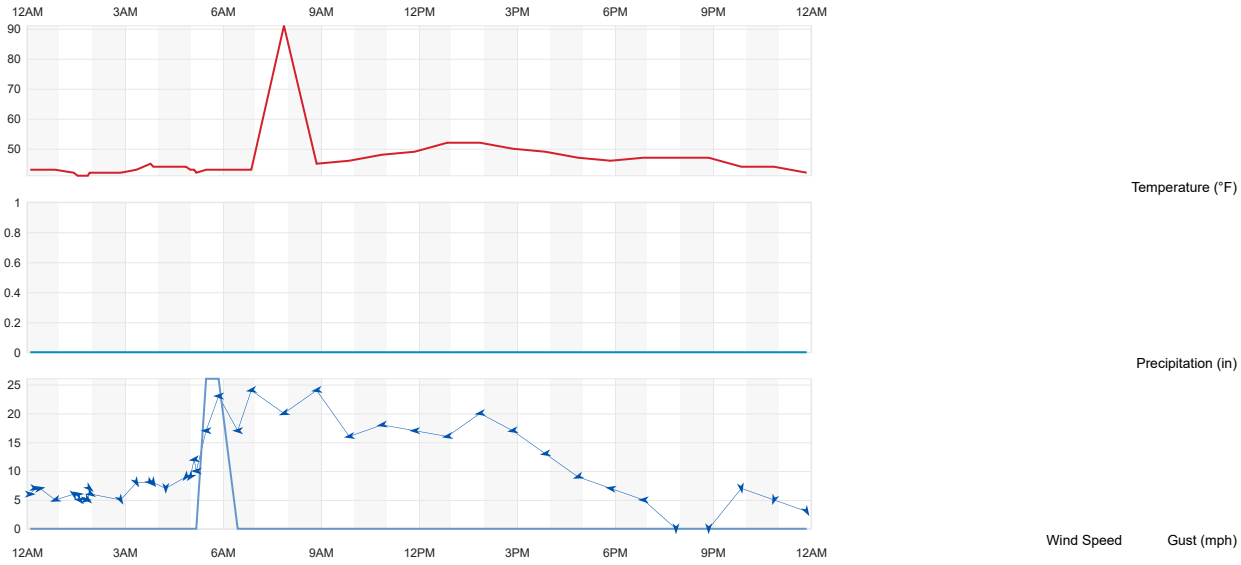
November | 7 | 2019 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	91	60	75
Low Temp	41	37	19
Day Average Temp	45.61	49	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.24	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	40.15	-	-
High	61	-	-
Low	36	-	-
Average	40.15	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	24	-	-

Temperature (° F)	Actual	Historic Avg.	Record
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.97	-	-
Astronomy	Day Length	Rise	Set
Actual Time	10h 34m	6:34 AM	5:08 PM
Civil Twilight		6:07 AM	5:35 PM
Nautical Twilight		5:37 AM	6:05 PM
Astronomical Twilight		5:07 AM	6:34 PM
Moon: waxing gibbous		3:03 PM	1:52 AM

Daily Observations

12:06 AM	43 °F	43 °F	100 %	W	6 mph	0 mph	24.82 in	0.0 in	Fog
12:15 AM	43 °F	43 °F	100 %	W	7 mph	0 mph	24.83 in	0.0 in	Fog
12:24 AM	43 °F	43 °F	100 %	W	7 mph	0 mph	24.84 in	0.0 in	Fog
12:52 AM	43 °F	43 °F	100 %	ENE	5 mph	0 mph	24.82 in	0.0 in	Fog
1:26 AM	42 °F	41 °F	96 %	SE	6 mph	0 mph	24.81 in	0.0 in	Fog
1:33 AM	41 °F	41 °F	100 %	ESE	6 mph	0 mph	24.81 in	0.0 in	Fog
1:36 AM	41 °F	41 °F	100 %	E	5 mph	0 mph	24.81 in	0.0 in	Mostly Cloudy
1:49 AM	41 °F	39 °F	93 %	W	5 mph	0 mph	24.82 in	0.0 in	Partial Fog
1:52 AM	41 °F	40 °F	96 %	NW	5 mph	0 mph	24.82 in	0.0 in	Fog
1:55 AM	42 °F	41 °F	96 %	NW	7 mph	0 mph	24.81 in	0.0 in	Fog
1:58 AM	42 °F	41 °F	96 %	WNW	6 mph	0 mph	24.81 in	0.0 in	Fog
2:52 AM	42 °F	41 °F	96 %	NNW	5 mph	0 mph	24.82 in	0.0 in	Fog
3:21 AM	43 °F	43 °F	100 %	NNW	8 mph	0 mph	24.84 in	0.0 in	Fog
3:47 AM	45 °F	43 °F	93 %	NW	8 mph	0 mph	24.84 in	0.0 in	Fog
3:52 AM	44 °F	43 °F	96 %	NNW	8 mph	0 mph	24.84 in	0.0 in	Fog
4:15 AM	44 °F	43 °F	96 %	N	7 mph	0 mph	24.85 in	0.0 in	Fog
4:52 AM	44 °F	43 °F	96 %	NE	9 mph	0 mph	24.85 in	0.0 in	Fog
5:00 AM	43 °F	43 °F	100 %	NE	9 mph	0 mph	24.85 in	0.0 in	Fog
5:07 AM	43 °F	41 °F	93 %	E	12 mph	0 mph	24.85 in	0.0 in	Mostly Cloudy
5:11 AM	42 °F	41 °F	96 %	E	10 mph	0 mph	24.85 in	0.0 in	Partly Cloudy
5:29 AM	43 °F	39 °F	87 %	E	17 mph	26 mph	24.86 in	0.0 in	Partial Fog
5:52 AM	43 °F	39 °F	87 %	E	23 mph	26 mph	24.86 in	0.0 in	Partly Cloudy / Windy
6:27 AM	43 °F	37 °F	81 %	E	17 mph	0 mph	24.88 in	0.0 in	Partial Fog
6:52 AM	43 °F	37 °F	81 %	E	24 mph	0 mph	24.89 in	0.0 in	Partial Fog / Windy
7:52 AM	91 °F	61 °F	36 %	ENE	20 mph	0 mph	24.91 in	0.0 in	Patches of Fog
8:52 AM	45 °F	36 °F	71 %	E	24 mph	0 mph	24.94 in	0.0 in	Cloudy / Windy
9:52 AM	46 °F	36 °F	68 %	E	16 mph	0 mph	24.94 in	0.0 in	Cloudy
10:52 AM	48 °F	37 °F	66 %	E	18 mph	0 mph	24.95 in	0.0 in	Cloudy
11:52 AM	49 °F	37 °F	64 %	E	17 mph	0 mph	24.94 in	0.0 in	Mostly Cloudy
12:52 PM	52 °F	38 °F	59 %	E	16 mph	0 mph	24.93 in	0.0 in	Mostly Cloudy
1:52 PM	52 °F	38 °F	59 %	E	20 mph	0 mph	24.92 in	0.0 in	Mostly Cloudy
2:52 PM	50 °F	38 °F	63 %	E	17 mph	0 mph	24.92 in	0.0 in	Mostly Cloudy
3:52 PM	49 °F	38 °F	66 %	E	13 mph	0 mph	24.92 in	0.0 in	Mostly Cloudy
4:52 PM	47 °F	37 °F	68 %	ENE	9 mph	0 mph	24.93 in	0.0 in	Mostly Cloudy
5:52 PM	46 °F	37 °F	71 %	E	7 mph	0 mph	24.94 in	0.0 in	Mostly Cloudy
6:52 PM	47 °F	38 °F	71 %	E	5 mph	0 mph	24.94 in	0.0 in	Cloudy
7:52 PM	47 °F	38 °F	71 %	CALM	0 mph	0 mph	24.95 in	0.0 in	Cloudy
8:52 PM	47 °F	38 °F	71 %	CALM	0 mph	0 mph	24.97 in	0.0 in	Cloudy
9:52 PM	44 °F	37 °F	76 %	N	7 mph	0 mph	24.97 in	0.0 in	Cloudy
10:52 PM	44 °F	37 °F	76 %	NNE	5 mph	0 mph	24.97 in	0.0 in	Cloudy
11:52 PM	42 °F	36 °F	79 %	NNW	3 mph	0 mph	24.97 in	0.0 in	Mostly Cloudy

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Albuquerque, NM
39 °F Partly Cloudy

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

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HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

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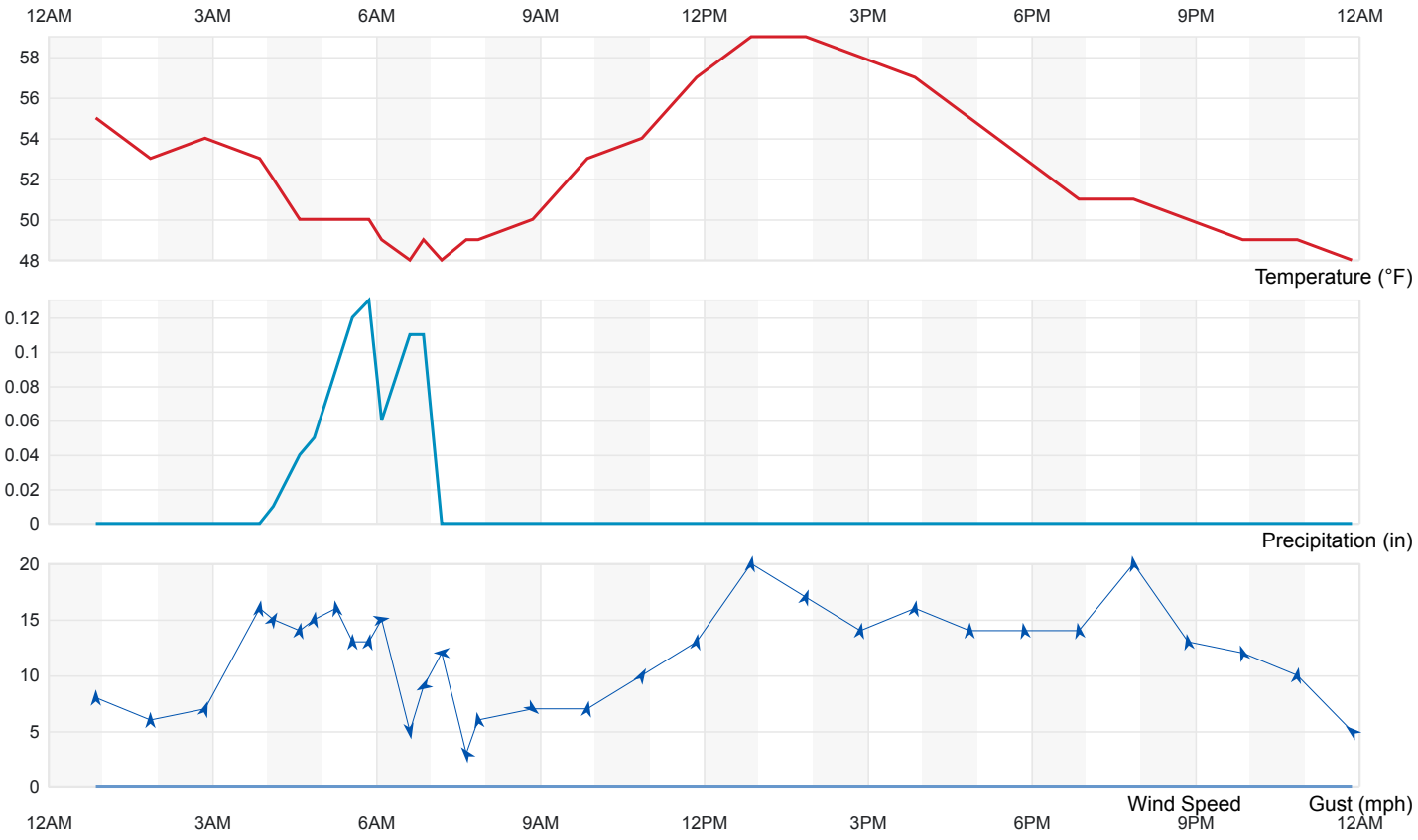
Daily Weekly Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2019-11-20) (/history/daily/us/nm/albuquerque/KABQ/date/2019-11-20) (/history/daily/us/nm/albuquerque/KABQ/date/2019-11)

November 20 2019 View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	59	54	73
Low Temp	48	32	14
Day Average Temp	51.94	43	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.05	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	44.97	-	-
High	49	-	-
Low	41	-	-
Average	44.97	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	20	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.55	-	-
Astronomy	Day Length	Rise	Set
Actual Time	10h 12m	6:47 AM	4:59 PM
Civil Twilight		6:19 AM	5:27 PM
Nautical Twilight		5:49 AM	5:57 PM
Astronomical Twilight		5:18 AM	6:28 PM
Moon: waxing crescent		-	-

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	55 °F	41 °F	59 %	S	8 mph	0 mph	24.48 in	0.0 in	Light Rain
1:52 AM	53 °F	43 °F	69 %	S	6 mph	0 mph	24.48 in	0.0 in	Cloudy
2:52 AM	54 °F	44 °F	69 %	SSW	7 mph	0 mph	24.47 in	0.0 in	Cloudy
3:52 AM	53 °F	45 °F	74 %	S	16 mph	0 mph	24.46 in	0.0 in	Cloudy
4:07 AM	52 °F	48 °F	86 %	SSW	15 mph	0 mph	24.46 in	0.0 in	Rain
4:36 AM	50 °F	49 °F	96 %	S	14 mph	0 mph	24.45 in	0.0 in	Light Rain
4:52 AM	50 °F	49 °F	96 %	S	15 mph	0 mph	24.45 in	0.1 in	Rain
5:16 AM	50 °F	49 °F	96 %	S	16 mph	0 mph	24.45 in	0.1 in	Rain

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
5:34 AM	50 °F	49 °F	96 %	S	13 mph	0 mph	24.46 in	0.1 in	Light Rain
5:52 AM	50 °F	48 °F	93 %	S	13 mph	0 mph	24.47 in	0.1 in	Light Rain
6:06 AM	49 °F	47 °F	93 %	W	15 mph	0 mph	24.48 in	0.1 in	Heavy Rain
6:37 AM	48 °F	46 °F	93 %	N	5 mph	0 mph	24.47 in	0.1 in	Light Rain
6:52 AM	49 °F	46 °F	90 %	ENE	9 mph	0 mph	24.45 in	0.1 in	Cloudy
7:12 AM	48 °F	46 °F	93 %	E	12 mph	0 mph	24.44 in	0.0 in	Cloudy
7:39 AM	49 °F	46 °F	90 %	SE	3 mph	0 mph	24.44 in	0.0 in	Mostly Cloudy
7:52 AM	49 °F	46 °F	90 %	S	6 mph	0 mph	24.46 in	0.0 in	Cloudy
8:52 AM	50 °F	47 °F	89 %	NW	7 mph	0 mph	24.48 in	0.0 in	Mostly Cloudy
9:52 AM	53 °F	49 °F	86 %	S	7 mph	0 mph	24.48 in	0.0 in	Mostly Cloudy
10:52 AM	54 °F	47 °F	77 %	SSW	10 mph	0 mph	24.48 in	0.0 in	Mostly Cloudy
11:52 AM	57 °F	46 °F	67 %	S	13 mph	0 mph	24.46 in	0.0 in	Mostly Cloudy
12:52 PM	59 °F	43 °F	55 %	S	20 mph	0 mph	24.44 in	0.0 in	Mostly Cloudy
1:52 PM	59 °F	43 °F	55 %	SSW	17 mph	0 mph	24.44 in	0.0 in	Mostly Cloudy
2:52 PM	58 °F	41 °F	53 %	S	14 mph	0 mph	24.46 in	0.0 in	Cloudy
3:52 PM	57 °F	43 °F	59 %	S	16 mph	0 mph	24.48 in	0.0 in	Mostly Cloudy
4:52 PM	55 °F	44 °F	67 %	S	14 mph	0 mph	24.49 in	0.0 in	Mostly Cloudy
5:52 PM	53 °F	43 °F	69 %	S	14 mph	0 mph	24.51 in	0.0 in	Cloudy
6:52 PM	51 °F	43 °F	74 %	S	14 mph	0 mph	24.53 in	0.0 in	Mostly Cloudy
7:52 PM	51 °F	42 °F	71 %	S	20 mph	0 mph	24.54 in	0.0 in	Mostly Cloudy
8:52 PM	50 °F	42 °F	74 %	S	13 mph	0 mph	24.54 in	0.0 in	Partly Cloudy
9:52 PM	49 °F	42 °F	77 %	SSE	12 mph	0 mph	24.53 in	0.0 in	Mostly Cloudy
10:52 PM	49 °F	41 °F	74 %	S	10 mph	0 mph	24.55 in	0.0 in	Cloudy
11:52 PM	48 °F	41 °F	77 %	SE	5 mph	0 mph	24.54 in	0.0 in	Cloudy

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Albuquerque, NM
39 °F Partly Cloudy

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

39° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

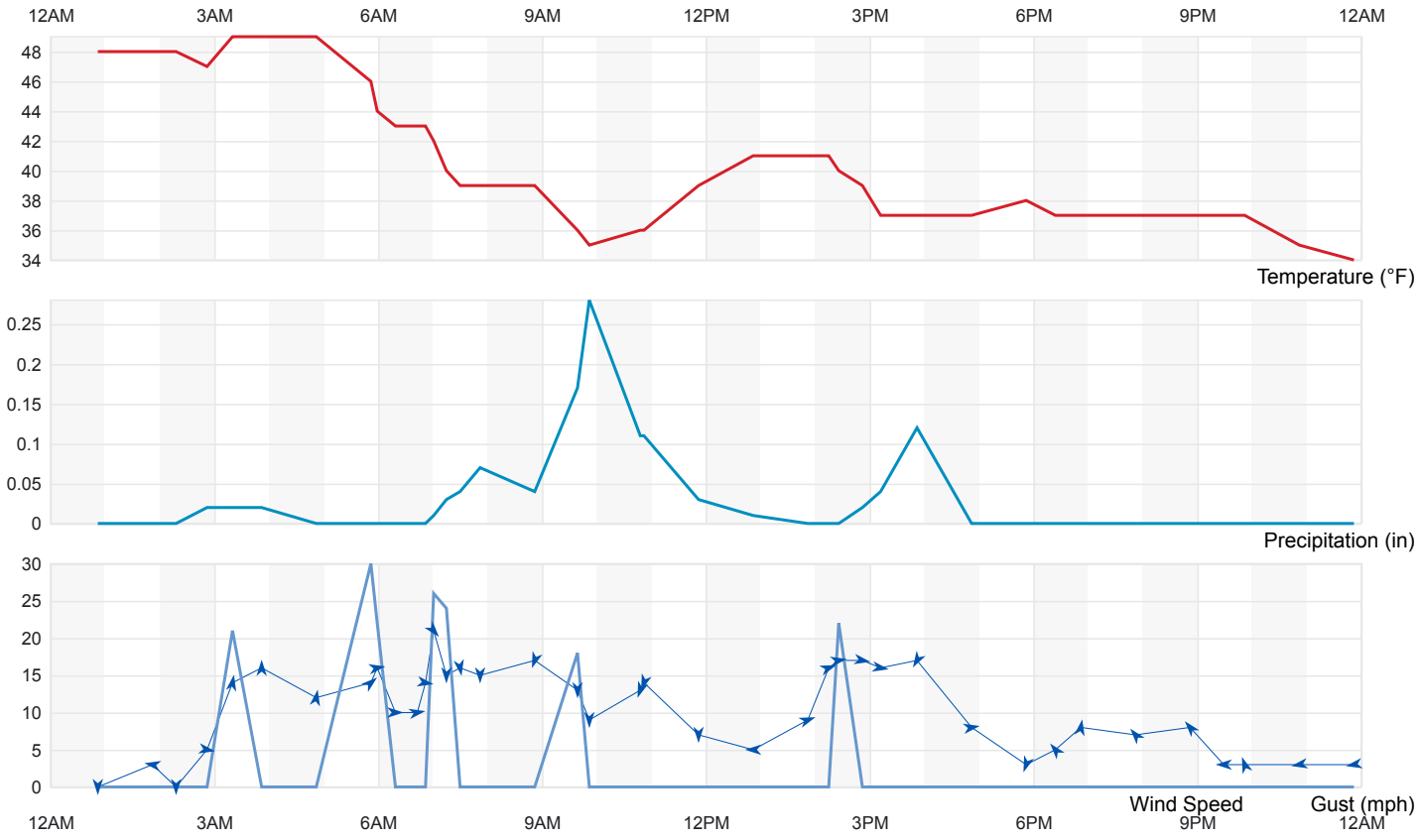
HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily Weekly Monthly

(/history/daily/[illegible]/KABQ/date/2019-11-21) 11-21) 11)

November 21 2019 View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	49	53	73
Low Temp	34	32	14
Day Average Temp	40.51	43	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.28	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	37.05	-	-
High	43	-	-
Low	32	-	-
Average	37.05	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	21	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.71	-	-
Astronomy	Day Length	Rise	Set
Actual Time	10h 11m	6:48 AM	4:59 PM
Civil Twilight		6:20 AM	5:26 PM
Nautical Twilight		5:50 AM	5:57 PM
Astronomical Twilight		5:19 AM	6:27 PM
Moon: waning crescent		1:04 AM	2:13 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	48 °F	40 °F	74 %	CALM	0 mph	0 mph	24.55 in	0.0 in	Cloudy
1:52 AM	48 °F	40 °F	74 %	E	3 mph	0 mph	24.54 in	0.0 in	Cloudy
2:18 AM	48 °F	41 °F	77 %	CALM	0 mph	0 mph	24.54 in	0.0 in	Cloudy
2:52 AM	47 °F	42 °F	83 %	W	5 mph	0 mph	24.55 in	0.0 in	Light Rain
3:20 AM	49 °F	43 °F	80 %	S	14 mph	21 mph	24.54 in	0.0 in	Light Rain
3:52 AM	49 °F	43 °F	80 %	S	16 mph	0 mph	24.54 in	0.0 in	Cloudy
4:52 AM	49 °F	43 °F	80 %	S	12 mph	0 mph	24.54 in	0.0 in	Light Rain
5:52 AM	46 °F	40 °F	79 %	SW	14 mph	30 mph	24.56 in	0.0 in	Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
5:59 AM	44 °F	40 °F	85 %	W	16 mph	22 mph	24.56 in	0.0 in	Light Rain
6:19 AM	43 °F	40 °F	89 %	W	10 mph	0 mph	24.57 in	0.0 in	Light Rain
6:43 AM	43 °F	39 °F	86 %	W	10 mph	0 mph	24.58 in	0.0 in	Light Rain
6:52 AM	43 °F	40 °F	89 %	W	14 mph	0 mph	24.58 in	0.0 in	Light Rain
7:01 AM	42 °F	38 °F	85 %	NW	21 mph	26 mph	24.59 in	0.0 in	Rain / Windy
7:15 AM	40 °F	37 °F	89 %	N	15 mph	24 mph	24.60 in	0.0 in	Light Rain
7:30 AM	39 °F	36 °F	89 %	N	16 mph	0 mph	24.60 in	0.0 in	Rain
7:52 AM	39 °F	36 °F	89 %	N	15 mph	0 mph	24.61 in	0.1 in	Light Rain
8:52 AM	39 °F	35 °F	86 %	NNE	17 mph	0 mph	24.62 in	0.0 in	Cloudy
9:39 AM	36 °F	34 °F	93 %	N	13 mph	18 mph	24.64 in	0.2 in	Wintry Mix
9:52 AM	35 °F	32 °F	89 %	N	9 mph	0 mph	24.64 in	0.3 in	Wintry Mix
10:48 AM	36 °F	34 °F	93 %	NNE	13 mph	0 mph	24.62 in	0.1 in	Light Rain
10:52 AM	36 °F	34 °F	93 %	NNE	14 mph	0 mph	24.62 in	0.1 in	Light Rain
11:52 AM	39 °F	35 °F	86 %	N	7 mph	0 mph	24.60 in	0.0 in	Light Rain
12:52 PM	41 °F	36 °F	82 %	E	5 mph	0 mph	24.57 in	0.0 in	Light Rain
1:52 PM	41 °F	38 °F	89 %	WSW	9 mph	0 mph	24.56 in	0.0 in	Cloudy
2:15 PM	41 °F	38 °F	89 %	WSW	16 mph	0 mph	24.57 in	0.0 in	Light Rain
2:26 PM	40 °F	38 °F	93 %	W	17 mph	22 mph	24.59 in	0.0 in	Light Rain
2:52 PM	39 °F	37 °F	93 %	W	17 mph	0 mph	24.62 in	0.0 in	Light Rain
3:12 PM	37 °F	35 °F	93 %	W	16 mph	0 mph	24.62 in	0.0 in	Light Rain
3:52 PM	37 °F	35 °F	93 %	NNE	17 mph	0 mph	24.59 in	0.1 in	Cloudy
4:52 PM	37 °F	35 °F	93 %	W	8 mph	0 mph	24.61 in	0.0 in	Cloudy
5:52 PM	38 °F	35 °F	89 %	NNE	3 mph	0 mph	24.64 in	0.0 in	Cloudy
6:24 PM	37 °F	35 °F	93 %	SE	5 mph	0 mph	24.66 in	0.0 in	Cloudy
6:52 PM	37 °F	35 °F	93 %	S	8 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
7:52 PM	37 °F	35 °F	93 %	SE	7 mph	0 mph	24.68 in	0.0 in	Mostly Cloudy
8:52 PM	37 °F	35 °F	93 %	SE	8 mph	0 mph	24.69 in	0.0 in	Cloudy
9:29 PM	37 °F	35 °F	93 %	E	3 mph	0 mph	24.70 in	0.0 in	Cloudy
9:52 PM	37 °F	35 °F	93 %	SSE	3 mph	0 mph	24.71 in	0.0 in	Mostly Cloudy
10:52 PM	35 °F	33 °F	92 %	E	3 mph	0 mph	24.71 in	0.0 in	Partly Cloudy
11:52 PM	34 °F	33 °F	96 %	E	3 mph	0 mph	24.71 in	0.0 in	Partly Cloudy

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(https://www.townandcountrymag.com/style/beauty-products/a12199303/hanacure-korean-all-in-one-face-mask-review/?utm_source=taboola&utm_source=taboola&utm_medium=referral)

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Albuquerque, NM
41 °F Mostly Cloudy

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

41° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

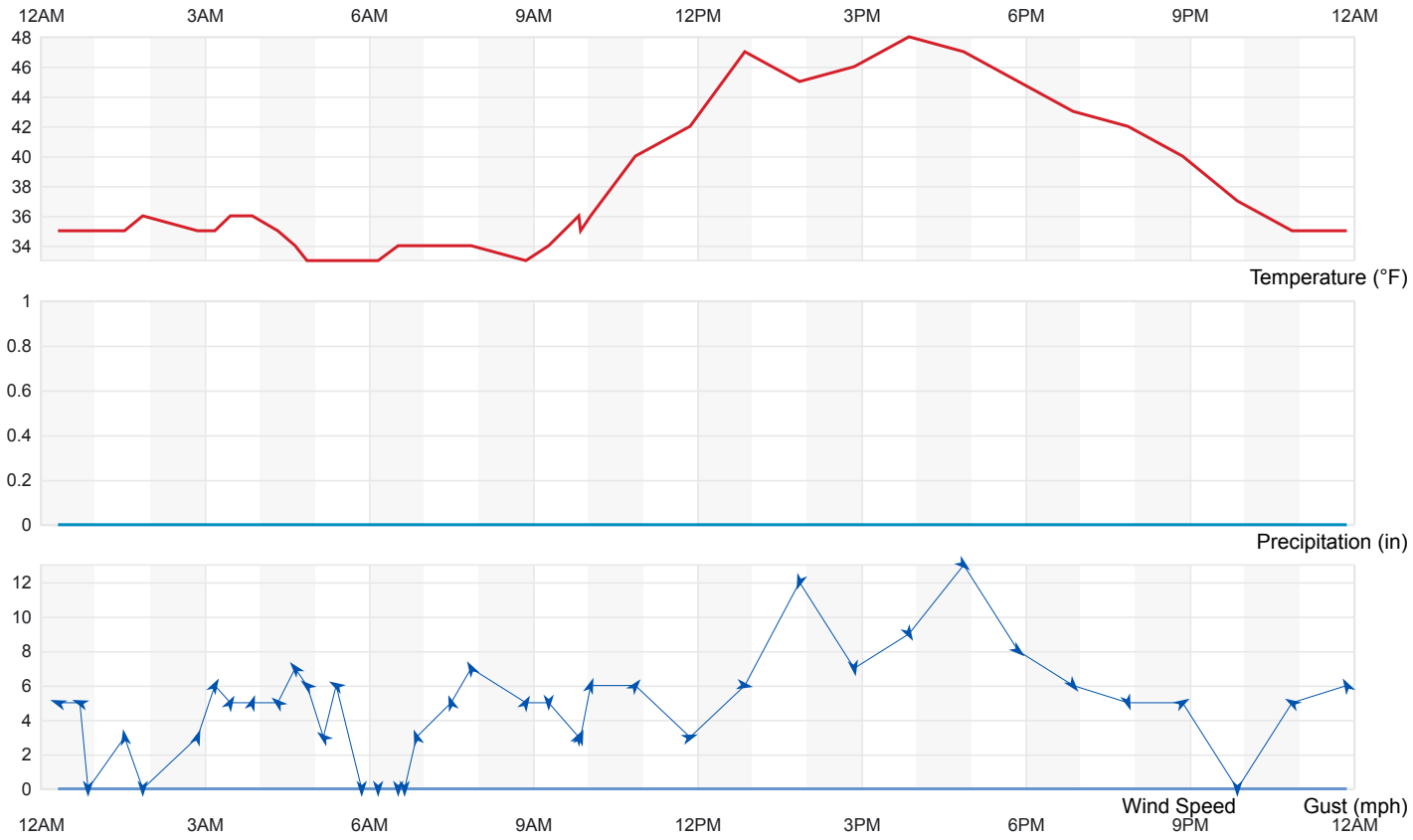
HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily Weekly Monthly

(/history/daily/… KABQ/date/2019-11-22) 11-22) 11)

November 22 2019 View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	48	53	78
Low Temp	33	32	15
Day Average Temp	37.2	42	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.68	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	32.73	-	-
High	35	-	-
Low	28	-	-
Average	32.73	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	13	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.78	-	-
Astronomy	Day Length	Rise	Set
Actual Time	10h 9m	6:49 AM	4:58 PM
Civil Twilight		6:21 AM	5:26 PM
Nautical Twilight		5:50 AM	5:57 PM
Astronomical Twilight		5:20 AM	6:27 PM
Moon: waning crescent		2:11 AM	2:48 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:19 AM	35 °F	33 °F	92 %	ESE	5 mph	0 mph	24.71 in	0.0 in	Cloudy
12:43 AM	35 °F	33 °F	92 %	ESE	5 mph	0 mph	24.71 in	0.0 in	Mostly Cloudy
12:52 AM	35 °F	34 °F	96 %	CALM	0 mph	0 mph	24.71 in	0.0 in	Mostly Cloudy
1:32 AM	35 °F	34 °F	96 %	S	3 mph	0 mph	24.71 in	0.0 in	Cloudy
1:52 AM	36 °F	35 °F	97 %	CALM	0 mph	0 mph	24.72 in	0.0 in	Cloudy
2:52 AM	35 °F	35 °F	100 %	SSW	3 mph	0 mph	24.72 in	0.0 in	Cloudy
3:11 AM	35 °F	34 °F	96 %	SSW	6 mph	0 mph	24.72 in	0.0 in	Fog
3:28 AM	36 °F	34 °F	93 %	SSW	5 mph	0 mph	24.72 in	0.0 in	Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
3:52 AM	36 °F	35 °F	97 %	SSW	5 mph	0 mph	24.72 in	0.0 in	Mostly Cloudy
4:20 AM	35 °F	34 °F	96 %	SE	5 mph	0 mph	24.73 in	0.0 in	Fog
4:39 AM	34 °F	33 °F	96 %	SE	7 mph	0 mph	24.72 in	0.0 in	Mostly Cloudy
4:52 AM	33 °F	33 °F	100 %	SE	6 mph	0 mph	24.72 in	0.0 in	Fog
5:10 AM	33 °F	33 °F	100 %	SE	3 mph	0 mph	24.73 in	0.0 in	Fog
5:24 AM	33 °F	33 °F	100 %	ESE	6 mph	0 mph	24.73 in	0.0 in	Fog
5:52 AM	33 °F	33 °F	100 %	CALM	0 mph	0 mph	24.74 in	0.0 in	Fog
6:10 AM	33 °F	33 °F	100 %	CALM	0 mph	0 mph	24.75 in	0.0 in	Fog
6:32 AM	34 °F	33 °F	96 %	CALM	0 mph	0 mph	24.75 in	0.0 in	Fog
6:39 AM	34 °F	33 °F	96 %	CALM	0 mph	0 mph	24.75 in	0.0 in	Fog
6:52 AM	34 °F	34 °F	100 %	SSE	3 mph	0 mph	24.75 in	0.0 in	Fog
7:30 AM	34 °F	33 °F	96 %	SSE	5 mph	0 mph	24.74 in	0.0 in	Fog
7:52 AM	34 °F	33 °F	96 %	SSE	7 mph	0 mph	24.75 in	0.0 in	Fog
8:52 AM	33 °F	33 °F	100 %	SSW	5 mph	0 mph	24.76 in	0.0 in	Fog
9:17 AM	34 °F	34 °F	100 %	VAR	5 mph	0 mph	24.76 in	0.0 in	Fog
9:50 AM	36 °F	34 °F	93 %	SSW	3 mph	0 mph	24.76 in	0.0 in	Mostly Cloudy
9:52 AM	35 °F	34 °F	96 %	SSW	3 mph	0 mph	24.76 in	0.0 in	Mostly Cloudy
10:03 AM	36 °F	34 °F	93 %	SSW	6 mph	0 mph	24.76 in	0.0 in	Partly Cloudy
10:52 AM	40 °F	34 °F	79 %	SW	6 mph	0 mph	24.76 in	0.0 in	Fair
11:52 AM	42 °F	35 °F	76 %	WSW	3 mph	0 mph	24.73 in	0.0 in	Partly Cloudy
12:52 PM	47 °F	34 °F	61 %	W	6 mph	0 mph	24.71 in	0.0 in	Partly Cloudy
1:52 PM	45 °F	34 °F	65 %	NNE	12 mph	0 mph	24.70 in	0.0 in	Mostly Cloudy
2:52 PM	46 °F	31 °F	56 %	N	7 mph	0 mph	24.69 in	0.0 in	Partly Cloudy
3:52 PM	48 °F	31 °F	52 %	NNW	9 mph	0 mph	24.69 in	0.0 in	Partly Cloudy
4:52 PM	47 °F	28 °F	48 %	NW	13 mph	0 mph	24.70 in	0.0 in	Partly Cloudy
5:52 PM	45 °F	29 °F	53 %	NW	8 mph	0 mph	24.71 in	0.0 in	Mostly Cloudy
6:52 PM	43 °F	30 °F	60 %	NW	6 mph	0 mph	24.72 in	0.0 in	Fair
7:52 PM	42 °F	30 °F	62 %	NNW	5 mph	0 mph	24.74 in	0.0 in	Fair
8:52 PM	40 °F	30 °F	68 %	WSW	5 mph	0 mph	24.76 in	0.0 in	Fair
9:52 PM	37 °F	30 °F	76 %	CALM	0 mph	0 mph	24.77 in	0.0 in	Fair
10:52 PM	35 °F	30 °F	82 %	ESE	5 mph	0 mph	24.78 in	0.0 in	Fair
11:52 PM	35 °F	29 °F	78 %	SSE	6 mph	0 mph	24.78 in	0.0 in	Fair

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Search Locations Log in (/log…

Albuquerque, NM
41 °F Mostly Cloudy

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

41° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
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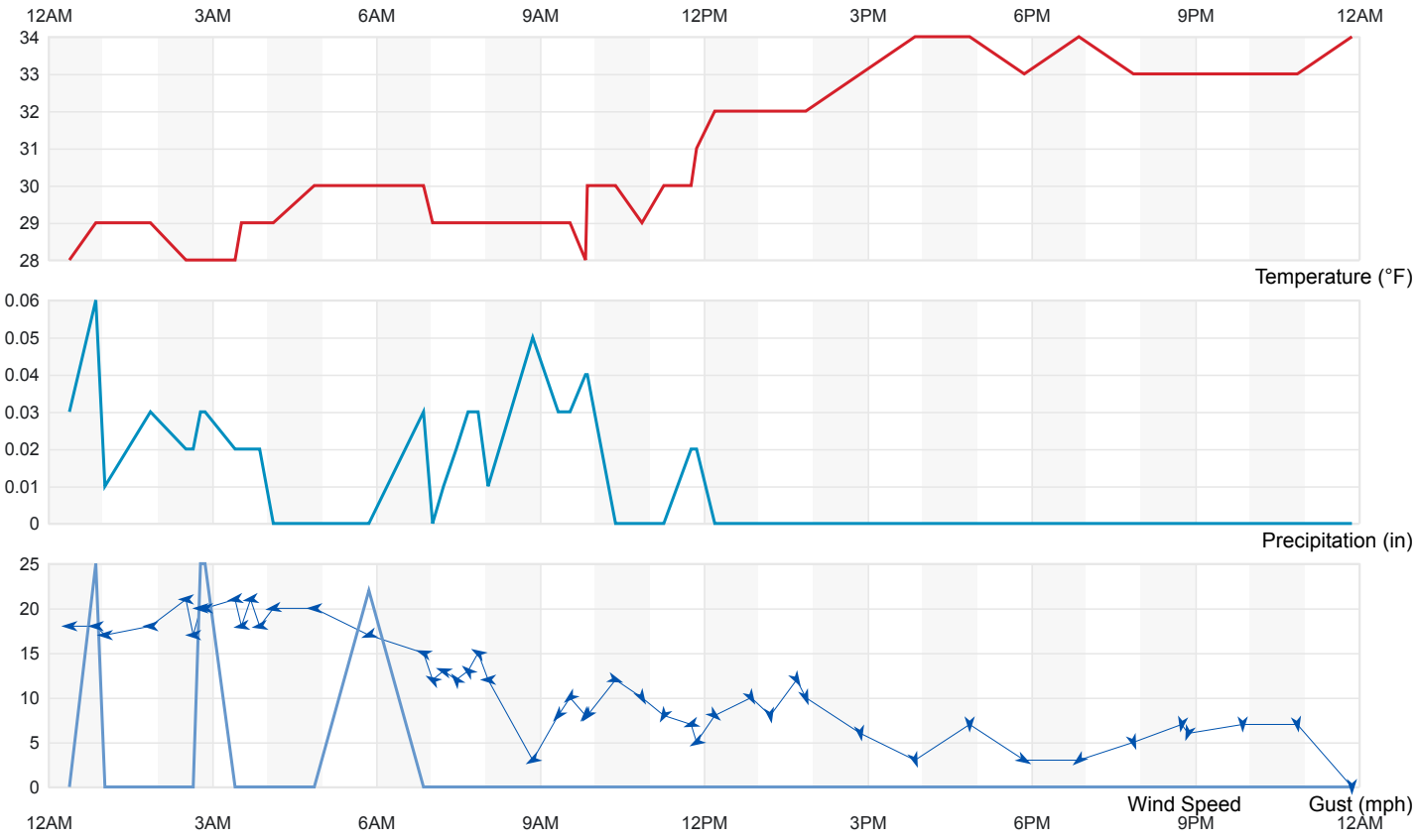
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily Weekly Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2019-11-28) (/history/weekly/us/nm/albuquerque/KABQ/date/2019-11-28) (/history/monthly/us/nm/albuquerque/KABQ/date/2019-11)

November 28 2019 View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	34	50	72
Low Temp	28	30	-6
Day Average Temp	30.35	40	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.25	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	26.69	-	-
High	31	-	-
Low	22	-	-
Average	26.69	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	21	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.67	-	-
Astronomy	Day Length	Rise	Set
Actual Time	10h 2m	6:54 AM	4:56 PM
Civil Twilight		6:27 AM	5:24 PM
Nautical Twilight		5:56 AM	5:55 PM
Astronomical Twilight		5:25 AM	6:26 PM
Moon: waxing crescent		8:55 AM	6:57 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:23 AM	28 °F	26 °F	92 %	E	18 mph	0 mph	24.63 in	0.0 in	Light Snow
12:52 AM	29 °F	25 °F	85 %	E	18 mph	25 mph	24.63 in	0.1 in	Light Snow
1:02 AM	29 °F	25 °F	85 %	E	17 mph	0 mph	24.63 in	0.0 in	Light Snow
1:52 AM	29 °F	25 °F	85 %	E	18 mph	0 mph	24.63 in	0.0 in	Light Snow
2:31 AM	28 °F	25 °F	88 %	E	21 mph	0 mph	24.63 in	0.0 in	Light Snow / Windy
2:39 AM	28 °F	25 °F	88 %	E	17 mph	0 mph	24.64 in	0.0 in	Light Snow
2:47 AM	28 °F	25 °F	86 %	E	20 mph	25 mph	24.64 in	0.0 in	Light Snow
2:52 AM	28 °F	25 °F	88 %	E	20 mph	25 mph	24.63 in	0.0 in	Light Snow

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
3:25 AM	28 °F	25 °F	88 %	E	21 mph	0 mph	24.63 in	0.0 in	Light Snow / Windy
3:32 AM	29 °F	24 °F	82 %	E	18 mph	0 mph	24.63 in	0.0 in	Light Snow
3:42 AM	29 °F	24 °F	82 %	E	21 mph	0 mph	24.62 in	0.0 in	Light Snow / Windy
3:52 AM	29 °F	24 °F	82 %	E	18 mph	0 mph	24.62 in	0.0 in	Light Snow
4:07 AM	29 °F	24 °F	82 %	E	20 mph	0 mph	24.62 in	0.0 in	Light Snow
4:52 AM	30 °F	22 °F	72 %	E	20 mph	0 mph	24.62 in	0.0 in	Cloudy
5:52 AM	30 °F	24 °F	79 %	ENE	17 mph	22 mph	24.61 in	0.0 in	Light Snow
6:52 AM	30 °F	24 °F	79 %	ESE	15 mph	0 mph	24.62 in	0.0 in	Light Snow
7:02 AM	29 °F	24 °F	82 %	ESE	12 mph	0 mph	24.62 in	0.0 in	Light Snow
7:14 AM	29 °F	25 °F	85 %	ESE	13 mph	0 mph	24.62 in	0.0 in	Light Snow
7:28 AM	29 °F	26 °F	89 %	SE	12 mph	0 mph	24.63 in	0.0 in	Light Snow
7:41 AM	29 °F	25 °F	85 %	SE	13 mph	0 mph	24.64 in	0.0 in	Light Snow
7:52 AM	29 °F	25 °F	85 %	ESE	15 mph	0 mph	24.63 in	0.0 in	Light Snow
8:03 AM	29 °F	26 °F	89 %	E	12 mph	0 mph	24.64 in	0.0 in	Light Snow
8:52 AM	29 °F	27 °F	92 %	ENE	3 mph	0 mph	24.66 in	0.1 in	Snow
9:20 AM	29 °F	27 °F	92 %	NE	8 mph	0 mph	24.66 in	0.0 in	Snow
9:33 AM	29 °F	27 °F	92 %	NE	10 mph	0 mph	24.64 in	0.0 in	Light Snow
9:50 AM	28 °F	27 °F	93 %	NE	8 mph	0 mph	24.62 in	0.0 in	Light Snow
9:52 AM	30 °F	27 °F	88 %	NE	8 mph	0 mph	24.62 in	0.0 in	Light Snow
10:23 AM	30 °F	27 °F	88 %	WNW	12 mph	0 mph	24.66 in	0.0 in	Cloudy
10:52 AM	29 °F	27 °F	92 %	NNW	10 mph	0 mph	24.67 in	0.0 in	Light Snow
11:16 AM	30 °F	27 °F	88 %	NNE	8 mph	0 mph	24.67 in	0.0 in	Light Snow
11:46 AM	30 °F	28 °F	93 %	ENE	7 mph	0 mph	24.64 in	0.0 in	Light Snow
11:52 AM	31 °F	29 °F	92 %	ENE	5 mph	0 mph	24.65 in	0.0 in	Light Snow
12:12 PM	32 °F	28 °F	85 %	NW	8 mph	0 mph	24.64 in	0.0 in	Cloudy
12:52 PM	32 °F	29 °F	88 %	NNW	10 mph	0 mph	24.62 in	0.0 in	Mostly Cloudy
1:13 PM	32 °F	28 °F	85 %	N	8 mph	0 mph	24.62 in	0.0 in	Cloudy
1:42 PM	32 °F	28 °F	85 %	NNW	12 mph	0 mph	24.62 in	0.0 in	Cloudy
1:52 PM	32 °F	28 °F	85 %	NNW	10 mph	0 mph	24.62 in	0.0 in	Cloudy
2:52 PM	33 °F	28 °F	82 %	N	6 mph	0 mph	24.64 in	0.0 in	Cloudy
3:52 PM	34 °F	28 °F	79 %	NNW	3 mph	0 mph	24.65 in	0.0 in	Cloudy
4:52 PM	34 °F	28 °F	79 %	N	7 mph	0 mph	24.64 in	0.0 in	Cloudy
5:52 PM	33 °F	29 °F	85 %	WNW	3 mph	0 mph	24.66 in	0.0 in	Cloudy
6:52 PM	34 °F	30 °F	85 %	NE	3 mph	0 mph	24.65 in	0.0 in	Cloudy
7:52 PM	33 °F	30 °F	89 %	NNW	5 mph	0 mph	24.66 in	0.0 in	Cloudy
8:45 PM	33 °F	30 °F	89 %	N	7 mph	0 mph	24.64 in	0.0 in	Cloudy
8:52 PM	33 °F	30 °F	89 %	NNE	6 mph	0 mph	24.64 in	0.0 in	Cloudy
9:52 PM	33 °F	30 °F	89 %	N	7 mph	0 mph	24.64 in	0.0 in	Cloudy
10:52 PM	33 °F	30 °F	89 %	N	7 mph	0 mph	24.62 in	0.0 in	Cloudy
11:52 PM	34 °F	31 °F	89 %	CALM	0 mph	0 mph	24.62 in	0.0 in	Cloudy

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Albuquerque, NM
41 °F Mostly Cloudy

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

41° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
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- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
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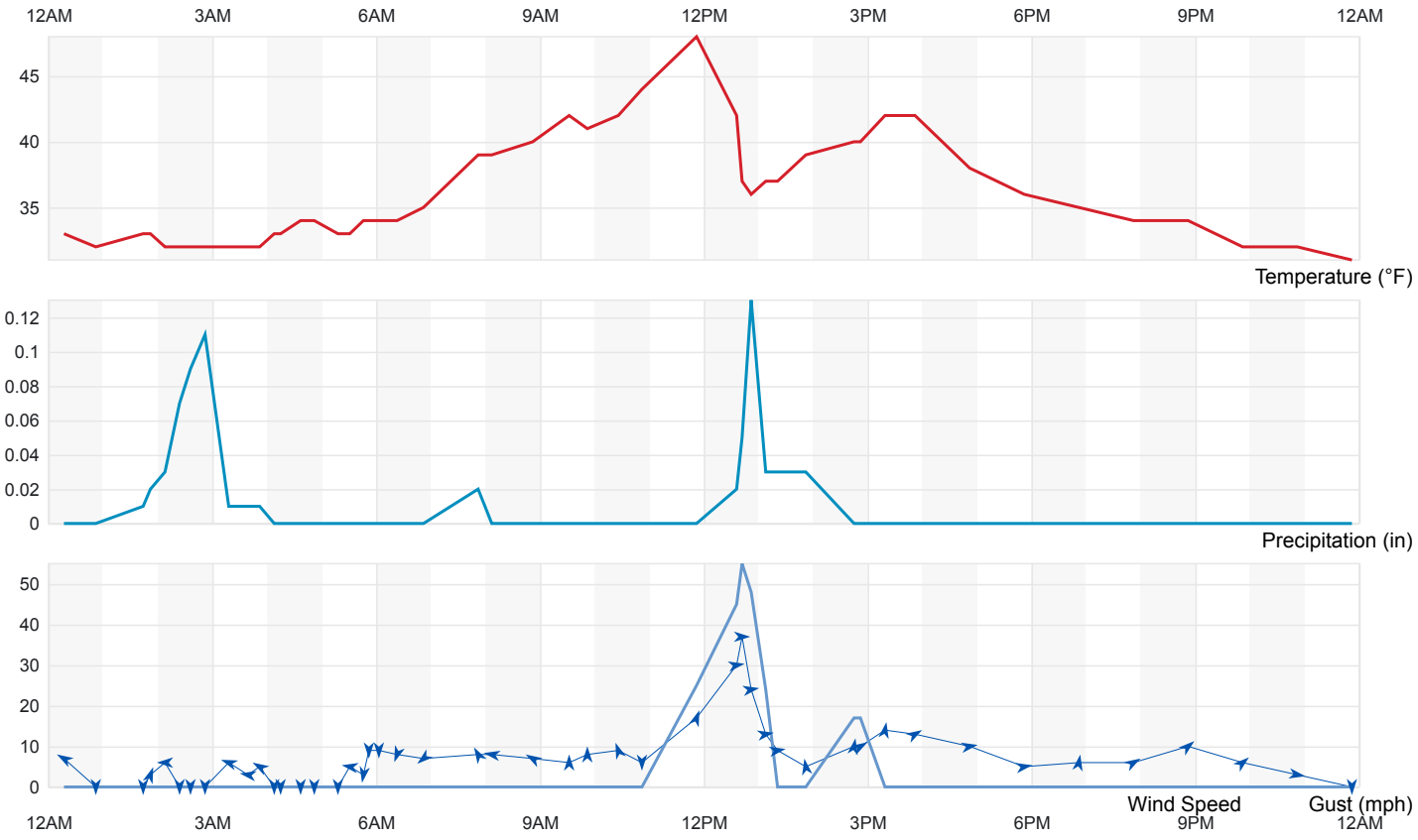
Daily Weekly Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2019-11-29) (/history/weekly/us/nm/albuquerque/KABQ/date/2019-11-29) (/history/monthly/us/nm/albuquerque/KABQ/date/2019-11)

November 29 2019 View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	48	50	69
Low Temp	31	29	-7
Day Average Temp	35.94	40	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.31	0.01	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	32.56	-	-
High	41	-	-
Low	22	-	-
Average	32.56	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	37	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.61	-	-
Astronomy	Day Length	Rise	Set
Actual Time	10h 0m	6:55 AM	4:56 PM
Civil Twilight		6:28 AM	5:24 PM
Nautical Twilight		5:56 AM	5:55 PM
Astronomical Twilight		5:26 AM	6:26 PM
Moon: waxing crescent		9:52 AM	7:53 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:17 AM	33 °F	30 °F	89 %	ESE	7 mph	0 mph	24.61 in	0.0 in	Cloudy
12:52 AM	32 °F	31 °F	96 %	CALM	0 mph	0 mph	24.58 in	0.0 in	Cloudy
1:44 AM	33 °F	31 °F	92 %	CALM	0 mph	0 mph	24.58 in	0.0 in	Rain
1:52 AM	33 °F	31 °F	92 %	SSW	3 mph	0 mph	24.58 in	0.0 in	Rain
2:08 AM	32 °F	31 °F	96 %	E	6 mph	0 mph	24.57 in	0.0 in	Wintry Mix
2:24 AM	32 °F	32 °F	100 %	CALM	0 mph	0 mph	24.57 in	0.1 in	Wintry Mix
2:36 AM	32 °F	31 °F	96 %	CALM	0 mph	0 mph	24.57 in	0.1 in	Wintry Mix
2:52 AM	32 °F	32 °F	100 %	CALM	0 mph	0 mph	24.56 in	0.1 in	Wintry Mix

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
3:18 AM	32 °F	31 °F	96 %	ESE	6 mph	0 mph	24.55 in	0.0 in	Wintry Mix
3:39 AM	32 °F	31 °F	96 %	E	3 mph	0 mph	24.54 in	0.0 in	Wintry Mix
3:52 AM	32 °F	31 °F	96 %	ESE	5 mph	0 mph	24.53 in	0.0 in	Wintry Mix
4:08 AM	33 °F	32 °F	96 %	CALM	0 mph	0 mph	24.53 in	0.0 in	Cloudy
4:15 AM	33 °F	32 °F	96 %	CALM	0 mph	0 mph	24.53 in	0.0 in	Cloudy
4:37 AM	34 °F	33 °F	96 %	CALM	0 mph	0 mph	24.51 in	0.0 in	Cloudy
4:52 AM	34 °F	33 °F	96 %	CALM	0 mph	0 mph	24.50 in	0.0 in	Cloudy
5:18 AM	33 °F	32 °F	96 %	CALM	0 mph	0 mph	24.50 in	0.0 in	Fog
5:31 AM	33 °F	32 °F	96 %	E	5 mph	0 mph	24.48 in	0.0 in	Fog
5:46 AM	34 °F	34 °F	100 %	N	3 mph	0 mph	24.48 in	0.0 in	Mostly Cloudy
5:52 AM	34 °F	33 °F	96 %	N	9 mph	0 mph	24.49 in	0.0 in	Mostly Cloudy
6:03 AM	34 °F	32 °F	92 %	N	9 mph	0 mph	24.50 in	0.0 in	Fog
6:23 AM	34 °F	33 °F	96 %	NNE	8 mph	0 mph	24.49 in	0.0 in	Cloudy
6:52 AM	35 °F	34 °F	96 %	NE	7 mph	0 mph	24.48 in	0.0 in	Light Rain
7:52 AM	39 °F	37 °F	93 %	SSE	8 mph	0 mph	24.46 in	0.0 in	Mostly Cloudy
8:07 AM	39 °F	37 °F	93 %	E	8 mph	0 mph	24.46 in	0.0 in	Cloudy
8:52 AM	40 °F	38 °F	93 %	ESE	7 mph	0 mph	24.44 in	0.0 in	Cloudy
9:32 AM	42 °F	39 °F	89 %	S	6 mph	0 mph	24.44 in	0.0 in	Mostly Cloudy
9:52 AM	41 °F	38 °F	89 %	S	8 mph	0 mph	24.43 in	0.0 in	Mostly Cloudy
10:26 AM	42 °F	39 °F	89 %	SSE	9 mph	0 mph	24.40 in	0.0 in	Mostly Cloudy
10:52 AM	44 °F	41 °F	89 %	VAR	6 mph	0 mph	24.37 in	0.0 in	Mostly Cloudy
11:52 AM	48 °F	41 °F	77 %	SSW	17 mph	25 mph	24.33 in	0.0 in	Mostly Cloudy
12:36 PM	42 °F	40 °F	92 %	W	30 mph	45 mph	24.36 in	0.0 in	Rain / Windy
12:42 PM	37 °F	35 °F	93 %	W	37 mph	55 mph	24.38 in	0.1 in	Heavy Rain / Windy
12:52 PM	36 °F	34 °F	93 %	W	24 mph	48 mph	24.39 in	0.1 in	Rain / Windy
1:08 PM	37 °F	35 °F	93 %	W	13 mph	24 mph	24.40 in	0.0 in	Light Rain
1:21 PM	37 °F	35 °F	93 %	W	9 mph	0 mph	24.39 in	0.0 in	Cloudy
1:52 PM	39 °F	35 °F	86 %	S	5 mph	0 mph	24.43 in	0.0 in	Cloudy
2:45 PM	40 °F	36 °F	86 %	S	10 mph	17 mph	24.44 in	0.0 in	Light Rain
2:52 PM	40 °F	35 °F	83 %	WSW	10 mph	17 mph	24.45 in	0.0 in	Light Rain
3:19 PM	42 °F	34 °F	73 %	S	14 mph	0 mph	24.47 in	0.0 in	Cloudy
3:52 PM	42 °F	32 °F	67 %	WSW	13 mph	0 mph	24.48 in	0.0 in	Partly Cloudy
4:52 PM	38 °F	29 °F	70 %	W	10 mph	0 mph	24.51 in	0.0 in	Mostly Cloudy
5:52 PM	36 °F	27 °F	70 %	W	5 mph	0 mph	24.53 in	0.0 in	Mostly Cloudy
6:52 PM	35 °F	27 °F	72 %	S	6 mph	0 mph	24.54 in	0.0 in	Fair
7:52 PM	34 °F	26 °F	73 %	WSW	6 mph	0 mph	24.54 in	0.0 in	Fair
8:52 PM	34 °F	24 °F	67 %	SW	10 mph	0 mph	24.53 in	0.0 in	Fair
9:52 PM	32 °F	22 °F	66 %	SW	6 mph	0 mph	24.54 in	0.0 in	Fair
10:52 PM	32 °F	22 °F	66 %	W	3 mph	0 mph	24.54 in	0.0 in	Mostly Cloudy
11:52 PM	31 °F	23 °F	72 %	CALM	0 mph	0 mph	24.55 in	0.0 in	Mostly Cloudy

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Search Locations Log in (/log…

Albuquerque, NM
41 °F Mostly Cloudy

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

41° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

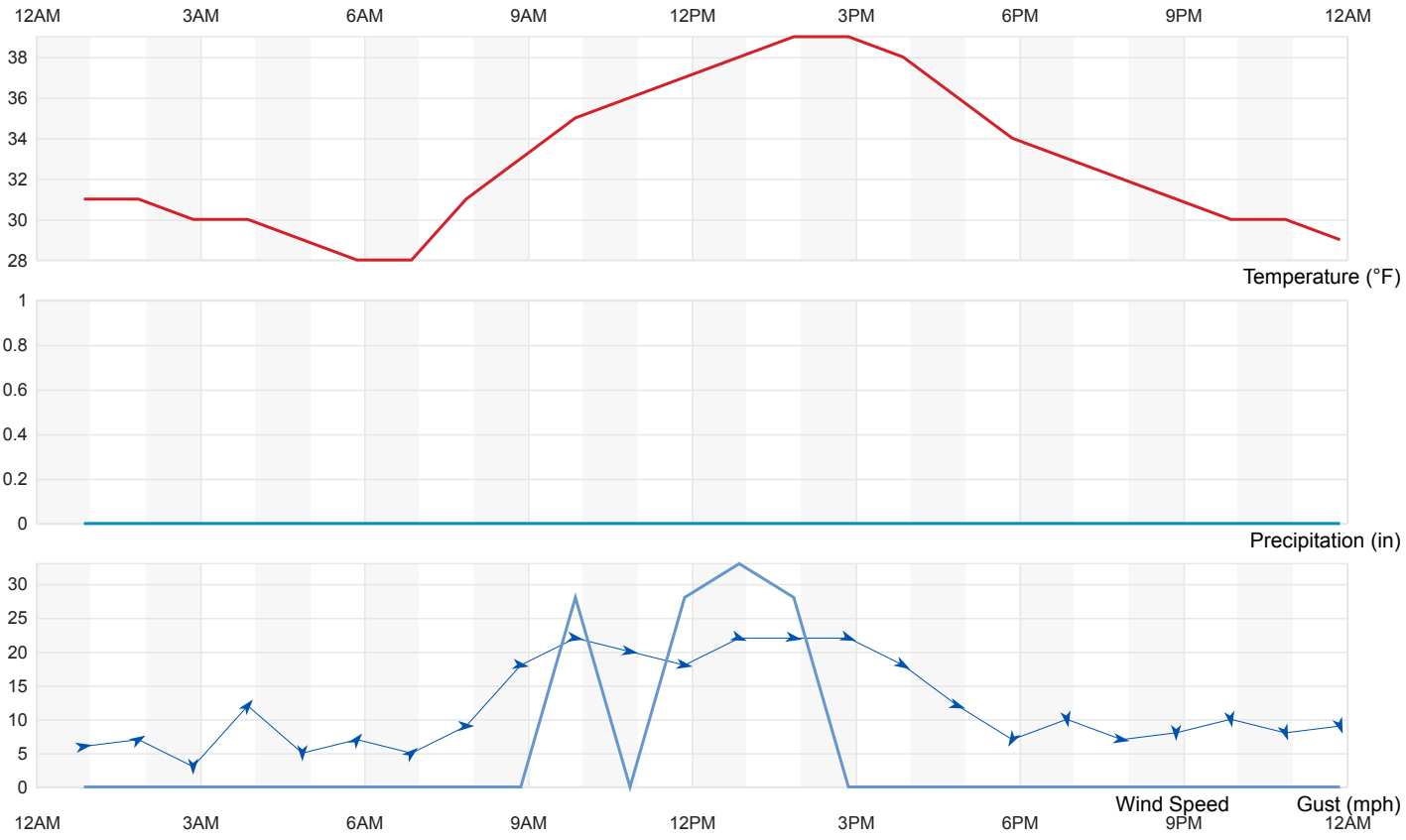
HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily Weekly Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2019-11-30) (/history/weekly/us/nm/albuquerque/KABQ/date/2019-11-30) (/history/monthly/us/nm/albuquerque/KABQ/date/2019-11)

November 30 2019 View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	39	49	69
Low Temp	28	29	5
Day Average Temp	32.83	39	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.18	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	16.29	-	-
High	22	-	-
Low	11	-	-
Average	16.29	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	22	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.81	-	-
Astronomy	Day Length	Rise	Set
Actual Time	9h 59m	6:56 AM	4:56 PM
Civil Twilight		6:28 AM	5:24 PM
Nautical Twilight		5:57 AM	5:55 PM
Astronomical Twilight		5:27 AM	6:25 PM
Moon: waxing crescent		10:41 AM	8:50 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	31 °F	22 °F	69 %	W	6 mph	0 mph	24.55 in	0.0 in	Partly Cloudy
1:52 AM	31 °F	22 °F	69 %	WSW	7 mph	0 mph	24.56 in	0.0 in	Partly Cloudy
2:52 AM	30 °F	22 °F	72 %	VAR	3 mph	0 mph	24.56 in	0.0 in	Fair
3:52 AM	30 °F	21 °F	69 %	SW	12 mph	0 mph	24.57 in	0.0 in	Fair
4:52 AM	29 °F	21 °F	72 %	VAR	5 mph	0 mph	24.58 in	0.0 in	Partly Cloudy
5:52 AM	28 °F	20 °F	72 %	SW	7 mph	0 mph	24.60 in	0.0 in	Fair
6:52 AM	28 °F	19 °F	69 %	SW	5 mph	0 mph	24.62 in	0.0 in	Fair
7:52 AM	31 °F	17 °F	57 %	W	9 mph	0 mph	24.64 in	0.0 in	Fair

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
8:52 AM	33 °F	16 °F	50 %	W	18 mph	0 mph	24.65 in	0.0 in	Fair
9:52 AM	35 °F	17 °F	48 %	W	22 mph	28 mph	24.67 in	0.0 in	Fair / Windy
10:52 AM	36 °F	15 °F	43 %	W	20 mph	0 mph	24.67 in	0.0 in	Fair
11:52 AM	37 °F	14 °F	39 %	W	18 mph	28 mph	24.66 in	0.0 in	Fair
12:52 PM	38 °F	13 °F	36 %	WNW	22 mph	33 mph	24.66 in	0.0 in	Fair / Windy
1:52 PM	39 °F	13 °F	34 %	W	22 mph	28 mph	24.67 in	0.0 in	Fair / Windy
2:52 PM	39 °F	12 °F	33 %	WNW	22 mph	0 mph	24.67 in	0.0 in	Fair / Windy
3:52 PM	38 °F	11 °F	33 %	WNW	18 mph	0 mph	24.69 in	0.0 in	Fair
4:52 PM	36 °F	11 °F	36 %	WNW	12 mph	0 mph	24.72 in	0.0 in	Fair
5:52 PM	34 °F	14 °F	44 %	NNE	7 mph	0 mph	24.74 in	0.0 in	Partly Cloudy
6:52 PM	33 °F	14 °F	46 %	N	10 mph	0 mph	24.75 in	0.0 in	Fair
7:52 PM	32 °F	14 °F	48 %	W	7 mph	0 mph	24.78 in	0.0 in	Fair
8:52 PM	31 °F	15 °F	52 %	N	8 mph	0 mph	24.79 in	0.0 in	Fair
9:52 PM	30 °F	16 °F	56 %	N	10 mph	0 mph	24.80 in	0.0 in	Fair
10:52 PM	30 °F	16 °F	56 %	NNW	8 mph	0 mph	24.81 in	0.0 in	Fair
11:52 PM	29 °F	16 °F	58 %	NNW	9 mph	0 mph	24.80 in	0.0 in	Fair

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(http://www.pastfactory.com/life/when-a-96-year-old-woman-sold-her-home-real-estate-agents-were-stunned-by-what-they-found-inside/?utm_source=tb&utm_medium=theweatherchannel-wunderground-tb&utm_term=96-Year-Old+Puts+Her+House+For+Sale.+This+Is+What+It+Looks+Like+Inside-https%3A%2F%2Fwww.pastfactory.com%2Fhivemedia-images%2Fcreatives%2Fnsy%2Foldlady_nsy.jpg&utm_content=2850702219&utm_campaign=3235471-tb&utm_source=tb)

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Past Factory

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35.05 °N, **106.61** °W

Albuquerque, NM Weather History

49° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

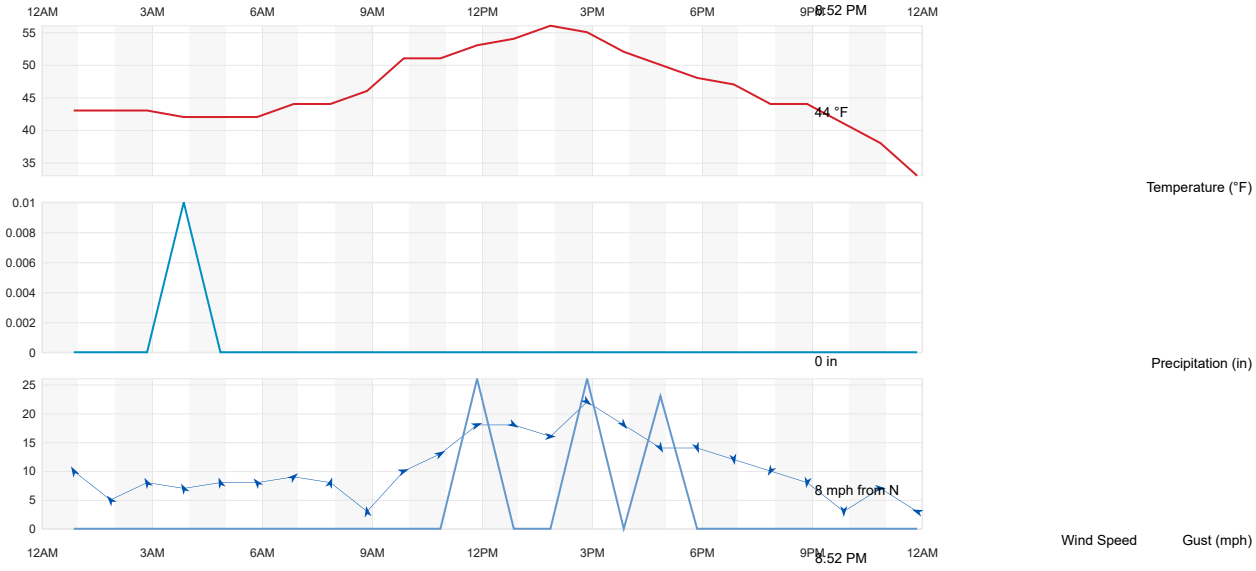
HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily | Weekly | Monthly

(/history/daily/us/nm/albuquerque/kabq/date/2019-12-5) (/history/daily/us/nm/albuquerque/kabq/date/2019-12-5) (/history/daily/us/nm/albuquerque/kabq/date/2019-12)

December | 5 | 2019 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	56	48	68
Low Temp	33	28	11
Day Average Temp	46.08	38	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.01	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	33.42	-	-
High	39	-	-
Low	28	-	-
Average	33.42	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	22	-	-

Temperature (° F)	Actual	Historic Avg.	Record
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.87	-	-
Astronomy	Day Length	Rise	Set
Actual Time	9h 54m	7:00 AM	4:55 PM
Civil Twilight		6:33 AM	5:23 PM
Nautical Twilight		6:01 AM	5:55 PM
Astronomical Twilight		5:31 AM	6:25 PM
Moon: waxing gibbous		1:32 PM	12:36 AM

Daily Observations

12:52 AM	43 °F	39 °F	86 %	SSE	10 mph	0 mph	24.66 in	0.0 in	Partly Cloudy
1:52 AM	43 °F	38 °F	82 %	SE	5 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
2:52 AM	43 °F	38 °F	82 %	SSE	8 mph	0 mph	24.67 in	0.0 in	Light Rain
3:52 AM	42 °F	39 °F	89 %	SSE	7 mph	0 mph	24.67 in	0.0 in	Cloudy
4:52 AM	42 °F	39 °F	89 %	SSE	8 mph	0 mph	24.67 in	0.0 in	Cloudy
5:52 AM	42 °F	39 °F	89 %	SE	8 mph	0 mph	24.67 in	0.0 in	Partly Cloudy
6:52 AM	44 °F	37 °F	76 %	SW	9 mph	0 mph	24.69 in	0.0 in	Mostly Cloudy
7:52 AM	44 °F	37 °F	76 %	SSW	8 mph	0 mph	24.70 in	0.0 in	Partly Cloudy
8:52 AM	46 °F	37 °F	71 %	S	3 mph	0 mph	24.71 in	0.0 in	Partly Cloudy
9:52 AM	51 °F	34 °F	52 %	WSW	10 mph	0 mph	24.71 in	0.0 in	Partly Cloudy
10:52 AM	51 °F	33 °F	50 %	WSW	13 mph	0 mph	24.71 in	0.0 in	Mostly Cloudy
11:52 AM	53 °F	31 °F	43 %	WSW	18 mph	26 mph	24.69 in	0.0 in	Mostly Cloudy
12:52 PM	54 °F	28 °F	37 %	WNW	18 mph	0 mph	24.68 in	0.0 in	Mostly Cloudy
1:52 PM	56 °F	30 °F	37 %	W	16 mph	0 mph	24.68 in	0.0 in	Mostly Cloudy
2:52 PM	55 °F	29 °F	37 %	NW	22 mph	26 mph	24.70 in	0.0 in	Mostly Cloudy / Windy
3:52 PM	52 °F	30 °F	43 %	NW	18 mph	0 mph	24.73 in	0.0 in	Mostly Cloudy
4:52 PM	50 °F	30 °F	46 %	NNW	14 mph	23 mph	24.77 in	0.0 in	Partly Cloudy
5:52 PM	48 °F	32 °F	54 %	NNW	14 mph	0 mph	24.79 in	0.0 in	Partly Cloudy
6:52 PM	47 °F	31 °F	54 %	N	12 mph	0 mph	24.81 in	0.0 in	Fair
7:52 PM	44 °F	31 °F	60 %	NNE	10 mph	0 mph	24.83 in	0.0 in	Fair
8:52 PM	44 °F	31 °F	60 %	N	8 mph	0 mph	24.84 in	0.0 in	Fair
9:52 PM	41 °F	31 °F	67 %	VAR	3 mph	0 mph	24.85 in	0.0 in	Fair
10:52 PM	38 °F	30 °F	73 %	W	7 mph	0 mph	24.86 in	0.0 in	Fair
11:52 PM	33 °F	28 °F	82 %	ESE	3 mph	0 mph	24.87 in	0.0 in	Fair

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Clipple

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35.05 °N, **106.61** °W

Albuquerque, NM Weather History

49° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

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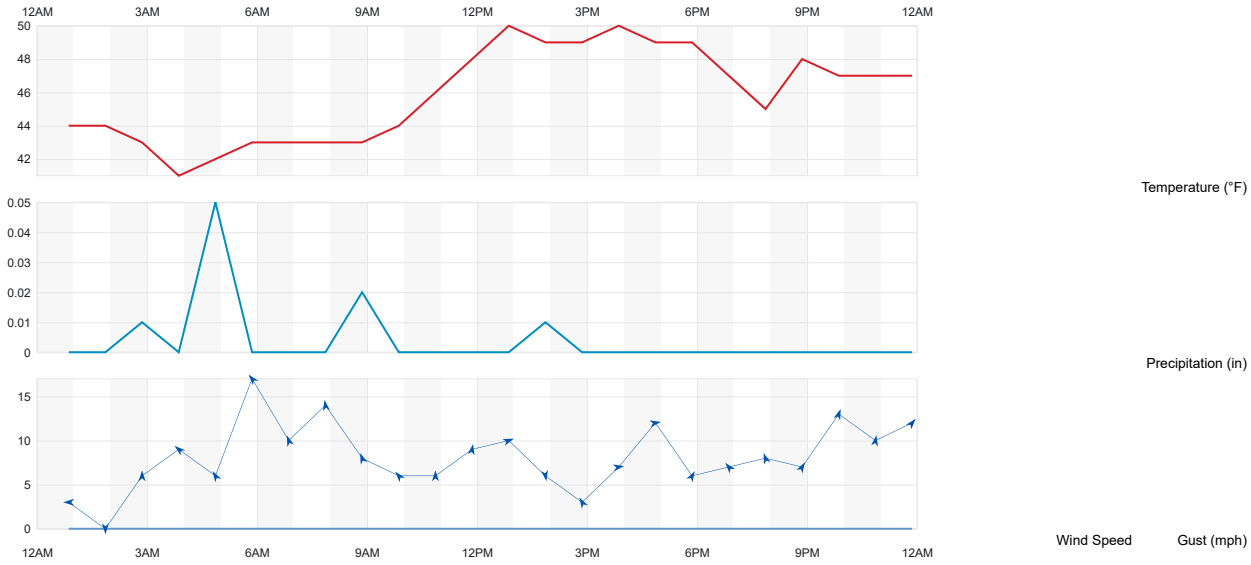
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily Weekly Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2019-12-8) (/history/daily/us/nm/albuquerque/KABQ/date/2019-12-8) (/history/daily/us/nm/albuquerque/KABQ/date/2019-12)

December | 8 | 2019 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	50	47	68
Low Temp	41	27	5
Day Average Temp	45.88	37	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.06	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	38.42	-	-
High	43	-	-
Low	35	-	-
Average	38.42	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	17	-	-

Temperature (° F)	Actual	Historic Avg.	Record
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.74	-	-
Astronomy	Day Length	Rise	Set
Actual Time	9h 52m	7:03 AM	4:56 PM
Civil Twilight		6:35 AM	5:24 PM
Nautical Twilight		6:03 AM	5:55 PM
Astronomical Twilight		5:33 AM	6:26 PM
Moon: waxing gibbous		2:57 PM	3:24 AM

Daily Observations

12:52 AM	44 °F	35 °F	71 %	E	3 mph	0 mph	24.73 in	0.0 in	Cloudy
1:52 AM	44 °F	36 °F	73 %	CALM	0 mph	0 mph	24.72 in	0.0 in	Cloudy
2:52 AM	43 °F	37 °F	80 %	S	6 mph	0 mph	24.74 in	0.0 in	Light Rain
3:52 AM	41 °F	38 °F	89 %	SE	9 mph	0 mph	24.73 in	0.0 in	Light Rain
4:52 AM	42 °F	40 °F	92 %	SSE	6 mph	0 mph	24.71 in	0.1 in	Light Rain
5:52 AM	43 °F	41 °F	93 %	SE	17 mph	0 mph	24.68 in	0.0 in	Cloudy
6:52 AM	43 °F	41 °F	93 %	SSE	10 mph	0 mph	24.70 in	0.0 in	Cloudy
7:52 AM	43 °F	41 °F	93 %	S	14 mph	0 mph	24.68 in	0.0 in	Light Rain
8:52 AM	43 °F	41 °F	93 %	SSE	8 mph	0 mph	24.69 in	0.0 in	Light Rain
9:52 AM	44 °F	42 °F	93 %	SE	6 mph	0 mph	24.69 in	0.0 in	Cloudy
10:52 AM	46 °F	42 °F	86 %	S	6 mph	0 mph	24.68 in	0.0 in	Cloudy
11:52 AM	48 °F	41 °F	77 %	S	9 mph	0 mph	24.64 in	0.0 in	Cloudy
12:52 PM	50 °F	40 °F	68 %	WSW	10 mph	0 mph	24.62 in	0.0 in	Cloudy
1:52 PM	49 °F	41 °F	74 %	N	6 mph	0 mph	24.61 in	0.0 in	Light Rain
2:52 PM	49 °F	43 °F	80 %	SSE	3 mph	0 mph	24.60 in	0.0 in	Cloudy
3:52 PM	50 °F	38 °F	63 %	W	7 mph	0 mph	24.59 in	0.0 in	Cloudy
4:52 PM	49 °F	35 °F	59 %	W	12 mph	0 mph	24.58 in	0.0 in	Cloudy
5:52 PM	49 °F	36 °F	61 %	SSW	6 mph	0 mph	24.58 in	0.0 in	Cloudy
6:52 PM	47 °F	36 °F	66 %	SE	7 mph	0 mph	24.60 in	0.0 in	Cloudy
7:52 PM	45 °F	37 °F	74 %	SSE	8 mph	0 mph	24.58 in	0.0 in	Cloudy
8:52 PM	48 °F	35 °F	61 %	SSW	7 mph	0 mph	24.57 in	0.0 in	Cloudy
9:52 PM	47 °F	35 °F	63 %	SSW	13 mph	0 mph	24.58 in	0.0 in	Cloudy
10:52 PM	47 °F	35 °F	63 %	S	10 mph	0 mph	24.59 in	0.0 in	Cloudy
11:52 PM	47 °F	36 °F	66 %	SW	12 mph	0 mph	24.59 in	0.0 in	Cloudy

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Netflix Caves: Finally Releasing These Long Wanted Shows
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35.05 °N, **106.61** °W

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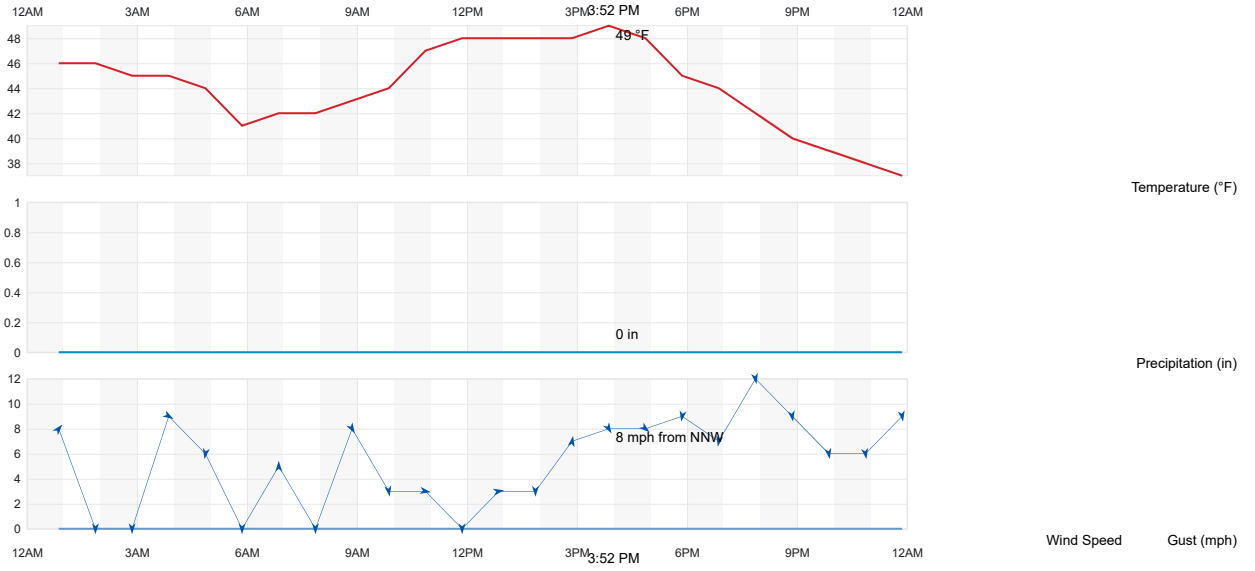
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily | Weekly | Monthly

(/history/daily/us/nm/albuquerque/kabq/date/2019-12-9) (/history/weekly/us/nm/albuquerque/kabq/date/2019-12-9) (/history/monthly/us/nm/albuquerque/kabq/date/2019-12)

December | 9 | 2019 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	49	47	64
Low Temp	37	27	2
Day Average Temp	44.13	37	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.03	0.01	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	30.46	-	-
High	35	-	-
Low	26	-	-
Average	30.46	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	12	-	-

Temperature (° F)	Actual	Historic Avg.	Record
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.72	-	-
Astronomy	Day Length	Rise	Set
Actual Time	9h 51m	7:04 AM	4:56 PM
Civil Twilight		6:36 AM	5:24 PM
Nautical Twilight		6:04 AM	5:55 PM
Astronomical Twilight		5:33 AM	6:26 PM
Moon: waxing gibbous		3:29 PM	4:21 AM

Daily Observations

12:52 AM	46 °F	35 °F	66 %	SW	8 mph	0 mph	24.58 in	0.0 in	Cloudy
1:52 AM	46 °F	35 °F	66 %	CALM	0 mph	0 mph	24.58 in	0.0 in	Cloudy
2:52 AM	45 °F	34 °F	65 %	CALM	0 mph	0 mph	24.58 in	0.0 in	Cloudy
3:52 AM	45 °F	32 °F	60 %	WNW	9 mph	0 mph	24.58 in	0.0 in	Cloudy
4:52 AM	44 °F	32 °F	63 %	N	6 mph	0 mph	24.57 in	0.0 in	Cloudy
5:52 AM	41 °F	33 °F	73 %	CALM	0 mph	0 mph	24.59 in	0.0 in	Cloudy
6:52 AM	42 °F	33 °F	70 %	S	5 mph	0 mph	24.60 in	0.0 in	Cloudy
7:52 AM	42 °F	33 °F	70 %	CALM	0 mph	0 mph	24.61 in	0.0 in	Cloudy
8:52 AM	43 °F	33 °F	68 %	NNW	8 mph	0 mph	24.62 in	0.0 in	Mostly Cloudy
9:52 AM	44 °F	32 °F	63 %	N	3 mph	0 mph	24.64 in	0.0 in	Mostly Cloudy
10:52 AM	47 °F	32 °F	56 %	W	3 mph	0 mph	24.62 in	0.0 in	Mostly Cloudy
11:52 AM	48 °F	32 °F	54 %	CALM	0 mph	0 mph	24.62 in	0.0 in	Partly Cloudy
12:52 PM	48 °F	31 °F	52 %	W	3 mph	0 mph	24.60 in	0.0 in	Mostly Cloudy
1:52 PM	48 °F	33 °F	56 %	VAR	3 mph	0 mph	24.60 in	0.0 in	Mostly Cloudy
2:52 PM	48 °F	33 °F	56 %	S	7 mph	0 mph	24.60 in	0.0 in	Mostly Cloudy
3:52 PM	49 °F	29 °F	46 %	NNW	8 mph	0 mph	24.61 in	0.0 in	Mostly Cloudy
4:52 PM	48 °F	26 °F	42 %	NW	8 mph	0 mph	24.62 in	0.0 in	Partly Cloudy
5:52 PM	45 °F	27 °F	49 %	N	9 mph	0 mph	24.65 in	0.0 in	Mostly Cloudy
6:52 PM	44 °F	26 °F	49 %	N	7 mph	0 mph	24.66 in	0.0 in	Partly Cloudy
7:52 PM	42 °F	26 °F	53 %	N	12 mph	0 mph	24.67 in	0.0 in	Fair
8:52 PM	40 °F	26 °F	58 %	N	9 mph	0 mph	24.70 in	0.0 in	Fair
9:52 PM	39 °F	26 °F	60 %	N	6 mph	0 mph	24.71 in	0.0 in	Fair
10:52 PM	38 °F	26 °F	62 %	N	6 mph	0 mph	24.71 in	0.0 in	Fair
11:52 PM	37 °F	26 °F	65 %	N	9 mph	0 mph	24.72 in	0.0 in	Fair

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A Simple Fix For Snoring And Dry Mouth at Night
Clipple

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

49° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
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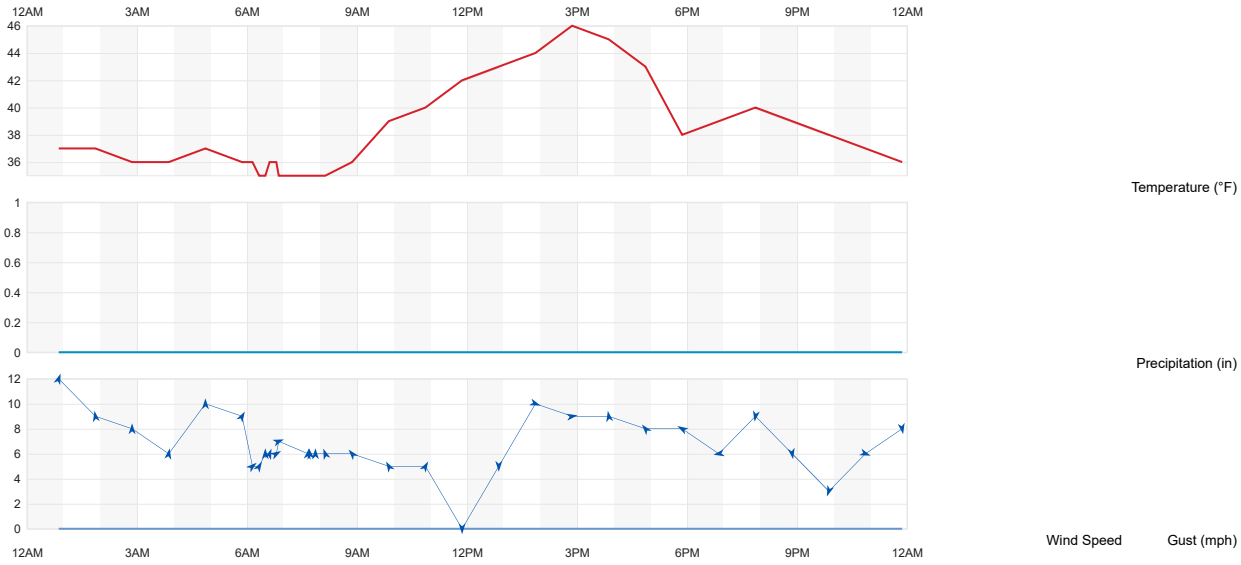
Daily | Weekly | Monthly

(/history/daily/us/nm/albuquerque/kabq/date/2019-12-25) (/history/daily/us/nm/albuquerque/kabq/date/2019-12-25) (/history/daily/us/nm/albuquerque/kabq/date/2019-12)

December | 25 | 2019 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	46	45	63
Low Temp	35	26	-8
Day Average Temp	38.03	35	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.17	0.01	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	32.44	-	-
High	36	-	-
Low	26	-	-
Average	32.44	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	12	-	-

Temperature (° F)	Actual	Historic Avg.	Record
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.63	-	-
Astronomy	Day Length	Rise	Set
Actual Time	9h 47m	7:13 AM	5:01 PM
Civil Twilight		6:45 AM	5:29 PM
Nautical Twilight		6:13 AM	6:01 PM
Astronomical Twilight		5:42 AM	6:32 PM
Moon: waning crescent		6:39 AM	4:45 PM

Daily Observations

12:52 AM	37 °F	35 °F	93 %	SSW	12 mph	0 mph	24.53 in	0.0 in	Cloudy
1:52 AM	37 °F	35 °F	93 %	S	9 mph	0 mph	24.51 in	0.0 in	Cloudy
2:52 AM	36 °F	35 °F	97 %	S	8 mph	0 mph	24.53 in	0.0 in	Cloudy
3:52 AM	36 °F	35 °F	97 %	S	6 mph	0 mph	24.53 in	0.0 in	Cloudy
4:52 AM	37 °F	35 °F	93 %	S	10 mph	0 mph	24.52 in	0.0 in	Cloudy
5:52 AM	36 °F	35 °F	97 %	SSW	9 mph	0 mph	24.54 in	0.0 in	Cloudy
6:09 AM	36 °F	35 °F	97 %	SW	5 mph	0 mph	24.54 in	0.0 in	Fog
6:20 AM	35 °F	35 °F	100 %	SSW	5 mph	0 mph	24.54 in	0.0 in	Fog
6:30 AM	35 °F	35 °F	100 %	S	6 mph	0 mph	24.55 in	0.0 in	Fog
6:37 AM	36 °F	35 °F	97 %	SSW	6 mph	0 mph	24.55 in	0.0 in	Fog
6:48 AM	36 °F	36 °F	100 %	WSW	6 mph	0 mph	24.56 in	0.0 in	Fog
6:52 AM	35 °F	35 °F	100 %	WSW	7 mph	0 mph	24.56 in	0.0 in	Fog
7:40 AM	35 °F	34 °F	96 %	S	6 mph	0 mph	24.56 in	0.0 in	Fog
7:43 AM	35 °F	35 °F	100 %	S	6 mph	0 mph	24.56 in	0.0 in	Cloudy
7:52 AM	35 °F	35 °F	100 %	S	6 mph	0 mph	24.57 in	0.0 in	Cloudy
8:08 AM	35 °F	34 °F	96 %	SSE	6 mph	0 mph	24.57 in	0.0 in	Cloudy
8:52 AM	36 °F	35 °F	97 %	SE	6 mph	0 mph	24.59 in	0.0 in	Mostly Cloudy
9:52 AM	39 °F	35 °F	86 %	SSE	5 mph	0 mph	24.61 in	0.0 in	Mostly Cloudy
10:52 AM	40 °F	34 °F	79 %	SSW	5 mph	0 mph	24.61 in	0.0 in	Mostly Cloudy
11:52 AM	42 °F	32 °F	67 %	CALM	0 mph	0 mph	24.59 in	0.0 in	Mostly Cloudy
12:52 PM	43 °F	30 °F	60 %	VAR	5 mph	0 mph	24.56 in	0.0 in	Mostly Cloudy
1:52 PM	44 °F	26 °F	49 %	WNW	10 mph	0 mph	24.56 in	0.0 in	Mostly Cloudy
2:52 PM	46 °F	26 °F	46 %	W	9 mph	0 mph	24.55 in	0.0 in	Mostly Cloudy
3:52 PM	45 °F	29 °F	53 %	S	9 mph	0 mph	24.56 in	0.0 in	Mostly Cloudy
4:52 PM	43 °F	30 °F	60 %	SE	8 mph	0 mph	24.57 in	0.0 in	Mostly Cloudy
5:52 PM	38 °F	30 °F	73 %	ESE	8 mph	0 mph	24.57 in	0.0 in	Mostly Cloudy
6:52 PM	39 °F	30 °F	70 %	E	6 mph	0 mph	24.58 in	0.0 in	Mostly Cloudy
7:52 PM	40 °F	27 °F	60 %	N	9 mph	0 mph	24.59 in	0.0 in	Cloudy
8:52 PM	39 °F	28 °F	65 %	N	6 mph	0 mph	24.60 in	0.0 in	Mostly Cloudy
9:52 PM	38 °F	29 °F	70 %	NNE	3 mph	0 mph	24.62 in	0.0 in	Mostly Cloudy
10:52 PM	37 °F	30 °F	76 %	WNW	6 mph	0 mph	24.62 in	0.0 in	Mostly Cloudy
11:52 PM	36 °F	28 °F	73 %	N	8 mph	0 mph	24.63 in	0.0 in	Mostly Cloudy

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Ageful

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

28° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
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Daily | Weekly | Monthly

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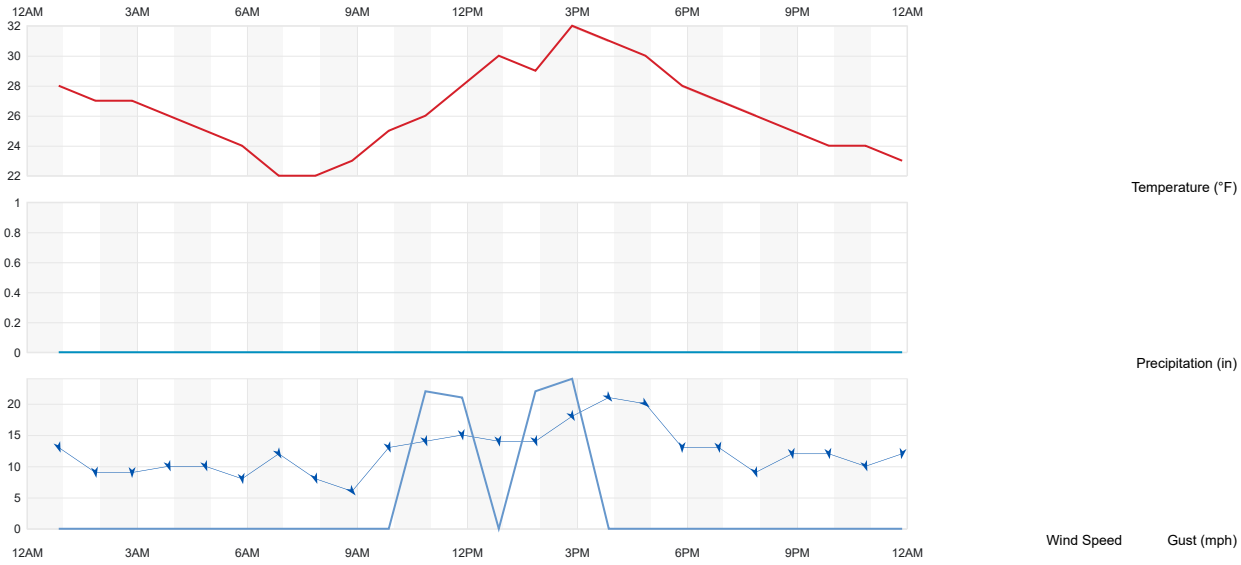
December | 29 | 2019 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	32	45	63
Low Temp	22	26	4
Day Average Temp	26.33	35	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.03	0.01	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	10.63	-	-
High	16	-	-
Low	7	-	-
Average	10.63	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	21	-	-

Temperature (° F)	Actual	Historic Avg.	Record
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.74	-	-
Astronomy	Day Length	Rise	Set
Actual Time	9h 49m	7:15 AM	5:04 PM
Civil Twilight		6:46 AM	5:32 PM
Nautical Twilight		6:15 AM	6:03 PM
Astronomical Twilight		5:44 AM	6:34 PM
Moon: waxing crescent		9:58 AM	8:32 PM

Daily Observations

12:52 AM	28 °F	16 °F	61 %	NNW	13 mph	0 mph	24.53 in	0.0 in	Cloudy
1:52 AM	27 °F	15 °F	61 %	N	9 mph	0 mph	24.54 in	0.0 in	Cloudy
2:52 AM	27 °F	16 °F	63 %	N	9 mph	0 mph	24.55 in	0.0 in	Cloudy
3:52 AM	26 °F	15 °F	63 %	NNW	10 mph	0 mph	24.56 in	0.0 in	Cloudy
4:52 AM	25 °F	13 °F	60 %	NNW	10 mph	0 mph	24.57 in	0.0 in	Cloudy
5:52 AM	24 °F	12 °F	60 %	N	8 mph	0 mph	24.58 in	0.0 in	Partly Cloudy
6:52 AM	22 °F	11 °F	63 %	NNW	12 mph	0 mph	24.60 in	0.0 in	Mostly Cloudy
7:52 AM	22 °F	12 °F	66 %	NNW	8 mph	0 mph	24.62 in	0.0 in	Partly Cloudy
8:52 AM	23 °F	12 °F	63 %	NW	6 mph	0 mph	24.64 in	0.0 in	Mostly Cloudy
9:52 AM	25 °F	11 °F	55 %	NNW	13 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
10:52 AM	26 °F	11 °F	53 %	NNW	14 mph	22 mph	24.67 in	0.0 in	Mostly Cloudy
11:52 AM	28 °F	10 °F	47 %	N	15 mph	21 mph	24.65 in	0.0 in	Mostly Cloudy
12:52 PM	30 °F	10 °F	43 %	N	14 mph	0 mph	24.64 in	0.0 in	Mostly Cloudy
1:52 PM	29 °F	9 °F	43 %	NNW	14 mph	22 mph	24.62 in	0.0 in	Mostly Cloudy
2:52 PM	32 °F	9 °F	38 %	NNW	18 mph	24 mph	24.63 in	0.0 in	Partly Cloudy
3:52 PM	31 °F	8 °F	38 %	NW	21 mph	0 mph	24.64 in	0.0 in	Fair / Windy
4:52 PM	30 °F	8 °F	40 %	NW	20 mph	0 mph	24.66 in	0.0 in	Fair
5:52 PM	28 °F	9 °F	45 %	N	13 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
6:52 PM	27 °F	8 °F	45 %	N	13 mph	0 mph	24.68 in	0.0 in	Fair
7:52 PM	26 °F	8 °F	47 %	NNW	9 mph	0 mph	24.71 in	0.0 in	Fair
8:52 PM	25 °F	8 °F	49 %	N	12 mph	0 mph	24.72 in	0.0 in	Fair
9:52 PM	24 °F	9 °F	53 %	N	12 mph	0 mph	24.73 in	0.0 in	Fair
10:52 PM	24 °F	7 °F	48 %	NNW	10 mph	0 mph	24.74 in	0.0 in	Partly Cloudy
11:52 PM	23 °F	8 °F	53 %	N	12 mph	0 mph	24.72 in	0.0 in	Partly Cloudy

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CPAP Makers Scrambling After New Snoring fix Unveiled
Clipple

6001 Indian School Road NE, Suite 310
Albuquerque, New Mexico 87110
tel: 505-243-3200
fax: 505-243-2700

January 8, 2020

Ms. Shellie Eaton, PE
Senior Engineer
City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Subject: Visual Stormwater Monitoring at the City of Albuquerque Facilities
Fourth Quarter 2019
CDM Smith Project No: 0668-229726.VISUAL MONITORING

Dear Ms. Eaton:

CDM Smith Inc. (CDM Smith) performed visual stormwater monitoring activities at select City of Albuquerque (CABQ) outfalls during the Fourth Quarter 2019. **Table 1** identifies the CABQ facilities for which CDM Smith is responsible for conducting quarterly visual monitoring. Monthly precipitation data from Weather Underground (WU; Albuquerque International Sunport Station) for the Fourth Quarter 2019 (October through December) is included in **Attachment A**. Daily weather reports for days when precipitation was observed (based on WU data) are included in **Attachment B**. The events with measurable precipitation occurring during this time are summarized in **Table2**.

Table 1 - City of Albuquerque Facilities - CDM Smith Quarterly Visual Monitoring

Zone	City of Albuquerque Facility
Zone 1	Los Altos Golf Course
	Lomas Fuel Station
	Arroyo Street Maintenance
	Street Satellite #1
	Los Altos Trails Parks Management
	Los Altos Parks Management
Zone 2	Daytona Transit Center
	Ladera Golf Course
	Streets Satellite #3
	Don Reservoir Convenience Center
Zone 3	Puerto del Sol Golf Course
	Yale Transit Center
Zone 4	Montessa Park Open Space
	Montessa Park Convenience Center

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Table 2 - Fourth Quarter 2019 Precipitation Events (October-December)

Date	Event Start Time	Storm Duration	Total Precipitation	Notes
10/4/2019	**3:30 AM**	**3 hr**	**0.36 in**	**Rain throughout the city starting around 3:30 AM. All zones received between 0.2 - 0.36 inches. Generally considered non-qualifying due to event falling outside of normal operating hours. However, samples were collected for Zone 4 (samples collected before 7 AM).**
11/6/2019	**10:00 AM**	**2 hr**	**0.24 in**	**Rain throughout the city starting around 10 AM. All zones received between 0.15-0.2 inches. Qualifying event, samples were collected in all zones.**
11/20/2019	**5:00 AM**	**1.5 hr**	**0.28 in**	**Rain throughout the city starting around 5 AM. All zones received between 0.15 - 0.35 inches. Storm event occurred before operating hours, however some samples were able to be collected prior to operating hours.**
11/21/2019	7:00 AM	5 hr	0.68 in	Rain throughout the city starting around 7 AM. All zones received between 0.5 - 0.75 inches. Storm event occurred within 72 hrs of the previous storm event, therefore, samples were not collected.
11/27/2019	7:00 PM	8 hr	0.25 in	Rain/snow throughout the city starting around 7 PM. All zones received between 0.1-0.7 inches. Storm event occurred outside of operating hours. Samples were not collected.
11/28/2019	6:00 AM	6 hr	0.31 in	Rain/snow throughout the city starting around 6 AM. All zones received between 0.2-0.3 inches. Storm event occurred within 72 hrs of the previous storm event, also occurred outside of operating hours. Samples were not collected.
11/29/2019	12:00 PM	2 hr	0.18 in	Rain throughout the city starting around 12 PM. All zones received between 0.15-0.3 inches. Storm event occurred within 72 hrs of the previous storm event, also occurred outside of operating hours. Samples were not collected.
12/8/2019	4:00 AM	2 hr	0.06 in	Light rain starting at 4 AM. All zones received between 0.03-0.06 in. Storm event occurred outside of operating hours; therefore, samples were not collected.
12/24/2019	3:30 PM	4 hr	0.17 in	Rain throughout the city. All zones received between 0.15 and 0.25 inches. Storm event occurred on a holiday; therefore, samples were not collected.

Note: Shaded rows indicate a non-qualifying event. Events in bold text indicate qualifying events. Stars indicate a weekend event. Any events with a total accumulation of 0.00" or T (Trace) were not included in this table. Storm Duration is based on hourly weather data. All weather data was sourced from Weather Underground

Certain criteria regarding the precipitation event must be met to qualify as an assessment event. Visual assessment of stormwater must occur:

- Within 30 minutes of the start of stormwater discharge (or as soon as practicable thereafter); and,
- At least 72 hours after the previous stormwater discharge event.

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An additional limitation on the timing of sampling activities within the CABQ is described in the City's Storm Water Management Plan (SWMP, December 2016). Section 13.3.1.2 of the SWMP limits sampling to normal business hours – Monday through Friday, 7:30 am to 5:00 pm and sampling is not required on the following observed holidays: Thanksgiving Day and Christmas Day through New Year's Day. Therefore, storm events that occur outside of normal business hours or on a holiday are not considered qualifying events.

As seen in **Table 2**, of the 9 precipitation events with measurable precipitation that occurred in the Fourth Quarter of 2019, three events (10/4/19, 11/6/19, and 11/20/19) were considered qualifying per the criteria listed above. Furthermore, based on CDM Smith's past visual monitoring experience for CABQ facilities, stormwater discharges from facilities typically does not occur for precipitation events of less than 0.1 inches of measurable rainfall. There were five events in the fourth quarter with precipitation greater than 0.1 inch of measurable rainfall that did not meet all the qualifying criteria for an assessment to take place.

CDM Smith's subcontractor, Bohannan Houston, Inc. (BHI) mobilized to all Zones on 10/4/19, 11/6/19, and 11/20/19 collectively to perform visual stormwater monitoring inspections at facility outfalls during precipitation events. As identified in **Table 3**, which summarizes Calendar Year 2019 visual stormwater monitoring, 17 of the 21 outfalls were monitored during the Fourth Quarter of 2019.

Table 3 - Calendar Year 2019 Visual Stormwater Monitoring

Zone	Facility	Outfalls	Quarter 1[1]	Quarter 2	Quarter 3	Quarter 4	Events Remaining[2]
1	Los Altos Golf Course	LA1	✓	✓	-	✓✓	0
		LA2	✓	✓	-	✓✓	0
	Lomas Fuel Station	L1	✓	✓	-	✓✓	0
	Arroyo Street Maintenance	AM1	✓	✓	-	✓✓	0
	Street Satellite #1	SS1A	-	✓	-	✓	2
		SS1B	✓	✓	-	✓✓	0
	Los Altos Trails Parks Management	LAM1	✓	✓	-	✓✓	0
	Los Altos Parks Management	LAP1	-	-	-	-	4
2	Daytona Transit Center	D1	-	✓✓	-	✓	1
		D2	✓	✓	-	✓✓	0
	Ladera Golf Course	LGC1	-	-	-	-	4
		LGC2	-	-	-	✓	3
	Streets Satellite #3	SS3	-	✓✓	-	✓✓	0
	Don Reservoir Convenience Center	DR01	-	✓✓	-	✓	1

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Table 3 - Calendar Year 2019 Visual Stormwater Monitoring

Zone	Facility	Outfalls	Quarter 1[1]	Quarter 2	Quarter 3	Quarter 4	Events Remaining[2]
3	Puerto del Sol Golf Course	PDS1	-	✓	✓	-	2
		PDS2	-	✓✓	-	✓	1
	Yale Transit Center	Y1	✓	✓	✓	✓	0
4	Montessa Park Open Space	MP1	✓	✓	-	✓✓	0
		MP2	-	✓	-	-	3
	Montessa Park Convenience Center	MP01	✓	✓	-	✓✓	0
		MP02	-	✓	-	✓✓	1

Notes:
1. A "✓" indicates that a visual monitoring event was performed for the indicated outfall during the calendar quarter, "✓✓" indicates two visual monitoring events were performed during the quarter.
2. This column indicates the number of events remaining for Calendar Year 2019.

Visual Monitoring observations for each of the seventeen outfalls observed during events on October 4, November 6, and November 20, 2019 are summarized below. Photographs of the visual monitoring samples are included in **Attachment D**.

- **Outfall LA1** (Los Altos Golf Course) is a concrete culvert discharging into riprap and vegetation before entering the storm drain channel. **11/6/19**: The outfall had significant runoff with a rotten odor and floatable debris. The collected sample was significantly polluted and described as dark grey, opaque, and contained solids, sheen, odor, and foam. Homeless camps were observed within 8 feet of the site which limited the amount of data collected and may be contributing to stormwater pollution. **11/20/19**: The outfall was observed under steady flow conditions. The collected sample was slightly cloudy with a yellow color. Floating and suspended solids were present in the sample. A sheen, sulfurous odor, and foam were observed. Since the previous inspection, vegetation from nearby has been cut and placed over the outfall grate. Homeless camps were still present within 8 feet of the site.
- **Outfall LA2** (Los Altos Golf Course) collects runoff from the Los Altos Golf Course fueling, maintenance, and storage areas before discharging through the lowest ground elevation on the west of the facility premises. **11/6/19**: The outfall was observed with approximately 0.5-in deep ponding. The collected sample was clear with a slight tan color and contained suspended solids. No sheen, odor, or foam was present. **11/20/19**: The outfall was observed under low flow conditions. The collected sample was clear with some suspended solids present. A sheen was visible at the water pooled in the outfall, but not in the grab sample.
- **Outfall L1** (Lomas Fuel Station) collects runoff from the CABQ fueling station, before discharging through the lowest ground elevation on the northwest of the facility premises. **11/6/19**: The outfall was observed with minimal ponding and low flow. The collected sample was clear with a grey hue and contained suspended solids. No sheen, odor, or foam

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was present. **11/20/19**: The outfall was observed under low flow conditions. The sample was taken out of a small pool of standing water. The collected sample was cloudy and grey in color. Suspended and settled solids were present in the sample.

- **Outfall AM1** (Arroyo Maintenance) is a culvert draining from the parking lot, located on the northwest corner of the facility, discharging to Altez Street. The outfall is surrounded by a wattle on the inside of the facility fence. **11/6/19**: The outfall had a steady flow approximately 1-in deep. The collected sample was very cloudy with a dark red color (stockpiles of red soil observed onsite). Floating, suspended, and settled solids were present in the sample. No sheen, odor, or foam was present. The outfall had signs of erosion occurring upstream that were transporting sediment to the street. **11/20/19**: The outfall was observed under low flow conditions with flow approximately 0.5-in deep. The collected sample was slightly cloudy and light brown in color. No solids, sheen, odors, or foam were present in the sample.
- **SS1A** (Street Satellite #1 A) is a wattle around a 4ft x 4ft gate that drains a parking lot. **11/6/19**: The outfall was observed under low flow conditions. The observed flow was ponding approximately 0.25-in deep at the wattle. The collected sample was slightly cloudy with a light grey color. Floating, suspended, and settled solids were present. A sheen was observed in the sample but was not accompanied by an odor. Many parked cars in at facility; may be contributing to sheen observed. No foam was present. **11/20/19**: No flow was observed during this sampling event.
- **SS1B** (Street Satellite #1 B) is a wattle around a 4ft x 4ft gate near a covered structure that drains a parking lot. **11/6/19**: The observed flow was ponding approximately 1-in deep at the wattle. The collected sample was very cloudy and dark grey in color. Suspended and floating solids were present. No sheen or odor were found, but foam was present at the outfall. **11/20/19**: The outfall was sampled under low flow conditions. Standing water approximately 0.5-in deep was observed at the outfall. Sediment and debris were observed outside of the wattle. The collected sample was very cloudy and tan in color. Suspended and settled solids were present in the sample. No sheen, odor, or foam was present.
- **Outfall LAM1** (Los Altos Trails Parks Management) is a storm drain which collects runoff from the facility parking lot area before discharging to the arroyo and storm drain channel on the northeast corner of the facility premises. **11/6/19**: The outfall was observed under low flow conditions with flow at a depth of approximately 0.1-in. The collected sample was slightly cloudy and light gray in color. Floating and suspended solids were present in the sample. No sheen, odor, or foam was present. **11/20/19**: The outfall was observed under low flow conditions. The collected sample was slightly cloudy with a light tan color. Some suspended solids were present. No sheen, odor, or foam was present.
- **Outfall D1** (Daytona Westside) is a storm drain manhole which collects runoff from the employee parking area. **11/6/19**: The outfall was inspected under low flow condition with

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flow at a depth of approximately 0.1-in. The collected sample was slightly cloudy and yellow in color. Only floating solids were present. **11/20/19**: No flow was observed during this sampling event.

- **Outfall D2** (Daytona Westside) is a storm drain manhole which collects runoff from the bus parking lot and maintenance building areas. **11/6/19**: The sample was collected at the concrete gutter near D2 because no flow was observed in D2. The site was observed at low flow conditions with flow at a depth of approximately 0.5-in. The collected sample was slightly cloudy with a yellow color. Only floating solids were present. **11/20/19**: The outfall was observed under low flow conditions. The collected sample was slightly cloudy and white in color. Some suspended solids were present.
- **Outfall LGC1** (Ladera Golf Course) is a concrete riser on the north end of the golf course that drains a stormwater detention pond. *No flow was observed during the monitoring events.*
- **Outfall LCG2** (Ladera Golf Course) is a runoff point before stormwater from the parking area enters the golf course pond. **11/6/19**: The outfall was observed under low flow conditions with flow at a depth of approximately 0.5-in. The collected sample was clear, but it was coming directly from the building drainage. An additional sample was taken at on the east side of the building. Flow was low with a depth of approximately 1-in. The collected sample was slightly cloudy and tan in color. Floating solids and a sheen were present. **11/20/19**: No flow observed during this sampling event.
- **SS3** (Streets Satellite #3) is a concrete spill way that discharges into a stormwater detention pond. **11/6/19**: The outfall was observed under low flow conditions with flow at a depth of approximately 1-in. The collected sample was slightly cloudy with a tan color. Floating solids and a sheen were present. There were vehicles and equipment parked in the site vicinity. **11/20/19**: No flow observed during this sampling event; ponded water was sampled. Sample was yellowish/tan in color and slightly cloudy with some settled solids (soil). A truck parked next to run-down appeared to be dripping fluid onto asphalt, however no sheen was observed in ponded water
- **Outfall DR01** (Don Reservoir Convenience Center) is an inlet on the east side of the property that drains the vehicle storage area and all solid and hazardous municipal waste collection/storage areas. **11/6/19**: The outfall was observed under low flow conditions with flow at a depth of approximately 0.5-in. The collected sample was very cloudy and brown in color. Floating and settled solids were present in the sample. A sheen was also observed. Leaves and debris were observed around the outfall. **11/20/19**: No flow observed during this sampling event.
- **Outfall Y1** (Yale Transit Center) is a grate leading to a storm drain which collects runoff from the bus parking lot and maintenance building areas. **11/6/19**: The outfall was observed under low flow conditions with flow at a depth of 1-in. The collected sample was very cloudy

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and brown in color. Solids, sheen, odor, and foam were all present in the sample. The outfall had an odor of cleaning products.

- **PDS1** (Puerto del Sol Golf Course) is a grated inlet that drains the north-east corner of the golf course. *Flow was not observed during the sampling events.*
- **PDS2** (Puerto del Sol Golf Course) is a grated inlet that drains the east end of the golf course and the parking area. **11/6/19**: The outfall was observed under low flow conditions with flow at a depth of approximately 1-in. Ponding was observed with foam at the site. The collected sample was opaque and brown in color. Suspended and settled solids were both present in the sample.
- **Outfall MP1** (Montessa Park Open Space) is a metal culvert collecting runoff from the facility parking lot and warehouse areas before discharging to the Tijeras Arroyo located on the northeast of the facility premises. **10/4/19**: The outfall was observed under low flow conditions with flow at a depth of approximately 0.25-in. The collected sample was clear with no solids present. **11/6/19**: The outfall was observed under moderate flow conditions. The collected sample was slightly cloudy with a yellow tint. Floating, suspended, and settled solids were present. Foam was observed in the Arroyo.
- **Outfall MP2** (Montessa Park Open Space) is a metal pipe/concrete culvert collecting runoff from the entire facility before discharging into the Tijeras Arroyo. A grab sample was not taken this quarter due to access issues (the culvert hangs in midair over the arroyo), but the water could be seen exiting the outfall from approximately 10-ft away. **10/4/19**: The outfall was observed under low flow conditions. However, the outfall could not be sampled due to unsafe conditions: (1) damage to culvert (hanging in mid-air 10-feet above arroyo) and (2) the Tijeras Arroyo was flowing. From a distance of 10-feet, the flow appeared clear with no solids, odors, foam, or sheen present. **11/6/19**: The outfall was observed under low flow conditions. A sample could not be taken due to unsafe conditions. From a distance, the flow appeared slightly cloudy with some floating solids. Foam was observed in the culvert.
- **Outfall MP01** (Montessa Park Convenience Center) is a lowest-elevation point on the premises which collects runoff from the waste transfer and storage areas before discharging to Los Picaros Road. **10/4/19**: The outfall was observed under low flow conditions. The collected sample was clear with no solids, sheen, odor, or foam present. **11/6/19**: The outfall was observed under moderate flow conditions. The collected sample was cloudy and grey in color. Floating, suspended, and settled solids were present in the sample. An acrid odor was observed, like the smell of tires. Black particles were also observed in the sample.
- **Outfall MP02** (Montessa Park Convenience Center) is a gutter leading into a trench drain that collects runoff from the MSW receiving areas and the tipping flow before discharging to Los Picaros Road. **10/4/19**: The outfall was sampled under low flow conditions in which flow was approximately 0.25-in deep. The collected sample was clear with no solids present. No

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sheen, odor, or foam was present. **11/6/19**: The outfall was observed under moderate flow conditions. The collected sample was opaque and yellow brown in color. Floating, suspended, and settled solids were present in the sample. An acrid odor was observed, like the smell of tires. Black particles were also observed in the sample.

CDM Smith appreciates the opportunity of providing environmental consulting services to the CABQ. Please contact CDM Smith at (505) 243-3200 if you have any questions or comments regarding this report.

Sincerely,

Kelsey Bicknell
Project Engineer
CDM Smith Inc.

Dacia Tucholke
Project Manager
CDM Smith Inc.

Attachments:

A – Monthly Precipitation Summary for Fourth Quarter 2019 (Weather Underground, October 1, 2019 to December 31, 2019)
B – Daily Weather Reports for Precipitation Events Occurring in Fourth Quarter 2019 (Weather Underground)
C – Visual Stormwater Monitoring Inspection Forms
D – Stormwater Monitoring Sampling Photographs

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ATTACHMENT A

MONTHLY PRECIPITATION SUMMARY FOR FOURTH QUARTER 2019 (WEATHER UNDERGROUND, OCTOBER 1, 2019 TO DECEMBER 31, 2019)

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Temperature (° F)	Max	Average	Min
Wind	29	8.52	0
Gust Wind	40	3.4	0
Sea Level Pressure	Max	Average	Min
Sea Level Pressure	25.01	24.72	24.37

Daily Observations

OCTOBER 2019 (Albuquerque International Sunport)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Oct	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	76	71.3	66	59	49.5	36	75	49.5	26	25	15.5	9	24.6	24.6	24.6	0.00
2	79	68.3	56	38	31.1	24	47	27.0	13	18	5.8	0	24.8	24.7	24.7	0.00
3	78	64.7	53	52	35.5	21	78	36.8	17	24	11.6	0	24.8	24.8	24.7	0.00
4	66	60.0	55	59	55.5	51	96	85.4	65	18	7.0	0	24.8	24.8	24.7	0.36
5	77	62.2	53	57	49.1	35	97	68.8	22	9	5.3	0	24.9	24.8	24.7	0.22
6	77	62.4	51	44	33.3	14	69	39.8	10	26	7.9	0	24.9	24.8	24.8	0.00
7	71	60.3	51	44	40.0	36	61	47.9	35	25	9.3	0	25.0	24.9	24.8	0.00
8	72	62.1	53	48	45.4	42	75	55.7	38	13	6.7	0	24.8	24.7	24.6	0.00
9	78	64.7	51	51	35.0	19	89	44.0	11	18	9.0	3	24.6	24.6	24.5	0.00
10	73	59.6	46	34	18.7	-9	50	23.7	8	25	14.0	0	24.8	24.6	24.5	0.00
11	60	46.9	36	10	1.1	-3	29	16.0	9	12	6.5	0	24.9	24.9	24.8	0.00
12	67	51.2	36	33	20.7	9	47	31.0	22	9	5.2	0	24.8	24.7	24.7	0.00
13	72	58.0	46	33	29.0	24	61	37.2	17	9	4.2	0	24.8	24.7	24.7	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
14	75	61.6	47	35	30.8	25	59	34.5	17	12	4.6	0	24.8	24.7	24.6	0.00
15	75	61.4	50	31	20.2	9	44	23.2	8	14	5.7	0	24.9	24.8	24.7	0.00
16	73	58.8	47	25	20.5	15	39	24.5	11	17	6.7	0	24.9	24.8	24.8	0.00
17	72	59.6	48	39	28.2	19	43	31.6	18	16	6.2	0	24.8	24.6	24.5	0.00
18	71	60.3	51	40	31.5	18	66	36.5	15	23	12.3	0	24.6	24.5	24.5	0.00
19	66	54.1	38	24	15.1	8	43	23.3	11	13	6.4	0	24.7	24.6	24.5	0.00
20	61	53.6	42	27	14.6	-4	38	22.7	10	26	14.3	6	24.7	24.6	24.5	0.00
21	61	49.1	36	13	8.0	3	29	19.8	12	26	9.4	3	24.9	24.7	24.7	0.00
22	65	53.1	40	26	19.0	13	37	26.8	19	9	4.5	0	24.9	24.8	24.8	0.00
23	69	56.3	42	27	21.0	11	51	28.4	12	14	5.5	0	24.8	24.7	24.6	0.00
24	53	46.0	38	25	21.2	14	57	38.4	27	29	16.0	3	24.9	24.8	24.7	0.00
25	58	42.0	29	24	19.3	14	75	44.7	19	9	3.9	0	25.0	24.9	24.8	0.00
26	66	50.2	33	21	17.2	12	52	29.1	17	16	5.7	0	24.8	24.6	24.5	0.00
27	74	56.9	40	26	15.8	12	38	22.2	11	26	14.4	7	24.6	24.5	24.4	0.00
28	50	45.0	36	35	24.0	15	62	45.0	26	21	13.0	3	24.7	24.6	24.5	0.00
29	67	46.3	26	17	11.6	-1	58	30.6	11	21	8.3	0	24.6	24.5	24.4	0.01
30	49	35.6	28	20	0.8	-9	61	25.6	14	20	13.4	7	25.0	24.8	24.6	0.00
31	49	34.6	23	-3	-6.2	-8	31	18.8	9	15	5.7	0	25.0	24.9	24.9	0.00

Note:
This document indicates that 0.22 in of rain fell on October 5th. It is unclear what this value refers to given that there was no rainfall on that day. See the daily weather documentation and the Quarterly Precipitation Events spreadsheet for accurate dates.

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Temperature (° F)	Max	Average	Min
Wind	39	7.22	0
Gust Wind	55	2.58	0

Sea Level Pressure	Max	Average	Min
Sea Level Pressure	25.02	24.74	24.23

Daily Observations NOVEMBER 2019 (Albuquerque International Sunport)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Nov	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	60	42.8	27	14	-3.6	-10	30	16.5	6	20	3.9	0	24.9	24.9	24.8	0.00
2	56	43.1	31	20	14.7	9	61	34.7	16	12	4.8	0	25.0	24.9	24.9	0.00
3	62	46.3	33	15	11.0	7	46	26.1	13	8	4.2	0	24.8	24.8	24.7	0.00
4	68	51.7	36	15	10.6	7	37	21.2	10	9	3.4	0	24.8	24.7	24.7	0.00
5	70	53.1	36	20	14.2	7	34	22.2	14	10	4.3	0	24.9	24.8	24.8	0.00
6	49	45.5	43	45	33.1	14	100	69.4	27	17	7.3	0	24.9	24.8	24.8	0.00
7	91	45.6	41	61	40.1	36	100	83.3	36	24	10.2	0	25.0	24.9	24.8	0.24
8	58	43.9	36	39	35.4	33	89	73.8	42	10	5.0	0	25.0	24.9	24.9	0.00
9	61	47.6	36	34	25.7	21	76	46.0	22	10	4.2	0	24.9	24.9	24.8	0.00
10	66	51.1	38	30	26.0	22	60	40.2	19	7	2.6	0	24.8	24.7	24.7	0.00
11	53	41.2	32	29	22.8	15	57	48.8	35	39	17.3	0	25.0	24.8	24.7	0.00
12	47	35.0	23	25	18.8	14	68	53.0	36	10	5.6	0	25.0	24.9	24.8	0.00
13	60	43.5	29	26	20.7	13	75	45.4	20	15	4.4	0	24.8	24.7	24.6	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
14	59	47.8	36	23	18.3	14	46	32.3	20	16	6.2	0	24.9	24.9	24.8	0.00
15	56	45.1	34	25	23.5	21	64	43.9	28	8	3.8	0	24.9	24.9	24.8	0.00
16	59	45.6	36	25	24.3	23	62	44.6	27	9	2.7	0	24.8	24.8	24.7	0.00
17	61	48.0	32	22	19.0	17	59	33.9	18	9	4.1	0	24.9	24.8	24.7	0.00
18	68	51.8	35	25	21.0	16	46	31.7	19	13	5.8	0	24.8	24.7	24.7	0.00
19	66	51.4	37	37	24.2	23	57	37.2	20	12	4.8	0	24.7	24.6	24.5	0.00
20	59	51.9	48	49	45.0	41	96	78.3	53	20	11.8	3	24.6	24.5	24.4	0.05
21	49	40.5	34	43	37.0	32	96	87.9	74	21	10.3	0	24.7	24.6	24.5	0.28
22	48	37.2	33	35	32.7	28	100	85.8	48	13	4.7	0	24.8	24.7	24.7	0.68
23	52	42.1	34	31	28.7	27	82	60.7	41	10	5.1	0	24.9	24.8	24.8	0.00
24	53	41.2	32	31	26.1	19	79	57.1	33	12	5.5	0	24.8	24.8	24.7	0.00
25	54	42.7	28	31	24.0	18	72	49.5	30	23	10.8	0	24.6	24.4	24.2	0.00
26	45	34.2	27	31	14.0	6	76	45.5	28	37	18.4	0	24.7	24.4	24.3	0.00
27	41	30.7	22	27	19.4	12	93	65.6	35	28	14.5	0	24.7	24.6	24.6	0.00
28	34	30.4	28	31	26.7	22	93	86.3	72	21	11.6	0	24.7	24.6	24.6	0.25
29	48	35.9	31	41	32.6	22	100	88.2	66	37	7.3	0	24.6	24.5	24.3	0.31
30	39	32.8	28	22	16.3	11	72	52.5	33	22	12.0	3	24.8	24.7	24.6	0.18

Note:
The November monthly records shown in this document are off by one day (and thus do not match the daily weather documentation). All of the precipitation values are correct, but shifted forward by one day.
For example, this document indicates that 0.28 in of rain fell on November 21st. This storm event actually occurred on November 20th. See the daily weather documentation and the Quarterly Precipitation Events spreadsheet for accurate dates.

Temperature (° F)	Max	Average	Min
Wind	28	6.22	0
Gust Wind	36	1.35	0

Sea Level Pressure	Max	Average	Min
Sea Level Pressure	25.03	24.74	24.37

Daily Observations DECEMBER 2019 (Albuquerque International Sunport)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Dec	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	42	33.1	24	23	19.0	15	71	56.8	41	13	4.1	0	24.9	24.9	24.8	0.00
2	49	36.8	29	26	22.4	19	72	57.9	32	9	3.8	0	24.9	24.9	24.8	0.00
3	57	42.6	30	31	27.5	23	75	57.2	33	10	3.0	0	24.9	24.8	24.8	0.00
4	52	45.1	40	39	34.8	30	82	67.5	54	8	4.2	0	24.8	24.7	24.7	0.00
5	56	46.1	33	39	33.4	28	89	64.0	37	22	10.5	3	24.9	24.7	24.7	0.01
6	50	39.5	32	30	28.3	27	82	65.9	41	12	3.0	0	25.0	24.9	24.9	0.00
7	52	41.6	31	34	30.5	27	85	66.2	45	9	2.9	0	24.9	24.8	24.8	0.00
8	50	45.9	41	43	38.4	35	93	76.3	59	17	8.1	0	24.7	24.6	24.6	0.06
9	49	44.1	37	35	30.5	26	73	59.3	42	12	5.4	0	24.7	24.6	24.6	0.03
10	48	37.7	26	26	23.7	21	85	59.6	36	9	2.8	0	24.9	24.8	24.7	0.00
11	44	35.8	29	34	27.0	21	85	70.8	57	8	3.3	0	24.9	24.9	24.8	0.00
12	51	36.6	28	34	25.6	20	100	70.2	29	13	2.3	0	24.9	24.8	24.8	0.00
13	58	43.8	31	30	26.3	24	79	52.8	28	22	7.9	0	24.8	24.7	24.6	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
14	60	47.3	33	34	30.1	25	75	53.3	31	24	10.0	0	24.6	24.5	24.4	0.00
15	58	45.3	37	33	25.1	16	76	49.0	19	24	11.2	3	24.6	24.5	24.4	0.00
16	38	31.7	26	18	10.5	5	56	42.6	25	23	11.0	0	24.9	24.8	24.6	0.00
17	38	28.5	20	13	9.0	2	68	46.5	22	13	7.0	0	25.0	25.0	24.9	0.00
18	41	28.1	19	9	5.4	2	62	40.1	22	12	4.5	0	25.0	24.9	24.8	0.00
19	40	28.8	21	12	9.4	6	60	46.0	27	10	4.2	0	24.8	24.7	24.7	0.00
20	46	33.8	24	14	11.9	8	58	42.2	24	10	5.0	0	25.0	24.9	24.8	0.00
21	50	34.5	23	16	14.2	12	65	45.8	25	8	3.5	0	25.0	24.9	24.9	0.00
22	48	35.6	24	19	16.5	14	69	47.9	28	10	4.5	0	24.9	24.9	24.8	0.00
23	42	33.3	26	18	15.9	14	66	50.0	34	8	2.9	0	24.8	24.7	24.7	0.00
24	46	37.0	32	36	26.6	15	100	69.7	35	15	5.7	0	24.7	24.6	24.5	0.00
25	46	38.0	35	36	32.4	26	100	82.5	46	12	6.8	0	24.6	24.6	24.5	0.17
26	47	38.6	29	30	28.0	26	92	67.8	44	12	5.4	0	24.7	24.7	24.6	0.00
27	51	41.8	29	34	31.4	25	88	67.7	48	28	16.3	5	24.6	24.5	24.4	0.00
28	40	32.7	28	30	25.2	17	100	75.7	45	16	8.8	0	24.5	24.4	24.4	0.00
29	32	26.3	22	16	10.6	7	66	52.4	38	21	12.3	6	24.7	24.6	24.5	0.03
30	23	19.9	16	10	8.9	8	74	62.8	55	9	6.0	3	24.8	24.8	24.7	0.00

Note:
This document indicates that 0.17 in of rain fell on December 25th. This storm event actually occurred on December 24th. See the daily weather documentation and the Quarterly Precipitation Events spreadsheet for accurate dates. Additionally, there

(http://gundrymd.com/cmd.php?ad=924275&utm_source=taboola&utm_medium=referral)

ATTACHMENT B

DAILY WEATHER REPORTS FOR PRECIPITATION EVENTS OCCURRING IN FOURTH QUARTER 2019 (WEATHER UNDERGROUND)

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35.05 °N, **106.61** °W

Albuquerque International Sunport, NM ★

65° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-10-4?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-10-4)

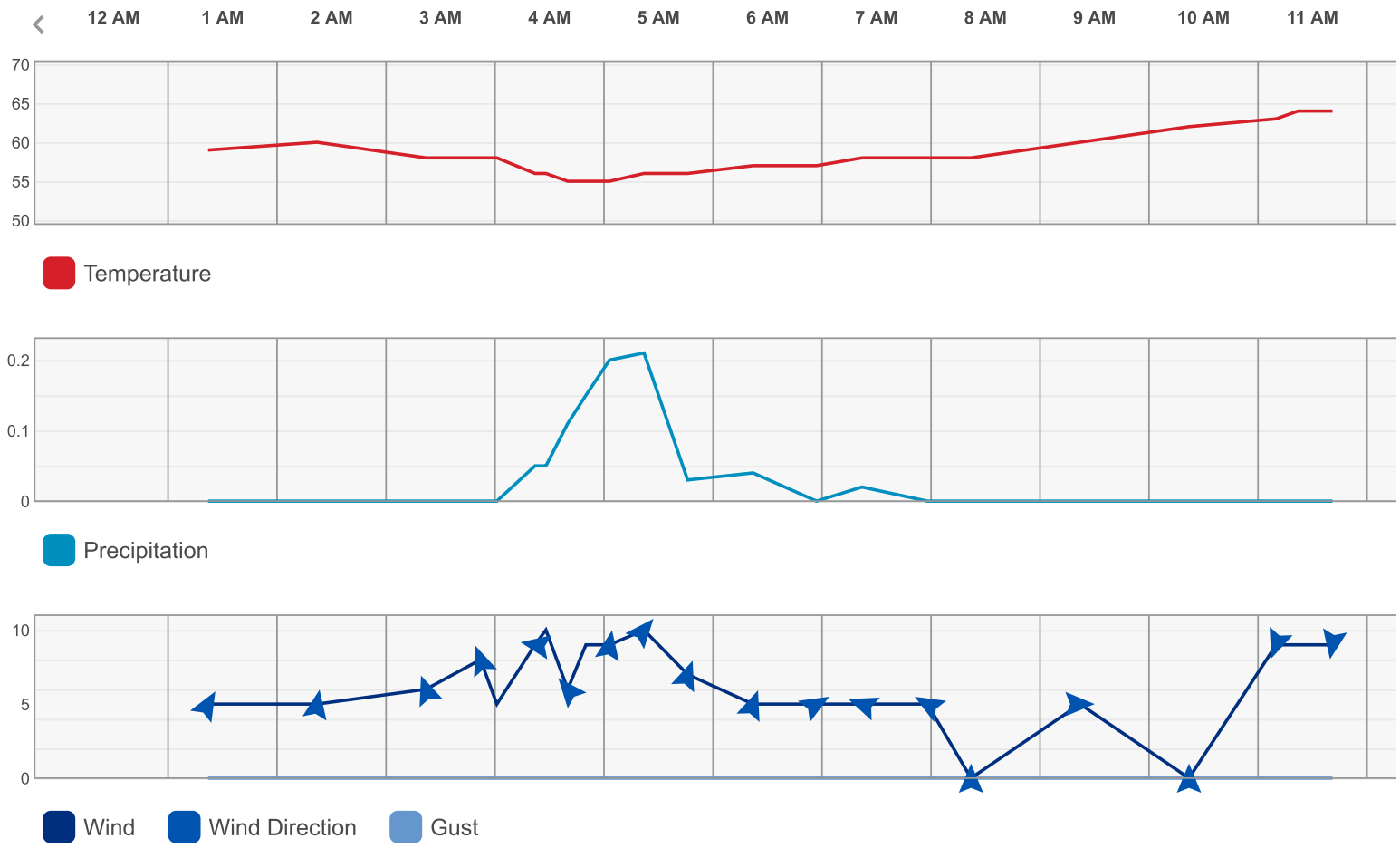
- TODAY (/WEATHER/US/NM/ALBUQUERQUE-INTERNATIONAL-SUNPORT/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE-INTERNATIONAL-SUNPORT/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE-INTERNATIONAL-SUNPORT/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ/DATE/2019-10)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ/DATE/2019-10-4)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily | Weekly | Monthly

October | 4 | 2019 | View

OCTOBER 4, 2019

Rainfall occurred outside of operating hours. Samples were not collected.



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	64	74	87
Low Temp	55	51	32
Day Average Temp	58.32	62	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.36	0.04	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	54.36	-	-
High	58	-	-
Low	51	-	-
Average	54.36	-	-
Wind (MPH)	Actual	Historic Avg.	Record

Temperature (° F)	Actual	Historic Avg.	Record
Max Wind Speed	10	-	-
Visibility	10	-	-

Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.82	-	-

Astronomy	Day Length	Rise	Set
Actual Time	11h 43m	7:04 AM	6:48 PM
Civil Twilight		6:39 AM	7:13 PM
Nautical Twilight		6:09 AM	7:42 PM
Astronomical Twilight		5:40 AM	8:12 PM
Moon: waxing crescent		1:26 PM	11:30 PM

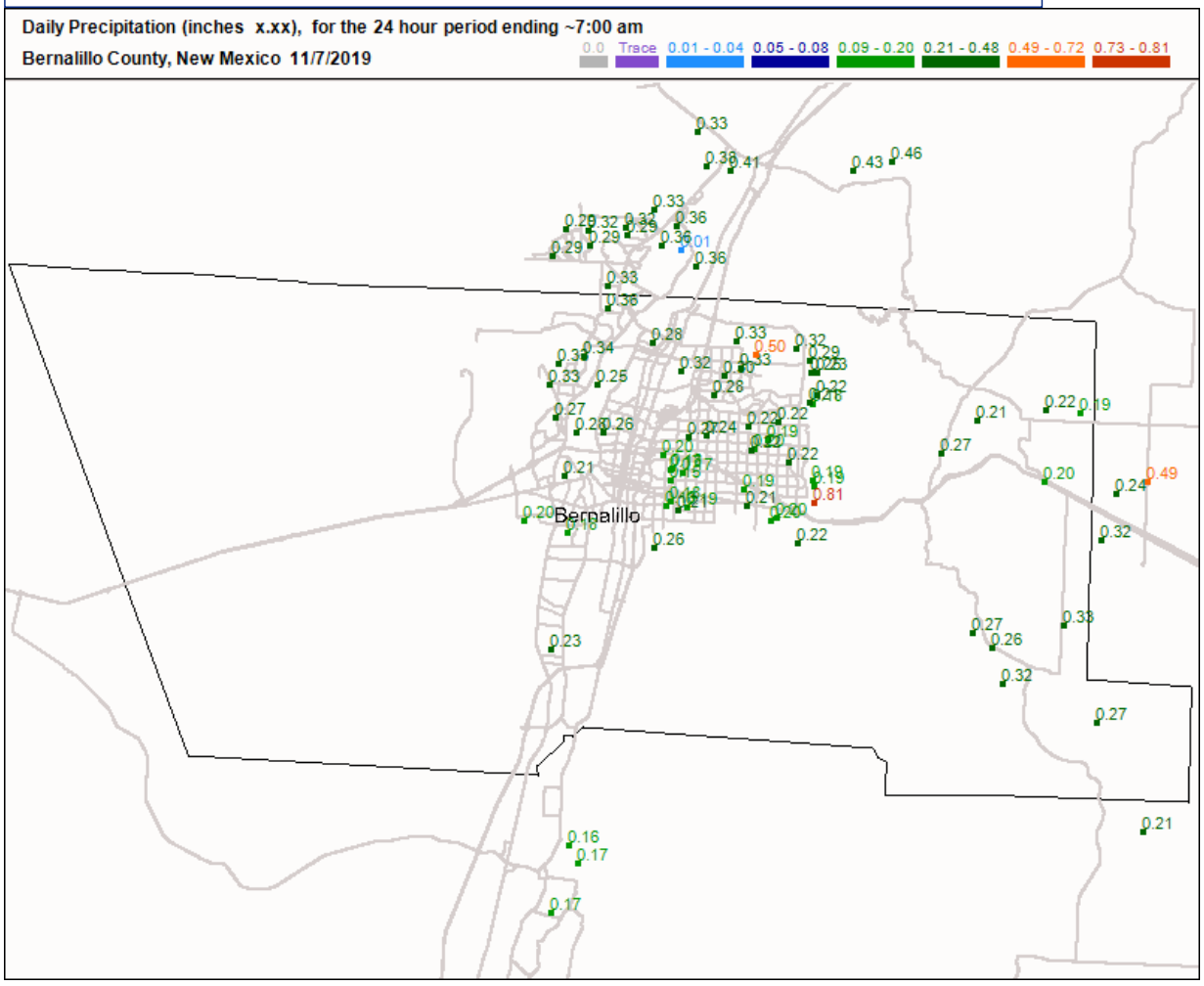
Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	59 ° F	52 ° F	78 %	NNE	5 mph	0 mph	24.82 in	0.0 in	Cloudy
1:52 AM	60 ° F	52 ° F	75 %	N	5 mph	0 mph	24.81 in	0.0 in	Cloudy
2:52 AM	58 ° F	52 ° F	81 %	NNW	6 mph	0 mph	24.80 in	0.0 in	Cloudy
3:22 AM	58 ° F	51 ° F	78 %	NNW	8 mph	0 mph	24.80 in	0.0 in	Thunder in the Vicinity
3:31 AM	58 ° F	51 ° F	78 %	N	5 mph	0 mph	24.80 in	0.0 in	Thunder
3:52 AM	56 ° F	53 ° F	90 %	W	9 mph	0 mph	24.80 in	0.1 in	Heavy T-Storm
3:58 AM	56 ° F	53 ° F	90 %	W	10 mph	0 mph	24.81 in	0.1 in	Heavy T-Storm
4:10 AM	55 ° F	54 ° F	96 %	NW	6 mph	0 mph	24.81 in	0.1 in	Heavy T-Storm
4:20 AM	55 ° F	53 ° F	93 %	NNW	9 mph	0 mph	24.81 in	0.1 in	T-Storm
4:33 AM	55 ° F	54 ° F	96 %	N	9 mph	0 mph	24.81 in	0.2 in	Light Rain
4:52 AM	56 ° F	54 ° F	93 %	NE	10 mph	0 mph	24.80 in	0.2 in	Light Rain
5:16 AM	56 ° F	54 ° F	93 %	NNE	7 mph	0 mph	24.81 in	0.0 in	Light Rain
5:52 AM	57 ° F	55 ° F	93 %	NNE	5 mph	0 mph	24.80 in	0.0 in	Cloudy
6:27 AM	57 ° F	55 ° F	93 %	ENE	5 mph	0 mph	24.80 in	0.0 in	Light Rain
6:52 AM	58 ° F	55 ° F	90 %	WNW	5 mph	0 mph	24.81 in	0.0 in	Light Rain
7:28 AM	58 ° F	56 ° F	93 %	WNW	5 mph	0 mph	24.82 in	0.0 in	Cloudy
7:52 AM	58 ° F	56 ° F	93 %	CALM	0 mph	0 mph	24.81 in	0.0 in	Cloudy
8:52 AM	60 ° F	57 ° F	90 %	E	5 mph	0 mph	24.82 in	0.0 in	Cloudy
9:52 AM	62 ° F	57 ° F	84 %	CALM	0 mph	0 mph	24.82 in	0.0 in	Cloudy
10:40 AM	63 ° F	57 ° F	81 %	SSW	9 mph	0 mph	24.82 in	0.0 in	Mostly Cloudy
10:52 AM	64 ° F	58 ° F	80 %	SSW	9 mph	0 mph	24.81 in	0.0 in	Mostly Cloudy
11:11 AM	64 ° F	57 ° F	78 %	S	9 mph	0 mph	24.81 in	0.0 in	Cloudy

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	11/7/2019	Standard	Get Map



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NOVEMBER 6, 2019

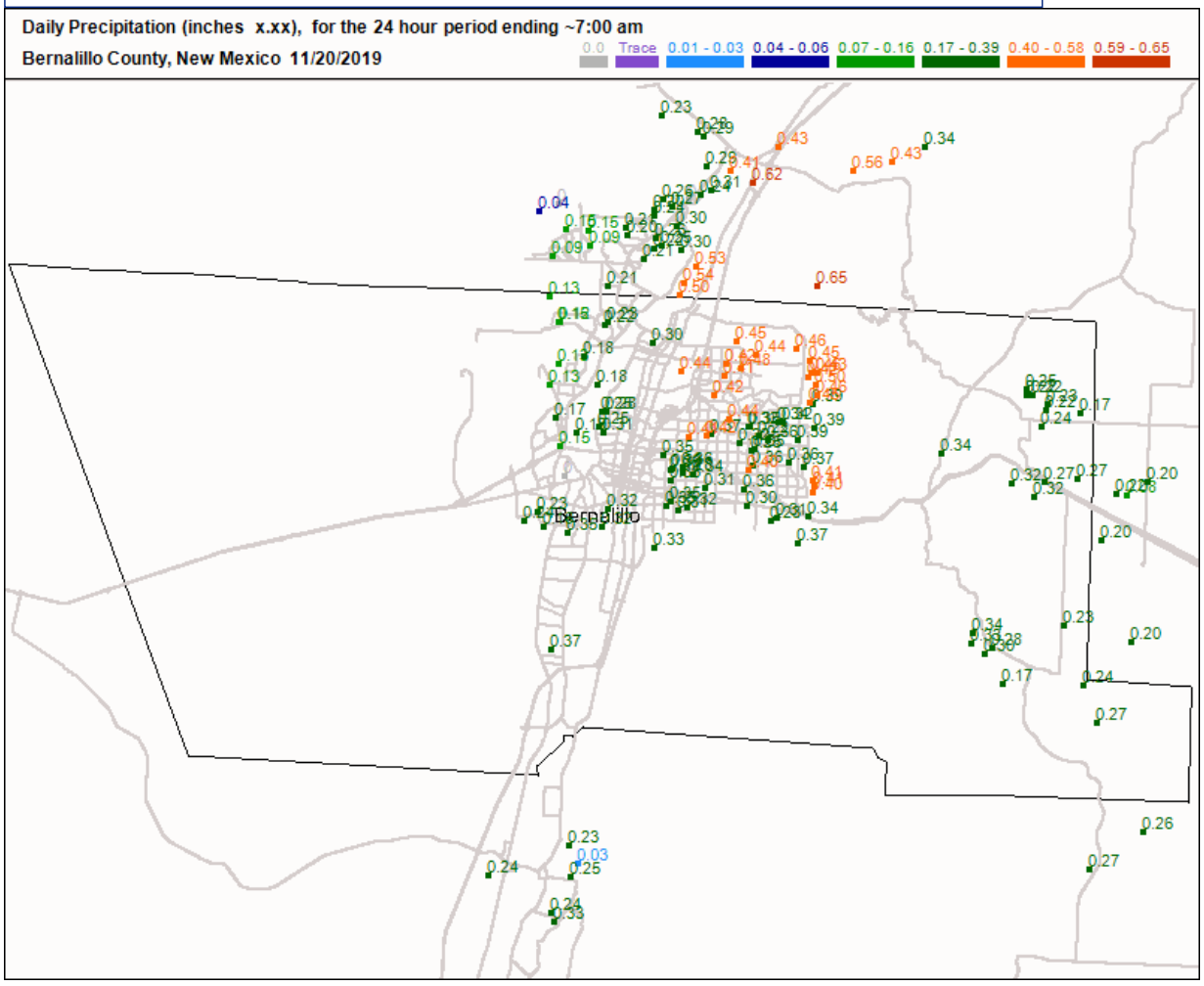
Samples were collected during this storm event.

Wunderground (Sunport) reported inconsistent and inaccurate values for precipitation on this day. CoCoRaHS was used instead to show precipitation values.

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	11/20/2019	Standard	Get Map



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NOVEMBER 20, 2019

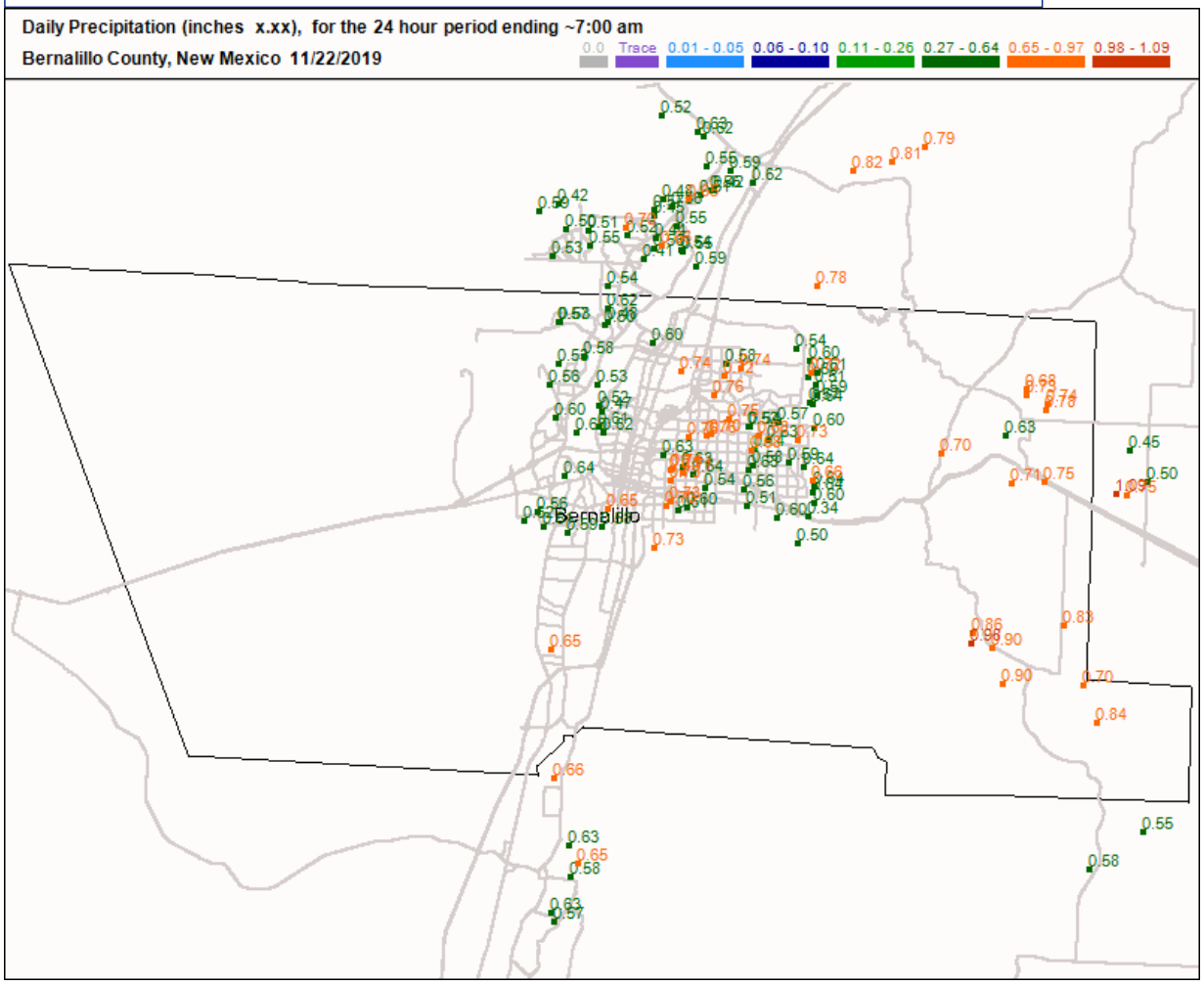
Rainfall occurred before normal operating hours, samples were collected only for zones 1 and 2.

Wunderground (Sunport) reported inaccurate runoff values on this day 11/20/19. CoCoRaHS was used instead to show precipitation values.

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Maps : Daily Precipitation

Map Type	Map Location		Date	Colors	
Precipitation	New Mexico	BR - Bernalillo	11/22/2019	Standard	Get Map



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NOVEMBER 21, 2019

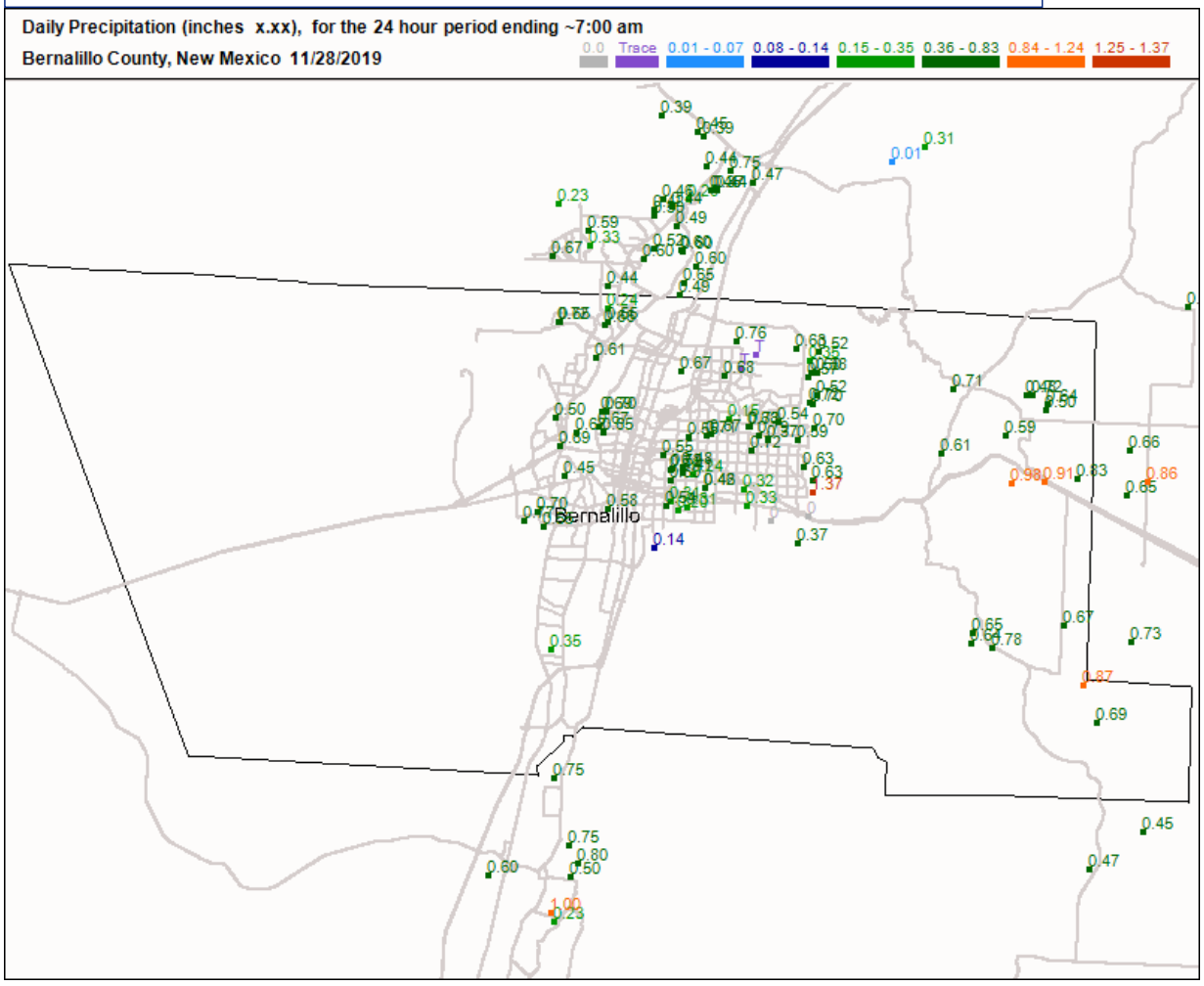
Samples were not collected due to storm event occurring within 72 hrs of the previous event.

Wunderground (Sunport) reported inaccurate runoff values on this day 11/21/19. CoCoRaHS was used instead to show precipitation values.

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	11/28/2019	Standard	Get Map



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NOVEMBER 27, 2019

Rainfall occurred outside of normal operating hours, samples were not collected.

Wunderground (Sunport) reported inaccurate runoff values on this day 11/27/19. CoCoRaHS was used instead to show precipitation values.

Search Locations Log in (/log…

Recent Cities
Supai, AZ (weather/us/az/supai/36.24,-112.69) Albuquerque, NM (weather/us/nm/albuquerque/35.08,-106.62) Albuquerque, NM (weather/us/nm/albuquerque/

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

41° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

NOVEMBER 28, 2019

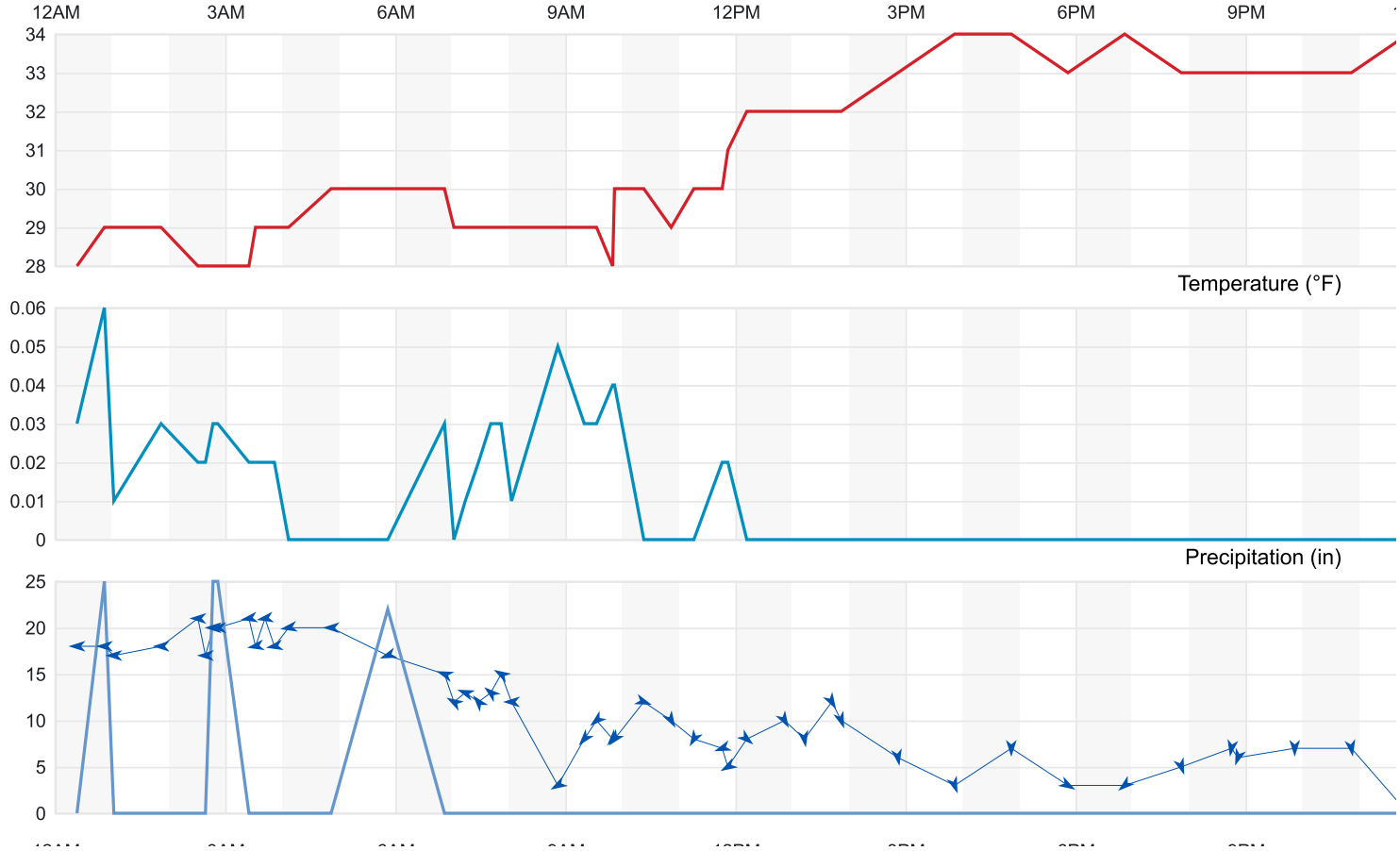
- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

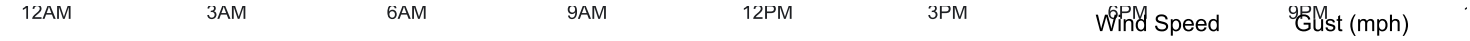
Rainfall occurred outside of operating hours. Samples were not collected.

Daily Weekly Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2019-11-28) 11-28) 11)

November 28 2019 View





Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	34	50	72
Low Temp	28	30	-6
Day Average Temp	30.35	40	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.25	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	26.69	-	-
High	31	-	-
Low	22	-	-
Average	26.69	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	21	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.67	-	-
Astronomy	Day Length	Rise	Set
Actual Time	10h 2m	6:54 AM	4:56 PM
Civil Twilight		6:27 AM	5:24 PM
Nautical Twilight		5:56 AM	5:55 PM
Astronomical Twilight		5:25 AM	6:26 PM
Moon: waxing crescent		8:55 AM	6:57 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:23 AM	28 °F	26 °F	92 %	E	18 mph	0 mph	24.63 in	0.0 in	Light Snow

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	29 °F	25 °F	85 %	E	18 mph	25 mph	24.63 in	0.1 in	Light Snow
1:02 AM	29 °F	25 °F	85 %	E	17 mph	0 mph	24.63 in	0.0 in	Light Snow
1:52 AM	29 °F	25 °F	85 %	E	18 mph	0 mph	24.63 in	0.0 in	Light Snow
2:31 AM	28 °F	25 °F	88 %	E	21 mph	0 mph	24.63 in	0.0 in	Light Snow /
2:39 AM	28 °F	25 °F	88 %	E	17 mph	0 mph	24.64 in	0.0 in	Light Snow
2:47 AM	28 °F	25 °F	86 %	E	20 mph	25 mph	24.64 in	0.0 in	Light Snow
2:52 AM	28 °F	25 °F	88 %	E	20 mph	25 mph	24.63 in	0.0 in	Light Snow
3:25 AM	28 °F	25 °F	88 %	E	21 mph	0 mph	24.63 in	0.0 in	Light Snow /
3:32 AM	29 °F	24 °F	82 %	E	18 mph	0 mph	24.63 in	0.0 in	Light Snow
3:42 AM	29 °F	24 °F	82 %	E	21 mph	0 mph	24.62 in	0.0 in	Light Snow /
3:52 AM	29 °F	24 °F	82 %	E	18 mph	0 mph	24.62 in	0.0 in	Light Snow
4:07 AM	29 °F	24 °F	82 %	E	20 mph	0 mph	24.62 in	0.0 in	Light Snow
4:52 AM	30 °F	22 °F	72 %	E	20 mph	0 mph	24.62 in	0.0 in	Cloudy
5:52 AM	30 °F	24 °F	79 %	ENE	17 mph	22 mph	24.61 in	0.0 in	Light Snow
6:52 AM	30 °F	24 °F	79 %	ESE	15 mph	0 mph	24.62 in	0.0 in	Light Snow
7:02 AM	29 °F	24 °F	82 %	ESE	12 mph	0 mph	24.62 in	0.0 in	Light Snow
7:14 AM	29 °F	25 °F	85 %	ESE	13 mph	0 mph	24.62 in	0.0 in	Light Snow
7:28 AM	29 °F	26 °F	89 %	SE	12 mph	0 mph	24.63 in	0.0 in	Light Snow
7:41 AM	29 °F	25 °F	85 %	SE	13 mph	0 mph	24.64 in	0.0 in	Light Snow
7:52 AM	29 °F	25 °F	85 %	ESE	15 mph	0 mph	24.63 in	0.0 in	Light Snow
8:03 AM	29 °F	26 °F	89 %	E	12 mph	0 mph	24.64 in	0.0 in	Light Snow
8:52 AM	29 °F	27 °F	92 %	ENE	3 mph	0 mph	24.66 in	0.1 in	Snow
9:20 AM	29 °F	27 °F	92 %	NE	8 mph	0 mph	24.66 in	0.0 in	Snow
9:33 AM	29 °F	27 °F	92 %	NE	10 mph	0 mph	24.64 in	0.0 in	Light Snow
9:50 AM	28 °F	27 °F	93 %	NE	8 mph	0 mph	24.62 in	0.0 in	Light Snow
9:52 AM	30 °F	27 °F	88 %	NE	8 mph	0 mph	24.62 in	0.0 in	Light Snow
10:23 AM	30 °F	27 °F	88 %	WNW	12 mph	0 mph	24.66 in	0.0 in	Cloudy
10:52 AM	29 °F	27 °F	92 %	NNW	10 mph	0 mph	24.67 in	0.0 in	Light Snow
11:16 AM	30 °F	27 °F	88 %	NNE	8 mph	0 mph	24.67 in	0.0 in	Light Snow
11:46 AM	30 °F	28 °F	93 %	ENE	7 mph	0 mph	24.64 in	0.0 in	Light Snow
11:52 AM	31 °F	29 °F	92 %	ENE	5 mph	0 mph	24.65 in	0.0 in	Light Snow
12:12 PM	32 °F	28 °F	85 %	NW	8 mph	0 mph	24.64 in	0.0 in	Cloudy
12:52 PM	32 °F	29 °F	88 %	NNW	10 mph	0 mph	24.62 in	0.0 in	Mostly Cloud
1:13 PM	32 °F	28 °F	85 %	N	8 mph	0 mph	24.62 in	0.0 in	Cloudy
1:42 PM	32 °F	28 °F	85 %	NNW	12 mph	0 mph	24.62 in	0.0 in	Cloudy
1:52 PM	32 °F	28 °F	85 %	NNW	10 mph	0 mph	24.62 in	0.0 in	Cloudy
2:52 PM	33 °F	28 °F	82 %	N	6 mph	0 mph	24.64 in	0.0 in	Cloudy
3:52 PM	34 °F	28 °F	79 %	NNW	3 mph	0 mph	24.65 in	0.0 in	Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
4:52 PM	34 °F	28 °F	79 %	N	7 mph	0 mph	24.64 in	0.0 in	Cloudy
5:52 PM	33 °F	29 °F	85 %	WNW	3 mph	0 mph	24.66 in	0.0 in	Cloudy
6:52 PM	34 °F	30 °F	85 %	NE	3 mph	0 mph	24.65 in	0.0 in	Cloudy
7:52 PM	33 °F	30 °F	89 %	NNW	5 mph	0 mph	24.66 in	0.0 in	Cloudy
8:45 PM	33 °F	30 °F	89 %	N	7 mph	0 mph	24.64 in	0.0 in	Cloudy
8:52 PM	33 °F	30 °F	89 %	NNE	6 mph	0 mph	24.64 in	0.0 in	Cloudy
9:52 PM	33 °F	30 °F	89 %	N	7 mph	0 mph	24.64 in	0.0 in	Cloudy
10:52 PM	33 °F	30 °F	89 %	N	7 mph	0 mph	24.62 in	0.0 in	Cloudy
11:52 PM	34 °F	31 °F	89 %	CALM	0 mph	0 mph	24.62 in	0.0 in	Cloudy

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&utm_source=theweatherchannel-wunderground&utm_medium=referral&utm_content=thumbnails-b:History Thumbnails:)
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(https://clknext.com/path/lp.php?trvid=10610&trvx=14fd40ad&cid=cashews&utm_term=theweatherchannel-wunderground&taboolaclickid=CjA5OTIwMWZiMy01NWNlLTRiNTgtYTdiZC00MjczYTVjNTFlMTgtdHVjdDQ3YTgxNDQSFW1vYm54LXRvdGFscmVzdG9yZS1zYw)

U.S. Cardiologist: It's Like a Pressure Wash for Your Insides
Gundry MD Total Restore Supplement

(https://clknext.com/path/lp.php?trvid=10610&trvx=14fd40ad&cid=cashews&utm_term=theweatherchannel-wunderground&taboolaclickid=CjA5OTIwMWZiMy01NWNlLTRiNTgtYTdiZC00MjczYTVjNTFlMTgtdHVjdDQ3YTgxNDQSFW1vYm54LXRvdGFscmVzdG9yZS1zYw)
(http://locksmithofhearts.com/trending/luxurious-houses-owned-hollywoods-stars?utm_source=taboola&utm_medium=theweatherchannel-wunderground&utm_campaign=3319626&utm_term=Where+Rick+Harrison+Lives+At+54+Will+Make+You+Especially+Sad&utm_content=http%3A%2F%2Fcdn.taboola.com%2Flit

Where Rick Harrison Lives At 54 Will Make You Especially Sad
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(https://moneywise.com/a/ch-b/states-americans-are-fleeing?t=15%20States%20Where%20Americans%20Don%27t%20Want%20To%20Live%20Anymore&utm_campaign=3041862&utm_source=taboola&utm_medium=Desktop&utm_term=wunderground&utm_content=2839326365)

15 States Where Americans Don't Want To Live Anymore
MoneyWise.com

(https://moneywise.com/a/ch-b/states-americans-are-fleeing?t=15%20States%20Where%20Americans%20Don%27t%20Want%20To%20Live%20Anymore&utm_campaign=3041862&utm_source=taboola&utm_medium=Desktop&utm_term=wunderground&utm_content=2839326365)
(https://news.education.investing.com/last-call-restaurant-chains-closing-locations-by-2020/?utm_source=taboola&utm_medium=cpm&utm_campaign=US-ClosingRest-TGI.Friday2-1-Desktop-Top10CTR%282%29-Chrome-Brand+Safe-3.10.19&utm_term=theweatherchannel-wunderground&origin=taboola&tp[click_id]=CjA5OTIwMWZiMy01NWNlLTRiNTgtYTdiZC00MjczYTVjNTFlMTgtdHVjdDQ3YTgxNDQSFGludmVzdGluZ3l1a29ubmV3LXNj&tp[site_id wunderground&tp[ts]=2019-12-04+15%3A22%3A07&tp[campaign_name]=US-ClosingRest-TGI.Friday2-1-Desktop-Top10CTR%282%29-Chrome-Brand+Safe-3.10.19&tp[campaign_id]=2970684&tp[campaign_item_id]=2834674363)

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investing.com

(https://news.education.investing.com/last-call-restaurant-chains-closing-locations-by-2020/?utm_source=taboola&utm_medium=cpm&utm_campaign=US-ClosingRest-TGI.Friday2-1-Desktop-Top10CTR%282%29-Chrome-Brand+Safe-3.10.19&utm_term=theweatherchannel-wunderground&origin=taboola&tp[click_id]=CjA5OTIwMWZiMy01NWNlLTRiNTgtYTdiZC00MjczYTVjNTFlMTgtdHVjdDQ3YTgxNDQSFGludmVzdGluZ3l1a29ubmV3LXNj&tp[site_id wunderground&tp[ts]=2019-12-04+15%3A22%3A07&tp[campaign_name]=US-ClosingRest-TGI.Friday2-1-Desktop-Top10CTR%282%29-Chrome-Brand+Safe-3.10.19&tp[campaign_id]=2970684&tp[campaign_item_id]=2834674363)
(https://get.bombas.com/6-reasons-holiday?utm_source=taboola&utm_medium=referral&utm_campaign=HolidayThirdParty&utm_term=2856446027&utm_content=theweatherchannel-wunderground)

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35.05 °N, **106.61** °W

Albuquerque, NM Weather History

41° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

NOVEMBER 29, 2019

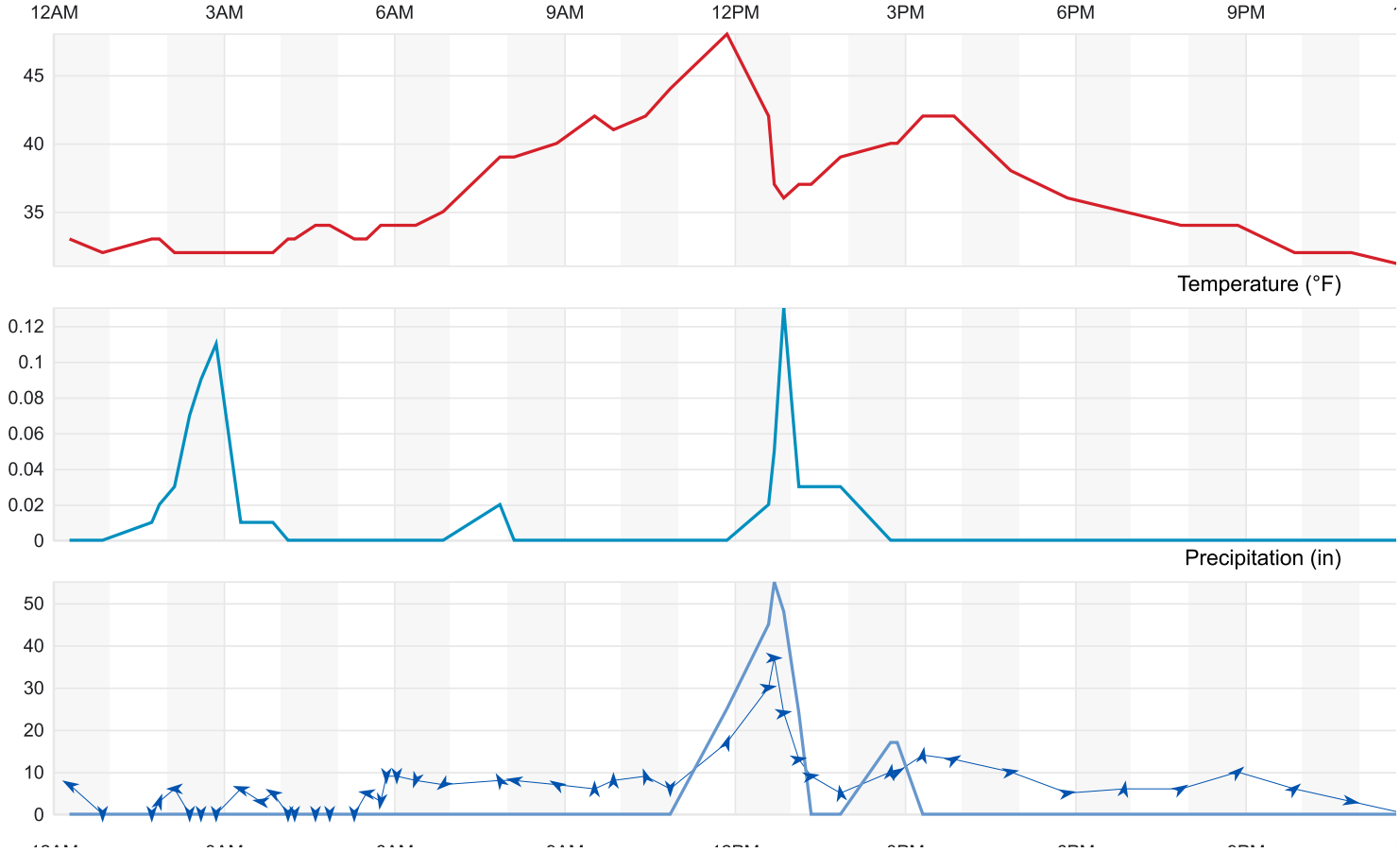
- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

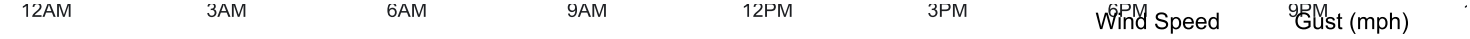
Rainfall occurred outside of operating hours. Samples were not collected.

Daily Weekly Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2019-11-29) 11-29) 11)

November 29 2019 View





Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	48	50	69
Low Temp	31	29	-7
Day Average Temp	35.94	40	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.31	0.01	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	32.56	-	-
High	41	-	-
Low	22	-	-
Average	32.56	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	37	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.61	-	-
Astronomy	Day Length	Rise	Set
Actual Time	10h 0m	6:55 AM	4:56 PM
Civil Twilight		6:28 AM	5:24 PM
Nautical Twilight		5:56 AM	5:55 PM
Astronomical Twilight		5:26 AM	6:26 PM
Moon: waxing crescent		9:52 AM	7:53 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:17 AM	33 °F	30 °F	89 %	ESE	7 mph	0 mph	24.61 in	0.0 in	Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	32 °F	31 °F	96 %	CALM	0 mph	0 mph	24.58 in	0.0 in	Cloudy
1:44 AM	33 °F	31 °F	92 %	CALM	0 mph	0 mph	24.58 in	0.0 in	Rain
1:52 AM	33 °F	31 °F	92 %	SSW	3 mph	0 mph	24.58 in	0.0 in	Rain
2:08 AM	32 °F	31 °F	96 %	E	6 mph	0 mph	24.57 in	0.0 in	Wintry Mix
2:24 AM	32 °F	32 °F	100 %	CALM	0 mph	0 mph	24.57 in	0.1 in	Wintry Mix
2:36 AM	32 °F	31 °F	96 %	CALM	0 mph	0 mph	24.57 in	0.1 in	Wintry Mix
2:52 AM	32 °F	32 °F	100 %	CALM	0 mph	0 mph	24.56 in	0.1 in	Wintry Mix
3:18 AM	32 °F	31 °F	96 %	ESE	6 mph	0 mph	24.55 in	0.0 in	Wintry Mix
3:39 AM	32 °F	31 °F	96 %	E	3 mph	0 mph	24.54 in	0.0 in	Wintry Mix
3:52 AM	32 °F	31 °F	96 %	ESE	5 mph	0 mph	24.53 in	0.0 in	Wintry Mix
4:08 AM	33 °F	32 °F	96 %	CALM	0 mph	0 mph	24.53 in	0.0 in	Cloudy
4:15 AM	33 °F	32 °F	96 %	CALM	0 mph	0 mph	24.53 in	0.0 in	Cloudy
4:37 AM	34 °F	33 °F	96 %	CALM	0 mph	0 mph	24.51 in	0.0 in	Cloudy
4:52 AM	34 °F	33 °F	96 %	CALM	0 mph	0 mph	24.50 in	0.0 in	Cloudy
5:18 AM	33 °F	32 °F	96 %	CALM	0 mph	0 mph	24.50 in	0.0 in	Fog
5:31 AM	33 °F	32 °F	96 %	E	5 mph	0 mph	24.48 in	0.0 in	Fog
5:46 AM	34 °F	34 °F	100 %	N	3 mph	0 mph	24.48 in	0.0 in	Mostly Cloud
5:52 AM	34 °F	33 °F	96 %	N	9 mph	0 mph	24.49 in	0.0 in	Mostly Cloud
6:03 AM	34 °F	32 °F	92 %	N	9 mph	0 mph	24.50 in	0.0 in	Fog
6:23 AM	34 °F	33 °F	96 %	NNE	8 mph	0 mph	24.49 in	0.0 in	Cloudy
6:52 AM	35 °F	34 °F	96 %	NE	7 mph	0 mph	24.48 in	0.0 in	Light Rain
7:52 AM	39 °F	37 °F	93 %	SSE	8 mph	0 mph	24.46 in	0.0 in	Mostly Cloud
8:07 AM	39 °F	37 °F	93 %	E	8 mph	0 mph	24.46 in	0.0 in	Cloudy
8:52 AM	40 °F	38 °F	93 %	ESE	7 mph	0 mph	24.44 in	0.0 in	Cloudy
9:32 AM	42 °F	39 °F	89 %	S	6 mph	0 mph	24.44 in	0.0 in	Mostly Cloud
9:52 AM	41 °F	38 °F	89 %	S	8 mph	0 mph	24.43 in	0.0 in	Mostly Cloud
10:26 AM	42 °F	39 °F	89 %	SSE	9 mph	0 mph	24.40 in	0.0 in	Mostly Cloud
10:52 AM	44 °F	41 °F	89 %	VAR	6 mph	0 mph	24.37 in	0.0 in	Mostly Cloud
11:52 AM	48 °F	41 °F	77 %	SSW	17 mph	25 mph	24.33 in	0.0 in	Mostly Cloud
12:36 PM	42 °F	40 °F	92 %	W	30 mph	45 mph	24.36 in	0.0 in	Rain / Windy
12:42 PM	37 °F	35 °F	93 %	W	37 mph	55 mph	24.38 in	0.1 in	Heavy Rain
12:52 PM	36 °F	34 °F	93 %	W	24 mph	48 mph	24.39 in	0.1 in	Rain / Windy
1:08 PM	37 °F	35 °F	93 %	W	13 mph	24 mph	24.40 in	0.0 in	Light Rain
1:21 PM	37 °F	35 °F	93 %	W	9 mph	0 mph	24.39 in	0.0 in	Cloudy
1:52 PM	39 °F	35 °F	86 %	S	5 mph	0 mph	24.43 in	0.0 in	Cloudy
2:45 PM	40 °F	36 °F	86 %	S	10 mph	17 mph	24.44 in	0.0 in	Light Rain
2:52 PM	40 °F	35 °F	83 %	WSW	10 mph	17 mph	24.45 in	0.0 in	Light Rain
3:19 PM	42 °F	34 °F	73 %	S	14 mph	0 mph	24.47 in	0.0 in	Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
3:52 PM	42 °F	32 °F	67 %	WSW	13 mph	0 mph	24.48 in	0.0 in	Partly Cloud
4:52 PM	38 °F	29 °F	70 %	W	10 mph	0 mph	24.51 in	0.0 in	Mostly Cloud
5:52 PM	36 °F	27 °F	70 %	W	5 mph	0 mph	24.53 in	0.0 in	Mostly Cloud
6:52 PM	35 °F	27 °F	72 %	S	6 mph	0 mph	24.54 in	0.0 in	Fair
7:52 PM	34 °F	26 °F	73 %	WSW	6 mph	0 mph	24.54 in	0.0 in	Fair
8:52 PM	34 °F	24 °F	67 %	SW	10 mph	0 mph	24.53 in	0.0 in	Fair
9:52 PM	32 °F	22 °F	66 %	SW	6 mph	0 mph	24.54 in	0.0 in	Fair
10:52 PM	32 °F	22 °F	66 %	W	3 mph	0 mph	24.54 in	0.0 in	Mostly Cloud
11:52 PM	31 °F	23 °F	72 %	CALM	0 mph	0 mph	24.55 in	0.0 in	Mostly Cloud

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(https://moneywise.com/a/ch-b/states-americans-are-fleeing?t=15%20States%20Where%20Americans%20Don%27t%20Want%20To%20Live%20Anymore&utm_campaign=3189743&utm_source=taboola&utm_medium=Desktop&utm_term=wunderground&utm_content=2847956090)

15 States Where Americans Don't Want To Live Anymore
MoneyWise.com

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Where Rick Harrison Lives At 54 Will Make You Especially Sad
Locksmith of Hearts

(http://locksmithofhearts.com/trending/luxurious-houses-owned-hollywoods-stars?utm_source=taboola&utm_medium=theweatherchannel-wunderground&utm_campaign=3319626&utm_term=Where+Rick+Harrison+Lives+At+54+Will+Make+You+Especially+Sad&utm_content=http%3A%2F%2Fcdn.taboola.com%2Flib
(https://news.education.investing.com/last-call-restaurant-chains-closing-locations-by-2020/?utm_source=taboola&utm_medium=cpm&utm_campaign=US-ClosingRest-TGI.Friday2-1-Desktop-Top10CTR%282%29-Chrome-Brand+Safe-3.10.19&utm_term=theweatherchannel-wunderground&origin=taboola&tp[click_id]=CjA5OTIwMWZiMy01NWNlLTRiNTgtYTdiZC00MjczYTVjNTFlMTgtdHVjdDQ3YTgxNDQSFGludmVzdGluZ3l1a29ubmV3LXNj&tp[site_id
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These Are All of the Restaurant Chains Closing in 2020
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(https://news.education.investing.com/last-call-restaurant-chains-closing-locations-by-2020/?utm_source=taboola&utm_medium=cpm&utm_campaign=US-ClosingRest-TGI.Friday2-1-Desktop-Top10CTR%282%29-Chrome-Brand+Safe-3.10.19&utm_term=theweatherchannel-wunderground&origin=taboola&tp[click_id]=CjA5OTIwMWZiMy01NWNlLTRiNTgtYTdiZC00MjczYTVjNTFlMTgtdHVjdDQ3YTgxNDQSFGludmVzdGluZ3l1a29ubmV3LXNj&tp[site_id
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(https://wikibuy.com/blog/the-genius-trick-every-costco-shopper-needs-to-know-e4720551bfec?hno=true&utm_source=jaguar11&utm_campaign=3302457&utm_term=2854352780)

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35.05 °N, **106.61** °W

Albuquerque, NM Weather History

41° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

DECEMBER 8, 2019

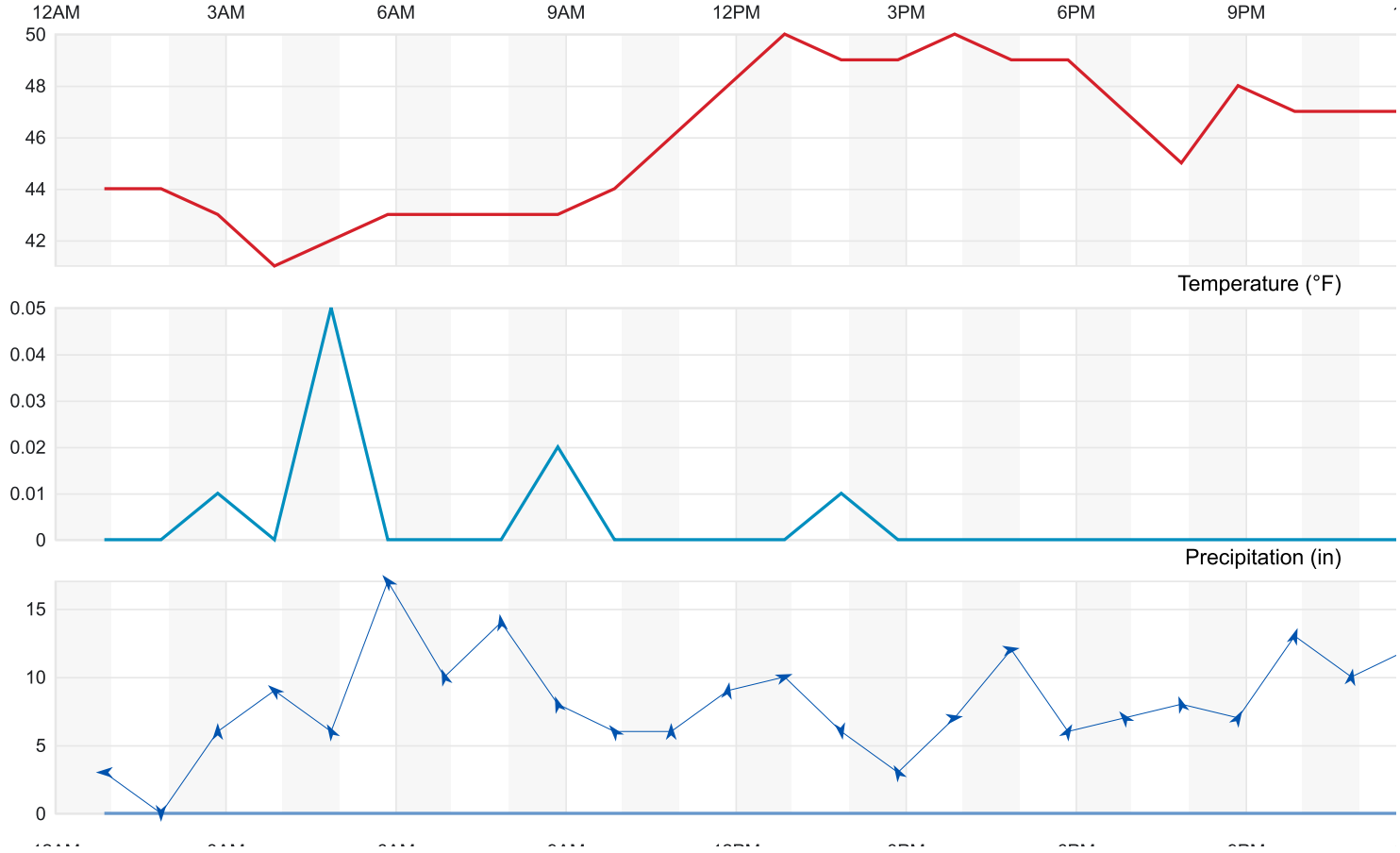
- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

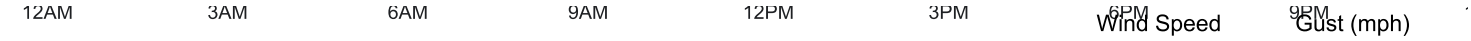
Rainfall occurred outside of operating hours. Samples were not collected.

Daily Weekly Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2019-12-8) (/history/weekly/us/nm/albuquerque/KABQ/date/2019-12-8) (/history/monthly/us/nm/albuquerque/KABQ/date/2019-12)

December 8 2019 View





Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	50	47	68
Low Temp	41	27	5
Day Average Temp	45.88	37	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.06	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	38.42	-	-
High	43	-	-
Low	35	-	-
Average	38.42	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	17	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.74	-	-
Astronomy	Day Length	Rise	Set
Actual Time	9h 52m	7:03 AM	4:56 PM
Civil Twilight		6:35 AM	5:24 PM
Nautical Twilight		6:03 AM	5:55 PM
Astronomical Twilight		5:33 AM	6:26 PM
Moon: waxing gibbous		2:57 PM	3:24 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	44 °F	35 °F	71 %	E	3 mph	0 mph	24.73 in	0.0 in	Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
1:52 AM	44 °F	36 °F	73 %	CALM	0 mph	0 mph	24.72 in	0.0 in	Cloudy
2:52 AM	43 °F	37 °F	80 %	S	6 mph	0 mph	24.74 in	0.0 in	Light Rain
3:52 AM	41 °F	38 °F	89 %	SE	9 mph	0 mph	24.73 in	0.0 in	Light Rain
4:52 AM	42 °F	40 °F	92 %	SSE	6 mph	0 mph	24.71 in	0.1 in	Light Rain
5:52 AM	43 °F	41 °F	93 %	SE	17 mph	0 mph	24.68 in	0.0 in	Cloudy
6:52 AM	43 °F	41 °F	93 %	SSE	10 mph	0 mph	24.70 in	0.0 in	Cloudy
7:52 AM	43 °F	41 °F	93 %	S	14 mph	0 mph	24.68 in	0.0 in	Light Rain
8:52 AM	43 °F	41 °F	93 %	SSE	8 mph	0 mph	24.69 in	0.0 in	Light Rain
9:52 AM	44 °F	42 °F	93 %	SE	6 mph	0 mph	24.69 in	0.0 in	Cloudy
10:52 AM	46 °F	42 °F	86 %	S	6 mph	0 mph	24.68 in	0.0 in	Cloudy
11:52 AM	48 °F	41 °F	77 %	S	9 mph	0 mph	24.64 in	0.0 in	Cloudy
12:52 PM	50 °F	40 °F	68 %	WSW	10 mph	0 mph	24.62 in	0.0 in	Cloudy
1:52 PM	49 °F	41 °F	74 %	N	6 mph	0 mph	24.61 in	0.0 in	Light Rain
2:52 PM	49 °F	43 °F	80 %	SSE	3 mph	0 mph	24.60 in	0.0 in	Cloudy
3:52 PM	50 °F	38 °F	63 %	W	7 mph	0 mph	24.59 in	0.0 in	Cloudy
4:52 PM	49 °F	35 °F	59 %	W	12 mph	0 mph	24.58 in	0.0 in	Cloudy
5:52 PM	49 °F	36 °F	61 %	SSW	6 mph	0 mph	24.58 in	0.0 in	Cloudy
6:52 PM	47 °F	36 °F	66 %	SE	7 mph	0 mph	24.60 in	0.0 in	Cloudy
7:52 PM	45 °F	37 °F	74 %	SSE	8 mph	0 mph	24.58 in	0.0 in	Cloudy
8:52 PM	48 °F	35 °F	61 %	SSW	7 mph	0 mph	24.57 in	0.0 in	Cloudy
9:52 PM	47 °F	35 °F	63 %	SSW	13 mph	0 mph	24.58 in	0.0 in	Cloudy
10:52 PM	47 °F	35 °F	63 %	S	10 mph	0 mph	24.59 in	0.0 in	Cloudy
11:52 PM	47 °F	36 °F	66 %	SW	12 mph	0 mph	24.59 in	0.0 in	Cloudy

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96-Year-Old Puts Her House For Sale. This Is What It Looks Like Inside
Trend Chaser

(http://www.trend-chaser.com/amazing/real-estate-agents-stunned-by-home/?utm_source=tb&utm_medium=theweatherchannel-wunderground-tb&utm_term=96-Year-Old+Puts+Her+House+For+Sale.+This+Is+What+It+Looks+Like+Inside-https%3A%2F%2Fconsole.brax-cdn.com%2Fcreatives%2Fb86bbc0b-1fab-4ae3-9b34-fef78c1a7488%2Foldlady_nsy_1000x600_011d64af38d4267a079f1185c3c08d94.png&utm_content=2850355765&utm_campaign=3227686-tb&utm_source=tb)
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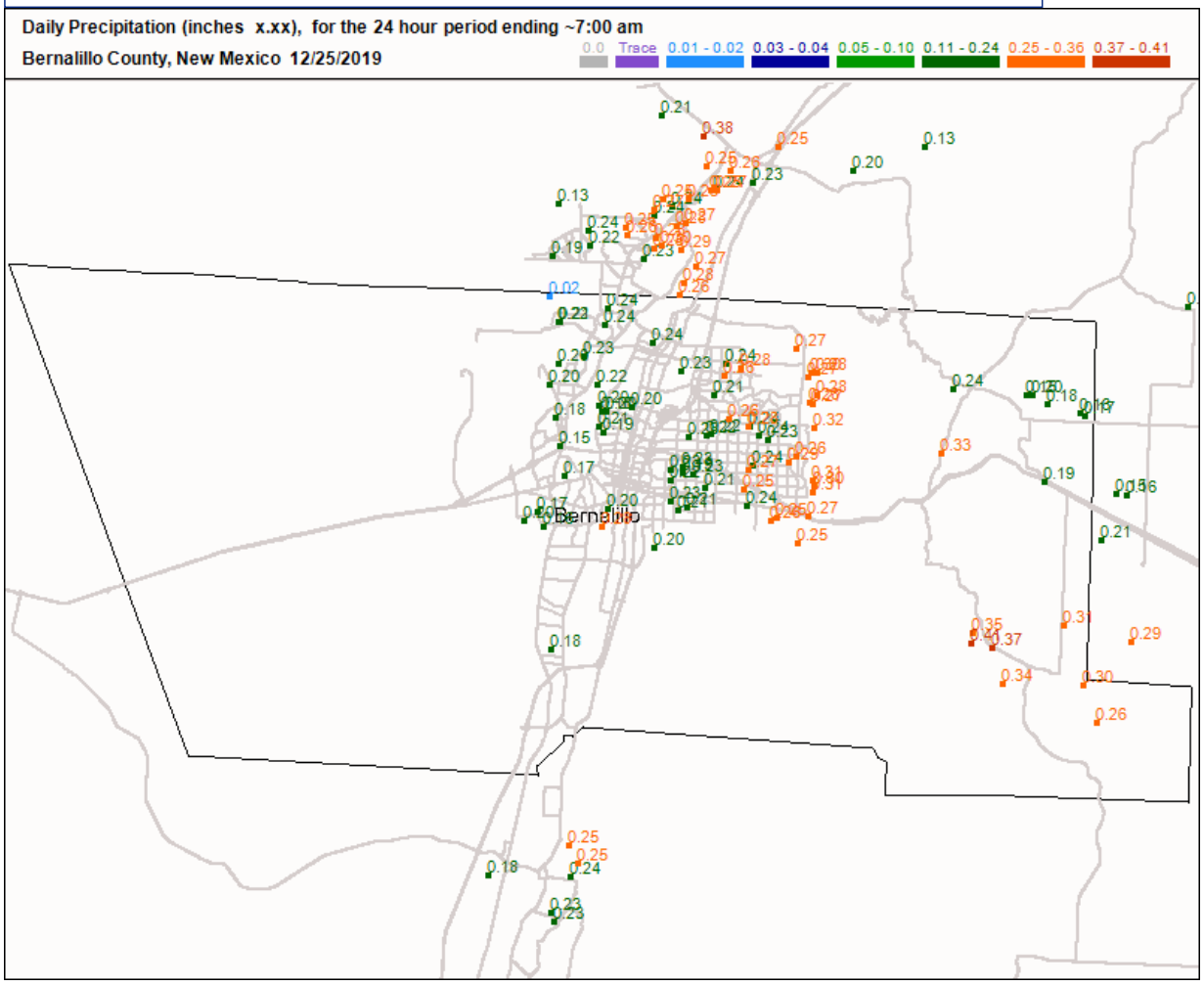
They Were Named The Most Beautiful Twins In The World, Wait Till You See Them Today

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	12/25/2019	Standard	Get Map



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DECEMBER 24, 2019

Rainfall occurred on a holiday, therefore samples were not collected for any zones.

Wunderground (Sunport) reported inaccurate runoff values on this day 12/24/19. CoCoRaHS was used instead to show precipitation values.

ATTACHMENT C

VISUAL MONITORING INSPECTION FORMS

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10/4/2019 MONITORING EVENT

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City of Albuquerque

Facility: Montessa Park Convenience Center

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ☒ Q4

Date: 10/4/2019
Time: 7:00 Am
Inspector: ~~Rob Salazar~~ /S. Ganley

Weather: overcast/raining
Storm Precip: 0.36 in
Last 72 hour Precip: none
Photo: Attached

Outfall ID:	MP01	MP02	
Flow Observed:	☒ Yes o No	☒ Yes o No	o Yes o No
Description of Monitoring Site:	Flow from side to concrete rundown/ditch	Flow along pavement/gutter to cattle grate inlet	
Flow Estimate (include units and method of estimation):	9" wide x 0.5" deep	12" wide x 0.25" deep	
Other Observations:	even though across soil area not much susp. Sed. noted.	Flow visible in cattle grate	
Color (describe):	Clear	Clear - Slight Sed. tint	
Turbidity:	☒ Clear o Slightly Cloudy o Very Cloudy o Opaque	☒ Clear ~~Slight~~ o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes ☒ No	o Yes ☒ No	o Yes o No
Suspended Solids:	o Yes ☒ No	o Yes ☒ No	o Yes o No
Settled Solids:	o Yes ☒ No	o Yes ☒ No	o Yes o No
Sheen Present:	o Yes ☒ No	o Yes ☒ No	o Yes o No
Odor:	o Yes ☒ No	o Yes ☒ No	o Yes o No
Foam Present:	o Yes ☒ No	o Yes ☒ No	o Yes o No
Describe:			

Additional Comments: Storm event from 4am - 6:20am
at site by 6:55am

City of Albuquerque

Facility: Montessa Park Open Space

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ☒ Q4

Date: 10/4/19

Time: 7:15am

Inspector: ~~Rob Salazar~~ / S. Gantley

Weather: overcast / just rained

Storm Precip: 0.36 in

Last 72 hour Precip: none

Photo: Attached

Sample not taken

Outfall ID:	MP 1		MP2			
Flow Observed:	☒ Yes	o No	☒ Yes	o No	o Yes	o No
Description of Monitoring Site:	Culvert pipe to concrete line channel / rundown		can't reach outfall - culvert damaged / tijeras in Flowing			
Flow Estimate (include units and method of estimation):	18"W x 0.25" deep		12"W x 0.5" deep			
Other Observations:	Clear some vegetation + debris blocking culvert inlet		observed from distance			
Color (describe):	clear					
Turbidity:	☒ Clear o Slightly Cloudy o Very Cloudy o Opaque		☒ Clear o Slightly Cloudy o Very Cloudy o Opaque		o Clear o Slightly Cloudy o Very Cloudy o Opaque	
Floating Solids:	o Yes	☒ No	o Yes	☒ No	o Yes	o No
Suspended Solids:	o Yes	☒ No	o Yes	☒ No	o Yes	o No
Settled Solids:	o Yes	☒ No	o Yes	☒ No	o Yes	o No
Sheen Present:	o Yes	☒ No	o Yes	☒ No	o Yes	o No
Odor:	o Yes	☒ No	o Yes	☒ No	o Yes	o No
Foam Present:	o Yes	☒ No	o Yes	☒ No	o Yes	o No
Describe:			none of above visible from 10' distance.			

Additional Comments: could not grab sample at MP2 - culvert hanging in mid-air + arroyo had Flow - could not access arroyo.

11/6/2019 MONITORING EVENT

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City of Albuquerque

Facility: Zone 1 - Los Altos Parks Management

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ø Q4

Date: 11/6/2019

Time: 10:20am

Inspector: Angie Bacigalupa

Weather: currently med/heavy rain

Storm Precip: 0.14 in

Last 72 hour Precip: none

Photo: Attached

Outfall ID:	LAP1		
Flow Observed:	o Yes **X** No	o Yes o No	o Yes o No
Description of Monitoring Site:	16" concrete culvert		
Flow Estimate (include units and method of estimation):	NO flow observed at site. No ponding available to sample from		
Other Observations:			
Color (describe):			
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes o No	o Yes o No
Odor:	o Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes o No	o Yes o No	o Yes o No
Describe:			

Additional Comments: Straw waddles observed on site to help retain flow to outfall

City of Albuquerque

Facility: Zone 1 – Arroyo St. Maintenance

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ø Q4

Date: 11/14/2019

Time: 10:35 am

Inspector: Angie Bacigalupa

Weather: Currently raining

Storm Precip: 0.14 in

Last 72 hour Precip: none

Photo: Attached

Outfall ID:	AM 1		
Flow Observed:	ø Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	Culvert w/ waddle inside facility - drains to street		
Flow Estimate (include units and method of estimation):	flow steady, 1" deep through 9" grate 2.5' across gutter		
Other Observations:	~1 CFS		
Color (describe):	dark red/tan		
Turbidity:	o Clear o Slightly Cloudy ø Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	ø Yes o No	o Yes o No	o Yes o No
Suspended Solids:	ø Yes o No	o Yes o No	o Yes o No
Settled Solids:	ø Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes ø No	o Yes o No	o Yes o No
Odor:	o Yes ø No	o Yes o No	o Yes o No
Foam Present:	o Yes ø No	o Yes o No	o Yes o No
Describe:	Red coarse sand settled to bottom, overall red/tan cloud, no odor		

Additional Comments: Steady runoff from site entering street gutter. stockpiles of red dirt observed on site.

City of Albuquerque

Facility: Zone 1 - Street Satellite #1

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ø Q4

Date: 11/14/2019
Time: 10:50 am
Inspector: Angie Bacigalupa

Weather: Currently raining
Storm Precip: 0.14 in
Last 72 hour Precip: none
Photo: Attached

Outfall ID:	SS# 1A		SS 1B	
Flow Observed:	ø Yes o No	o Yes o No	ø Yes o No	
Description of Monitoring Site:	4'x4' waddle North End of Parking Lot		4'x4' waddle by covered structure	
Flow Estimate (include units and method of estimation):	ponding around waddle is 0.25" deep and 6" wide		ponding around waddle is 1" deep, 2' wide	
Other Observations:	light oil sheen no foam or odor		foam bubbles thickly/clouded	
Color (describe):	light grey/tan		dark grey	
Turbidity:	o Clear ø Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy ø Very Cloudy o Opaque	
Floating Solids:	ø Yes o No	o Yes o No	o Yes ø No	
Suspended Solids:	ø Yes o No	o Yes o No	ø Yes o No	
Settled Solids:	ø Yes o No	o Yes o No	ø Yes o No	
Sheen Present:	ø Yes o No	o Yes o No	o Yes ø No	
Odor:	o Yes ø No	o Yes o No	o Yes ø No	
Foam Present:	o Yes ø No	o Yes o No	ø Yes o No	
Describe:				

Additional Comments: facility contains lots of parked cars - could be contributing to oil sheen at SS1A

City of Albuquerque

Facility: Zone 1 - Los Anos Trails Park management

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ø Q4

Date: 11/6/2019 **Weather:** Currently raining

Time: 11:05am **Storm Precip:** 0.14 in

Inspector: Angie Bacigalupa **Last 72 hour Precip:** none

Photo: Attached

Outfall ID:	CAM 1		
Flow Observed:	ø Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	Iron grate w/ concrete channel @ NW end of site		
Flow Estimate (include units and method of estimation):	Sheet flow to grate ~ 0.1" deep and 6"-12" wide		
Other Observations:	flowing stormwater appears clear but slightly clouded when collected		
Color (describe):	light grey/tan		
Turbidity:	o Clear ø Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	ø Yes o No	o Yes o No	o Yes o No
Suspended Solids:	ø Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes ø No	o Yes o No	o Yes o No
Sheen Present:	o Yes ø No	o Yes o No	o Yes o No
Odor:	o Yes ø No	o Yes o No	o Yes o No
Foam Present:	o Yes ø No	o Yes o No	o Yes o No
Describe:			

Additional Comments: parked cars observed at site

City of Albuquerque

Facility: Zone 1 - Lomas Fuel Station

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ø Q4

Date: 11/6/2019

Time: 11:10am

Inspector: Angie Bacigalupa

Weather: Currently raining

Storm Precip: 0.14 in

Last 72 hour Precip: none

Photo: Attached

Outfall ID:	L1		
Flow Observed:	ø Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	low spot on asphalt		
Flow Estimate (include units and method of estimation):	minimal ponding <0.1" deep and 5'x2' wide		
Other Observations:	difficult to collect sample,		
Color (describe):	clear grey		
Turbidity:	ø Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes ø No	o Yes o No	o Yes o No
Suspended Solids:	ø Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes ø No	o Yes o No	o Yes o No
Sheen Present:	o Yes ø No	o Yes o No	o Yes o No
Odor:	o Yes ø No	o Yes o No	o Yes o No
Foam Present:	o Yes ø No	o Yes o No	o Yes o No
Describe:	some suspended solids but minimal		

Additional Comments: fuel station was being filled by tankard but no oil sheen observed

City of Albuquerque

Facility: Zone 1 - Los Altos Golf Course

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ø Q4

Date: 11/6/2019
Time: 11:20 am
Inspector: Angie Bacigalupa

Weather: lightly raining
Storm Precip: 0.14 in
Last 72 hour Precip: none
Photo: Attached

Outfall ID:	LA 1		LA 2
Flow Observed:	ø Yes o No	o Yes o No	ø Yes o No
Description of Monitoring Site:	8ft Culvert		low spot on Asphalt
Flow Estimate (include units and method of estimation):	Significant runoff across 7ft outlet estimate 1.5ft deep (see note)		0.5" deep ponding across concrete slab (50ft x 15ft)
Other Observations:	rotten odor trash & floatables foam bubbles		Clear, minimal suspended solids
Color (describe):	dark grey / green		clear tan / white
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy ø Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	ø Clear ø Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	ø Yes ø No	o Yes o No	o Yes ø No
Suspended Solids:	ø Yes o No	o Yes o No	ø Yes o No
Settled Solids:	ø Yes o No	o Yes o No	o Yes ø No
Sheen Present:	ø Yes o No	o Yes o No	o Yes ø No
Odor:	ø Yes o No	o Yes o No	o Yes ø No
Foam Present:	ø Yes o No	o Yes o No	o Yes ø No
Describe:	Significantly polluted		Some course sand piles observed on site but not in runoff

Additional Comments:

Homeless camps observed at 8' culvert site that limited the amount of data collected

City of Albuquerque

Facility: DAYTONA TRANSIT CENTER ZONE 2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ☒ Q4

Date: 11/06/19 **Weather:** RAINING

Time: 10:30 AM **Storm Precip:** 0.14 in

Inspector: MADELINE OLIVAS **Last 72 hour Precip:** none

Photo: Attached

Outfall ID:	D1		D2			
Flow Observed:	☒ Yes	o No	☒ Yes	o No	o Yes	o No
Description of Monitoring Site:	MANHOLE		CONCRETE GUTTER NEAR MANHOLE			
Flow Estimate (include units and method of estimation):	1 FOOT WIDE BY 1 INCH DEEP		6 INCHES WIDE BY ½ INCH DEEP			
Other Observations:	TRASH IN PARKING LOT.		BUSSES IN PARKING LOT AROUND SITE			
Color (describe):	YELLOW		YELLOW			
Turbidity:	o Clear ☑ Slightly Cloudy o Very Cloudy o Opaque		o Clear ☑ Slightly Cloudy o Very Cloudy o Opaque		o Clear o Slightly Cloudy o Very Cloudy o Opaque	
Floating Solids:	☑ Yes	o No	☑ Yes	o No	o Yes	o No
Suspended Solids:	o Yes	☑ No	o Yes	☑ No	o Yes	o No
Settled Solids:	o Yes	☑ No	o Yes	☑ No	o Yes	o No
Sheen Present:	o Yes	☑ No	o Yes	☑ No	o Yes	o No
Odor:	o Yes	☑ No	o Yes	☑ No	o Yes	o No
Foam Present:	o Yes	☑ No	o Yes	☑ No	o Yes	o No
Describe:	YELLOWISH WITH FEW SOLIDS		FEW SOLIDS			

Additional Comments: AT D2 MANHOLE WAS ACCESSIBLE BUT NO FLOW WAS OBSERVED INSIDE. MONITORING LOCATION MOVED TO NEAR BY CONCRETE GUTTER.

City of Albuquerque

Facility: DON RESERVOIR CONVENIENCE CENTER ZONE 2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 ø Q3 ☒ Q4

Date: 11/06/19

Time: 10:30AM

Inspector: MADELINE OLIVAS

Weather: RAINING

Storm Precip: 0.14 in

Last 72 hour Precip: none

Photo: Attached

Outfall ID:	DR01		
Flow Observed:	☒ Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	COLLECTED AT CURB AND RUNDOWN		
Flow Estimate (include units and method of estimation):	6 INCHES ~~DEEP~~ WIDE 1/2 INCH DEEP		
Other Observations:	LEAVES AND DEBRIS IN AREA		
Color (describe):	BROWNISH		
Turbidity:	o Clear o Slightly Cloudy ☒ Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	☒ Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes ☒ No	o Yes o No	o Yes o No
Settled Solids:	☒ Yes o No	o Yes o No	o Yes o No
Sheen Present:	☒ Yes o No	o Yes o No	o Yes o No
Odor:	o Yes ☒ No	o Yes o No	o Yes o No
Foam Present:	o Yes ☒ No	o Yes o No	o Yes o No
Describe:	DARK BROWN CLOUDY WITH DIRT		

Additional Comments: _____

City of Albuquerque

Facility: LADERA GOLF COURSE

ZONE 2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

o Q1 o Q2 ø Q3 X Q4

Date: 11/06/19

Time: 10:30 AM

Inspector: MADELINE OLIVAS

Weather: RAINING

Storm Precip: 0.14 in

Last 72 hour Precip: none

Photo: Attached

Outfall ID:	LGC1	LGC2	LGC2 ADDITIONAL
Flow Observed:	o Yes ø No	ø Yes o No	ø Yes o No
Description of Monitoring Site:		PARKING LOT NEXT TO CORNER OF BUILDING	PARKING LOT ON EAST SIDE OF BUILDING
Flow Estimate (include units and method of estimation):	NONE	4 INCHES WIDE BY ½ INCH DEEP	2 INCHES WIDE BY ONE INCH DEEP
Other Observations:	WATER HAD SEEPED INTO GROUND / FLOWED AROUND	FLOW MOSTLY FROM BUILDING ROOF NOT REPRESENTATIVE	SHEEN FROM NEARBY DARKED VEHICLES
Color (describe):		NONE/CLEAR	TAN
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	ø Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear ø Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes ø No	ø Yes o No
Suspended Solids:	o Yes o No	o Yes ø No	o Yes ø No
Settled Solids:	o Yes o No	o Yes ø No	o Yes ø No
Sheen Present:	o Yes o No	o Yes ø No	ø Yes o No
Odor:	o Yes o No	o Yes ø No	o Yes ø No
Foam Present:	o Yes o No	o Yes ø No	o Yes ø No
Describe:	Sample not collected	CLEAN FLOW OFF BUILDING ROOF	MURKY WITH SEDIMENT.

Additional Comments: AN ADDITIONAL SITE WAS SAMPLED TO BETTER REPRESENT THE RUNOFF. LGC1 HAD NO FLOW AS THE WATER HAD SEEPED INTO THE SEDIMENT AROUND THE STRUCTURE/FLOWED AROUND IT.

City of Albuquerque

Facility: STREETS SATELLITE #3

ZONE 2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 ☑ Q3 ☒ Q4

Date: 11/06/19 **Weather:** RAINING

Time: 10:30 AM **Storm Precip:** 0.14 in

Inspector: MADELINE OLIVAS **Last 72 hour Precip:** none

Photo: Attached

Outfall ID:	SS3		
Flow Observed:	☑ Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	ACTIVELY RAINING		
Flow Estimate (include units and method of estimation):	1 FT WIDE BY 1 IN DEEP		
Other Observations:	SHEEN PRESENT ON SURROUNDING PARKING LOT		
Color (describe):	TAN		
Turbidity:	o Clear ☑ Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	☑ Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes ☑ No	o Yes o No	o Yes o No
Settled Solids:	o Yes ☑ No	o Yes o No	o Yes o No
Sheen Present:	☑ Yes o No	o Yes o No	o Yes o No
Odor:	o Yes ☑ No	o Yes o No	o Yes o No
Foam Present:	o Yes ☑ No	o Yes o No	o Yes o No
Describe:	CLOUDY WITH FLOATING DEBRIS		

Additional Comments: VEHICLES AND EQUIPMENT PARKED IN SITE VICINITY

Waddle had a gap, allowing flow to pass directly into the downstream pond.

City of Albuquerque

Facility: Yale Transit Center

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ø Q4

Date: 11/6/19
Time: 10:50 am
Inspector: Melanie Meroni

Weather: Raining
Storm Precip: 0.2 in
Last 72 hour Precip: none
Photo: Attached

Outfall ID:	Y1		
Flow Observed:	✓ Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	inlet to Storm cepter wq device		
Flow Estimate (include units and method of estimation):	3ft x 1in		
Other Observations:	trash @ inlet		
Color (describe):	Brown		
Turbidity:	o Clear o Slightly Cloudy ● Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	● Yes o No	o Yes o No	o Yes o No
Suspended Solids:	● Yes o No	o Yes o No	o Yes o No
Settled Solids:	● Yes o No	o Yes o No	o Yes o No
Sheen Present:	● Yes o No	o Yes o No	o Yes o No
Odor:	● Yes o No	o Yes o No	o Yes o No
Foam Present:	● Yes o No	o Yes o No	o Yes o No
Describe:	smelt like cleaning products		

Additional Comments:

City of Albuquerque

Facility: Puerto del Sol Golf Course

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ø Q4

Date: 11/6/19
Time: 11:10 am
Inspector: Melanie Meroni

Weather: raining
Storm Precip: 0.2 in
Last 72 hour Precip: none
Photo: Attached

Outfall ID:	PDS 1	PDS 2	
Flow Observed:	o Yes ● No	● Yes o No	o Yes o No
Description of Monitoring Site:	Grated Inlet	Grated Inlet	
Flow Estimate (include units and method of estimation):	Sample not collected	1Ft x 1in	
Other Observations:		ponding @ site Foam in inlet	
Color (describe):		Brown	
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy ● Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes ● No	o Yes o No
Suspended Solids:	o Yes o No	● Yes o No	o Yes o No
Settled Solids:	o Yes o No	● Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes ● No	o Yes o No
Odor:	o Yes o No	o Yes ● No	o Yes o No
Foam Present:	o Yes o No	● Yes o No	o Yes o No
Describe:			

Additional Comments:

City of Albuquerque

Facility: Montessa Park Open Space

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ø Q4

Date: 11/6/19
Time: 10:50 am
Inspector: Rob Salazar

Weather: Drizzle
Storm Precip: 0.14 in
Last 72 hour Precip: none
Photo: Attached

Outfall ID:	MP 1	MP2	
Flow Observed:	ø Yes o No	ø Yes o No	o Yes o No
Description of Monitoring Site:	Trash in culvert	Active flow in culvert. Little to no active flow in arroyo.	
Flow Estimate (include units and method of estimation):	0.5" moderate flow speed	~1 cfs	
Other Observations:	foam in arroyo	no ~~photo~~ SAMPLE leaf matter	
Color (describe):	faint yellow	none	
Turbidity:	o Clear ø Slightly Cloudy o Very Cloudy o Opaque	o Clear ø Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	ø Yes o No	ø Yes o No	o Yes o No
Suspended Solids:	ø Yes o No	o Yes ø No	o Yes o No
Settled Solids:	ø Yes o No	o Yes ø No	o Yes o No
Sheen Present:	o Yes ø No	o Yes ø No	o Yes o No
Odor:	o Yes ø No	o Yes ø No	o Yes o No
Foam Present:	o Yes ø No	ø Yes o No	o Yes o No
Describe:		Sample not collected due to unsafe conditions. Flow characteristics noted above.	

Additional Comments: MP2 - Culvert hangs in mid-air, approximately 10 ft above arroyo invert.

City of Albuquerque

Facility: Montessa Park Convenience Center

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ø Q4

Date: 11/6/19 **Weather:** Light Rain

Time: 10:35 am **Storm Precip:** 0.14 in

Inspector: Rob Salazar **Last 72 hour Precip:** none

Photo: Attached

Outfall ID:	MP01		MP02			
Flow Observed:	ø Yes	o No	ø Yes	o No	o Yes	o No
Description of Monitoring Site:						
Flow Estimate (include units and method of estimation):	1-2" deep swift		0.5" deep steady			
Other Observations:						
Color (describe):	Gray		yellow brown			
Turbidity:	o Clear ø Slightly Cloudy o Very Cloudy o Opaque		o Clear o Slightly Cloudy o Very Cloudy ø Opaque		o Clear o Slightly Cloudy o Very Cloudy o Opaque	
Floating Solids:	ø Yes	o No	ø Yes	o No	o Yes	o No
Suspended Solids:	ø Yes	o No	ø Yes	o No	o Yes	o No
Settled Solids:	ø Yes	o No	ø Yes	o No	o Yes	o No
Sheen Present:	o Yes	ø No	o Yes	ø No	o Yes	o No
Odor:	ø Yes	o No	ø Yes	o No	o Yes	o No
Foam Present:	o Yes	ø No	o Yes	ø No	o Yes	o No
Describe:	acrid odor "fire smell" black particles		acrid odor "fire smell black particles			

Additional Comments: On site staff asked if they would receive this assessment

11/20/2019 MONITORING EVENT

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City of Albuquerque

Facility: Zone 1 - Arroyo Street Maintenance

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 x Q4

Date: 11/20/19
Time: 6:30 AM
Inspector: Sarah Gantley

Weather: light rain
Storm Precip: 0.3 in
Last 72 hour Precip: none
Photo: Attached

Outfall ID:	AM1		
Flow Observed:	x Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	Concrete Sidewalk Culvert drains to street from facility, Unable inside facility		
Flow Estimate (include units and method of estimation):	0.5" deep in 11.5" wide concrete culvert		
Other Observations:			
Color (describe):	light brown/tan		
Turbidity:	o Clear x Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes x No	o Yes o No	o Yes o No
Suspended Solids:	o Yes x No	o Yes o No	o Yes o No
Settled Solids:	o Yes x No	o Yes o No	o Yes o No
Sheen Present:	o Yes x No	o Yes o No	o Yes o No
Odor:	o Yes x No	o Yes o No	o Yes o No
Foam Present:	o Yes x No	o Yes o No	o Yes o No
Describe:	Clear (mostly) w/ light tan color		

Additional Comments: Steady runoff from site entering street. Did not observe red sediment in sample reported in last sample. Some red sediment visible on street.

City of Albuquerque

Facility: Zone 1 - Los Altos Trails Park Management

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ● Q4

Date: 11/20/2019
Time: 6:50 am
Inspector: Angie Bacigalupa

Weather: Cloudy, light rain
Storm Precip: 0.3 in
Last 72 hour Precip: None
Photo: Attached

Outfall ID:	LAM 1		
Flow Observed:	⊘ Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	Iron grate w/ concrete channel NW end of site		
Flow Estimate (include units and method of estimation):	thin sheet flow along concrete path 6" wide		
Other Observations:	Only slightly turbid water very light		
Color (describe):	clear / tan (light)		
Turbidity:	o Clear ⊘ Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes ⊘ No	o Yes o No	o Yes o No
Suspended Solids:	⊘ Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes ⊘ No	o Yes o No	o Yes o No
Sheen Present:	o Yes ⊘ No	o Yes o No	o Yes o No
Odor:	o Yes ⊘ No	o Yes o No	o Yes o No
Foam Present:	o Yes ⊘ No	o Yes o No	o Yes o No
Describe:			

Additional Comments: parked cars observed at site

City of Albuquerque

Facility: Zone 1 - Lomas Fuel Station

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ● Q4

Date: 11/20/2019 **Weather:** Cloudy, light rain

Time: 10:55 am **Storm Precip:** 0.3 in

Inspector: Angie Bacigalupa **Last 72 hour Precip:** None

Photo: Attached

Outfall ID:	L1		
Flow Observed:	☒ Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	low spot on asphalt		
Flow Estimate (include units and method of estimation):	Standing water in a puddle 2'x3', 1/10" deep difficult to collect		
Other Observations:	enough water for sampling purposes		
Color (describe):	Cloudy grey		
Turbidity:	o Clear ☒ Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes ☒ No	o Yes o No	o Yes o No
Suspended Solids:	☒ Yes o No	o Yes o No	o Yes o No
Settled Solids:	☒ Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes ☒ No	o Yes o No	o Yes o No
Odor:	o Yes ☒ No	o Yes o No	o Yes o No
Foam Present:	o Yes ☒ No	o Yes o No	o Yes o No
Describe:	color may be asphalt particles no odor		

Additional Comments: a few vehicles at fuel station using pumps

City of Albuquerque

Facility: Zone 1 - Los Altos Golf Course

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ● Q4

Date: 11/20/2019

Time: 6:59

Inspector: Angie Bacigalupa

Weather: Cloudy but stopped raining

Storm Precip: 0.3 in

Last 72 hour Precip: None

Photo: Attached

Outfall ID:	LA 1		LA2
Flow Observed:	● Yes o No	o Yes o No	● Yes o No
Description of Monitoring Site:	8ft pipe culvert		low spot on asphalt
Flow Estimate (include units and method of estimation):	Steady flow contained in low flow channel 3' wide	flow	Standing water in a puddle 5'x20' and 1/4" deep
Other Observations:	trash and other debris present in flow		Clear sample with very little to no suspended solids
Color (describe):	yellow/tan		clear
Turbidity:	o Clear ● Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	● Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	● Yes o No	o Yes o No	o Yes ● No
Suspended Solids:	● Yes o No	o Yes o No	● Yes o No
Settled Solids:	o Yes ● No	o Yes o No	o Yes ● No
Sheen Present:	● Yes o No	o Yes o No	o Yes ● No
Odor:	● Yes o No	o Yes o No	o Yes ● No
Foam Present:	● Yes o No	o Yes o No	o Yes ● No
Describe:	Slight rotten egg odor. Foam in bubbles in channel		Some sheen visible at site but not in sample-

Additional Comments: Vegetation from nearby was chopped down and placed over the grate @ 8ft culvert since the last inspection (11/6/2019). Homeless observed at 8ft culvert site.

City of Albuquerque

Facility: Zone 1 - Los Altos Park Management

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ● Q4

Date: 11/20/2019 **Weather:** Cloudy but no rain

Time: 7:20 **Storm Precip:** 0.3 in

Inspector: Angie Bacigalupa **Last 72 hour Precip:** None

Photo: Attached

Sample not taken

Outfall ID:	LAP 1		
Flow Observed:	o Yes ● No	o Yes o No	o Yes o No
Description of Monitoring Site:	16" Concrete Culvert		
Flow Estimate (include units and method of estimation):	no flow at site, therefore not able to		
Other Observations:	collect sample		
Color (describe):			
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes o No	o Yes o No
Odor:	o Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes o No	o Yes o No	o Yes o No
Describe:			

Additional Comments: Straw waddles observed around the perimeter of site that must prevent stormwater from reaching outfall

City of Albuquerque

Facility: Zone 1 - Street Satellite #1

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ● Q4

Date: 11/20/2019
Time: 7:28 am
Inspector: Angie Bacigalupa

Weather: Cloudy but no rain
Storm Precip: 0.3 in
Last 72 hour Precip: None
Photo: Attached

Sample not taken

Outfall ID:	SS 1A		SS 1B
Flow Observed:	o Yes ● No	o Yes o No	● Yes o No
Description of Monitoring Site:	4'x4' waddle North end of site		4'x4' waddle by covered structure
Flow Estimate (include units and method of estimation):	no flow at site therefore unable to collect sample		Standing water 2'x5', ½" deep
Other Observations:			lots of sediment & debris along outside of waddle
Color (describe):			Cloudy tan
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy ● Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes o No	o Yes ● No
Suspended Solids:	o Yes o No	o Yes o No	● Yes o No
Settled Solids:	o Yes o No	o Yes o No	● Yes o No
Sheen Present:	o Yes o No	o Yes o No	o Yes ● No
Odor:	o Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes o No	o Yes o No	o Yes ● No
Describe:			Settled dark grey solids at site but not in sample

Additional Comments: parked vehicles observed on site

City of Albuquerque

Facility: DAYTONA TRANSIT CENTER ZONE 2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ☒ Q4

Date: 11/20/19 **Weather:** Cloudy

Time: 7:30AM **Storm Precip:** 0.3 in

Inspector: MADELINE OLIVAS **Last 72 hour Precip:** None

Photo: Attached

Sample not taken

Outfall ID:	D1	D2	
Flow Observed:	o Yes ☒ No	☒ Yes o No	o Yes o No
Description of Monitoring Site:	MANHOLE NEAR STREET	MANHOLE IN PARKING LOT	
Flow Estimate (include units and method of estimation):	N/A	1 FOOT WIDE BY 1 INCH DEEP	
Other Observations:	NO FLOW IN STREET OR PARKING LOT	BUSSES PARKED NEAR BY. TRASH IN PARKING LOT.	
Color (describe):		WHITEISH	
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear ☒ Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes ☒ No	o Yes o No
Suspended Solids:	o Yes o No	o Yes ☒ No	o Yes o No
Settled Solids:	o Yes o No	☒ Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes ☒ No	o Yes o No
Odor:	o Yes o No	o Yes ☒ No	o Yes o No
Foam Present:	o Yes o No	o Yes ☒ No	o Yes o No
Describe:		SOME DEBRIS OR SEDIMENT SWIRLING	

Additional Comments: NO FLOW IN GUTTER PREVIOUSLY USED TO SUPPLEMENT D2.

City of Albuquerque

Facility: LADERA GOLF COURSE ZONE 2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ☒Q4

Date: 11/20/19 **Weather:** PARTLY CLOUDY

Time: 8:00 AM **Storm Precip:** 0.3 in

Inspector: MADELINE OLIVAS **Last 72 hour Precip:** None

Photo: Attached

Sample not taken Sample not taken

Outfall ID:	LGC1	LGC2	
Flow Observed:	o Yes ☒No	o Yes ☒No	o Yes o No
Description of Monitoring Site:	STRUCTURE ON COURSE	OFF CORNER OF MAINTENANCE BUILDING	
Flow Estimate (include units and method of estimation):	N/A	N/A	
Other Observations:	WATER HAD SEEPED INTO GROUND/FLOWED AROUND	WATER HAD SEEPED INTO GROUND	
Color (describe):			
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes o No	o Yes o No
Odor:	o Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes o No	o Yes o No	o Yes o No
Describe:			

Additional Comments: AREA AROUND LGC1 HAD TRASH AND DEBRIS TRAPPED WHERE FLOW HAD GONE AROUND.

City of Albuquerque

Facility: STREETS SATELLITE #3
ZONE 2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ☒Q4

Date: 11/20/19
Time: 7:50am
Inspector: MADELINE OLIVAS

Weather: PARTLY CLOUDY
Storm Precip: 0.3 in
Last 72 hour Precip: None
Photo: Attached

Outfall ID:	SS3		
Flow Observed:	o Yes ☒No	o Yes o No	o Yes o No
Description of Monitoring Site:	PONDED WATER NEAR RUN DOWN		
Flow Estimate (include units and method of estimation):	N/A		
Other Observations:	LEAKING TRUCK NEAR BY		
Color (describe):	YELLOWISH/TAN		
Turbidity:	o Clear ☒ Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes ☒No	o Yes o No	o Yes o No
Suspended Solids:	o Yes ☒No	o Yes o No	o Yes o No
Settled Solids:	☒Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes ☒No	o Yes o No	o Yes o No
Odor:	o Yes ☒No	o Yes o No	o Yes o No
Foam Present:	o Yes ☒No	o Yes o No	o Yes o No
Describe:	MURKY YELLOW WITH DIRT		

Additional Comments: TRUCK PARKED NEXT TO RUN DOWN APPEARED TO BE DRIPPING ON TO ASPHALT. NO SHEEN PRESENT ON WATER SURFACE.

City of Albuquerque

Facility: DON RESERVOIR CONVENIENCE CENTER ZONE 2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 ☒Q4

Date: 11/20/19 **Weather:** PARTLY CLOUDY

Time: 7:45AM **Storm Precip:**

Inspector: MADELINE OLIVAS **Last 72 hour Precip:**

Photo:

Sample not taken

Outfall ID:	DR01		
Flow Observed:	o Yes ☒No	o Yes o No	o Yes o No
Description of Monitoring Site:	GUTTER/ RUNDOWN OFF DRIVEWAY		
Flow Estimate (include units and method of estimation):	N/A		
Other Observations:	LEAVES AND SOME DEBRIS ON RUNDOWN		
Color (describe):			
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes o No	o Yes o No
Odor:	o Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes o No	o Yes o No	o Yes o No
Describe:			

Additional Comments:

ATTACHMENT D

STORMWATER MONITORING SAMPLING PHOTOGRAPHS

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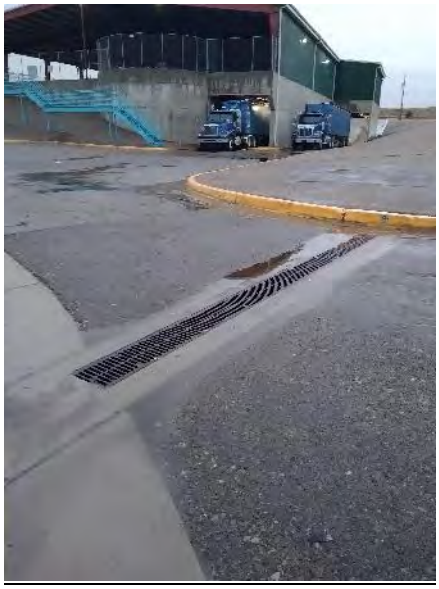
Fourth Quarter 2019 (October 4th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 1: Outfall MP01



Photograph 2: Sample MP01



Photograph 3: Outfall MP02



Photograph 4: Sample MP02

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Fourth Quarter 2019 (October 4th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



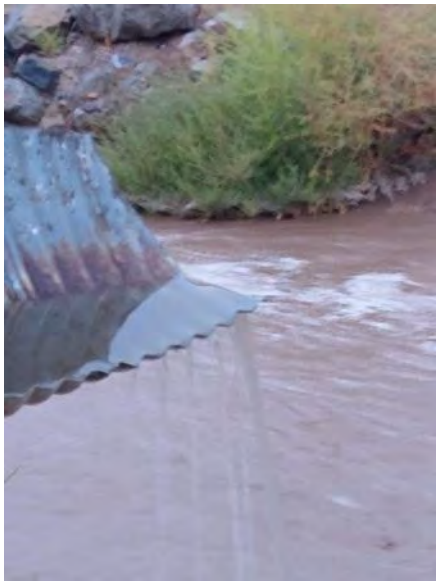
Photograph 5: Outfall MP1



Photograph 6: Sample MP1



Photograph 7: Outfall MP2



Photograph 8: Sample MP2

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Fourth Quarter 2019 (November 6th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 1: Sample AM1



Photograph 2: Sample L1



Photograph 3: Sample LA1



Photograph 4: Sample LA2

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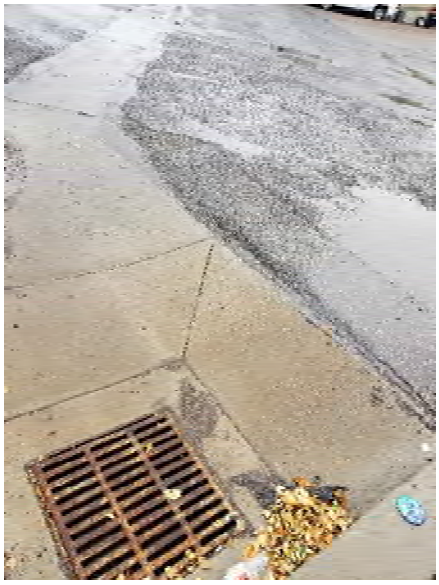
Fourth Quarter 2019 (November 6th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 5: Outfall LAM1



Photograph 6: Sample LAM1



Photograph 7: Outfall LAP1



Photograph 8: Sample SS1A

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Fourth Quarter 2019 (November 6th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 9: Outfall SS1B



Photograph 10: Sample SS1B



Photograph 11: SS1B vs SS1A

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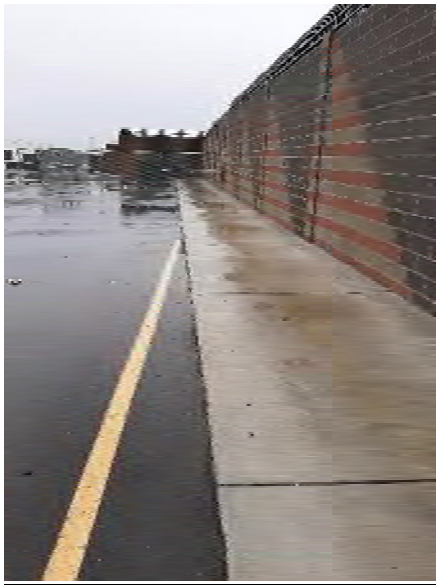
Fourth Quarter 2019 (November 6th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 12: Outfall D1



Photograph 13: Sample D1



Photograph 14: Outfall D2



Photograph 15: Sample D2

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Fourth Quarter 2019 (November 6th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 16: Outfall DR01



Photograph 17: Sample DR01



Photograph 18: Outfall LGC2 (West)



Photograph 19: Sample LGC2 (West)

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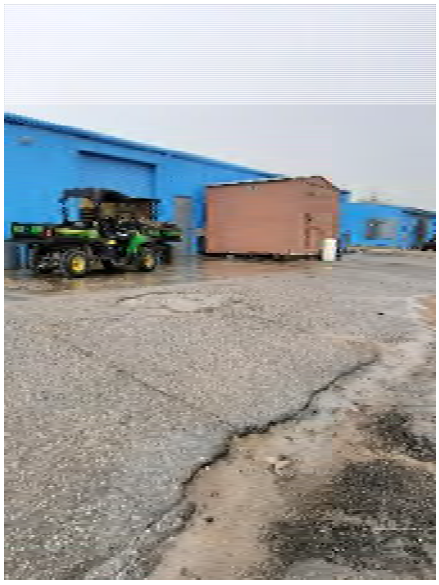
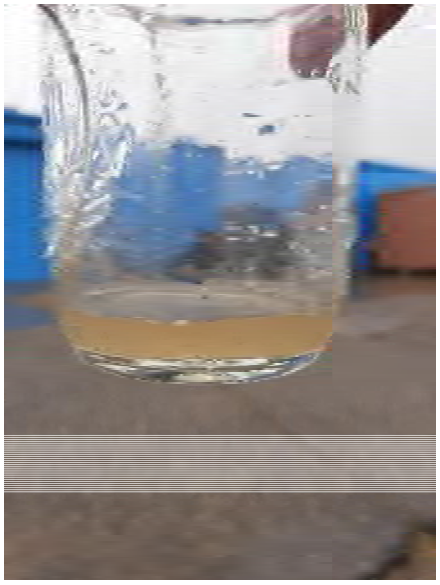
Fourth Quarter 2019 (November 6th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 20: Outfall LGC2 (East)



Photograph 21: Sample LGC2 (East)



Photograph 22: Outfall SS3



Photograph 21: Sample SS3

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Fourth Quarter 2019 (November 6th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



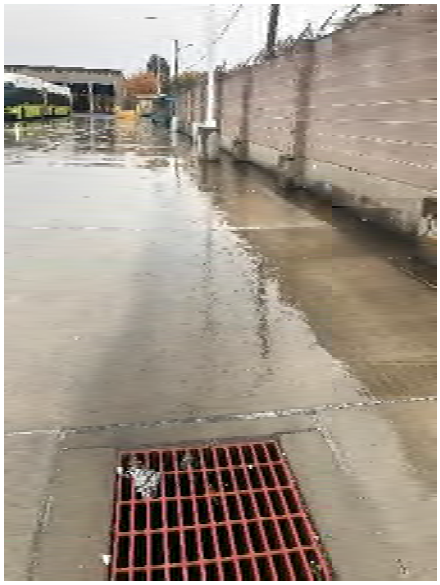
Photograph 22: Outfall PDS1



Photograph 23: Outfall PDS2



Photograph 24: Sample PDS2



Photograph 25: Outfall Y1

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Fourth Quarter 2019 (November 6th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 26: Sample Y1



Photograph 27: Outfall MP01



Photograph 28: Sample MP01



Photograph 29: Outfall MP02

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Fourth Quarter 2019 (November 6th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 30: Sample MP02



Photograph 31: Outfall MP1



Photograph 32: Sample MP1



Photograph 33: Outfall MP2

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Fourth Quarter 2019 (November 20th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 1: Outfall AM1



Photograph 2: Sample AM1



Photograph 3: Sample L1



Photograph 4: Sample LA1

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Fourth Quarter 2019 (November 20th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 5: Sample LA2



Photograph 6: Sample LAM1



Photograph 7: Outfall LAP1



Photograph 8: Outfall SS1A

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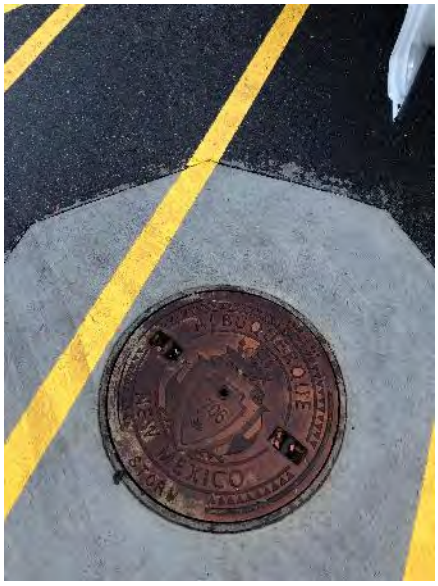
Fourth Quarter 2019 (November 20th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 9: Sample SS1B



Photograph 10: Outfall D1



Photograph 11: Outfall D2



Photograph 12: Sample D2

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Fourth Quarter 2019 (November 20th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 13: Outfall DR01



Photograph 14: Outfall LGC1



Photograph 15: Outfall LGC2



Photograph 16: Outfall SS3

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Fourth Quarter 2019 (November 20th, 2019)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 17: Sample SS3

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Weston Solutions, Inc.
3840 Commons Ave. NE
Albuquerque, NM 87109
505-837-6520 Fax 505-837-6595
www.westonsolutions.com

April 6, 2020

Ms. Kathy Verhage, P.E.
Department of Municipal Development - Storm Drainage Design
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

REFERENCE: PROJECT NO. 8013 CITYWIDE ON-CALL NPDES AND MS4 ENGINEERING SUPPORT SERVICES 1st QUARTER 2020 UPDATE FOR TASK 4 VISUAL STORM WATER INSPECTIONS

Dear Ms. Verhage:

This letter describes the results of the 2020 Quarter 1 (January 1 through March 31) Visual Storm Water Inspections for ten City of Albuquerque (City) facilities that are subject to the requirements of the U.S. Environmental Protection Agency's (EPA) Municipal Separate Storm Sewer System (MS4) Permit and the Multi Sector General Permit for Storm Water Discharges Associated with Industrial Activity (MSGP) at City-owned facilities. The purpose of this memo is to document the City's compliance with the requirements for quarterly stormwater monitoring. To comply with the MS4 and MSGP's requirements for stormwater monitoring, the City tasked Weston Solutions to perform the quarterly visual inspections in order to identify potential impacted stormwater discharges at the 10 City-owned facilities. The following facilities meet the definition of an industrial facility in the MSGP based on audits of City-owned facilities performed between 2012 and 2020.

- Arroyo Del Oso Golf Course
- Balloon Fiesta Park and Golf Training Center
- Albuquerque BioPark Zoo
- Fire Department Mechanic Shop
- 4th Street Fuel Station
- Pino Yards Complex
- Street Maintenance Satellite #2
- 6th Street Park Management
- Eagle Rock Convenience Center
- Edith Yards Maintenance Facility

Figure 1 identifies these facilities along with the Weston inspection team responsible for inspecting each facility outfall.

Figure 1: Facility Site Locations

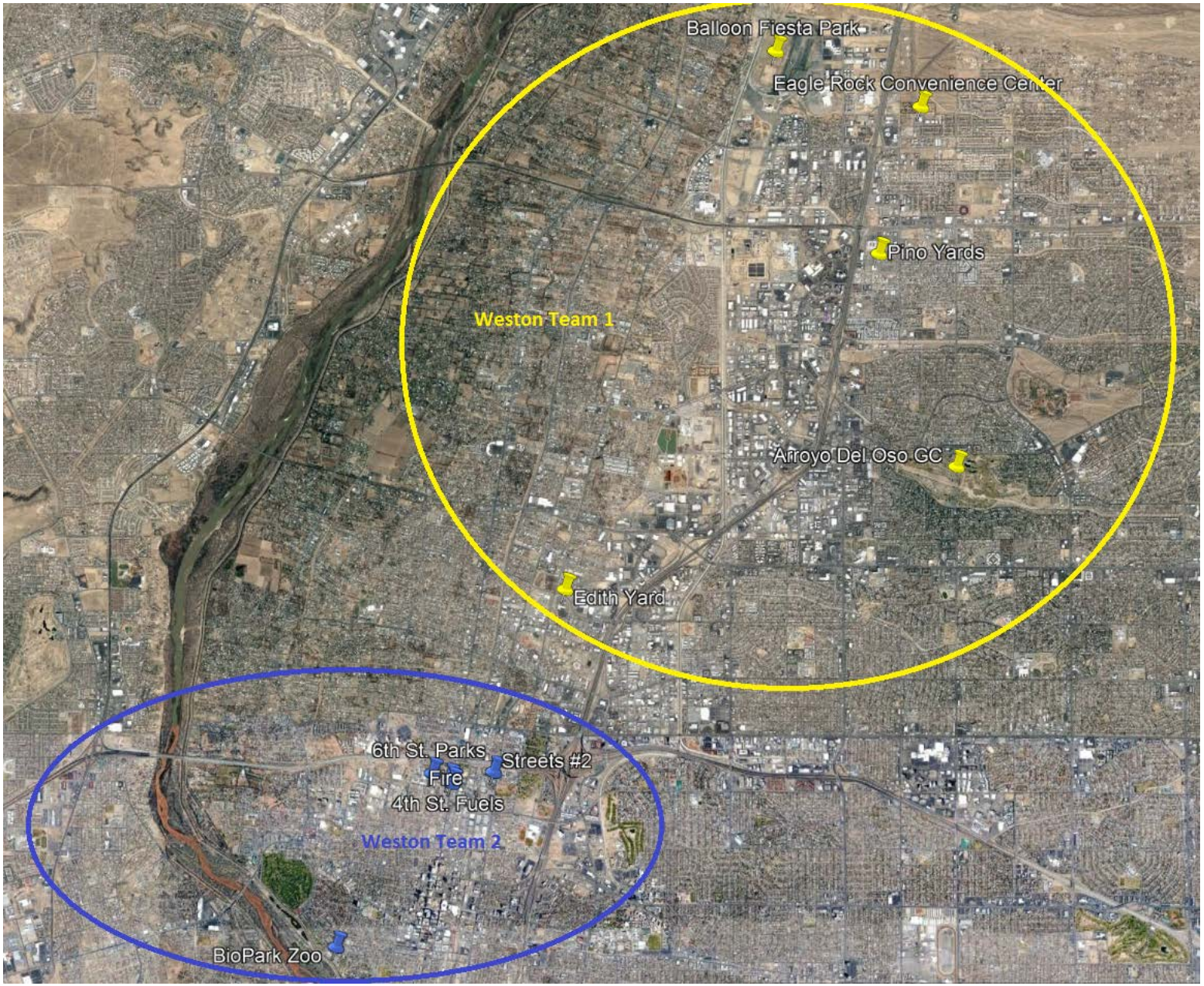


Table 1 summarizes the inspection status during the 1st Quarter of 2020.

Table 1: Outfall ID and Designees Site	Outfall ID	2020 Quarter 1 Status
Weston Team 1		
Balloon Fiesta Park and Golf Training Center	BFP1	Sample collected
	BFP2	Visited, dry-no sample
	BFP3	Visited, dry-no sample
	BFP4	Visited, dry-no sample
	BFP5	Visited, dry-no sample
Pino Yards Complex	PY1	Visited, dry-no sample
	PY2	Sample collected
	PY3	Sample collected
Arroyo Del Oso Golf Course	ADO1	Visited, dry-no sample
	ADO2	Sample collected
Eagle Rock Convenience Center	ER01/ER02	Sample collected from both
	ER03	Sample collected
ABQ BioPark Zoo	BP1	Visited, dry-no sample
Weston Team 2		
4th Street Fuel Station	FS1	Sample collected
Fire Department Mechanic Shop	FM1	Sample collected
	FM2	Sample collected
Street Maintenance Satellite #2	SS2	Sample collected
Edith Yards Maintenance Facility	EY01	Visited, dry-no sample
	EY02	Sample collected
	EY03	Sample collected
6th Street Park Management	6PM1	Visited, dry-no sample

Background

The MSGP establishes requirements for monitoring the quality of stormwater discharges depending on the nature of activities performed at the various industrial facilities. Although benchmark monitoring is not required, the MSGP does require quarterly visual inspection of stormwater quality. Visual inspection consists of the collection of grab samples from each outfall (subject to demonstration of substantially identical outfalls) and examination for the presence of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, or other indicators of stormwater pollution.

The following criteria regarding the precipitation event must be met for a visual inspection of stormwater to occur:

- During daylight hours
- Within 30 minutes of start of storm water discharge (or as soon as practicable thereafter)
- At least 72 hours after the previous storm water discharge event

Weston follows the City's existing stormwater monitoring protocol outlining the locations and descriptions of all outfalls to be monitored. The protocol identifies contact persons at each facility for use in notifying City personnel when members of the stormwater monitoring team are mobilizing to that location. A standard visual assessment form is used by all staff to document the inspection activities.

April 6, 2020

Quarter 1 Monitoring Results

The results from the 1st Quarter 2020 visual inspections including monitoring reports and photo logs can be found in the Attachment A. From January 1 – March 31, 2020 the following occurred:

- Weston Sites Team 1 mobilized twice during the quarter to collect samples from storm events on January 1, 2020 and January 21, 2020. Visual samples were collected from seven of the fourteen outfalls that fall under Team 1.
- Weston Sites Team 2 mobilized twice during the quarter to collect samples from a storm event on January 1, 2020 and January 21, 2020. Six visual samples were collected from the eight outfalls over the course of the mobilizations.

Although there were several recordable precipitation events through this period, the vast majority did not meet the criteria for visual sampling since they occurred in the early evening, overnight or on weekends, or did not produce enough rainfall to be considered a qualifying event. Many sites received no rain due to the localized nature of the storms that did occur. Non-qualifying event data is provided in Attachment B.

Any outfalls not inspected in the 1st Quarter will be addressed during Quarter 2 of 2020 pending suitable weather conditions.

Observed Problems

For previously submitted memos, Weather Underground (WU) has provided historical information for any non-qualifying event, as found in Attachment B. Within Quarter 4 of 2019, the WU website changed the formatting of their data presentation. The following lists differences in previous and current format:

- When reviewing historical data, searching a date range is no longer an option as was the case previously. The new format only allows for retrieval of, at the longest, one month of record at a time.
- Monthly data no longer notes Sea Level Pressure (in), Visibility (mi), or an Event (fog, rain, snow, etc.).
- Daily data no longer notes Windchill, Visibility (mi), or Events (fog, rain, snow, etc.) at the time of measurement.

There are discrepancies in the data for Quarter 1 of 2020 between the monthly precipitation quantities and daily precipitation amounts when comparing days of data. Upon further research, WU determines a specific day's total precipitation by calculating the total amount of precipitation from 11:51:00 AM of the previous day to 11:52:00 AM on the day in question. The following are assumed:

- Total precipitation is measured in inches
- Precipitation totals are the sum of all significantly measurable amounts and any trace amounts measured.

We appreciate the opportunity to provide professional consulting services to you and we look forward to assisting you in the next quarter. Please contact Shannon Archuleta at (505) 837-6536 (Shannon.Archuleta@WestonSolutions.com) or Brad Sumrall at (505) 837-6566 (Brad.Sumrall@WestonSolutions.com) if you have any questions or need additional information.

Sincerely,
WESTON SOLUTIONS, INC.



L. Brad Sumrall, P.E.
Technical Director

Enclosures:

ATTACHMENT A: Q4 INSPECTION FORMS AND PHOTO LOGS

ATTACHMENT B: NON-QUALIFYING EVENT DATA

ATTACHMENT A: Q4 INSPECTION FORMS AND PHOTO LOGS

STREETS SATELLITE #2

City of Albuquerque

Street Maintenance Satellite #2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☑ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/16/20
Time: 1242
Inspector: Andrew Brenner
Signature: Andrew L Brenner

Weather: cloudy, snowy
Storm Precip: .15
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	SS2
Flow Observed:	☒ Yes ☐ No
Description of Monitoring Site:	
Flow Estimate (include units and method of estimation) :	<1cfs
Other Observations:	very little flow coming from site
Color (Describe):	yellowish
Turbidity:	☒ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☒ No
Suspended Solids:	☐ Yes ☒ No
Settled Solids:	☐ Yes ☒ No
Sheen Present:	☐ Yes ☒ No
Odor:	☐ Yes ☒ No
Foam Present:	☐ Yes ☒ No
Describe:	

Additional Comments:

WESTON SOLUTIONS

Date:	January 16, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Street Maintenance Satellite #2









City of Albuquerque
Street Maintenance Satellite #2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☒ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/21/20
Time: 1401
Inspector: Andrew Brenner
Signature: Andrew F. Brenner

Weather: rain, cloudy
Storm Precip: .13
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	SS2
Flow Observed:	☒ Yes ☐ No
Description of Monitoring Site:	
Flow Estimate (include units and method of estimation) :	<1 cfs
Other Observations:	
Color (Describe):	red
Turbidity:	~~☒ Clear~~ ☐ Slightly Cloudy ☐ Very Cloudy ☒ Opaque
Floating Solids:	☒ Yes ☐ No
Suspended Solids:	☒ Yes ☐ No
Settled Solids:	☐ Yes ☒ No
Sheen Present:	☐ Yes ☒ No
Odor:	☐ Yes ☒ No
Foam Present:	☐ Yes ☒ No
Describe:	

Additional Comments:

Date: January 21,2020

Event: Street Maintenance Satellite #2

Inspector: Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Street Maintenance Satellite #2	
	
	

PINO YARDS

City of Albuquerque
Pino Yards Complex

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☒ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/16/2020
Time: 1:35 pm
Inspector: Shannon Archuleta
Signature: Shannon Archuleta

Weather: Light Snow, Cloudy
Storm Precip: .15
Last 72 Hour Precip: N/A
Photo: yes

Outfall ID:	PY1	PY2	PY3
Flow Observed:	☐ Yes ☑ No	☐ Yes ☑ No	☑ Yes ☐ No
Description of Monitoring Site:			inlet into Detention pond
Flow Estimate (include units and method of estimation) :			< 1 cfs
Other Observations:			The site did not have water qual. features
Color (Describe):			Black/Brown
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☑ Opaque
Floating Solids:	☐ Yes ☐ No	☐ Yes ☐ No	☑ Yes ☐ No
Suspended Solids:	☐ Yes ☐ No	☐ Yes ☐ No	☑ Yes ☐ No
Settled Solids:	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☑ No
Sheen Present:	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☑ No
Odor:	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☑ No
Foam Present:	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☑ No
Describe:	Unable to access	Unable to access	consistent flow along both curbs

Additional Comments: Sheen present in flow (very little) but not present in sample collected.

Date:	January 16, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Shannon Archuleta (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Pino Yards Complex	
	
	

City of Albuquerque
Pino Yards Complex

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☑ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/21/2020
Time: 1:16 pm
Inspector: Shannon Archuleta
Signature:

Weather: Light Rain, Cloudy
Storm Precip: .13
Last 72 Hour Precip: N/A
Photo: Yes

Outfall ID:	PY1	PY2	PY3
Flow Observed:	☐ Yes ☑ No	☑ Yes ☐ No	☑ Yes ☐ No
Description of Monitoring Site:		Southern River Drain	Pond entrance
Flow Estimate (include units and method of estimation) :		< 1 cfs	< 1 cfs
Other Observations:		Road salt/dirt in open @ facility	Flowing in to pond from Both curbs
Color (Describe):		Pink/tan	Light Tan
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☐ Clear ☑ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☐ No	☐ Yes ☑ No	☑ Yes ☐ No
Suspended Solids:	☐ Yes ☐ No	☑ Yes ☐ No	☑ Yes ☐ No
Settled Solids:	☐ Yes ☐ No	☐ Yes ☑ No	☐ Yes ☑ No
Sheen Present:	☐ Yes ☐ No	☑ Yes ☐ No	☐ Yes ☑ No
Odor:	☐ Yes ☐ No	☐ Yes ☑ No	☐ Yes ☑ No
Foam Present:	☐ Yes ☐ No	☐ Yes ☑ No	☐ Yes ☑ No
Describe:	No flow observed; grate completely covered w/ leaves; see photos		Heavy flow

Additional Comments: Water ponding around sock by drains (PY1 & PY2); see photos

Date:	January 21, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Shannon Archuleta (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Pino Yards Complex





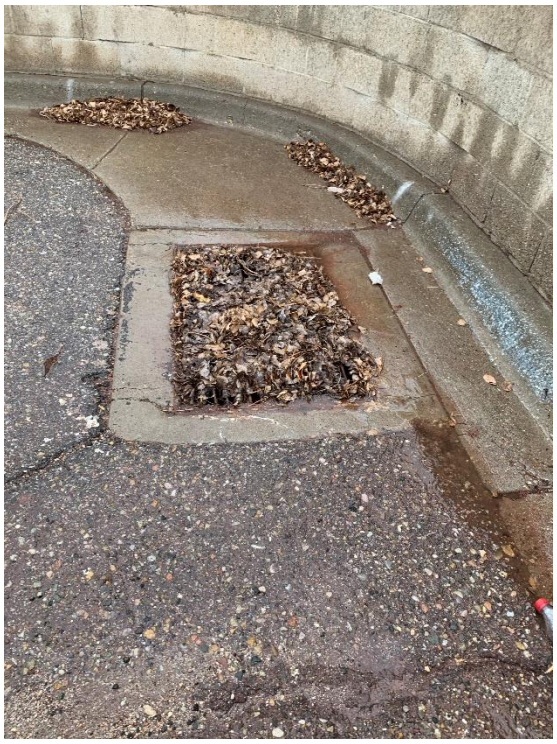







DRAINS TO RIVER


DRAINS TO RIVER




DRAINS TO




DRAINS TO RIVER



BALLOON FIESTA PARK/ GOLF TRAINING CENTER

City of Albuquerque

Balloon Fiesta Park and Golf Training Center

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☒ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/16/2020
Time: 1:00 PM
Inspector: Shannon Archuleta
Signature: Shan Archuleta

Weather: Light snow, cloudy
Storm Precip: .15
Last 72 Hour Precip: NO
Photo: yes

Outfall ID:	BFP1	BFP2	BFP3
Flow Observed:	☑ Yes ☐ No	☐ Yes ☑ No	☐ Yes ☑ No
Description of Monitoring Site:			
Flow Estimate (include units and method of estimation) :	< 1 cfs		
Other Observations:			
Color (Describe):	Clear		
Turbidity:	☑ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☑ No	☐ Yes ☐ No	☐ Yes ☐ No
Suspended Solids:	☐ Yes ☑ No	☐ Yes ☐ No	☐ Yes ☐ No
Settled Solids:	☑ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Sheen Present:	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Odor:	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Foam Present:	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Describe:	Some small rock debris	Unable to access drain, inlet behind fence.	No observed flow

Additional Comments: Geese Feces present at Sight. Minimal flow, snow collecting on grass.

City of Albuquerque

Balloon Fiesta Park and Golf Training Center

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☑ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/16/2020
Time: 1:00 pm
Inspector: Shannon Archuleta
Signature: Shannon Archuleta

Weather: Light snow, cloudy
Storm Precip: .15
Last 72 Hour Precip: N/A
Photo: yes

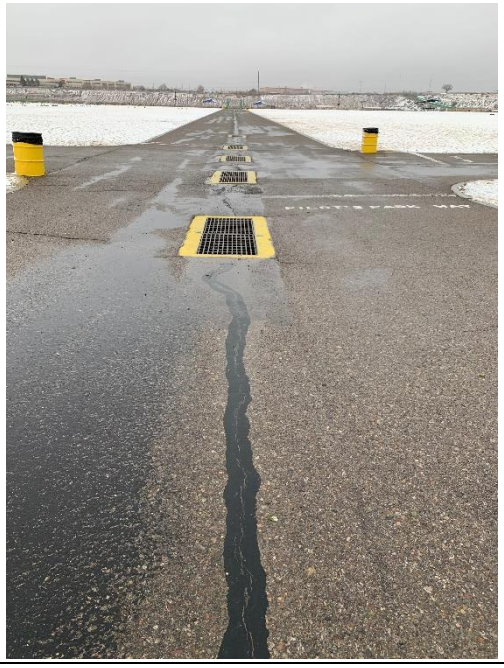
Outfall ID:	BFP4	BFP5
Flow Observed:	☐ Yes ☑ No	☐ Yes ☑ No
Description of Monitoring Site:		
Flow Estimate (include units and method of estimation) :		
Other Observations:		
Color (Describe):		
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☐ No	☐ Yes ☐ No
Suspended Solids:	☐ Yes ☐ No	☐ Yes ☐ No
Settled Solids:	☐ Yes ☐ No	☐ Yes ☐ No
Sheen Present:	☐ Yes ☐ No	☐ Yes ☐ No
Odor:	☐ Yes ☐ No	☐ Yes ☐ No
Foam Present:	☐ Yes ☐ No	☐ Yes ☐ No
Describe:	No observed flow.	No observed flow.

Additional Comments:

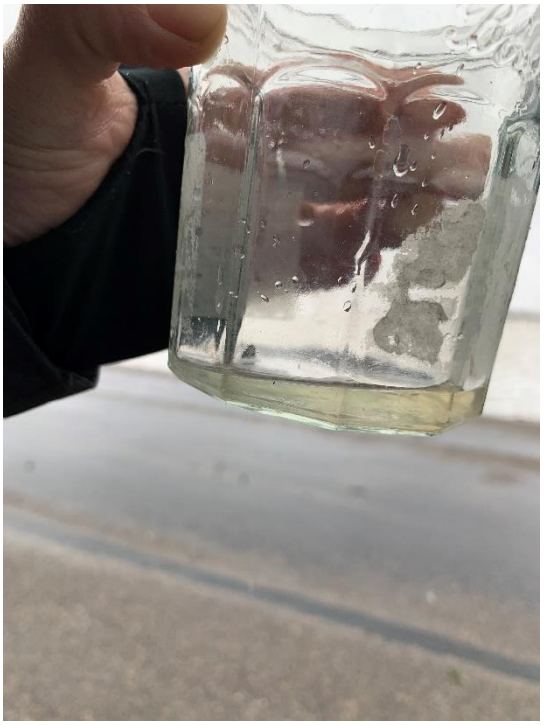
Date:	January 16, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Shannon Archuleta (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Balloon Fiesta Park and Golf Training Center










18







ARROYO DEL OSO GOLF COURSE

City of Albuquerque

Arroyo Del Oso Golf Course

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☒ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/16/2020
Time: 1:55
Inspector: Shannon Archuleta
Signature: Shannon Archuleta

Weather: Light Snow, Cloudy
Storm Precip: .15
Last 72 Hour Precip: N/A
Photo: yes

Outfall ID:	ADO1	ADO2
Flow Observed:	☐ Yes ☒ No	☑ Yes ☐ No
Description of Monitoring Site:		West side of golf course
Flow Estimate (include units and method of estimation) :		< 1 cfs
Other Observations:		flow slightly diverted by organic debris build up
Color (Describe):		White/clear
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☑ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☐ No	☑ Yes ☐ No
Suspended Solids:	☐ Yes ☐ No	☑ Yes ☐ No
Settled Solids:	☐ Yes ☐ No	☐ Yes ☑ No
Sheen Present:	☐ Yes ☐ No	☐ Yes ☑ No
Odor:	☐ Yes ☐ No	☐ Yes ☑ No
Foam Present:	☐ Yes ☐ No	☐ Yes ☑ No
Describe:	No flow present.	clear sample w/ little organic matter suspended

Additional Comments:

WESTON SOLUTIONS

Date:	January 16, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Shannon Archuleta (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Arroyo Del Osos Golf Course









City of Albuquerque

Arroyo Del Oso Golf Course

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☑ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/21/2020
Time: 12:52 pm
Inspector: Shannon Archuleta
Signature: Shannon Archuleta

Weather: Light Rain, cloudy
Storm Precip: .13
Last 72 Hour Precip: N/A
Photo: Yes

@ 1:02 pm

Outfall ID:	ADO1	ADO2
Flow Observed:	☐ Yes ☒ No	☒ Yes ☐ No
Description of Monitoring Site:		West outflow
Flow Estimate (include units and method of estimation) :		< 1 cfs
Other Observations:		~~80~~ leaves & debris blocking part of arroyo
Color (Describe):		clear
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☑ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☐ No	☐ Yes ☑ No
Suspended Solids:	☐ Yes ☐ No	☐ Yes ☑ No
Settled Solids:	☐ Yes ☐ No	☐ Yes ☑ No
Sheen Present:	☐ Yes ☐ No	☐ Yes ☑ No
Odor:	☐ Yes ☐ No	☐ Yes ☑ No
Foam Present:	☐ Yes ☐ No	☐ Yes ☑ No
Describe:	No flow observed	

Additional Comments: No flow conditions @ ADO1, consistent & slightly increasing @ ADO2

Date:	January 21, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Shannon Archuleta (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Arroyo Del Osos Golf Course









FIRE DEPARTMENT MECHANIC

City of Albuquerque

Fire Department Mechanic Shop

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☒ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/16/20
Time: 1251
Inspector: Andrew Brenner
Signature: Andrew E Brenner

Weather: cloudy, snow
Storm Precip: .15
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	FM1	FM2
Flow Observed:	☒ Yes ☐ No	☐ Yes ☒ No
Description of Monitoring Site:	valley gutter w/ wattle @ end of gutter	
Flow Estimate (include units and method of estimation) :	<1cfs	
Other Observations:	~~All~~ runoff collected in valley gutter + was flowing off site	
Color (Describe):	gray	
Turbidity:	☐ Clear ☐ Slightly Cloudy ☒ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☒ No	☐ Yes ☐ No
Suspended Solids:	☒ Yes ☐ No	☐ Yes ☐ No
Settled Solids:	☒ Yes ☐ No	☐ Yes ☐ No
Sheen Present:	☐ Yes ☒ No	☐ Yes ☐ No
Odor:	☐ Yes ☒ No	☐ Yes ☐ No
Foam Present:	☐ Yes ☒ No	☐ Yes ☐ No
Describe:		no flow observed

Additional Comments:

Date:	January 16, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Fire Department Mechanic Shop









City of Albuquerque

Fire Department Mechanic Shop

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☒ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/21/20
Time: 1417
Inspector: Andrew Brenner
Signature: Andrew E Brenner

Weather: cloudy, rain
Storm Precip: .13
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	FM1	FM2
Flow Observed:	☒ Yes ☐ No	☒ Yes ☐ No
Description of Monitoring Site:		
Flow Estimate (include units and method of estimation) :	< 1 cfs	< 1 cfs
Other Observations:		
Color (Describe):	clear	clear
Turbidity:	☒ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☒ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☒ Yes ☐ No	☒ Yes ☐ No
Suspended Solids:	☐ Yes ☒ No	☐ Yes ☒ No
Settled Solids:	☒ Yes ☐ No	☒ Yes ☐ No
Sheen Present:	☐ Yes ☒ No	☐ Yes ☒ No
Odor:	☐ Yes ☒ No	☐ Yes ☒ No
Foam Present:	☐ Yes ☒ No	☒ Yes ☐ No
Describe:		

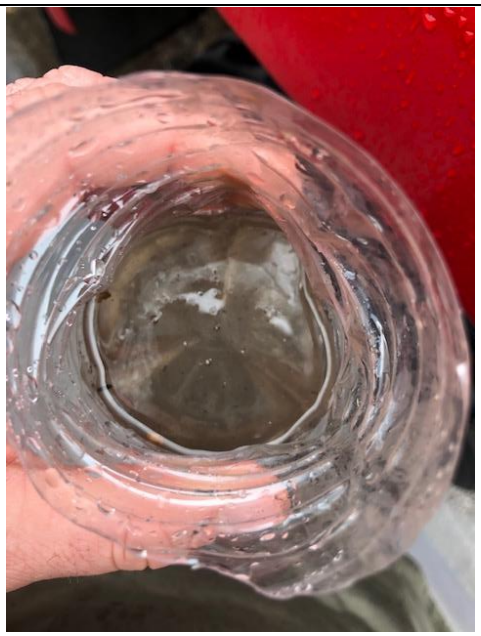
Additional Comments:

WESTON SOLUTIONS

Date:	January 21,2020
Event:	Fire Department Mechanic Shop
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Fire Department Mechanic Shop	
 FM1	 FM1
 FM1	 FM1

 FM2	 FM2
 FM2	 FM2

4TH STREET FUELS

City of Albuquerque
4th Street Fuel Station

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☒ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/16/20
Time: 1249
Inspector: Andrew Brenner
Signature: Andrew L Brenner

Weather: Cloudy, Snowy
Storm Precip: .15
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	FS1
Flow Observed:	☐ Yes ☒ No
Description of Monitoring Site:	
Flow Estimate (include units and method of estimation) :	
Other Observations:	
Color (Describe):	
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☐ No
Suspended Solids:	☐ Yes ☐ No
Settled Solids:	☐ Yes ☐ No
Sheen Present:	☐ Yes ☐ No
Odor:	☐ Yes ☐ No
Foam Present:	☐ Yes ☐ No
Describe:	No flow observed

Additional Comments:

Date:	January 16, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

4th Street Fuel Station	
	

City of Albuquerque
4th Street Fuel Station

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☒ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: ~~1/20~~ AED 1/21/20
Time: 1414
Inspector: Andrew Brenner
Signature: Andrew E Brenner

Weather: cloudy, rain
Storm Precip: .13
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	FS1
Flow Observed:	☒ Yes ☐ No
Description of Monitoring Site:	
Flow Estimate (include units and method of estimation) :	<1 cfs
Other Observations:	
Color (Describe):	gray
Turbidity:	☐ Clear ☐ Slightly Cloudy ☒ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☒ No
Suspended Solids:	☐ Yes ☒ No
Settled Solids:	☐ Yes ☒ No
Sheen Present:	☐ Yes ☒ No
Odor:	☐ Yes ☒ No
Foam Present:	☐ Yes ☒ No
Describe:	

Additional Comments:

Date: January 21,2020

Event: 4th Street Fuel Station

Inspector: Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

4th Street Fuel Station	
	
	

ABQ BIOPARK ZOO

City of Albuquerque
ABQ BioPark Zoo

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☑ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/16/20
Time: 1334
Inspector: Andrew Brenner
Signature: Andrew E Brenner

Weather: cloudy, snow
Storm Precip: .13
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	BP1
Flow Observed:	☐ Yes ☒ No
Description of Monitoring Site:	
Flow Estimate (include units and method of estimation) :	
Other Observations:	
Color (Describe):	
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☐ No
Suspended Solids:	☐ Yes ☐ No
Settled Solids:	☐ Yes ☐ No
Sheen Present:	☐ Yes ☐ No
Odor:	☐ Yes ☐ No
Foam Present:	☐ Yes ☐ No
Describe:	No flow observed

Additional Comments:

Date:	January 16, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

ABQ BioPark Zoo	
	

City of Albuquerque
ABQ BioPark Zoo

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☒ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/21/20
Time: 1456
Inspector: Andrew Brenner
Signature: Andrew E Brenner

Weather: cloudy, rain
Storm Precip: .13
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	BP1
Flow Observed:	☐ Yes ☒ No
Description of Monitoring Site:	
Flow Estimate (include units and method of estimation) :	
Other Observations:	
Color (Describe):	
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☐ No
Suspended Solids:	☐ Yes ☐ No
Settled Solids:	☐ Yes ☐ No
Sheen Present:	☐ Yes ☐ No
Odor:	☐ Yes ☐ No
Foam Present:	☐ Yes ☐ No
Describe:	

Additional Comments:

Date: January 21,2020

Event: ABQ BioPark

Inspector: Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

ABQ BioPark	
	

6TH STREET PARKS MANAGEMENT

City of Albuquerque

6th Street Park Management

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☒ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/16/20
Time: 1303
Inspector: Andrew Brenner
Signature: Andrew F Brenner

Weather: Cloudy, Snow
Storm Precip: .15
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	6PM1
Flow Observed:	☐ Yes ☒ No
Description of Monitoring Site:	
Flow Estimate (include units and method of estimation) :	
Other Observations:	
Color (Describe):	
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☐ No
Suspended Solids:	☐ Yes ☐ No
Settled Solids:	☐ Yes ☐ No
Sheen Present:	☐ Yes ☐ No
Odor:	☐ Yes ☐ No
Foam Present:	☐ Yes ☐ No
Describe:	No flow observed

Additional Comments:

WESTON SOLUTIONS

Date:	January 16, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

6th Street Park Management	
	

City of Albuquerque
6th Street Park Management

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☒ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/21/20
Time: 1439
Inspector: Andrew Brenner
Signature: Andrew L Brenner

Weather: rain, cloudy
Storm Precip: .13
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	6PM1
Flow Observed:	☐ Yes ☒ No
Description of Monitoring Site:	AFB ~~puddle~~ ponding of runoff
Flow Estimate (include units and method of estimation) :	AFB < 1 cfs
Other Observations:	
Color (Describe):	brown
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☒ Opaque
Floating Solids:	☐ Yes ☒ No
Suspended Solids:	☐ Yes ☒ No
Settled Solids:	☐ Yes ☒ No
Sheen Present:	☐ Yes ☒ No
Odor:	☐ Yes ☒ No
Foam Present:	☐ Yes ☒ No
Describe:	

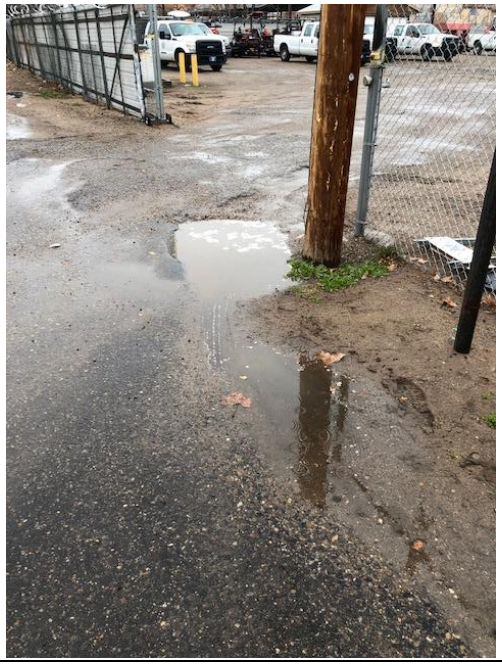
Additional Comments:

Date: January 21,2020

Event: 6th Street Maintenance

Inspector: Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

6th Street Maintenance	
	
	

EAGLE ROCK CONVENIENCE CENTER

City of Albuquerque Solid Waste Management Department

Eagle Rock Convenience Center

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☑ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/16/2020
Time: 1:13 pm
Inspector: Shannon Archuleta
Signature: Shan Archu

Weather: Light Snow, Cloudy
Storm Precip: .15
Last 72 Hour Precip: N/A
Photo: Yes

ER01

Outfall ID:	ER01 ~~ER02~~ (circle one)	ER03
Flow Observed:	☑ Yes ☐ No	☐ Yes ☒ No
Description of Monitoring Site:	North Side	Pond
Flow Estimate (include units and method of estimation) :	< 1 cfs	
Other Observations:	Sheen in flow but not in collection	
Color (Describe):	Black/Brown	
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☑ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☑ Yes ☐ No	☐ Yes ☐ No
Suspended Solids:	☑ Yes ☐ No	☐ Yes ☐ No
Settled Solids:	☑ Yes ☐ No	☐ Yes ☐ No
Sheen Present:	☐ Yes ☑ No	☐ Yes ☐ No
Odor:	☐ Yes ☑ No	☐ Yes ☐ No
Foam Present:	☐ Yes ☑ No	☐ Yes ☐ No
Describe:		No observed flow

* No flow observed

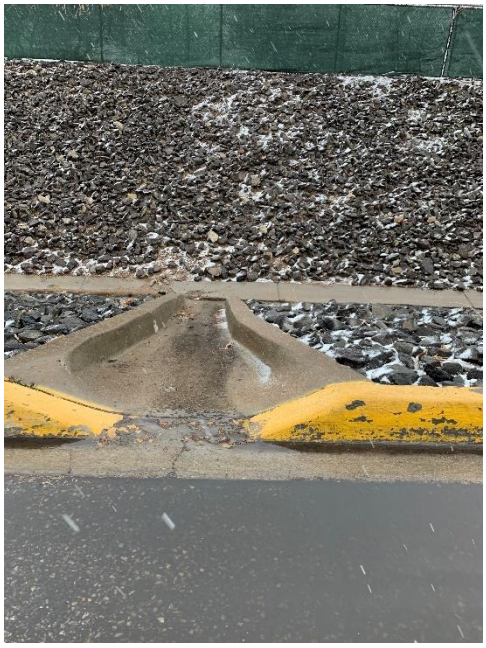
Additional Comments: Minimal flow

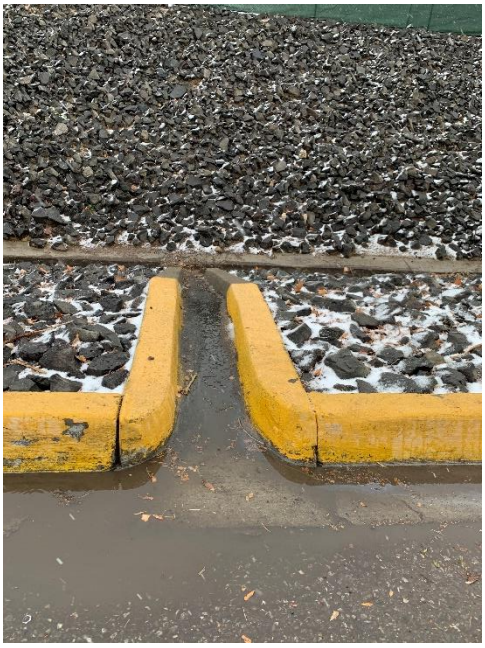
WESTON SOLUTIONS

Date:	January 16, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Shannon Archuleta (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Eagle Rock Convenience Center













City of Albuquerque Solid Waste Management Department

Eagle Rock Convenience Center

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☑ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/21/2020
Time: 1:37 PM
Inspector: Shannon Archuleta
Signature: Shannon Archuleta

Weather: Light Rain, Cloudy
Storm Precip: .13
Last 72 Hour Precip: N/A
Photo: Yes

Outfall ID:	ER01/ER02 (circle one)	ER03
Flow Observed:	☑ Yes ☐ No	☑ Yes ☐ No
Description of Monitoring Site:	South Inlet	Pond, North Side
Flow Estimate (include units and method of estimation) :	< 1 cfs	< 1 cfs
Other Observations:		
Color (Describe):	Brown	Black / Brown
Turbidity:	☐ Clear ☐ Slightly Cloudy ☑ Very Cloudy ☐ Opaque	☐ Clear ☑ Slightly Cloudy ☐ Very Cloudy ☑ Opaque
Floating Solids:	☐ Yes ☑ No	☐ Yes ☑ No
Suspended Solids:	☑ Yes ☐ No	☑ Yes ☐ No
Settled Solids:	☑ Yes ☐ No	☐ Yes ☑ No
Sheen Present:	☑ Yes ☐ No	☐ Yes ☑ No
Odor:	☐ Yes ☑ No	☐ Yes ☑ No
Foam Present:	☐ Yes ☑ No	☐ Yes ☑ No
Describe:	Heavier flow	very Black flow, Heavier flow

ER02 ☑ YES

North Inlet

< 1 cfs

- Sheen present in flow, but not in sample
- Light Tan color

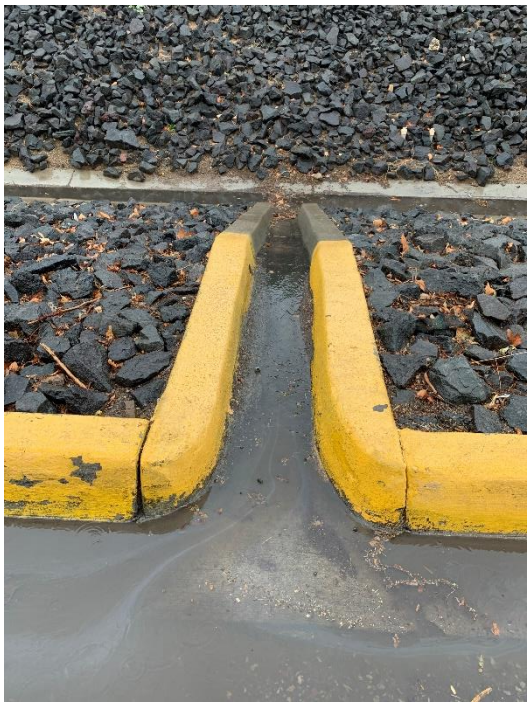
Very Light flow

Additional Comments: ER03: Odor from flow source, but not in sample

Date:	January 21, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Shannon Archuleta (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Eagle Rock Convenience Center	
	
	

















EDITH YARD

City of Albuquerque Solid Waste Management Department
Edith Yards Maintenance Facility

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

☒ Q1 ☐ Q2 ☐ Q3 ☐ Q4

Date: 1/21/20
Time: 1341
Inspector: Andrew Brenner
Signature: Andrew F. Brenner

Weather: cloudy, rain
Storm Precip: .14
Last 72 Hour Precip: no
Photo: yes

Outfall ID:	EY01	EY02	EY03
Flow Observed:	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No
Description of Monitoring Site:			
Flow Estimate (include units and method of estimation) :		<1cfs	<1cfs
Other Observations:			
Color (Describe):		black	gray
Turbidity:	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☐ Opaque	☐ Clear ☐ Slightly Cloudy ☐ Very Cloudy ☒ Opaque	☐ Clear ☒ Slightly Cloudy ☐ Very Cloudy ☐ Opaque
Floating Solids:	☐ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No
Suspended Solids:	☐ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No
Settled Solids:	☐ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No
Sheen Present:	☐ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No
Odor:	☐ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No
Foam Present:	☐ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No
Describe:			

Additional Comments:

Date: January 21,2020

Event: Edith Yards Maintenance Facility

Inspector: Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Edith Yards Maintenance Facility	
 EY01	 EY01
 EY02	 EY02



EY02



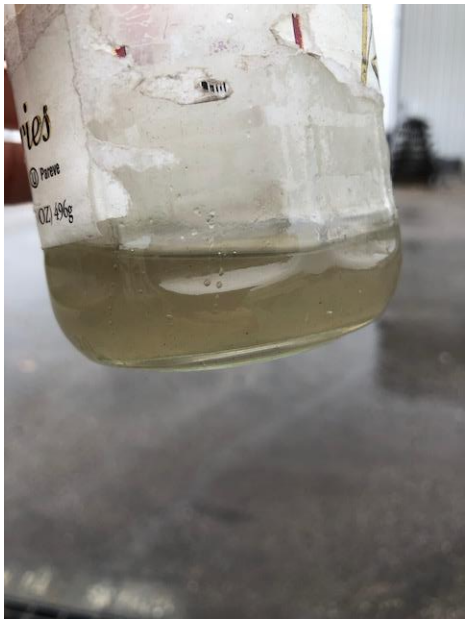
EY02



EY03



EY03

 EY03	 EY03

ATTACHMENT B: NON-QUALIFYING DATA

Search Locations

Log in (/log…

Recent Cities
Albuquerque, NM (87116) (weather/us/nm/albuquerque/35.05,-106.61)

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

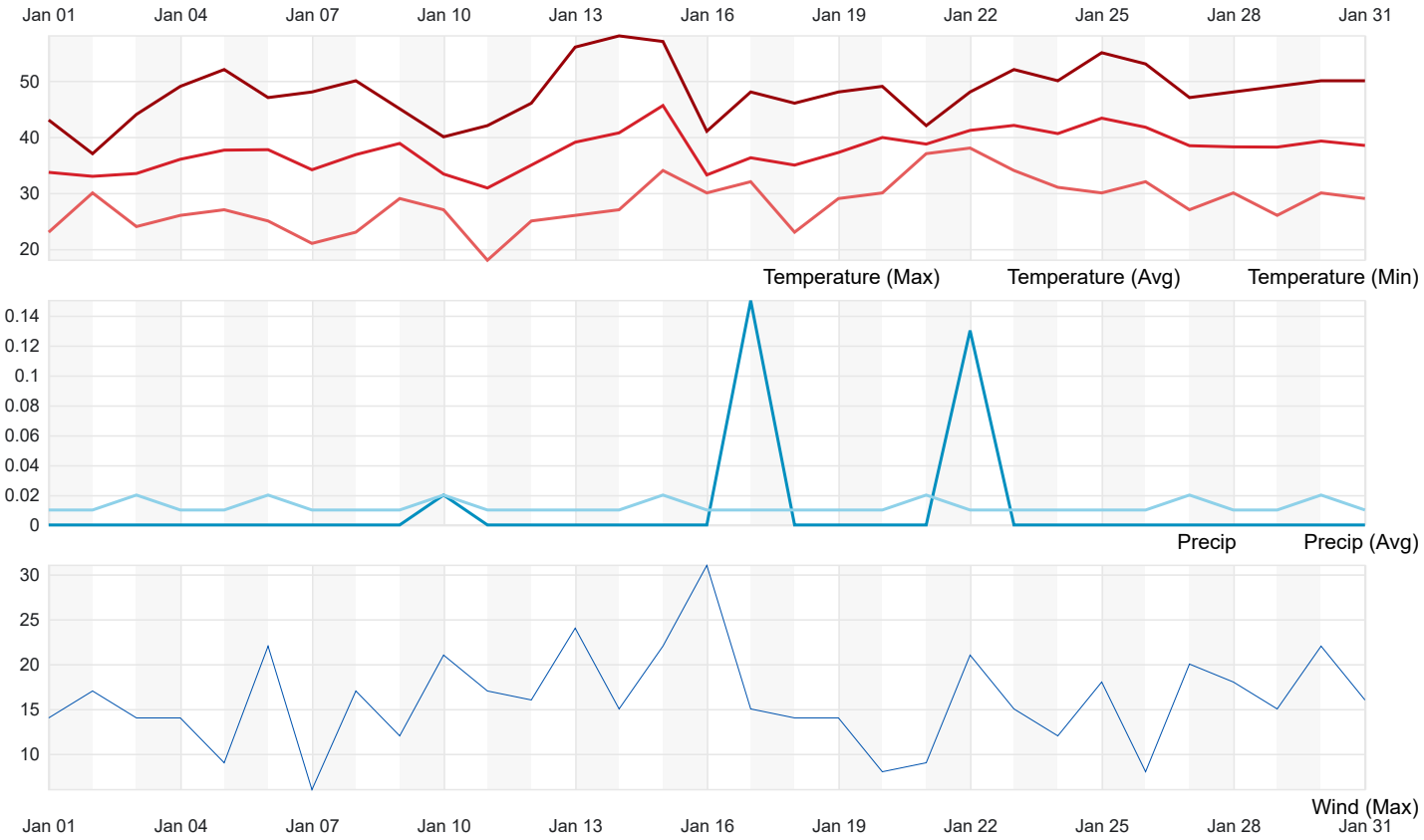
70° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily (/history/daily/us/nm/albuquerque/KABQ/date/2020-1-1) Weekly (/history/weekly/us/nm/albuquerque/KABQ/date/2020-1-1) **Monthly** (/history/monthly/us/nm/albuquerque/KABQ/date/2020-1-1)

January 2020 View



Summary

Temperature (° F)	Max	Average	Min
Max Temperature	58	48.06	37
Avg Temperature	45.58	37.66	30.88
Min Temperature	38	28.16	18

Dew Point (° F)	Max	Average	Min
Dew Point	38	19.36	3

Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.15	0.01	0.00	0.30
Snowdepth	0.00	0.00	0.00	0.00

Wind	Max	Average	Min
Wind	31	7.15	0
Gust Wind	41	1.91	0

Sea Level Pressure	Max	Average	Min
Sea Level Pressure	25.03	24.74	24.37

Daily Observations

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Jan	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	43	33.7	23	22	16.0	12	65	49.8	32	14	7.0	0	24.7	24.5	24.4	0.00
2	37	33.0	30	23	21.2	20	69	62.0	52	17	11.5	6	24.7	24.5	24.4	0.00
3	44	33.5	24	19	16.7	14	69	52.1	32	14	7.8	0	24.9	24.8	24.7	0.00
4	49	36.0	26	21	18.8	17	71	51.7	31	14	4.8	0	25.0	25.0	24.9	0.00
5	52	37.6	27	22	20.1	19	72	51.3	28	9	4.1	0	25.0	24.9	24.8	0.00
6	47	37.7	25	20	12.5	6	57	38.1	19	22	11.0	3	25.0	24.9	24.8	0.00
7	48	34.1	21	14	11.7	10	63	41.3	24	6	3.1	0	25.0	24.9	24.8	0.00
8	50	36.8	23	16	13.0	9	68	41.2	22	17	5.4	0	24.8	24.6	24.5	0.00
9	45	38.8	29	25	15.5	9	64	39.8	26	12	5.2	0	24.6	24.6	24.5	0.00
10	40	33.4	27	31	23.1	8	96	69.5	38	21	10.1	0	24.8	24.6	24.5	0.02
11	42	30.9	18	12	8.6	4	65	41.5	23	17	8.2	0	24.8	24.7	24.6	0.00
12	46	35.0	25	17	13.1	11	63	42.1	24	16	6.3	0	24.7	24.7	24.6	0.00
13	56	39.0	26	15	11.9	9	56	36.2	15	24	6.5	0	24.8	24.7	24.6	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
14	58	40.7	27	16	12.5	10	58	34.8	15	15	6.8	0	24.8	24.7	24.6	0.00
15	57	45.6	34	15	11.0	3	44	26.5	12	22	6.8	0	24.8	24.8	24.7	0.00
16	41	33.2	30	31	25.9	10	96	79.3	29	31	10.5	0	24.9	24.8	24.8	0.00
17	48	36.3	32	38	31.1	14	100	84.3	41	15	5.1	0	24.9	24.7	24.7	0.15
18	46	35.0	23	16	13.6	9	72	44.2	24	14	5.9	0	25.0	24.9	24.9	0.00
19	48	37.2	29	21	17.3	15	61	46.0	29	14	8.3	0	25.0	24.9	24.9	0.00
20	49	39.9	30	26	22.6	20	72	51.7	32	8	4.6	0	25.0	24.9	24.9	0.00
21	42	38.7	37	38	33.6	27	97	82.8	62	9	3.6	0	24.9	24.7	24.6	0.00
22	48	41.1	38	38	31.9	28	100	72.1	48	21	10.8	0	24.8	24.7	24.6	0.13
23	52	42.0	34	29	27.4	25	79	58.0	35	15	8.3	0	24.8	24.8	24.7	0.00
24	50	40.6	31	28	26.8	25	79	59.7	41	12	4.6	0	24.8	24.7	24.6	0.00
25	55	43.3	30	28	25.0	21	79	51.2	27	18	9.6	0	24.8	24.7	24.7	0.00
26	53	41.7	32	28	24.6	23	73	52.6	32	8	3.1	0	24.8	24.8	24.7	0.00
27	47	38.4	27	35	26.5	21	81	63.3	47	20	8.4	0	24.7	24.6	24.6	0.00
28	48	38.2	30	21	17.5	13	59	44.8	25	18	8.4	0	24.8	24.7	24.7	0.00
29	49	38.2	26	19	16.9	14	71	44.9	26	15	7.5	0	24.7	24.6	24.6	0.00
30	50	39.3	30	24	18.5	6	64	46.1	18	22	11.6	5	24.8	24.7	24.6	0.00
31	50	38.5	29	22	15.5	8	69	43.1	19	16	6.8	0	24.9	24.9	24.8	0.00

e=colorbox&utm_source=theweatherchannel-wunderground&utm_medium=referral&utm_content=thumbnails-b:History Thumbnails:)
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(https://wikibuy.com/blog/is-amazon-actually-giving-you-the-best-price-779e00e8958e?hno=true&utm_source=jaguar11&utm_campaign=2449978&utm_term=250381195)

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utm_content=4dee27_unboxing.png&utm_source=taboola&utm_medium=cpc&utm_campaign=Predictive+Algorithm_Why+Firstleaf+Page_Desktop&t_campaign=Predictive+Algorithm_Why+Firstlea
wunderground&t_siteid=1194714&t_thumbnail=https%3A%2F%2Fconsole.brax-cdn.com%2Fcreatives%2F338f3185-984d-4592-b143-
e100ca7011e2%2Funboxing_41294887bc99fcb02106661709e79168.1200x800.png&t_title=Our+%245+Wines+Are+Better+Than+Most+%2450+Wines&t_platform=Desktop)

Our $5 Wines Are Better Than Most $50 Wines
Firstleaf

(https://page.firstleaf.club/why-firstleaf?
utm_content=4dee27_unboxing.png&utm_source=taboola&utm_medium=cpc&utm_campaign=Predictive+Algorithm_Why+Firstleaf+Page_Desktop&t_campaign=Predictive+Algorithm_Why+Firstlea
wunderground&t_siteid=1194714&t_thumbnail=https%3A%2F%2Fconsole.brax-cdn.com%2Fcreatives%2F338f3185-984d-4592-b143-
e100ca7011e2%2Funboxing_41294887bc99fcb02106661709e79168.1200x800.png&t_title=Our+%245+Wines+Are+Better+Than+Most+%2450+Wines&t_platform=Desktop)
(https://www.fool.com/mms/mark/double-down-2?utm_source=taboola&utm_medium=contentmarketing&utm_campaign=sar-
doubledown2&aid=9187&paid=9187&waid=9187&source=esatabwdg0210889&psource=esatabwdg0210889&wsource=esatabwdg0210889&utm_source=taboola&utm_medium=referral)

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Recent Cities
Albuquerque, NM (87116) (weather/us/nm/albuquerque/35.05,-106.61)

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

70° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

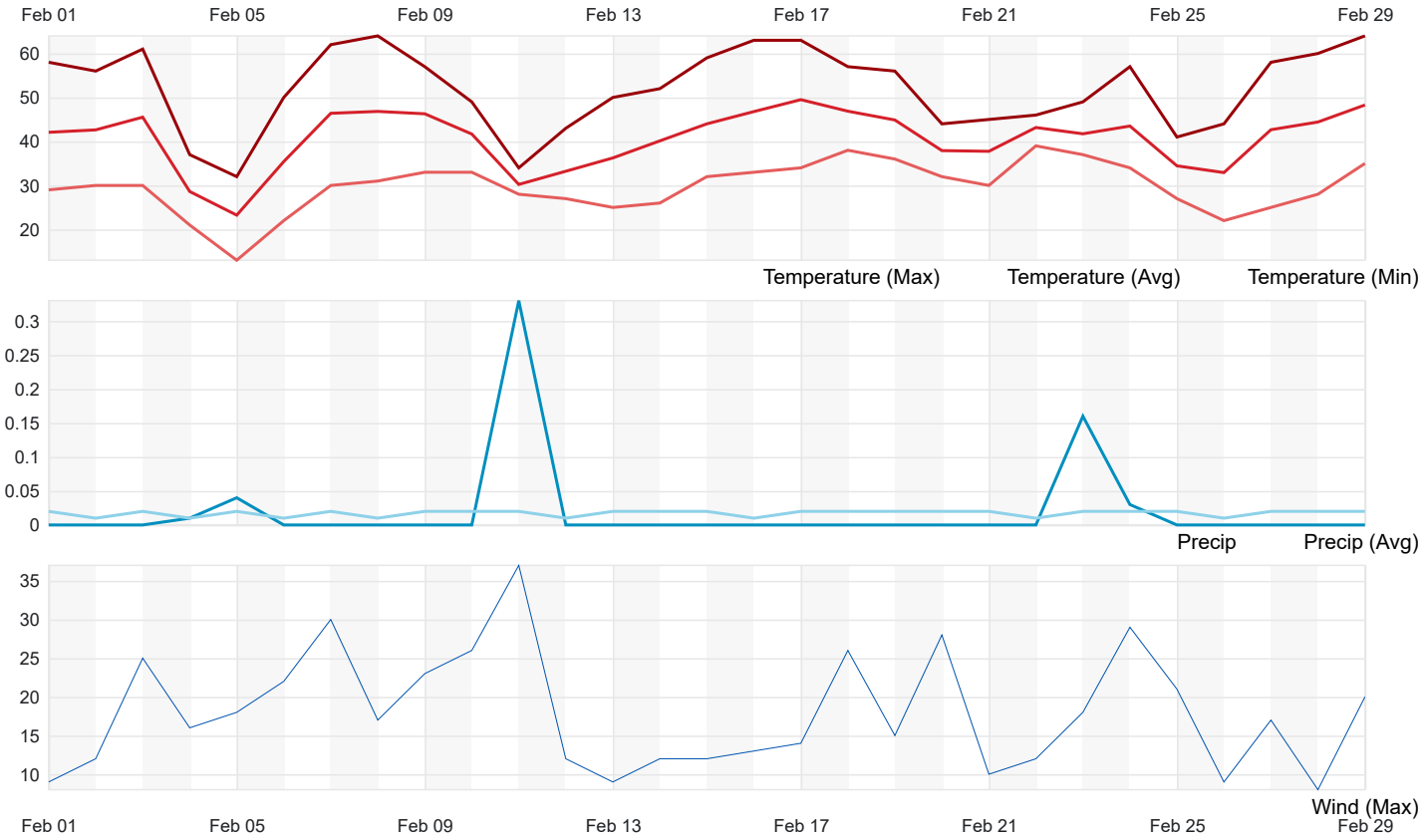
HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily Weekly **Monthly**

(/history/daily/us/nm/albuquerque/KABQ/date/2020-2-1) (/history/weekly/us/nm/albuquerque/KABQ/date/2020-2-1) **2-1)**

February 2020 View



Summary

Temperature (° F)	Max	Average	Min
Max Temperature	64	52.1	32
Avg Temperature	49.5	40.6	23.25
Min Temperature	39	29.66	13

Dew Point (° F)	Max	Average	Min
Dew Point	44	20.73	-13

Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.33	0.02	0.00	0.57
Snowdepth	0.00	0.00	0.00	0.00

Wind	Max	Average	Min
Wind	37	8.29	0
Gust Wind	48	3.22	0

Sea Level Pressure	Max	Average	Min
Sea Level Pressure	25.03	24.7	24.22

Daily Observations

Time	Temperature (° F)	Dew Point (° F)	Humidity (%)	Wind Speed (mph)	Pressure (Hg)	Precipitation (in)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Feb	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	58	42.1	29	23	17.9	13	55	39.7	23	9	3.7	0	25.0	24.9	24.9	0.00
2	56	42.6	30	24	20.7	14	72	43.8	25	12	6.4	0	24.9	24.7	24.5	0.00
3	61	45.5	30	27	19.6	14	60	37.8	20	25	13.5	0	24.5	24.4	24.2	0.00
4	37	28.6	21	29	22.3	12	92	77.4	65	16	7.1	0	24.6	24.5	24.4	0.01
5	32	23.3	13	13	2.9	-5	81	45.8	21	18	8.4	0	24.6	24.5	24.5	0.04
6	50	35.4	22	22	13.0	3	54	40.3	31	22	10.2	0	24.6	24.5	24.4	0.00
7	62	46.4	30	26	21.7	18	72	41.9	18	30	8.4	0	24.7	24.6	24.5	0.00
8	64	46.8	31	23	18.6	6	64	37.2	11	17	8.5	0	24.7	24.6	24.5	0.00
9	57	46.3	33	24	17.0	12	52	32.9	18	23	11.6	0	24.6	24.6	24.5	0.00
10	49	41.7	33	40	35.0	29	96	77.6	50	26	6.2	0	24.7	24.6	24.6	0.00
11	34	30.2	28	30	23.7	19	92	76.8	66	37	23.2	0	24.7	24.6	24.6	0.33
12	43	33.2	27	27	23.8	18	93	71.3	37	12	5.7	0	24.7	24.6	24.5	0.00
13	50	36.3	25	25	21.5	19	81	58.8	32	9	5.9	0	24.8	24.7	24.7	0.00
14	52	40.1	26	31	27.4	23	88	62.9	37	12	4.8	0	24.8	24.7	24.7	0.00
15	59	44.0	32	31	23.5	18	79	49.4	22	12	6.0	0	24.8	24.7	24.7	0.00
16	63	46.8	33	28	22.4	17	57	40.7	20	13	5.5	0	24.8	24.7	24.6	0.00
17	63	49.5	34	29	26.8	24	73	44.4	23	14	5.6	0	24.6	24.6	24.5	0.00
18	57	46.9	38	31	27.2	21	70	48.2	26	26	9.8	0	24.8	24.7	24.6	0.00
19	56	44.9	36	32	29.9	28	73	57.2	34	15	5.6	0	24.8	24.7	24.7	0.00
20	44	37.9	32	32	24.8	21	73	59.9	45	28	19.6	5	25.0	24.9	24.8	0.00
21	45	37.8	30	30	25.6	22	75	62.4	49	10	3.7	0	25.0	25.0	24.9	0.00
22	46	43.2	39	44	38.4	31	97	83.9	67	12	4.1	0	24.9	24.8	24.6	0.00
23	49	41.7	37	43	36.0	27	100	82.2	43	18	8.2	0	24.7	24.6	24.6	0.16
24	57	43.5	34	30	21.0	7	79	45.8	18	29	11.0	0	24.7	24.7	24.6	0.03
25	41	34.5	27	13	2.6	-13	51	28.9	10	21	14.0	8	25.0	24.8	24.7	0.00
26	44	32.9	22	11	5.8	-2	63	36.3	15	9	4.4	0	25.0	25.0	24.9	0.00
27	58	42.7	25	12	8.3	5	53	27.3	14	17	8.5	0	24.9	24.9	24.9	0.00
28	60	44.4	28	15	11.8	8	53	28.9	13	8	4.2	0	25.0	24.9	24.8	0.00
29	64	48.3	35	17	12.0	7	46	25.5	11	20	6.5	0	24.8	24.7	24.6	0.00

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Albuquerque, NM (87116) (weather/us/nm/albuquerque/35.05,-106.61)

35.05 °N, **106.61** °W

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HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

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Daily Weekly **Monthly**

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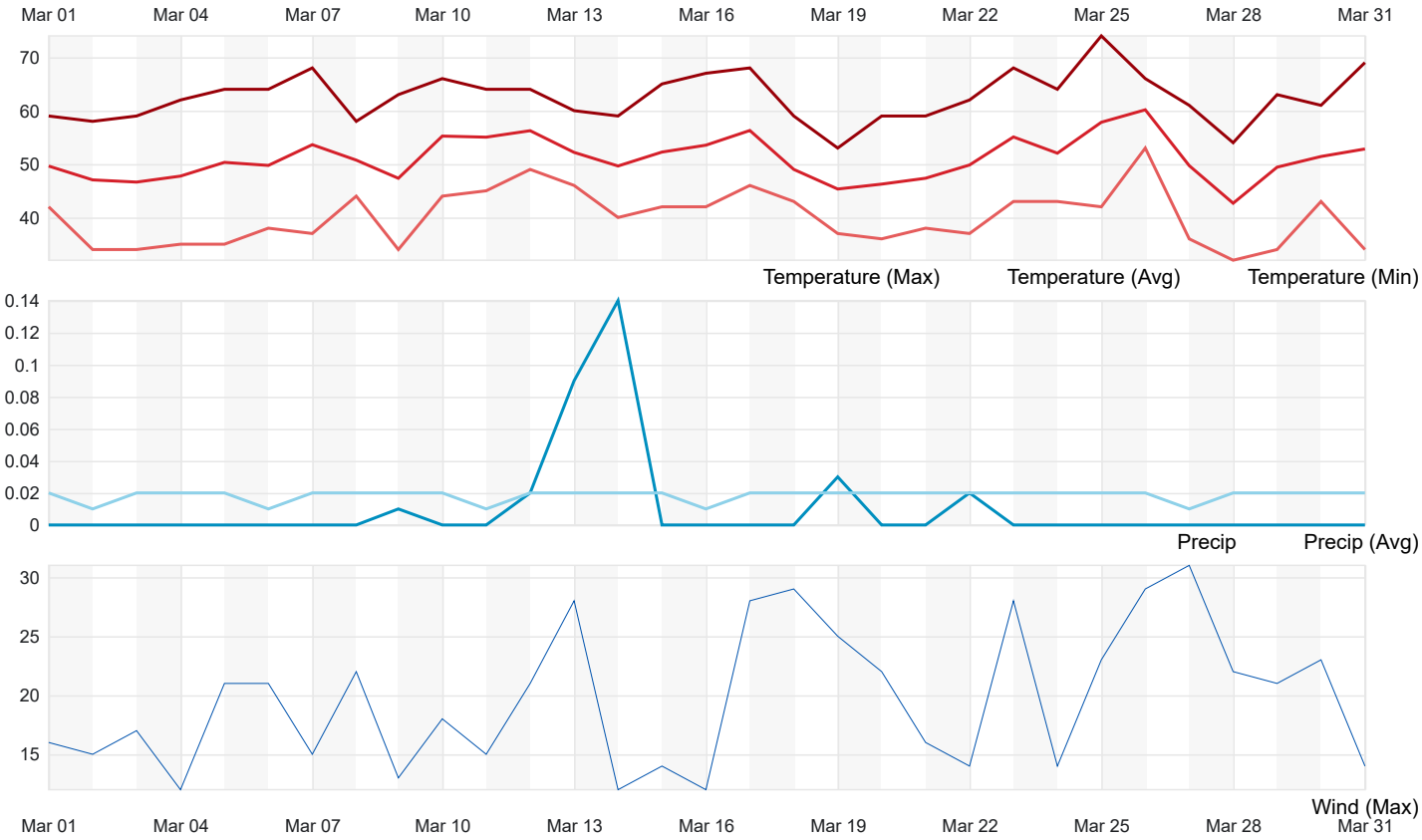
March 2020 View



Summary

Temperature (° F)	Max	Average	Min
Max Temperature	74	62.58	53
Avg Temperature	60.16	51.04	42.67
Min Temperature	53	39.94	32

Dew Point (° F)	Max	Average	Min
Dew Point	48	26.25	0

Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.14	0.01	0.00	0.31
Snowdepth	0.00	0.00	0.00	0.00

Wind	Max	Average	Min
Wind	31	9.13	0
Gust Wind	45	3.97	0

Sea Level Pressure	Max	Average	Min
Sea Level Pressure	25	24.69	24.34

Daily Observations

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Mar	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	59	49.6	42	28	23.3	11	53	36.6	25	16	7.0	0	24.6	24.6	24.5	0.00
2	58	47.0	34	27	19.7	14	67	37.1	18	15	6.4	0	24.6	24.6	24.5	0.00
3	59	46.6	34	19	15.7	13	44	30.5	16	17	8.9	0	24.6	24.5	24.5	0.00
4	62	47.8	35	20	13.0	1	52	29.0	9	12	7.3	3	24.8	24.8	24.6	0.00
5	64	50.3	35	31	21.6	14	67	36.0	15	21	8.4	0	25.0	24.9	24.8	0.00
6	64	49.8	38	27	19.1	0	55	33.5	8	21	7.6	0	25.0	24.9	24.8	0.00
7	68	53.6	37	33	28.6	25	67	41.0	21	15	7.5	0	24.8	24.7	24.6	0.00
8	58	50.7	44	43	38.0	33	85	62.9	46	22	10.2	3	24.7	24.6	24.6	0.00
9	63	47.3	34	41	31.4	17	100	62.5	17	13	6.0	0	24.8	24.8	24.7	0.01
10	66	55.2	44	38	33.2	28	63	45.0	28	18	7.6	0	24.9	24.8	24.8	0.00
11	64	55.0	45	47	41.6	35	86	61.4	48	15	7.8	0	24.9	24.8	24.7	0.00
12	64	56.3	49	46	41.6	37	86	60.8	37	21	5.8	0	24.7	24.6	24.6	0.02
13	60	52.2	46	48	41.7	23	94	70.2	27	28	14.6	0	24.7	24.6	24.5	0.09

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
14	59	49.6	40	32	29.4	27	68	47.5	29	12	5.9	0	24.8	24.8	24.7	0.14
15	65	52.3	42	36	30.6	25	65	45.8	24	14	7.8	0	24.8	24.8	24.7	0.00
16	67	53.5	42	37	23.7	11	82	37.4	12	12	6.3	0	24.8	24.7	24.6	0.00
17	68	56.3	46	38	25.2	18	59	32.0	17	28	11.9	3	24.7	24.6	24.5	0.00
18	59	49.0	43	41	37.6	32	82	66.1	36	29	10.3	0	24.6	24.6	24.4	0.00
19	53	45.3	37	42	28.5	17	90	55.3	24	25	14.8	5	24.8	24.6	24.4	0.03
20	59	46.3	36	32	26.5	24	70	48.5	26	22	12.3	5	24.9	24.8	24.8	0.00
21	59	47.4	38	42	33.7	30	77	60.7	35	16	7.6	0	24.8	24.7	24.6	0.00
22	62	49.8	37	34	24.6	18	76	41.6	19	14	6.8	0	24.8	24.7	24.7	0.02
23	68	55.1	43	29	22.6	12	51	31.2	12	28	10.6	0	24.7	24.7	24.6	0.00
24	64	52.0	43	29	24.0	18	58	36.0	18	14	6.8	0	24.8	24.7	24.6	0.00
25	74	57.8	42	26	19.1	13	41	24.6	11	23	9.5	0	24.7	24.6	24.5	0.00
26	66	60.2	53	35	32.0	29	48	35.0	25	29	15.7	3	24.6	24.5	24.5	0.00
27	61	49.7	36	37	27.2	16	64	43.8	22	31	17.8	6	24.6	24.5	24.3	0.00
28	54	42.7	32	24	13.5	6	67	35.1	15	22	10.4	5	24.7	24.7	24.6	0.00
29	63	49.4	34	17	13.2	11	40	25.5	13	21	8.9	0	24.8	24.7	24.6	0.00
30	61	51.4	43	19	15.8	13	34	25.0	16	23	10.4	0	24.8	24.7	24.6	0.00
31	69	52.8	34	21	18.2	16	52	28.3	13	14	4.3	0	24.8	24.7	24.6	0.00

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wunderground&t_siteid=1194714&t_thumbnail=https%3A%2F%2Fconsole.brax-cdn.com%2Fcreatives%2F338f3185-984d-4592-b143-
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35.05 °N, **106.61** °W

Albuquerque, NM Weather History

70° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

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Daily | Weekly | Monthly

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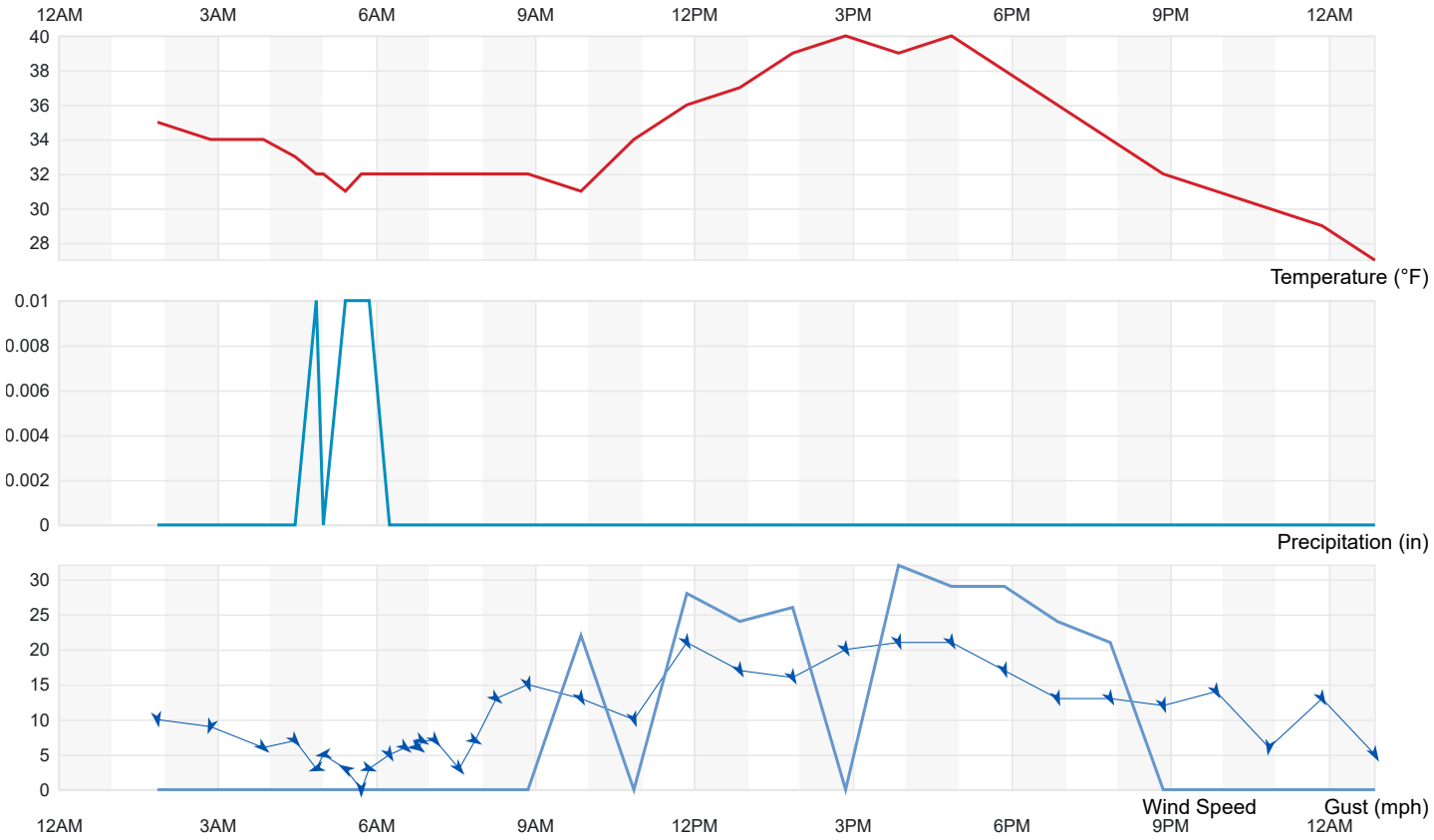
January | 10 | 2020 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	40	46	63
Low Temp	27	26	-6
Day Average Temp	33.37	36	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.02	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	23.06	-	-
High	31	-	-
Low	8	-	-
Average	23.06	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	21	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.78	-	-
Astronomy	Day Length	Rise	Set
Actual Time	9h 57m	7:16 AM	5:13 PM
Civil Twilight		6:48 AM	5:41 PM
Nautical Twilight		6:17 AM	6:12 PM
Astronomical Twilight		5:46 AM	6:43 PM
Moon: full moon		6:18 PM	8:11 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
1:52 AM	35 °F	24 °F	64 %	N	10 mph	0 mph	24.50 in	0.0 in	Cloudy
2:52 AM	34 °F	27 °F	75 %	NNE	9 mph	0 mph	24.49 in	0.0 in	Cloudy
3:52 AM	34 °F	27 °F	75 %	NW	6 mph	0 mph	24.50 in	0.0 in	Cloudy
4:28 AM	33 °F	28 °F	82 %	NW	7 mph	0 mph	24.51 in	0.0 in	Light Snow
4:52 AM	32 °F	30 °F	92 %	ENE	3 mph	0 mph	24.51 in	0.0 in	Light Snow
5:00 AM	32 °F	30 °F	92 %	E	5 mph	0 mph	24.51 in	0.0 in	Light Snow
5:25 AM	31 °F	30 °F	96 %	ESE	3 mph	0 mph	24.50 in	0.0 in	Light Snow
5:43 AM	32 °F	30 °F	92 %	CALM	0 mph	0 mph	24.49 in	0.0 in	Light Snow

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
5:52 AM	32 °F	30 °F	92 %	WNW	3 mph	0 mph	24.49 in	0.0 in	Light Snow
6:15 AM	32 °F	31 °F	96 %	NNW	5 mph	0 mph	24.49 in	0.0 in	Light Drizzle
6:33 AM	32 °F	31 °F	96 %	NW	6 mph	0 mph	24.50 in	0.0 in	Light Snow
6:47 AM	32 °F	30 °F	93 %	WNW	6 mph	0 mph	24.50 in	0.0 in	Light Snow
6:48 AM	32 °F	30 °F	93 %	NW	6 mph	0 mph	24.50 in	0.0 in	Light Snow
6:52 AM	32 °F	31 °F	96 %	WNW	7 mph	0 mph	24.50 in	0.0 in	Light Snow
7:07 AM	32 °F	31 °F	96 %	NW	7 mph	0 mph	24.51 in	0.0 in	Light Snow
7:34 AM	32 °F	31 °F	96 %	NW	3 mph	0 mph	24.51 in	0.0 in	Mostly Cloudy
7:52 AM	32 °F	29 °F	88 %	WNW	7 mph	0 mph	24.52 in	0.0 in	Cloudy
8:16 AM	32 °F	29 °F	88 %	NW	13 mph	0 mph	24.53 in	0.0 in	Cloudy
8:52 AM	32 °F	24 °F	73 %	NNW	15 mph	0 mph	24.53 in	0.0 in	Mostly Cloudy
9:52 AM	31 °F	23 °F	72 %	NNW	13 mph	22 mph	24.57 in	0.0 in	Mostly Cloudy
10:52 AM	34 °F	24 °F	67 %	NNW	10 mph	0 mph	24.59 in	0.0 in	Mostly Cloudy
11:52 AM	36 °F	22 °F	57 %	NNW	21 mph	28 mph	24.60 in	0.0 in	Mostly Cloudy / Windy
12:52 PM	37 °F	21 °F	52 %	NNW	17 mph	24 mph	24.58 in	0.0 in	Partly Cloudy
1:52 PM	39 °F	20 °F	46 %	NNW	16 mph	26 mph	24.57 in	0.0 in	Partly Cloudy
2:52 PM	40 °F	19 °F	43 %	NNW	20 mph	0 mph	24.58 in	0.0 in	Fair
3:52 PM	39 °F	18 °F	43 %	NNW	21 mph	32 mph	24.60 in	0.0 in	Partly Cloudy / Windy
4:52 PM	40 °F	18 °F	41 %	NNW	21 mph	29 mph	24.63 in	0.0 in	Partly Cloudy / Windy
5:52 PM	38 °F	14 °F	38 %	NNW	17 mph	29 mph	24.67 in	0.0 in	Partly Cloudy
6:52 PM	36 °F	14 °F	41 %	NNW	13 mph	24 mph	24.70 in	0.0 in	Mostly Cloudy
7:52 PM	34 °F	12 °F	40 %	NNW	13 mph	21 mph	24.72 in	0.0 in	Fair
8:52 PM	32 °F	12 °F	44 %	NNW	12 mph	0 mph	24.75 in	0.0 in	Fair
9:52 PM	31 °F	10 °F	42 %	NNW	14 mph	0 mph	24.76 in	0.0 in	Fair
10:52 PM	30 °F	10 °F	43 %	N	6 mph	0 mph	24.77 in	0.0 in	Fair
11:52 PM	29 °F	8 °F	41 %	NNW	13 mph	0 mph	24.78 in	0.0 in	Fair
12:52 AM	27 °F	9 °F	47 %	NNW	5 mph	0 mph	24.77 in	0.0 in	Fair

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Daily | Weekly | Monthly

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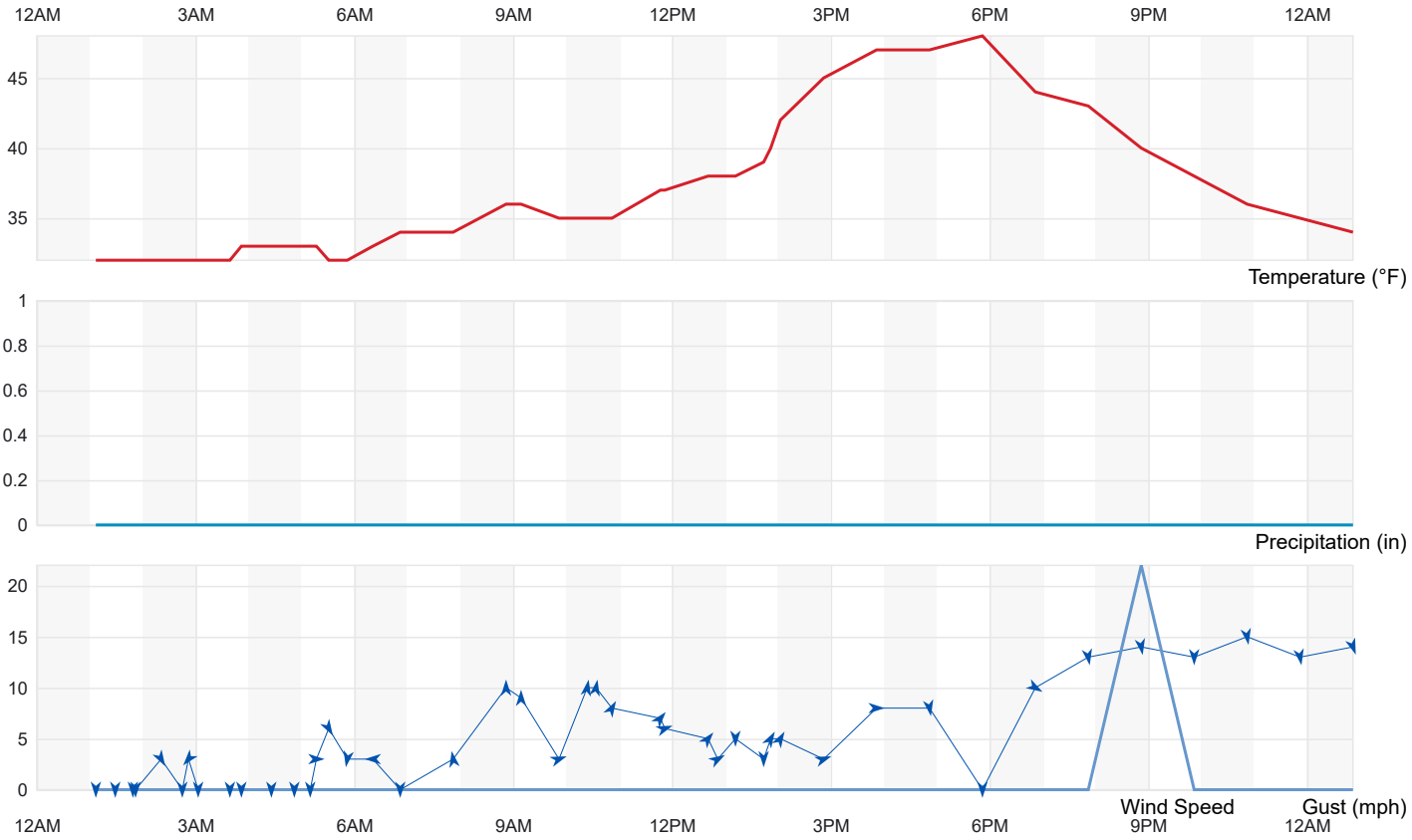
January | 17 | 2020 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	48	47	67
Low Temp	32	26	1
Day Average Temp	36.27	36	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.15	0.01	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	31.05	-	-
High	38	-	-
Low	14	-	-
Average	31.05	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	15	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.85	-	-
Astronomy	Day Length	Rise	Set
Actual Time	10h 5m	7:14 AM	5:20 PM
Civil Twilight		6:47 AM	5:47 PM
Nautical Twilight		6:16 AM	6:18 PM
Astronomical Twilight		5:45 AM	6:49 PM
Moon: waning gibbous		1:09 AM	12:59 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
1:07 AM	32 °F	31 °F	96 %	CALM	0 mph	0 mph	24.76 in	0.0 in	Wintry Mix
1:29 AM	32 °F	32 °F	100 %	CALM	0 mph	0 mph	24.75 in	0.0 in	Cloudy
1:49 AM	32 °F	30 °F	93 %	CALM	0 mph	0 mph	24.74 in	0.0 in	Cloudy
1:52 AM	32 °F	31 °F	96 %	CALM	0 mph	0 mph	24.74 in	0.0 in	Cloudy
2:21 AM	32 °F	31 °F	96 %	NNW	3 mph	0 mph	24.73 in	0.0 in	Wintry Mix
2:45 AM	32 °F	31 °F	96 %	CALM	0 mph	0 mph	24.73 in	0.0 in	Light Freezing Drizzle
2:52 AM	32 °F	31 °F	96 %	NE	3 mph	0 mph	24.73 in	0.0 in	Light Freezing Drizzle
3:03 AM	32 °F	31 °F	96 %	CALM	0 mph	0 mph	24.73 in	0.0 in	Fog

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
3:39 AM	32 °F	32 °F	100 %	CALM	0 mph	0 mph	24.73 in	0.0 in	Fog
3:52 AM	33 °F	32 °F	96 %	CALM	0 mph	0 mph	24.73 in	0.0 in	Cloudy
4:26 AM	33 °F	32 °F	96 %	CALM	0 mph	0 mph	24.72 in	0.0 in	Cloudy
4:52 AM	33 °F	32 °F	96 %	CALM	0 mph	0 mph	24.72 in	0.0 in	Light Rain
5:10 AM	33 °F	32 °F	96 %	CALM	0 mph	0 mph	24.71 in	0.0 in	Light Rain
5:17 AM	33 °F	31 °F	92 %	W	3 mph	0 mph	24.71 in	0.0 in	Light Rain
5:31 AM	32 °F	32 °F	100 %	NNW	6 mph	0 mph	24.72 in	0.0 in	Light Rain
5:52 AM	32 °F	32 °F	100 %	N	3 mph	0 mph	24.71 in	0.0 in	Wintry Mix
6:21 AM	33 °F	33 °F	100 %	E	3 mph	0 mph	24.71 in	0.0 in	Light Drizzle
6:52 AM	34 °F	34 °F	100 %	CALM	0 mph	0 mph	24.70 in	0.0 in	Light Drizzle
7:52 AM	34 °F	33 °F	96 %	S	3 mph	0 mph	24.70 in	0.0 in	Cloudy
8:52 AM	36 °F	33 °F	89 %	S	10 mph	0 mph	24.69 in	0.0 in	Cloudy
9:09 AM	36 °F	34 °F	93 %	S	9 mph	0 mph	24.70 in	0.0 in	Cloudy
9:52 AM	35 °F	34 °F	96 %	WSW	3 mph	0 mph	24.71 in	0.0 in	Cloudy
10:24 AM	35 °F	34 °F	96 %	S	10 mph	0 mph	24.71 in	0.0 in	Fog
10:34 AM	35 °F	34 °F	96 %	S	10 mph	0 mph	24.71 in	0.0 in	Fog
10:52 AM	35 °F	35 °F	100 %	SSW	8 mph	0 mph	24.70 in	0.0 in	Fog
11:47 AM	37 °F	36 °F	93 %	SW	7 mph	0 mph	24.71 in	0.0 in	Fog
11:52 AM	37 °F	35 °F	93 %	WSW	6 mph	0 mph	24.71 in	0.0 in	Fog
12:41 PM	38 °F	36 °F	93 %	SW	5 mph	0 mph	24.71 in	0.0 in	Cloudy
12:52 PM	38 °F	37 °F	97 %	WSW	3 mph	0 mph	24.70 in	0.0 in	Cloudy
1:12 PM	38 °F	37 °F	97 %	VAR	5 mph	0 mph	24.69 in	0.0 in	Cloudy
1:44 PM	39 °F	37 °F	93 %	VAR	3 mph	0 mph	24.68 in	0.0 in	Cloudy
1:52 PM	40 °F	37 °F	89 %	SSW	5 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
2:03 PM	42 °F	38 °F	85 %	SSW	5 mph	0 mph	24.67 in	0.0 in	Partly Cloudy
2:52 PM	45 °F	36 °F	71 %	WSW	3 mph	0 mph	24.67 in	0.0 in	Fair
3:52 PM	47 °F	34 °F	61 %	W	8 mph	0 mph	24.67 in	0.0 in	Partly Cloudy
4:52 PM	47 °F	32 °F	56 %	N	8 mph	0 mph	24.70 in	0.0 in	Fair
5:52 PM	48 °F	30 °F	50 %	CALM	0 mph	0 mph	24.72 in	0.0 in	Mostly Cloudy
6:52 PM	44 °F	28 °F	53 %	WNW	10 mph	0 mph	24.75 in	0.0 in	Partly Cloudy
7:52 PM	43 °F	28 °F	56 %	N	13 mph	0 mph	24.78 in	0.0 in	Fair
8:52 PM	40 °F	18 °F	41 %	N	14 mph	22 mph	24.80 in	0.0 in	Fair
9:52 PM	38 °F	16 °F	41 %	N	13 mph	0 mph	24.84 in	0.0 in	Fair
10:52 PM	36 °F	15 °F	43 %	N	15 mph	0 mph	24.85 in	0.0 in	Fair
11:52 PM	35 °F	15 °F	44 %	N	13 mph	0 mph	24.85 in	0.0 in	Fair
12:52 AM	34 °F	14 °F	44 %	NNW	14 mph	0 mph	24.85 in	0.0 in	Fair

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Albuquerque, NM (87116) (weather/us/nm/albuquerque/35.05,-106.61)

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

70° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
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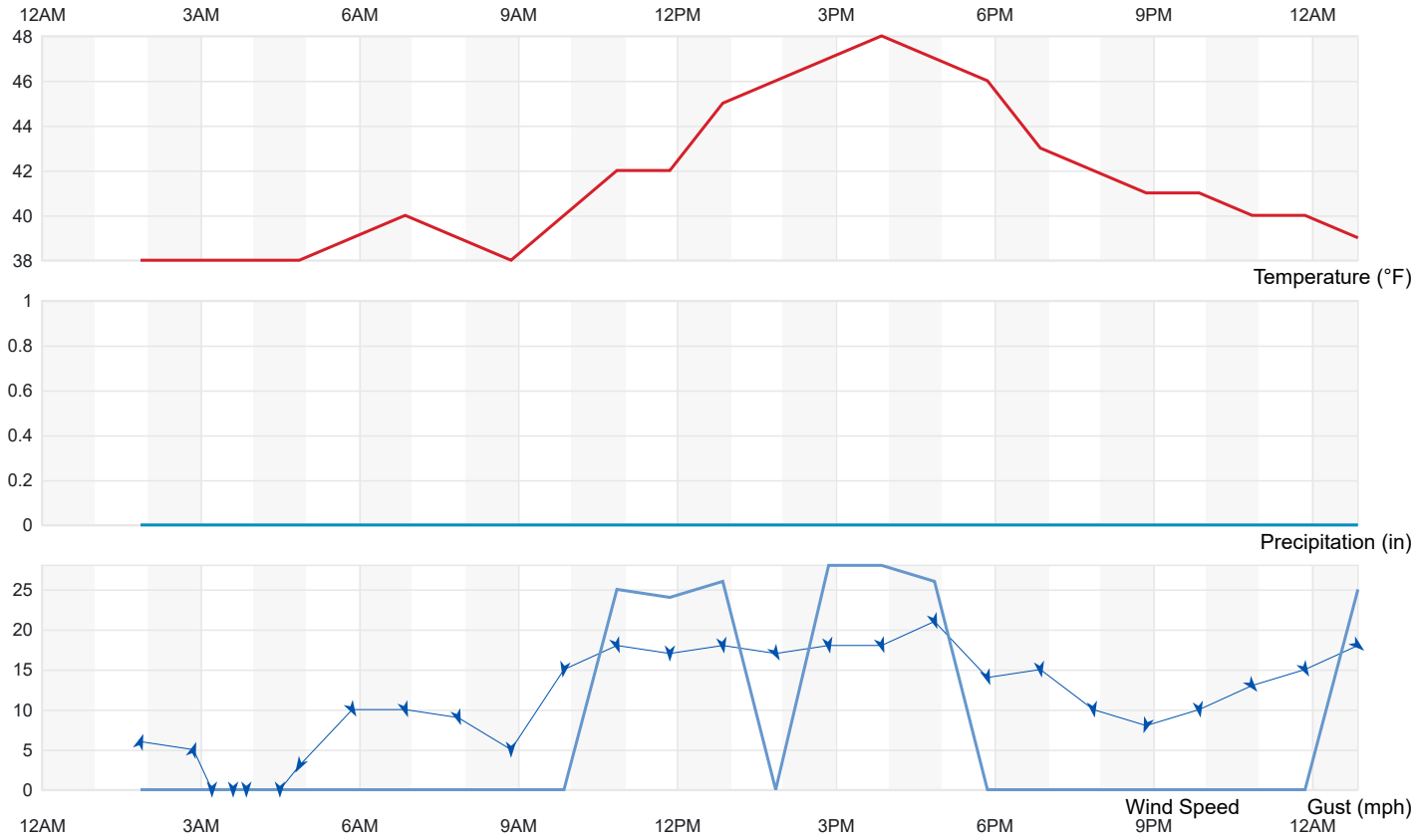
Daily Weekly Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2020-1-22) (/history/weekly/us/nm/albuquerque/KABQ/date/2020-1-22) (/history/monthly/us/nm/albuquerque/KABQ/date/2020-1)

January 22 2020 View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	48	47	66
Low Temp	38	26	3
Day Average Temp	41.15	37	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.13	0.01	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	31.93	-	-
High	38	-	-
Low	28	-	-
Average	31.93	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	21	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.75	-	-
Astronomy	Day Length	Rise	Set
Actual Time	10h 12m	7:12 AM	5:25 PM
Civil Twilight		6:45 AM	5:52 PM
Nautical Twilight		6:14 AM	6:23 PM
Astronomical Twilight		5:44 AM	6:53 PM
Moon: waning crescent		6:28 AM	4:29 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
1:52 AM	38 °F	37 °F	97 %	SSW	6 mph	0 mph	24.64 in	0.0 in	Cloudy
2:52 AM	38 °F	37 °F	97 %	SSW	5 mph	0 mph	24.63 in	0.0 in	Light Drizzle
3:13 AM	38 °F	37 °F	97 %	CALM	0 mph	0 mph	24.63 in	0.0 in	Fog
3:37 AM	38 °F	37 °F	97 %	CALM	0 mph	0 mph	24.63 in	0.0 in	Fog
3:52 AM	38 °F	38 °F	100 %	CALM	0 mph	0 mph	24.63 in	0.0 in	Fog
4:30 AM	38 °F	37 °F	97 %	CALM	0 mph	0 mph	24.64 in	0.0 in	Cloudy
4:52 AM	38 °F	37 °F	97 %	NNE	3 mph	0 mph	24.63 in	0.0 in	Cloudy
5:52 AM	39 °F	35 °F	86 %	NNW	10 mph	0 mph	24.62 in	0.0 in	Mostly Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
6:52 AM	40 °F	33 °F	77 %	NNW	10 mph	0 mph	24.63 in	0.0 in	Mostly Cloudy
7:52 AM	39 °F	33 °F	79 %	NNW	9 mph	0 mph	24.66 in	0.0 in	Mostly Cloudy
8:52 AM	38 °F	32 °F	79 %	N	5 mph	0 mph	24.66 in	0.0 in	Mostly Cloudy
9:52 AM	40 °F	32 °F	73 %	N	15 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
10:52 AM	42 °F	31 °F	65 %	NNW	18 mph	25 mph	24.69 in	0.0 in	Partly Cloudy
11:52 AM	42 °F	30 °F	62 %	N	17 mph	24 mph	24.69 in	0.0 in	Mostly Cloudy
12:52 PM	45 °F	30 °F	56 %	N	18 mph	26 mph	24.67 in	0.0 in	Mostly Cloudy
1:52 PM	46 °F	30 °F	54 %	NNW	17 mph	0 mph	24.66 in	0.0 in	Partly Cloudy
2:52 PM	47 °F	29 °F	50 %	N	18 mph	28 mph	24.65 in	0.0 in	Fair
3:52 PM	48 °F	29 °F	48 %	NNW	18 mph	28 mph	24.66 in	0.0 in	Partly Cloudy
4:52 PM	47 °F	28 °F	48 %	NNW	21 mph	26 mph	24.65 in	0.0 in	Partly Cloudy / Windy
5:52 PM	46 °F	30 °F	54 %	NNW	14 mph	0 mph	24.67 in	0.0 in	Partly Cloudy
6:52 PM	43 °F	29 °F	58 %	N	15 mph	0 mph	24.69 in	0.0 in	Partly Cloudy
7:52 PM	42 °F	29 °F	60 %	N	10 mph	0 mph	24.71 in	0.0 in	Fair
8:52 PM	41 °F	29 °F	62 %	NNE	8 mph	0 mph	24.71 in	0.0 in	Fair
9:52 PM	41 °F	29 °F	62 %	N	10 mph	0 mph	24.73 in	0.0 in	Fair
10:52 PM	40 °F	28 °F	63 %	NW	13 mph	0 mph	24.74 in	0.0 in	Fair
11:52 PM	40 °F	28 °F	63 %	NNW	15 mph	0 mph	24.75 in	0.0 in	Fair
12:52 AM	39 °F	28 °F	65 %	NW	18 mph	25 mph	24.75 in	0.0 in	Fair

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Albuquerque, NM (87116) (weather/us/nm/albuquerque/35.05,-106.61)

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

70° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

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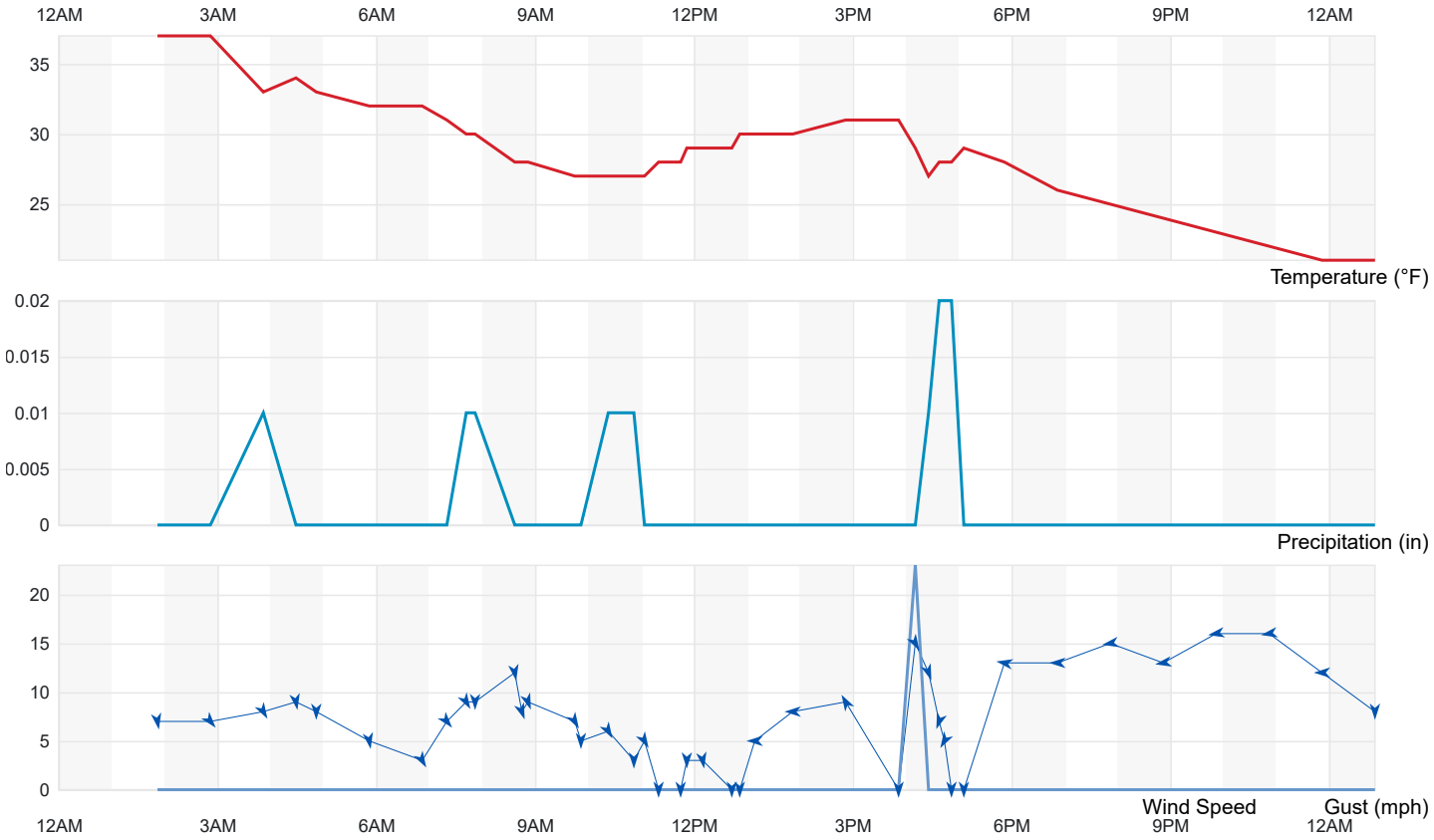
Daily | Weekly | Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2020-2-4) (/history/weekly/us/nm/albuquerque/KABQ/date/2020-2-4) (/history/monthly/us/nm/albuquerque/KABQ/date/2020-2)

February | 4 | 2020 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	37	50	69
Low Temp	21	28	4
Day Average Temp	28.62	39	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.01	0.01	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	22.29	-	-
High	29	-	-
Low	12	-	-
Average	22.29	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	16	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.61	-	-
Astronomy	Day Length	Rise	Set
Actual Time	10h 33m	7:04 AM	5:38 PM
Civil Twilight		6:38 AM	6:05 PM
Nautical Twilight		6:08 AM	6:35 PM
Astronomical Twilight		5:38 AM	7:04 PM
Moon: waxing gibbous		2:12 PM	3:51 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
1:52 AM	37 °F	28 °F	70 %	N	7 mph	0 mph	24.38 in	0.0 in	Light Snow
2:52 AM	37 °F	28 °F	70 %	NW	7 mph	0 mph	24.38 in	0.0 in	Cloudy
3:52 AM	33 °F	29 °F	85 %	NNW	8 mph	0 mph	24.39 in	0.0 in	Light Snow
4:29 AM	34 °F	28 °F	79 %	N	9 mph	0 mph	24.39 in	0.0 in	Light Snow
4:52 AM	33 °F	27 °F	78 %	N	8 mph	0 mph	24.39 in	0.0 in	Cloudy
5:52 AM	32 °F	25 °F	75 %	N	5 mph	0 mph	24.41 in	0.0 in	Light Snow
6:52 AM	32 °F	25 °F	75 %	NNW	3 mph	0 mph	24.43 in	0.0 in	Light Snow
7:20 AM	31 °F	25 °F	79 %	NW	7 mph	0 mph	24.44 in	0.0 in	Light Snow

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
7:42 AM	30 °F	25 °F	82 %	NNW	9 mph	0 mph	24.44 in	0.0 in	Light Snow
7:52 AM	30 °F	25 °F	82 %	N	9 mph	0 mph	24.45 in	0.0 in	Light Snow
8:37 AM	28 °F	19 °F	69 %	N	12 mph	0 mph	24.47 in	0.0 in	Light Snow
8:45 AM	28 °F	20 °F	72 %	NNW	8 mph	0 mph	24.47 in	0.0 in	Light Snow
8:52 AM	28 °F	19 °F	69 %	NNW	9 mph	0 mph	24.48 in	0.0 in	Light Snow
9:45 AM	27 °F	21 °F	78 %	NNW	7 mph	0 mph	24.50 in	0.0 in	Light Snow
9:52 AM	27 °F	22 °F	81 %	N	5 mph	0 mph	24.50 in	0.0 in	Light Snow
10:23 AM	27 °F	21 °F	78 %	NNW	6 mph	0 mph	24.51 in	0.0 in	Light Snow
10:52 AM	27 °F	22 °F	81 %	VAR	3 mph	0 mph	24.51 in	0.0 in	Light Snow
11:04 AM	27 °F	23 °F	85 %	NNW	5 mph	0 mph	24.52 in	0.0 in	Light Snow
11:20 AM	28 °F	24 °F	85 %	CALM	0 mph	0 mph	24.52 in	0.0 in	Light Snow
11:45 AM	28 °F	24 °F	85 %	CALM	0 mph	0 mph	24.52 in	0.0 in	Light Snow
11:52 AM	29 °F	25 °F	85 %	VAR	3 mph	0 mph	24.52 in	0.0 in	Light Snow
12:10 PM	29 °F	24 °F	82 %	N	3 mph	0 mph	24.52 in	0.0 in	Light Snow
12:43 PM	29 °F	25 °F	85 %	CALM	0 mph	0 mph	24.52 in	0.0 in	Light Snow
12:52 PM	30 °F	25 °F	82 %	CALM	0 mph	0 mph	24.52 in	0.0 in	Light Snow
1:09 PM	30 °F	23 °F	75 %	E	5 mph	0 mph	24.52 in	0.0 in	Light Snow
1:52 PM	30 °F	23 °F	75 %	E	8 mph	0 mph	24.50 in	0.0 in	Light Snow
2:52 PM	31 °F	24 °F	76 %	SSE	9 mph	0 mph	24.49 in	0.0 in	Light Snow
3:52 PM	31 °F	23 °F	72 %	CALM	0 mph	0 mph	24.50 in	0.0 in	Light Snow
4:11 PM	29 °F	24 °F	82 %	NNW	15 mph	23 mph	24.51 in	0.0 in	Light Snow
4:26 PM	27 °F	25 °F	92 %	NNW	12 mph	0 mph	24.52 in	0.0 in	Heavy Snow
4:38 PM	28 °F	24 °F	85 %	NNE	7 mph	0 mph	24.52 in	0.0 in	Light Snow
4:44 PM	28 °F	24 °F	85 %	NNE	5 mph	0 mph	24.52 in	0.0 in	Light Snow
4:52 PM	28 °F	23 °F	81 %	CALM	0 mph	0 mph	24.52 in	0.0 in	Light Snow
5:06 PM	29 °F	24 °F	82 %	CALM	0 mph	0 mph	24.52 in	0.0 in	Mostly Cloudy
5:52 PM	28 °F	22 °F	78 %	E	13 mph	0 mph	24.53 in	0.0 in	Partly Cloudy
6:52 PM	26 °F	18 °F	71 %	E	13 mph	0 mph	24.54 in	0.0 in	Partly Cloudy
7:52 PM	25 °F	15 °F	66 %	E	15 mph	0 mph	24.57 in	0.0 in	Partly Cloudy
8:52 PM	24 °F	14 °F	65 %	E	13 mph	0 mph	24.57 in	0.0 in	Partly Cloudy
9:52 PM	23 °F	13 °F	65 %	E	16 mph	0 mph	24.58 in	0.0 in	Fair
10:52 PM	22 °F	12 °F	66 %	E	16 mph	0 mph	24.60 in	0.0 in	Fair
11:52 PM	21 °F	12 °F	68 %	E	12 mph	0 mph	24.61 in	0.0 in	Fair
12:52 AM	21 °F	14 °F	74 %	N	8 mph	0 mph	24.61 in	0.0 in	Fair

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Albuquerque, NM (87116) (weather/us/nm/albuquerque/35.05,-106.61)

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

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HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

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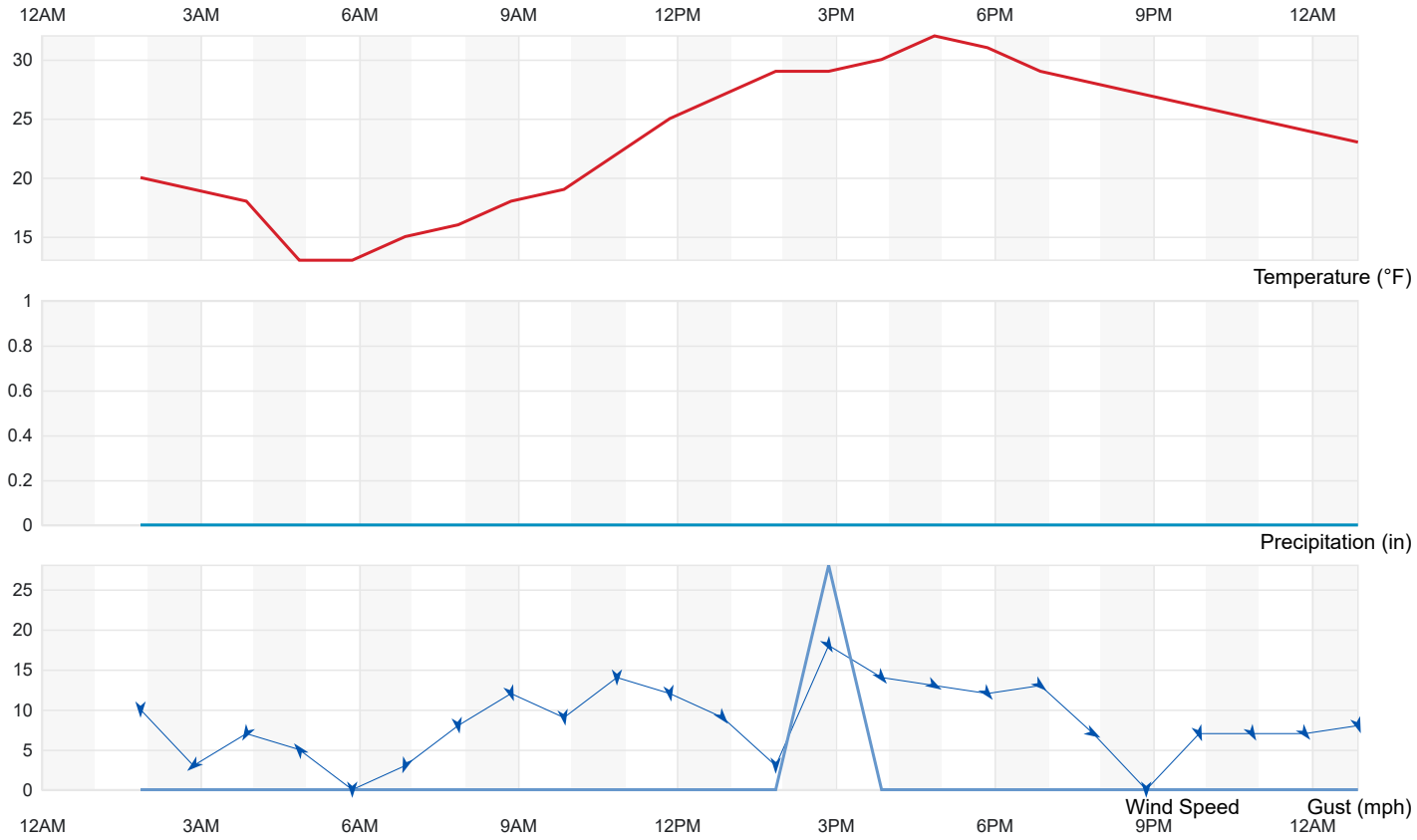
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily | Weekly | Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2020-2-5) (/history/weekly/us/nm/albuquerque/KABQ/date/2020-2-5) (/history/monthly/us/nm/albuquerque/KABQ/date/2020-2)

February | 5 | 2020 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	32	50	72
Low Temp	13	28	7
Day Average Temp	23.25	39	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.04	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	2.88	-	-
High	13	-	-
Low	-5	-	-
Average	2.88	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	18	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.59	-	-
Astronomy	Day Length	Rise	Set
Actual Time	10h 35m	7:03 AM	5:39 PM
Civil Twilight		6:37 AM	6:06 PM
Nautical Twilight		6:07 AM	6:36 PM
Astronomical Twilight		5:37 AM	7:05 PM
Moon: waxing gibbous		3:01 PM	4:52 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
1:52 AM	20 °F	13 °F	74 %	N	10 mph	0 mph	24.58 in	0.0 in	Fair
2:52 AM	19 °F	13 °F	77 %	NE	3 mph	0 mph	24.59 in	0.0 in	Fair
3:52 AM	18 °F	12 °F	78 %	NNE	7 mph	0 mph	24.59 in	0.0 in	Fair
4:52 AM	13 °F	8 °F	81 %	SE	5 mph	0 mph	24.58 in	0.0 in	Fair
5:52 AM	13 °F	7 °F	77 %	CALM	0 mph	0 mph	24.57 in	0.0 in	Fair
6:52 AM	15 °F	8 °F	74 %	NNE	3 mph	0 mph	24.58 in	0.0 in	Fair
7:52 AM	16 °F	5 °F	62 %	N	8 mph	0 mph	24.58 in	0.0 in	Fair
8:52 AM	18 °F	4 °F	54 %	NNW	12 mph	0 mph	24.58 in	0.0 in	Fair

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
9:52 AM	19 °F	4 °F	52 %	N	9 mph	0 mph	24.57 in	0.0 in	Fair
10:52 AM	22 °F	3 °F	44 %	N	14 mph	0 mph	24.57 in	0.0 in	Fair
11:52 AM	25 °F	3 °F	39 %	N	12 mph	0 mph	24.57 in	0.0 in	Fair
12:52 PM	27 °F	0 °F	31 %	NW	9 mph	0 mph	24.53 in	0.0 in	Mostly Cloudy
1:52 PM	29 °F	0 °F	29 %	VAR	3 mph	0 mph	24.49 in	0.0 in	Mostly Cloudy
2:52 PM	29 °F	-4 °F	24 %	NNW	18 mph	28 mph	24.48 in	0.0 in	Mostly Cloudy
3:52 PM	30 °F	-4 °F	23 %	NW	14 mph	0 mph	24.48 in	0.0 in	Mostly Cloudy
4:52 PM	32 °F	-4 °F	21 %	WNW	13 mph	0 mph	24.48 in	0.0 in	Mostly Cloudy
5:52 PM	31 °F	-5 °F	21 %	NW	12 mph	0 mph	24.48 in	0.0 in	Partly Cloudy
6:52 PM	29 °F	-2 °F	26 %	NW	13 mph	0 mph	24.49 in	0.0 in	Partly Cloudy
7:52 PM	28 °F	-1 °F	29 %	WNW	7 mph	0 mph	24.50 in	0.0 in	Partly Cloudy
8:52 PM	27 °F	1 °F	33 %	CALM	0 mph	0 mph	24.51 in	0.0 in	Fair
9:52 PM	26 °F	1 °F	34 %	NNW	7 mph	0 mph	24.53 in	0.0 in	Fair
10:52 PM	25 °F	2 °F	37 %	NNW	7 mph	0 mph	24.52 in	0.0 in	Fair
11:52 PM	24 °F	2 °F	38 %	NW	7 mph	0 mph	24.53 in	0.0 in	Fair
12:52 AM	23 °F	3 °F	42 %	NNW	8 mph	0 mph	24.53 in	0.0 in	Fair

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Daily | Weekly | Monthly

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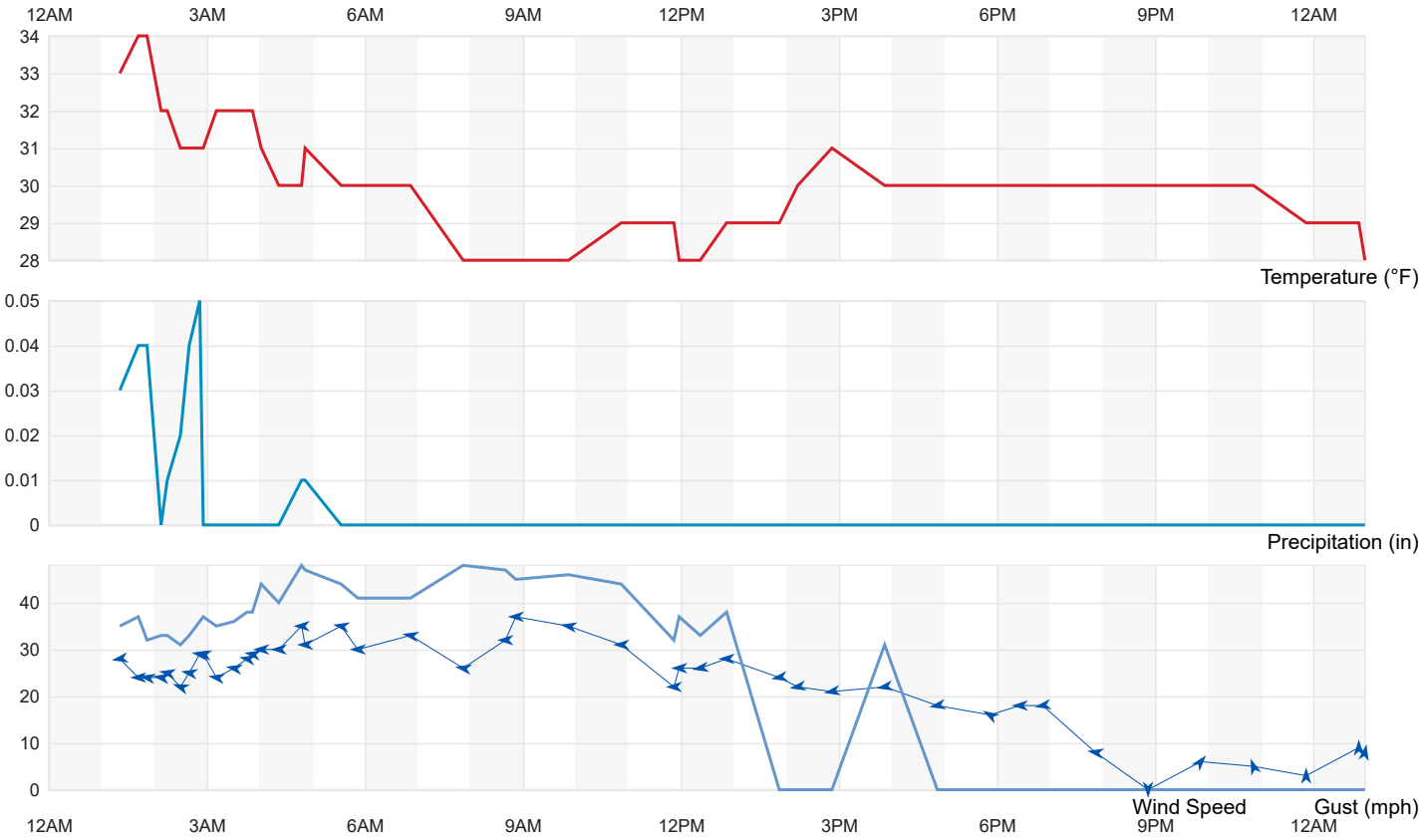
February | 11 | 2020 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	34	52	72
Low Temp	28	30	2
Day Average Temp	30.23	41	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.33	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	23.66	-	-
High	30	-	-
Low	19	-	-
Average	23.66	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	37	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.71	-	-
Astronomy	Day Length	Rise	Set
Actual Time	10h 47m	6:58 AM	5:45 PM
Civil Twilight		6:32 AM	6:11 PM
Nautical Twilight		6:02 AM	6:41 PM
Astronomical Twilight		5:32 AM	7:11 PM
Moon: waning gibbous		9:48 PM	9:50 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
1:21 AM	33 °F	30 °F	89 %	E	28 mph	35 mph	24.57 in	0.0 in	Wintry Mix / Windy
1:42 AM	34 °F	29 °F	82 %	E	24 mph	37 mph	24.58 in	0.0 in	Wintry Mix / Windy
1:52 AM	34 °F	29 °F	82 %	E	24 mph	32 mph	24.59 in	0.0 in	Wintry Mix / Windy
2:08 AM	32 °F	29 °F	88 %	E	24 mph	33 mph	24.59 in	0.0 in	Wintry Mix / Windy
2:15 AM	32 °F	29 °F	88 %	E	25 mph	33 mph	24.59 in	0.0 in	Wintry Mix / Windy
2:30 AM	31 °F	29 °F	92 %	ESE	22 mph	31 mph	24.62 in	0.0 in	Heavy Snow / Windy
2:40 AM	31 °F	29 °F	92 %	E	25 mph	33 mph	24.62 in	0.0 in	Heavy Snow / Windy
2:52 AM	31 °F	28 °F	89 %	E	29 mph	36 mph	24.58 in	0.1 in	Light Snow / Windy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
2:56 AM	31 °F	28 °F	89 %	E	29 mph	37 mph	24.58 in	0.0 in	Light Snow / Windy
3:11 AM	32 °F	27 °F	82 %	E	24 mph	35 mph	24.60 in	0.0 in	Light Snow / Windy
3:31 AM	32 °F	27 °F	82 %	E	26 mph	36 mph	24.60 in	0.0 in	Light Snow / Windy
3:46 AM	32 °F	27 °F	80 %	E	28 mph	38 mph	24.61 in	0.0 in	Light Snow / Windy
3:52 AM	32 °F	26 °F	79 %	E	29 mph	38 mph	24.61 in	0.0 in	Light Snow / Windy
4:02 AM	31 °F	27 °F	85 %	E	30 mph	44 mph	24.61 in	0.0 in	Light Snow / Windy
4:22 AM	30 °F	26 °F	85 %	E	30 mph	40 mph	24.61 in	0.0 in	Light Snow / Windy
4:48 AM	30 °F	25 °F	80 %	E	35 mph	48 mph	24.61 in	0.0 in	Light Snow / Windy
4:52 AM	31 °F	24 °F	76 %	E	31 mph	47 mph	24.61 in	0.0 in	Light Snow / Windy
5:33 AM	30 °F	23 °F	75 %	E	35 mph	44 mph	24.62 in	0.0 in	Cloudy / Windy
5:52 AM	30 °F	22 °F	72 %	E	30 mph	41 mph	24.62 in	0.0 in	Light Snow / Windy
6:52 AM	30 °F	21 °F	69 %	E	33 mph	41 mph	24.65 in	0.0 in	Mostly Cloudy / Windy
7:52 AM	28 °F	20 °F	72 %	E	26 mph	48 mph	24.67 in	0.0 in	Light Snow / Windy
8:40 AM	28 °F	19 °F	69 %	E	32 mph	47 mph	24.68 in	0.0 in	Cloudy / Windy
8:52 AM	28 °F	19 °F	69 %	E	37 mph	45 mph	24.67 in	0.0 in	Cloudy / Windy
9:52 AM	28 °F	19 °F	69 %	E	35 mph	46 mph	24.68 in	0.0 in	Cloudy / Windy
10:52 AM	29 °F	19 °F	67 %	E	31 mph	44 mph	24.71 in	0.0 in	Cloudy / Windy
11:52 AM	29 °F	19 °F	67 %	E	22 mph	32 mph	24.71 in	0.0 in	Cloudy / Windy
11:58 AM	28 °F	20 °F	72 %	E	26 mph	37 mph	24.71 in	0.0 in	Light Snow / Windy
12:22 PM	28 °F	21 °F	75 %	E	26 mph	33 mph	24.71 in	0.0 in	Light Snow / Windy
12:52 PM	29 °F	20 °F	69 %	E	28 mph	38 mph	24.71 in	0.0 in	Cloudy / Windy
1:52 PM	29 °F	22 °F	75 %	E	24 mph	0 mph	24.69 in	0.0 in	Light Snow / Windy
2:13 PM	30 °F	22 °F	72 %	E	22 mph	0 mph	24.68 in	0.0 in	Cloudy / Windy
2:52 PM	31 °F	22 °F	69 %	E	21 mph	0 mph	24.67 in	0.0 in	Cloudy / Windy
3:52 PM	30 °F	21 °F	69 %	E	22 mph	31 mph	24.66 in	0.0 in	Cloudy / Windy
4:52 PM	30 °F	21 °F	69 %	E	18 mph	0 mph	24.64 in	0.0 in	Cloudy
5:52 PM	30 °F	21 °F	69 %	ESE	16 mph	0 mph	24.64 in	0.0 in	Cloudy
6:26 PM	30 °F	20 °F	66 %	E	18 mph	0 mph	24.65 in	0.0 in	Cloudy
6:52 PM	30 °F	20 °F	66 %	E	18 mph	0 mph	24.64 in	0.0 in	Cloudy
7:52 PM	30 °F	21 °F	69 %	E	8 mph	0 mph	24.64 in	0.0 in	Cloudy
8:52 PM	30 °F	22 °F	72 %	CALM	0 mph	0 mph	24.63 in	0.0 in	Cloudy
9:52 PM	30 °F	21 °F	69 %	SW	6 mph	0 mph	24.64 in	0.0 in	Mostly Cloudy
10:52 PM	30 °F	23 °F	75 %	SSE	5 mph	0 mph	24.63 in	0.0 in	Cloudy
11:52 PM	29 °F	23 °F	78 %	S	3 mph	0 mph	24.62 in	0.0 in	Cloudy
12:52 AM	29 °F	25 °F	85 %	S	9 mph	0 mph	24.60 in	0.0 in	Mostly Cloudy
12:59 AM	28 °F	26 °F	92 %	S	8 mph	0 mph	24.60 in	0.0 in	Light Snow

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35.05 °N, **106.61** °W

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Daily | Weekly | Monthly

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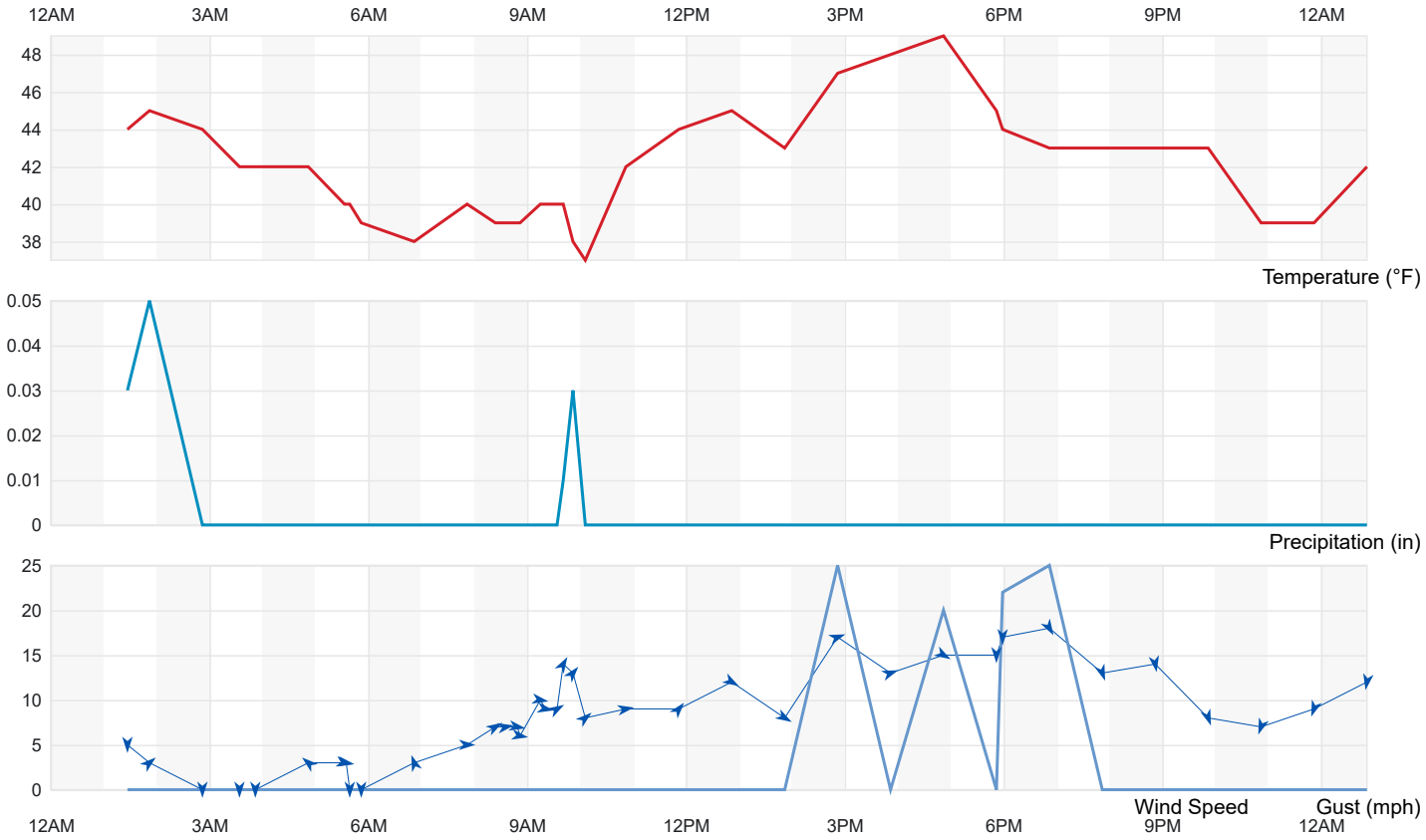

Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	49	55	78
Low Temp	37	32	5
Day Average Temp	41.74	43	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.16	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	36.03	-	-
High	43	-	-
Low	27	-	-
Average	36.03	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	18	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.69	-	-
Astronomy	Day Length	Rise	Set
Actual Time	11h 11m	6:45 AM	5:57 PM
Civil Twilight		6:19 AM	6:22 PM
Nautical Twilight		5:50 AM	6:52 PM
Astronomical Twilight		5:20 AM	7:21 PM
Moon: new moon		8:05 AM	7:07 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
1:27 AM	44 °F	43 °F	96 %	VAR	5 mph	0 mph	24.66 in	0.0 in	Light Rain
1:52 AM	45 °F	42 °F	90 %	SW	3 mph	0 mph	24.65 in	0.1 in	Cloudy
2:52 AM	44 °F	42 °F	93 %	CALM	0 mph	0 mph	24.64 in	0.0 in	Mostly Cloudy
3:34 AM	42 °F	41 °F	96 %	CALM	0 mph	0 mph	24.63 in	0.0 in	Mostly Cloudy
3:52 AM	42 °F	40 °F	92 %	CALM	0 mph	0 mph	24.62 in	0.0 in	Mostly Cloudy
4:52 AM	42 °F	40 °F	92 %	SE	3 mph	0 mph	24.62 in	0.0 in	Partly Cloudy
5:33 AM	40 °F	39 °F	97 %	W	3 mph	0 mph	24.61 in	0.0 in	Fog
5:35 AM	40 °F	39 °F	97 %	W	3 mph	0 mph	24.60 in	0.0 in	Fog

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
5:39 AM	40 °F	39 °F	97 %	CALM	0 mph	0 mph	24.60 in	0.0 in	Fog
5:52 AM	39 °F	38 °F	96 %	CALM	0 mph	0 mph	24.60 in	0.0 in	Fog
6:52 AM	38 °F	37 °F	97 %	SSE	3 mph	0 mph	24.59 in	0.0 in	Fog
7:52 AM	40 °F	40 °F	100 %	W	5 mph	0 mph	24.60 in	0.0 in	Fog
8:24 AM	39 °F	39 °F	100 %	WSW	7 mph	0 mph	24.60 in	0.0 in	Fog
8:36 AM	39 °F	39 °F	100 %	W	7 mph	0 mph	24.61 in	0.0 in	Fog
8:49 AM	39 °F	39 °F	100 %	W	7 mph	0 mph	24.61 in	0.0 in	Mostly Cloudy
8:52 AM	39 °F	39 °F	100 %	W	6 mph	0 mph	24.61 in	0.0 in	Mostly Cloudy
9:15 AM	40 °F	39 °F	97 %	W	10 mph	0 mph	24.62 in	0.0 in	Cloudy
9:21 AM	40 °F	39 °F	97 %	W	9 mph	0 mph	24.62 in	0.0 in	Cloudy
9:34 AM	40 °F	39 °F	97 %	WSW	9 mph	0 mph	24.63 in	0.0 in	Light Rain with Thunder
9:41 AM	40 °F	39 °F	97 %	SSW	14 mph	0 mph	24.63 in	0.0 in	Light Rain with Thunder
9:52 AM	38 °F	35 °F	89 %	SW	13 mph	0 mph	24.63 in	0.0 in	T-Storm
10:06 AM	37 °F	34 °F	89 %	SW	8 mph	0 mph	24.63 in	0.0 in	Mostly Cloudy
10:52 AM	42 °F	36 °F	79 %	W	9 mph	0 mph	24.64 in	0.0 in	Mostly Cloudy
11:52 AM	44 °F	32 °F	63 %	SW	9 mph	0 mph	24.62 in	0.0 in	Mostly Cloudy
12:52 PM	45 °F	33 °F	63 %	WNW	12 mph	0 mph	24.62 in	0.0 in	Cloudy
1:52 PM	43 °F	34 °F	71 %	WNW	8 mph	0 mph	24.61 in	0.0 in	Cloudy
2:52 PM	47 °F	31 °F	54 %	WSW	17 mph	25 mph	24.60 in	0.0 in	Cloudy
3:52 PM	48 °F	30 °F	50 %	WSW	13 mph	0 mph	24.59 in	0.0 in	Cloudy
4:52 PM	49 °F	27 °F	43 %	WNW	15 mph	20 mph	24.59 in	0.0 in	Mostly Cloudy
5:52 PM	45 °F	33 °F	63 %	N	15 mph	0 mph	24.62 in	0.0 in	Cloudy
5:59 PM	44 °F	33 °F	65 %	N	17 mph	22 mph	24.62 in	0.0 in	Cloudy
6:52 PM	43 °F	32 °F	65 %	NNW	18 mph	25 mph	24.63 in	0.0 in	Mostly Cloudy
7:52 PM	43 °F	32 °F	65 %	NNW	13 mph	0 mph	24.66 in	0.0 in	Mostly Cloudy
8:52 PM	43 °F	31 °F	62 %	N	14 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
9:52 PM	43 °F	31 °F	62 %	NNW	8 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
10:52 PM	39 °F	31 °F	73 %	NNE	7 mph	0 mph	24.68 in	0.0 in	Mostly Cloudy
11:52 PM	39 °F	31 °F	73 %	NNE	9 mph	0 mph	24.69 in	0.0 in	Partly Cloudy
12:52 AM	42 °F	31 °F	65 %	N	12 mph	0 mph	24.69 in	0.0 in	Mostly Cloudy

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- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
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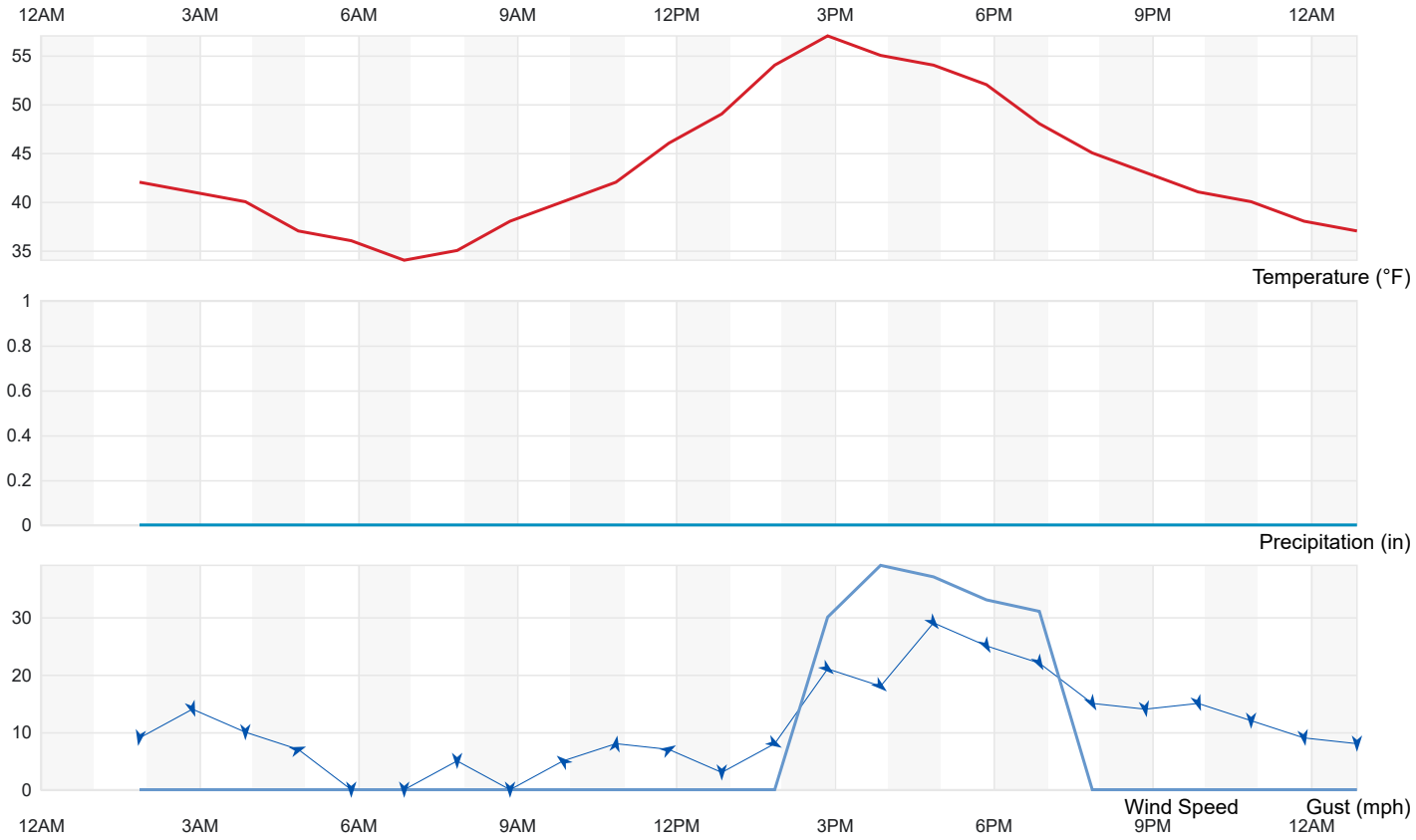
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily Weekly Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2020-2-24) (/history/weekly/us/nm/albuquerque/KABQ/date/2020-2-24) (/history/monthly/us/nm/albuquerque/KABQ/date/2020-2)

February 24 2020 View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	57	55	79
Low Temp	34	32	11
Day Average Temp	43.5	44	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.03	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	21.04	-	-
High	30	-	-
Low	7	-	-
Average	21.04	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	29	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.7	-	-
Astronomy	Day Length	Rise	Set
Actual Time	11h 13m	6:44 AM	5:58 PM
Civil Twilight		6:18 AM	6:23 PM
Nautical Twilight		5:49 AM	6:53 PM
Astronomical Twilight		5:19 AM	7:22 PM
Moon: waxing crescent		8:35 AM	8:03 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
1:52 AM	42 °F	30 °F	62 %	N	9 mph	0 mph	24.70 in	0.0 in	Mostly Cloudy
2:52 AM	41 °F	29 °F	62 %	NNW	14 mph	0 mph	24.69 in	0.0 in	Partly Cloudy
3:52 AM	40 °F	29 °F	65 %	N	10 mph	0 mph	24.69 in	0.0 in	Partly Cloudy
4:52 AM	37 °F	29 °F	73 %	WSW	7 mph	0 mph	24.69 in	0.0 in	Fair
5:52 AM	36 °F	28 °F	73 %	CALM	0 mph	0 mph	24.69 in	0.0 in	Fair
6:52 AM	34 °F	28 °F	79 %	CALM	0 mph	0 mph	24.69 in	0.0 in	Fair
7:52 AM	35 °F	28 °F	76 %	VAR	5 mph	0 mph	24.69 in	0.0 in	Fair
8:52 AM	38 °F	29 °F	70 %	CALM	0 mph	0 mph	24.70 in	0.0 in	Fair

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
9:52 AM	40 °F	30 °F	68 %	SE	5 mph	0 mph	24.70 in	0.0 in	Fair
10:52 AM	42 °F	28 °F	58 %	S	8 mph	0 mph	24.69 in	0.0 in	Fair
11:52 AM	46 °F	28 °F	50 %	WSW	7 mph	0 mph	24.67 in	0.0 in	Fair
12:52 PM	49 °F	28 °F	44 %	VAR	3 mph	0 mph	24.65 in	0.0 in	Fair
1:52 PM	54 °F	25 °F	33 %	WNW	8 mph	0 mph	24.62 in	0.0 in	Fair
2:52 PM	57 °F	18 °F	22 %	NW	21 mph	30 mph	24.58 in	0.0 in	Partly Cloudy / Windy
3:52 PM	55 °F	14 °F	20 %	NW	18 mph	39 mph	24.59 in	0.0 in	Partly Cloudy
4:52 PM	54 °F	11 °F	18 %	NW	29 mph	37 mph	24.61 in	0.0 in	Partly Cloudy / Windy
5:52 PM	52 °F	15 °F	23 %	NNW	25 mph	33 mph	24.61 in	0.0 in	Partly Cloudy / Windy
6:52 PM	48 °F	20 °F	33 %	NNW	22 mph	31 mph	24.62 in	0.0 in	Partly Cloudy / Windy
7:52 PM	45 °F	17 °F	33 %	NNW	15 mph	0 mph	24.65 in	0.0 in	Fair
8:52 PM	43 °F	12 °F	28 %	N	14 mph	0 mph	24.66 in	0.0 in	Fair
9:52 PM	41 °F	8 °F	26 %	NNW	15 mph	0 mph	24.67 in	0.0 in	Fair
10:52 PM	40 °F	7 °F	26 %	N	12 mph	0 mph	24.67 in	0.0 in	Fair
11:52 PM	38 °F	7 °F	28 %	N	9 mph	0 mph	24.67 in	0.0 in	Fair
12:52 AM	37 °F	7 °F	29 %	N	8 mph	0 mph	24.67 in	0.0 in	Fair

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(https://stairlift-us.searchlime.com/list?c=ohsXJUkpLg&network=taboola&cid=CjA4ZDRkYzM0OS1hNjNiLTQ5YzctYjRjNy05YTQzYzU1NjJhOTctdHVjdDUzYjJiZjASCXJlc29mdC1zYw&subid1=4121232&subid2=1194714|theweatherchanwunderground&title=The+Cost+Of+Stair+Lift+In+2020+Can+Actually+Surprise+You)

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35.05 °N, **106.61** °W

Albuquerque, NM Weather History

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HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
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- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
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Daily | Weekly | Monthly

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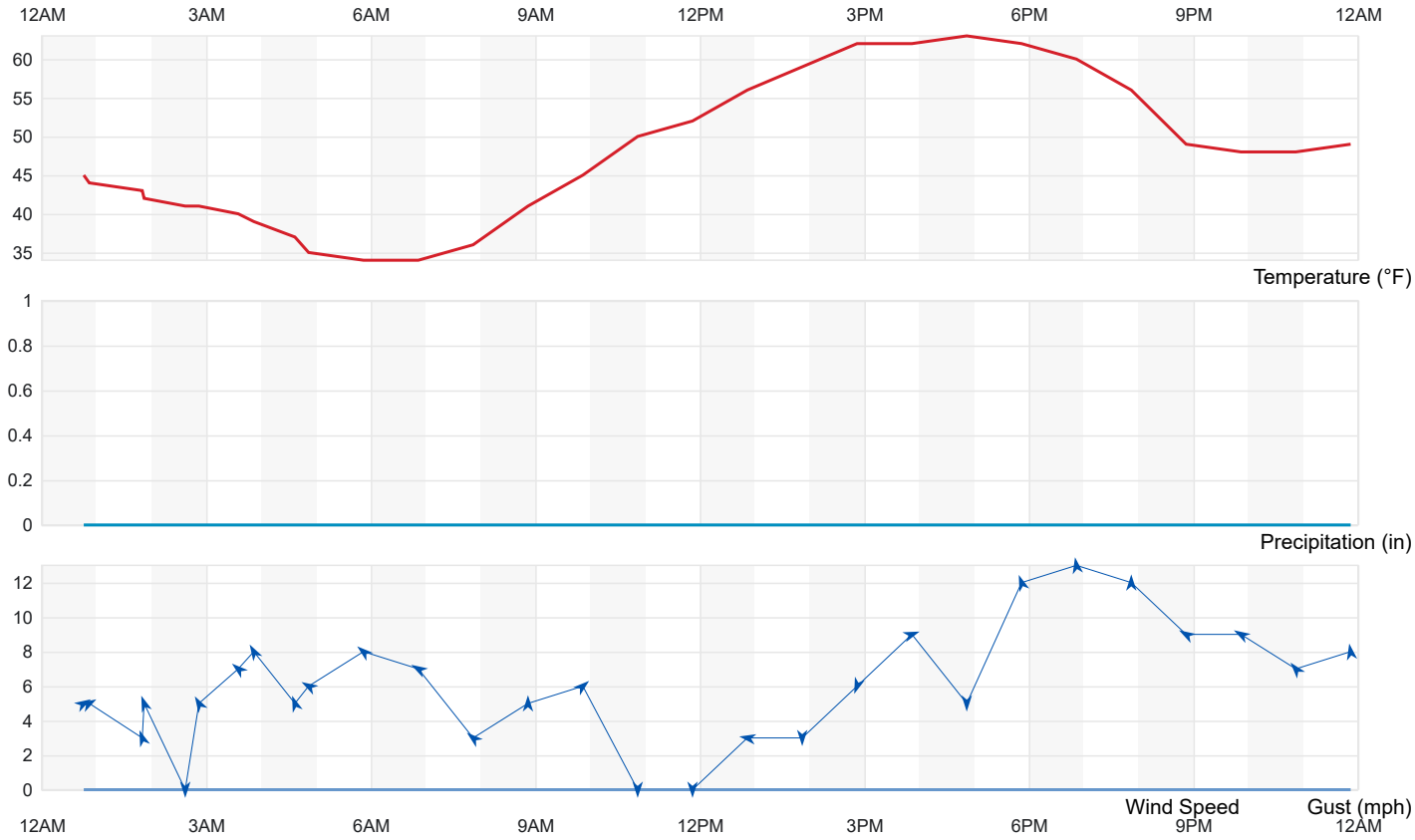
March | 9 | 2020 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	63	59	80
Low Temp	34	35	15
Day Average Temp	47.34	47	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.01	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	31.38	-	-
High	41	-	-
Low	17	-	-
Average	31.38	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	13	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.84	-	-
Astronomy	Day Length	Rise	Set
Actual Time	11h 44m	7:26 AM	7:10 PM
Civil Twilight		7:00 AM	7:35 PM
Nautical Twilight		6:31 AM	8:05 PM
Astronomical Twilight		6:01 AM	8:34 PM
Moon: full moon		7:23 PM	7:42 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:46 AM	45 °F	41 °F	87 %	WSW	5 mph	0 mph	24.71 in	0.0 in	Cloudy
12:52 AM	44 °F	41 °F	89 %	WSW	5 mph	0 mph	24.71 in	0.0 in	Cloudy
1:50 AM	43 °F	39 °F	87 %	SSE	3 mph	0 mph	24.71 in	0.0 in	Mostly Cloudy
1:52 AM	42 °F	40 °F	92 %	SSE	5 mph	0 mph	24.71 in	0.0 in	Mostly Cloudy
2:37 AM	41 °F	40 °F	96 %	CALM	0 mph	0 mph	24.72 in	0.0 in	Fog
2:52 AM	41 °F	40 °F	96 %	SSE	5 mph	0 mph	24.72 in	0.0 in	Fog
3:35 AM	40 °F	39 °F	97 %	SE	7 mph	0 mph	24.72 in	0.0 in	Fog
3:52 AM	39 °F	39 °F	100 %	SSE	8 mph	0 mph	24.72 in	0.0 in	Fog

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
4:37 AM	37 °F	36 °F	96 %	SSE	5 mph	0 mph	24.74 in	0.0 in	Fair
4:52 AM	35 °F	34 °F	96 %	ESE	6 mph	0 mph	24.75 in	0.0 in	Fair
5:52 AM	34 °F	32 °F	92 %	SE	8 mph	0 mph	24.76 in	0.0 in	Fair
6:52 AM	34 °F	31 °F	89 %	ESE	7 mph	0 mph	24.78 in	0.0 in	Fair
7:52 AM	36 °F	31 °F	82 %	SE	3 mph	0 mph	24.80 in	0.0 in	Fair
8:52 AM	41 °F	34 °F	76 %	S	5 mph	0 mph	24.81 in	0.0 in	Fair
9:52 AM	45 °F	33 °F	63 %	SW	6 mph	0 mph	24.84 in	0.0 in	Fair
10:52 AM	50 °F	32 °F	50 %	CALM	0 mph	0 mph	24.83 in	0.0 in	Fair
11:52 AM	52 °F	32 °F	47 %	CALM	0 mph	0 mph	24.83 in	0.0 in	Fair
12:52 PM	56 °F	31 °F	39 %	E	3 mph	0 mph	24.81 in	0.0 in	Fair
1:52 PM	59 °F	28 °F	31 %	VAR	3 mph	0 mph	24.80 in	0.0 in	Fair
2:52 PM	62 °F	25 °F	24 %	NNE	6 mph	0 mph	24.76 in	0.0 in	Fair
3:52 PM	62 °F	18 °F	18 %	WSW	9 mph	0 mph	24.76 in	0.0 in	Fair
4:52 PM	63 °F	17 °F	17 %	VAR	5 mph	0 mph	24.75 in	0.0 in	Fair
5:52 PM	62 °F	23 °F	22 %	SSE	12 mph	0 mph	24.75 in	0.0 in	Fair
6:52 PM	60 °F	21 °F	22 %	S	13 mph	0 mph	24.76 in	0.0 in	Fair
7:52 PM	56 °F	24 °F	29 %	S	12 mph	0 mph	24.79 in	0.0 in	Fair
8:52 PM	49 °F	24 °F	38 %	ESE	9 mph	0 mph	24.80 in	0.0 in	Fair
9:52 PM	48 °F	27 °F	44 %	ESE	9 mph	0 mph	24.81 in	0.0 in	Fair
10:52 PM	48 °F	27 °F	44 %	SE	7 mph	0 mph	24.82 in	0.0 in	Partly Cloudy
11:52 PM	49 °F	31 °F	50 %	S	8 mph	0 mph	24.84 in	0.0 in	Mostly Cloudy

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(https://investingoutlook.co/multi-millionaire-farmer-warns-get-out-dollar/?cid=MKT421756&eid=MKT455209&utm_source=taboola&utm_medium=referral)

Man Who Called GM Collapse Has Big New Prediction About U.S. Dollar
Stansberry Research

(https://investingoutlook.co/multi-millionaire-farmer-warns-get-out-dollar/?cid=MKT421756&eid=MKT455209&utm_source=taboola&utm_medium=referral)
(https://www.fool.com/mms/mark/double-down-2?utm_source=taboola&utm_medium=contentmarketing&utm_campaign=sar-doubledown2&aid=9187&paid=9187&waid=9187&source=esatabwdg0210889&psource=esatabwdg0210889&wsource=esatabwdg0210889&utm_source=taboola&utm_medium=referral)

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Albuquerque, NM (87116) (weather/us/nm/albuquerque/35.05,-106.61)

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

71° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

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- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily | Weekly | Monthly

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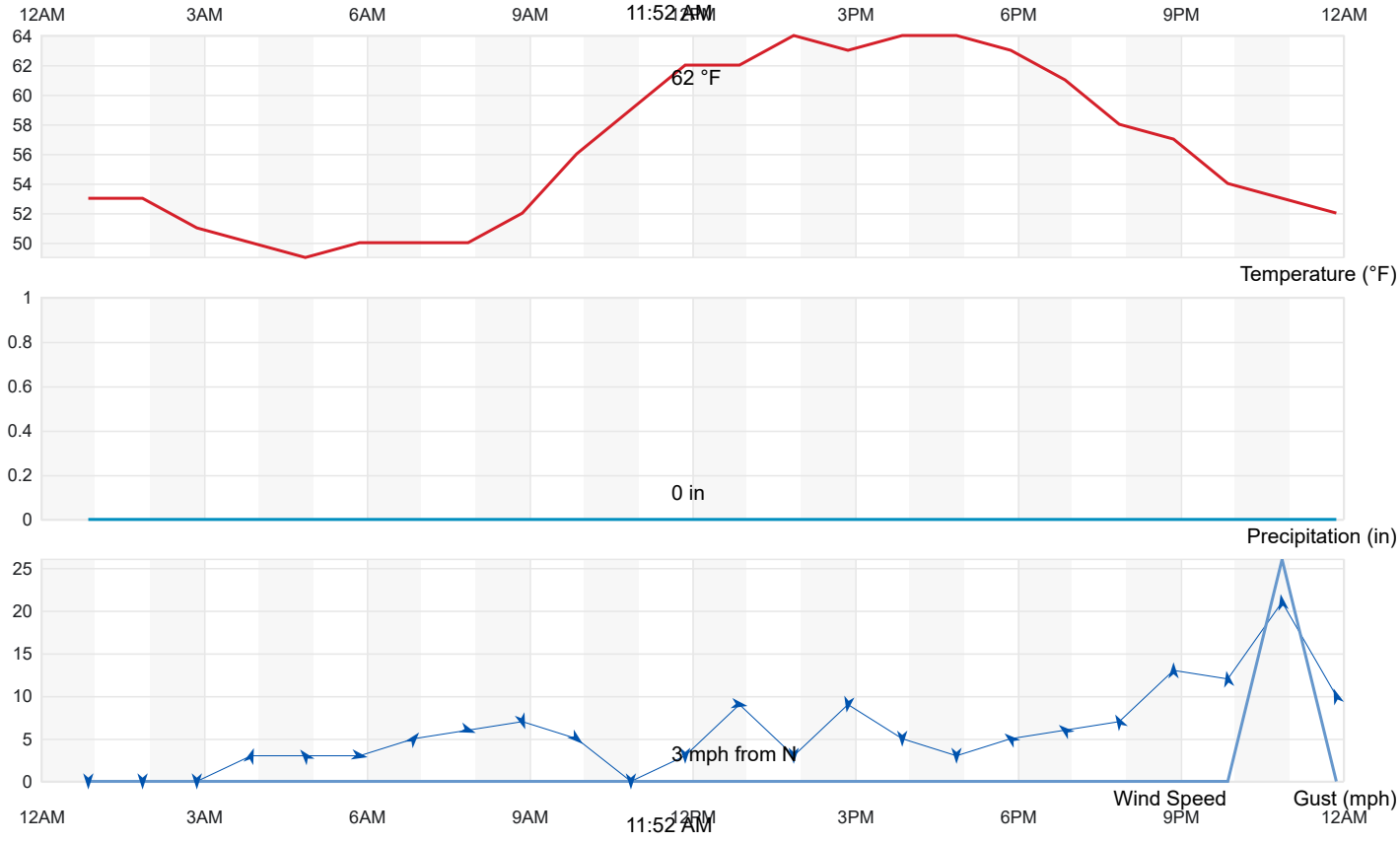
March | 12 | 2020 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	64	60	82
Low Temp	49	35	13
Day Average Temp	56.25	47	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.02	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	41.63	-	-
High	46	-	-
Low	37	-	-
Average	41.63	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	21	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.71	-	-
Astronomy	Day Length	Rise	Set
Actual Time	11h 51m	7:21 AM	7:12 PM
Civil Twilight		6:56 AM	7:38 PM
Nautical Twilight		6:27 AM	8:07 PM
Astronomical Twilight		5:57 AM	8:37 PM
Moon: waning gibbous		10:58 PM	9:31 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	53 °F	42 °F	66 %	CALM	0 mph	0 mph	24.71 in	0.0 in	Cloudy
1:52 AM	53 °F	43 °F	69 %	CALM	0 mph	0 mph	24.70 in	0.0 in	Cloudy
2:52 AM	51 °F	44 °F	77 %	CALM	0 mph	0 mph	24.69 in	0.0 in	Light Rain
3:52 AM	50 °F	44 °F	80 %	SSW	3 mph	0 mph	24.67 in	0.0 in	Light Rain
4:52 AM	49 °F	45 °F	86 %	SE	3 mph	0 mph	24.66 in	0.0 in	Cloudy
5:52 AM	50 °F	44 °F	80 %	W	3 mph	0 mph	24.67 in	0.0 in	Cloudy
6:52 AM	50 °F	44 °F	80 %	SW	5 mph	0 mph	24.66 in	0.0 in	Mostly Cloudy
7:52 AM	50 °F	44 °F	80 %	WNW	6 mph	0 mph	24.66 in	0.0 in	Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
8:52 AM	52 °F	43 °F	71 %	NNW	7 mph	0 mph	24.66 in	0.0 in	Mostly Cloudy
9:52 AM	56 °F	42 °F	60 %	NW	5 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
10:52 AM	59 °F	42 °F	53 %	CALM	0 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
11:52 AM	62 °F	41 °F	46 %	VAR	3 mph	0 mph	24.66 in	0.0 in	Mostly Cloudy
12:52 PM	62 °F	38 °F	41 %	W	9 mph	0 mph	24.64 in	0.0 in	Cloudy
1:52 PM	64 °F	37 °F	37 %	VAR	3 mph	0 mph	24.62 in	0.0 in	Cloudy
2:52 PM	63 °F	37 °F	38 %	N	9 mph	0 mph	24.61 in	0.0 in	Cloudy
3:52 PM	64 °F	37 °F	37 %	VAR	5 mph	0 mph	24.58 in	0.0 in	Cloudy
4:52 PM	64 °F	37 °F	37 %	VAR	3 mph	0 mph	24.57 in	0.0 in	Mostly Cloudy
5:52 PM	63 °F	37 °F	38 %	SE	5 mph	0 mph	24.57 in	0.0 in	Mostly Cloudy
6:52 PM	61 °F	38 °F	42 %	SE	6 mph	0 mph	24.57 in	0.0 in	Cloudy
7:52 PM	58 °F	39 °F	49 %	SSE	7 mph	0 mph	24.57 in	0.0 in	Cloudy
8:52 PM	57 °F	43 °F	59 %	S	13 mph	0 mph	24.59 in	0.0 in	Cloudy
9:52 PM	54 °F	46 °F	75 %	S	12 mph	0 mph	24.61 in	0.0 in	Cloudy
10:52 PM	53 °F	46 °F	77 %	S	21 mph	26 mph	24.60 in	0.0 in	Cloudy / Windy
11:52 PM	52 °F	46 °F	80 %	SSE	10 mph	0 mph	24.59 in	0.0 in	Cloudy

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(https://om.forgeofempires.com/foe/us/?ref=tab_us_us&&external_param=2844644261&pid=theweatherchannel-wunderground&bid=http%3A%2F%2Fcdn.taboola.com%2Flibtrc%2Fstatic%2Fthumbnails%2F4def6df2115bc0cea867470c716b3e03.jpg)

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(https://stairlift-us.searchlime.com/list?c=ohsXJUkpLg&network=taboola&cid=CjA4ZDRkYzM0OS1hNjNiLTQ5YzctYjRjNy05YTQzYzU1NjJhOTctdHVjdDUzYjJiZjASCXJlc29mdC1zYw&subid1=4121232&subid2=1194714|theweatherchanwunderground&title=The+Cost+Of+Stair+Lift+In+2020+Can+Actually+Surprise+You)

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Albuquerque, NM (87116) (weather/us/nm/albuquerque/35.05,-106.61)

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

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HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

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Daily | Weekly | Monthly

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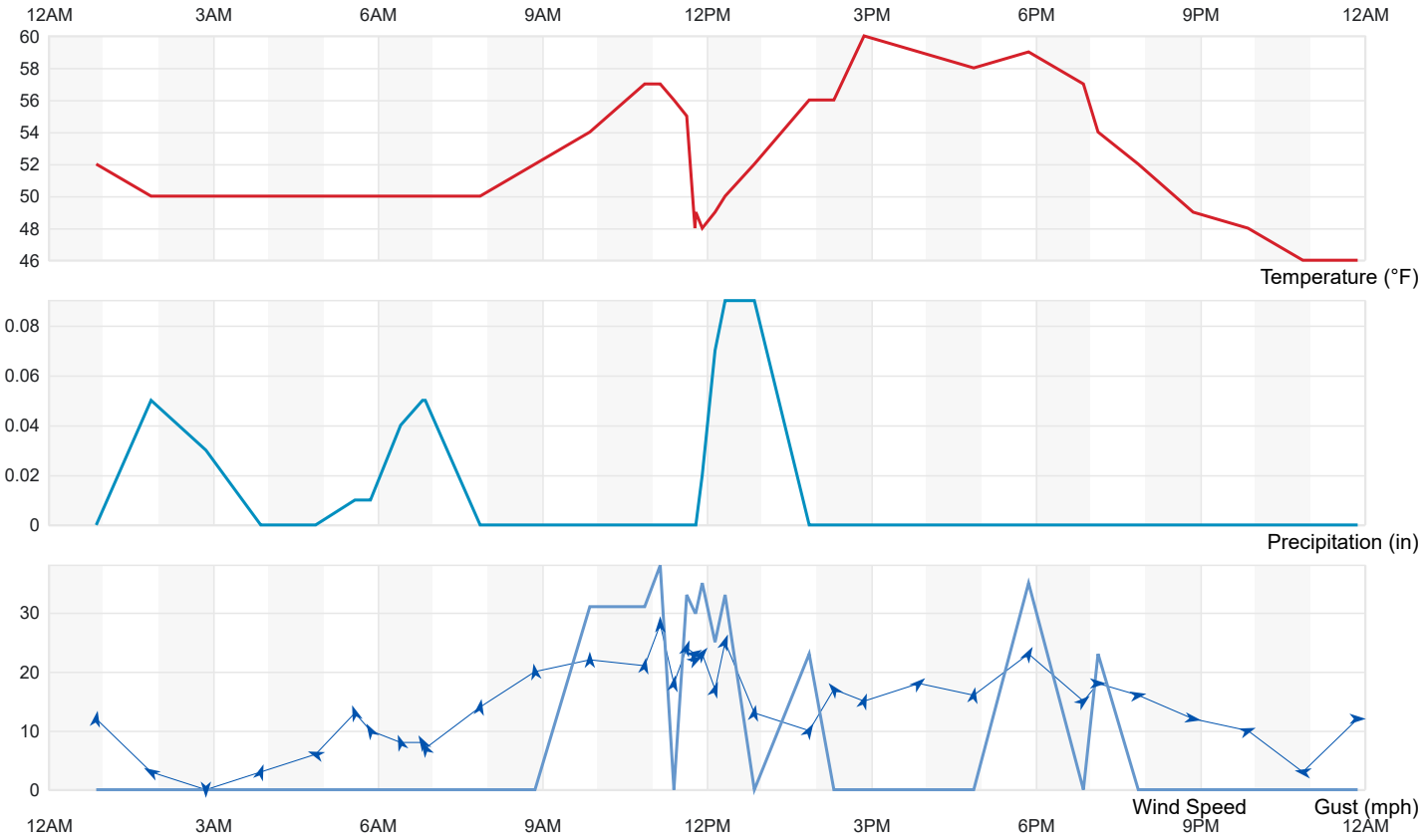
March | 13 | 2020 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	60	60	80
Low Temp	46	35	16
Day Average Temp	52.19	48	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.09	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	41.67	-	-
High	48	-	-
Low	23	-	-
Average	41.67	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	28	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.69	-	-
Astronomy	Day Length	Rise	Set
Actual Time	11h 53m	7:20 AM	7:13 PM
Civil Twilight		6:55 AM	7:39 PM
Nautical Twilight		6:25 AM	8:08 PM
Astronomical Twilight		5:56 AM	8:37 PM
Moon: waxing crescent		-	-

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	52 °F	46 °F	80 %	S	12 mph	0 mph	24.60 in	0.0 in	Light Rain
1:52 AM	50 °F	47 °F	89 %	ESE	3 mph	0 mph	24.62 in	0.1 in	Rain
2:52 AM	50 °F	46 °F	86 %	CALM	0 mph	0 mph	24.60 in	0.0 in	Light Rain
3:52 AM	50 °F	47 °F	89 %	SSW	3 mph	0 mph	24.57 in	0.0 in	Light Rain
4:52 AM	50 °F	46 °F	86 %	ESE	6 mph	0 mph	24.56 in	0.0 in	Cloudy
5:35 AM	50 °F	46 °F	86 %	SSE	13 mph	0 mph	24.56 in	0.0 in	Light Rain
5:52 AM	50 °F	47 °F	89 %	SSE	10 mph	0 mph	24.57 in	0.0 in	Cloudy
6:25 AM	50 °F	48 °F	93 %	SSE	8 mph	0 mph	24.57 in	0.0 in	Light Rain

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
6:49 AM	50 °F	48 °F	94 %	SSE	8 mph	0 mph	24.57 in	0.1 in	Mostly Cloudy
6:52 AM	50 °F	48 °F	93 %	SSE	7 mph	0 mph	24.57 in	0.1 in	Mostly Cloudy
7:52 AM	50 °F	47 °F	89 %	S	14 mph	0 mph	24.57 in	0.0 in	Mostly Cloudy
8:52 AM	52 °F	46 °F	80 %	S	20 mph	0 mph	24.58 in	0.0 in	Partly Cloudy
9:52 AM	54 °F	45 °F	72 %	S	22 mph	31 mph	24.58 in	0.0 in	Mostly Cloudy / Windy
10:52 AM	57 °F	45 °F	64 %	S	21 mph	31 mph	24.57 in	0.0 in	Mostly Cloudy / Windy
11:09 AM	57 °F	46 °F	67 %	S	28 mph	38 mph	24.57 in	0.0 in	Thunder in the Vicinity
11:24 AM	56 °F	46 °F	69 %	S	18 mph	0 mph	24.57 in	0.0 in	Light Rain
11:38 AM	55 °F	45 °F	69 %	SSW	24 mph	33 mph	24.57 in	0.0 in	T-Storm / Windy
11:47 AM	48 °F	45 °F	87 %	WSW	23 mph	30 mph	24.57 in	0.0 in	Light Rain with Thunder
11:48 AM	49 °F	44 °F	83 %	WSW	22 mph	30 mph	24.57 in	0.0 in	Light Rain with Thunder
11:55 AM	48 °F	43 °F	83 %	SW	23 mph	35 mph	24.57 in	0.0 in	Heavy T-Storm / Windy
12:09 PM	49 °F	43 °F	80 %	SSW	17 mph	25 mph	24.57 in	0.1 in	T-Storm
12:20 PM	50 °F	42 °F	74 %	SSW	25 mph	33 mph	24.57 in	0.1 in	Light Rain / Windy
12:52 PM	52 °F	47 °F	83 %	S	13 mph	0 mph	24.57 in	0.1 in	Mostly Cloudy
1:52 PM	56 °F	43 °F	62 %	SSW	10 mph	23 mph	24.53 in	0.0 in	Mostly Cloudy
2:19 PM	56 °F	46 °F	69 %	SE	17 mph	0 mph	24.53 in	0.0 in	Partly Cloudy
2:52 PM	60 °F	44 °F	55 %	SSW	15 mph	0 mph	24.51 in	0.0 in	Partly Cloudy
3:52 PM	59 °F	38 °F	46 %	SW	18 mph	0 mph	24.50 in	0.0 in	Cloudy
4:52 PM	58 °F	37 °F	46 %	S	16 mph	0 mph	24.50 in	0.0 in	Cloudy
5:52 PM	59 °F	26 °F	28 %	SSW	23 mph	35 mph	24.51 in	0.0 in	Mostly Cloudy / Windy
6:52 PM	57 °F	23 °F	27 %	SW	15 mph	0 mph	24.53 in	0.0 in	Mostly Cloudy
7:08 PM	54 °F	31 °F	41 %	W	18 mph	23 mph	24.55 in	0.0 in	Mostly Cloudy
7:52 PM	52 °F	31 °F	45 %	W	16 mph	0 mph	24.57 in	0.0 in	Mostly Cloudy
8:52 PM	49 °F	32 °F	52 %	W	12 mph	0 mph	24.61 in	0.0 in	Mostly Cloudy
9:52 PM	48 °F	31 °F	52 %	WSW	10 mph	0 mph	24.63 in	0.0 in	Partly Cloudy
10:52 PM	46 °F	33 °F	61 %	E	3 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
11:52 PM	46 °F	32 °F	58 %	W	12 mph	0 mph	24.69 in	0.0 in	Mostly Cloudy

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35.05 °N, **106.61** °W

Albuquerque, NM Weather History

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Daily | Weekly | Monthly

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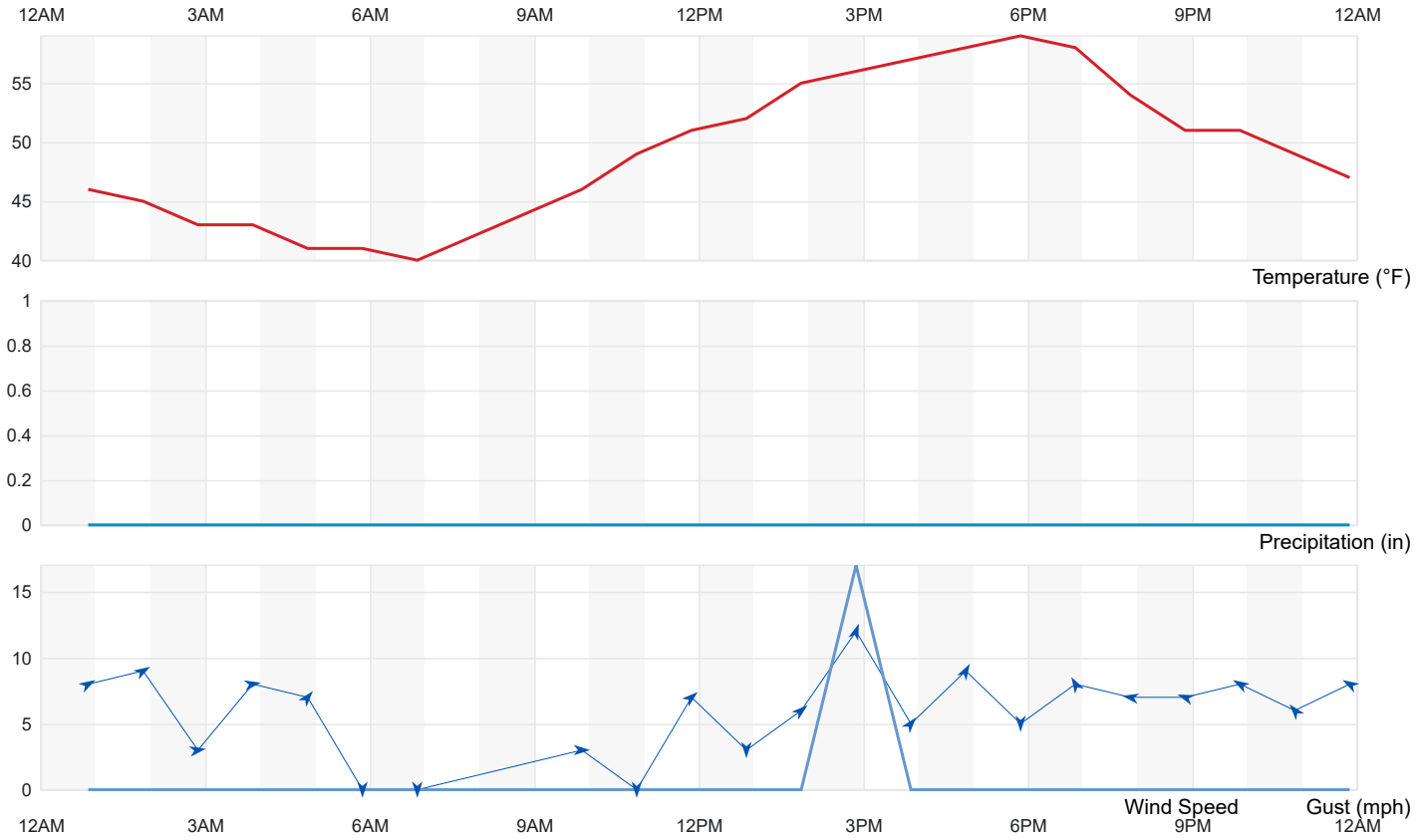
March | 14 | 2020 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	59	60	79
Low Temp	40	35	15
Day Average Temp	49.64	48	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.14	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	29.36	-	-
High	32	-	-
Low	27	-	-
Average	29.36	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	12	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.8	-	-
Astronomy	Day Length	Rise	Set
Actual Time	11h 55m	7:19 AM	7:14 PM
Civil Twilight		6:53 AM	7:39 PM
Nautical Twilight		6:24 AM	8:09 PM
Astronomical Twilight		5:54 AM	8:38 PM
Moon: waning gibbous		12:08 AM	10:48 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	46 °F	32 °F	58 %	WSW	8 mph	0 mph	24.69 in	0.0 in	Mostly Cloudy
1:52 AM	45 °F	31 °F	58 %	WSW	9 mph	0 mph	24.71 in	0.0 in	Mostly Cloudy
2:52 AM	43 °F	30 °F	60 %	W	3 mph	0 mph	24.71 in	0.0 in	Mostly Cloudy
3:52 AM	43 °F	30 °F	60 %	W	8 mph	0 mph	24.72 in	0.0 in	Partly Cloudy
4:52 AM	41 °F	31 °F	67 %	SW	7 mph	0 mph	24.73 in	0.0 in	Partly Cloudy
5:52 AM	41 °F	30 °F	65 %	CALM	0 mph	0 mph	24.74 in	0.0 in	Fair
6:52 AM	40 °F	30 °F	68 %	CALM	0 mph	0 mph	24.76 in	0.0 in	Fair
9:52 AM	46 °F	32 °F	58 %	W	3 mph	0 mph	24.80 in	0.0 in	Fair

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
10:52 AM	49 °F	28 °F	44 %	CALM	0 mph	0 mph	24.80 in	0.0 in	Fair
11:52 AM	51 °F	28 °F	41 %	SW	7 mph	0 mph	24.80 in	0.0 in	Fair
12:52 PM	52 °F	29 °F	41 %	VAR	3 mph	0 mph	24.79 in	0.0 in	Fair
1:52 PM	55 °F	27 °F	34 %	SW	6 mph	0 mph	24.77 in	0.0 in	Fair
2:52 PM	56 °F	27 °F	33 %	SSW	12 mph	17 mph	24.76 in	0.0 in	Fair
3:52 PM	57 °F	27 °F	32 %	SW	5 mph	0 mph	24.76 in	0.0 in	Fair
4:52 PM	58 °F	27 °F	31 %	SSW	9 mph	0 mph	24.75 in	0.0 in	Fair
5:52 PM	59 °F	27 °F	29 %	VAR	5 mph	0 mph	24.75 in	0.0 in	Fair
6:52 PM	58 °F	27 °F	31 %	SSE	8 mph	0 mph	24.76 in	0.0 in	Fair
7:52 PM	54 °F	29 °F	38 %	E	7 mph	0 mph	24.76 in	0.0 in	Partly Cloudy
8:52 PM	51 °F	32 °F	48 %	ESE	7 mph	0 mph	24.78 in	0.0 in	Fair
9:52 PM	51 °F	30 °F	44 %	ESE	8 mph	0 mph	24.79 in	0.0 in	Fair
10:52 PM	49 °F	31 °F	50 %	SE	6 mph	0 mph	24.80 in	0.0 in	Fair
11:52 PM	47 °F	31 °F	54 %	ESE	8 mph	0 mph	24.80 in	0.0 in	Fair

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Man Who Called GM Collapse Has Big New Prediction About U.S. Dollar
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35.05 °N, **106.61** °W

Albuquerque, NM Weather History

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- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily | Weekly | Monthly

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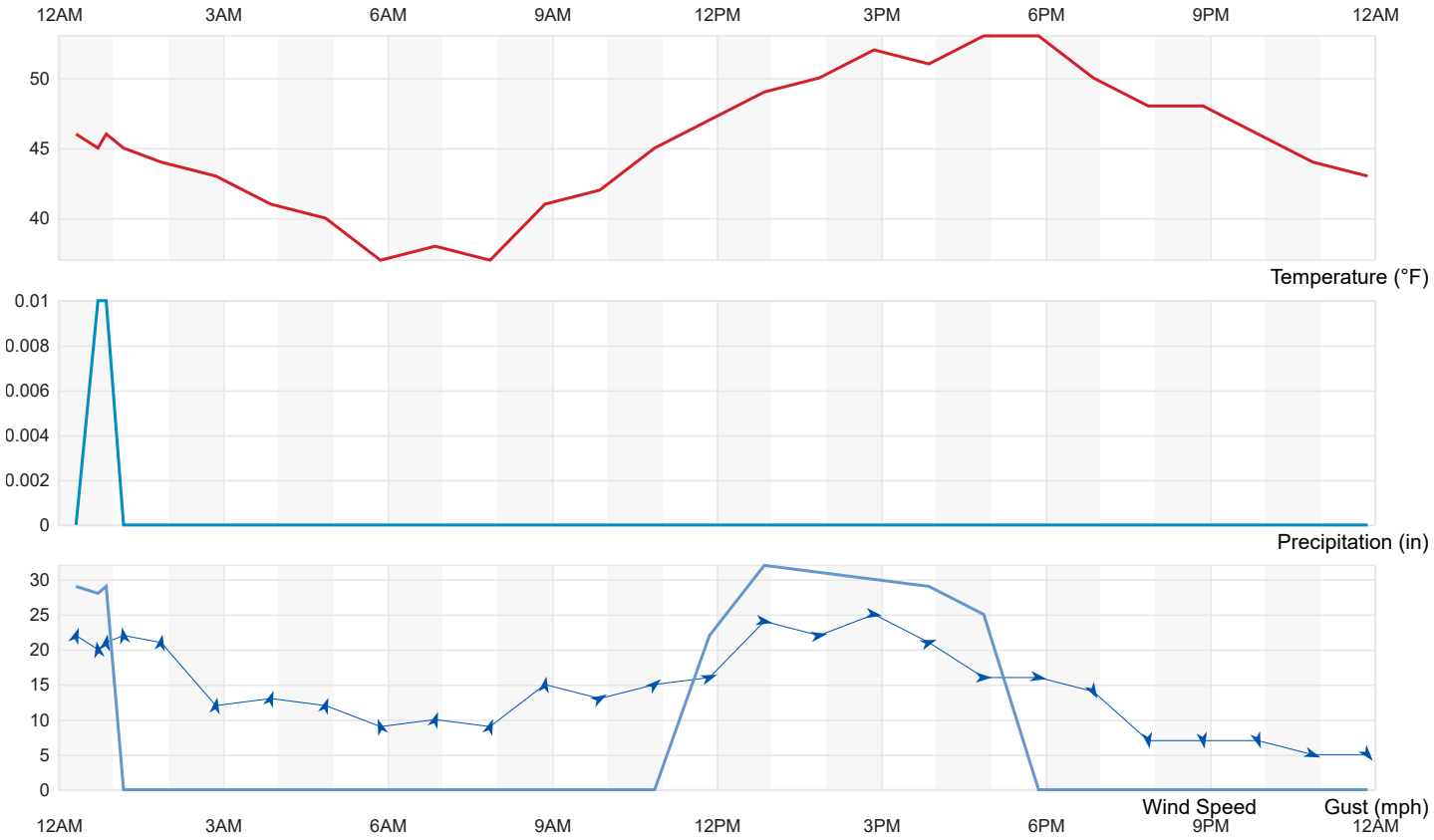
March | 19 | 2020 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	53	61	85
Low Temp	37	36	19
Day Average Temp	45.33	49	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.03	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	28.48	-	-
High	42	-	-
Low	17	-	-
Average	28.48	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	25	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.8	-	-
Astronomy	Day Length	Rise	Set
Actual Time	12h 6m	7:12 AM	7:18 PM
Civil Twilight		6:46 AM	7:43 PM
Nautical Twilight		6:17 AM	8:13 PM
Astronomical Twilight		5:47 AM	8:43 PM
Moon: waning crescent		4:53 AM	3:07 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:19 AM	46 °F	41 °F	83 %	SSW	22 mph	29 mph	24.45 in	0.0 in	Cloudy / Windy
12:43 AM	45 °F	42 °F	90 %	S	20 mph	28 mph	24.44 in	0.0 in	Light Rain
12:52 AM	46 °F	41 °F	83 %	S	21 mph	29 mph	24.46 in	0.0 in	Cloudy / Windy
1:11 AM	45 °F	40 °F	82 %	S	22 mph	0 mph	24.47 in	0.0 in	Mostly Cloudy / Windy
1:52 AM	44 °F	36 °F	73 %	S	21 mph	0 mph	24.48 in	0.0 in	Partly Cloudy / Windy
2:52 AM	43 °F	35 °F	74 %	S	12 mph	0 mph	24.48 in	0.0 in	Cloudy
3:52 AM	41 °F	31 °F	67 %	SSW	13 mph	0 mph	24.49 in	0.0 in	Mostly Cloudy
4:52 AM	40 °F	30 °F	68 %	SSW	12 mph	0 mph	24.51 in	0.0 in	Partly Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
5:52 AM	37 °F	30 °F	76 %	SSE	9 mph	0 mph	24.52 in	0.0 in	Partly Cloudy
6:52 AM	38 °F	28 °F	68 %	SSW	10 mph	0 mph	24.54 in	0.0 in	Partly Cloudy
7:52 AM	37 °F	28 °F	70 %	SSW	9 mph	0 mph	24.56 in	0.0 in	Partly Cloudy
8:52 AM	41 °F	29 °F	62 %	S	15 mph	0 mph	24.59 in	0.0 in	Partly Cloudy
9:52 AM	42 °F	28 °F	58 %	WSW	13 mph	0 mph	24.62 in	0.0 in	Mostly Cloudy
10:52 AM	45 °F	29 °F	53 %	SW	15 mph	0 mph	24.63 in	0.0 in	Mostly Cloudy
11:52 AM	47 °F	27 °F	46 %	WSW	16 mph	22 mph	24.63 in	0.0 in	Mostly Cloudy
12:52 PM	49 °F	23 °F	36 %	W	24 mph	32 mph	24.64 in	0.0 in	Mostly Cloudy / Windy
1:52 PM	50 °F	23 °F	35 %	W	22 mph	31 mph	24.64 in	0.0 in	Mostly Cloudy / Windy
2:52 PM	52 °F	22 °F	31 %	W	25 mph	30 mph	24.64 in	0.0 in	Mostly Cloudy / Windy
3:52 PM	51 °F	21 °F	31 %	WSW	21 mph	29 mph	24.65 in	0.0 in	Mostly Cloudy / Windy
4:52 PM	53 °F	21 °F	29 %	W	16 mph	25 mph	24.67 in	0.0 in	Partly Cloudy
5:52 PM	53 °F	17 °F	24 %	W	16 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
6:52 PM	50 °F	23 °F	35 %	NNW	14 mph	0 mph	24.69 in	0.0 in	Mostly Cloudy
7:52 PM	48 °F	24 °F	39 %	N	7 mph	0 mph	24.72 in	0.0 in	Mostly Cloudy
8:52 PM	48 °F	24 °F	39 %	N	7 mph	0 mph	24.74 in	0.0 in	Mostly Cloudy
9:52 PM	46 °F	24 °F	42 %	NNW	7 mph	0 mph	24.76 in	0.0 in	Partly Cloudy
10:52 PM	44 °F	26 °F	49 %	WNW	5 mph	0 mph	24.78 in	0.0 in	Partly Cloudy
11:52 PM	43 °F	26 °F	51 %	NW	5 mph	0 mph	24.80 in	0.0 in	Partly Cloudy

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HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

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(/history/daily/us/nm/albuquerque/KABQ/date/2020-3-22) (/history/weekly/us/nm/albuquerque/KABQ/date/2020-3-22) (/history/monthly/us/nm/albuquerque/KABQ/date/2020-3)

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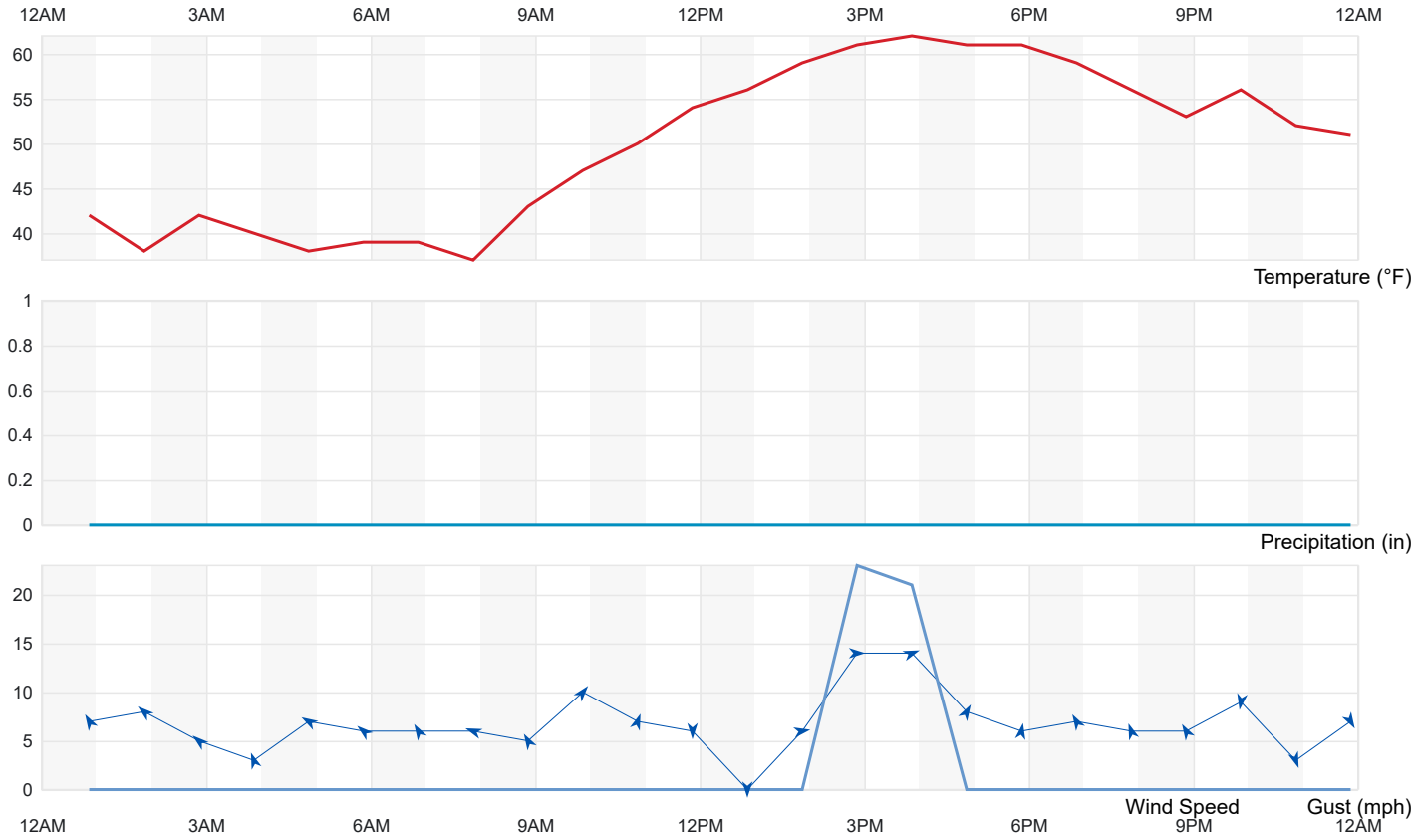

Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	62	62	82
Low Temp	37	37	18
Day Average Temp	49.83	49	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.02	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	24.58	-	-
High	34	-	-
Low	18	-	-
Average	24.58	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	14	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.79	-	-
Astronomy	Day Length	Rise	Set
Actual Time	12h 13m	7:07 AM	7:21 PM
Civil Twilight		6:42 AM	7:46 PM
Nautical Twilight		6:12 AM	8:15 PM
Astronomical Twilight		5:42 AM	8:45 PM
Moon: waning crescent		6:38 AM	5:58 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	42 °F	34 °F	73 %	SSE	7 mph	0 mph	24.72 in	0.0 in	Fair
1:52 AM	38 °F	31 °F	76 %	SE	8 mph	0 mph	24.73 in	0.0 in	Partly Cloudy
2:52 AM	42 °F	27 °F	55 %	SE	5 mph	0 mph	24.74 in	0.0 in	Mostly Cloudy
3:52 AM	40 °F	27 °F	60 %	SSE	3 mph	0 mph	24.73 in	0.0 in	Cloudy
4:52 AM	38 °F	28 °F	68 %	ESE	7 mph	0 mph	24.73 in	0.0 in	Cloudy
5:52 AM	39 °F	27 °F	62 %	SE	6 mph	0 mph	24.74 in	0.0 in	Cloudy
6:52 AM	39 °F	26 °F	60 %	SSE	6 mph	0 mph	24.76 in	0.0 in	Cloudy
7:52 AM	37 °F	27 °F	67 %	ESE	6 mph	0 mph	24.76 in	0.0 in	Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
8:52 AM	43 °F	28 °F	56 %	SSE	5 mph	0 mph	24.77 in	0.0 in	Cloudy
9:52 AM	47 °F	26 °F	44 %	SW	10 mph	0 mph	24.79 in	0.0 in	Cloudy
10:52 AM	50 °F	25 °F	38 %	SSW	7 mph	0 mph	24.78 in	0.0 in	Cloudy
11:52 AM	54 °F	24 °F	31 %	VAR	6 mph	0 mph	24.77 in	0.0 in	Cloudy
12:52 PM	56 °F	21 °F	26 %	CALM	0 mph	0 mph	24.75 in	0.0 in	Cloudy
1:52 PM	59 °F	18 °F	20 %	W	6 mph	0 mph	24.73 in	0.0 in	Cloudy
2:52 PM	61 °F	18 °F	19 %	W	14 mph	23 mph	24.71 in	0.0 in	Cloudy
3:52 PM	62 °F	19 °F	19 %	WSW	14 mph	21 mph	24.70 in	0.0 in	Cloudy
4:52 PM	61 °F	22 °F	22 %	SSW	8 mph	0 mph	24.68 in	0.0 in	Cloudy
5:52 PM	61 °F	22 °F	22 %	S	6 mph	0 mph	24.68 in	0.0 in	Cloudy
6:52 PM	59 °F	23 °F	25 %	SSE	7 mph	0 mph	24.68 in	0.0 in	Cloudy
7:52 PM	56 °F	23 °F	28 %	SSE	6 mph	0 mph	24.68 in	0.0 in	Cloudy
8:52 PM	53 °F	24 °F	32 %	SSE	6 mph	0 mph	24.71 in	0.0 in	Cloudy
9:52 PM	56 °F	23 °F	28 %	N	9 mph	0 mph	24.71 in	0.0 in	Cloudy
10:52 PM	52 °F	24 °F	34 %	NNW	3 mph	0 mph	24.71 in	0.0 in	Cloudy
11:52 PM	51 °F	23 °F	33 %	NNW	7 mph	0 mph	24.71 in	0.0 in	Partly Cloudy

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6001 Indian School Road NE, Suite 310
Albuquerque, New Mexico 87110
tel: 505-243-3200
fax: 505-243-2700

April 10, 2020

Ms. Shellie Eaton, PE
Senior Engineer
City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Subject: Visual Stormwater Monitoring at the City of Albuquerque Facilities
First Quarter 2020
CDM Smith Project No: 0668-229726.VISUAL MONITORING

Dear Ms. Eaton:

CDM Smith Inc. (CDM Smith) performed visual stormwater monitoring activities at select City of Albuquerque (CABQ) outfalls during the First Quarter 2020. **Table 1** identifies the CABQ facilities for which CDM Smith is responsible for conducting quarterly visual monitoring. Monthly precipitation data from Weather Underground (WU; Albuquerque International Sunport Station) for the First Quarter 2020 (January through March) is included in **Attachment A**. Daily weather reports for days when precipitation was observed (based on WU data) are included in **Attachment B**. The events with measurable precipitation occurring during this time are summarized in **Table2**.

Table 1 - City of Albuquerque Facilities - CDM Smith Quarterly Visual Monitoring

Zone	City of Albuquerque Facility
Zone 1	Los Altos Golf Course
	Lomas Fuel Station
	Arroyo Street Maintenance
	Street Satellite #1
	Los Altos Trails Parks Management
	Los Altos Parks Management
Zone 2	Daytona Transit Center
	Ladera Golf Course
	Streets Satellite #3
	Don Reservoir Convenience Center
Zone 3	Puerto del Sol Golf Course
	Yale Transit Center
Zone 4	Montessa Park Open Space
	Montessa Park Convenience Center

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Table 2 - First Quarter 2020 Precipitation Events (January-March)

Date	Event Start Time	Storm Duration (hours)	Total Precipitation (inches)	Notes
1/10/2020	3:30 AM	1.5 hr	0.02	Light rain across the city - rainfall amount ranging from 0.01 - 0.03 in. Samples were not collected due to lack of runoff and event occurring outside of operating hours.
1/16/2020	**10:00 AM**	**8 hr**	**0.15**	**Snow across the city - precipitation amounts ranging from 0.15 to 0.35. Samples were collected in all zones. Some outfall samples were not collected due to lack of runoff.**
1/21/2020	**11:00 AM**	**8 hr**	**0.13**	**Light rain across the city - rainfall amount ranging from 0.11 to 0.19. Inspectors went to Zones 3 and 4, but only two samples were collected in Zone 4. Other outfalls could not be sampled due to lack of runoff.**
2/4/2020	6:00 AM	10 hr	0.04	Light snow across the city - precipitation amounts ranging from trace to 0.06 in. Samples were not collected due to lack of runoff.
2/10/2020	10:00 PM	4 hr	0.33	Light rain across the city from 8 AM - 12 PM. Heavy rain and snow starting at 10 PM -2 AM. Samples were not collected. The peak of the storm occurred after operating hours and there was also not enough runoff during the day time.
2/22/2020*	12:00 PM	6 hr	0.16	Light rain across the city from 12 PM - 6 PM. Storm event occurred outside of operating hours, samples were not collected.
2/23/2020*	3:00 AM	12 hr	0.03	Scattered rain across the city starting around 3 AM. Precipitation amounts vary from 0.01 - 0.12. Storm event occurred outside of operating hours, samples were not collected.
3/8/2020*	3:00 PM	2	0.01	Light rain across the city from 3 PM - 5PM. Storm event occurred outside of operating hours. Samples were not collected.
3/11/2020	7:00 AM	1 hr	0.02	Scattered rain across the city. Samples were not collected due to lack of runoff.
3/13/2020	**12:00 PM**	**2**	**0.14**	**Scattered and light across the city between 1 AM - 6 AM. Qualifying rainfall did not occur until about 12 PM. One sample was collected in Zone 3.**
3/18/2020	7:00 PM	2	0.03	Light rain across the city starting around 7 PM. Storm even occurred outside of operating hours. Sample were not collected.
3/21/2020	3:30 PM	1	0.02	Light rain across the city. Storm even occurred outside of operating hours. Sample were not collected.

Note: Shaded rows indicate a non-qualifying event. Events in bold text indicate qualifying events. Stars indicate a weekend event. Any events with a total accumulation of 0.00" or T (Trace) were not included in this table. Storm Duration is based on hourly weather data. All weather data was sourced from Weather Underground or CoCoRaHS.

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Certain criteria regarding the precipitation event must be met to qualify as an assessment event. Visual assessment of stormwater must occur:

- Within 30 minutes of the start of stormwater discharge (or as soon as practicable thereafter); and,
- At least 72 hours after the previous stormwater discharge event.

An additional limitation on the timing of sampling activities within the CABQ is described in the City's Storm Water Management Plan (SWMP, December 2016). Section 13.3.1.2 of the SWMP limits sampling to normal business hours – Monday through Friday, 7:30 am to 5:00 pm and sampling is not required on the following observed holidays: Thanksgiving Day and Christmas Day through New Year's Day. Therefore, storm events that occur outside of normal business hours or on a holiday are not considered qualifying events.

As seen in **Table 2**, of the 12 precipitation events with measurable precipitation that occurred in the First Quarter of 2020, three events (1/16/20, 1/21/20, and 3/13/20) were considered qualifying per the criteria listed above. Furthermore, based on CDM Smith's past visual monitoring experience for CABQ facilities, stormwater discharges from facilities typically does not occur for precipitation events of less than 0.1 inches of measurable rainfall. There were two events in the first quarter with precipitation greater than 0.1 inch of measurable rainfall that did not meet all the qualifying criteria for an assessment to take place.

CDM Smith's subcontractor, Bohannan Houston, Inc. (BHI) mobilized to all Zones on 1/16/20, 1/21/20, and 3/13/20 collectively to perform visual stormwater monitoring inspections at facility outfalls during precipitation events. As identified in **Table 3**, which summarizes Calendar Year 2019 visual stormwater monitoring, 14 of the 21 outfalls were monitored during the First Quarter of 2020.

Table 3 - Calendar Year 2020 Visual Stormwater Monitoring

Zone	Facility	Outfalls	Quarter 1[1]	Quarter 2	Quarter 3	Quarter 4	Events Remaining[2]
1	Los Altos Golf Course	LA1	✓	-	-	-	3
		LA2	✓	-	-	-	3
	Lomas Fuel Station	L1	-	-	-	-	4
	Arroyo Street Maintenance	AM1	✓	-	-	-	3
	Street Satellite #1	SS1A	-	-	-	-	4
		SS1B	✓	-	-	-	3
	Los Altos Trails Parks Management	LAM1	✓	-	-	-	3
	Los Altos Parks Management	LAP1	-	-	-	-	4

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Table 3 - Calendar Year 2020 Visual Stormwater Monitoring

Zone	Facility	Outfalls	Quarter 1[1]	Quarter 2	Quarter 3	Quarter 4	Events Remaining[2]
2	Daytona Transit Center	D1	✓	-	-	-	3
		D2	✓	-	-	-	3
	Ladera Golf Course	LGC1	-	-	-	-	4
		LGC2	✓	-	-	-	3
	Streets Satellite #3	SS3	✓	-	-	-	3
	Don Reservoir Convenience Center	DR01	✓	-	-	-	3
3	Puerto del Sol Golf Course	PDS1	-	-	-	-	4
		PDS2	✓	-	-	-	3
	Yale Transit Center	Y1	✓	-	-	-	3
4	Montessa Park Open Space	MP1	✓	-	-	-	3
		MP2	-	-	-	-	4
	Montessa Park Convenience Center	MP01	-	-	-	-	4
		MP02	✓	-	-	-	3

Notes:
1. A "✓" indicates that a visual monitoring event was performed for the indicated outfall during the calendar quarter, "✓✓" indicates two visual monitoring events were performed during the quarter.
2. This column indicates the number of events remaining for Calendar Year 2020.

Visual Monitoring observations for each of the fourteen outfalls observed during events on 1/16/20, 1/21/20, and 3/13/20 are summarized below. Photographs of the visual monitoring samples are included in **Attachment D**.

- **Outfall LA1** (Los Altos Golf Course) is a concrete culvert discharging into riprap and vegetation before entering the storm drain channel. **1/16/20**: The outfall was observed after flow had ceased. A small amount of ponding was observed in which a sample was taken from. The sample was very cloudy to opaque, brown to dark grey in color, contained solids and a sheen. No odor or foam was present. A sheen was observed in onsite puddles, possibly originating from nearby parking lots.
- **Outfall LA2** (Los Altos Golf Course) collects runoff from the Los Altos Golf Course fueling, maintenance, and storage areas before discharging through the lowest ground elevation on the west of the facility premises. **1/16/20**: The sample was observed under very low flow conditions. Small ponds were observed at the site. The sample taken was clear to slightly cloudy and grey in color. It contained suspended and settled solids. No sheen, odor, or foam was present.

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- **Outfall AM1** (Arroyo Maintenance) is a culvert draining from the parking lot, located on the northwest corner of the facility, discharging to Altez Street. The outfall is surrounded by a wattle on the inside of the facility fence. **1/16/20**: The outfall was observed under low flow conditions. The collected sample was very cloudy and red in color with obvious solids present. No sheen, odor, or foam was present in the sample. Sheen was noted in the gutter upstream from traffic, offsite. Snow plows were present; oil or gas may be dripping from operating vehicles.
- **SS1B** (Street Satellite #1 B) is a wattle around a 4ft x 4ft gate near a covered structure that drains a parking lot. **1/16/20**: The outfall was observed under very low flow conditions. The collected sample was opaque and dark grey in color and contained obvious solids. A sheen and foam were present with no accompanying odor. . Snow plows were present; oil or gas may be dripping from operating vehicles.
- **Outfall LAM1** (Los Altos Trails Parks Management) is a storm drain which collects runoff from the facility parking lot area before discharging to the arroyo and storm drain channel on the northeast corner of the facility premises. **1/16/20**: The outfall was inspected under low flow conditions. The collected sample was slightly cloudy to very cloudy with suspended and settled solids. No sheen, odor, or foam was present.
- **Outfall D1** (Daytona Westside) is a storm drain manhole which collects runoff from the employee parking area. **1/16/20**: The outfall was observed under low flow conditions. The collected sample was slightly cloudy with a whitish hue. No solids, sheen, odor, or foam were present.
- **Outfall D2** (Daytona Westside) is a storm drain manhole which collects runoff from the bus parking lot and maintenance building areas. **1/16/20**: The outfall was observed under low flow conditions. The collected sample was clear with a yellow tint. No solids, sheen, or odor were present, but a foam was observed.
- **Outfall LCG2** (Ladera Golf Course) is a runoff point before stormwater from the parking area enters the golf course pond. **1/16/20**: The outfall was observed under low flow conditions. The collected sample was clear with no solids, sheen, odor, or foam present.
- **SS3** (Streets Satellite #3) is a concrete spill way that discharges into a stormwater detention pond. **1/16/20**: The outfall was observed under low flow conditions. The collected sample was very cloudy with a tan/yellow color. Floating solids were present. A sheen was observed in the sample, but no odor or foam were present. The sheen may originate from vehicles and trailers parked nearby.
- **Outfall DR01** (Don Reservoir Convenience Center) is an inlet on the east side of the property that drains the vehicle storage area and all solid and hazardous municipal waste collection/storage areas. **1/16/20**: The outfall was observed under low flow conditions. The collected sample was very cloudy and brownish in color with settled solids. A large sheen was

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observed around the outfall (likely from the parking lot and trucks), but no odor or foam were present.

- **Outfall Y1** (Yale Transit Center) is a grate leading to a storm drain which collects runoff from the bus parking lot and maintenance building areas. **1/16/20**: The outfall was observed under low flow conditions. The collected sample was very cloudy and brown in color with settled solids. No sheen, odor, or foam was observed.
- **PDS2** (Puerto del Sol Golf Course) is a grated inlet that drains the east end of the golf course and the parking area. **3/13/20**: The outfall was observed under low flow conditions. The collected sample was opaque and tan in color with solids present. No sheen, odor, or foam were present.
- **Outfall MP1** (Montessa Park Open Space) is a metal culvert collecting runoff from the facility parking lot and warehouse areas before discharging to the Tijeras Arroyo located on the northeast of the facility premises. **1/21/20**: The outfall was observed under very low flow conditions. The collected sample was slightly cloudy and yellowish in color with solids present and dark flakes observed. No sheen, odor, or foam were observed.
- **Outfall MP02** (Montessa Park Convenience Center) is a gutter leading into a trench drain that collects runoff from the MSW receiving areas and the tipping flow before discharging to Los Picaros Road. **1/21/20**: The sample was observed under low flow conditions. The collected sample was slightly cloudy and yellow in color with solids present. A sheen and a sharp chemical smell were observed; likely sources include daily traffic and parked vehicles. No foam was present.

CDM Smith appreciates the opportunity of providing environmental consulting services to the CABQ. Please contact CDM Smith at (505) 243-3200 if you have any questions or comments regarding this report.

Sincerely,

Kelsey Bicknell
Project Engineer
CDM Smith Inc.

Dacia Tucholke
Project Manager
CDM Smith Inc.

Attachments:

A – Monthly Precipitation Summary for First Quarter 2020 (Weather Underground and/or CoCoRaHS, January 1, 2020 to March 31, 2020)
B – Daily Weather Reports for Precipitation Events Occurring in First Quarter 2020 (Weather Underground and/or CoCoRaHS)
C – Visual Stormwater Monitoring Inspection Forms
D – Stormwater Monitoring Sampling Photographs

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ATTACHMENT A

MONTHLY PRECIPITATION SUMMARY FOR FIRST QUARTER 2020
(WEATHER UNDERGROUND AND/OR COCORAHS, JANUARY 1, 2020 TO MARCH 31, 2020)

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Temperature (° F)	Max	Average	Min
Max Temperature	58	48.06	37
Avg Temperature	45.58	37.66	30.88
Min Temperature	38	28.16	18

Dew Point (° F)	Max	Average	Min
Dew Point	38	19.36	3

Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.15	0.01	0.00	0.30
Snowdepth	0.00	0.00	0.00	0.00

Wind	Max	Average	Min
Wind	31	7.15	0
Gust Wind	41	1.91	0

Sea Level Pressure	Max	Average	Min
Sea Level Pressure	25.03	24.74	24.37

Daily Observations

JANUARY 2020
(Albuquerque International Sunport)

Time	Temperature (° F)	Dew Point (° F)	Humidity (%)	Wind Speed (mph)	Pressure (Hg)	Precipitation (in)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Jan	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	43	33.7	23	22	16.0	12	65	49.8	32	14	7.0	0	24.7	24.5	24.4	0.00
2	37	33.0	30	23	21.2	20	69	62.0	52	17	11.5	6	24.7	24.5	24.4	0.00
3	44	33.5	24	19	16.7	14	69	52.1	32	14	7.8	0	24.9	24.8	24.7	0.00
4	49	36.0	26	21	18.8	17	71	51.7	31	14	4.8	0	25.0	25.0	24.9	0.00
5	52	37.6	27	22	20.1	19	72	51.3	28	9	4.1	0	25.0	24.9	24.8	0.00
6	47	37.7	25	20	12.5	6	57	38.1	19	22	11.0	3	25.0	24.9	24.8	0.00
7	48	34.1	21	14	11.7	10	63	41.3	24	6	3.1	0	25.0	24.9	24.8	0.00
8	50	36.8	23	16	13.0	9	68	41.2	22	17	5.4	0	24.8	24.6	24.5	0.00
9	45	38.8	29	25	15.5	9	64	39.8	26	12	5.2	0	24.6	24.6	24.5	0.00
10	40	33.4	27	31	23.1	8	96	69.5	38	21	10.1	0	24.8	24.6	24.5	0.02
11	42	30.9	18	12	8.6	4	65	41.5	23	17	8.2	0	24.8	24.7	24.6	0.00
12	46	35.0	25	17	13.1	11	63	42.1	24	16	6.3	0	24.7	24.7	24.6	0.00
13	56	39.0	26	15	11.9	9	56	36.2	15	24	6.5	0	24.8	24.7	24.6	0.00
14	58	40.7	27	16	12.5	10	58	34.8	15	15	6.8	0	24.8	24.7	24.6	0.00
15	57	45.6	34	15	11.0	3	44	26.5	12	22	6.8	0	24.8	24.8	24.7	0.00
16	41	33.2	30	31	25.9	10	96	79.3	29	31	10.5	0	24.9	24.8	24.8	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
17	48	36.3	32	38	31.1	14	100	84.3	41	15	5.1	0	24.9	24.7	24.7	0.15
18	46	35.0	23	16	13.6	9	72	44.2	24	14	5.9	0	25.0	24.9	24.9	0.00
19	48	37.2	29	21	17.3	15	61	46.0	29	14	8.3	0	25.0	24.9	24.9	0.00
20	49	39.9	30	26	22.6	20	72	51.7	32	8	4.6	0	25.0	24.9	24.9	0.00
21	42	38.7	37	38	33.6	27	97	82.8	62	9	3.6	0	24.9	24.7	24.6	0.00
22	48	41.1	38	38	31.9	28	100	72.1	48	21	10.8	0	24.8	24.7	24.6	0.13
23	52	42.0	34	29	27.4	25	79	58.0	35	15	8.3	0	24.8	24.8	24.7	0.00
24	50	40.6	31	28	26.8	25	79	59.7	41	12	4.6	0	24.8	24.7	24.6	0.00
25	55	43.3	30	28	25.0	21	79	51.2	27	18	9.6	0	24.8	24.7	24.7	0.00
26	53	41.7	32	28	24.6	23	73	52.6	32	8	3.1	0	24.8	24.8	24.7	0.00
27	47	38.4	27	35	26.5	21	81	63.3	47	20	8.4	0	24.7	24.6	24.6	0.00
28	48	38.2	30	21	17.5	13	59	44.8	25	18	8.4	0	24.8	24.7	24.7	0.00
29	49	38.2	26	19	16.9	14	71	44.9	26	15	7.5	0	24.7	24.6	24.6	0.00
30	50	39.3	30	24	18.5	6	64	46.1	18	22	11.6	5	24.8	24.7	24.6	0.00
31	50	38.5	29	22	15.5	8	69	43.1	19	16	6.8	0	24.9	24.9	24.8	0.00

Note:
The January monthly records shown for Jan 17th and the 22nd are off by one day (and thus do not match the daily weather documentation). All of the precipitation values are correct, but shifted forward by one day.
For example, this document indicates that 0.13 in of rain fell on January 22nd. This storm event actually occurred on January 21st. See daily weather documentation and the Quarterly Precipitation Events spreadsheet for accurate dates.

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Temperature (° F)	Max	Average	Min
Max Temperature	64	52.1	32
Avg Temperature	49.5	40.6	23.25
Min Temperature	39	29.66	13
Dew Point (° F)	Max	Average	Min
Dew Point	44	20.73	-13
Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.33	0.02	0.00	0.57
Snowdepth	0.00	0.00	0.00	0.00
Wind	Max	Average	Min
Wind	37	8.29	0
Gust Wind	48	3.22	0
Sea Level Pressure	Max	Average	Min
Sea Level Pressure	25.03	24.7	24.22

Daily Observations

FEBRUARY 2020
(Albuquerque International Sunport)

Time	Temperature (° F)	Dew Point (° F)	Humidity (%)	Wind Speed (mph)	Pressure (Hg)	Precipitation (in)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Feb	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	58	42.1	29	23	17.9	13	55	39.7	23	9	3.7	0	25.0	24.9	24.9	0.00
2	56	42.6	30	24	20.7	14	72	43.8	25	12	6.4	0	24.9	24.7	24.5	0.00
3	61	45.5	30	27	19.6	14	60	37.8	20	25	13.5	0	24.5	24.4	24.2	0.00
4	37	28.6	21	29	22.3	12	92	77.4	65	16	7.1	0	24.6	24.5	24.4	0.01
5	32	23.3	13	13	2.9	-5	81	45.8	21	18	8.4	0	24.6	24.5	24.5	0.04
6	50	35.4	22	22	13.0	3	54	40.3	31	22	10.2	0	24.6	24.5	24.4	0.00
7	62	46.4	30	26	21.7	18	72	41.9	18	30	8.4	0	24.7	24.6	24.5	0.00
8	64	46.8	31	23	18.6	6	64	37.2	11	17	8.5	0	24.7	24.6	24.5	0.00
9	57	46.3	33	24	17.0	12	52	32.9	18	23	11.6	0	24.6	24.6	24.5	0.00
10	49	41.7	33	40	35.0	29	96	77.6	50	26	6.2	0	24.7	24.6	24.6	0.00
11	34	30.2	28	30	23.7	19	92	76.8	66	37	23.2	0	24.7	24.6	24.6	0.33
12	43	33.2	27	27	23.8	18	93	71.3	37	12	5.7	0	24.7	24.6	24.5	0.00
13	50	36.3	25	25	21.5	19	81	58.8	32	9	5.9	0	24.8	24.7	24.7	0.00
14	52	40.1	26	31	27.4	23	88	62.9	37	12	4.8	0	24.8	24.7	24.7	0.00
15	59	44.0	32	31	23.5	18	79	49.4	22	12	6.0	0	24.8	24.7	24.7	0.00
16	63	46.8	33	28	22.4	17	57	40.7	20	13	5.5	0	24.8	24.7	24.6	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
17	63	49.5	34	29	26.8	24	73	44.4	23	14	5.6	0	24.6	24.6	24.5	0.00
18	57	46.9	38	31	27.2	21	70	48.2	26	26	9.8	0	24.8	24.7	24.6	0.00
19	56	44.9	36	32	29.9	28	73	57.2	34	15	5.6	0	24.8	24.7	24.7	0.00
20	44	37.9	32	32	24.8	21	73	59.9	45	28	19.6	5	25.0	24.9	24.8	0.00
21	45	37.8	30	30	25.6	22	75	62.4	49	10	3.7	0	25.0	25.0	24.9	0.00
22	46	43.2	39	44	38.4	31	97	83.9	67	12	4.1	0	24.9	24.8	24.6	0.00
23	49	41.7	37	43	36.0	27	100	82.2	43	18	8.2	0	24.7	24.6	24.6	0.16
24	57	43.5	34	30	21.0	7	79	45.8	18	29	11.0	0	24.7	24.7	24.6	0.03
25	41	34.5	27	13	2.6	-13	51	28.9	10	21	14.0	8	25.0	24.8	24.7	0.00
26	44	32.9	22	11	5.8	-2	63	36.3	15	9	4.4	0	25.0	25.0	24.9	0.00
27	58	42.7	25	12	8.3	5	53	27.3	14	17	8.5	0	24.9	24.9	24.9	0.00
28	60	44.4	28	15	11.8	8	53	28.9	13	8	4.2	0	25.0	24.9	24.8	0.00
29	64	48.3	35	17	12.0	7	46	25.5	11	20	6.5	0	24.8	24.7	24.6	0.00

Note:
The February monthly records shown above are off by one day (and thus do not match the daily weather documentation). All of the precipitation values are correct, but shifted forward by one day.
For example, this document indicates that 0.16 in of rain fell on February 23rd. This storm event actually occurred on February 22nd. See daily weather documentation and the Quarterly Precipitation Events spreadsheet for accurate dates.

History Thumbnails:)
History Thumbnails:)

Temperature (° F)	Max	Average	Min
Max Temperature	74	62.23	53
Avg Temperature	60.16	50.86	42.67
Min Temperature	53	40.13	32

Dew Point (° F)	Max	Average	Min
Dew Point	48	26.52	0

Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.14	0.01	0.00	0.31
Snowdepth	0.00	0.00	0.00	0.00

Wind	Max	Average	Min
Wind	31	9.2	0
Gust Wind	45	4.04	0

Sea Level Pressure	Max	Average	Min
Sea Level Pressure	25	24.68	24.34

Daily Observations

MARCH 2020
(Albuquerque International Sunport)

Time	Temperature (° F)	Dew Point (° F)	Humidity (%)	Wind Speed (mph)	Pressure (Hg)	Precipitation (in)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Mar	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	59	49.6	42	28	23.3	11	53	36.6	25	16	7.0	0	24.6	24.6	24.5	0.00
2	58	47.0	34	27	19.7	14	67	37.1	18	15	6.4	0	24.6	24.6	24.5	0.00
3	59	46.6	34	19	15.7	13	44	30.5	16	17	8.9	0	24.6	24.5	24.5	0.00
4	62	47.8	35	20	13.0	1	52	29.0	9	12	7.3	3	24.8	24.8	24.6	0.00
5	64	50.3	35	31	21.6	14	67	36.0	15	21	8.4	0	25.0	24.9	24.8	0.00
6	64	49.8	38	27	19.1	0	55	33.5	8	21	7.6	0	25.0	24.9	24.8	0.00
7	68	53.6	37	33	28.6	25	67	41.0	21	15	7.5	0	24.8	24.7	24.6	0.00
8	58	50.7	44	43	38.0	33	85	62.9	46	22	10.2	3	24.7	24.6	24.6	0.00
9	63	47.3	34	41	31.4	17	100	62.5	17	13	6.0	0	24.8	24.8	24.7	0.01
10	66	55.2	44	38	33.2	28	63	45.0	28	18	7.6	0	24.9	24.8	24.8	0.00
11	64	55.0	45	47	41.6	35	86	61.4	48	15	7.8	0	24.9	24.8	24.7	0.00
12	64	56.3	49	46	41.6	37	86	60.8	37	21	5.8	0	24.7	24.6	24.6	0.02
13	60	52.2	46	48	41.7	23	94	70.2	27	28	14.6	0	24.7	24.6	24.5	0.09
14	59	49.6	40	32	29.4	27	68	47.5	29	12	5.9	0	24.8	24.8	24.7	0.14
15	65	52.3	42	36	30.6	25	65	45.8	24	14	7.8	0	24.8	24.8	24.7	0.00
16	67	53.5	42	37	23.7	11	82	37.4	12	12	6.3	0	24.8	24.7	24.6	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
17	68	56.3	46	38	25.2	18	59	32.0	17	28	11.9	3	24.7	24.6	24.5	0.00
18	59	49.0	43	41	37.6	32	82	66.1	36	29	10.3	0	24.6	24.6	24.4	0.00
19	53	45.3	37	42	28.5	17	90	55.3	24	25	14.8	5	24.8	24.6	24.4	0.03
20	59	46.3	36	32	26.5	24	70	48.5	26	22	12.3	5	24.9	24.8	24.8	0.00
21	59	47.4	38	42	33.7	30	77	60.7	35	16	7.6	0	24.8	24.7	24.6	0.00
22	62	49.8	37	34	24.6	18	76	41.6	19	14	6.8	0	24.8	24.7	24.7	0.02
23	68	55.1	43	29	22.6	12	51	31.2	12	28	10.6	0	24.7	24.7	24.6	0.00
24	64	52.0	43	29	24.0	18	58	36.0	18	14	6.8	0	24.8	24.7	24.6	0.00
25	74	57.8	42	26	19.1	13	41	24.6	11	23	9.5	0	24.7	24.6	24.5	0.00
26	66	60.2	53	35	32.0	29	48	35.0	25	29	15.7	3	24.6	24.5	24.5	0.00
27	61	49.7	36	37	27.2	16	64	43.8	22	31	17.8	6	24.6	24.5	24.3	0.00
28	54	42.7	32	24	13.5	6	67	35.1	15	22	10.4	5	24.7	24.7	24.6	0.00
29	63	49.4	34	17	13.2	11	40	25.5	13	21	8.9	0	24.8	24.7	24.6	0.00
30	57	47.9	43	19	15.8	13	34	28.1	20	22	7.4	0	24.7	24.7	24.6	0.00

Note:
The March monthly records shown above are off by one day (and thus do not match the daily weather documentation). All of the precipitation values are correct, but shifted forward by one day.
For example, this document indicates that 0.03 in of rain fell on March 19th. This storm event actually occurred on March 18th. See daily weather documentation and the Quarterly Precipitation Events spreadsheet for accurate dates.

:History Thumbnails:)
History Thumbnails:)

31195)

ATTACHMENT B

DAILY WEATHER REPORTS FOR PRECIPITATION EVENTS OCCURRING IN FIRST QUARTER 2020 (WEATHER UNDERGROUND AND/OR COCORAHS)

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Search Locations Log in (/log...

Popular Cities | San Francisco, CA ⚠ 46 °F Fair | Manhattan, NY 44 °F Cloudy | Schiller Park, IL ⚠ 48 °F Light Drizzle

35.05 °N, **106.61** °W

Albuquerque, NM Weather History ★ 🏠

33° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

JANUARY 10, 2020

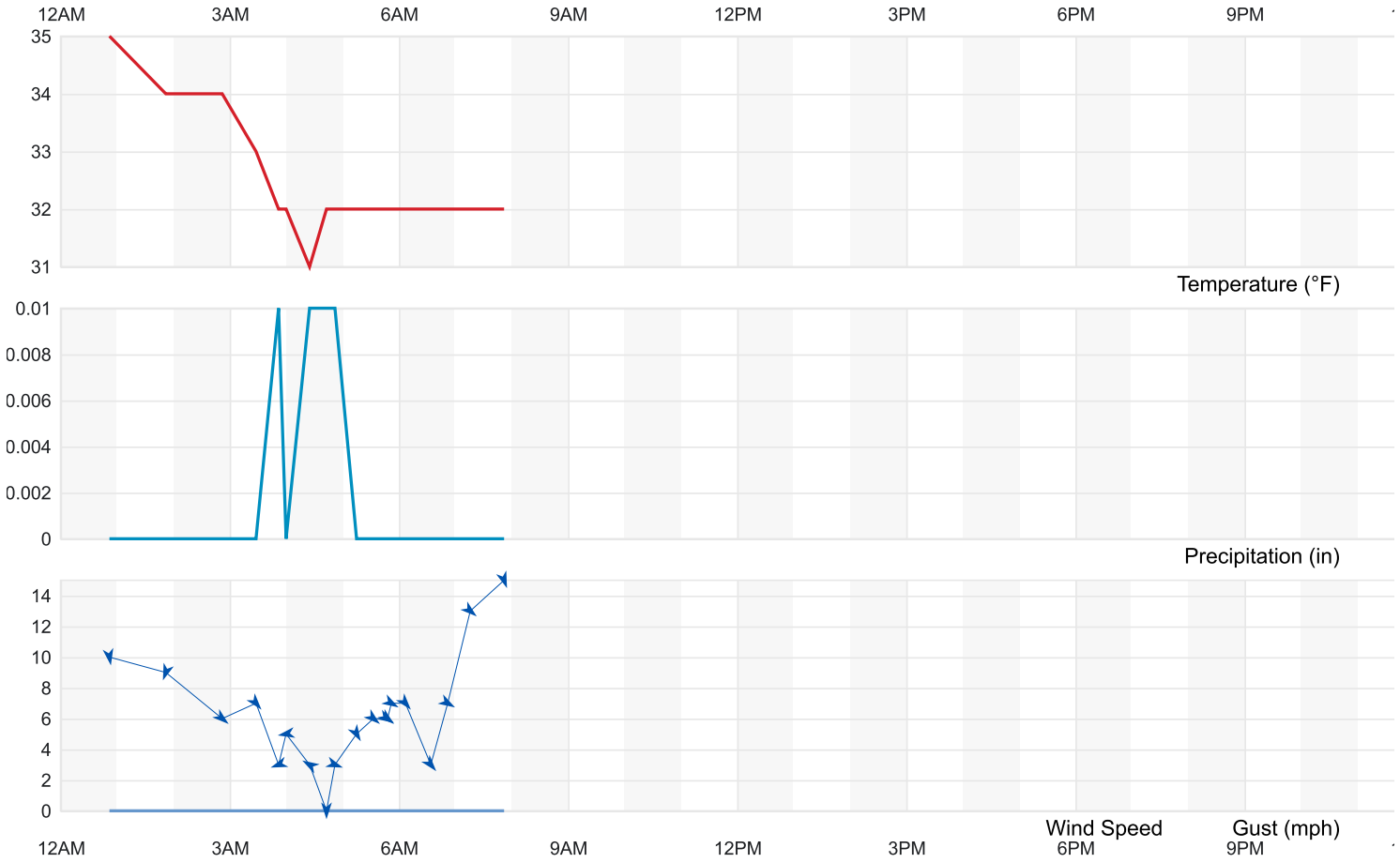
- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Rainfall occurred outside of operating hours. Not enough runoff. Samples were not collected.

Daily | Weekly | Monthly

(/history/daily/us/nm/albuquerque/KABQ) (/history/weekly/us/nm/albuquerque/KABQ) (/history/monthly/us/nm/albuquerque/KABQ)

January | 10 | 2020 | View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	35	46	63
Low Temp	31	26	-6
Day Average Temp	32.37	36	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.02	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	29.11	-	-
High	31	-	-
Low	24	-	-
Average	29.11	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	15	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.53	-	-
Astronomy	Day Length	Rise	Set
Actual Time	9h 57m	7:16 AM	5:13 PM
Civil Twilight		6:48 AM	5:41 PM
Nautical Twilight		6:17 AM	6:12 PM
Astronomical Twilight		5:46 AM	6:43 PM
Moon: full moon		5:19 PM	7:11 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	35 °F	24 °F	64 %	N	10 mph	0 mph	24.50 in	0.0 in	Cloudy
1:52 AM	34 °F	27 °F	75 %	NNE	9 mph	0 mph	24.49 in	0.0 in	Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
2:52 AM	34 °F	27 °F	75 %	NW	6 mph	0 mph	24.50 in	0.0 in	Cloudy
3:28 AM	33 °F	28 °F	82 %	NW	7 mph	0 mph	24.51 in	0.0 in	Light Snow
3:52 AM	32 °F	30 °F	92 %	ENE	3 mph	0 mph	24.51 in	0.0 in	Light Snow
4:00 AM	32 °F	30 °F	92 %	E	5 mph	0 mph	24.51 in	0.0 in	Light Snow
4:25 AM	31 °F	30 °F	96 %	ESE	3 mph	0 mph	24.50 in	0.0 in	Light Snow
4:43 AM	32 °F	30 °F	92 %	CALM	0 mph	0 mph	24.49 in	0.0 in	Light Snow
4:52 AM	32 °F	30 °F	92 %	WNW	3 mph	0 mph	24.49 in	0.0 in	Light Snow
5:15 AM	32 °F	31 °F	96 %	NNW	5 mph	0 mph	24.49 in	0.0 in	Light Drizzle
5:33 AM	32 °F	31 °F	96 %	NW	6 mph	0 mph	24.50 in	0.0 in	Light Snow
5:47 AM	32 °F	30 °F	93 %	WNW	6 mph	0 mph	24.50 in	0.0 in	Light Snow
5:48 AM	32 °F	30 °F	93 %	NW	6 mph	0 mph	24.50 in	0.0 in	Light Snow
5:52 AM	32 °F	31 °F	96 %	WNW	7 mph	0 mph	24.50 in	0.0 in	Light Snow
6:07 AM	32 °F	31 °F	96 %	NW	7 mph	0 mph	24.51 in	0.0 in	Light Snow
6:34 AM	32 °F	31 °F	96 %	NW	3 mph	0 mph	24.51 in	0.0 in	Mostly Cloud
6:52 AM	32 °F	29 °F	88 %	WNW	7 mph	0 mph	24.52 in	0.0 in	Cloudy
7:16 AM	32 °F	29 °F	88 %	NW	13 mph	0 mph	24.53 in	0.0 in	Cloudy
7:52 AM	32 °F	24 °F	73 %	NNW	15 mph	0 mph	24.53 in	0.0 in	Mostly Cloud

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How To Make Your Dark Spots Fade (Effortless 2 Minute Routine)
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12 Foods That Help Fight PsA Inflammation
HealthCentral.com

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(https://clknext.com/path/lp.php?trvid=10610&trvx=14fd40ad&cid=cashews&utm_term=theweatherchannel-wunderground&taboolaclickid=CjAxZGQ4Y2M5ZS1jYmVlLTQ1MzktYmEwYi03M2EwNTI3ZWZhMjYtdHVjdDUwNTBlMzcSFW1vYm54LXRvdGFscmVzdG9yZS1zYw)

U.S. Cardiologist: It's Like a Pressure Wash for Your Insides
Gundry MD Total Restore Supplement

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3 Dangerous Foods People Feed Their Dogs (Without Realizing It)
Dr. Marty ProPower Plus for Dogs Supplement

(http://drmartypets.com/cmd.php?ad=891100&utm_source=taboola&utm_medium=referral)
(https://d0ehy.voluumtrk.com/0fd31cb0-4b6a-471e-a371-6b4e6e7e70a3?utm_source=taboola&utm_medium=referral)

If Your Dog Suffers From Bad Joints, Try This Simple Tip
Petlab Co.

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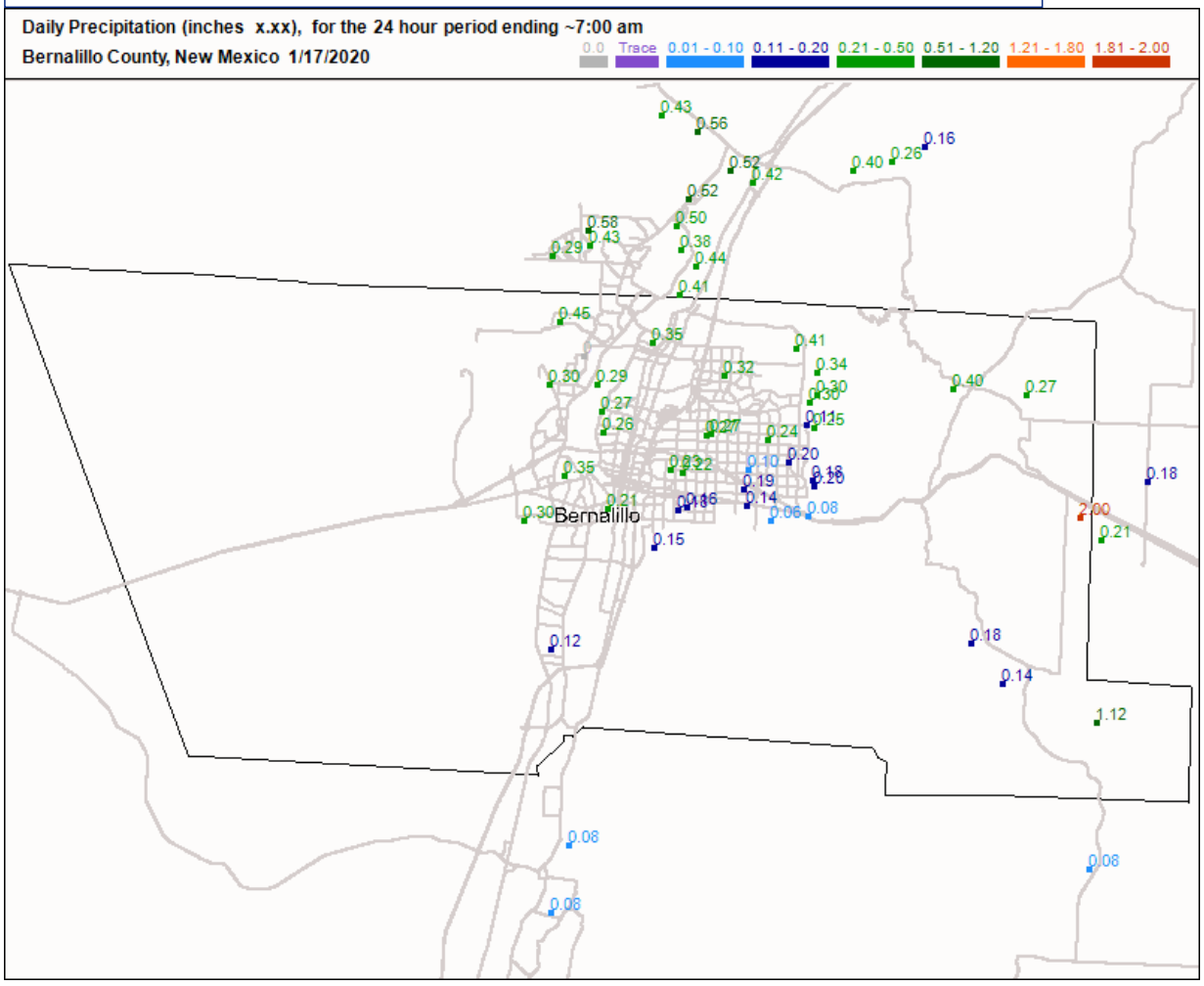
"Because every drop counts"

Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	1/17/2020	Standard	Get Map



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JANUARY 16, 2020

Light snow occurred throughout the city. Samples were collected within 30 minutes of peak runoff, approximately 2 PM. Wunderground (Sunport) reported inconsistent and inaccurate values for precipitation on this day. CoCoRaHS was used instead to show precipitation values.

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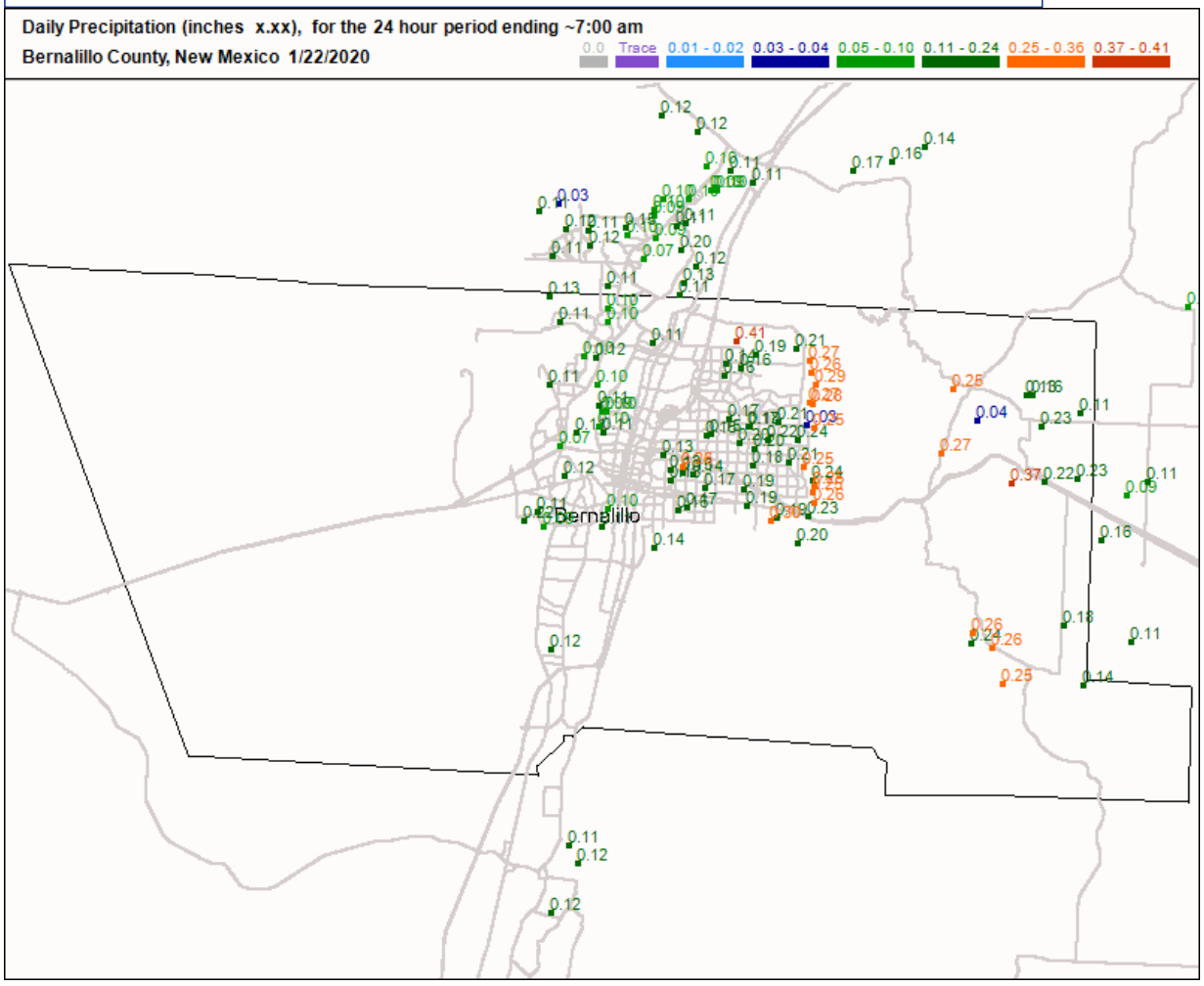
Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	1/22/2020	Standard	Get Map



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JANUARY 21, 2020

Light rain occurred throughout the city for most of the day. Rainfall was not significant/intense enough to create runoff. Inspectors went to Zones 3 and 4, but were only able to collect two samples.
Wunderground (Sunport) reported inconsistent and inaccurate values for precipitation on this day. CoCoRaHS was used instead to show precipitation values.

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
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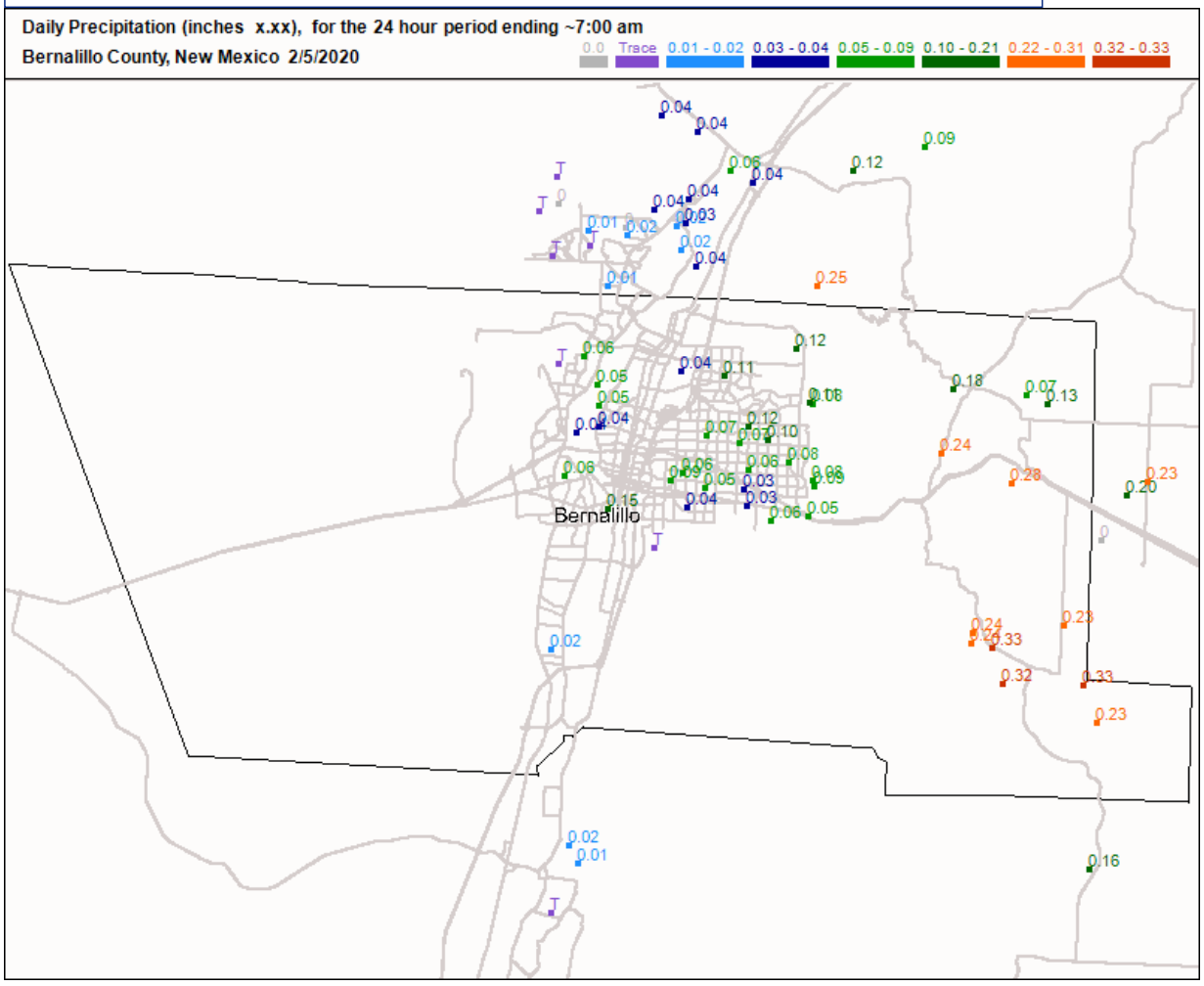
Maps : Daily Precipitation

Map Type	Map Location		Date	Colors	
Precipitation	New Mexico	BR - Bernalillo	2/5/2020	Standard	Get Map



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FEBRUARY 4, 2020

Light snow occurred throughout the city. There was not enough snow for runoff to accumulate, samples were not collected. Wunderground (Sunport) reported inconsistent and inaccurate values for precipitation on this day. CoCoRaHS was used instead to show precipitation values.

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
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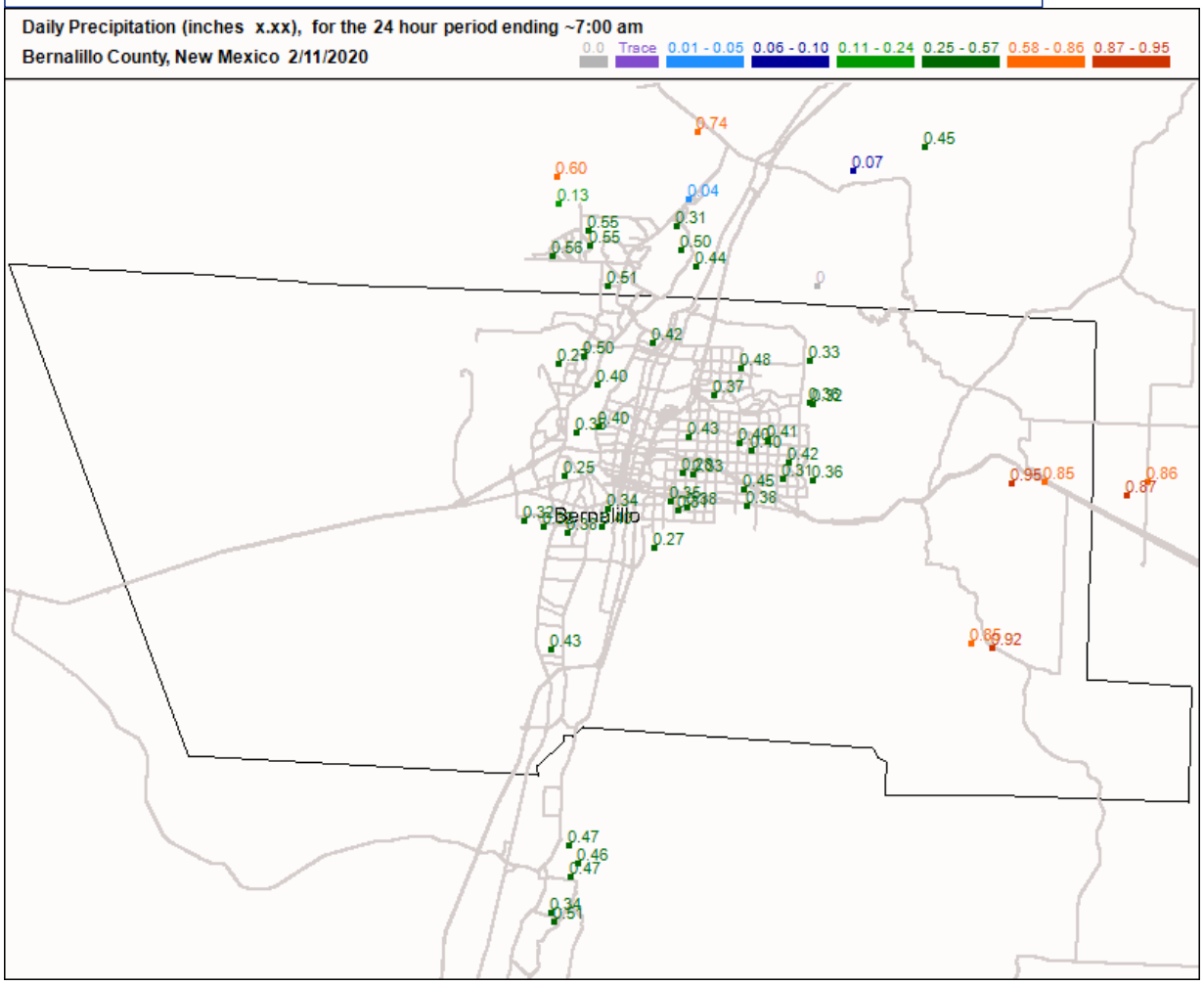
Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	2/11/2020	Standard	Get Map



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FEBRUARY 10, 2020

Light rain throughout the city starting at 8 AM. Heavy rain/ snow after 10 PM.
The peak of the storm occurred after operating hours, there was not enough rain during the daytime for runoff to accumulate. Samples were not collected.
Wunderground (Sunport) reported inconsistent and inaccurate values for precipitation on this day. CoCoRaHS was used instead to show precipitation values.

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
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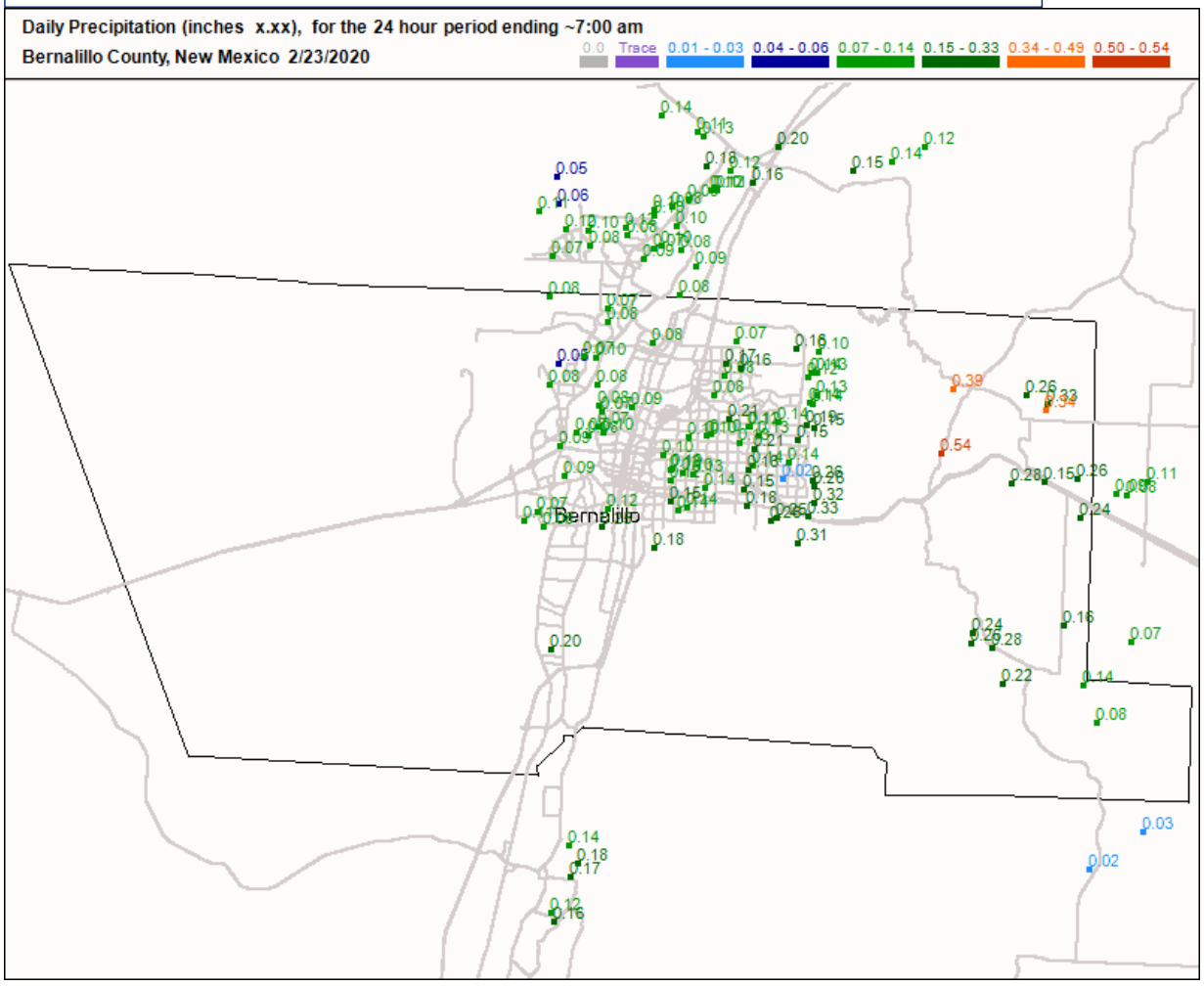
Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	2/23/2020	Standard	Get Map



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FEBRUARY 22, 2020

Light rain throughout the city starting around 12 PM.
Storm event occurred outside of operating hours, therefore samples were not collected.
Wunderground (Sunport) reported inconsistent and inaccurate values for precipitation on this day. CoCoRaHS was used instead to show precipitation values.

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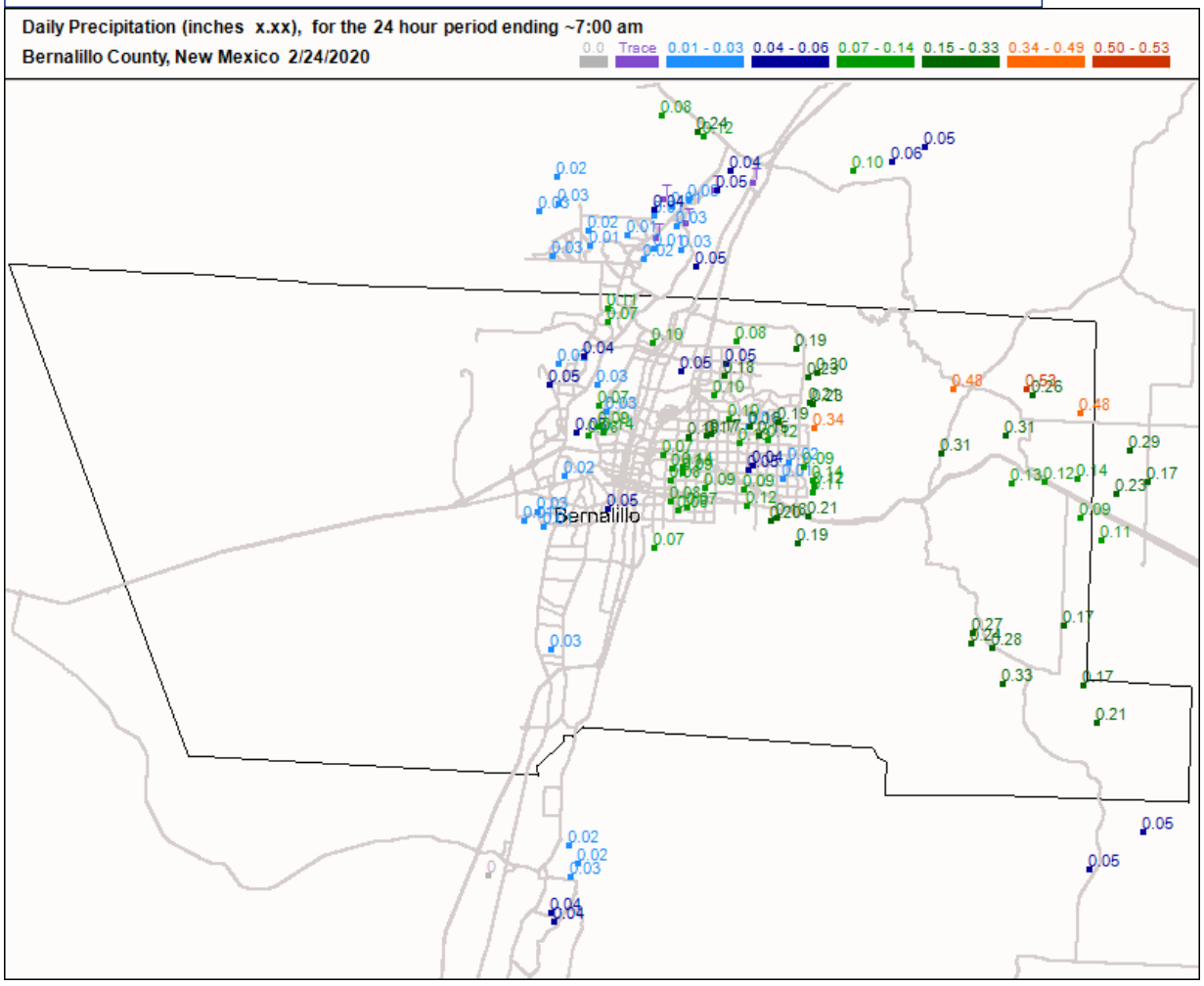
Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	2/24/2020	Standard	Get Map



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FEBRUARY 23, 2020

Light rain throughout the city starting around 3 AM.
Storm event occurred outside of operating hours, therefore samples were not collected.
Wunderground (Sunport) reported inconsistent and inaccurate values for precipitation on this day. CoCoRaHS was used instead to show precipitation values.

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
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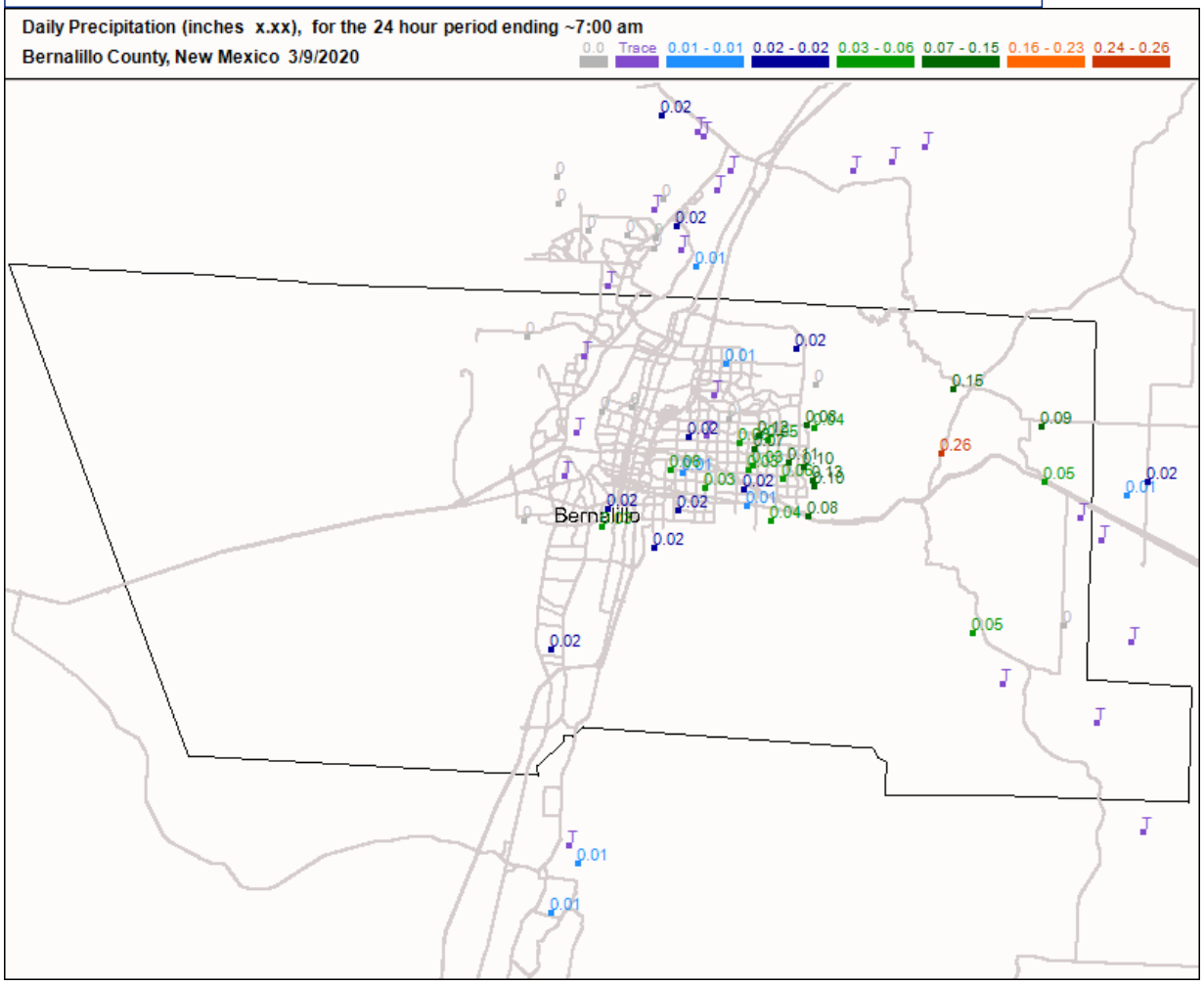
Maps : Daily Precipitation

Map Type	Map Location		Date	Colors	
Precipitation	New Mexico	BR - Bernalillo	3/9/2020	Standard	Get Map



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March 8, 2020

Light rain throughout the city starting around 3 PM.
Storm event occurred outside of operating hours, therefore samples were not collected.
Wunderground (Sunport) reported inconsistent and inaccurate values for precipitation on this day. CoCoRaHS was used instead to show precipitation values.

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
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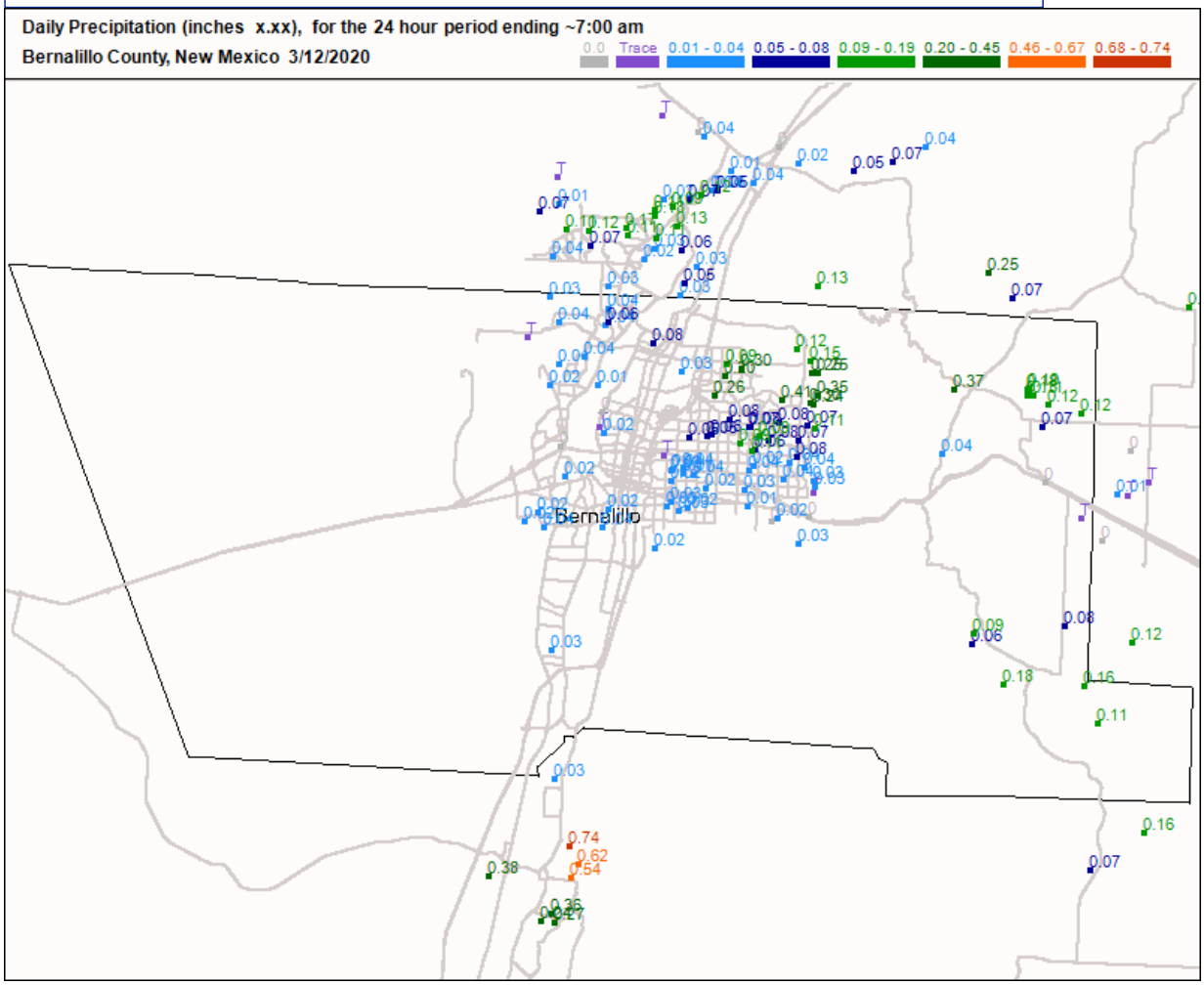
Maps : Daily Precipitation

Map Type	Map Location		Date	Colors	
Precipitation	New Mexico	BR - Bernalillo	3/12/2020	Standard	Get Map



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March 11, 2020

Scattered rain throughout the city. There was not enough rainfall for runoff to occur, therefore samples were not collected.
Wunderground (Sunport) reported inconsistent and inaccurate values for precipitation on this day. CoCoRaHS was used instead to show precipitation values.

Search Locations

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Popular Cities

San Francisco, CA
44 °F Mostly Cloudy

Manhattan, NY
41 °F Partly Cloudy

Schiller Park,
36 °F Snow

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

52° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

MARCH 13, 2020

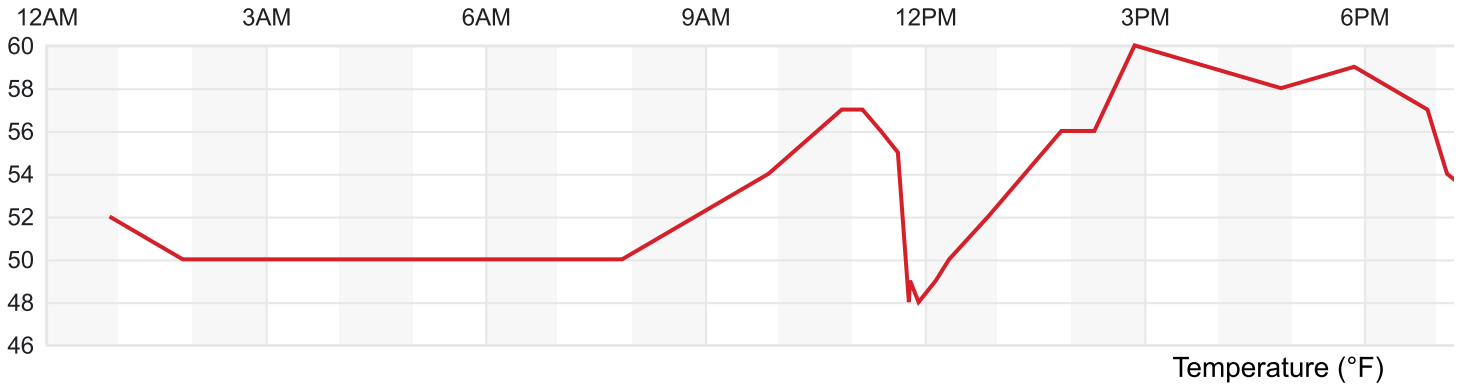
- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

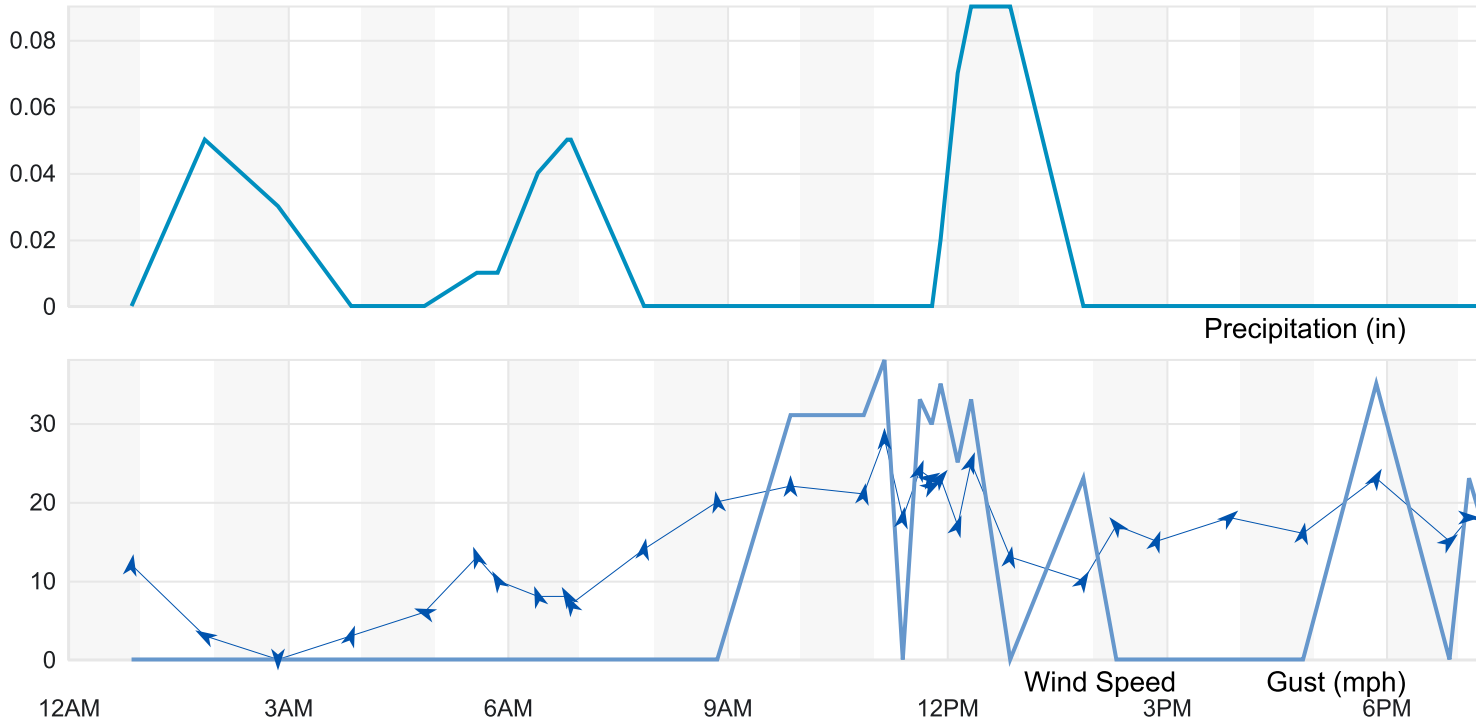
Rainfall before 8 AM was not considered a qualifying event (below 0.1 in). Samples were collected for Zone 3 during rainfall which occurred around 12 PM.

Daily | Weekly | Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2020-3-13) (/history/weekly/us/nm/albuquerque/KABQ/date/2020-3-13) (/history/monthly/us/nm/albuquerque/KABQ/date/2020-3)

March | 13 | 2020 | View





Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	60	60	80
Low Temp	46	35	16
Day Average Temp	52.19	48	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.09	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	41.67	-	-
High	48	-	-
Low	23	-	-
Average	41.67	-	-
Wind (MPH)	Actual	Historic Avg.	Record

Temperature (° F)	Actual	Historic Avg.	Record
Max Wind Speed	28	-	-
Visibility	10	-	-

Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.69	-	-

Astronomy	Day Length	Rise	Set
Actual Time	11h 53m	7:20 AM	7:13 PM
Civil Twilight		6:55 AM	7:39 PM
Nautical Twilight		6:25 AM	8:08 PM
Astronomical Twilight		5:56 AM	8:37 PM
Moon: waning gibbous		-	-

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure
12:52 AM	52 °F	46 °F	80 %	S	12 mph	0 mph	24.60 in
1:52 AM	50 °F	47 °F	89 %	ESE	3 mph	0 mph	24.62 in
2:52 AM	50 °F	46 °F	86 %	CALM	0 mph	0 mph	24.60 in
3:52 AM	50 °F	47 °F	89 %	SSW	3 mph	0 mph	24.57 in
4:52 AM	50 °F	46 °F	86 %	ESE	6 mph	0 mph	24.56 in
5:35 AM	50 °F	46 °F	86 %	SSE	13 mph	0 mph	24.56 in
5:52 AM	50 °F	47 °F	89 %	SSE	10 mph	0 mph	24.57 in
6:25 AM	50 °F	48 °F	93 %	SSE	8 mph	0 mph	24.57 in
6:49 AM	50 °F	48 °F	94 %	SSE	8 mph	0 mph	24.57 in
6:52 AM	50 °F	48 °F	93 %	SSE	7 mph	0 mph	24.57 in
7:52 AM	50 °F	47 °F	89 %	S	14 mph	0 mph	24.57 in
8:52 AM	52 °F	46 °F	80 %	S	20 mph	0 mph	24.58 in
9:52 AM	54 °F	45 °F	72 %	S	22 mph	31 mph	24.58 in

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure
10:52 AM	57 °F	45 °F	64 %	S	21 mph	31 mph	24.57 in
11:09 AM	57 °F	46 °F	67 %	S	28 mph	38 mph	24.57 in
11:24 AM	56 °F	46 °F	69 %	S	18 mph	0 mph	24.57 in
11:38 AM	55 °F	45 °F	69 %	SSW	24 mph	33 mph	24.57 in
11:47 AM	48 °F	45 °F	87 %	WSW	23 mph	30 mph	24.57 in
11:48 AM	49 °F	44 °F	83 %	WSW	22 mph	30 mph	24.57 in
11:55 AM	48 °F	43 °F	83 %	SW	23 mph	35 mph	24.57 in
12:09 PM	49 °F	43 °F	80 %	SSW	17 mph	25 mph	24.57 in
12:20 PM	50 °F	42 °F	74 %	SSW	25 mph	33 mph	24.57 in
12:52 PM	52 °F	47 °F	83 %	S	13 mph	0 mph	24.57 in
1:52 PM	56 °F	43 °F	62 %	SSW	10 mph	23 mph	24.53 in
2:19 PM	56 °F	46 °F	69 %	SE	17 mph	0 mph	24.53 in
2:52 PM	60 °F	44 °F	55 %	SSW	15 mph	0 mph	24.51 in
3:52 PM	59 °F	38 °F	46 %	SW	18 mph	0 mph	24.50 in
4:52 PM	58 °F	37 °F	46 %	S	16 mph	0 mph	24.50 in
5:52 PM	59 °F	26 °F	28 %	SSW	23 mph	35 mph	24.51 in
6:52 PM	57 °F	23 °F	27 %	SW	15 mph	0 mph	24.53 in
7:08 PM	54 °F	31 °F	41 %	W	18 mph	23 mph	24.55 in
7:52 PM	52 °F	31 °F	45 %	W	16 mph	0 mph	24.57 in
8:52 PM	49 °F	32 °F	52 %	W	12 mph	0 mph	24.61 in
9:52 PM	48 °F	31 °F	52 %	WSW	10 mph	0 mph	24.63 in
10:52 PM	46 °F	33 °F	61 %	E	3 mph	0 mph	24.67 in
11:52 PM	46 °F	32 °F	58 %	W	12 mph	0 mph	24.69 in

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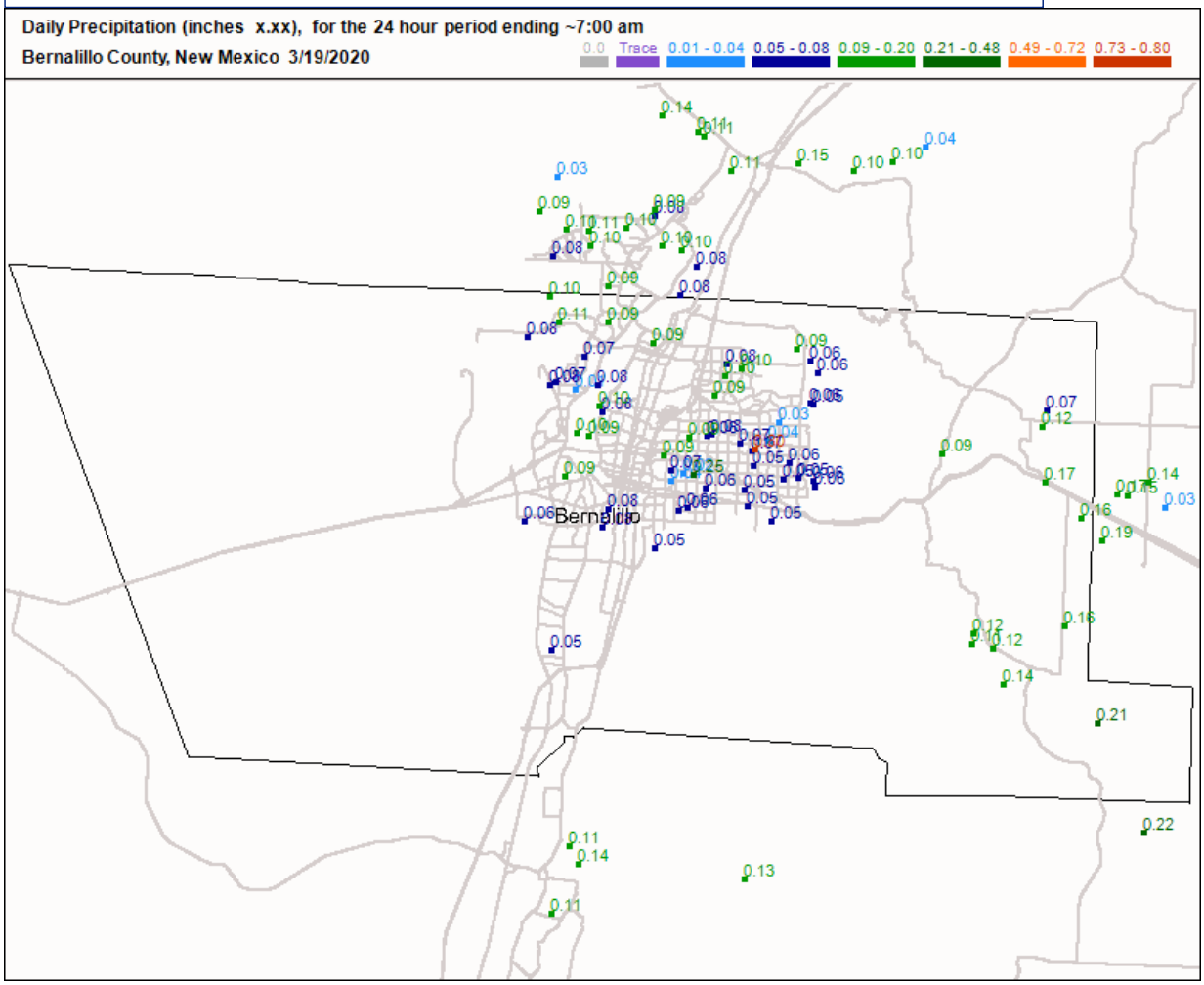
PayPal Has 300 Million Members – Yet Few Have This Upgrade

Honey

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Maps : Daily Precipitation

Map Type	Map Location		Date	Colors	
Precipitation	New Mexico	BR - Bernalillo	3/19/2020	Standard	Get Map



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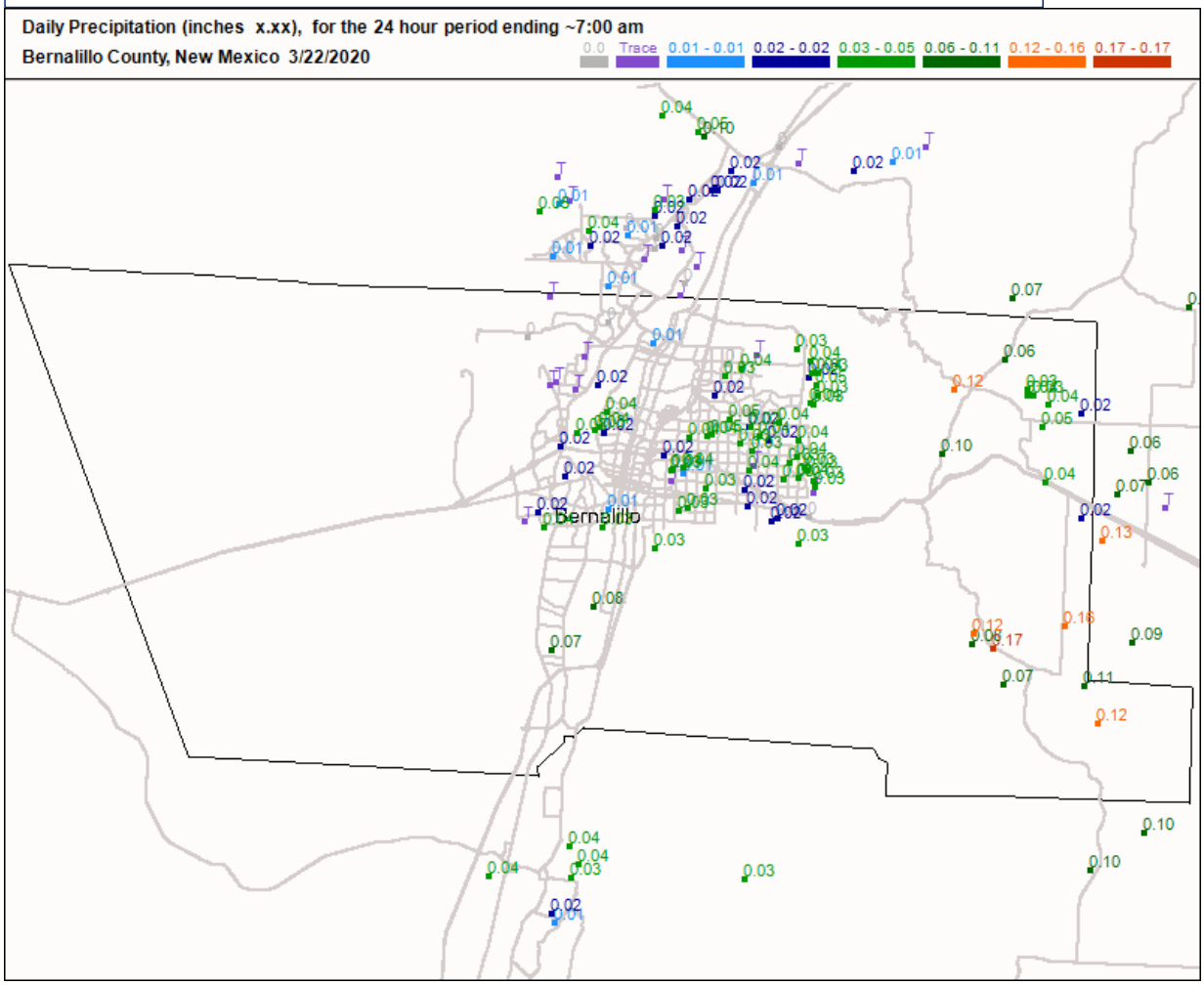
March 18, 2020

Light rain throughout the city starting around 7 PM. Storm event occurred outside of operating hours, therefore samples were not collected.
Wunderground (Sunport) reported inconsistent and inaccurate values for precipitation on this day. CoCoRaHS was used instead to show precipitation values.

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Maps : Daily Precipitation

Map Type	Map Location		Date	Colors	
Precipitation	New Mexico	BR - Bernalillo	3/22/2020	Standard	Get Map



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ATTACHMENT C

VISUAL MONITORING INSPECTION FORMS

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1/16/2020 MONITORING EVENT

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City of Albuquerque

Facility: Street Maintenance Satellite #1 - Zone 1

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
● Q1 o Q2 o Q3 o Q4

Date: 1/16/2020
Time: 2:08 pm
Inspector: Angie Bacigalupa

Weather: Snowing
Storm Precip: 0.19 in
Last 72 hour Precip: 1/10/2020
Photo: Attached

Outfall ID:	SS1B		SS1A
Flow Observed:	● Yes o No	o Yes o No	o Yes ● No
Description of Monitoring Site:	waddle around 4'x4' grate next to structure		waddle around 4'x4' grate on highspot
Flow Estimate (include units and method of estimation):	ponding 2'x6" ½" deep limited runoff		no flow / ponding at site, therefore no sample collected
Other Observations:	very cloudy grey, foam & sheen		
Color (describe):	dark grey		
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy ● Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	● Yes o No	o Yes o No	o Yes o No
Suspended Solids:	● Yes o No	o Yes o No	o Yes o No
Settled Solids:	● Yes o No	o Yes o No	o Yes o No
Sheen Present:	● Yes o No	o Yes o No	o Yes o No
Odor:	o Yes ● No	o Yes o No	o Yes o No
Foam Present:	● Yes o No	o Yes o No	o Yes o No
Describe:	Sheen observed at site in ponding water		

Additional Comments: Snow plows present & operating

City of Albuquerque

Facility: Zone 1 - Arroyo St Maintenance

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
● Q1 o Q2 o Q3 o Q4

Date: 1/16/2020 **Weather:** Snowing

Time: 2:21 pm **Storm Precip:** 0.19 in

Inspector: Angie Bacigalupa **Last 72 hour Precip:** 1/10/2020

Photo: Attached

Outfall ID:	AM1		
Flow Observed:	● Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	Culvert w/ waddle inside facility discharge to st gutter		
Flow Estimate (include units and method of estimation):	minor runoff ponding 4-6" wide across gutter, ½" deep		
Other Observations:	Stockpiled red dirt observed in sample, cloudy		
Color (describe):	Cloudy red		
Turbidity:	o Clear o Slightly Cloudy ● Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	● Yes o No	o Yes o No	o Yes o No
Suspended Solids:	● Yes o No	o Yes o No	o Yes o No
Settled Solids:	● Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes ● No	o Yes o No	o Yes o No
Odor:	o Yes ● No	o Yes o No	o Yes o No
Foam Present:	o Yes ● No	o Yes o No	o Yes o No
Describe:	Sheen was seen in gutter upstream from traffic, not SIM		

Additional Comments: Snow plows present & operating

City of Albuquerque

Facility: Zone 1 - Los Altos Trails Park Management

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
● Q1 o Q2 o Q3 o Q4

Date: 1/16/2020
Time: 2:36 pm
Inspector: Angie Bacigalupa

Weather: lightly snowing
Storm Precip: 0.19 in
Last 72 hour Precip: 1/10/2020
Photo: Attached

Outfall ID:	LAN1		
Flow Observed:	● Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	Iron grate w/ concrete channel		
Flow Estimate (include units and method of estimation):	Small quantity of runoff, difficult to get sample pooling ~ 2-4" down concrete channel		
Other Observations:	½" deep sheet flow mostly suspended sand / dirt		
Color (describe):	light tan / cloudy		
Turbidity:	o Clear ● Slightly Cloudy ● Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes ● No	o Yes o No	o Yes o No
Suspended Solids:	● Yes o No	o Yes o No	o Yes o No
Settled Solids:	● Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes ● No	o Yes o No	o Yes o No
Odor:	o Yes ● No	o Yes o No	o Yes o No
Foam Present:	o Yes ● No	o Yes o No	o Yes o No
Describe:	hardly any foreign particulate in sample		

Additional Comments: parked cars observed

City of Albuquerque

Facility: Zone 1 – Tomas Fuel Station

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
● Q1 o Q2 o Q3 o Q4

Date: 1/14/2020

Time: 2:43 pm

Inspector: Angie Bacigalupa

Weather: lightly snowing

Storm Precip: 0.19 in

Last 72 hour Precip: 1/10/2020

Photo: Attached

Outfall ID:	L1		
Flow Observed:	o Yes ● No	o Yes o No	o Yes o No
Description of Monitoring Site:	low spot on Asphalt		
Flow Estimate (include units and method of estimation):	not enough flow/ponding at site to		
Other Observations:	Collect Sample		
Color (describe):			
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes o No	o Yes o No
Odor:	o Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes o No	o Yes o No	o Yes o No
Describe:			

Additional Comments: Not enough runoff from snow for collection

City of Albuquerque

Facility: Zone 1 – Los Altos Golf Course

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
● Q1 o Q2 o Q3 o Q4

Date: 1/14/2020
Time: 2:45pm
Inspector: Angie Bacigalupa

Weather: lightly Snowing
Storm Precip: 0.19 in
Last 72 hour Precip: 1/10/2020
Photo: Attached

Outfall ID:	LA2		LA1
Flow Observed:	● Yes o No	o Yes o No	● Yes o No
Description of Monitoring Site:	low spot on Asphalt		8' diameter pipe culvert
Flow Estimate (include units and method of estimation):	Small amount of ponding throughout site		no flow, small amount of ponding along Concrete channel
Other Observations:	~¼" deep		lots of debris and brush against culvert grate
Color (describe):	Grey/hardly cloudy		Cloudy brown/dark grey
Turbidity:	● Clear ● Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy ● Very Cloudy ● Opaque
Floating Solids:	o Yes ● No	o Yes o No	● Yes o No
Suspended Solids:	● Yes o No	o Yes o No	● Yes o No
Settled Solids:	● Yes o No	o Yes o No	● Yes o No
Sheen Present:	o Yes ● No	o Yes o No	● Yes o No
Odor:	o Yes ● No	o Yes o No	o Yes ● No
Foam Present:	o Yes ● No	o Yes o No	o Yes ● No
Describe:	Clear water, not much debris or suspended solids present		Sheen observed in puddles, no odor unlike last time

Additional Comments: lightly snowing, not much runoff at SITES yet

City of Albuquerque

Facility: Zone 1 — Los Altos Park Management

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
● Q1 o Q2 o Q3 o Q4

Date: 1/16/2020 **Weather:** Showing

Time: 3:01 pm **Storm Precip:** 0.19 in

Inspector: Angie Bacigalupo **Last 72 hour Precip:** 1/10/2020

Photo: Attached

Outfall ID:	LAP 1		
Flow Observed:	o Yes ● No	o Yes o No	o Yes o No
Description of Monitoring Site:	16" diameter Concrete culvert with straw waddus around Site perimeter		
Flow Estimate (include units and method of estimation):	No flow observed		
Other Observations:			
Color (describe):			
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes o No	o Yes o No
Odor:	o Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes o No	o Yes o No	o Yes o No
Describe:			

Additional Comments: No flow observed at outfall waddus around Site perimeter probably prevent much flow from leaving site

City of Albuquerque

Facility: STREETS SATELLITE #3
ZONE 2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
☒ Q1 o Q2 o Q3 o Q4

Date: 01/16/20
Time: 2:15 pm
Inspector: MADELINE OLIVAS

Weather: SNOW/RAIN
Storm Precip: 0.35 in
Last 72 hour Precip: 1/10/2020
Photo: Attached

Outfall ID:	SS3		
Flow Observed:	☒ Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	GUTTER AT END OF PARKING LOT		
Flow Estimate (include units and method of estimation):	6 IN WIDE BY 1 IN DEEP		
Other Observations:	VEHICLES IN AREA AND TRASH ON GROUND		
Color (describe):	TAN/YELLOW		
Turbidity:	o Clear o Slightly Cloudy ☒ Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	☒ Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes ☒ No	o Yes o No	o Yes o No
Settled Solids:	o Yes ☒ No	o Yes o No	o Yes o No
Sheen Present:	☒ Yes o No	o Yes o No	o Yes o No
Odor:	o Yes ☒ No	o Yes o No	o Yes o No
Foam Present:	o Yes ☒ No	o Yes o No	o Yes o No
Describe:	CLOUDY WITH FLOATING PARTCLES		

Additional Comments: SHEEN ON WATER SURFACE
VEHICLES AND TRAILERS PARKED NEAR BY

City of Albuquerque

Facility: DON RESERVOIR CONVENIENCE CENTER ZONE 2

Quarterly Visual Monitoring of Storm Water Outfall Discharges

☒ Q1 ○ Q2 ○ Q3 ○ Q4

Date: 01/06/20

Time: 2:20 PM

Inspector: MADELINE OLIVAS

Weather: SNOW/RAIN

Storm Precip: 0.35 in

Last 72 hour Precip: 1/10/2020

Photo: Attached

Outfall ID:	DR01		
Flow Observed:	☒ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Description of Monitoring Site:	GUTTER AT STREET/INLET CORNER		
Flow Estimate (include units and method of estimation):	6 IN WIDE BY 1/2 IN DEEP		
Other Observations:	HEAVY SHEEN ON SURROUNDING PAVEMENT		
Color (describe):	BROWNISH		
Turbidity:	○ Clear ○ Slightly Cloudy ☒ Very Cloudy ○ Opaque	○ Clear ○ Slightly Cloudy ○ Very Cloudy ○ Opaque	○ Clear ○ Slightly Cloudy ○ Very Cloudy ○ Opaque
Floating Solids:	○ Yes ☒ No	○ Yes ○ No	○ Yes ○ No
Suspended Solids:	○ Yes ☒ No	○ Yes ○ No	○ Yes ○ No
Settled Solids:	☒ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Sheen Present:	☒ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Odor:	○ Yes ☒ No	○ Yes ○ No	○ Yes ○ No
Foam Present:	○ Yes ☒ No	○ Yes ○ No	○ Yes ○ No
Describe:	SETTLED SOIL PARTICLES		

Additional Comments: EXCESSIVE SHEEN ON ROAD COMING FROM PARKING LOT AND/OR TRUCKS

City of Albuquerque

Facility: DAYTONA TRANSIT CENTER ZONE 2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

~~Q1~~ o Q2 o Q3 o Q4

Date: 01/16/20

Time: 2:30 PM

Inspector: MADELINE OLIVAS

Weather: SNOW/RAIN

Storm Precip: 0.35 in

Last 72 hour Precip: 1/10/2020

Photo: Attached

Outfall ID:	D1	D2	
Flow Observed:	~~Yes~~ o No	~~Yes~~ o No	o Yes o No
Description of Monitoring Site:	MANHOLE	MANHOLE	
Flow Estimate (include units and method of estimation):	1 FT WIDE BY 1 IN DEEP	1 FT WIDE BY 2 IN DEEP	
Other Observations:	PARKING LOT NEAR MH BEING MAINT.	TRASH IN PARKING LOT	
Color (describe):	WHITE ISH	YELLOW	
Turbidity:	o Clear ~~Slightly Cloudy~~ o Very Cloudy o Opaque	~~Clear~~ o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes ~~No~~	o Yes ~~No~~	o Yes o No
Suspended Solids:	o Yes ~~No~~	o Yes ~~No~~	o Yes o No
Settled Solids:	o Yes ~~No~~	o Yes ~~No~~	o Yes o No
Sheen Present:	o Yes ~~No~~	o Yes ~~No~~	o Yes o No
Odor:	o Yes ~~No~~	o Yes ~~No~~	o Yes o No
Foam Present:	o Yes ~~No~~	~~Yes~~ o No	o Yes o No
Describe:	CLOUDY WHITE	FOAM IN NEARBY LOT WATER	

Additional Comments: PARKING LOT NEAR D1 BLOCKED OFF FOR MAINTENANCE/CONSTRUCTION

City of Albuquerque

Facility: LADERA GOLF COURSE ZONE 2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
☒Q1 o Q2 o Q3 o Q4

Date: 01/16/20 **Weather:** SNOW/RAIN

Time: 2:45 pm **Storm Precip:** 0.35 in

Inspector: MADELINE OLIVAS **Last 72 hour Precip:** 1/10/2020

Photo: Attached

Outfall ID:	LGC1	LGC2	
Flow Observed:	o Yes ☒No	☒Yes o No	o Yes o No
Description of Monitoring Site:	INACCESSIBLE	RUNDOWN AT CORNER OF BUILDING	
Flow Estimate (include units and method of estimation):		6 IN WIDE BY ½ IN DEEP	
Other Observations:		SOME SHEEN IN PARKING LOT	
Color (describe):		CLEAR	
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	☒Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes ☒No	o Yes o No
Suspended Solids:	o Yes o No	o Yes ☒No	o Yes o No
Settled Solids:	o Yes o No	o Yes ☒No	o Yes o No
Sheen Present:	o Yes o No	o Yes ☒No	o Yes o No
Odor:	o Yes o No	o Yes ☒No	o Yes o No
Foam Present:	o Yes o No	o Yes ☒No	o Yes o No
Describe:		CLEAR COLLECTED FROM RUNDOWN	

Additional Comments: GATE CLOSED FOR ACCESS TO LGC1

City of Albuquerque

Facility: Puerto del Sol Golf Course

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
☒ Q1 ○ Q2 ○ Q3 ○ Q4

Date: 1/16/20
Time: 2:40
Inspector: MH

Weather: light snow
Storm Precip: 0.18 in
Last 72 hour Precip: 1/10/2020
Photo: Attached

Outfall ID:	PDS1	PDS2	
Flow Observed:	○ Yes ● No	○ Yes ● No	○ Yes ○ No
Description of Monitoring Site:	grated inlet	grated inlet	
Flow Estimate (include units and method of estimation):	N/A	N/A	
Other Observations:			
Color (describe):			
Turbidity:	○ Clear ○ Slightly Cloudy ○ Very Cloudy ○ Opaque	○ Clear ○ Slightly Cloudy ○ Very Cloudy ○ Opaque	○ Clear ○ Slightly Cloudy ○ Very Cloudy ○ Opaque
Floating Solids:	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Suspended Solids:	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Settled Solids:	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Sheen Present:	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Odor:	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Foam Present:	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Describe:			

Additional Comments:

City of Albuquerque

Facility: Yale Transit Center (Y1)

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
☒ Q1 o Q2 o Q3 o Q4

Date: 1/16/20
Time: 2:15
Inspector: Melanie Meloni

Weather: light snow
Storm Precip: 0.18 in
Last 72 hour Precip: 1/10/2020
Photo: Attached

Outfall ID:	Y1		
Flow Observed:	● Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	Inlet to storm-rep tor water quality device		
Flow Estimate (include units and method of estimation):	.5" x 1Ft		
Other Observations:	snowing / light flow		
Color (describe):	light Brown		
Turbidity:	o Clear o Slightly Cloudy ● Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes ● No	o Yes o No	o Yes o No
Suspended Solids:	o Yes ● No	o Yes o No	o Yes o No
Settled Solids:	● Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes ● No	o Yes o No	o Yes o No
Odor:	o Yes ● No	o Yes o No	o Yes o No
Foam Present:	o Yes ● No	o Yes o No	o Yes o No
Describe:	gravel particles settled		

Additional Comments:

City of Albuquerque

Facility: Montessa Park Open Space

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
☒ Q1 ○ Q2 ○ Q3 ○ Q4

Date: 1/16/20
Time: 2:25 pm
Inspector: Rob Salazar

Weather: Light Snow
Storm Precip: 0.15 in
Last 72 hour Precip: 1/10/2020
Photo: Attached

Outfall ID:	MP 1	MP2	
Flow Observed:	○ Yes ☒ No	○ Yes ☒ No	○ Yes ○ No
Description of Monitoring Site:	Weeds in inlet/outlet small puddles	Some trash wet ground	
Flow Estimate (include units and method of estimation):	none	none	
Other Observations:			
Color (describe):			
Turbidity:	○ Clear ○ Slightly Cloudy ○ Very Cloudy ○ Opaque	○ Clear ○ Slightly Cloudy ○ Very Cloudy ○ Opaque	○ Clear ○ Slightly Cloudy ○ Very Cloudy ○ Opaque
Floating Solids:	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Suspended Solids:	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Settled Solids:	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Sheen Present:	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Odor:	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Foam Present:	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Describe:			

Additional Comments:

City of Albuquerque

Facility: Montessa Park Convenience Center

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
☒ Q1 o Q2 o Q3 o Q4

Date: 1/16/20
Time: 2:15 pm
Inspector: Rob Salazar

Weather: Light Snow
Storm Precip: 0.15 in
Last 72 hour Precip: 1/10/2020
Photo: Attached

Outfall ID:	MP01	MP02	
Flow Observed:	o Yes ☒ No	o Yes ☒ No	o Yes o No
Description of Monitoring Site:	No litter	No litter	
Flow Estimate (include units and method of estimation):	small puddles	small puddles	
Other Observations:	slight sheen on puddles		
Color (describe):			
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes o No	o Yes o No
Odor:	o Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes o No	o Yes o No	o Yes o No
Describe:			

Additional Comments:

1/21/2020 MONITORING EVENT

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City of Albuquerque

Facility: Montessa Park Convenience Center

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
☒ Q1 ○ Q2 ○ Q3 ○ Q4

Date: 1/21/20
Time: 11:45 am
Inspector: Rob Salazar

Weather: Light Drizzle
Storm Precip: 0.14 in
Last 72 hour Precip: 1/16/2020
Photo: Attached

Outfall ID:	MP02	MP01	
Flow Observed:	☒ Yes ○ No	○ Yes ☒ No	○ Yes ○ No
Description of Monitoring Site:	oily sheen in gutter & spotting		
Flow Estimate (include units and method of estimation):	<0.1 cfs visual	N/A	
Other Observations:		Puddles	
Color (describe):	yellow		
Turbidity:	○ Clear ☒ Slightly Cloudy ○ Very Cloudy ○ Opaque	○ Clear ○ Slightly Cloudy ○ Very Cloudy ○ Opaque	○ Clear ○ Slightly Cloudy ○ Very Cloudy ○ Opaque
Floating Solids:	☒ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Suspended Solids:	☒ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Settled Solids:	☒ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Sheen Present:	☒ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Odor:	☒ Yes ○ No	○ Yes ○ No	○ Yes ○ No
Foam Present:	○ Yes ☒ No	○ Yes ○ No	○ Yes ○ No
Describe:	tangy chemical smell		

Additional Comments: very little traffic

City of Albuquerque

Facility: Montessa Park Open Space

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
☒ Q1 ○ Q2 ○ Q3 ○ Q4

Date: 1/21/20
Time: 12:00 pm
Inspector: Rob Salazar

Weather: Light drizzle
Storm Precip: 0.14 in
Last 72 hour Precip: 1/16/2020
Photo: Attached

Outfall ID:	MP 1		MP2			
Flow Observed:	☒ Yes	○ No	○ Yes	☒ No	○ Yes	○ No
Description of Monitoring Site:	Puddles. Debris @ inlet/outlet		Muddy			
Flow Estimate (include units and method of estimation):	<0.1 trickle		N/A			
Other Observations:			No evidence of arroyo flow			
Color (describe):	light yellow					
Turbidity:	○ Clear ☒ Slightly Cloudy ○ Very Cloudy ○ Opaque		○ Clear ○ Slightly Cloudy ○ Very Cloudy ○ Opaque		○ Clear ○ Slightly Cloudy ○ Very Cloudy ○ Opaque	
Floating Solids:	☒ Yes	○ No	○ Yes	○ No	○ Yes	○ No
Suspended Solids:	☒ Yes	○ No	○ Yes	○ No	○ Yes	○ No
Settled Solids:	☒ Yes	○ No	○ Yes	○ No	○ Yes	○ No
Sheen Present:	○ Yes	☒ No	○ Yes	○ No	○ Yes	○ No
Odor:	○ Yes	☒ No	○ Yes	○ No	○ Yes	○ No
Foam Present:	○ Yes	☒ No	○ Yes	○ No	○ Yes	○ No
Describe:	Small flakes (dark)					

Additional Comments:

3/13/2020 MONITORING EVENT

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City of Albuquerque

Facility: Puerto del Sol Golf Course

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
☒ Q1 o Q2 o Q3 o Q4

Date: 03/13/2020

Time: 12:25 PM

Inspector: Melanie Meroni

Weather: Raining

Storm Precip: 0.09 in

Last 72 hour Precip: 3/8/2020

Photo: Attached

Outfall ID:	PDS2		
Flow Observed:	X Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	Grated Inlet		
Flow Estimate (include units and method of estimation):	1" x 3" Wide		
Other Observations:			
Color (describe):	Tan		
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy X Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	X Yes o No	o Yes o No	o Yes o No
Suspended Solids:	X Yes o No	o Yes o No	o Yes o No
Settled Solids:	X Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes X No	o Yes o No	o Yes o No
Odor:	o Yes X No	o Yes o No	o Yes o No
Foam Present:	o Yes X No	o Yes o No	o Yes o No
Describe:	Some sediment, Opaque Tan, Settled Dirt		

Additional Comments: _____

ATTACHMENT D

STORMWATER MONITORING SAMPLING PHOTOGRAPHS

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First Quarter 2020 (January 16th, 2020)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 1: Sample LA1



Photograph 2: Sample LA2



Photograph 3: Sample SS1B



Photograph 4: Sample AM1

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First Quarter 2020 (January 16th, 2020)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 5: Sample D1



Photograph 6: Sample D2



Photograph 7: Sample LGC2



Photograph 8: Sample SS3

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First Quarter 2020 (January 16th, 2020)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 9: Sample DR01



Photograph 10: Sample Y1

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First Quarter 2020 (January 21st, 2020)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 1: Sample MP1



Photograph 2: Sample MP02

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First Quarter 2020 (March 13th, 2020)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 1: Sample PDS2

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Weston Solutions, Inc.
3840 Commons Ave. NE
Albuquerque, NM 87109
505-837-6520 Fax 505-837-6595
www.westonsolutions.com

July 28, 2020

Ms. Kathy Verhage, P.E.
Department of Municipal Development - Storm Drainage Design
City of Albuquerque
P.O. Box 1293
Albuquerque, NM 87103

REFERENCE: PROJECT NO. 8013 CITYWIDE ON-CALL NPDES AND MS4 ENGINEERING SUPPORT SERVICES 2nd QUARTER 2020 UPDATE FOR TASK 8 VISUAL STORM WATER INSPECTIONS

Dear Ms. Verhage:

This letter describes the results of the 2020 Quarter 2 (April 1 through June 30) Visual Storm Water Inspections for ten City of Albuquerque (City) facilities that are subject to the requirements of the U.S. Environmental Protection Agency's (EPA) Municipal Separate Storm Sewer System (MS4) Permit and the Multi Sector General Permit for Storm Water Discharges Associated with Industrial Activity (MSGP) at City-owned facilities. The purpose of this memo is to document the City's compliance with the requirements for quarterly stormwater monitoring. To comply with the MS4 and MSGP's requirements for stormwater monitoring, the City tasked Weston Solutions to perform the quarterly visual inspections in order to identify potential impacted stormwater discharges at the 10 City-owned facilities. The following facilities meet the definition of an industrial facility in the MSGP based on audits of City-owned facilities performed between 2012 and 2020.

- Arroyo Del Oso Golf Course
- Balloon Fiesta Park and Golf Training Center
- Albuquerque BioPark Zoo
- Fire Department Mechanic Shop
- 4th Street Fuel Station
- Pino Yards Complex
- Street Maintenance Satellite #2
- 6th Street Park Management
- Eagle Rock Convenience Center
- Edith Yards Maintenance Facility

Figure 1 identifies these facilities along with the Weston inspection team responsible for inspecting each facility outfall.

Figure 1: Facility Site Locations

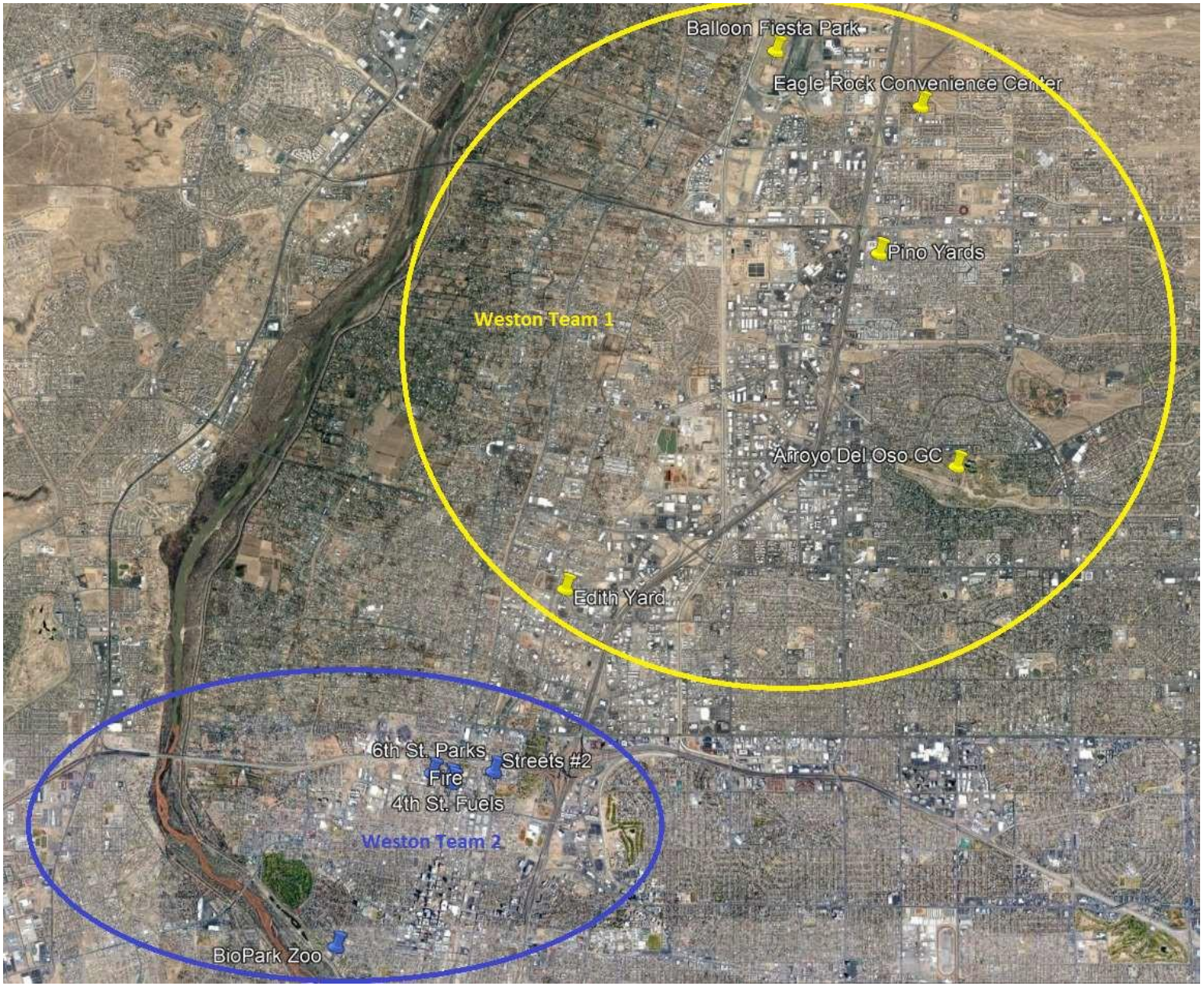


Table 1 summarizes the inspection status during the 2nd Quarter of 2020.

Table 1: Outfall ID and Designees Site	Outfall ID	2020 Quarter 2 Status
Weston Team 1		
Balloon Fiesta Park and Golf Training Center	BFP1	Dry-no sample
	BFP2	Dry-no sample
	BFP3	Dry-no sample
	BFP4	Dry-no sample
	BFP5	Dry-no sample
Pino Yards Complex	PY1	Dry-no sample
	PY2	Dry-no sample
	PY3	Dry-no sample
Arroyo Del Oso Golf Course	ADO1	Dry-no sample
	ADO2	Dry-no sample
Eagle Rock Convenience Center	ER01/ER02	Dry-no sample
	ER03	Dry-no sample
ABQ BioPark Zoo	BP1	Dry-no sample
Weston Team 2		
4th Street Fuel Station	FS1	Sample collected
Fire Department Mechanic Shop	FM1	Sample collected
	FM2	Visited, dry-no sample
Street Maintenance Satellite #2	SS2	Sample collected
Edith Yards Maintenance Facility	EY01	Visited, dry-no sample
	EY02	Visited, dry-no sample
	EY03	Visited, dry-no sample
6th Street Park Management	6PM1	Visited, dry-no sample

Background

The MSGP establishes requirements for monitoring the quality of stormwater discharges depending on the nature of activities performed at the various industrial facilities. Although benchmark monitoring is not required, the MSGP does require quarterly visual inspection of stormwater quality. Visual inspection consists of the collection of grab samples from each outfall (subject to demonstration of substantially identical outfalls) and examination for the presence of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, or other indicators of stormwater pollution.

The following criteria regarding the precipitation event must be met for a visual inspection of stormwater to occur:

- During daylight hours
- Within 30 minutes of start of storm water discharge (or as soon as practicable thereafter)
- At least 72 hours after the previous storm water discharge event

Weston follows the City's existing stormwater monitoring protocol outlining the locations and descriptions of all outfalls to be monitored. The protocol identifies contact persons at each facility for use in notifying City personnel when members of the stormwater monitoring team are mobilizing to that location. A standard visual assessment form is used by all staff to document the inspection activities.

July 28, 2020

Quarter 2 Monitoring Results

The results from the 2nd Quarter 2020 visual inspections including monitoring reports and photo logs can be found in the Attachment A. From April 1 – June 30, 2020 the following occurred:

- Weston Sites Team 1 did not mobilize during the quarter to collect samples.
- Weston Sites Team 2 mobilized once during the quarter to collect samples from the storm event on June 24, 2020. Three visual samples were collected from the eight outfalls over the course of the mobilization.

Although there was one recordable precipitation event during this period, the vast majority did not meet the criteria for visual sampling since they occurred in the early evening, overnight or on weekends, or did not produce enough rainfall to be considered a qualifying event. Many sites received no rain due to the localized nature of the storms that did occur. Non-qualifying event data is provided in Attachment B.

Any outfalls not inspected in the 2nd Quarter will be addressed during Quarter 3 of 2020 pending suitable weather conditions.

Observed Problems

For previously submitted memos, Weather Underground (WU) has provided historical information for any non-qualifying event, as found in Attachment B. Within Quarter 4 of 2019, the WU website changed the formatting of their data presentation. The following lists differences in previous and current format:

- When reviewing historical data, searching a date range is no longer an option as was the case previously. The new format only allows for retrieval of, at the longest, one month of record at a time.
- Monthly data no longer notes Sea Level Pressure (in), Visibility (mi), or an Event (fog, rain, snow, etc.).
- Daily data no longer notes Windchill, Visibility (mi), or Events (fog, rain, snow, etc.) at the time of measurement.

There are discrepancies in the data between the monthly precipitation quantities and daily precipitation amounts when comparing days of data. Upon further research, WU determines a specific day's total precipitation by calculating the total amount of precipitation from 11:51:00 AM of the previous day to 11:52:00 AM on the day in question. The following are assumed:

- Total precipitation is measured in inches
- Precipitation totals are the sum of all significantly measurable amounts and any trace amounts measured.

We appreciate the opportunity to provide professional consulting services to you and we look forward to assisting you in the next quarter. Please contact Shannon Archuleta at (505) 837-6536 (Shannon.Archuleta@WestonSolutions.com) or David "Sonny" Cooper at (505) 837-6524 (Sonny.Cooper@WestonSolutions.com) if you have any questions or need additional information.

Sincerely,
WESTON SOLUTIONS, INC.

David Cooper

David "Sonny" Cooper, P.E.
Project Manager

Enclosures:

ATTACHMENT A: Q2 INSPECTION FORMS AND PHOTO LOGS

ATTACHMENT B: NON-QUALIFYING EVENT DATA

ATTACHMENT A: Q2 INSPECTION FORMS AND PHOTO LOGS

STREETS SATELLITE #2

City of Albuquerque

Street Maintenance Satellite #2

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

Ql X 02 Q3 Q4

Date: 6/23/2020

Weather: Cloudy

Storm Precip: No

1nspector: _____

Last 72 Hour Precip: No

Time: 1553

Andrew Brenner

Signature: _____

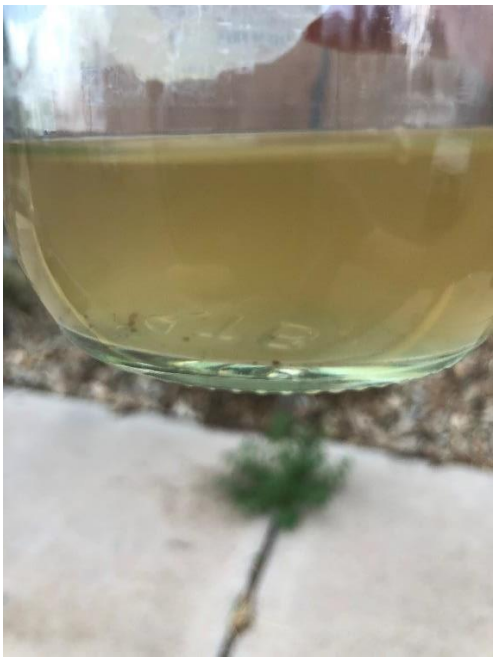
Photo: Yes

Outfall ID:	SS2
Flow Observed:	Yes / No
Description of Monitoring Site:	No precipitation during sample collection
Flow Estimate (include units and method of estimation) :	
Other Observations:	
Color (Describe):	yellow
Turbidity:	Clear / Slightly Cloudy / Very Cloudy / Opaque
Floating Solids:	Yes / X No
Suspended Solids:	Yes / No
Settled Solids:	Yes / No
Sheen Present:	Yes / I No
Odor:	Yes / No
Foam Present:	Yes / X No
Describe:	

Additional Comments: _____

Date:	June 23, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Street Maintenance Satellite #2	
	

FIRE DEPARTMENT MECHANIC

City of Albuquerque
Fire Department Mechanic Shop

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

Q1 • Q2 Q3 Q4

Date: 6/23/20
Time: 1601
Inspector: Andrew F renner
Signature: _____

Weather: Cloudy
Storm Precip: .1r-in.
Last 72 Hour Precip: No
Photo: Yes

Outfall ID:	FMl	FM2
Flow Observed:	M Yes No	Yes • No
Description of Monitoring Site:	No precipitation during sample collection	
Flow Estimate (include units and method of estimation) :	< lcfs	
Other Observations:		
Color (Describe):	yellow	
Turbidity:	Clear Slightly Cloudy a Very Cloudy Opaque	Clear Slightly Cloudy Very Cloudy Opaque
Floating Solids:	Yes a No	Yes No
Suspended Solids:	Yes •No	Yes No
Settled Solids:	•Yes No	Yes No
Sheen Present:	Yes •No	Yes No
Odor:	Yes a No	Yes No
Foam Present:	Yes X No	Yes No
Describe:		

Additional Comments: _____

WESTON SOLUTIONS

Date:	June 23, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Fire Department Mechanic Shop	
	
	

4TH STREET FUELS

City of Albuquerque
4th Street Fuel Station

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

Ql • Q2 Q3 Q4

Date: 06/23/ 2020
Time: 1559
1nspector: Andrew Brenner
Signature:

Weather: Cloudy
Storm Precip: .-1 "":t- M
Last 72 Hour Precip: No
Photo: Yes

Outfall ID:	FSl
Flow Observed:	• Yes No
Description of Monitoring Site:	No precipitation during sample collection
flow Estimate (include units and method of estimation) :	< lcfs
Other Observations:	
Color (Describe):	gray
Turbidity:	Clear • Slightly Cloudy Very Cloudy Opaque
Floating Solids:	Yes • No
Suspended Solids:	Yes ■ No
Settled Solids:	• Yes No
Sheen Present:	Yes ■ No
Odor:	Yes • No
Foam Present:	Yes • No
Describe:	

Additional Comments:

Date:	June 23, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

4th Street Fuel Station	
	

6TH STREET PARKS MANAGEMENT

City of Albuquerque

6th Street Park Management

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

Q1 Q2 Q3 Q4

Date: 6/23/2020
Time: 1605
Inspector: Andrew Brenner
Signature:

Weather: Cloudy
Storm Precip:
Last 72 Hour Precip: No
Photo: Yes

Outfall ID:	6PM1	
Flow Observed:	Yes	No
Description of Monitoring Site:		
Flow Estimate (include units and method of estimation) :		
Other Observations:		
Color (Describe):		
Turbidity:	Clear Slightly Cloudy Very Cloudy Opaque	
Floating Solids:	Yes	No
Suspended Solids:	Yes	No
Settled Solids:	Yes	No
Sheen Present:	Yes	No
Odor:	Yes	No
Foam Present:	Yes	No
Describe:		

Additional Comments:

Date:	June 23, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Andrew Brenner (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

6th Street Park Management	
	

EDITH YARD

City of Albuquerque Solid Waste Management Department

Edith Yards Maintenance Facility

Quarterly Visual Monitoring of
Storm Water Outfall Discharges

D Ql !_ Q2 D Q3 D Q4

Date: 6/24/2020

Time: __ __ ____

Weather: lSO l+cd +hv Sf""ov"m

Storm Precip: - ·13

Photo: ES

Signature: =: L.J.:z::.::::::::_

1nspector: =.!.J'-'-'--=-'----LJ--'--:.. ==

Last 72 Hour Precip: {/) 1 , ,

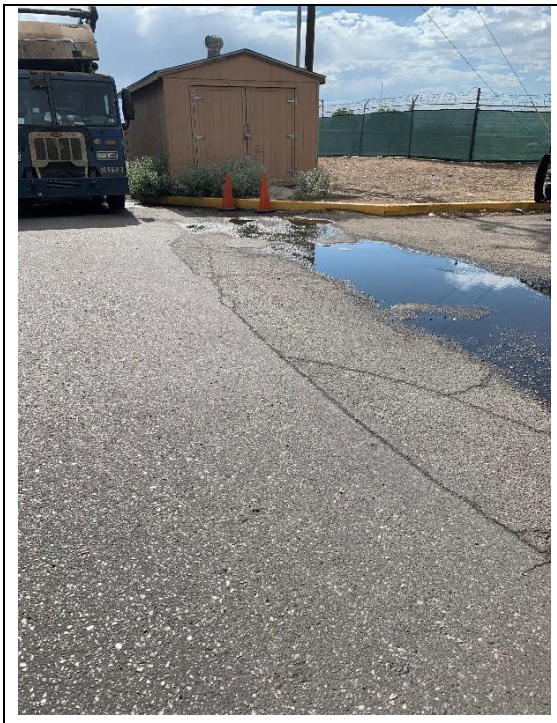
---'----=' "'-------

Outfall ID:	EY01	EY02	EY03
Flow Observed:	D Yes 1'.i: No	D Yes l:K. No	D Yes f>(No
Description of Monitoring Site:			
Flow Estimate (include units and method of estimation) :			
Other Observations:			
Color (Describe):			
Turbidity:	D Clear D Slightly Cloudy D Very Cloudy D Opaque	D Clear D Slightly Cloudy D Very Cloudy D Opaque	D Clear D Slightly Cloudy D Very Cloudy D Opaque
Floating Solids:	D Yes D No	D Yes D No	D Yes D No
Suspended Solids:	D Yes D No	D Yes D No	D Yes D No
Settled Solids:	D Yes D No	D Yes D No	D Yes D No
Sheen Present:	D Yes D No	D Yes D No	D Yes D No
Odor:	D Yes D No	D Yes D No	D Yes D No
Foam Present:	D Yes D No	D Yes D No	D Yes D No
Describe:			
Additional Comments:	Pooling to Show pvevious 8ow\bv+no active flow.		

Date:	June 23, 2020
Event:	MS4 Stormwater Visual Monitoring
Inspector:	Shannon Archuleta (Weston)

CITY OF ALBUQUERQUE
STORM WATER MONITORING PHOTOGRAPH LOG

Edith Yards Maintenance Yards	
	
	

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ATTACHMENT B: NON-QUALIFYING DATA

35.05 °N, 106.61 °W

Albuquerque, NM Weather History star_rate home

91° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

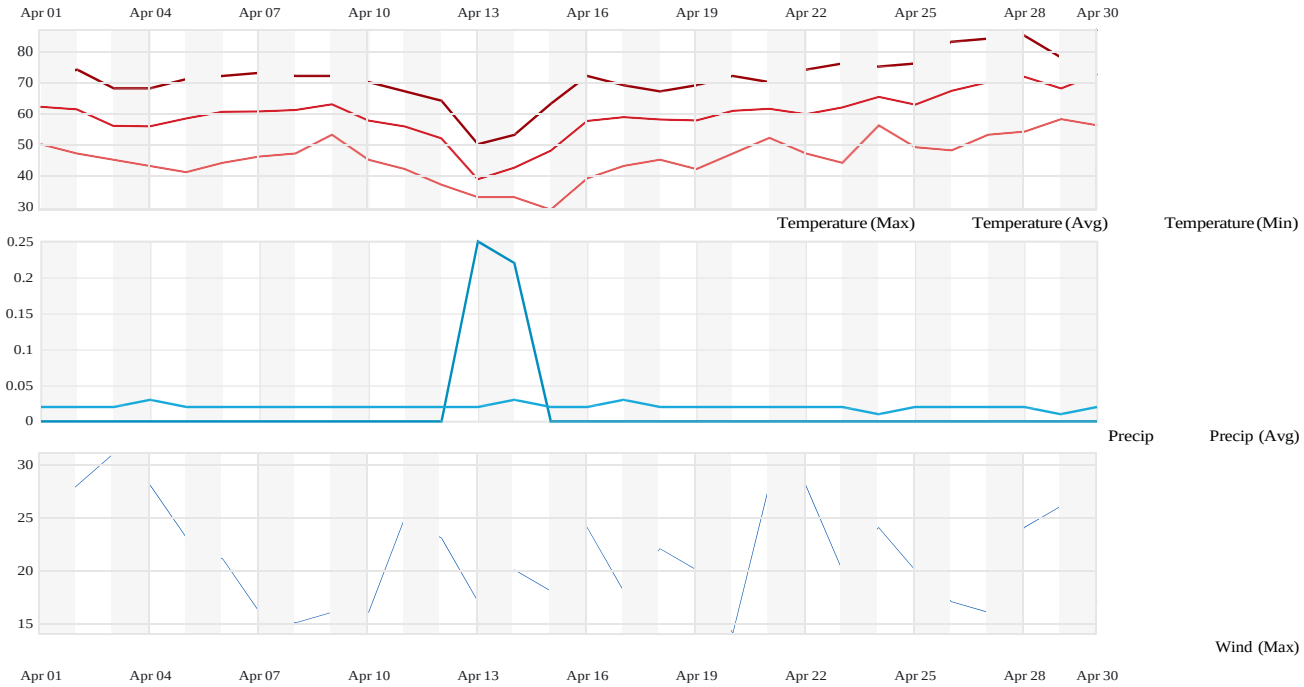
HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily Weekly Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2020-4-6) (/history/weekly/us/nm/albuquerque/KABQ/date/2020-4-6) (/history/monthly/us/nm/albuquerque/KABQ/date/2020-4-6)

April 2020 View



Summary

Temperature (° F)	Max	Average	Min
Max Temperature	87	71.53	50
Avg Temperature	72.42	59.42	38.73
Min Temperature	58	45.6	29
Dew Point (° F)	Max	Average	Min

Temperature (° F)	Max	Average	Min	
Dew Point	39	20.82	-7	

Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.25	0.02	0.00	0.47
Snowdepth	0.00	0.00	0.00	0.00

Wind	Max	Average	Min	
Wind	31	9.38	0	
Gust Wind	46	5.97	0	

Sea Level Pressure	Max	Average	Min	
Sea Level Pressure	24.9	24.64	24.39	

Daily Observations

Time	Temperature (° F)	Dew Point (° F)	Humidity (%)	Wind Speed (mph)	Pressure (Hg)	Precipitation (in)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Apr	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	72	62.0	50	21	17.6	16	31	18.8	12	25	11.3	5	24.6	24.5	24.4	0.00
2	74	61.1	47	23	17.0	11	33	19.5	9	28	13.6	0	24.6	24.5	24.4	0.00
3	68	55.9	45	29	22.0	17	41	28.1	14	31	12.7	0	24.7	24.6	24.5	0.00
4	68	55.7	43	28	24.0	15	53	32.4	16	28	10.7	0	24.6	24.6	24.5	0.00
5	71	58.2	41	20	16.7	14	38	21.2	12	23	9.2	0	24.6	24.6	24.5	0.00
6	72	60.4	44	22	14.8	4	37	18.8	7	21	8.8	0	24.7	24.6	24.6	0.00
7	73	60.5	46	20	16.4	12	29	18.8	11	16	6.8	0	24.8	24.7	24.6	0.00
8	72	60.9	47	27	19.4	17	36	21.2	13	15	5.6	0	24.8	24.7	24.6	0.00
9	72	62.8	53	33	23.6	16	39	24.2	13	16	8.2	0	24.7	24.6	24.6	0.00
10	70	57.5	45	26	14.0	3	38	19.9	10	16	7.8	0	24.7	24.6	24.5	0.00
11	67	55.6	42	25	10.7	2	39	18.3	8	25	9.8	0	24.6	24.5	24.4	0.00
12	64	51.9	37	36	27.9	23	59	41.2	23	23	10.2	0	24.6	24.5	24.4	0.00
13	50	38.7	33	39	33.9	29	92	83.4	52	17	8.0	0	24.7	24.6	24.6	0.25
14	53	42.4	33	36	14.2	-7	93	42.9	9	20	9.7	0	24.8	24.8	24.7	0.22
15	63	47.9	29	22	12.2	3	56	26.5	11	18	6.6	0	24.8	24.7	24.6	0.00
16	72	57.4	39	24	18.0	11	55	26.0	10	24	13.0	0	24.7	24.6	24.5	0.00
17	69	58.6	43	23	19.0	16	43	22.6	13	18	8.4	0	24.7	24.6	24.6	0.00
18	67	57.9	45	29	20.1	12	52	25.8	12	22	10.1	0	24.6	24.6	24.5	0.00
19	69	57.6	42	30	24.9	20	58	30.8	16	20	7.0	0	24.7	24.6	24.6	0.00
20	72	60.7	47	30	24.2	13	46	27.2	11	14	7.0	0	24.7	24.6	24.6	0.00
21	70	61.3	52	31	24.3	17	40	25.9	14	28	9.7	0	24.7	24.6	24.5	0.00
22	74	59.6	47	36	25.8	14	61	33.0	11	28	13.2	5	24.7	24.6	24.6	0.00
23	76	61.8	44	24	22.6	20	42	24.0	14	20	9.0	0	24.7	24.6	24.5	0.00
24	75	65.1	56	25	17.6	6	29	17.6	9	24	13.5	6	24.7	24.7	24.6	0.00
25	76	62.6	49	28	18.3	6	40	20.5	8	20	7.8	0	24.9	24.8	24.7	0.00
26	83	67.1	48	21	16.5	11	28	15.7	8	17	6.0	0	24.8	24.7	24.6	0.00
27	84	69.8	53	31	23.3	17	33	19.0	9	16	7.5	0	24.8	24.7	24.6	0.00
28	85	71.5	54	28	23.0	17	35	17.7	8	24	11.1	0	24.8	24.7	24.7	0.00
29	78	67.8	58	33	30.1	22	35	25.2	17	26	11.8	5	24.9	24.8	24.8	0.00
30	87	72.4	56	34	32.4	30	40	24.4	14	17	7.1	0	24.8	24.7	24.6	0.00

la.com/en/?template=colorbox&utm_source=theweatherchannel-wunderground&utm_medium=referral&utm_content=thumbnails-b:History Thumbnails:)
a.com/en/?template=colorbox&utm_source=theweatherchannel-wunderground&utm_medium=referral&utm_content=thumbnails-b:History Thumbnails:)
You May Like

(http://click.clktraker.com/aff_ad?campaign_id=6954&aff_id=9016&hostNameId=2951&utm_source=cpc&aff_sub=2858868076&aff_sub2=1194714&aff_sub3=If+You%27re+Over+40+and+Own+a+PC+This+Game+is+a+Must&aff_sub4=http%3A%2F%2Fcdn8qCKSDoqEc&source=theweatherchannel-wunderground#tblciGiCtXZ0SdiVRgvpxDE1lmd88B65JCPqbFdvAzAMT-8qCKSDoqEc)

If You're Over 40 and Own a PC This Game is a Must

Throne Kingdom at War

(http://click.clktraker.com/aff_ad?campaign_id=6954&aff_id=9016&hostNameId=2951&utm_source=cpc&aff_sub=2858868076&aff_sub2=1194714&aff_sub3=If+You%27re+Over+40+and+Own+a+PC+This+Game+is+a+Must&aff_sub4=http%3A%2F%2Fcdn8qCKSDoqEc&source=theweatherchannel-wunderground#tblciGiCtXZ0SdiVRgvpxDE1lmd88B65JCPqbFdvAzAMT-8qCKSDoqEc)

35.05 °N, 106.61 °W

Albuquerque, NM Weather History star_ratehome

78° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

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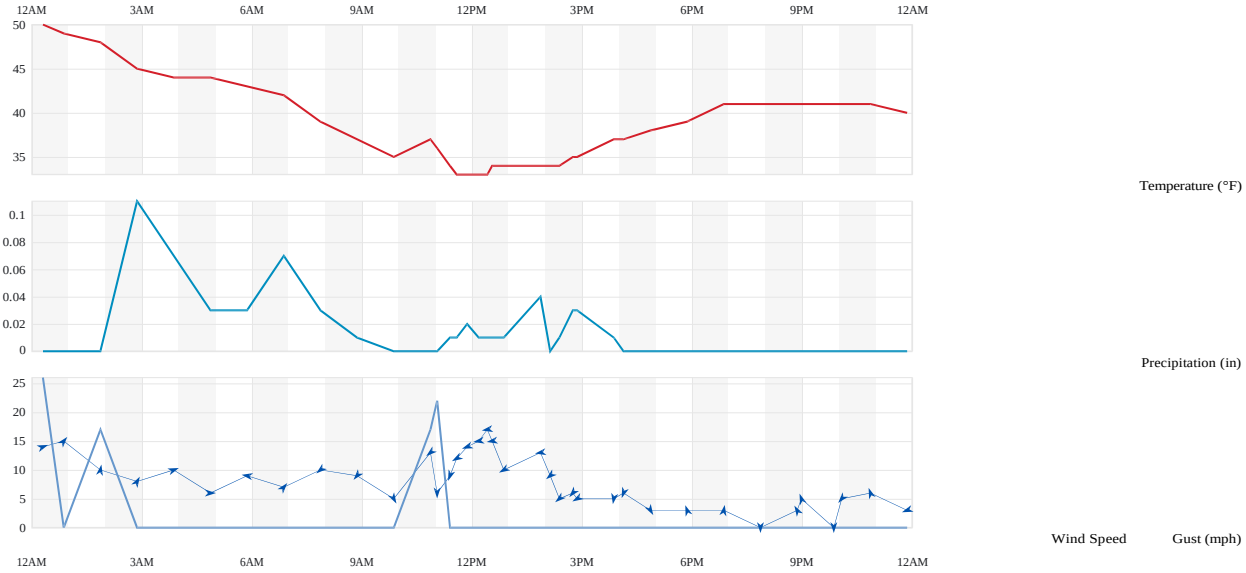
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily Weekly Monthly

(/history/daily/[illegible]/date/2020-4-13) (4-13) 4)

April 13 2020 View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	50	68	84
Low Temp	33	42	23
Day Average Temp	38.73	55	-

Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.25	0.02	-

Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	33.86	-	-
High	39	-	-
Low	29	-	-
Average	33.86	-	-

Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	17	-	-

Temperature (° F)	Actual	Historic Avg.	Record
Visibility	10	-	-

Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.68	-	-

Astronomy	Day Length	Rise	Set
Actual Time	13h 1m	6:37 AM	7:38 PM
Civil Twilight		6:11 AM	8:04 PM
Nautical Twilight		5:40 AM	8:35 PM
Astronomical Twilight		5:08 AM	9:07 PM
Moon: waning gibbous		1:08 AM	11:05 AM

Daily Observations

12:18 AM	50 °F	33 °F	52 %	WSW	14 mph	26 mph	24.59 in	0.0 in	Cloudy
12:52 AM	49 °F	33 °F	54 %	SW	15 mph	0 mph	24.59 in	0.0 in	Cloudy
1:52 AM	48 °F	36 °F	63 %	S	10 mph	17 mph	24.59 in	0.0 in	Light Rain
2:52 AM	45 °F	38 °F	76 %	SSW	8 mph	0 mph	24.60 in	0.1 in	Rain
3:52 AM	44 °F	36 °F	73 %	WSW	10 mph	0 mph	24.60 in	0.1 in	Light Rain
4:52 AM	44 °F	37 °F	76 %	W	6 mph	0 mph	24.61 in	0.0 in	Rain
5:52 AM	43 °F	39 °F	86 %	E	9 mph	0 mph	24.58 in	0.0 in	Light Rain
6:52 AM	42 °F	36 °F	79 %	SW	7 mph	0 mph	24.62 in	0.1 in	Light Rain
7:52 AM	39 °F	34 °F	82 %	NE	10 mph	0 mph	24.62 in	0.0 in	Light Rain
8:52 AM	37 °F	32 °F	82 %	NE	9 mph	0 mph	24.64 in	0.0 in	Light Rain
9:52 AM	35 °F	33 °F	92 %	NNW	5 mph	0 mph	24.65 in	0.0 in	Cloudy
10:52 AM	37 °F	30 °F	76 %	NE	13 mph	17 mph	24.66 in	0.0 in	Light Snow
11:03 AM	36 °F	29 °F	76 %	VAR	6 mph	22 mph	24.65 in	0.0 in	Light Snow
11:24 AM	34 °F	31 °F	89 %	NNE	9 mph	0 mph	24.65 in	0.0 in	Light Snow
11:35 AM	33 °F	31 °F	92 %	ENE	12 mph	0 mph	24.66 in	0.0 in	Light Snow
11:52 AM	33 °F	31 °F	92 %	ENE	14 mph	0 mph	24.65 in	0.0 in	Light Snow
12:11 PM	33 °F	30 °F	89 %	E	15 mph	0 mph	24.65 in	0.0 in	Light Snow
12:25 PM	33 °F	30 °F	89 %	E	17 mph	0 mph	24.64 in	0.0 in	Light Snow
12:33 PM	34 °F	30 °F	85 %	E	15 mph	0 mph	24.64 in	0.0 in	Light Snow
12:52 PM	34 °F	31 °F	89 %	ENE	10 mph	0 mph	24.64 in	0.0 in	Light Snow
1:52 PM	34 °F	31 °F	89 %	E	13 mph	0 mph	24.62 in	0.0 in	Light Snow
2:08 PM	34 °F	32 °F	92 %	NE	9 mph	0 mph	24.63 in	0.0 in	Light Snow
2:23 PM	34 °F	32 °F	92 %	NE	5 mph	0 mph	24.63 in	0.0 in	Light Snow
2:45 PM	35 °F	32 °F	89 %	NE	6 mph	0 mph	24.63 in	0.0 in	Light Snow
2:52 PM	35 °F	33 °F	92 %	ENE	5 mph	0 mph	24.63 in	0.0 in	Light Snow
3:52 PM	37 °F	33 °F	86 %	N	5 mph	0 mph	24.62 in	0.0 in	Light Rain
4:08 PM	37 °F	34 °F	89 %	NNE	6 mph	0 mph	24.61 in	0.0 in	Cloudy
4:52 PM	38 °F	34 °F	86 %	NNW	3 mph	0 mph	24.60 in	0.0 in	Cloudy
5:52 PM	39 °F	36 °F	89 %	SSE	3 mph	0 mph	24.60 in	0.0 in	Cloudy
6:52 PM	41 °F	36 °F	82 %	S	3 mph	0 mph	24.61 in	0.0 in	Light Rain
7:52 PM	41 °F	37 °F	86 %	CALM	0 mph	0 mph	24.61 in	0.0 in	Cloudy
8:52 PM	41 °F	37 °F	86 %	SSE	3 mph	0 mph	24.63 in	0.0 in	Mostly Cloudy
8:59 PM	41 °F	37 °F	86 %	SSE	5 mph	0 mph	24.64 in	0.0 in	Mostly Cloudy
9:52 PM	41 °F	37 °F	86 %	CALM	0 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
10:05 PM	41 °F	38 °F	89 %	NE	5 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
10:52 PM	41 °F	37 °F	86 %	SSE	6 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
11:52 PM	40 °F	37 °F	89 %	ENE	3 mph	0 mph	24.68 in	0.0 in	Partly Cloudy

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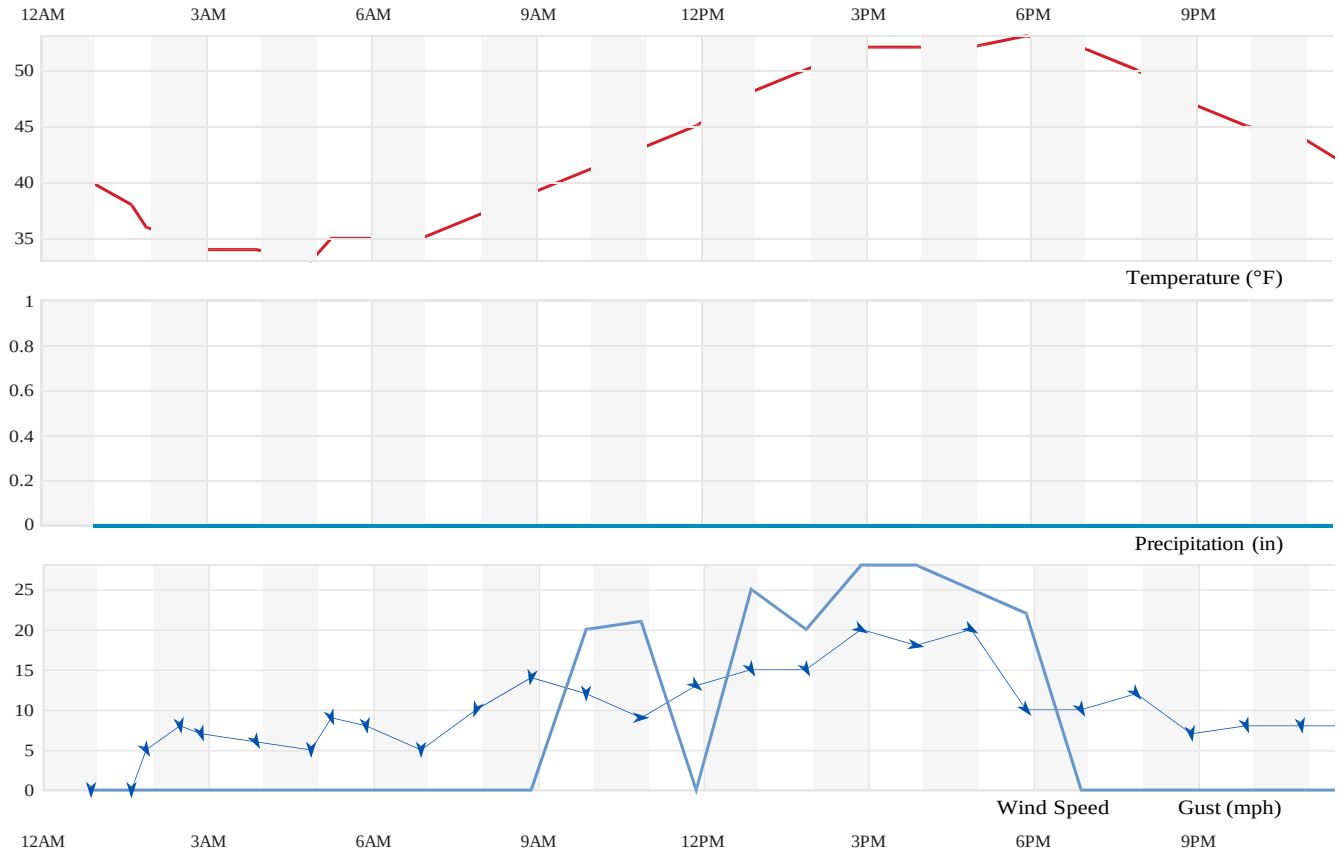
April 14 2020 View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	53	69	86
Low Temp	33	42	20
Day Average Temp	42.44	56	-

Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.22	0.03	-

Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	14.19	-	-
High	36	-	-
Low	-7	-	-
Average	14.19	-	-

Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	20	-	-
Visibility	10	-	-

Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.81	-	-

Astronomy	Day Length	Rise	Set
Actual Time	13h 3m	6:36 AM	7:39 PM
Civil Twilight		6:09 AM	8:05 PM
Nautical Twilight		5:39 AM	8:36 PM
Astronomical Twilight		5:07 AM	9:08 PM
Moon: waning gibbous		2:04 AM	12:02 PM

Daily Observations

12:52 AM	40 °F	36 °F	86 %	CALM	0 mph	0 mph	24.70 in	0.0 in	Fair
1:36 AM	38 °F	35 °F	89 %	CALM	0 mph	0 mph	24.70 in	0.0 in	Fair
1:52 AM	36 °F	34 °F	93 %	NNW	5 mph	0 mph	24.70 in	0.0 in	Fair

2:29 AM	35 °F	32 °F	89 %	N	8 mph	0 mph	24.71 in	0.0 in	Partly Cl
2:52 AM	34 °F	32 °F	92 %	NNW	7 mph	0 mph	24.71 in	0.0 in	Partly Cl
3:52 AM	34 °F	32 °F	92 %	NNW	6 mph	0 mph	24.73 in	0.0 in	Partly Cl
4:52 AM	33 °F	31 °F	92 %	N	5 mph	0 mph	24.74 in	0.0 in	Fair
5:14 AM	35 °F	25 °F	67 %	NNW	9 mph	0 mph	24.73 in	0.0 in	Fair
5:52 AM	35 °F	24 °F	64 %	N	8 mph	0 mph	24.74 in	0.0 in	Fair
6:52 AM	35 °F	19 °F	52 %	N	5 mph	0 mph	24.76 in	0.0 in	Fair
7:52 AM	37 °F	17 °F	44 %	NNE	10 mph	0 mph	24.80 in	0.0 in	Fair
8:52 AM	39 °F	14 °F	36 %	N	14 mph	0 mph	24.80 in	0.0 in	Fair
9:52 AM	41 °F	14 °F	33 %	N	12 mph	20 mph	24.81 in	0.0 in	Fair
10:52 AM	43 °F	12 °F	28 %	W	9 mph	21 mph	24.81 in	0.0 in	Fair
11:52 AM	45 °F	12 °F	26 %	NW	13 mph	0 mph	24.79 in	0.0 in	Fair
12:52 PM	48 °F	12 °F	24 %	NNW	15 mph	25 mph	24.77 in	0.0 in	Fair
1:52 PM	50 °F	10 °F	20 %	NNW	15 mph	20 mph	24.75 in	0.0 in	Fair
2:52 PM	52 °F	5 °F	15 %	WNW	20 mph	28 mph	24.74 in	0.0 in	Fair
3:52 PM	52 °F	1 °F	12 %	W	18 mph	28 mph	24.73 in	0.0 in	Fair
4:52 PM	52 °F	-1 °F	11 %	WNW	20 mph	25 mph	24.71 in	0.0 in	Fair
5:52 PM	53 °F	-2 °F	10 %	NW	10 mph	22 mph	24.71 in	0.0 in	Fair
6:52 PM	52 °F	-3 °F	10 %	NNW	10 mph	0 mph	24.71 in	0.0 in	Fair
7:52 PM	50 °F	-7 °F	9 %	NW	12 mph	0 mph	24.72 in	0.0 in	Fair
8:52 PM	47 °F	-5 °F	11 %	N	7 mph	0 mph	24.75 in	0.0 in	Fair
9:52 PM	45 °F	-2 °F	14 %	NNW	8 mph	0 mph	24.76 in	0.0 in	Fair
10:52 PM	44 °F	-1 °F	15 %	N	8 mph	0 mph	24.77 in	0.0 in	Fair

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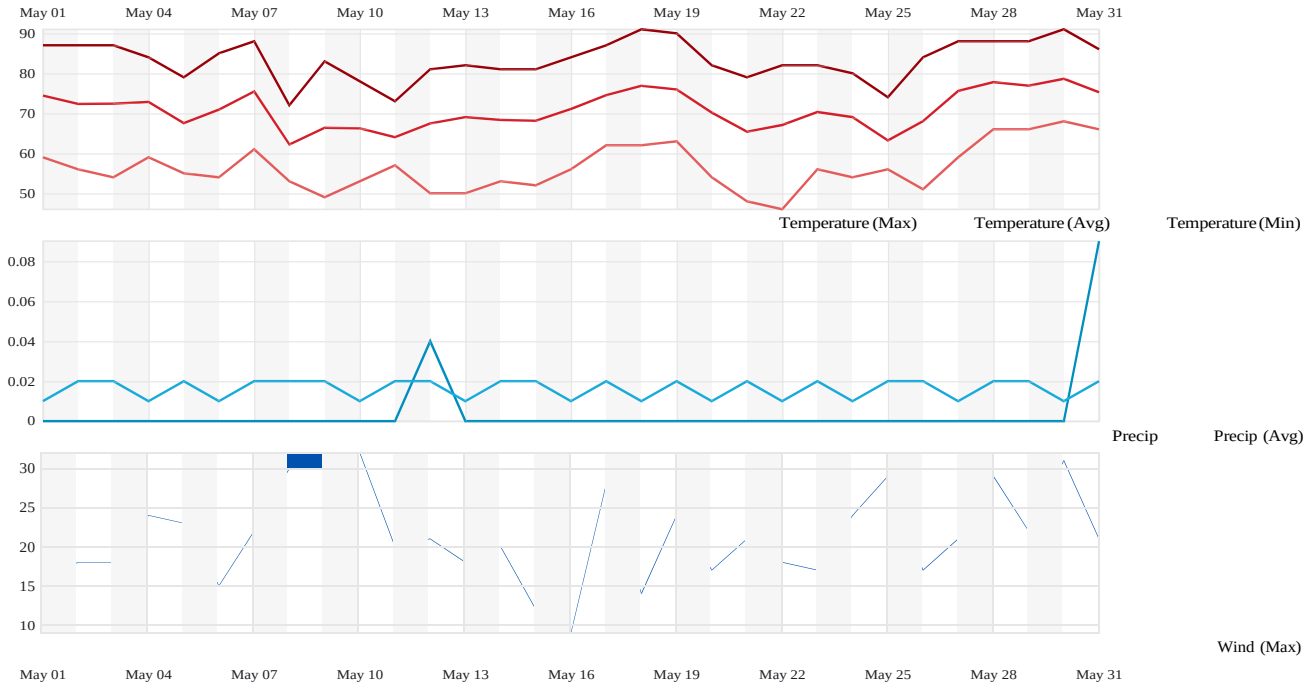
May 2020 View



Summary

Temperature (° F)	Max	Average	Min
Max Temperature	91	83.35	72
Avg Temperature	78.63	70.76	62.21
Min Temperature	68	56.39	46

Dew Point (° F)	Max	Average	Min

Temperature (° F)	Max	Average	Min	
Dew Point	54	25.6	-6	

Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.09	0.00	0.00	0.13
Snowdepth	0.00	0.00	0.00	0.00

Wind	Max	Average	Min	
Wind	32	9.93	0	
Gust Wind	53	6.31	0	

Sea Level Pressure	Max	Average	Min	
Sea Level Pressure	24.93	24.68	24.46	

Daily Observations

Time	Temperature (° F)	Dew Point (° F)	Humidity (%)	Wind Speed (mph)	Pressure (Hg)	Precipitation (in)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
May	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	87	74.4	59	32	24.0	13	35	17.8	6	16	7.4	0	24.7	24.7	24.6	0.00
2	87	72.3	56	23	17.7	14	22	13.6	7	18	8.7	0	24.8	24.7	24.6	0.00
3	87	72.4	54	28	22.5	17	28	16.2	10	18	7.7	0	24.8	24.7	24.6	0.00
4	84	72.8	59	26	19.9	14	26	14.6	7	24	12.9	3	24.7	24.7	24.6	0.00
5	79	67.5	55	39	32.2	17	53	29.6	15	23	11.5	0	24.9	24.8	24.7	0.00
6	85	70.9	54	33	28.1	18	40	22.6	9	15	7.8	0	24.9	24.8	24.7	0.00
7	88	75.5	61	27	14.6	1	23	11.1	6	22	12.3	5	24.7	24.6	24.6	0.00
8	72	62.2	53	24	19.3	3	27	19.8	9	30	18.1	0	24.9	24.8	24.7	0.00
9	83	66.4	49	30	21.2	12	41	21.3	7	32	7.7	0	24.8	24.7	24.7	0.00
10	78	66.3	53	35	30.0	22	37	26.5	17	32	16.2	5	24.9	24.8	24.7	0.00
11	73	64.0	57	50	43.2	35	59	47.5	28	20	8.3	0	24.8	24.7	24.6	0.00
12	81	67.5	50	43	32.9	22	71	34.0	12	21	7.5	0	24.7	24.6	24.5	0.04
13	82	69.0	50	27	20.5	12	35	17.8	7	18	10.5	0	24.6	24.6	24.5	0.00
14	81	68.3	53	28	22.7	16	35	19.4	9	20	7.6	0	24.7	24.6	24.5	0.00
15	81	68.1	52	28	22.7	16	32	19.5	11	12	5.8	0	24.7	24.6	24.5	0.00
16	84	71.1	56	31	23.7	19	33	18.1	10	9	4.4	0	24.7	24.6	24.6	0.00
17	87	74.5	62	48	38.2	23	60	31.3	14	28	14.3	3	24.7	24.7	24.6	0.00
18	91	76.9	62	29	25.2	21	28	16.1	8	14	6.5	0	24.8	24.7	24.6	0.00
19	90	76.0	63	32	26.3	20	26	16.4	12	24	10.9	0	24.7	24.6	24.5	0.00
20	82	70.2	54	24	14.2	-6	24	13.2	5	17	8.6	0	24.7	24.6	24.5	0.00
21	79	65.4	48	7	3.0	-4	16	9.1	5	21	7.7	0	24.7	24.6	24.6	0.00
22	82	67.1	46	15	8.4	4	21	11.0	6	18	8.4	0	24.7	24.6	24.5	0.00
23	82	70.3	56	19	15.5	10	20	12.7	9	17	8.8	0	24.6	24.6	24.5	0.00
24	80	69.0	54	22	16.8	8	25	14.2	9	24	11.6	3	24.6	24.6	24.5	0.00
25	74	63.2	56	38	30.9	8	51	32.1	12	29	14.3	3	24.7	24.6	24.6	0.00
26	84	68.0	51	38	28.5	15	54	28.6	8	17	7.7	0	24.8	24.7	24.6	0.00
27	88	75.6	59	35	27.6	19	24	17.4	12	21	7.6	0	24.7	24.7	24.6	0.00
28	88	77.8	66	40	36.3	34	33	23.2	15	29	13.0	3	24.9	24.8	24.7	0.00
29	88	76.9	66	41	39.1	34	36	26.6	15	22	10.5	0	24.9	24.9	24.8	0.00
30	91	78.6	68	54	42.4	37	59	29.7	15	31	14.3	5	24.8	24.8	24.7	0.00
31	86	75.3	66	54	46.0	38	65	37.9	21	21	9.3	0	24.9	24.8	24.7	0.09

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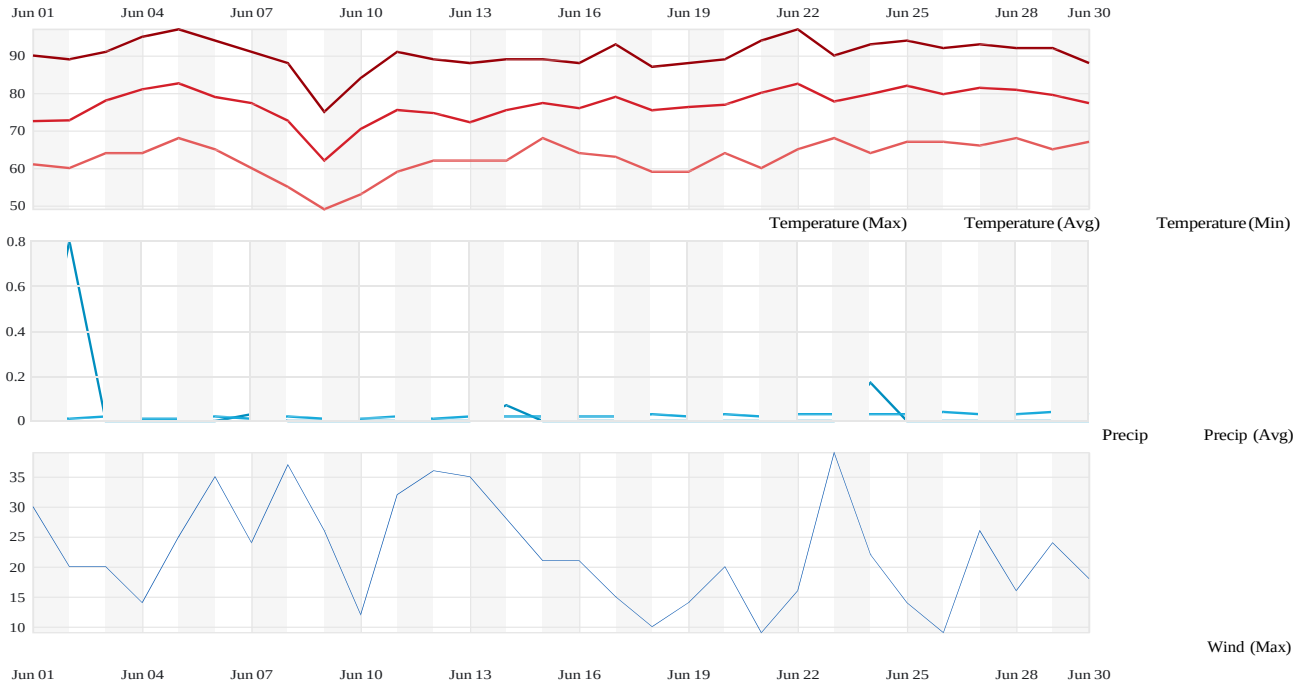
June 2020 View



Summary

Temperature (° F)	Max	Average	Min
Max Temperature	97	90.33	75
Avg Temperature	82.6	76.93	62
Min Temperature	68	62.6	49

Dew Point (° F)	Max	Average	Min

Temperature (° F)	Max	Average	Min	
Dew Point	58	33.23	8	

Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.80	0.04	0.00	1.07
Snowdepth	0.00	0.00	0.00	0.00

Wind	Max	Average	Min	
Wind	39	9.86	0	
Gust Wind	53	6.17	0	

Sea Level Pressure	Max	Average	Min	
Sea Level Pressure	24.99	24.7	24.43	

Daily Observations

Time	Temperature (° F)	Dew Point (° F)	Humidity (%)	Wind Speed (mph)	Pressure (Hg)	Precipitation (in)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Jun	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	90	72.5	61	58	48.3	40	83	47.3	18	30	9.2	0	24.9	24.8	24.7	0.00
2	89	72.7	60	58	51.2	43	90	51.6	21	20	7.0	0	24.8	24.8	24.7	0.80
3	91	78.0	64	52	44.1	32	65	34.5	12	20	7.3	0	24.8	24.7	24.6	0.00
4	95	81.0	64	48	39.2	25	50	26.3	8	14	6.0	0	24.7	24.7	24.6	0.00
5	97	82.6	68	47	36.1	28	36	20.8	9	25	9.8	3	24.7	24.6	24.6	0.00
6	94	79.0	65	58	40.3	10	78	35.5	5	35	19.0	3	24.7	24.6	24.5	0.00
7	91	77.3	60	30	22.8	18	25	13.8	8	24	11.1	0	24.6	24.5	24.4	0.03
8	88	72.6	55	37	26.1	8	32	19.7	6	37	14.9	0	24.7	24.6	24.4	0.00
9	75	62.0	49	24	16.4	8	35	19.4	8	26	16.1	10	24.8	24.8	24.7	0.00
10	84	70.4	53	24	18.5	14	26	15.0	8	12	5.9	0	24.9	24.8	24.8	0.00
11	91	75.5	59	42	24.1	16	35	16.6	7	32	9.4	0	24.9	24.9	24.8	0.00
12	89	74.7	62	47	43.8	39	48	34.5	17	36	10.4	0	25.0	24.9	24.8	0.00
13	88	72.2	62	53	46.2	38	72	41.8	20	35	12.6	0	24.9	24.8	24.7	0.00
14	89	75.5	62	53	44.2	31	70	37.4	15	28	12.1	0	24.8	24.7	24.7	0.07
15	89	77.4	68	45	40.5	35	42	28.2	15	21	8.9	0	24.8	24.8	24.7	0.00
16	88	76.0	64	45	41.0	36	48	30.4	16	21	8.3	0	24.8	24.7	24.6	0.00
17	93	79.0	63	42	27.5	12	45	20.4	5	15	8.3	0	24.7	24.6	24.6	0.00
18	87	75.4	59	24	18.2	14	20	12.2	7	10	5.5	0	24.7	24.7	24.6	0.00
19	88	76.3	59	23	15.3	12	17	10.6	6	14	8.4	0	24.7	24.7	24.6	0.00
20	89	76.9	64	50	33.4	19	58	26.2	8	20	8.8	3	24.8	24.7	24.6	0.00
21	94	80.1	60	28	22.1	19	22	12.8	7	9	6.0	0	24.8	24.7	24.6	0.00
22	97	82.5	65	41	28.5	24	33	15.5	8	16	7.8	0	24.8	24.7	24.6	0.00
23	90	77.8	68	55	48.9	37	53	37.5	20	39	18.3	0	24.8	24.7	24.7	0.00
24	93	79.8	64	50	42.9	34	58	30.9	12	22	8.5	0	24.8	24.7	24.6	0.17
25	94	82.0	67	45	36.3	25	45	22.6	8	14	8.3	0	24.8	24.7	24.6	0.00
26	92	79.7	67	42	29.4	18	32	18.1	7	9	4.0	0	24.8	24.7	24.7	0.00
27	93	81.4	66	41	27.0	12	40	17.2	5	26	12.0	5	24.7	24.7	24.6	0.00
28	92	80.9	68	35	29.9	24	25	16.3	10	16	10.0	3	24.6	24.5	24.4	0.00
29	92	79.5	65	36	28.4	21	27	16.8	8	24	10.7	0	24.6	24.6	24.5	0.00
30	88	77.3	67	33	26.5	20	25	16.3	8	18	11.0	0	24.7	24.6	24.6	0.00

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Albuquerque: Why Are People Snapping Up This $89 AC Unit?
Trending AC unit

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35.05 °N, 106.61 °W

Albuquerque, NM Weather History star_rate home

☀ 79° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

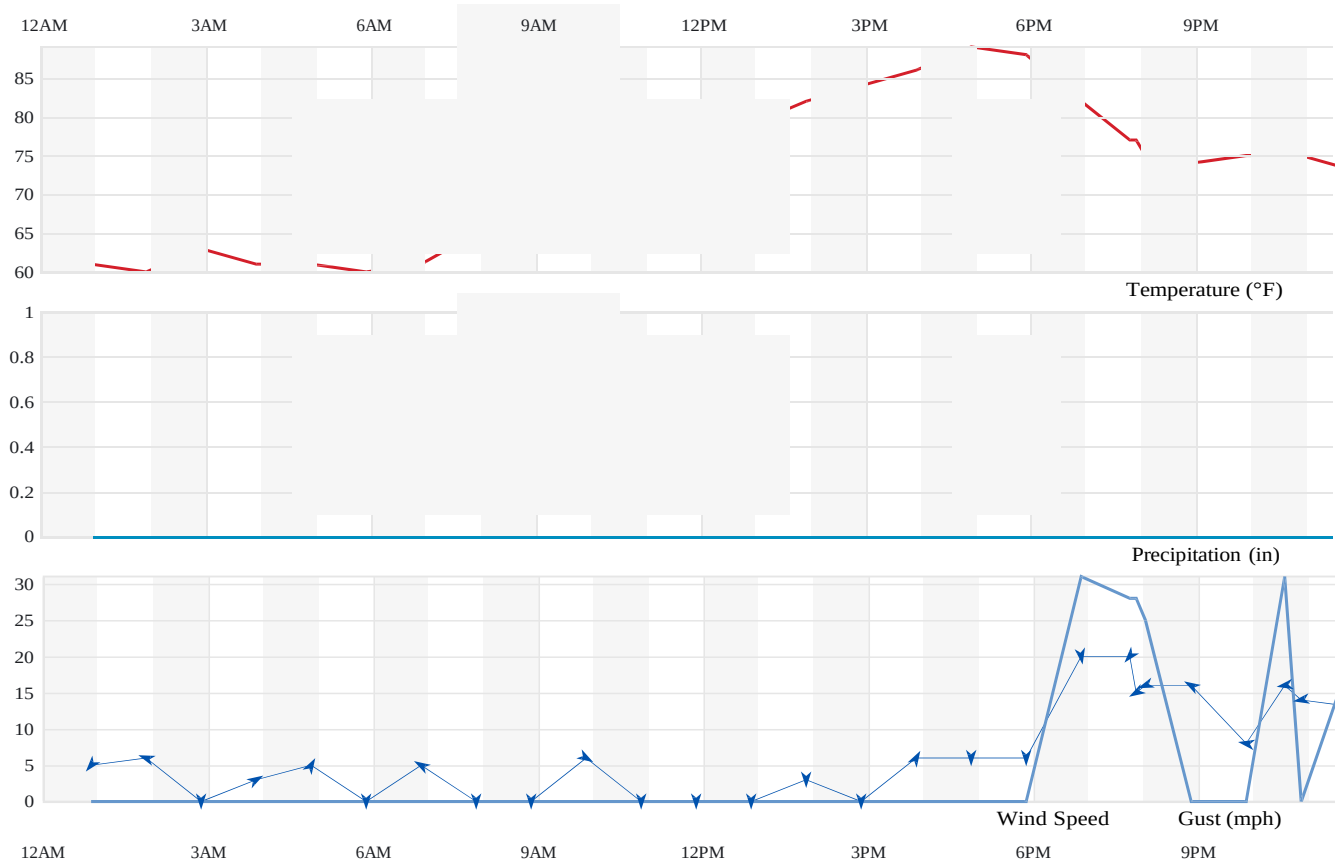
HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily Weekly Monthly

(/history/daily/ (/history/weekly/ /KABQ/date/2020-6-2) 6-2) 6)

June 2 2020 View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	89	85	96
Low Temp	60	58	36
Day Average Temp	72.74	71	-

Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.80	0.01	-

Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	51.22	-	-
High	58	-	-
Low	43	-	-
Average	51.22	-	-

Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	20	-	-
Visibility	10	-	-

Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.82	-	-

Astronomy	Day Length	Rise	Set
Actual Time	14h 22m	5:54 AM	8:17 PM
Civil Twilight		5:25 AM	8:46 PM
Nautical Twilight		4:49 AM	9:22 PM
Astronomical Twilight		4:09 AM	10:02 PM
Moon: waxing gibbous		4:58 PM	3:48 AM

Daily Observations

12:52 AM	61 °F	56 °F	83 %	NE	5 mph	0 mph	24.80 in	0.0 in	Mostly Cl
1:52 AM	60 °F	56 °F	86 %	ESE	6 mph	0 mph	24.79 in	0.0 in	Mostly Cl
2:52 AM	63 °F	55 °F	75 %	CALM	0 mph	0 mph	24.77 in	0.0 in	Cloudy

3:52 AM	61 °F	58 °F	90 %	WSW	3 mph	0 mph	24.78 in	0.0 in	Mostly Cl
4:52 AM	61 °F	56 °F	83 %	SSW	5 mph	0 mph	24.79 in	0.0 in	Cloudy
5:52 AM	60 °F	56 °F	86 %	CALM	0 mph	0 mph	24.80 in	0.0 in	Mostly Cl
6:52 AM	61 °F	56 °F	83 %	ESE	5 mph	0 mph	24.80 in	0.0 in	Mostly Cl
7:52 AM	65 °F	55 °F	70 %	CALM	0 mph	0 mph	24.81 in	0.0 in	Partly Cl
8:52 AM	66 °F	54 °F	65 %	CALM	0 mph	0 mph	24.82 in	0.0 in	Mostly Cl
9:52 AM	68 °F	53 °F	59 %	WNW	6 mph	0 mph	24.82 in	0.0 in	Mostly Cl
10:52 AM	71 °F	55 °F	57 %	CALM	0 mph	0 mph	24.80 in	0.0 in	Fair
11:52 AM	76 °F	53 °F	45 %	CALM	0 mph	0 mph	24.80 in	0.0 in	Fair
12:52 PM	79 °F	52 °F	39 %	CALM	0 mph	0 mph	24.78 in	0.0 in	Fair
1:52 PM	82 °F	51 °F	34 %	VAR	3 mph	0 mph	24.75 in	0.0 in	Partly Cl
2:52 PM	84 °F	47 °F	27 %	CALM	0 mph	0 mph	24.72 in	0.0 in	Partly Cl
3:52 PM	86 °F	47 °F	26 %	SSW	6 mph	0 mph	24.70 in	0.0 in	Fair
4:52 PM	89 °F	45 °F	22 %	VAR	6 mph	0 mph	24.69 in	0.0 in	Partly Cl
5:52 PM	88 °F	43 °F	21 %	N	6 mph	0 mph	24.68 in	0.0 in	Mostly Cl
6:52 PM	82 °F	44 °F	26 %	N	20 mph	31 mph	24.71 in	0.0 in	Thunder
7:45 PM	77 °F	52 °F	42 %	NE	20 mph	28 mph	24.76 in	0.0 in	T-Storm
7:52 PM	77 °F	51 °F	40 %	ENE	15 mph	28 mph	24.76 in	0.0 in	Light Rai
8:02 PM	75 °F	53 °F	46 %	ENE	16 mph	25 mph	24.76 in	0.0 in	Light Rai
8:52 PM	74 °F	48 °F	40 %	ESE	16 mph	0 mph	24.75 in	0.0 in	Mostly Cl
9:52 PM	75 °F	48 °F	38 %	E	8 mph	0 mph	24.76 in	0.0 in	Mostly Cl
10:34 PM	75 °F	46 °F	36 %	E	16 mph	31 mph	24.77 in	0.0 in	Mostly Cl
10:52 PM	75 °F	47 °F	37 %	E	14 mph	0 mph	24.79 in	0.0 in	Mostly Cl

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35.05 °N, 106.61 °W

Albuquerque, NM Weather History star_rate home

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HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

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- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
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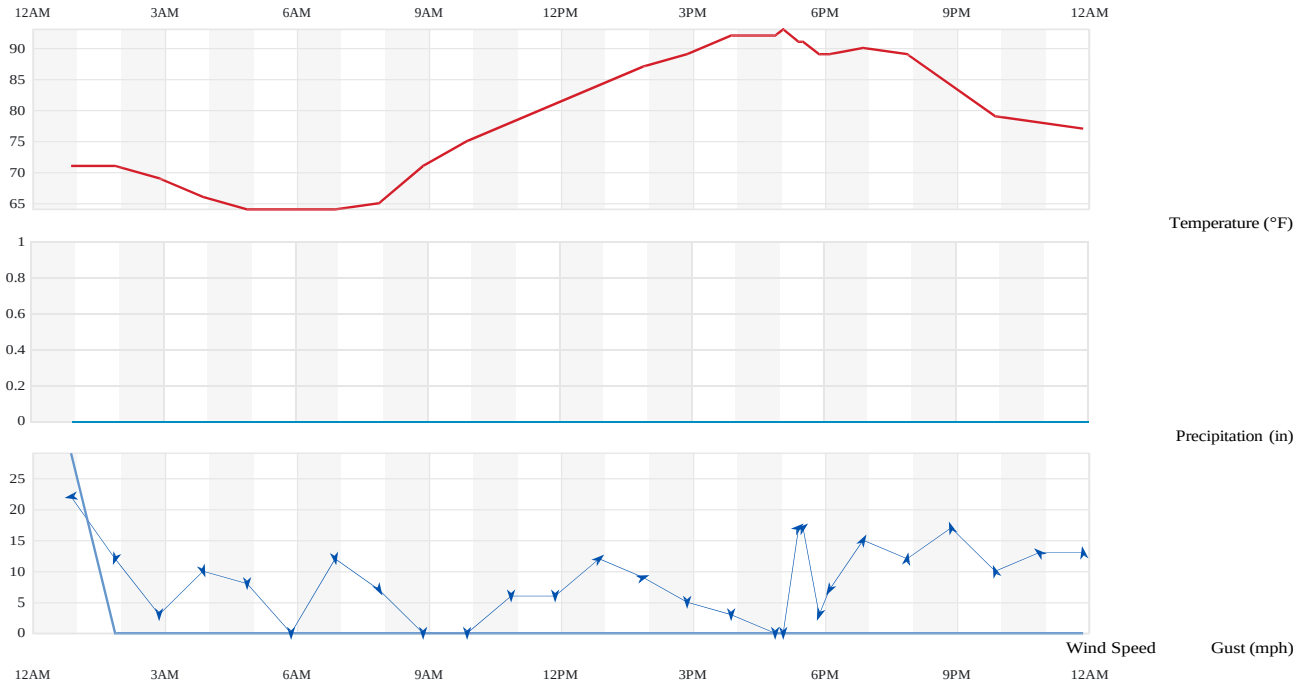
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

Daily Weekly Monthly

(/history/daily/[illegible]KABQ/date/2020-6-24) (6-24) (6)

June 24 2020 View



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	93	90	104
Low Temp	64	64	48
Day Average Temp	79.75	77	-
Precipitation (Inches)	Actual	Historic Avg.	Record

Temperature (° F)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.17	0.03	-

Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	42.86	-	-
High	50	-	-
Low	34	-	-
Average	42.86	-	-

Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	22	-	-
Visibility	10	-	-

Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.75	-	-

Astronomy	Day Length	Rise	Set
Actual Time	14h 30m	5:54 AM	8:25 PM
Civil Twilight		5:25 AM	8:55 PM
Nautical Twilight		4:48 AM	9:32 PM
Astronomical Twilight		4:07 AM	10:12 PM
Moon: waxing crescent		9:10 AM	11:31 PM

Daily Observations

12:52 AM	71 °F	47 °F	42 %	E	22 mph	29 mph	24.73 in	0.0 in	Partly Cloudy / Windy
1:52 AM	71 °F	47 °F	42 %	NNE	12 mph	0 mph	24.73 in	0.0 in	Fair
2:52 AM	69 °F	48 °F	47 %	VAR	3 mph	0 mph	24.74 in	0.0 in	Fair
3:52 AM	66 °F	49 °F	54 %	NNW	10 mph	0 mph	24.74 in	0.0 in	Fair
4:52 AM	64 °F	49 °F	58 %	N	8 mph	0 mph	24.74 in	0.0 in	Mostly Cloudy
5:52 AM	64 °F	49 °F	58 %	CALM	0 mph	0 mph	24.73 in	0.0 in	Partly Cloudy
6:52 AM	64 °F	49 °F	58 %	N	12 mph	0 mph	24.75 in	0.0 in	Mostly Cloudy
7:52 AM	65 °F	50 °F	58 %	NNW	7 mph	0 mph	24.75 in	0.0 in	Mostly Cloudy
8:52 AM	71 °F	49 °F	45 %	CALM	0 mph	0 mph	24.75 in	0.0 in	Partly Cloudy
9:52 AM	75 °F	50 °F	41 %	CALM	0 mph	0 mph	24.74 in	0.0 in	Partly Cloudy
10:52 AM	78 °F	48 °F	35 %	VAR	6 mph	0 mph	24.74 in	0.0 in	Fair
11:52 AM	81 °F	47 °F	30 %	VAR	6 mph	0 mph	24.73 in	0.0 in	Fair
12:52 PM	84 °F	46 °F	26 %	SW	12 mph	0 mph	24.71 in	0.0 in	Fair
1:52 PM	87 °F	44 °F	22 %	WSW	9 mph	0 mph	24.68 in	0.0 in	Fair
2:52 PM	89 °F	39 °F	17 %	VAR	5 mph	0 mph	24.66 in	0.0 in	Fair
3:52 PM	92 °F	34 °F	13 %	VAR	3 mph	0 mph	24.63 in	0.0 in	Fair
4:52 PM	92 °F	34 °F	13 %	CALM	0 mph	0 mph	24.60 in	0.0 in	Partly Cloudy
5:03 PM	93 °F	34 °F	12 %	CALM	0 mph	0 mph	24.59 in	0.0 in	Thunder in the Vicinity
5:24 PM	91 °F	37 °F	15 %	SW	17 mph	0 mph	24.59 in	0.0 in	Partly Cloudy
5:30 PM	91 °F	37 °F	15 %	SW	17 mph	0 mph	24.59 in	0.0 in	Thunder in the Vicinity
5:52 PM	89 °F	39 °F	17 %	NNE	3 mph	0 mph	24.59 in	0.0 in	T-Storm
6:06 PM	89 °F	39 °F	17 %	NNE	7 mph	0 mph	24.59 in	0.0 in	Mostly Cloudy

6:52 PM	90 °F	37 °F	15 %	SSW	15 mph	0 mph	24.59 in	0.0 in	Mostly Cloudy
7:52 PM	89 °F	37 °F	16 %	S	12 mph	0 mph	24.60 in	0.0 in	Mostly Cloudy
8:52 PM	84 °F	39 °F	20 %	SSE	17 mph	0 mph	24.62 in	0.0 in	Mostly Cloudy
9:52 PM	79 °F	41 °F	26 %	SSE	10 mph	0 mph	24.66 in	0.0 in	Partly Cloudy
10:52 PM	78 °F	41 °F	27 %	SE	13 mph	0 mph	24.67 in	0.0 in	Fair

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Trending AC unit

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6001 Indian School Road NE, Suite 310
Albuquerque, New Mexico 87110
tel: 505-243-3200
fax: 505-243-2700

July 10, 2020

Ms. Shellie Eaton, PE
Senior Engineer
City of Albuquerque
P.O. Box 1293
Albuquerque, New Mexico 87103

Subject: Visual Stormwater Monitoring at the City of Albuquerque Facilities
Second Quarter 2020
CDM Smith Project No: 0668-229726.VISUAL MONITORING

Dear Ms. Eaton:

CDM Smith Inc. (CDM Smith) performed visual stormwater monitoring activities at select City of Albuquerque (CABQ) outfalls during the Second Quarter 2020. **Table 1** identifies the CABQ facilities for which CDM Smith is responsible for conducting quarterly visual monitoring. Monthly precipitation data from Weather Underground (WU; Albuquerque International Sunport Station) for the Second Quarter 2020 (April through June) is included in **Attachment A**. Daily weather reports for days when precipitation was observed (based on WU data) are included in **Attachment B**. The events with measurable precipitation occurring during this time are summarized in **Table2**.

Table 1 - City of Albuquerque Facilities - CDM Smith Quarterly Visual Monitoring

Zone	City of Albuquerque Facility
Zone 1	Los Altos Golf Course
	Lomas Fuel Station
	Arroyo Street Maintenance
	Street Satellite #1
	Los Altos Trails Parks Management
	Los Altos Parks Management
Zone 2	Daytona Transit Center
	Ladera Golf Course
	Streets Satellite #3
	Don Reservoir Convenience Center
Zone 3	Puerto del Sol Golf Course
	Yale Transit Center
Zone 4	Montessa Park Open Space
	Montessa Park Convenience Center

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Table 2 - Second Quarter 2020 Precipitation Events (April-June)

Date	Event Start Time	Storm Duration	Total Precipitation (inches)	Notes
4/13/2020	**3:00 AM**	**12 hr**	**0.25**	**Heavy rain in the early morning and light rain/snow across the city throughout the rest of the day. One sample was successfully collected in zone 3. The zones 1 and 4 were not inspected due to peak of rainfall occurring outside of operating hours. Zone 2 was visited but there was not enough runoff for samples.**
5/11/2020	1:30 PM	2 hr	0.05	Fast moving and sporadic rain showers in the afternoon. Storms were too short-lived for enough rainfall to accumulate. Samples were not collected.
5/30/2020	8:00 PM	2 hr	0.15	Rain throughout the city varying from 0.01 to 0.28 in. Rainfall occurred outside of operating hours. Samples were not collected
6/1/2020	6:00 PM	5 hr	0.91	Heavy rain throughout the city varying from 0.6 to 1.3 in. Rainfall occurred outside of operating hours. Samples were not collected
6/6/2020	7:00 AM	2 hr	0.02	Light rain throughout the city. Rainfall occurred outside of operating hours. Samples were not collected.
6/13/2020	9:00 PM	2 hr	0.1	Light rain throughout the city. Rainfall occurred outside of operating hours. Samples were not collected.
6/15/2020	**6:30 PM**	**0.5 hr**	**0.15**	**Fast and heavy rain concentrated in the foothills. Storm occurred outside of operating hours. However, one sample was collected. The other outfalls did not have runoff but were inspected.**
6/23/2020	**3:30 PM**	**0.5 hr**	**0.18**	**Fast moving and sporadic rain showers in the afternoon. Storms were too short-lived for staff to reach all outfalls in time. Some samples were collected in Zones 1 and 3.**

Note: Events in bold text indicate qualifying events. Any events with a total accumulation of 0.00" or T (Trace) were not included in this table. Storm Duration is based on hourly weather data. All weather data was sourced from Weather Underground.

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Certain criteria regarding the precipitation event must be met to qualify as an assessment event. Visual assessment of stormwater must occur:

- Within 30 minutes of the start of stormwater discharge (or as soon as practicable thereafter); and,
- At least 72 hours after the previous stormwater discharge event.

An additional limitation on the timing of sampling activities within the CABQ is described in the City's Storm Water Management Plan (SWMP, December 2016). Section 13.3.1.2 of the SWMP limits sampling to normal business hours – Monday through Friday, 7:30 am to 5:00 pm and sampling is not required on the following observed holidays: Thanksgiving Day and Christmas Day through New Year's Day. Therefore, storm events that occur outside of normal business hours or on a holiday are not considered qualifying events.

As seen in **Table 2**, of the 8 precipitation events with measurable precipitation that occurred in the Second Quarter of 2020, three events (4/13/20, 6/15/20, and 6/23/20) were considered qualifying per the criteria listed above. Furthermore, based on CDM Smith's past visual monitoring experience for CABQ facilities, stormwater discharges from facilities typically does not occur for precipitation events of less than 0.1 inches of measurable rainfall. There were three events in the second quarter with precipitation greater than 0.1 inch of measurable rainfall that did not meet all the qualifying criteria for an assessment to take place.

CDM Smith's subcontractor, Bohannan Houston, Inc. (BHI) mobilized on 4/13/20, 6/15/20, and 6/23/20 collectively to perform visual stormwater monitoring inspections at facility outfalls during precipitation events. As identified in **Table 3**, which summarizes Calendar Year 2020 visual stormwater monitoring, 4 of the 21 outfalls were monitored during the 2nd Quarter of 2020. Due to very few qualifying storms and poor storm timing, samples were only collected from Zones 1 and 3 during this quarter.

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Table 3 - Calendar Year 2020 Visual Stormwater Monitoring

Zone	Facility	Outfalls	Quarter 1[1]	Quarter 2	Quarter 3	Quarter 4	Events Remaining[2]
1	Los Altos Golf Course	LA1	✓	✓	-	-	2
		LA2	✓	✓	-	-	2
	Lomas Fuel Station	L1	-	-	-	-	4
	Arroyo Street Maintenance	AM1	✓	✓	-	-	2
	Street Satellite #1	SS1A	-	-	-	-	4
		SS1B	✓	-	-	-	3
	Los Altos Trails Parks Management	LAM1	✓	-	-	-	3
	Los Altos Parks Management	LAP1	-	-	-	-	4
2	Daytona Transit Center	D1	✓	-	-	-	3
		D2	✓	-	-	-	3
	Ladera Golf Course	LGC1	-	-	-	-	4
		LGC2	✓	-	-	-	3
	Streets Satellite #3	SS3	✓	-	-	-	3
	Don Reservoir Convenience Center	DR01	✓	-	-	-	3
3	Puerto del Sol Golf Course	PDS1	-	-	-	-	4
		PDS2	✓	-	-	-	3
	Yale Transit Center	Y1	✓	✓✓	-	-	2
4	Montessa Park Open Space	MP1	✓	-	-	-	3
		MP2	-	-	-	-	4
	Montessa Park Convenience Center	MP01	-	-	-	-	4
		MP02	✓	-	-	-	3

Notes:
1. A "✓" indicates that a visual monitoring event was performed for the indicated outfall during the calendar quarter, "✓✓" indicates two visual monitoring events were performed during the quarter.
2. This column indicates the number of events remaining for Calendar Year 2020.

Visual Monitoring observations for each of the four outfalls observed during events on 4/13/20, 6/15/20, and 6/23/20 are summarized below. Photographs of the visual monitoring samples are included in **Attachment D**.

- **Outfall LA1** (Los Altos Golf Course) is a concrete culvert discharging into riprap and vegetation before entering the storm drain channel. **6/23/2020**: The outfall was observed under moderately high flow conditions. The sample was very cloudy, light brown in color, and contained floating, suspended, and settled solids. No sheen, odor, or foam was present. *Other observations: No visible runoff was seen leaving the golf course property.*

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- **Outfall LA2** (Los Altos Golf Course) collects runoff from the Los Altos Golf Course fueling, maintenance, and storage areas before discharging through the lowest ground elevation on the west of the facility premises. **6/23/2020**: The sample was observed under very low flow conditions. Small ponds were observed at the site. The sample taken was clear and contained no solids. No sheen, odor, or foam was present. *Other observations: Flow appears to have changed direction and now enters the Animal Shelter property and drains into a roadway swale.*
- **Outfall AM1** (Arroyo Maintenance) is a culvert draining from the parking lot, located on the northwest corner of the facility, discharging to Altez Street. The outfall is surrounded by a wattle on the inside of the facility fence. **6/15/2020**: The outfall was observed under moderately high flow conditions that resulted in ponding at the outfall. The collected sample was very cloudy and light tan in color with suspended solids present. No sheen, odor, or foam was present in the sample.
- **Outfall Y1** (Yale Transit Center) is a grate leading to a storm drain which collects runoff from the bus parking lot and maintenance building areas. **4/13/2020**: The outfall was observed under low flow conditions. The collected sample was clear with no solids present. No sheen, odor, or foam was observed. *Other observations: Some trash and debris were observed near the inlet grate.* **6/23/2020**: The outfall was observed under low flow conditions. The collected sample was slightly cloudy and tan/light brown in color. Suspended solids were observed in the sample. No sheen, odor, or foam was present.

CDM Smith appreciates the opportunity of providing environmental consulting services to the CABQ. Please contact CDM Smith at (505) 243-3200 if you have any questions or comments regarding this report.

Sincerely,

Kelsey Bicknell
Project Engineer
CDM Smith Inc.

Dacia Tucholke
Project Manager
CDM Smith Inc.

Attachments:

A – Monthly Precipitation Summary for Second Quarter 2020 (Weather Underground and/or CoCoRaHS, April 1, 2020 to June 30, 2020)
B – Daily Weather Reports for Precipitation Events Occurring in Second Quarter 2020 (Weather Underground and/or CoCoRaHS)
C – Visual Stormwater Monitoring Inspection Forms
D – Stormwater Monitoring Sampling Photographs

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ATTACHMENT A

MONTHLY PRECIPITATION SUMMARY FOR SECOND QUARTER 2020 (WEATHER UNDERGROUND AND/OR COCORAHS, APRIL 1, 2020 TO JUNE 30, 2020)

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35.05 °N, **106.61** °W

Albuquerque, NM Weather History

33° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

APRIL 13, 2020

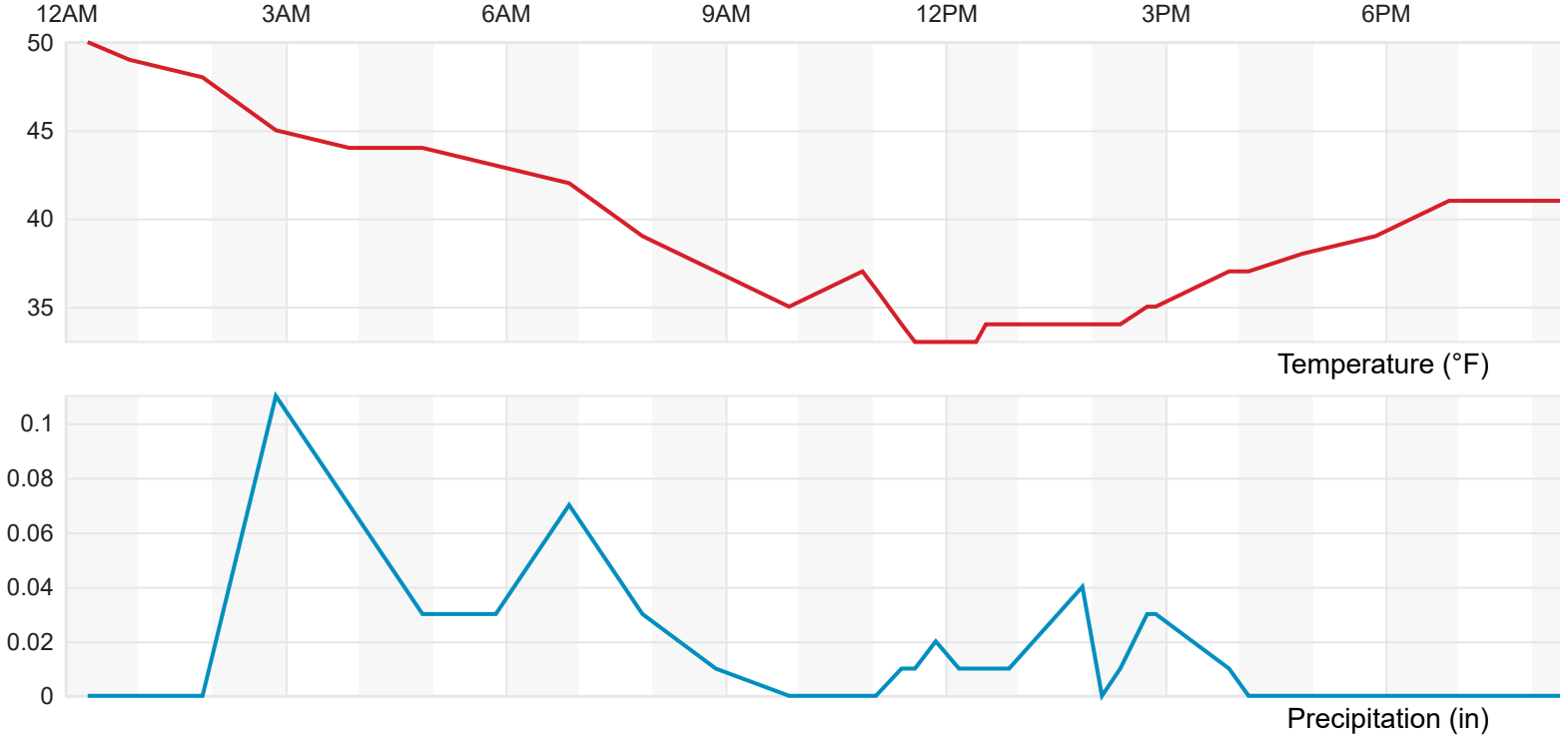
- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

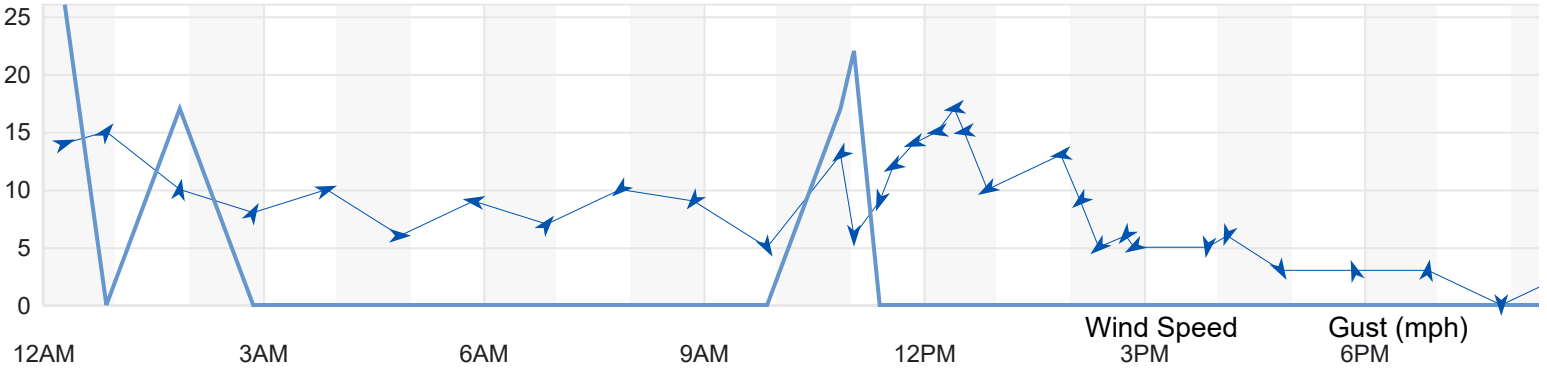
Peak rainfall occurred outside of operating hours. In other zones, light rain and snow accumulation did not create enough runoff. Samples were not collected, except for one sample in zone 3.

Daily | Weekly | Monthly

(/history/daily/us/nm/albuquerque/kabq/date/2020-4-13) (/history/weekly/us/nm/albuquerque/kabq/date/2020-4-13) (/history/monthly/us/nm/albuquerque/kabq/date/2020-4)

April | 13 | 2020 | View





Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	50	68	84
Low Temp	33	42	23
Day Average Temp	38.73	55	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 11:52:00)	0.25	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	33.86	-	-
High	39	-	-
Low	29	-	-
Average	33.86	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	17	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.68	-	-
Astronomy	Day Length	Rise	Set
Actual Time	13h 1m	6:37 AM	7:38 PM

Temperature (° F)	Actual	Historic Avg.	Record
Civil Twilight		6:11 AM	8:04 PM
Nautical Twilight		5:40 AM	8:35 PM
Astronomical Twilight		5:08 AM	9:07 PM
Moon: waning gibbous		1:08 AM	11:05 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Prec
12:18 AM	50 °F	33 °F	52 %	WSW	14 mph	26 mph	24.59 in	0.0 i
12:52 AM	49 °F	33 °F	54 %	SW	15 mph	0 mph	24.59 in	0.0 i
1:52 AM	48 °F	36 °F	63 %	S	10 mph	17 mph	24.59 in	0.0 i
2:52 AM	45 °F	38 °F	76 %	SSW	8 mph	0 mph	24.60 in	0.1 i
3:52 AM	44 °F	36 °F	73 %	WSW	10 mph	0 mph	24.60 in	0.1 i
4:52 AM	44 °F	37 °F	76 %	W	6 mph	0 mph	24.61 in	0.0 i
5:52 AM	43 °F	39 °F	86 %	E	9 mph	0 mph	24.58 in	0.0 i
6:52 AM	42 °F	36 °F	79 %	SW	7 mph	0 mph	24.62 in	0.1 i
7:52 AM	39 °F	34 °F	82 %	NE	10 mph	0 mph	24.62 in	0.0 i
8:52 AM	37 °F	32 °F	82 %	NE	9 mph	0 mph	24.64 in	0.0 i
9:52 AM	35 °F	33 °F	92 %	NNW	5 mph	0 mph	24.65 in	0.0 i
10:52 AM	37 °F	30 °F	76 %	NE	13 mph	17 mph	24.66 in	0.0 i
11:03 AM	36 °F	29 °F	76 %	VAR	6 mph	22 mph	24.65 in	0.0 i
11:24 AM	34 °F	31 °F	89 %	NNE	9 mph	0 mph	24.65 in	0.0 i
11:35 AM	33 °F	31 °F	92 %	ENE	12 mph	0 mph	24.66 in	0.0 i
11:52 AM	33 °F	31 °F	92 %	ENE	14 mph	0 mph	24.65 in	0.0 i
12:11 PM	33 °F	30 °F	89 %	E	15 mph	0 mph	24.65 in	0.0 i
12:25 PM	33 °F	30 °F	89 %	E	17 mph	0 mph	24.64 in	0.0 i
12:33 PM	34 °F	30 °F	85 %	E	15 mph	0 mph	24.64 in	0.0 i
12:52 PM	34 °F	31 °F	89 %	ENE	10 mph	0 mph	24.64 in	0.0 i
1:52 PM	34 °F	31 °F	89 %	E	13 mph	0 mph	24.62 in	0.0 i
2:08 PM	34 °F	32 °F	92 %	NE	9 mph	0 mph	24.63 in	0.0 i

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Prec
2:23 PM	34 °F	32 °F	92 %	NE	5 mph	0 mph	24.63 in	0.0 i
2:45 PM	35 °F	32 °F	89 %	NE	6 mph	0 mph	24.63 in	0.0 i
2:52 PM	35 °F	33 °F	92 %	ENE	5 mph	0 mph	24.63 in	0.0 i
3:52 PM	37 °F	33 °F	86 %	N	5 mph	0 mph	24.62 in	0.0 i
4:08 PM	37 °F	34 °F	89 %	NNE	6 mph	0 mph	24.61 in	0.0 i
4:52 PM	38 °F	34 °F	86 %	NNW	3 mph	0 mph	24.60 in	0.0 i
5:52 PM	39 °F	36 °F	89 %	SSE	3 mph	0 mph	24.60 in	0.0 i
6:52 PM	41 °F	36 °F	82 %	S	3 mph	0 mph	24.61 in	0.0 i
7:52 PM	41 °F	37 °F	86 %	CALM	0 mph	0 mph	24.61 in	0.0 i
8:52 PM	41 °F	37 °F	86 %	SSE	3 mph	0 mph	24.63 in	0.0 i
8:59 PM	41 °F	37 °F	86 %	SSE	5 mph	0 mph	24.64 in	0.0 i
9:52 PM	41 °F	37 °F	86 %	CALM	0 mph	0 mph	24.67 in	0.0 i
10:05 PM	41 °F	38 °F	89 %	NE	5 mph	0 mph	24.67 in	0.0 i
10:52 PM	41 °F	37 °F	86 %	SSE	6 mph	0 mph	24.67 in	0.0 i
11:52 PM	40 °F	37 °F	89 %	ENE	3 mph	0 mph	24.68 in	0.0 i

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(https://wikibuy.com/blog/is-amazon-actually-giving-you-the-best-price-779e00e8958e?
hno=true&utm_source=jaguar11&utm_campaign=2449978&utm_term=250381195)

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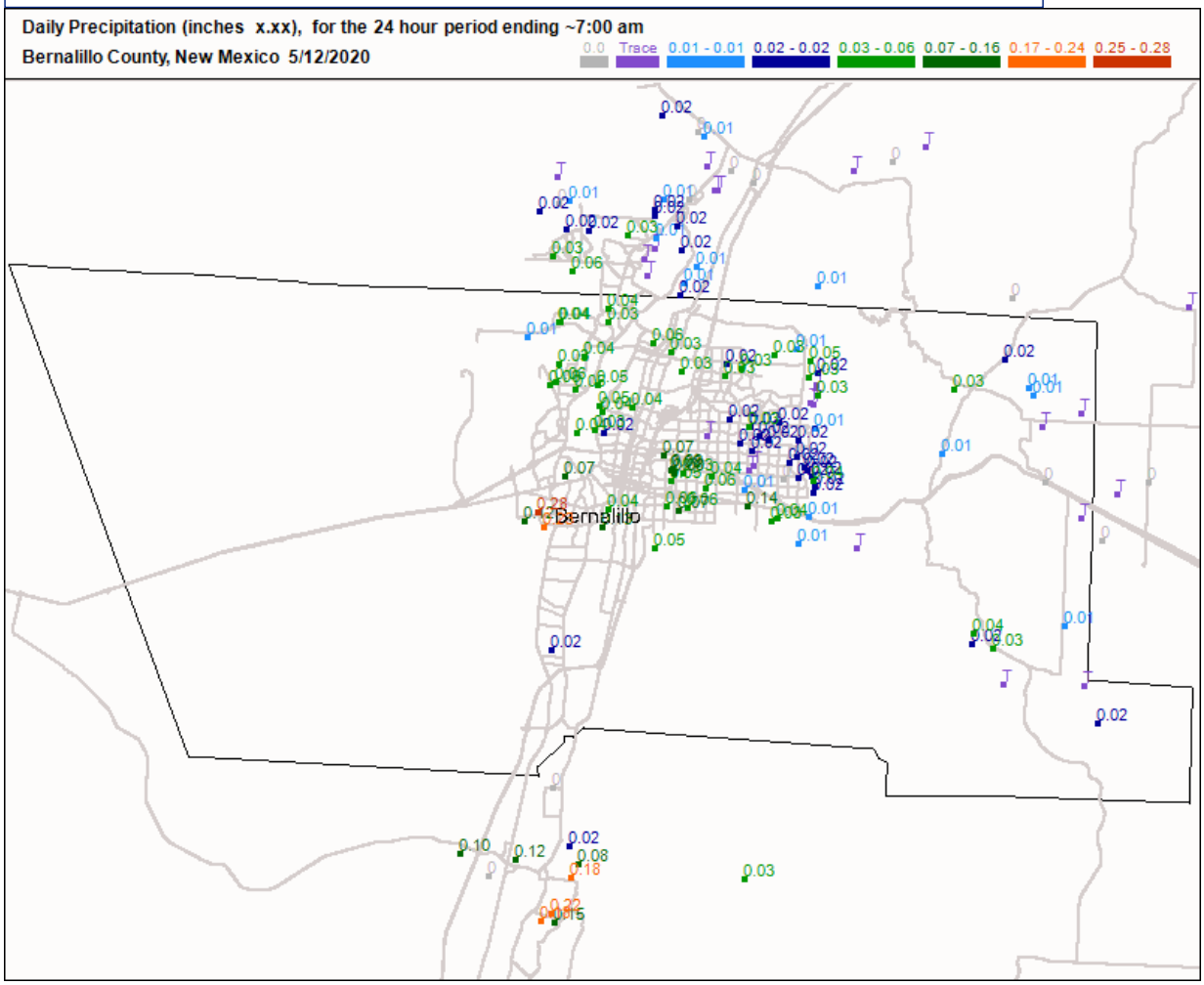
Gundry MD Bio Complete 3 Supplement

COMMUNITY COLLABORATIVE RAIN, HAIL & SNOW NETWORK
"Because every drop counts"

Maps : Daily Precipitation

Map Type	Map Location	Date	Colors
Precipitation	New Mexico	BR - Bernalillo	5/12/2020	Standard	Get Map



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MAY 11, 2020

Sporadic rain showers in the afternoon. There was not enough rain for runoff to accumulate. Samples were not collected.
Wunderground (Sunport) reported inconsistent values for precipitation on this day. CoCoRaHS was used instead to show precipitation values.

35.05 °N, **106.61** °W

Albuquerque, NM Weather History ★

69° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

MAY 30, 2020

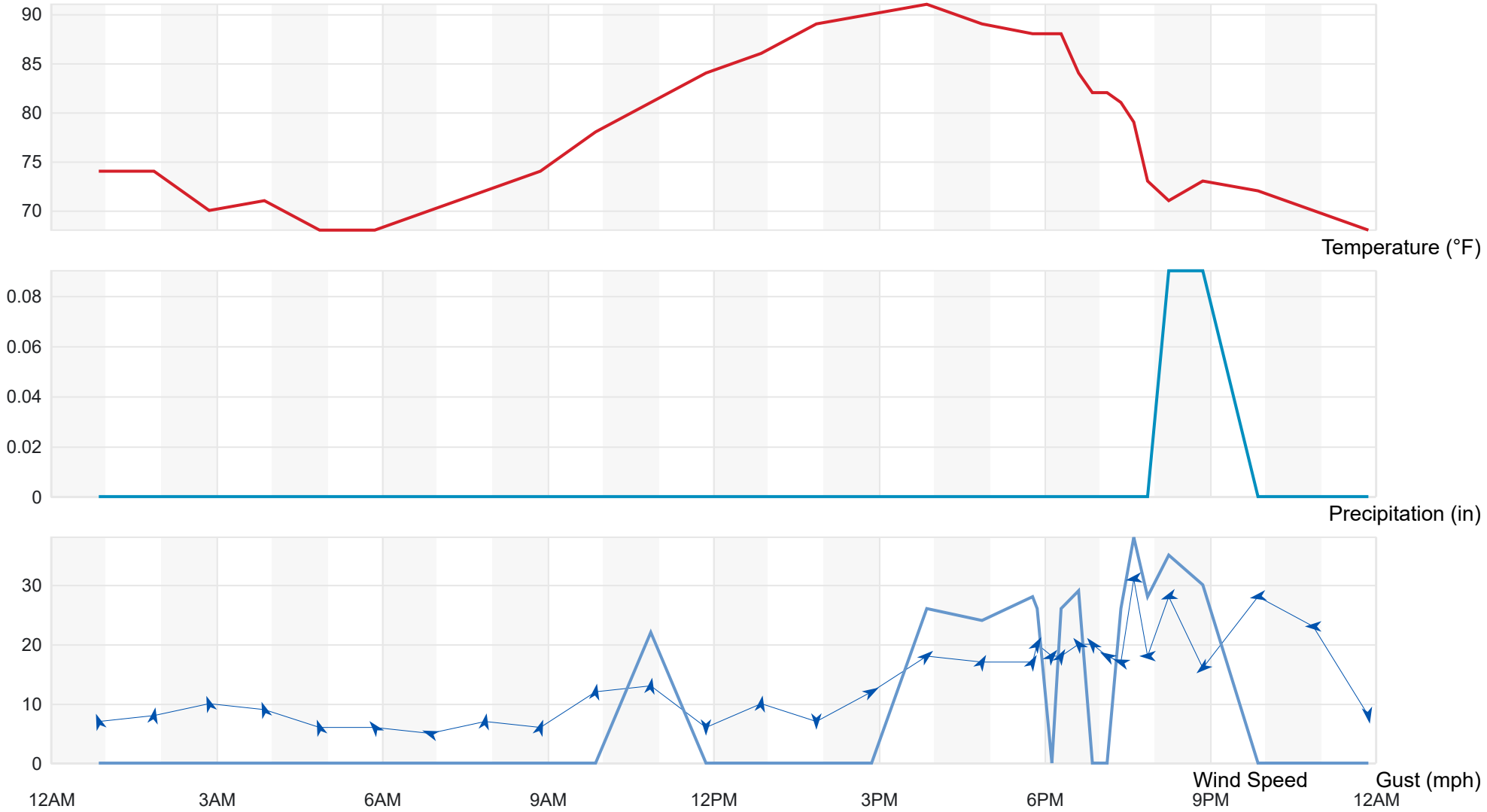
Rainfall occurred outside of operating hours. Samples were not collected.

Daily | Weekly | Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2020-5-30) (/history/weekly/us/nm/albuquerque/KABQ/date/2020-5-30) (/history/monthly/us/nm/albuquerque/KABQ/date/2020-5)

May | 30 | 2020 | View

12AM 3AM 6AM 9AM 12PM 3PM 6PM 9PM 12AM



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	91	84	97

Temperature (° F)	Actual	Historic Avg.	Record
Low Temp	68	57	35
Day Average Temp	78.63	70	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 06:52:00)	0.00	0.01	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	42.44	-	-
High	54	-	-
Low	37	-	-
Average	42.44	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	31	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.84	-	-
Astronomy	Day Length	Rise	Set
Actual Time	14h 20m	5:55 AM	8:15 PM
Civil Twilight		5:26 AM	8:44 PM
Nautical Twilight		4:50 AM	9:20 PM

Temperature (° F)	Actual	Historic Avg.	Record
Astronomical Twilight		4:11 AM	9:59 PM
Moon: waxing gibbous		1:32 PM	2:07 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	74 °F	41 °F	30 %	SSE	7 mph	0 mph	24.84 in	0.0 in	Mostly Cloudy
1:52 AM	74 °F	41 °F	30 %	S	8 mph	0 mph	24.82 in	0.0 in	Mostly Cloudy
2:52 AM	70 °F	42 °F	36 %	SSE	10 mph	0 mph	24.82 in	0.0 in	Partly Cloudy
3:52 AM	71 °F	40 °F	32 %	SSE	9 mph	0 mph	24.82 in	0.0 in	Mostly Cloudy
4:52 AM	68 °F	40 °F	36 %	SSE	6 mph	0 mph	24.81 in	0.0 in	Mostly Cloudy
5:52 AM	68 °F	39 °F	35 %	SE	6 mph	0 mph	24.82 in	0.0 in	Mostly Cloudy
6:52 AM	70 °F	40 °F	33 %	ESE	5 mph	0 mph	24.84 in	0.0 in	Mostly Cloudy
7:52 AM	72 °F	40 °F	31 %	S	7 mph	0 mph	24.84 in	0.0 in	Partly Cloudy
8:52 AM	74 °F	40 °F	29 %	SSW	6 mph	0 mph	24.84 in	0.0 in	Fair
9:52 AM	78 °F	41 °F	27 %	S	12 mph	0 mph	24.84 in	0.0 in	Partly Cloudy
10:52 AM	81 °F	40 °F	23 %	S	13 mph	22 mph	24.82 in	0.0 in	Partly Cloudy
11:52 AM	84 °F	40 °F	21 %	VAR	6 mph	0 mph	24.80 in	0.0 in	Partly Cloudy
12:52 PM	86 °F	40 °F	20 %	S	10 mph	0 mph	24.77 in	0.0 in	Partly Cloudy
1:52 PM	89 °F	40 °F	18 %	VAR	7 mph	0 mph	24.75 in	0.0 in	Partly Cloudy
2:52 PM	90 °F	39 °F	17 %	WSW	12 mph	0 mph	24.72 in	0.0 in	Partly Cloudy
3:52 PM	91 °F	38 °F	15 %	SW	18 mph	26 mph	24.71 in	0.0 in	Partly Cloudy
4:52 PM	89 °F	37 °F	16 %	SSW	17 mph	24 mph	24.69 in	0.0 in	Mostly Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
5:47 PM	88 °F	39 °F	18 %	SSW	17 mph	28 mph	24.69 in	0.0 in	Thunder
5:52 PM	88 °F	39 °F	18 %	SSW	20 mph	26 mph	24.69 in	0.0 in	Thunder
6:08 PM	88 °F	39 °F	18 %	SW	18 mph	0 mph	24.69 in	0.0 in	Thunder in the Vicinity
6:18 PM	88 °F	39 °F	18 %	SSW	18 mph	26 mph	24.69 in	0.0 in	Mostly Cloudy
6:37 PM	84 °F	42 °F	23 %	SE	20 mph	29 mph	24.70 in	0.0 in	Mostly Cloudy
6:52 PM	82 °F	43 °F	25 %	SE	20 mph	0 mph	24.70 in	0.0 in	Mostly Cloudy
7:08 PM	82 °F	42 °F	24 %	ESE	18 mph	0 mph	24.71 in	0.0 in	Thunder in the Vicinity
7:23 PM	81 °F	41 °F	24 %	ESE	17 mph	26 mph	24.71 in	0.0 in	Mostly Cloudy
7:37 PM	79 °F	46 °F	31 %	E	31 mph	38 mph	24.72 in	0.0 in	Thunder / Windy
7:52 PM	73 °F	52 °F	48 %	E	18 mph	28 mph	24.75 in	0.0 in	T-Storm
8:15 PM	71 °F	54 °F	55 %	ENE	28 mph	35 mph	24.76 in	0.1 in	Rain / Windy
8:52 PM	73 °F	52 °F	48 %	NE	16 mph	30 mph	24.77 in	0.1 in	Cloudy
9:52 PM	72 °F	49 °F	44 %	E	28 mph	0 mph	24.77 in	0.0 in	Cloudy / Windy
10:52 PM	70 °F	50 °F	49 %	E	23 mph	0 mph	24.79 in	0.0 in	Cloudy / Windy
11:52 PM	68 °F	53 °F	59 %	N	8 mph	0 mph	24.82 in	0.0 in	Mostly Cloudy

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(https://mypowerlife.com/cmd.php?ad=953570&utm_source=taboola&utm_medium=referral&tblci=GiAzRzbAPLO4yYfCuIrLmDQnj2Z63YMWuF875Nn-JOuFMSDG9Uw)

Celebrity Trainer: “Muscle Loss in Seniors is Real, But It Doesn’t Have to Be"

Power Life

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Recent Cities
Albuquerque, NM (weather/us/nm/albuquerque/35.07,-106.66)

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

66° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

June 1, 2020

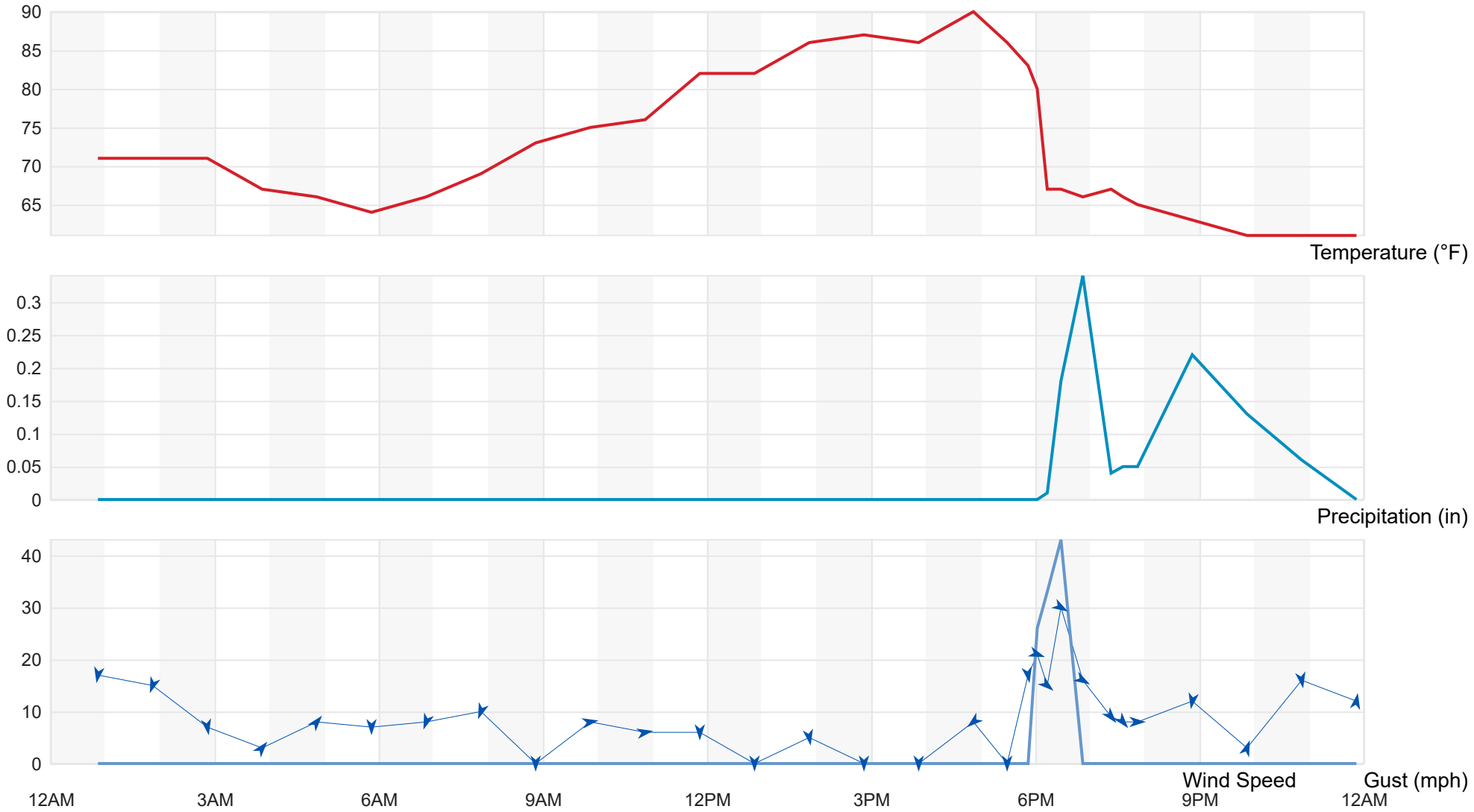
Rainfall occurred outside of operating hours. Samples were not collected.

Daily | Weekly | Monthly

(/history/daily/us/nm/albuquerque/kabq/date/2020-6-1) (/history/weekly/us/nm/albuquerque/kabq/date/2020-6-1) (/history/monthly/us/nm/albuquerque/kabq/date/2020-6)

June | 1 | 2020 | View

12AM 3AM 6AM 9AM 12PM 3PM 6PM 9PM 12AM



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	90	84	96

Temperature (° F)	Actual	Historic Avg.	Record
Low Temp	61	57	37
Day Average Temp	72.5	71	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 06:52:00)	0.00	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	48.33	-	-
High	58	-	-
Low	40	-	-
Average	48.33	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	30	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.85	-	-
Astronomy	Day Length	Rise	Set
Actual Time	14h 21m	5:54 AM	8:16 PM
Civil Twilight		5:25 AM	8:46 PM
Nautical Twilight		4:49 AM	9:21 PM

Temperature (° F)	Actual	Historic Avg.	Record
Astronomical Twilight		4:10 AM	10:01 PM
Moon: waxing gibbous		3:49 PM	3:15 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	71 °F	48 °F	44 %	N	17 mph	0 mph	24.80 in	0.0 in	Mostly Cloudy
1:52 AM	71 °F	46 °F	41 %	NNE	15 mph	0 mph	24.80 in	0.0 in	Mostly Cloudy
2:52 AM	71 °F	46 °F	41 %	N	7 mph	0 mph	24.80 in	0.0 in	Mostly Cloudy
3:52 AM	67 °F	46 °F	47 %	SW	3 mph	0 mph	24.80 in	0.0 in	Mostly Cloudy
4:52 AM	66 °F	46 °F	48 %	SW	8 mph	0 mph	24.80 in	0.0 in	Mostly Cloudy
5:52 AM	64 °F	47 °F	54 %	N	7 mph	0 mph	24.81 in	0.0 in	Partly Cloudy
6:52 AM	66 °F	47 °F	50 %	NNE	8 mph	0 mph	24.83 in	0.0 in	Partly Cloudy
7:52 AM	69 °F	48 °F	47 %	NNE	10 mph	0 mph	24.83 in	0.0 in	Partly Cloudy
8:52 AM	73 °F	47 °F	39 %	CALM	0 mph	0 mph	24.83 in	0.0 in	Partly Cloudy
9:52 AM	75 °F	45 °F	34 %	W	8 mph	0 mph	24.83 in	0.0 in	Mostly Cloudy
10:52 AM	76 °F	47 °F	36 %	W	6 mph	0 mph	24.81 in	0.0 in	Mostly Cloudy
11:52 AM	82 °F	46 °F	28 %	VAR	6 mph	0 mph	24.80 in	0.0 in	Mostly Cloudy
12:52 PM	82 °F	41 °F	23 %	CALM	0 mph	0 mph	24.78 in	0.0 in	Partly Cloudy
1:52 PM	86 °F	42 °F	21 %	N	5 mph	0 mph	24.74 in	0.0 in	Partly Cloudy
2:52 PM	87 °F	42 °F	21 %	CALM	0 mph	0 mph	24.72 in	0.0 in	Mostly Cloudy
3:52 PM	86 °F	40 °F	20 %	CALM	0 mph	0 mph	24.70 in	0.0 in	Mostly Cloudy
4:52 PM	90 °F	41 °F	18 %	NE	8 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
5:29 PM	86 °F	40 °F	20 %	CALM	0 mph	0 mph	24.67 in	0.0 in	Thunder in the Vicinity
5:52 PM	83 °F	44 °F	25 %	N	17 mph	0 mph	24.69 in	0.0 in	Thunder in the Vicinity
6:02 PM	80 °F	45 °F	29 %	WNW	21 mph	26 mph	24.71 in	0.0 in	Thunder / Windy
6:13 PM	67 °F	54 °F	63 %	NW	15 mph	33 mph	24.72 in	0.0 in	T-Storm
6:28 PM	67 °F	54 °F	63 %	WNW	30 mph	43 mph	24.77 in	0.2 in	Heavy T-Storm / Windy
6:52 PM	66 °F	56 °F	70 %	WNW	16 mph	0 mph	24.78 in	0.3 in	T-Storm
7:23 PM	67 °F	56 °F	68 %	NW	9 mph	0 mph	24.80 in	0.0 in	T-Storm
7:36 PM	66 °F	56 °F	70 %	NW	8 mph	0 mph	24.82 in	0.1 in	Light Rain
7:52 PM	65 °F	58 °F	78 %	W	8 mph	0 mph	24.84 in	0.1 in	Light Rain
8:52 PM	63 °F	55 °F	75 %	N	12 mph	0 mph	24.85 in	0.2 in	Rain
9:52 PM	61 °F	56 °F	83 %	SSW	3 mph	0 mph	24.85 in	0.1 in	Light Rain
10:52 PM	61 °F	56 °F	83 %	N	16 mph	0 mph	24.81 in	0.1 in	Light Rain
11:52 PM	61 °F	55 °F	81 %	S	12 mph	0 mph	24.80 in	0.0 in	Mostly Cloudy

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(https://flovak-sollected.com/ef78cd3f-64e9-4a63-a8d4-f2c3fce22312?site=theweatherchannel-wunderground&site_id=1194714&title=Genius+Smartwatch+With+ECG+is+Taking+New+Mexico+By+Storm&campaign_id=4617030&campaign_item_id=2899819527&platform=Desktop&thumbnail=http%JOuFMSDpvkM&tblci=GiAzRzbAPLO4yYfCuIrLmDQnj2Z63YMWuF875Nn-JOuFMSDpvkM)

Genius Smartwatch With ECG is Taking New Mexico By Storm

OshenWatch

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

72° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

June 6, 2020

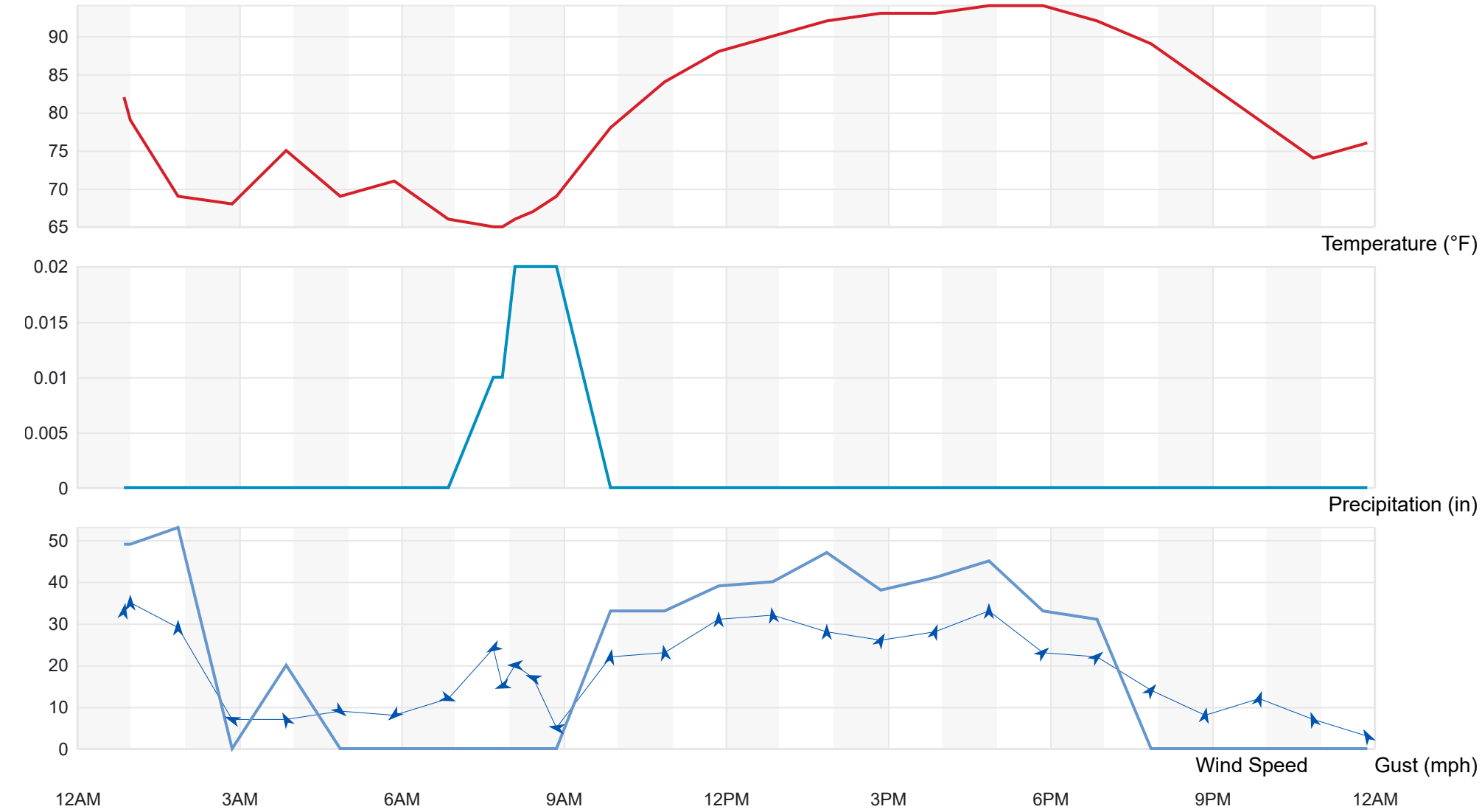
Rainfall occurred outside of operating hours. Samples were not collected.

Daily | Weekly | Monthly

(/history/daily/us/nm/albuquerque/kabq/date/2020-6-6) (/history/weekly/us/nm/albuquerque/kabq/date/2020-6-6) (/history/monthly/us/nm/albuquerque/kabq/date/2020-6)

June | 6 | 2020 | View

12AM 3AM 6AM 9AM 12PM 3PM 6PM 9PM 12AM



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	94	86	101

Temperature (° F)	Actual	Historic Avg.	Record
Low Temp	65	59	41
Day Average Temp	78.96	72	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 06:52:00)	0.00	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	40.29	-	-
High	58	-	-
Low	10	-	-
Average	40.29	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	35	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.71	-	-
Astronomy	Day Length	Rise	Set
Actual Time	14h 25m	5:53 AM	8:19 PM
Civil Twilight		5:24 AM	8:49 PM
Nautical Twilight		4:47 AM	9:25 PM

Temperature (° F)	Actual	Historic Avg.	Record
Astronomical Twilight		4:07 AM	10:05 PM
Moon: waning gibbous		9:36 PM	6:36 AM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	82 °F	44 °F	26 %	S	33 mph	49 mph	24.67 in	0.0 in	Mostly Cloudy / Windy
12:59 AM	79 °F	46 °F	31 %	S	35 mph	49 mph	24.69 in	0.0 in	Mostly Cloudy / Windy
1:52 AM	69 °F	54 °F	58 %	S	29 mph	53 mph	24.70 in	0.0 in	Light Rain / Windy
2:52 AM	68 °F	55 °F	63 %	ESE	7 mph	0 mph	24.66 in	0.0 in	Cloudy
3:52 AM	75 °F	49 °F	40 %	SSE	7 mph	20 mph	24.62 in	0.0 in	Light Rain
4:52 AM	69 °F	57 °F	65 %	NW	9 mph	0 mph	24.67 in	0.0 in	Light Rain
5:52 AM	71 °F	55 °F	57 %	NE	8 mph	0 mph	24.66 in	0.0 in	Cloudy
6:52 AM	66 °F	58 °F	75 %	WNW	12 mph	0 mph	24.71 in	0.0 in	Light Rain
7:42 AM	65 °F	58 °F	78 %	ENE	24 mph	0 mph	24.67 in	0.0 in	Light Rain / Windy
7:52 AM	65 °F	58 °F	78 %	ENE	15 mph	0 mph	24.68 in	0.0 in	T-Storm
8:06 AM	66 °F	58 °F	75 %	E	20 mph	0 mph	24.67 in	0.0 in	T-Storm
8:26 AM	67 °F	56 °F	68 %	ESE	17 mph	0 mph	24.67 in	0.0 in	Light Rain
8:52 AM	69 °F	57 °F	65 %	E	5 mph	0 mph	24.66 in	0.0 in	Mostly Cloudy
9:52 AM	78 °F	52 °F	40 %	S	22 mph	33 mph	24.65 in	0.0 in	Mostly Cloudy / Windy
10:52 AM	84 °F	48 °F	28 %	S	23 mph	33 mph	24.62 in	0.0 in	Partly Cloudy / Windy
11:52 AM	88 °F	44 °F	22 %	S	31 mph	39 mph	24.61 in	0.0 in	Fair / Windy
12:52 PM	90 °F	41 °F	18 %	S	32 mph	40 mph	24.59 in	0.0 in	Fair / Windy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
1:52 PM	92 °F	40 °F	16 %	S	28 mph	47 mph	24.56 in	0.0 in	Fair / Windy
2:52 PM	93 °F	38 °F	15 %	SSW	26 mph	38 mph	24.53 in	0.0 in	Fair / Windy
3:52 PM	93 °F	36 °F	13 %	SSW	28 mph	41 mph	24.50 in	0.0 in	Fair / Windy
4:52 PM	94 °F	32 °F	11 %	S	33 mph	45 mph	24.48 in	0.0 in	Fair / Windy
5:52 PM	94 °F	13 °F	5 %	SW	23 mph	33 mph	24.47 in	0.0 in	Fair / Windy
6:52 PM	92 °F	13 °F	5 %	SW	22 mph	31 mph	24.48 in	0.0 in	Fair / Windy
7:52 PM	89 °F	10 °F	5 %	SW	14 mph	0 mph	24.48 in	0.0 in	Fair
8:52 PM	84 °F	13 °F	7 %	S	8 mph	0 mph	24.51 in	0.0 in	Fair
9:52 PM	79 °F	13 °F	8 %	SSW	12 mph	0 mph	24.53 in	0.0 in	Fair
10:52 PM	74 °F	16 °F	11 %	SSE	7 mph	0 mph	24.57 in	0.0 in	Fair
11:52 PM	76 °F	14 °F	10 %	SSE	3 mph	0 mph	24.59 in	0.0 in	Fair

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Montana Man Discovers He Has Oldest DNA in America

Genetics Digest

(https://geneticsdigest.click/dusty-oldest-native-ancestry/??tclid=GiAzRzbAPLO4yYfCuIrLmDQnj2Z63YMWuF875Nn-JOuFMSDXukU&utm_campaign=taboola&utm_source=3853027&utm_medium=theweatherchannel-wunderground&utm_term=1194714&utm_content=2882763656#tblciGiAzRzbAPLO4yYfCuIrLmDQnj2Z63YMWuF875Nn-JOuFMSDXukU)
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Albuquerque: Our $5 Wines Are Better Than Most $50 Wines

Firstleaf

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

78° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

June 13, 2020

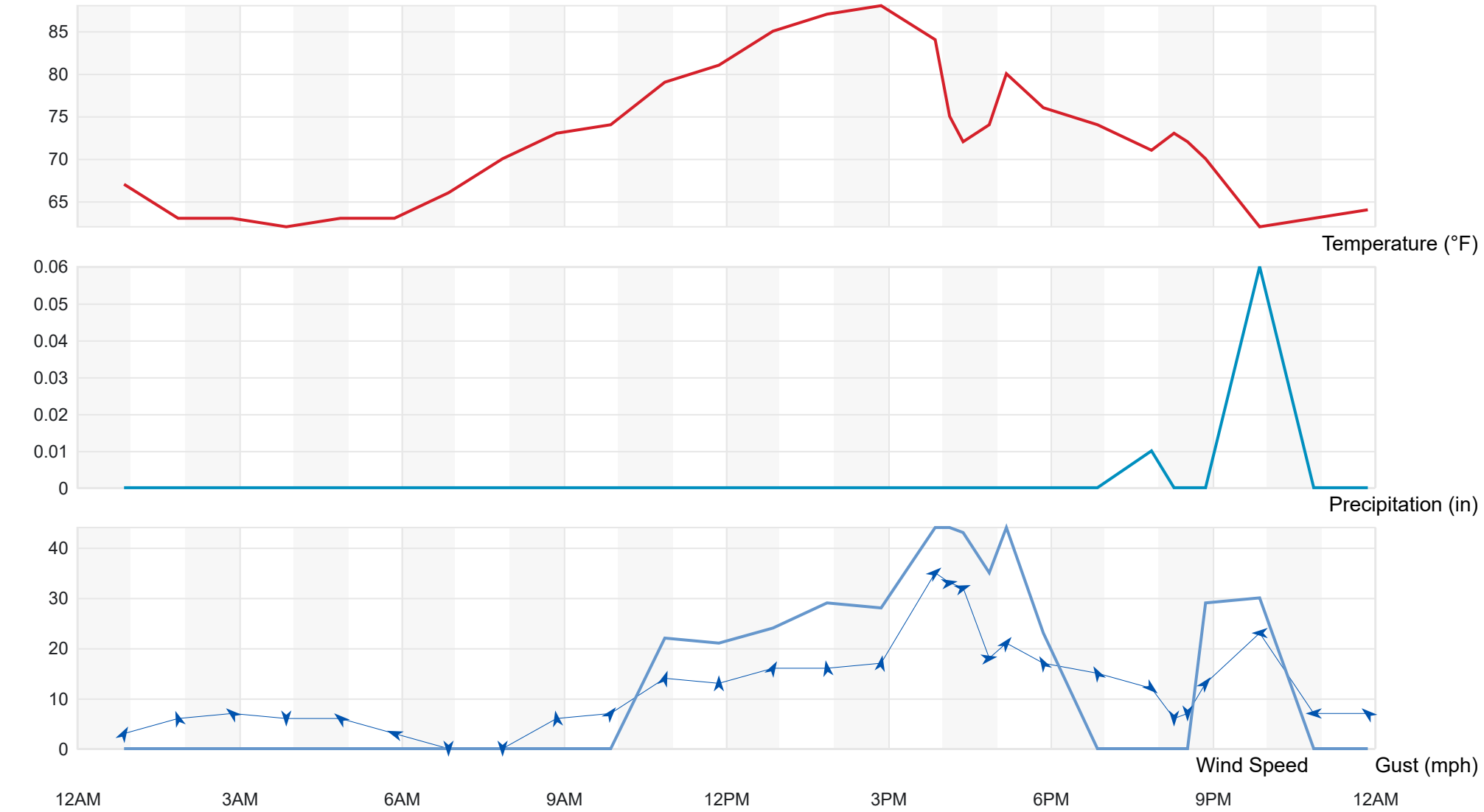
Rainfall occurred outside of operating hours. Samples were not collected.

Daily Weekly Monthly

(/history/daily/us/nm/albuquerque/KABQ/date/2020-6-13) 6-13) 6)

June | 13 | 2020 | View

12AM 3AM 6AM 9AM 12PM 3PM 6PM 9PM 12AM



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	88	88	100

Temperature (° F)	Actual	Historic Avg.	Record
Low Temp	62	61	37
Day Average Temp	72.21	75	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 06:52:00)	0.00	0.02	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	46.17	-	-
High	53	-	-
Low	38	-	-
Average	46.17	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	35	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.85	-	-
Astronomy	Day Length	Rise	Set
Actual Time	14h 29m	5:53 AM	8:22 PM
Civil Twilight		5:23 AM	8:52 PM
Nautical Twilight		4:46 AM	9:29 PM

Temperature (° F)	Actual	Historic Avg.	Record
Astronomical Twilight		4:06 AM	10:09 PM
Moon: waning gibbous		1:44 AM	1:27 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:52 AM	67 °F	43 °F	42 %	SSW	3 mph	0 mph	24.85 in	0.0 in	Fair
1:52 AM	63 °F	42 °F	46 %	SSE	6 mph	0 mph	24.85 in	0.0 in	Fair
2:52 AM	63 °F	42 °F	46 %	SE	7 mph	0 mph	24.85 in	0.0 in	Fair
3:52 AM	62 °F	46 °F	56 %	VAR	6 mph	0 mph	24.84 in	0.0 in	Fair
4:52 AM	63 °F	47 °F	56 %	SE	6 mph	0 mph	24.84 in	0.0 in	Fair
5:52 AM	63 °F	46 °F	54 %	ESE	3 mph	0 mph	24.83 in	0.0 in	Fair
6:52 AM	66 °F	47 °F	50 %	CALM	0 mph	0 mph	24.83 in	0.0 in	Fair
7:52 AM	70 °F	49 °F	47 %	CALM	0 mph	0 mph	24.83 in	0.0 in	Fair
8:52 AM	73 °F	47 °F	39 %	S	6 mph	0 mph	24.83 in	0.0 in	Fair
9:52 AM	74 °F	49 °F	41 %	SW	7 mph	0 mph	24.82 in	0.0 in	Fair
10:52 AM	79 °F	47 °F	32 %	SSW	14 mph	22 mph	24.80 in	0.0 in	Fair
11:52 AM	81 °F	46 °F	29 %	S	13 mph	21 mph	24.79 in	0.0 in	Fair
12:52 PM	85 °F	45 °F	25 %	SSW	16 mph	24 mph	24.76 in	0.0 in	Fair
1:52 PM	87 °F	43 °F	21 %	S	16 mph	29 mph	24.71 in	0.0 in	Partly Cloudy
2:52 PM	88 °F	42 °F	20 %	S	17 mph	28 mph	24.70 in	0.0 in	Mostly Cloudy
3:52 PM	84 °F	43 °F	24 %	SW	35 mph	44 mph	24.71 in	0.0 in	Mostly Cloudy / Windy
4:08 PM	75 °F	43 °F	32 %	W	33 mph	44 mph	24.71 in	0.0 in	Mostly Cloudy / Windy

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
4:23 PM	72 °F	46 °F	40 %	WSW	32 mph	43 mph	24.72 in	0.0 in	T-Storm / Windy
4:52 PM	74 °F	43 °F	33 %	W	18 mph	35 mph	24.71 in	0.0 in	Thunder in the Vicinity
5:11 PM	80 °F	38 °F	22 %	SW	21 mph	44 mph	24.74 in	0.0 in	Light Rain / Windy
5:52 PM	76 °F	46 °F	35 %	SSE	17 mph	23 mph	24.69 in	0.0 in	Mostly Cloudy
6:52 PM	74 °F	43 °F	33 %	SSE	15 mph	0 mph	24.70 in	0.0 in	Mostly Cloudy
7:52 PM	71 °F	50 °F	47 %	NW	12 mph	0 mph	24.73 in	0.0 in	Rain
8:17 PM	73 °F	48 °F	41 %	VAR	6 mph	0 mph	24.74 in	0.0 in	Thunder
8:32 PM	72 °F	50 °F	46 %	VAR	7 mph	0 mph	24.76 in	0.0 in	Mostly Cloudy
8:52 PM	70 °F	51 °F	51 %	SW	13 mph	29 mph	24.78 in	0.0 in	Light Rain
9:52 PM	62 °F	53 °F	72 %	E	23 mph	30 mph	24.75 in	0.1 in	Light Rain / Windy
10:52 PM	63 °F	52 °F	67 %	E	7 mph	0 mph	24.74 in	0.0 in	Mostly Cloudy
11:52 PM	64 °F	52 °F	65 %	SE	7 mph	0 mph	24.72 in	0.0 in	Mostly Cloudy

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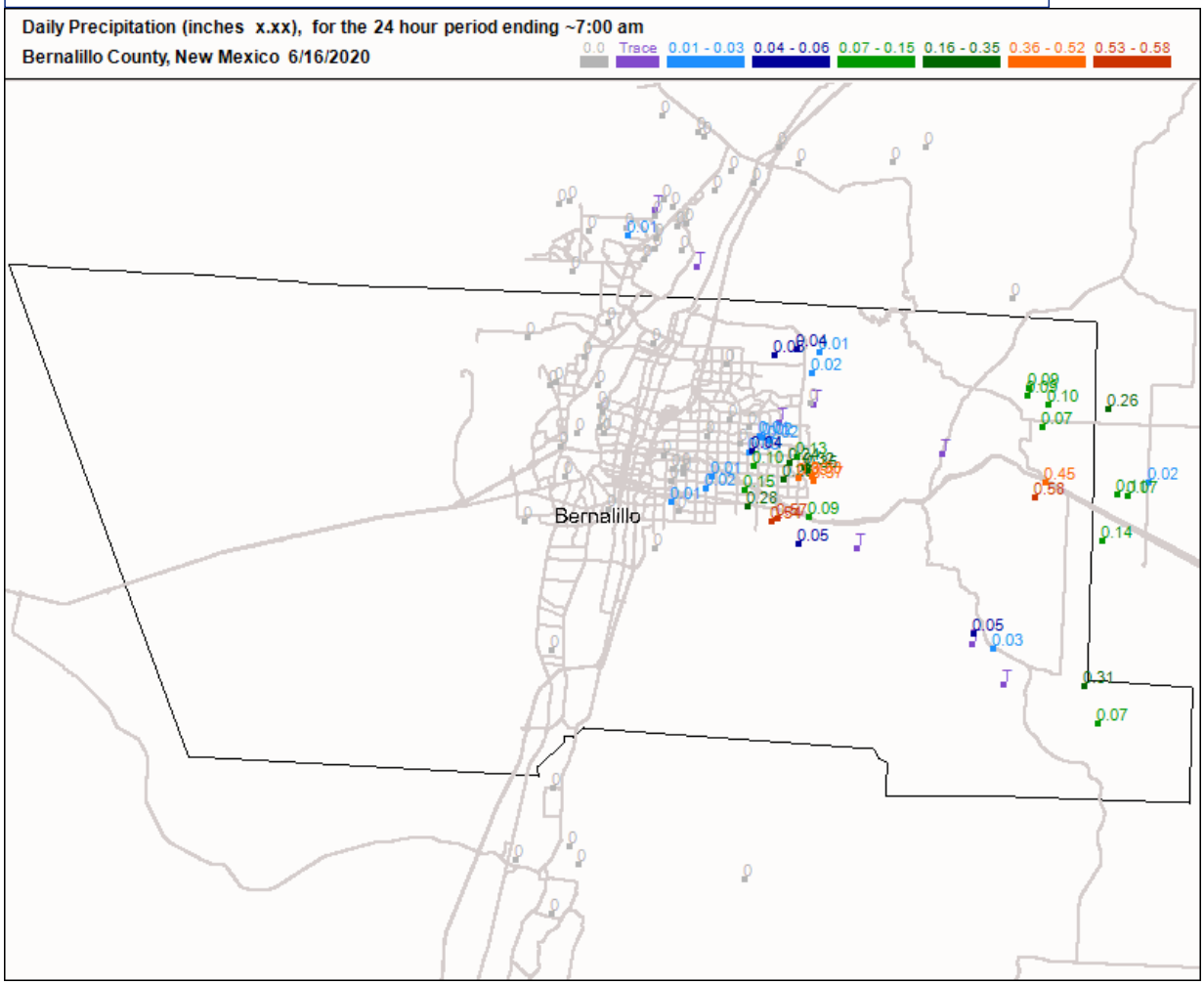
Maps : Daily Precipitation

Map Type	Map Location		Date	Colors	
Precipitation	New Mexico	BR - Bernalillo	6/16/2020	Standard	Get Map



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June 15, 2020

Fast and heavy rainstorm in the foothills. Storm occurred outside of operating hours. However, one sample was collected and the other outfalls were inspected. Wunderground (Sunport) had zero precipitation on this day. CoCoRaHS was used instead to show precipitation values.

35.05 °N, **106.61** °W

Albuquerque, NM Weather History

81° ALBUQUERQUE INTERNATIONAL SUNPORT STATION (/WEATHER/US/NM/ALBUQUERQUE/KABQ?CM_VEN=LOCALWX_PWSDASH) | CHANGE

HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)

- TODAY (/WEATHER/US/NM/ALBUQUERQUE/KABQ)
- HOURLY (/HOURLY/US/NM/ALBUQUERQUE/KABQ)
- 10-DAY (/FORECAST/US/NM/ALBUQUERQUE/KABQ)
- CALENDAR (/CALENDAR/US/NM/ALBUQUERQUE/KABQ)
- HISTORY (/HISTORY/DAILY/US/NM/ALBUQUERQUE/KABQ)
- WUNDERMAP (/WUNDERMAP?LAT=35.05&LON=-106.61)

June 23, 2020

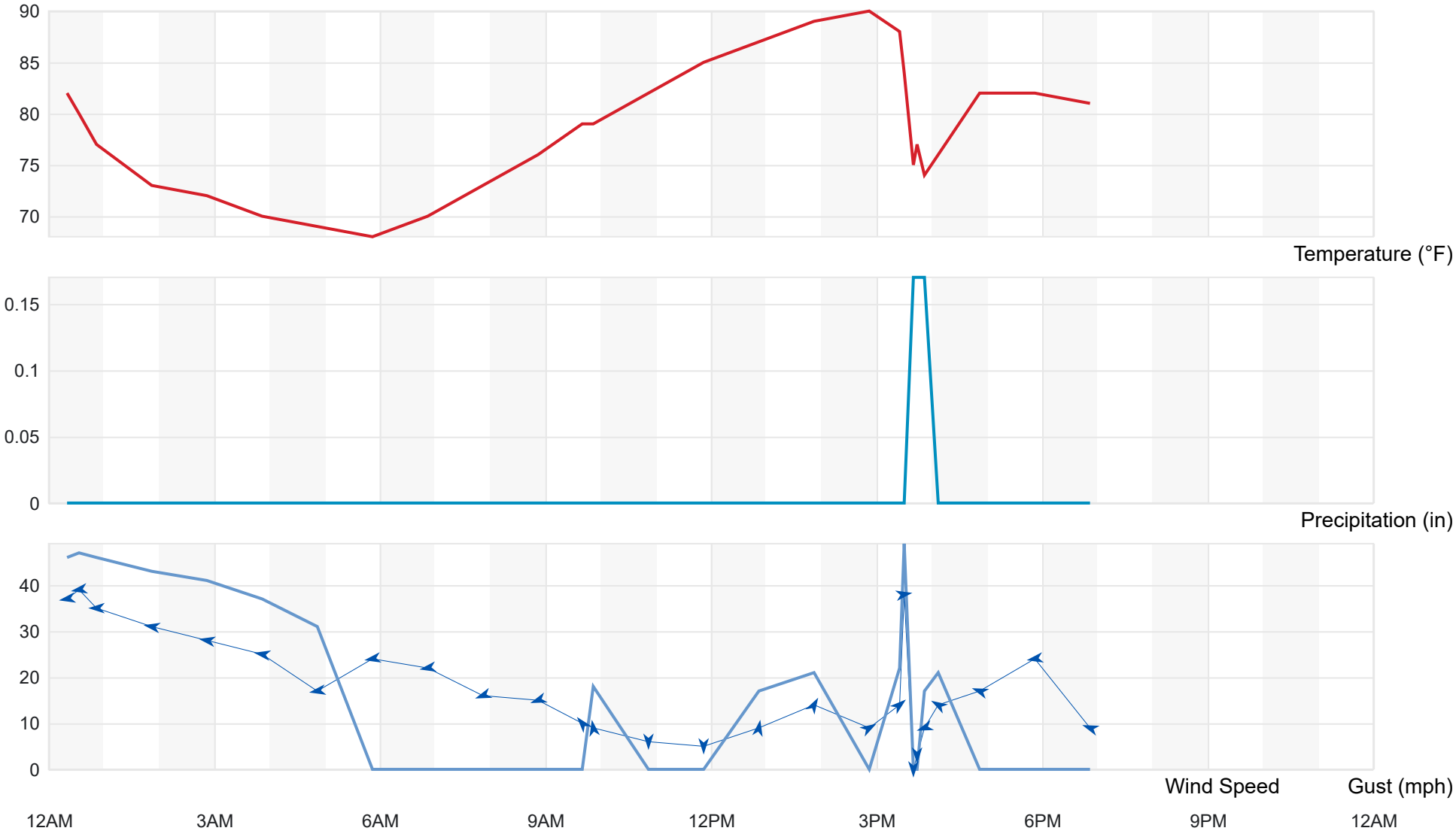
Fast moving and sporadtic rain showers in the afternoon. Storms were too short-lived for staff to reach outfalls in time. Some samples were collected in Zones 1 and 3.

Daily | Weekly | Monthly

(/history/daily/us/nm/albuquerque/KABQ)

June | 23 | 2020 | View

12AM 3AM 6AM 9AM 12PM 3PM 6PM 9PM 12AM



Summary

Temperature (° F)	Actual	Historic Avg.	Record
High Temp	90	90	100

Temperature (° F)	Actual	Historic Avg.	Record
Low Temp	68	64	44
Day Average Temp	78.52	77	-
Precipitation (Inches)	Actual	Historic Avg.	Record
Precipitation (past 24 hours from 06:20:00)	0.00	0.03	-
Dew Point (° F)	Actual	Historic Avg.	Record
Dew Point	49.26	-	-
High	55	-	-
Low	37	-	-
Average	49.26	-	-
Wind (MPH)	Actual	Historic Avg.	Record
Max Wind Speed	39	-	-
Visibility	10	-	-
Sea Level Pressure (Hg)	Actual	Historic Avg.	Record
Sea Level Pressure	24.8	-	-
Astronomy	Day Length	Rise	Set
Actual Time	14h 30m	5:54 AM	8:25 PM
Civil Twilight		5:24 AM	8:55 PM
Nautical Twilight		4:48 AM	9:31 PM

Temperature (° F)	Actual	Historic Avg.	Record
Astronomical Twilight		4:07 AM	10:12 PM
Moon: waxing crescent		8:05 AM	10:48 PM

Daily Observations

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
12:20 AM	82 °F	37 °F	20 %	E	37 mph	46 mph	24.68 in	0.0 in	Squalls / Windy
12:33 AM	80 °F	42 °F	26 %	E	39 mph	47 mph	24.68 in	0.0 in	Squalls / Windy
12:52 AM	77 °F	46 °F	33 %	E	35 mph	46 mph	24.69 in	0.0 in	Squalls / Windy
1:52 AM	73 °F	49 °F	42 %	E	31 mph	43 mph	24.71 in	0.0 in	Partly Cloudy / Windy
2:52 AM	72 °F	49 °F	44 %	E	28 mph	41 mph	24.71 in	0.0 in	Partly Cloudy / Windy
3:52 AM	70 °F	49 °F	47 %	E	25 mph	37 mph	24.72 in	0.0 in	Partly Cloudy / Windy
4:52 AM	69 °F	51 °F	53 %	E	17 mph	31 mph	24.76 in	0.0 in	Partly Cloudy
5:52 AM	68 °F	50 °F	52 %	E	24 mph	0 mph	24.77 in	0.0 in	Partly Cloudy / Windy
6:52 AM	70 °F	51 °F	51 %	E	22 mph	0 mph	24.79 in	0.0 in	Partly Cloudy / Windy
7:52 AM	73 °F	52 °F	48 %	ENE	16 mph	0 mph	24.79 in	0.0 in	Partly Cloudy
8:52 AM	76 °F	52 °F	43 %	ENE	15 mph	0 mph	24.80 in	0.0 in	Partly Cloudy
9:40 AM	79 °F	52 °F	39 %	SE	10 mph	0 mph	24.79 in	0.0 in	Partly Cloudy
9:52 AM	79 °F	52 °F	39 %	S	9 mph	18 mph	24.79 in	0.0 in	Fair
10:52 AM	82 °F	52 °F	35 %	VAR	6 mph	0 mph	24.78 in	0.0 in	Fair
11:52 AM	85 °F	51 °F	31 %	VAR	5 mph	0 mph	24.77 in	0.0 in	Fair
12:52 PM	87 °F	51 °F	29 %	S	9 mph	17 mph	24.75 in	0.0 in	Fair
1:52 PM	89 °F	50 °F	26 %	SSW	14 mph	21 mph	24.71 in	0.0 in	Fair

Time	Temperature	Dew Point	Humidity	Wind	Wind Speed	Wind Gust	Pressure	Precip.	Condition
2:52 PM	90 °F	45 °F	21 %	WSW	9 mph	0 mph	24.69 in	0.0 in	Partly Cloudy
3:25 PM	88 °F	44 °F	22 %	SW	14 mph	22 mph	24.70 in	0.0 in	T-Storm
3:30 PM	84 °F	49 °F	29 %	W	38 mph	49 mph	24.72 in	0.0 in	T-Storm / Windy
3:40 PM	75 °F	49 °F	40 %	CALM	0 mph	0 mph	24.71 in	0.2 in	Light Rain with Thunder
3:44 PM	77 °F	50 °F	39 %	VAR	3 mph	0 mph	24.71 in	0.2 in	Light Rain with Thunder
3:52 PM	74 °F	55 °F	52 %	ENE	9 mph	17 mph	24.72 in	0.2 in	Thunder
4:07 PM	76 °F	54 °F	46 %	ESE	14 mph	21 mph	24.71 in	0.0 in	Mostly Cloudy
4:52 PM	82 °F	50 °F	33 %	ESE	17 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy
5:52 PM	82 °F	48 °F	30 %	E	24 mph	0 mph	24.67 in	0.0 in	Mostly Cloudy / Windy
6:52 PM	81 °F	50 °F	34 %	ESE	9 mph	0 mph	24.66 in	0.0 in	Mostly Cloudy

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ATTACHMENT B

DAILY WEATHER REPORTS FOR PRECIPITATION EVENTS OCCURRING IN SECOND QUARTER 2020 (WEATHER UNDERGROUND AND/OR COCORAHS)

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Temperature (° F)	Max	Average	Min
Avg Temperature	72.42	59.42	38.73
Min Temperature	58	45.6	29
Dew Point (° F)	Max	Average	Min
Dew Point	39	20.82	-7
Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.25	0.02	0.00	0.47
Snowdepth	0.00	0.00	0.00	0.00
Wind	Max	Average	Min
Wind	31	9.38	0
Gust Wind	46	5.97	0
Sea Level Pressure	Max	Average	Min
Sea Level Pressure	24.9	24.64	24.39

Daily Observations

APRIL 2020 (Albuquerque International Sunport)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Apr	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	72	62.0	50	21	17.6	16	31	18.8	12	25	11.3	5	24.6	24.5	24.4	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
2	74	61.1	47	23	17.0	11	33	19.5	9	28	13.6	0	24.6	24.5	24.4	0.00
3	68	55.9	45	29	22.0	17	41	28.1	14	31	12.7	0	24.7	24.6	24.5	0.00
4	68	55.7	43	28	24.0	15	53	32.4	16	28	10.7	0	24.6	24.6	24.5	0.00
5	71	58.2	41	20	16.7	14	38	21.2	12	23	9.2	0	24.6	24.6	24.5	0.00
6	72	60.4	44	22	14.8	4	37	18.8	7	21	8.8	0	24.7	24.6	24.6	0.00
7	73	60.5	46	20	16.4	12	29	18.8	11	16	6.8	0	24.8	24.7	24.6	0.00
8	72	60.9	47	27	19.4	17	36	21.2	13	15	5.6	0	24.8	24.7	24.6	0.00
9	72	62.8	53	33	23.6	16	39	24.2	13	16	8.2	0	24.7	24.6	24.6	0.00
10	70	57.5	45	26	14.0	3	38	19.9	10	16	7.8	0	24.7	24.6	24.5	0.00
11	67	55.6	42	25	10.7	2	39	18.3	8	25	9.8	0	24.6	24.5	24.4	0.00
12	64	51.9	37	36	27.9	23	59	41.2	23	23	10.2	0	24.6	24.5	24.4	0.00
13	50	38.7	33	39	33.9	29	92	83.4	52	17	8.0	0	24.7	24.6	24.6	0.25
14	53	42.4	33	36	14.2	-7	93	42.9	9	20	9.7	0	24.8	24.8	24.7	0.22
15	63	47.9	29	22	12.2	3	56	26.5	11	18	6.6	0	24.8	24.7	24.6	0.00
16	72	57.4	39	24	18.0	11	55	26.0	10	24	13.0	0	24.7	24.6	24.5	0.00
17	69	58.6	43	23	19.0	16	43	22.6	13	18	8.4	0	24.7	24.6	24.6	0.00
18	67	57.9	45	29	20.1	12	52	25.8	12	22	10.1	0	24.6	24.6	24.5	0.00
19	69	57.6	42	30	24.9	20	58	30.8	16	20	7.0	0	24.7	24.6	24.6	0.00
20	72	60.7	47	30	24.2	13	46	27.2	11	14	7.0	0	24.7	24.6	24.6	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
21	70	61.3	52	31	24.3	17	40	25.9	14	28	9.7	0	24.7	24.6	24.5	0.00
22	74	59.6	47	36	25.8	14	61	33.0	11	28	13.2	5	24.7	24.6	24.6	0.00
23	76	61.8	44	24	22.6	20	42	24.0	14	20	9.0	0	24.7	24.6	24.5	0.00
24	75	65.1	56	25	17.6	6	29	17.6	9	24	13.5	6	24.7	24.7	24.6	0.00
25	76	62.6	49	28	18.3	6	40	20.5	8	20	7.8	0	24.9	24.8	24.7	0.00
26	83	67.1	48	21	16.5	11	28	15.7	8	17	6.0	0	24.8	24.7	24.6	0.00
27	84	69.8	53	31	23.3	17	33	19.0	9	16	7.5	0	24.8	24.7	24.6	0.00
28	85	71.5	54	28	23.0	17	35	17.7	8	24	11.1	0	24.8	24.7	24.7	0.00
29	78	67.8	58	33	30.1	22	35	25.2	17	26	11.8	5	24.9	24.8	24.8	0.00
30	87	72.4	56	34	32.4	30	40	24.4	14	17	7.1	0	24.8	24.7	24.6	0.00

Note:
The April monthly records shown above are off by one day (and thus do not match the daily weather documentation). All of the precipitation occurred on April 13th, rather than over the course of two days, April 13th and 14th. See daily weather documentation and the Quarterly Precipitation Events spreadsheet for accurate dates.

s-b:History Thumbnails:)
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Temperature (° F)	Max	Average	Min	
Avg Temperature	78.63	70.76	62.21	
Min Temperature	68	56.39	46	
Dew Point (° F)	Max	Average	Min	
Dew Point	54	25.6	-6	
Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.09	0.00	0.00	0.13
Snowdepth	0.00	0.00	0.00	0.00
Wind	Max	Average	Min	
Wind	32	9.93	0	
Gust Wind	53	6.31	0	
Sea Level Pressure	Max	Average	Min	
Sea Level Pressure	24.93	24.68	24.46	

Daily Observations

MAY 2020 (Albuquerque International Sunport)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
May	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	87	74.4	59	32	24.0	13	35	17.8	6	16	7.4	0	24.7	24.7	24.6	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
2	87	72.3	56	23	17.7	14	22	13.6	7	18	8.7	0	24.8	24.7	24.6	0.00
3	87	72.4	54	28	22.5	17	28	16.2	10	18	7.7	0	24.8	24.7	24.6	0.00
4	84	72.8	59	26	19.9	14	26	14.6	7	24	12.9	3	24.7	24.7	24.6	0.00
5	79	67.5	55	39	32.2	17	53	29.6	15	23	11.5	0	24.9	24.8	24.7	0.00
6	85	70.9	54	33	28.1	18	40	22.6	9	15	7.8	0	24.9	24.8	24.7	0.00
7	88	75.5	61	27	14.6	1	23	11.1	6	22	12.3	5	24.7	24.6	24.6	0.00
8	72	62.2	53	24	19.3	3	27	19.8	9	30	18.1	0	24.9	24.8	24.7	0.00
9	83	66.4	49	30	21.2	12	41	21.3	7	32	7.7	0	24.8	24.7	24.7	0.00
10	78	66.3	53	35	30.0	22	37	26.5	17	32	16.2	5	24.9	24.8	24.7	0.00
11	73	64.0	57	50	43.2	35	59	47.5	28	20	8.3	0	24.8	24.7	24.6	0.00
12	81	67.5	50	43	32.9	22	71	34.0	12	21	7.5	0	24.7	24.6	24.5	0.04
13	82	69.0	50	27	20.5	12	35	17.8	7	18	10.5	0	24.6	24.6	24.5	0.00
14	81	68.3	53	28	22.7	16	35	19.4	9	20	7.6	0	24.7	24.6	24.5	0.00
15	81	68.1	52	28	22.7	16	32	19.5	11	12	5.8	0	24.7	24.6	24.5	0.00
16	84	71.1	56	31	23.7	19	33	18.1	10	9	4.4	0	24.7	24.6	24.6	0.00
17	87	74.5	62	48	38.2	23	60	31.3	14	28	14.3	3	24.7	24.7	24.6	0.00
18	91	76.9	62	29	25.2	21	28	16.1	8	14	6.5	0	24.8	24.7	24.6	0.00
19	90	76.0	63	32	26.3	20	26	16.4	12	24	10.9	0	24.7	24.6	24.5	0.00
20	82	70.2	54	24	14.2	-6	24	13.2	5	17	8.6	0	24.7	24.6	24.5	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
21	79	65.4	48	7	3.0	-4	16	9.1	5	21	7.7	0	24.7	24.6	24.6	0.00
22	82	67.1	46	15	8.4	4	21	11.0	6	18	8.4	0	24.7	24.6	24.5	0.00
23	82	70.3	56	19	15.5	10	20	12.7	9	17	8.8	0	24.6	24.6	24.5	0.00
24	80	69.0	54	22	16.8	8	25	14.2	9	24	11.6	3	24.6	24.6	24.5	0.00
25	74	63.2	56	38	30.9	8	51	32.1	12	29	14.3	3	24.7	24.6	24.6	0.00
26	84	68.0	51	38	28.5	15	54	28.6	8	17	7.7	0	24.8	24.7	24.6	0.00
27	88	75.6	59	35	27.6	19	24	17.4	12	21	7.6	0	24.7	24.7	24.6	0.00
28	88	77.8	66	40	36.3	34	33	23.2	15	29	13.0	3	24.9	24.8	24.7	0.00
29	88	76.9	66	41	39.1	34	36	26.6	15	22	10.5	0	24.9	24.9	24.8	0.00
30	91	78.6	68	54	42.4	37	59	29.7	15	31	14.3	5	24.8	24.8	24.7	0.00
31	86	75.3	66	54	46.0	38	65	37.9	21	21	9.3	0	24.9	24.8	24.7	0.09

Note:
The May monthly records shown above are off by one day (and thus do not match the daily weather documentation). All of the precipitation values are correct, but shifted forward by one day.
For example, this document indicates that there was precipitation on May 31st. This storm event actually occurred on May 30th. See daily weather documentation and the Quarterly Precipitation Events spreadsheet for accurate dates.

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(https://wikibuy.com/blog/is-amazon-actually-giving-you-the-best-price-779e00e8958e?hno=true&utm_source=jaguar11&utm_campaign=2449978&utm_term=250381201&tblci=GiAzRzbAPLO4yYfCuIrLmDQnj2Z63YMWuF875Nn-JOuFMSDR3kA#tblciGiAzRzbAPLO4yYfCuIrLmDQnj2Z63YMWuF875Nn-JOuFMSDR3kA)
(https://www.nerdwallet.com/ur/?utm_content=633fe1&nw_campaign_id=149037548564553200&utm_medium=ntv&utm_source=tb&utm_campaign=cc_mktg_paid_101518_rew_3tgt_tb&utm_term=theweatherchannel-wunderground&mktg_link=172713280#tblciGiAzRzbAPLO4yYfCuIrLmDQnj2Z63YMWuF875Nn-JOuFMSDl8T0)

Temperature (° F)	Max	Average	Min
Avg Temperature	82.6	76.93	62
Min Temperature	68	62.6	49
Dew Point (° F)	Max	Average	Min
Dew Point	58	33.23	8
Precipitation (Inches)	Max	Average	Min	Sum
Precipitation	0.80	0.04	0.00	1.07
Snowdepth	0.00	0.00	0.00	0.00
Wind	Max	Average	Min
Wind	39	9.86	0
Gust Wind	53	6.17	0
Sea Level Pressure	Max	Average	Min
Sea Level Pressure	24.99	24.7	24.43

Daily Observations

JUNE 2020 (Albuquerque International Sunport)

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
Jun	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Total
1	90	72.5	61	58	48.3	40	83	47.3	18	30	9.2	0	24.9	24.8	24.7	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
2	89	72.7	60	58	51.2	43	90	51.6	21	20	7.0	0	24.8	24.8	24.7	0.80
3	91	78.0	64	52	44.1	32	65	34.5	12	20	7.3	0	24.8	24.7	24.6	0.00
4	95	81.0	64	48	39.2	25	50	26.3	8	14	6.0	0	24.7	24.7	24.6	0.00
5	97	82.6	68	47	36.1	28	36	20.8	9	25	9.8	3	24.7	24.6	24.6	0.00
6	94	79.0	65	58	40.3	10	78	35.5	5	35	19.0	3	24.7	24.6	24.5	0.00
7	91	77.3	60	30	22.8	18	25	13.8	8	24	11.1	0	24.6	24.5	24.4	0.03
8	88	72.6	55	37	26.1	8	32	19.7	6	37	14.9	0	24.7	24.6	24.4	0.00
9	75	62.0	49	24	16.4	8	35	19.4	8	26	16.1	10	24.8	24.8	24.7	0.00
10	84	70.4	53	24	18.5	14	26	15.0	8	12	5.9	0	24.9	24.8	24.8	0.00
11	91	75.5	59	42	24.1	16	35	16.6	7	32	9.4	0	24.9	24.9	24.8	0.00
12	89	74.7	62	47	43.8	39	48	34.5	17	36	10.4	0	25.0	24.9	24.8	0.00
13	88	72.2	62	53	46.2	38	72	41.8	20	35	12.6	0	24.9	24.8	24.7	0.00
14	89	75.5	62	53	44.2	31	70	37.4	15	28	12.1	0	24.8	24.7	24.7	0.07
15	89	77.4	68	45	40.5	35	42	28.2	15	21	8.9	0	24.8	24.8	24.7	0.00
16	88	76.0	64	45	41.0	36	48	30.4	16	21	8.3	0	24.8	24.7	24.6	0.00
17	93	79.0	63	42	27.5	12	45	20.4	5	15	8.3	0	24.7	24.6	24.6	0.00
18	87	75.4	59	24	18.2	14	20	12.2	7	10	5.5	0	24.7	24.7	24.6	0.00
19	88	76.3	59	23	15.3	12	17	10.6	6	14	8.4	0	24.7	24.7	24.6	0.00
20	89	76.9	64	50	33.4	19	58	26.2	8	20	8.8	3	24.8	24.7	24.6	0.00

Time	Temperature (° F)			Dew Point (° F)			Humidity (%)			Wind Speed (mph)			Pressure (Hg)			Precipitation (in)
21	94	80.1	60	28	22.1	19	22	12.8	7	9	6.0	0	24.8	24.7	24.6	0.00
22	97	82.5	65	41	28.5	24	33	15.5	8	16	7.8	0	24.8	24.7	24.6	0.00
23	90	77.8	68	55	48.9	37	53	37.5	20	39	18.3	0	24.8	24.7	24.7	0.00
24	93	79.8	64	50	42.9	34	58	30.9	12	22	8.5	0	24.8	24.7	24.6	0.17
25	94	82.0	67	45	36.3	25	45	22.6	8	14	8.3	0	24.8	24.7	24.6	0.00
26	92	79.7	67	42	29.4	18	32	18.1	7	9	4.0	0	24.8	24.7	24.7	0.00
27	93	81.4	66	41	27.0	12	40	17.2	5	26	12.0	5	24.7	24.7	24.6	0.00
28	92	80.9	68	35	29.9	24	25	16.3	10	16	10.0	3	24.6	24.5	24.4	0.00
29	92	79.5	65	36	28.4	21	27	16.8	8	24	10.7	0	24.6	24.6	24.5	0.00
30	88	77.3	67	33	26.5	20	25	16.3	8	18	11.0	0	24.7	24.6	24.6	0.00

Note:
The June monthly records shown above are off by one day (and thus do not match the daily weather documentation). All of the precipitation values are correct, but shifted forward by one day.
For example, this document indicates that there was precipitation on June 24 th. This storm event actually occurred on June 23rd. See daily weather documentation and the Quarterly Precipitation Events spreadsheet for accurate dates.

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Montana Man Discovers He Has Oldest DNA in America
Genetics Digest

(https://geneticsdigest.click/dusty-oldest-native-ancestry/??tclid=GiAzRzbAPLO4yYfCuIrLmDQnj2Z63YMWuF875Nn-JOuFMSDXukU&utm_campaign=taboola&utm_source=3853027&utm_medium=theweatherchannel-wunderground&utm_term=1194714&utm_content=2882763656#tblciGiAzRzbAPLO4yYfCuIrLmDQnj2Z63YMWuF875Nn-JOuFMSDXukU)
(https://wikibuy.com/blog/is-amazon-actually-giving-you-the-best-price-779e00e8958e?hno=true&utm_source=jaguar11&utm_campaign=2449978&utm_term=250381201&tblci=GiAzRzbAPLO4yYfCuIrLmDQnj2Z63YMWuF875Nn-JOuFMSDR3kA#tblciGiAzRzbAPLO4yYfCuIrLmDQnj2Z63YMWuF875Nn-JOuFMSDR3kA)

The Dead Giveaway That Tells You When Amazon’s Giving You A Better Price Than Other Retailers
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ATTACHMENT C

VISUAL MONITORING INSPECTION FORMS

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4/13/2020 MONITORING EVENT

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City of Albuquerque

Facility: Yale Transit Center (Y1)

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 ⊗ Q2 o Q3 o Q4

Date: 04/13/20

Time: 7:20

Inspector: Melanie Meroni

Weather: Light Rain/Snow

Storm Precip: 0.25 in

Last 72 hour Precip: 3/13/2020

Photo: Attached

Outfall ID:	Y1		
Flow Observed:	◉ Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	Inlet to Stormceptor Water Quality Device		
Flow Estimate (include units and method of estimation):	3' x 1/2 "		
Other Observations:	Ponding south of Inlet Scattered Trash at site		
Color (describe):	Clear		
Turbidity:	◉ Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes ◉ No	o Yes o No	o Yes o No
Suspended Solids:	o Yes ◉ No	o Yes o No	o Yes o No
Settled Solids:	o Yes ◉ No	o Yes o No	o Yes o No
Sheen Present:	o Yes ◉ No	o Yes o No	o Yes o No
Odor:	o Yes ◉ No	o Yes o No	o Yes o No
Foam Present:	o Yes ◉ No	o Yes o No	o Yes o No
Describe:	Clear/Clean looking water		

Additional Comments: Some trash and debris near and in the inlet grate

6/15/2020 MONITORING EVENT

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City of Albuquerque

Facility: Zone 1 - Arroyo Street Maintenance

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o Q2 o Q3 o Q4

Date: 6/15/20

Time: 7 pm

Inspector: Sarah Gantey

Weather: just stopped raining

Storm Precip: 0.15 in

Last 72 hour Precip: <0.1" on 6/13/20
<0.1" on 6/12/20

Photo: Attached

Outfall ID:	AM1		
Flow Observed:	• Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	Sidewalk culvert discharges to Street from facility, wattle placed at facility outflow pt.		
Flow Estimate (include units and method of estimation):	ponding accross gutter and into street ~5-6' width, 1-2" deep		
Other Observations:	suspended sediment from outflow visible		
Color (describe):	light tan		
Turbidity:	o Clear o Slightly Cloudy • Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes • No	o Yes o No	o Yes o No
Suspended Solids:	• Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes • No	o Yes o No	o Yes o No
Sheen Present:	o Yes • No	o Yes o No	o Yes o No
Odor:	o Yes • No	o Yes o No	o Yes o No
Foam Present:	o Yes • No	o Yes o No	o Yes o No
Describe:	no odor suspended sediment, ~~Cloudy~~ Cloudy		

Additional Comments: Short, intense storm approx. at 6:40pm.

City of Albuquerque

Facility: Zone 1 - Lomas Fuel Station

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 X Q2 o Q3 o Q4

Date: 6/15/20
Time: 7:05 pm
Inspector: Sarah Ganley

Weather: just stopped raining
Storm Precip: 0.15 in
Last 72 hour Precip: <0.1" on 6/12 and 6/13/20
Photo: Attached

* NO SAMPLE *

Outfall ID:	L1		
Flow Observed:	o Yes X No	o Yes o No	o Yes o No
Description of Monitoring Site:	low spot on asphalt from Fuel Station		
Flow Estimate (include units and method of estimation):	no flow observed. puddles on site - no flow off-site		
Other Observations:			
Color (describe):			
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes o No	o Yes o No
Odor:	o Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes o No	o Yes o No	o Yes o No
Describe:			

Additional Comments:

City of Albuquerque

Facility: Zone 1 - Los Altos Golf Course

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 • Q2 o Q3 o Q4

Date: 6/15/20

Time: 7:07 pm

Inspector: Sarah Ganley

Weather: just stopped raining

Storm Precip: 0.15 in

Last 72 hour Precip: <0.1" on 6/12 & 6/13

Photo: Attached

	NO SAMPLE		*NO SAMPLE*
Outfall ID:	LA 2		LA 1
Flow Observed:	o Yes • No	o Yes o No	o Yes o No
Description of Monitoring Site:	low spot on asphalt at gate		Gate closed — could not access
Flow Estimate (include units and method of estimation):	no flow observed		
Other Observations:			
Color (describe):			
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes o No	o Yes o No
Odor:	o Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes o No	o Yes o No	o Yes o No
Describe:			

Additional Comments: Short, intense storm, approx. at 6:40 pm

City of Albuquerque

Facility: Zone 1 - Los Altos Park Management

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 ✗ Q2 o Q3 o Q4

Date: 6/15/20
Time: 7:10 pm
Inspector: Sarah Gantley

Weather: just stopped raining
Storm Precip: 0.15 in
Last 72 hour Precip: <0.1" on 6/12 & 6/13/20
Photo: Attached

NO SAMPLE

Outfall ID:	LAP1		
Flow Observed:	o Yes (o No)	o Yes o No	o Yes o No
Description of Monitoring Site:	concrete culvert - outside of facility		
Flow Estimate (include units and method of estimation):	Waddles around site fence/perimeter. No flow observed - puddles observed on-site @ outfall		
Other Observations:			
Color (describe):			
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes o No	o Yes o No
Odor:	o Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes o No	o Yes o No	o Yes o No
Describe:			

Additional Comments:
- Flow from sheet (to north) + in gutter. No flow from facility observed. Wattles working to prevent off-site flow from facility.
- Short, intense storm, at 6:40 pm approx.

6/23/2020 MONITORING EVENT

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City of Albuquerque

Facility: Zone 1 – Los Altos Golf Course

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 X Q2 o Q3 o Q4

Date: 6/23/20
Time: 4:03
Inspector: S. Ganley

Weather: just stopped raining
Storm Precip: 0.18 in
Last 72 hour Precip: 6/15/20
Photo: Attached

Outfall ID:	LA2		LA1		Other – north of LA2	
Flow Observed:	X Yes	o No	X Yes	o No	o Yes	o No
Description of Monitoring Site:	Low spot on asphalt by fence		for 8' SD culvert →		low spot by ped. gate into animal shelter property	
Flow Estimate (include units and method of estimation):	12" wide x 0.25" deep – ponds west of gate		States-8' dia. culvert. This is a SD-not flow from property.		12" W x 0.25" deep	
Other Observations:			No visible runoff from Golf Course property.		observed flow path to fence north of LA2.	
Color (describe):	Clear		light brown, Cloudy		mostly clear	
Turbidity:	X Clear o Slightly Cloudy o Very Cloudy o Opaque		o Clear o Slightly Cloudy X Very Cloudy o Opaque		o Clear X Slightly Cloudy o Very Cloudy o Opaque	
Floating Solids:	o Yes	X No	X Yes	o No	o Yes	X No
Suspended Solids:	o Yes	X No	X Yes	o No	X Yes	o No
Settled Solids:	o Yes	X No	X Yes	o No	o Yes	X No
Sheen Present:	o Yes	X No	o Yes	X No	o Yes	X No
Odor:	o Yes	X No	o Yes	X No	o Yes	X No
Foam Present:	o Yes	X No	o Yes	X No	o Yes	X No
Describe:	minimal runoff in this area.		observations above are for SD flow.		some sediment present on pkg. areas + sand pile runoff	

Additional Comments: Observed a different runoff path to North of LA2 – took photos + sample – outfalling to north of property.

City of Albuquerque

Facility: Zone 1 – Lomas Fuel Station

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 o ~~Q2~~ o Q3 o Q4

Date: 6/23/20
Time: 4:00
Inspector: S. Ganley

Weather: just stopped raining
Storm Precip: 0.18 in
Last 72 hour Precip: 6/15/20
Photo: Attached

No Sample

Outfall ID:	L1		
Flow Observed:	o Yes ~~o~~ No	o Yes o No	o Yes o No
Description of Monitoring Site:	low spot on asphalt		
Flow Estimate (include units and method of estimation):	puddles – not enough to get a sample		
Other Observations:	facility looked clean – no WQ issues observed w/ puddles.		
Color (describe):			
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes o No	o Yes o No
Odor:	o Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes o No	o Yes o No	o Yes o No
Describe:			

Additional Comments:

City of Albuquerque

Facility: Zone 1 - Street maint. Satellite #1

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 ☒ Q2 o Q3 o Q4

Date: 6/23/20
Time: 3:55 pm
Inspector: S. Ganley

Weather: raining
Storm Precip: 0.18 in
Last 72 hour Precip: 6/15/20
Photo: Attached

*No sample taken

Outfall ID:	SS1B		
Flow Observed:	o Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	observed wattle in place		
Flow Estimate (include units and method of estimation):			
Other Observations:			
Color (describe):			
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes o No	o Yes o No
Odor:	o Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes o No	o Yes o No	o Yes o No
Describe:			

Additional Comments: Gate to facility was locked. Took photos of closer outfall from fence. No obvious, visible WQ issues from the fence viewpoint.

City of Albuquerque

Facility: Zone 1 - Los Altos Trails (LAM 1)

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 ☒ Q2 o Q3 o Q4

Date: 6/23/20
Time: 4:00pm
Inspector: S. Gawley

Weather: light rain
Storm Precip: 0.18 in
Last 72 hour Precip: 6/15/20
Photo: attached

* no sample

Outfall ID:	LAM 1		
Flow Observed:	o Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	SD inlet at end of concrete sloped convey.		
Flow Estimate (include units and method of estimation):			
Other Observations:	likely not enough flow, even if gate was open.		
Color (describe):			
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes o No	o Yes o No
Odor:	o Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes o No	o Yes o No	o Yes o No
Describe:			

Additional Comments: Gate to facility was locked. Took photos from entrance and adjacent property to west. Runoff appeared to have some sediment but no ~~other~~ other WQ issues visible from perimeter.

City of Albuquerque

Facility: Puerto del Sol Golf Course

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 ☒ Q2 o Q3 o Q4

Date: 6/23/2020
Time: 3:45 PM
Inspector: Marie VanDerGeest

Weather: Cloudy, just stopped raining
Storm Precip: 0.18 in
Last 72 hour Precip: 6/15/2020
Photo: Attached

	NO SAMPLE	NO SAMPLE	
Outfall ID:	PDS1	PDS2	
Flow Observed:	o Yes ☒ No	o Yes ☒ No	o Yes o No
Description of Monitoring Site:	Ground is wet, ponding upstream of inlet. No active drainage.	Gate locked. Ground is wet, some active drainage	
Flow Estimate (include units and method of estimation):	N/A	N/A	
Other Observations:	Decent amount of drainage in areas surrounding inlet.	A lot of organic debris built up against grate.	
Color (describe):	N/A	N/A	
Turbidity:	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes o No	o Yes o No	o Yes o No
Suspended Solids:	o Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes o No	o Yes o No	o Yes o No
Sheen Present:	o Yes o No	o Yes o No	o Yes o No
Odor:	o Yes o No	o Yes o No	o Yes o No
Foam Present:	o Yes o No	o Yes o No	o Yes o No
Describe:	N/A	N/A	

Additional Comments: _____

City of Albuquerque

Facility: Yale Transit Center

Quarterly Visual Monitoring of
Storm Water Outfall Discharges
o Q1 ⊠ Q2 o Q3 o Q4

Date: 6/23/2020
Time: 4:00 PM
Inspector: Marie VanDerGeest

Weather: Cloudy, just stopped raining
Storm Precip: 0.18 in
Last 72 hour Precip: 6/15/2020
Photo: Attached

Outfall ID:	Y1		
Flow Observed:	⊠ Yes o No	o Yes o No	o Yes o No
Description of Monitoring Site:	Steady flow into inlet from south. No flow from north side.		
Flow Estimate (include units and method of estimation):	2' wide, 1" deep		
Other Observations:	Several pieces of trash collected on grate and surrounding areas.		
Color (describe):	Tan/light brown		
Turbidity: 7-6-2020 KB	o Clear ⊠ Slightly Cloudy o Very Cloudy ~~⊠ Opaque~~	o Clear o Slightly Cloudy o Very Cloudy o Opaque	o Clear o Slightly Cloudy o Very Cloudy o Opaque
Floating Solids:	o Yes ⊠ No	o Yes o No	o Yes o No
Suspended Solids:	⊠ Yes o No	o Yes o No	o Yes o No
Settled Solids:	o Yes ⊠ No	o Yes o No	o Yes o No
Sheen Present:	o Yes ⊠ No	o Yes o No	o Yes o No
Odor:	o Yes ⊠ No	o Yes o No	o Yes o No
Foam Present:	o Yes ⊠ No	o Yes o No	o Yes o No
Describe:	Fine particles suspended.		

Additional Comments:

ATTACHMENT D

STORMWATER MONITORING SAMPLING PHOTOGRAPHS

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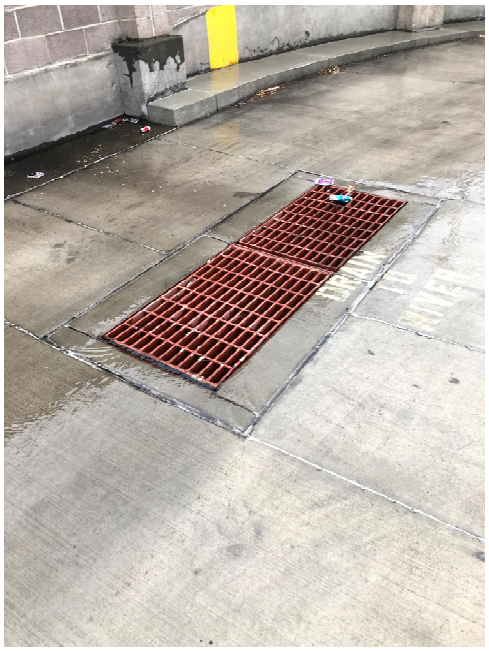
Second Quarter 2020 (April 13th, 2020)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 1: Outfall Y1



Photograph 2: Sample Y1

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Second Quarter 2020 (June 15th, 2020)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 1: Outfall AM1



Photograph 2: Sample AM1

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Second Quarter 2020 (June 23, 2020)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities



Photograph 1: Outfall LA1



Photograph 2: Sample LA1



Photograph 3: Outfall LA2



Photograph 4: Sample LA2

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Second Quarter 2020 (June 23, 2020)
Stormwater Monitoring Sample Photographs
City of Albuquerque Facilities

	
Photograph 5: Stormwater flowing into animal shelter	**Photograph 6**: Collected sample at shared gate with animal shelter

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Attachment 9

Education and Outreach Outcomes Report

Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) • City of Albuquerque
Bernalillo County • Town of Bernalillo • Village of Corrales • Ciudad Soil and Water Conservation District Eastern
Sandoval County Arroyo Flood Control Authority (ESCAFCA) • Village of Los Ranchos de Albuquerque •
Department of Transportation (NMDOT) • City of Rio Rancho • Sandoval County
Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA)

Outcomes Report

for

Fiscal Year 2019-2020

(July 1, 2019 - June 30, 2020)

presented by

Dana Bloomquist

CWA STRATEGIC COMMUNICATIONS

Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) • City of Albuquerque
Bernalillo County • Town of Bernalillo • Village of Corrales • Ciudad Soil and Water Conservation District Eastern
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Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA)

Outcomes Report

for

Fiscal Year 2019-2020

(July 1, 2019 - June 30, 2020)

presented by

Dana Bloomquist

CWA STRATEGIC COMMUNICATIONS

During the period from July 1, 2019, through June 30, 2020, the Mid Rio Grande Stormwater Quality Team (MRGSQT) continued its educational outreach activities. When pandemic quarantine restrictions took effect in March 2020, many in-person events were canceled and some ongoing outreach activities were reconfigured to accommodate this new reality. However, the majority of the year was business as usual. This report will highlight all activities, including the late-year programmatic pivots, including:

- Partnering with the Bosque Ecosystem Monitoring Program (BEMP), Arroyo Classroom and RiverXChange
- Continuing to maintain and update the keeptheriogrand.com website, as well as post relevant information to the Keep the Rio Grand Facebook page
- Participating in high-profile community events, including the Los Ranchos Lavender Festival, the NM State Fair Parade, the Corrales Harvest Festival, the Rio Rancho Children's Water Festival and New Mexico's Animal Humane Society's Doggie Dash and Dawdle
- Repairing and strengthening hardware for the team's interactive kiosk and moving it to Albuquerque's South Valley Library
- Participating in a variety of community events throughout the year

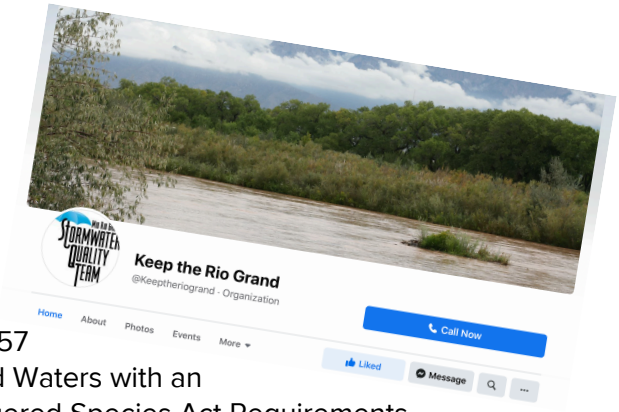
Team partners and supporters disseminated information on stormwater quality and pollution prevention through municipal water quality reports to stakeholders. Specialty advertising giveaways relating to stormwater quality awareness were ordered (or reordered) for use at public events. MRGSQT's annual budget for all these activities, excluding Type 9 items, donated hours by team members and funding for Arroyo Classroom, RiverXchange and BEMP is $103,000. The contractor, CWA Strategic Communications (CWA), donated $119.45 in services during the 12-month period. The following is a review of the activities in which the Team has participated.

There is a possibility that there was some duplication in the counts of individuals who attended more than one event, but numbers are close.

WEBSITE (www.keeptheriogrand.org)

CWA redesigned the website in October 2018 and has continued to maintain and update the content.

KEEP THE RIO GRAND FACEBOOK PAGE (www.facebook.com/Keeptheriogrand)



In conjunction with the SQT website, a Facebook page continues to post information educating the general public about stormwater team members, MS4-related topics, events and more. The page has 157 "likes" (a 4% increase from the previous year) and the team occasionally boosts posts during events to obtain more visibility.

Estimated number of individuals reached by this activity: 157

Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen Strategy; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.e Control of Floatables; Part 1.D.5.g, Public Education and Outreach on Stormwater Impacts.

Audience(s): Children, Adults

EVENTS

Between July 1, 2019, and June 20, 2020, MRGSQT members and their partner agencies reported participating in a total of 51 community outreach/educational events reaching adults and children.

Estimated number of individuals reached by these community outreach/education events: 84,675
Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen Strategy; Part 1.D.5.c(i)(f) and (h) Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.e Control of Floatables; Part 1.D.5.g, Public Education and Outreach on Stormwater Impacts.
Audience(s): Children, Adults

Details can be found in Exhibit 1 at the end of this report.

GENERAL MATERIALS DISTRIBUTION/STORMWATER AWARENESS SURVEY

As appropriate, team members distribute materials at events in return for event attendees filling out a stormwater awareness survey. Total distribution correlates to number of surveys completed.

STORMWATER QUALITY TEAM Inventory July 1, 2019, through June 30, 2020			
Item	***Starting Qty as of 7/1/2019***	***Distributed***	***Ending Qty as of 6/30/2020***
"Keep the Rio Grand" Bumper Stickers *	250		631
"Reduce Stormwater Pollution at Home" Brochure * **	84		4,365
Dog-Shaped Poop Bag Dispensers	1,750	355	1,395
"Don't Contaminate the River" Oval Stickers	3,750	1,659	2,091
Poop Emoji Squeezies	1,464	1,243	221
Morphing Fish Bags	2,500	720	1,780
Silicone Pet Food Can Lids	1,311	240	1,071
New Pet Rack Cards *	4,394		4,424
FOG Rack Cards	4,412	143	4,269
No Poop Fairy Rack Cards	4,427	278	4,149
Professionals Harmful Chemicals Rack Card	4,720	293	4,427
Reduce Stormwater Pollution at Home Rack Card *	4,358		4,365
Large Stormwater display – 8 ft	1	-	1
Tabletop Stormwater display – 6 ft	1	-	1
SQT 6' x 3' banner	1	-	1
TOTAL DISTRIBUTION		**4,931**	

** Inventory was inaccurate in the previous year, so these numbers show an increase from starting and ending quantities.*

*** These materials were reprinted; the distributed number reflects the net decrease.*

Estimated number of individuals reached by these community outreach/education events: 4,931
Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen

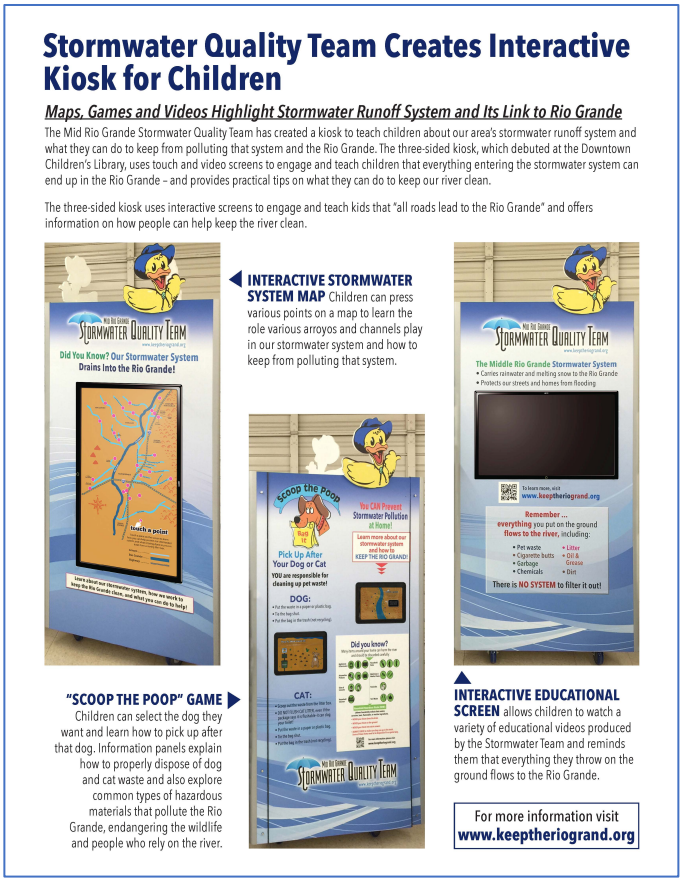
Strategy; Part 1.D.5.c(i)(f) and (h) Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.e Control of Floatables; Part 1.D.5.g, Public Education and Outreach on Stormwater Impacts.
Audience(s): Children, Adults

Sample surveys and survey analytics can be found in Exhibit 2 at the end of this report.

EDUCATIONAL ACTIVITIES

Educational Kiosk at Albuquerque's Rudolfo Anaya North Valley Public Library and South Valley Public Library

At the beginning of the year, the team's interactive kiosk was installed at the Rudolfo Anaya North Valley Public Library. Over time and regular use, it became obvious that the kiosk would need some maintenance and repair. CWA contracted with a moving company to pack and move the kiosk from the Rudolfo Anaya North Valley Public Library to the CWA offices at the end of December, where we assessed the damage and determined what repairs needed to be made. Staff from SSCAFCA made those repairs.



Arrangements were then made with staff at the South Valley Public Library to move the kiosk there. It was moved and set up March 12th, the week before the pandemic quarantine took effect. The library was reopened June 2nd.

The kiosk is a valuable educational tool and we look forward to its use as the libraries are better able to accommodate regular activity so that children can learn from these kiosk features:

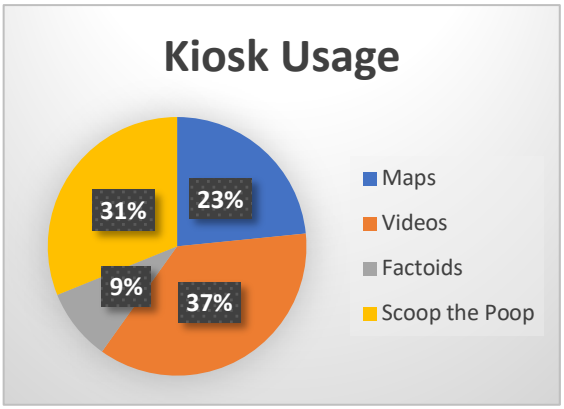
- An interactive stormwater system map of the Middle Rio Grande that allows children to press various points to learn the roles arroyos and channels play in the stormwater system and how to keep from polluting that system. The system stretches from Bernalillo on the north through Rio Rancho and into Albuquerque.
- A "Scoop the Poop" game that allows children to choose a dog and learn how to properly pick up after their dog. This is important because pet waste is a major source of E. coli contamination in the Rio Grande.
- An educational panel on common types of trash, debris and chemicals that pollute the Rio Grande, including appliances and electronics; automotive products such as oil, batteries and gasoline; fertilizers and pesticides; household cleaners; yard waste; and prescription and over-the-counter medicines.
- A touchscreen that includes facts about each arroyo and the Rio Grande.
- A touchscreen that allows viewers to select and watch stormwater-related videos:

- Rio the Duck
- Keep the Rio Grand
- Scoop the Poop!
- 100 Billion Gallons
- Arroyo Safety
- Respect Your Arroyos

Educational Kiosk Statistics

From July 1, 2019, to December 27, 2019, while the kiosk was installed at the Rudolfo Anaya North Valley Library, 36,192 people visited the library and had the opportunity to view information presented by the kiosk and interact with the kiosk. Of the 36,192 visitors, approximately 3,837 (primarily) children interacted with the kiosk.

From March 12, 2020, to June 30, 2020, after the kiosk was installed at the South Valley Library, only, 2,500 people visited the library (the library was closed March 16 – June 1) and had the opportunity to view information presented by the kiosk and interact with the kiosk. Of the 2,488 visitors, approximately 130 (primarily) children interacted with the kiosk. These numbers are understandably low, as visits to the library were still impacted by the pandemic and families continuing to self-quarantine.



	July 2019			
	Map	**Videos**	**Factoids**	**Scoop the Poop**
People	188	386	118	275
Touches	2,399	386	367	738

	August 2019			
	Map	**Videos**	**Factoids**	**Scoop the Poop**
People	156	301	97	212
Touches	1,751	301	252	534

	September 2019			
	Map	**Videos**	**Factoids**	**Scoop the Poop**
People	183	350	35	235
Touches	2,015	350	144	541

	October 2019			
	Map	**Videos**	**Factoids**	**Scoop the Poop**
People	145	268	0	200
Touches	1,991	268	0	443

	November 2019			
	Map	**Videos**	**Factoids**	**Scoop the Poop**
People	145	89	44	157
Touches	1,870	89	138	381

	June 2020			
	Maps	**Videos**	**Factoids**	**Scoop the Poop**
People	35	18	22	55
Touches	293	18	100	136

Total estimated number of people reached by these educational activities: 38,680
Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen Strategy; Part 1.D.5.c(i)(f) and (h) Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.e Control of Floatables; Part 1.D.5.g Public Education and Outreach on Stormwater Impacts.
Audience(s): Children, Adults

STUDENTS AND TEACHERS REACHED THROUGH PARTNER EDUCATIONAL PROGRAMS – ARROYO CLASSROOM, RIVERXCHANGE AND BOSQUE ECOSYSTEM MONITORING PROGRAM (BEMP)

Arroyo Classroom

The Arroyo Classroom program utilizes natural arroyos as outdoor classrooms and brings local animals into the classroom to educate and motivate third-grade students to respect the arroyos as important wildlife habitat. In the 2019-2020 school year, the program served 35 classes within the Rio Rancho Public School System, reaching approximately 37 teachers and 736 students. Their deliverables included 35 of 35 planned Watershed Presentations, 29 of 35 planned Arroyo Walks (six were not completed due to school closures because of the pandemic), 32 of 35 planned Bat Presentations (some classes doubled up due to a scheduling issue, but all classes were completed) and 35 of 35 planned Owl/Bird Presentations.



For more information, see Exhibit 3, Arroyo Classroom's 2019-2020 report to the Mid Rio Grande Stormwater Quality Team.

RiverXchange

RiverXchange is an innovative, long-term outreach program that integrates water resource topics with computer technology, student writing and a hands-on curriculum to meet specific, measurable outcomes.

Since 2007, the program has enabled upper elementary classes from New Mexico to become "high-tech pen pals" with classes outside the state to share what they learn about the geography, culture and ecology of their local river and watershed. This year there were more 1,254 total participants. Each student spends about 25 hours engaged with the program over the course of the school year. The

curriculum incorporates hands-on activities and multiple classroom presentations by local water resources experts. During the 2019-2020 season, 38 fifth-grade classes, 19 of which were from Title I schools, participated in RiverXchange in New Mexico. RiverXchange worked with 26 classes (607 students) in Bernalillo County and 12 classes (325) students in Sandoval County. A total of 40 teachers were involved. Even with the impacts of the COVID-19 pandemic and the transition to a new education coordinator mid-year, RiverXchange was able to run smoothly with only a few classes missing a presentation or a field trip due to school closures mid-March.



For more information, see Exhibit 4, RiverXchange's 2029-2020 report to the Mid Rio Grande Stormwater Quality Team.

Bosque Ecosystem Monitoring Program (BEMP)

The main objective of the Stormwater Science outreach education program of the Bosque Ecosystem Monitoring Program (BEMP) is to teach students that the health of the Rio Grande is directly related to the health of the surrounding watershed, as well as what their responsibilities and opportunities are to help "Keep the Rio Grand." The Stormwater Science program includes a 1.5-hour classroom activity, a 4- to 5-hour study trip to the Rio Grande and optional curriculum extensions incorporating hands-on data analysis, graphing and system modeling. During the 2019-2020 school year, 737 students participated in Stormwater Science activities in their classrooms, in the field, both or in outreach events. The classroom program was delivered to 245 students in 14 classrooms at 3 different schools in Albuquerque. E. coli monitoring was conducted by 35 students from La Academia de Esperanza, the University of New Mexico and Bosque School. 53 students participated in the Stormwater Study Trip. BEMP participated in the Children's Water Festival, working with 300 4th-grade students and 12 teachers. Stormwater Science presentations during summer programming were made to 200 students in grades K-8. Additionally, BEMP participated in a Storytime in the Park program where one activity was shared with 750 families. From the end of March through June, approximately 10,100 students received BEMP activities through the five Grab & Go meal locations and free Little Libraries around the city. About 5,800 of those students received an activity with a stormwater science focus. Additionally, materials were placed on their website and posted on their social media accounts.

For more information, see Exhibit 5, BEMP's 2019-2020 report to the Mid Rio Grande Stormwater Quality Team.

Total estimated number of people reached by these educational activities: 7,398
Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen

Strategy; Part 1.D.5.c(i)(f) and (h) Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.e Control of Floatables; Part 1.D.5.g, Public Education and Outreach on Stormwater Impacts; Part 1.D.5.h Public Involvement and Participation.
Audience(s): Children, Adults

PUBLIC EDUCATION CAMPAIGNS ON PROPER DISPOSAL OF FATS, OILS & GREASE

In November and December 2019, the cities of Albuquerque and Rio Rancho each ran public education campaigns on how to dispose of cooking grease properly. Their campaigns were timed to coincide with the holiday cooking season (Thanksgiving through Christmas).

In Albuquerque:
Outdoor Boards – two 14'x48' boards ran two weeks each month in November and December. The estimated number of people reached, with duplication, was 2,305,492.



Television Advertising – two two-week schedules each in November and December on Comcast (three zones), KOAT TV, KOB TV and KRQE TV. A total of 900 spots were placed for an estimated reach of 1,012,834.

Radio Advertising – two two-week schedules each in November and December targeting women 25+. A total of 491 spots ran on KOB AM/FM, KBQI FM, KPEK FM and KRST FM. Reach was estimated at 210,000.

In Rio Rancho:
Digital Outdoor Boards – Artwork ran on six boards during November and December. Alternating the red and green images, two boards ran for two weeks in November (11/18 – 12/1/19) and four boards ran one week (11/18 – 11/26/19). In December, artwork ran on all six boards for a week around Christmas (12/23 – 12/29/19). A total estimated audience of 184,321 adults (18 years of age and older) with duplication were reached.



Print Advertising – Two ads were each run on two separate pages in the *Rio Rancho Observer* (for a total of four ads) on one Sunday in November (11/24/19) and again on one Sunday in December (12/22/19) for a total of 128 column inches of ad space. Each ad was 4 columns by 4 inches in size. Circulation for the *Rio Rancho Observer* is 18,500.

Total estimated audience reached: 3,731,147
Permit Reference(s): Part 1.C.2 Discharges to Impaired Waters with and without an Approved TMDL; Part 1.C.3.a; Endangered Species Act Requirements, Dissolved Oxygen Strategy; Part 1.D.5.c(i)(f) Pollution Prevention/Good Housekeeping for Municipal Co-permittee Operations; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.g, Public Education and Outreach on Stormwater Impacts.
Audience(s): Children, Adults

ARROYO SAFETY CAMPAIGN

MRGSQT member SSCAFCA continued its Arroyo Safety Campaign by producing a 1.5-minute video with help from a local girl scout troop. After an initial discussion about arroyo safety and best practices for staying safe, the troop met several times to brainstorm and develop strategies to reach their peers. Their solution was to create a “rap” song with accompanying video to share the message. One of the girls wrote the rap lyrics and several others took video footage, which were incorporated into the video. The video was posted (and boosted) on the Arroyo Safety Facebook page, the Mid Rio Grande Stormwater Quality Team’s (MRGSQT) website www.keeptheriogrand.org, YouTube, Instagram and the SSCAFCA website.

KNOW YOUR ARROYOS

ENJOY • RESPECT • PROTECT

Walkin’ in arroyos is pretty great
But there’s a few rules, no need to hate
Ya’ wanna’ stay safe while havin’ fun
So sit right down and listen to em’.

Ya’ really don’t wanna’ get swept away,
So get outta’ there when the clouds turn gray!
Cause even if the clouds are far away
the rain travels fast – now hear me, OK?

Before you go out to have a blast
Look at the sky, and check the forecast!
And if you see gray clouds out to the west–
It’s a definite sign, no time to rest.

Get yourself to higher ground
Or better yet, get homeward bound
Stay off the unstable arroyo wall
It’s fragile, it’s weak and you might fall

Keep your trash from hittin’ the sand,
Cause’ it’ll end up in the Rio Grande
And pollution’s something you want no part of
Keep the river clean, treat it with love

Bein’ in arroyos is pretty great
But there’s a few rules, no need to hate
When you’re out on the mesa havin’ fun
Staying safe is rule number one!

Watch the video on the kiosk at the Rudolfo Anaya North Valley Library or at www.sscafca.org



In addition, an Arroyo Safety game to be played on mobile devices was developed and is now available on Apple's AppStore and GooglePlay. The goal is to teach basic Arroyo Safety messages through a fun game.



A news release was sent to the *Rio Rancho Observer* and social media announcements were made on the Arroyo Safety Facebook page, SSCAFCA's website and the Mid Rio Grande Stormwater Quality Team's website. All media provided the link to the AppStore and Googleplay to download the game.

Total estimated audience reached: 22,422
Permit Reference(s): Part 1.C.2 Discharges to Impaired Waters with an without an Approved TMDL; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen Strategy; Part 1.D.5.c(i)(f) and (h) Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.g, Public Education and Outreach on Stormwater Impacts.
Audience(s): All ages, especially middle school students

SEPTIC SYSTEM EDUCATION, OUTREACH AND ENFORCEMENT PROGRAM

Bernalillo County administers the septic system permitting program in the unincorporated portions of Bernalillo County under the Bernalillo County Wastewater Ordinance, ensuring the proper disposal of septic waste and proper operation and maintenance of septic systems. The wastewater ordinance was passed in 2015.

The County began a campaign in 2012 to get unpermitted systems permitted or properly abandoned, with an established goal of contacting a minimum of 300 unpermitted system or aging system owners per year. During the period July 1, 2019, to June 30, 2020, Bernalillo County had 579 total wastewater operator permits, 432 total wastewater system permits, as well as 67 septic abandonments and connections to public sewer utilities. Bernalillo County sent 813 letters through the "unpermitted and aging wastewater system campaigns" which resulted in an estimated 235 properties permitted (included in the total numbers listed above) for septic systems in FY2020.

Total estimated audience reached: 813
Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen Strategy; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.g, Public Education and

Outreach on Stormwater Impacts.
Audience(s): Adults

NM STATE FAIR PARADE FLOAT

AMAFCA created a float for the State Fair Parade, which takes place every September in Albuquerque. With signs saying "Keep the Rio Grand" and "There is No Poop Fairy," the team borrowed a concept developed by Greenville County Soil and Water Conservation District in South Carolina. A staff member dressed up as the "Poop Fairy" and tossed Poop Emoji Squeezies to the crowd.



Total estimated audience reached: 50,000
Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.e Control of Floatables; Part 1.D.5.g, Public Educatino and Outreadh on Stormwater Impacts; Part 1.D.5.h, Public Involvement and Participation.
Audience(s): All ages

CHILDREN'S WATER FESTIVAL

The 2019 Children's Water Festival (Festival) was held Monday, October 21, and Tuesday, October 22, at the Santa Ana Star Center in Rio Rancho. Some 1,437 students, mostly 4th-graders, attended from 61 classrooms at Placitas Elementary School, St. Thomas Aquinas and all of the elementary schools in Rio Rancho Public Schools. The students attend three 30-minute presentations in a half-day format. Eighteen presenters taught the classes and three to four schools were on site at one time. Schools attended a morning or afternoon program.



The principal focus of the Festival is to educate 4th-grade schoolchildren about water and its relationship to humans, animals and other natural resources in a fun and interactive atmosphere. The Festival's vision is to introduce students and teachers to new ideas, options and solutions so they will conserve and protect water for the future; lay the foundation for further learning; and reach as many students and teachers as possible.

Total estimated audience reached: 1,437
Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen Strategy; Part 1.D.5.c(i)(f) and (h) Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.e Control of Floatables; Part 1.D.5.g Public Education and Outreach on Stormwater

Impacts.
Audience(s): fourth-graders

For more information, see Exhibit 6, Children's Water Festival Report, 2019-2020.

DONATIONS/SPONSORSHIPS

Stormwater Team members donated $91,000 to organizations for additional educational and training programs.

MEMBER	AMOUNT DONATED	RECIPIENT	PURPOSE
AMAFCA	$2,000	Land and Water Summit	For Public Involvement and Participation
Bernalillo County	$5,000	Land and Water Summit	For Public Involvement and Participation
Bernalillo County	$75,000	BEMP	For Education and Outreach
City of Rio Rancho	$2,000	Land and Water Summit	For Public Involvement and Participation
Mid Rio Grande Stormwater Quality Team	$5,000	Land and Water Summit	For Public Involvement and Participation
SSCAFCA	$2,000	Land and Water Summit	For Public Involvement and Participation
	$91,000		

ESTIMATED TOTAL NUMBER OF PEOPLE REACHED THROUGH ALL ADVERTISING, EDUCATIONAL AND PUBLIC OUTREACH ACTIVITIES DURING 2019-2020

Obviously, some people were reached by more than one activity, but in gross numbers an estimated **3,943,687** people were reached with a stormwater quality/stormwater pollution prevention message during the 2019-2020 fiscal year.

Exhibit 1

Event Participation 2019-2020

NAME OF PROGRAM/EVENT	EVENT DATE	TYPE OF AUDIENCE	MS4 CATEGORY	TOTAL REACHED	NOTES
2019					
"There is No Poop Fairy" float in State Fair Parade	9/17/19	All Ages	AS, PW, SWP	50,000	Provided education information about Scoop the Poop, There is No Poop Fairy, why it is important to pick up after your pet as well as proper household hazardous waste disposal.
Corrales Harvest Festival	9/28 & 9/29/19	All Ages	AS, PW, SWP	10,000	Booth handing out information, swag and collecting surveys to determine public knowledge regarding stormwater issues.
Rio Rancho Children's Water Festival	10/21 & 10/22/19	Elementary Students and Teachers	SWP	1,437	Students attended from 61 classrooms; Placitas Elementary School, St. Thomas Aquinas and all of the elementary schools in Rio Rancho Public Schools. Students attend three 30-minute presentations in a half-day format. Up to 3 to 4 schools were on site at one time. Schools attended a morning or afternoon session.
Animal Humane's Doggie Dash and Dawdle	11/3/19	All Ages	AS, PW, SWP	4,000	Animal Humane's signature event and largest fundraiser; booth handing out information, swag and collecting surveys.
Georgia O-Keefe Elementary	12/5/19	All Ages	SWP	24	Planted 17 poles.
Zia Elementary	12/6/19	All Ages	SWP	20	Planted 17 poles.
John Baker Elementary	12/19/19	All Ages	SWP	29	Planted 25 poles.
EPA Region6 Stormwater Conference – Responding to Change: Dynamic Stormwater Management in Economic, Political and Climatic Transitions, Denton, TX	7/28 – 8/1/19	Adults	SWP	75	Kali Bronson, Bernalillo County Stormwater Program Compliance Manager, attended, served as a session moderator, and presented at the 2019 EPA Region 6 Stormwater Conference in Denton, TX. Attendance at the Bernalillo County presentation is estimated at 75 people.
Rocky Mountain Youth Corps	July 2019	Adults, Children	AS	53	In partnership with Bernalillo County Parks and Recreation, the youth corps participants worked to support and expand wildlife habitat throughout the South Valley while also leading environmental education activities for local youth. 8 Corps members and 2 Supervisors completed 1,400 hours of service, educated 43 local youth and led 4 field trips.
Southwest Conservation Corps	July 2019	Adults	SWP	5	Participants completed approximately 800 hours of work removing invasive species, constructing a trellis, removing fence and planting cottonwoods at Sanchez Farm Open Space the the Westside Community Center.
Valle de Oro Youth Corps	July 2019	Youth	SWP	5	Participants completed approximately 60 hours of work restoring Tijeras Creek, adobe hornos and performing La Plazita Garden maintenance.
2019 Arid LID Workshop	9/19 – 9/20/19	Adults	SWP	66	Arid LID is a coalition of interdisciplinary professionals in the Middle Rio Grande area working to promote the use of GSI and LID in development. The coalition held a workshop which brought together policy makers, engineers, biologists, developers, and others to educate and make future plans for GSI/LID opportunities. Attendance included 66 people.

NAME OF PROGRAM/EVENT	EVENT DATE	TYPE OF AUDIENCE	MS4 CATEGORY	TOTAL REACHED	NOTES
2019					
East Mountain Celebration	9/22/19	All Ages	SWP	1,500	This is a family-friendly event and kids enjoyed free activities like face painting, fun jumps, a petting zoo and obstacle courses. Both Bernalillo County and Tijeras Creek Watershed Collaborative had a water quality booth which provided information to educate County residents on stormwater quality, water conservation methods and incentive programs, and groundwater monitoring programs.
Tijeras Creek Watershed Collaborative Youth Conservation Corps Workday	10/5/19	All Ages	SWP	31	Bernalillo County is a partner in the Tijeras Creek Watershed Collaborative. The Youth Conservation Corps completed a workday helping to restore the creek. The group were also weeding in the area and repaired a spillway and berms. 31 people participated in the event and performed approximately 160 volunteer hours.
2020					
Georgia O'Keefe Elementary	1/9/20	All Ages	SWP	43	Planted 28 poles.
John Baker Elementary	1/10/20	All Ages	SWP	21	Planted 25 poles.
North Valley Elementary	2/6/20	All Ages	SWP	28	Planted 16 poles.
Sandia Vista Elementary	2/7/20	All Ages	SWP	34	Planted 28 poles.
North Valley Academy	2/13/20	All Ages	SWP	32	Planted 30 poles.
Martin Luther King Elementary	2/14/20	All Ages	SWP	49	Planted 30 poles.
Duranes Elementary	2/15/20	All Ages	SWP	31	Planted 26 poles.
7 Bar Elementary	2/20/20	All Ages	SWP	41	Planted 20 poles.
Monte Vista Elementary	2/21/20	All Ages	SWP	27	Planted 17 poles.
7 Bar Elementary	2/27/20	All Ages	SWP	32	Planted 24 poles.
Martin Luther King Elementary	2/28/20	All Ages	SWP	62	Planted 39 poles.
Zia Elementary	3/5/20	All Ages	SWP	49	Planted 17 poles.
Monte Vista Elementary	3/6/20	All Ages	SWP	53	Planted 32 poles.
Cochiti Elementary	3/11/20	All Ages	SWP	46	Planted 38 poles.
Martin Luther King Elementary	3/12/20	All Ages	SWP	57	Planted 38 poles.
Holy Ghost	1/23/20	All Ages	SWP	63	Planted 53 poles.
Cottonwood Gulch/RMYC	1/24/20	All Ages	SWP	24	Planted 41 poles.
Nahalot Shalom	1/26/20	All Ages	SWP	26	Planted 33 poles.
Peace Corps	2/8/20	All Ages	SWP	39	Planted 60 poles.
Congregation Albert	2/9/20	All Ages	SWP	34	Planted 28 poles.
Mountain Mahogany Families	2/29/20	All Ages	SWP	19	Planted 33 poles.
Sandia Civitans	3/7/20	Adults	SWP	16	Planted 100 poles.
Bernalillo County Septic Systems Permits, "Unpermitted" and Aging System Wastewater System Campaign Outreach Program	7/1/19 – 6/30/20	Adults	SSS	813	Bernalillo County had 579 total wastewater operator permits, 432 total wastewater system permits, as well as 67 septic abandonments and connections to public sewer utilities. Bernalillo County sent 813 letters through the "unpermitted and aging wastewater system campaigns" which resulted in an estimates 235 properties permitted (included in the total numbers listed above) for septic systems in FY2020.

NAME OF PROGRAM/EVENT	EVENT DATE	TYPE OF AUDIENCE	MS4 CATEGORY	TOTAL REACHED	NOTES
2020					
BernCo at A Glance Monthly Newsletters	7/1/19 – 6/30/20	Adults	SWP	12,000	An estimated 500 hardcopies of each newsletter are printed and distributed via County offices and provided at neighborhood association meetings by the neighborhood coordinator. The neighborhood coordinator also sends the monthly electronic newsletter to all County and City neighborhood associations. It is estimated that these monthly newsletters reach 1,000 people per month and 12,000 people annually.
Bernalillo County HHW Neighborhood Collection Events	7/1/19 – 6/30/20	AdAults	HHW	241	In FY2020, Bernalillo County hosted 7 HHW weekend neighborhood collection events in association with mini-cleanup events. During the 7 events, 241 individuals participated and 5,206 pounds of HHW were collected. An HHW report is available upon request. The HHW report includes historical trend analysis for this outreach program as well as specific collection data per location.
Bernalillo County Solid Waste Illegal Dumping Partnership (IDP) Educational Outreach	7/1/19 – 6/30/20	Adults	HHW	1,200	Hosted 15 community cleanup events. Participated in a virtual Junk Jog with the COA. Created a Tire Recycling and Disposal committee to educate business on the proper way to dispose of tires. Visits began September 2019 and will be ongoing. Distributed to date over 1,200 Carlos Coyote coloring books to various entities in the community.
Bosque Environmental Monitoring Program (BEMP) Monitoring and Educational Outreach Programs	7/1/19 – 6/30/20	Children	AS, ID, PW		Bernalillo County classrooms participated in monthly monitoring programs at 33 monitoring sites. BEMP provided in-classroom and field-based educational programming for 50 Bernalillo county schools. Bernalillo County gave $75,000 in support of this program.
Bernalillo County Employee Training – Stormwater Quality Training and IDDE Training	7/1/19 – 6/30/20	Adults	SWP	71	Bernalillo County began using a video training service, Excal Visual, Inc., in FY 2018. In FY 2020, 41 people completed the IDDE training and 30 completed the Rain Check Training (general stormwater quality training).
Master Naturalists Volunteering at Bernalillo County Open Space	7/1/19 – 6/30/20	Adults	SWP		Master Naturalists volunteer at the Bernalillo County Open Space workday events as well as with tour and education events for the public. Since the program began in 2010, there have been more than 500 registered volunteers. In FY 2020, there were 906 documented volunteer hours.
RiverXchange Program by Ciudad Soil and Watter Conservation District	2019 – 2020 Academic Year	Adults, Children	SWP	972	Bernalillo County supports RiverXchange which gave a series of presentations and hosted field trips for 38 5th-grade classes. Program elements included addressing topics in stormwater, wastewater, drinking water, water use in agriculture and planting field trips. Attendance included 932 students and 40 teachers.

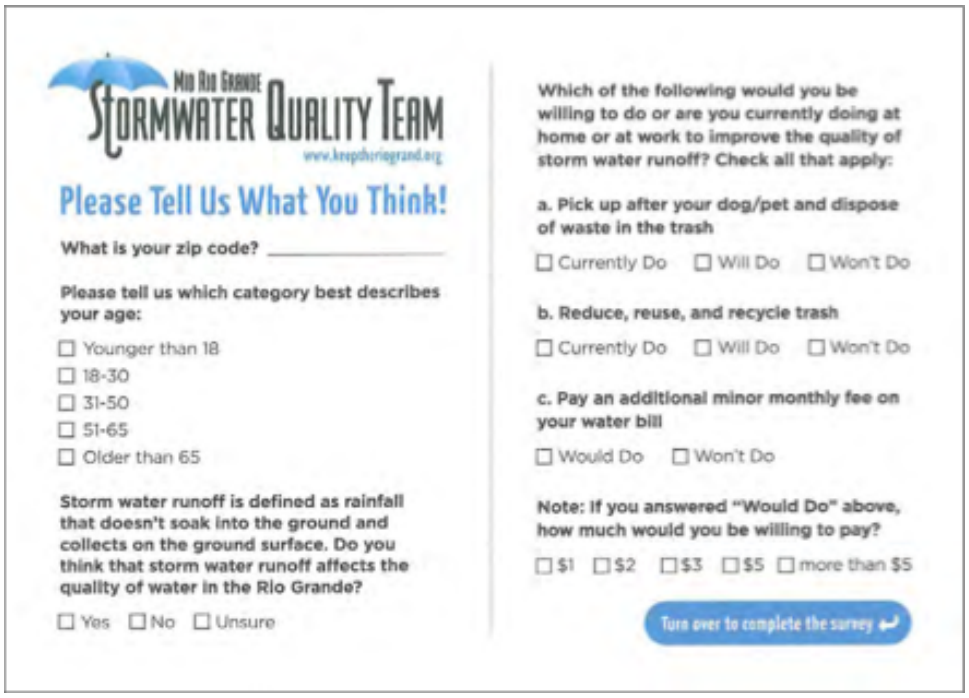
NAME OF PROGRAM/EVENT	EVENT DATE	TYPE OF AUDIENCE	MS4 CATEGORY	TOTAL REACHED	NOTES
2020					
Arroyo Classroom Program, by Ciudad Soil and Water Conservation District	2019 – 2020 Academic Year	Adults, Children	SWP	736	The program, partially funded by Bernalillo County, reaches 736 students in 35 classes. Both in-class presentations and a field trip to an arroyo habitat were part of the program. Students built a watershed model to facilitate their understanding of surface water pollution and prevention.
Annual Bosque Planting Day	2/22/20	Adults	SWP	167	Bernalillo County supported the Bosque Cultural Healing Garden Project for a day of reforestation with volunteers revitalizing the Albuquerque Bosque. Attendance is estimated at 167 volunteers.
Sponsorship of New Mexico Land and Water Summit	2/27 – 2/28/20	Adults	SWP	154	Bernalillo County provided the New Mexico Land and Water Summit with a sponsorship of $5,000. Topics discussed at the summit included green stormwater infrastructure, watershed restoration and management, and public outreach and engagement. Atendees included 154 professionals in the fields of hydrology, landscape architecture, landscaping and engineering. The field trips included two Bernalillo County projects – Alameda Drain Train and South 2nd Street Project.
New Mexico Arbor Day Celebration	3/14/20	All Ages	SWP		Bernalillo County sponsored an event promoting tree care, environmental responsibility and community involvement in making Albuquerque "greener." The event included tree care and planting demos.
Talking Talons Youth Leadership	4/29/20	Children	SWP		Bernalillo County provided online resources and worksheets to teach 6th-graders about land use impacts on stormwater and the river, human activities and their impacts, and things kids can do to reduce stormwater pollution.
Pueblo of Isleta Environment Department Alternative 2020 Environmental Fair	6/26/20	All Ages	SWP	250	Bernalillo County put together an online activity book with educational information about pet waste and watershed health for 250 fair participants
SSCAFCA Facility Outreach	2019-2020	All Ages	SWP		SSCAFCA deployed approximately 100 "There is no Poop Fairy" signs at all SSCAFCA-owned facilities to inform the public and encourage them to scoop and remove animal waste

AS: Animal Sources
CON: Construction
HHW: Household Hazardous Waste
ID: Illicit Discharges
PW: Pet Waste
SSS: Septic & Sanitary Sewer Systems
SWP: General Stormwater Pollution Prevention

Exhibit 2

Sample Surveys and Survey Analytics 2019-2020

The Mid Rio Grande Storm Water Quality Team organized a short survey addressing various water quality issues affecting the Rio Grande. The graphs on the following pages reflect the tallied results of the 10-question voluntary questionnaire from May 2014 – November 2019. The total number of surveys recorded are 5,830.



Mid Rio Grande Stormwater Quality Team
www.keepthatriogrand.org

Please Tell Us What You Think!

What is your zip code? _____

Please tell us which category best describes your age:

- ☐ Younger than 18
- ☐ 18-30
- ☐ 31-50
- ☐ 51-65
- ☐ Older than 65

Storm water runoff is defined as rainfall that doesn't soak into the ground and collects on the ground surface. Do you think that storm water runoff affects the quality of water in the Rio Grande?

☐ Yes ☐ No ☐ Unsure

Which of the following would you be willing to do or are you currently doing at home or at work to improve the quality of storm water runoff? Check all that apply:

a. Pick up after your dog/pet and dispose of waste in the trash

☐ Currently Do ☐ Will Do ☐ Won't Do

b. Reduce, reuse, and recycle trash

☐ Currently Do ☐ Will Do ☐ Won't Do

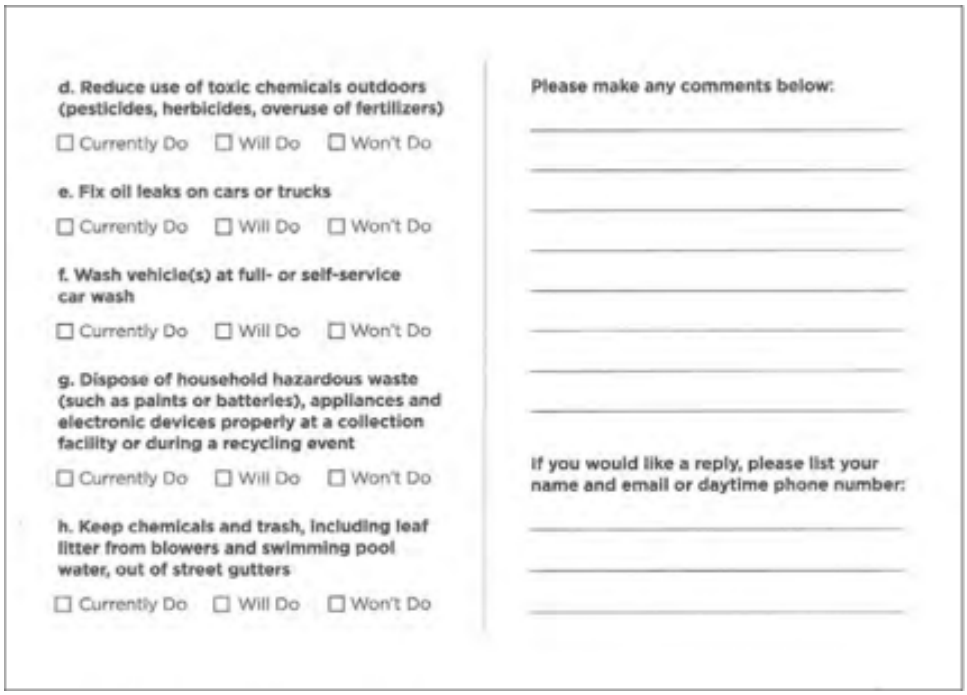
c. Pay an additional minor monthly fee on your water bill

☐ Would Do ☐ Won't Do

Note: If you answered "Would Do" above, how much would you be willing to pay?

☐ $1 ☐ $2 ☐ $3 ☐ $5 ☐ more than $5

Turn over to complete the survey



d. Reduce use of toxic chemicals outdoors (pesticides, herbicides, overuse of fertilizers)

☐ Currently Do ☐ Will Do ☐ Won't Do

e. Fix oil leaks on cars or trucks

☐ Currently Do ☐ Will Do ☐ Won't Do

f. Wash vehicle(s) at full- or self-service car wash

☐ Currently Do ☐ Will Do ☐ Won't Do

g. Dispose of household hazardous waste (such as paints or batteries), appliances and electronic devices properly at a collection facility or during a recycling event

☐ Currently Do ☐ Will Do ☐ Won't Do

h. Keep chemicals and trash, including leaf litter from blowers and swimming pool water, out of street gutters

☐ Currently Do ☐ Will Do ☐ Won't Do

Please make any comments below:

_____

_____

_____

_____

_____

_____

_____

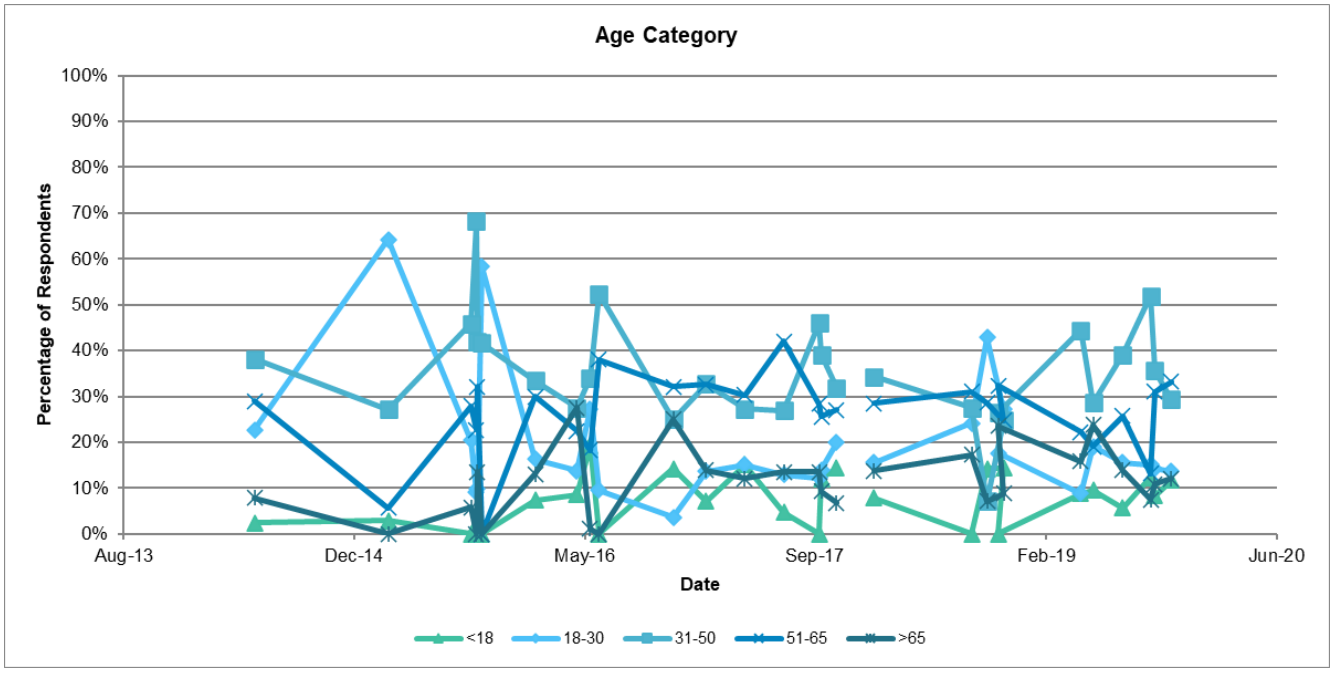
_____

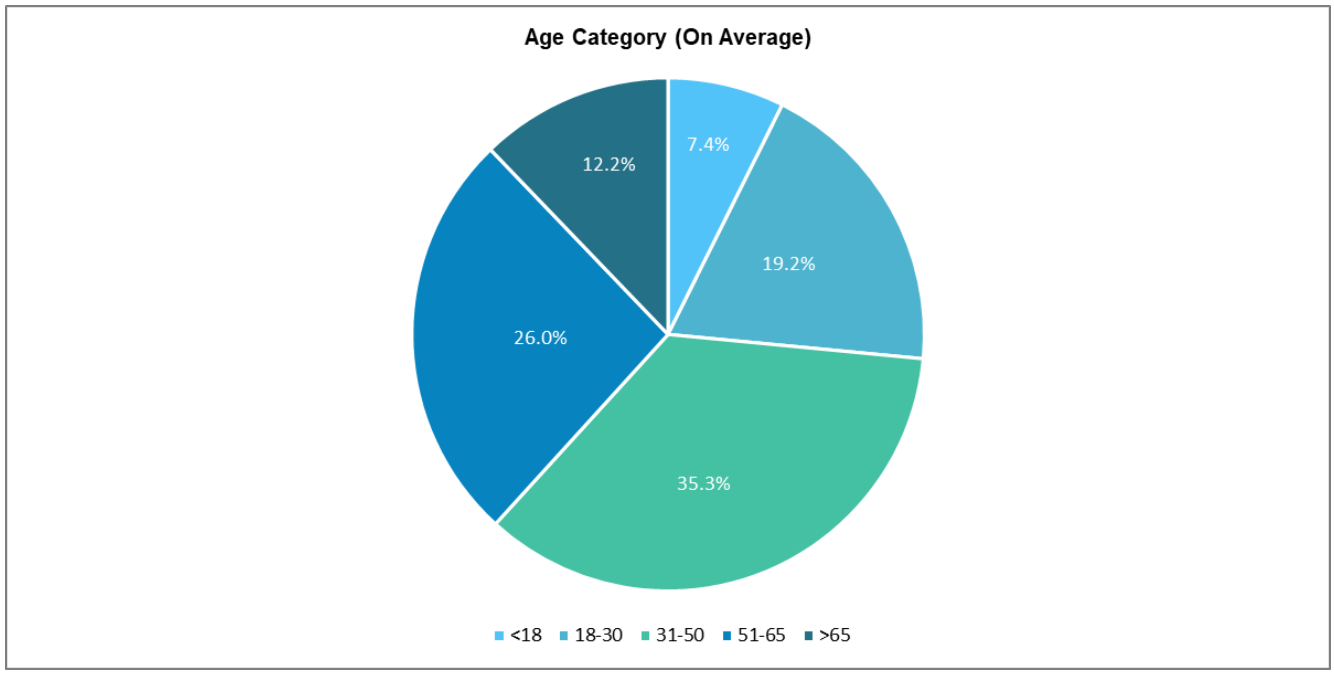
If you would like a reply, please list your name and email or daytime phone number:

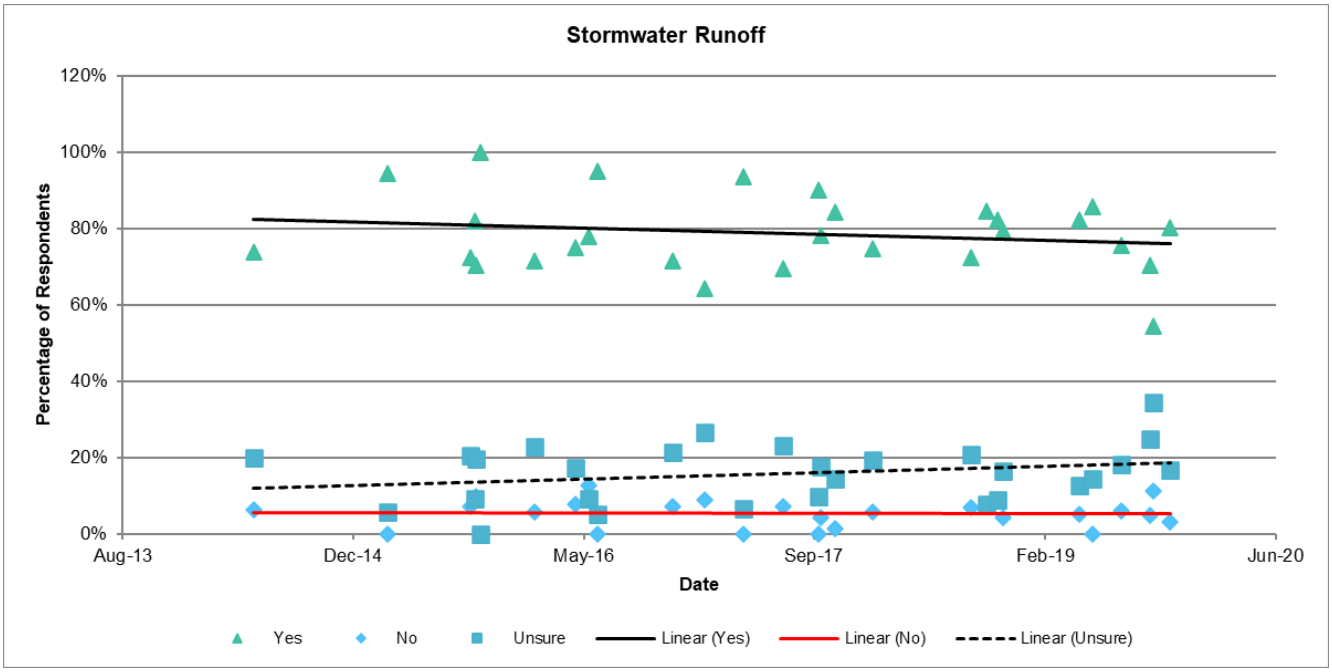
_____

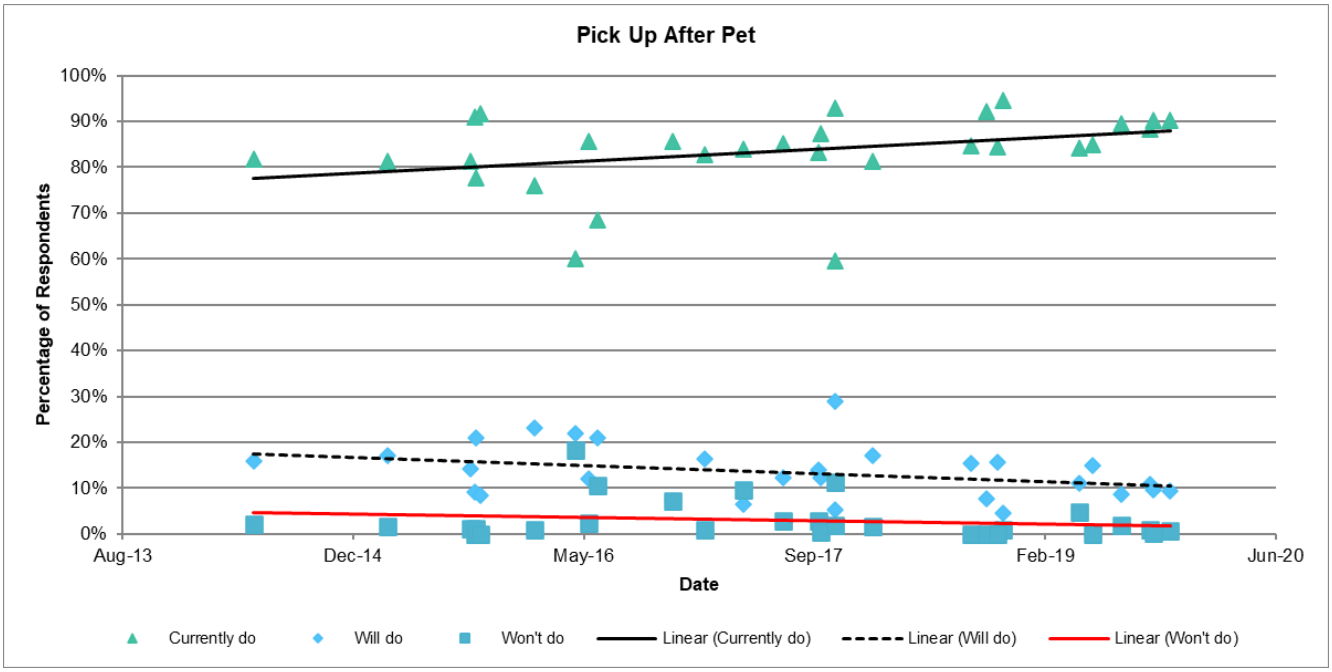
_____

_____


Age Category
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
<18
18-30
31-50
51-65
>65


Age Category (On Average)
7.4%
19.2%
35.3%
26.0%
12.2%
<18
18-30
31-50
51-65
>65


Stormwater Runoff
120%
100%
80%
60%
40%
20%
0%
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Yes
No
Unsure
Linear (Yes)
Linear (No)
Linear (Unsure)


Pick Up After Pet
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
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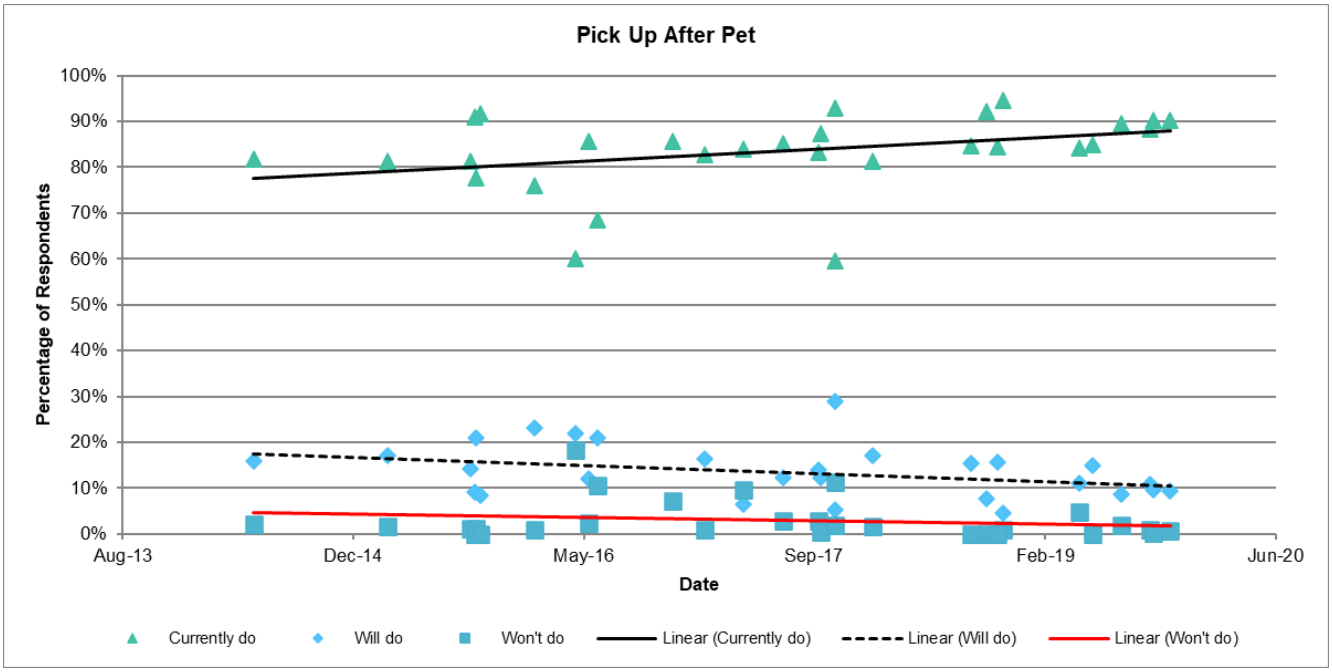
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Currently do
Will do
Won't do
Linear (Currently do)
Linear (Will do)
Linear (Won't do)


Pick Up After Pet
Percentage of Respondents
100%
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Aug-13
Dec-14
May-16
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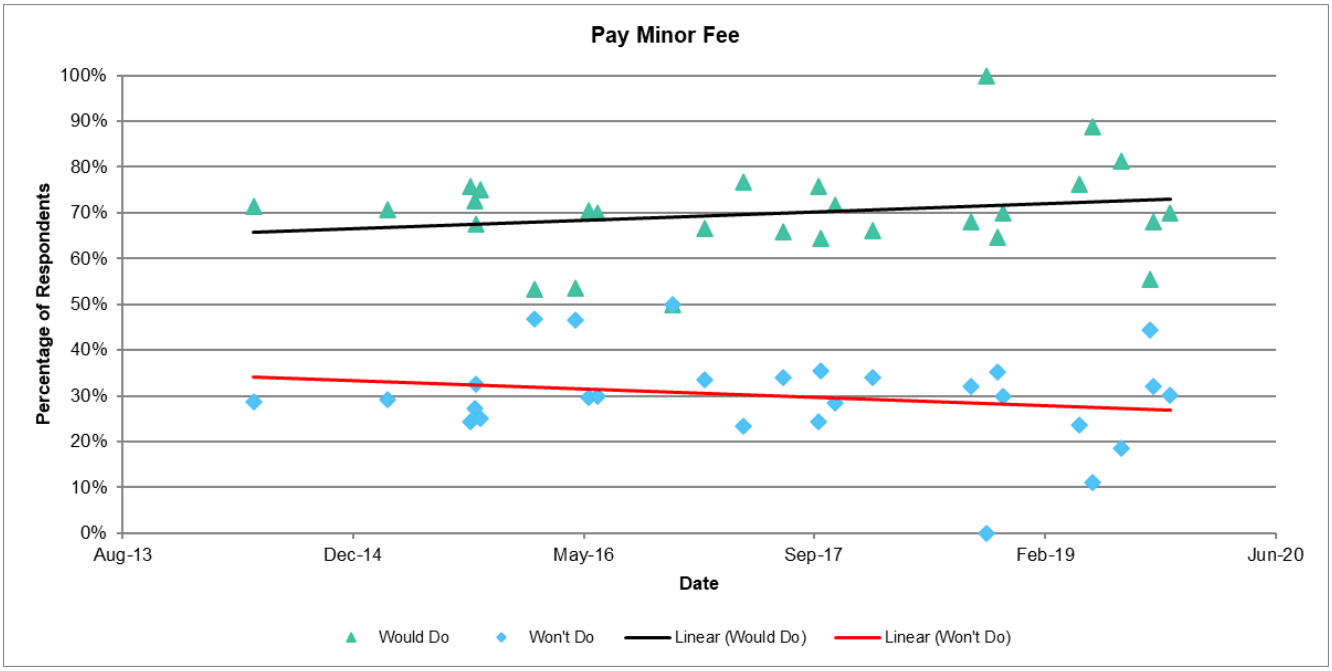
Feb-19
Jun-20
Date
Currently do
Will do
Won't do
Linear (Currently do)
Linear (Will do)
Linear (Won't do)


Pay Minor Fee
Percentage of Respondents
100%
90%
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Aug-13
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May-16
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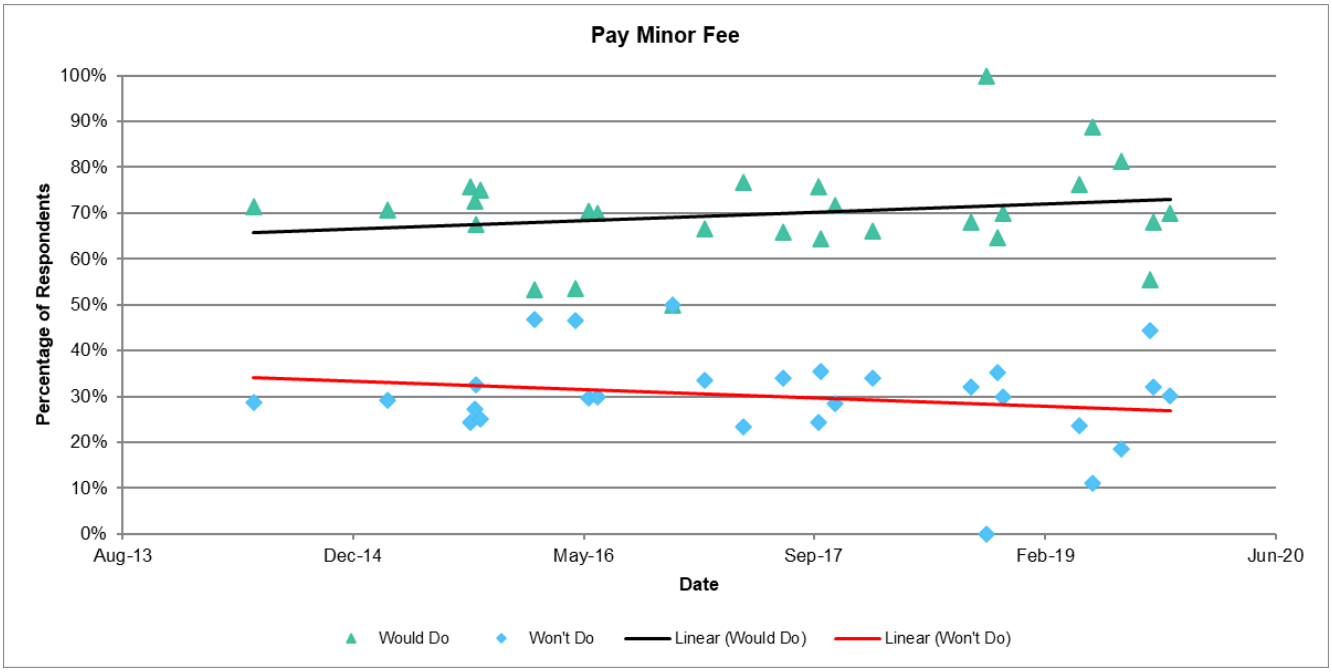
Feb-19
Jun-20
Date
Would Do
Won't Do
Linear (Would Do)
Linear (Won't Do)


Pay Minor Fee
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Percentage of Respondents
Aug-13
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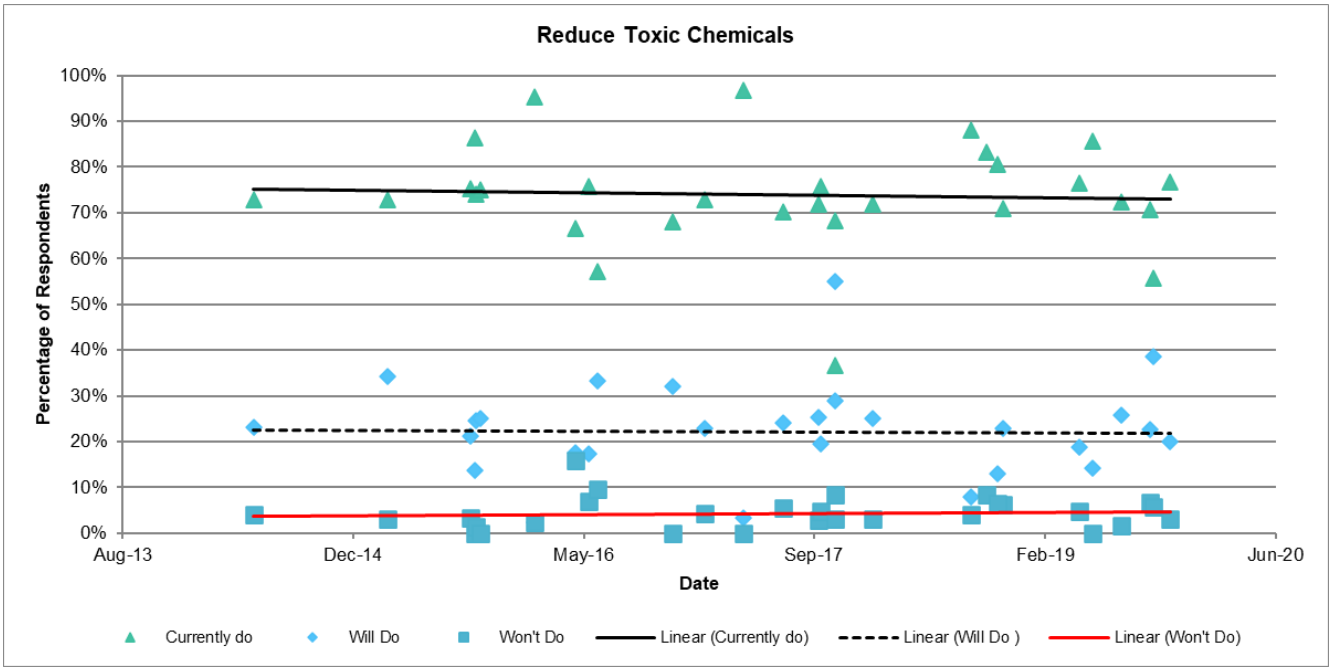
May-16
Sep-17
Feb-19
Jun-20
Date
Would Do
Won't Do
Linear (Would Do)
Linear (Won't Do)


Reduce Toxic Chemicals
100%
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20%
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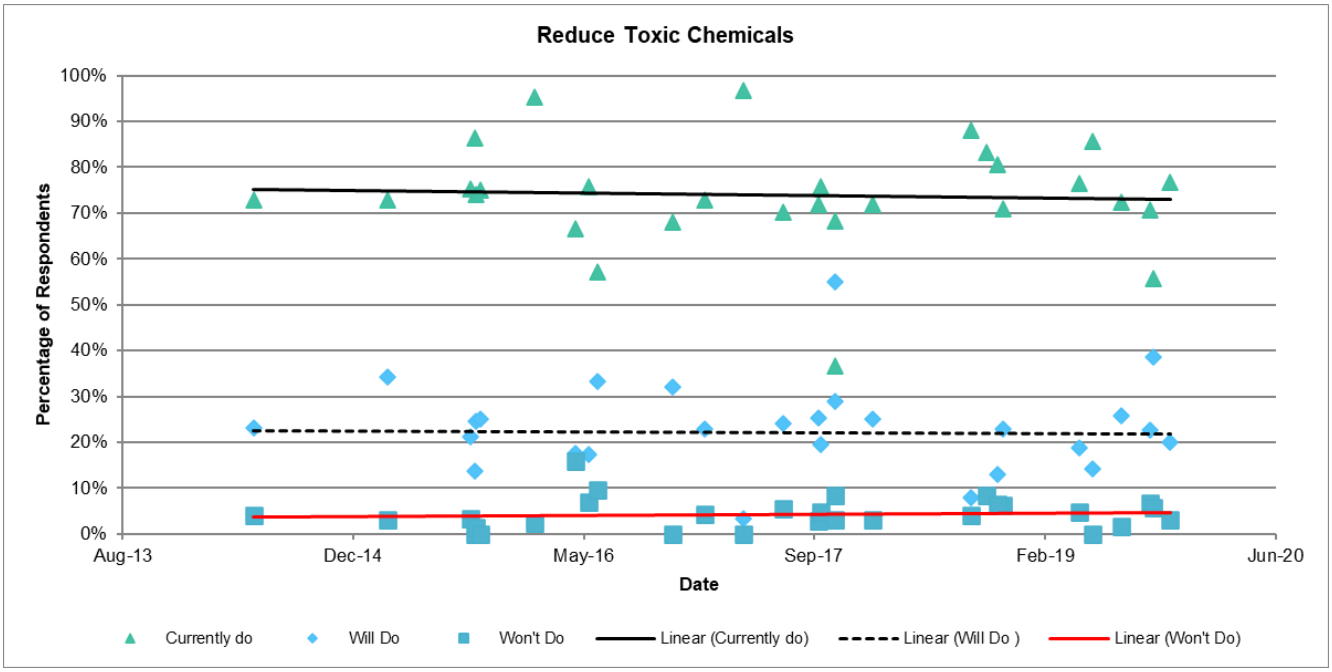
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Currently do
Will Do
Won't Do
Linear (Currently do)
Linear (Will Do)
Linear (Won't Do)


Reduce Toxic Chemicals
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0%
Percentage of Respondents
Aug-13
Dec-14
May-16
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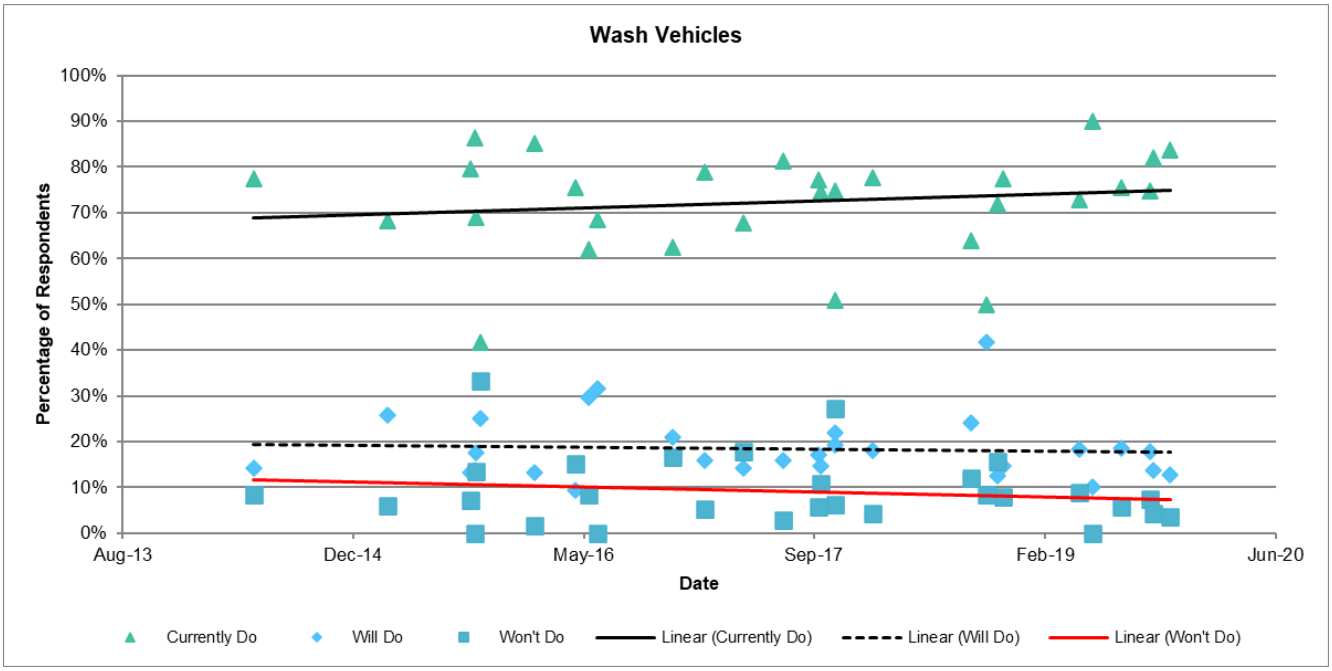
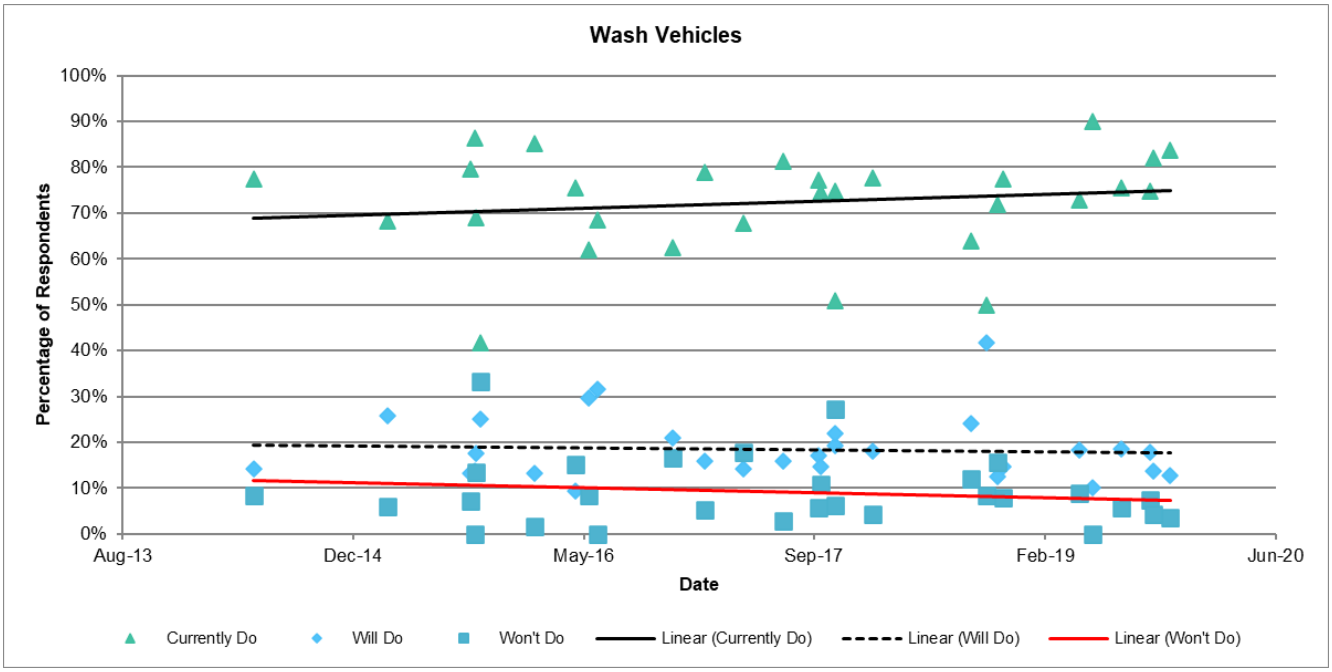
Feb-19
Jun-20
Date
Currently do
Will Do
Won't Do
Linear (Currently do)
Linear (Will Do)
Linear (Won't Do)


Wash Vehicles
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Currently Do
Will Do
Won't Do
Linear (Currently Do)
Linear (Will Do)
Linear (Won't Do)


Wash Vehicles
100%
90%
80%
70%
60%
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40%
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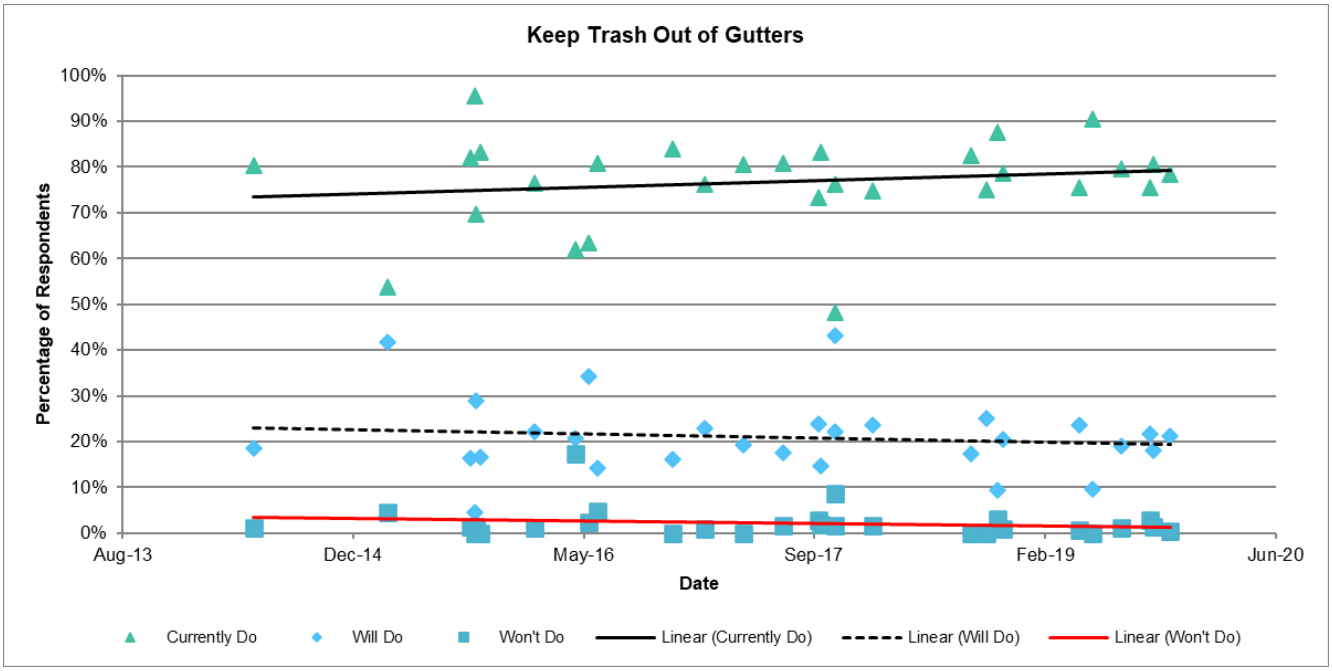
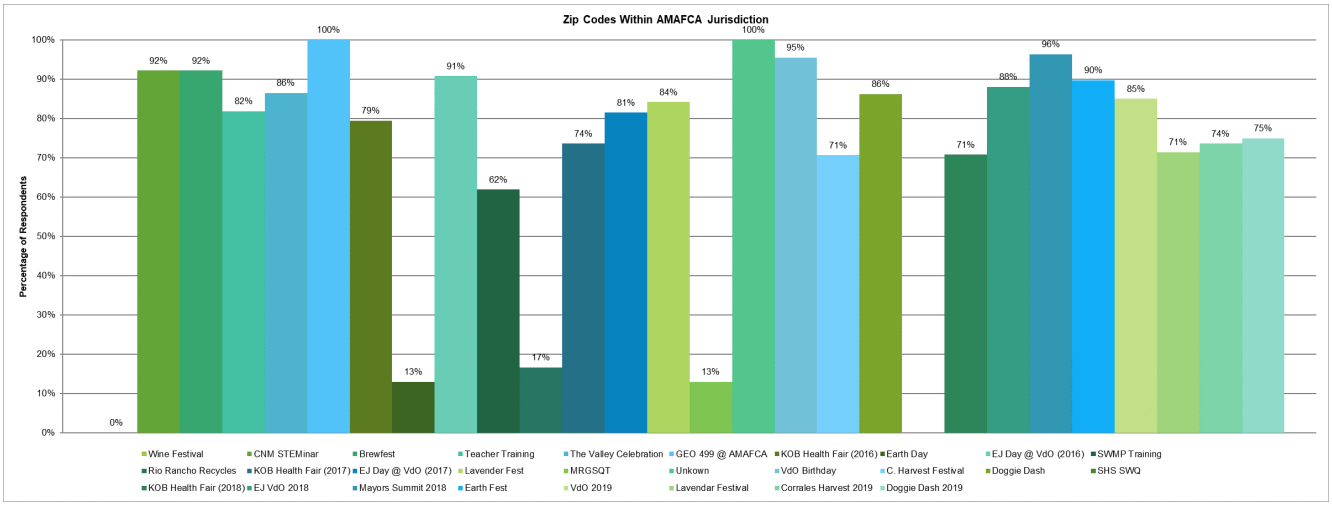
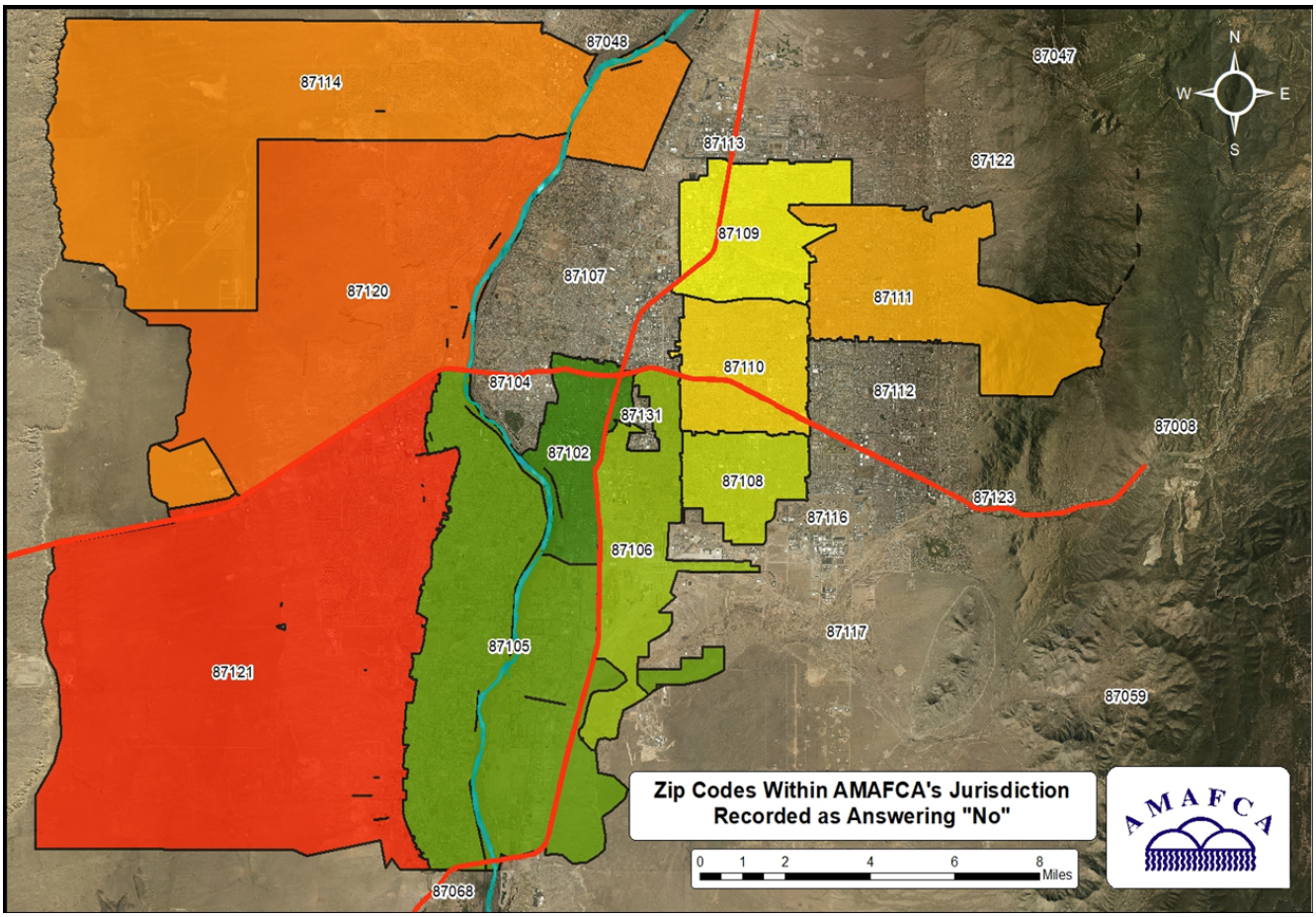
10%
0%
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Currently Do
Will Do
Won't Do
Linear (Currently Do)
Linear (Will Do)
Linear (Won't Do)


Keep Trash Out of Gutters
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Currently Do
Will Do
Won't Do
Linear (Currently Do)
Linear (Will Do)
Linear (Won't Do)


Zip Codes Within AMAFCA Jurisdiction
Percentage of Respondents
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0%
92%
92%
82%
86%
100%
79%
13%
91%
62%
17%
74%
81%
84%
13%
100%
95%
71%
86%
71%
88%
96%
90%
85%
71%
74%
75%
Wine Festival
CNM STEMinar
Brewfest
Teacher Training
The Valley Celebration
GEO 499 @ AMAFCA
KOB Health Fair (2016)
Earth Day
EJ Day @ VdO (2016)
SWMP Training
Rio Rancho Recycles
KOB Health Fair (2017)
EJ Day @ VdO (2017)
Lavender Fest
MRGSQT
Unkown
VdO Birthday
C. Harvest Festival
Doggie Dash
SHS SWQ
KOB Health Fair (2018)
EJ VdO 2018
Mayors Summit 2018
Earth Fest
VdO 2019
Lavendar Festival
Corrales Harvest 2019
Doggie Dash 2019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87047
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87113
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87109
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87120
87111
87110
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87112
87131
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87123
87116
87106
87117
87105
87121
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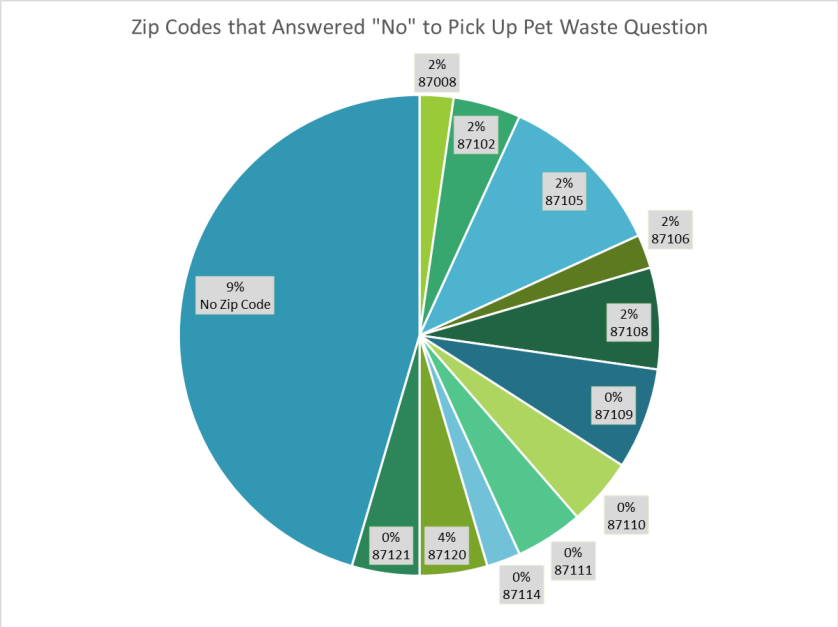
0 1 2 4 6 8
Miles
AMAFCA



Answered No to Pick up Pet Waste	*Number of Votes*	*% of Votes*
79109	1	2%
79782	1	2%
87008	1	2%
87043	1	2%
87044	1	2%
87047		0%
87048		0%
87059		0%
87068		0%
87102	2	4%
87104		0%
87105	5	9%
87106	1	2%
87107		0%
87108	3	5%
87109	3	5%
87110	2	4%
87111	2	4%
87112		0%
87113		0%
87114	1	2%
87116		0%
87117		0%
87120	2	4%
87121	2	4%
87122		0%
87123		0%
87124	1	2%
87131		0%
87144	3	5%
87528	1	2%
87557	1	2%
88310	1	2%
No Zip Code	20	36%
87024	1	2%

Statistics for Pet Waste Question

Item	*# of Respondents*	*% of Respondents*
Total Number Who Answered No	56	
Total % w/in AMAFCA Jurisdiction		43%
Total Who Answered "Pet" Question	2,774	
% of Total "Pet" Votes		1.28%
Total “Already Do”	4,526	84.76%
Total “Will Do”	756	14.16%
Total “Wont Do”	108	2.02%
Total Question (Summation)	5,340	100.94%
Error		1.04%

Survey Question	Answer	Mean ± MoE
Stormwater Runoff	Yes	78%±10%
	No	06%±4%
	Unsure	16%±7%
Pick up after pet	Currently do	83%±11%
	Will do	14%±7%
	Won't do	03%±3%
Reduce, Recycle, and Recycle Trash	Currently do	89%±10%
	Will do	10%±6%
	Won't do	01%±2%
Pay Minor Fee	Would Do	70%±11%
	Won't Do	30%±9%
Reduce Use of Toxic Chemicals	Currently do	74%±11%
	Will Do	22%±9%
	Won't Do	05%±4%
Fix Oil Leaks on Vehicle(s)	Currently do	79%±12%
	Will Do	17%±7%
	Won't Do	04%±3%
Wash Vehicles at Full or Self Service Car wash	Currently Do	73%±13%
	Will Do	18%±8%
	Won't Do	09%±5%
Dispose Household Hazardous Waste	Currently Do	75%±12%
	Will Do	21%±8%
	Won't Do	03%±3%
Keep Chemicals/Trash Out of Street Gutters	Currently Do	77%±12%
	Will Do	20%±8%
	Won't Do	03%±3%

Exhibit 3

Arroyo Classroom
2019-2020 Final Report

Arroyo Classroom

2019-2020 final report

submitted by
Erin Blaz, CSWCD
May 2020

SUMMARY

The Arroyo Classroom program utilizes our natural arroyos as outdoor classrooms and brings local animals into the classroom to motivate 3rd graders to respect the arroyos as important wildlife habitat. Orilla Consulting, LLC developed the program in 2012 and initially implemented the program for 7 classes at Maggie Cordova Elementary in Rio Rancho. In 2013, the program grew to serve 20 classes. On July 1st, 2015, Orilla Consulting, LLC transferred the program to Ciudad Soil and Water Conservation District as part of the larger education and outreach efforts we are involved in throughout Bernalillo and Sandoval Counties. In the 2019-2020 school year, we served 35 classes within Rio Rancho Public Schools, reaching approximately 37 teachers and 736 students.

Participating Schools

SCHOOL	Number of classes	Number of Students
Enchanted Hills Elem.	6	104
Martin Luther King Elem. *	6	145
Sandia Vista Elem.	4	79
Maggie Cordova Elem. *	7	151
Cielo Azul Elem. *	6	132
Puesta del Sol Elem. *	6	125
TOTALS	**35**	**736**

* Title 1 school

Sponsor

- Southern Sandoval County Arroyo and Flood Control Authority (SSCAFCA)

Sponsor provided a total of $17,762.77 in cash.

Deliverables:

All presentations were completed except for 6 Arroyo Walks due to school closures due to the global pandemic.

- Watershed Presentations: 35:35
- Arroyo Walk: 29:35
- Bat Presentations: 32:35 (some classes doubled up due to a scheduling issue, all classes completed)
- Owl/Bird Presentations: 35:35

Program Description

The program consists of a four-part series of lessons, based on grade-level science standards and addressing areas of interest to SSCAFCA, such as bats, burrowing owls, ATV use, pet waste, and arroyo safety. Educators Melissa McLamb and Erin Blaz delivered two of the lessons – an introductory lesson about watersheds, and a walking field trip to nearby arroyo habitat. Justin Stevenson of RD Wildlife Management, LLC delivered a lesson using live microbats. Mikal Deese, certified wildlife rehabilitator of non-profit On A Wing And A Prayer, delivered presentations with a live Burrowing Owl or other birds of prey when requested.

The watershed lesson expounds on the water cycle, already integral in 3rd grade curriculum. This year, we developed a hands on lesson where students were able to build a model of a watershed. This lesson introduces the concept of a watershed to students, demonstrates how surface water becomes polluted through a variety of waste, and discusses the importance of keeping our arroyos clean.

The arroyo walk is a highlight for students and teachers, as the majority of participating classes only receive one other field trip during the school year, and students always come away learning something new and interesting about the uniqueness of arroyo habitat. This lesson is about the unique adaptations of arroyo animals and plants, incorporates a walk out to a nearby arroyo (when available) and extensive discussion about arroyo safety *(see lesson plan in Appendix A.)* Melissa first talked to students about the difference between concrete-lined channels and sandy-bottomed arroyos, and emphasized that it is never safe to go into concrete-lined channels, while sandy-bottomed arroyos can be visited when there are no clouds in the sky. Students searched for evidence of animals living in the arroyo banks, learned about how lizards and other cold-blooded animals are adapted to the desert environment by moving about to regulate their temperature. They also looked for certain adaptations of desert plants to minimize water loss in the desert.

In the lesson about bats, Justin discussed common myths about bats while pointing out how

these myths can pose issues for bat populations as he addressed each one. He taught students about species common in their area, including what habitat they prefer, what they eat, the challenges they face, and what to do if one sees an injured bat. He talked about how important bats are in keeping insect populations under control, shared ways to encourage and protect bats and emphasized that kids should not be frightened of them, but also should never touch a bat if they find one. Students were able to view two different species of live microbats.

This year in addition to the burrowing owl lesson Mikal Deese, certified wildlife rehabilitator of non-profit On A Wing And A Prayer,, was able to offer an alternative lesson using other birds of prey, as an accommodation for students and teachers that have cultural sensitivities to owls. When requested, Mikal brough in three birds for students to observe - an American Kestrel, Peregrine Falcon and a Swainson's Hawk. In this presentation Mikal gives a wonderful talk that covers habitat, behaviors and threats to these species. As a bird rehabilitator she also shares the personal story of each bird. After each bird, Mikal gives students a turn to ask questions and students sit attentively in and engage in a stimulating back and forth session sparked by their curiosity.

When presenting the burrowing owl, Mikal included an fun role-playing activity for students where they had to collect food (dried beans) and bring them back to their chicks. Some kids played adults, others were hungry chicks and in the midst of all the fun and chaos, important lessons are learned. Students get to experience the challenges in competing for food, and learn about human impacts on the food chain - some beans are colored differently and represent pesticides or poisons, which sadly kills off burrowing owls. Students also get to observe the burrowing owl up close and learn about ways to respect and protect their habitat.

Evaluation

Teacher feedback for 2019-2020 was positive and encouraging. Teachers overwhelmingly say they choose to participate in Arroyo Classroom to teach about local ecology and conservation issues, incorporate more science in the classroom and to offer experiential learning opportunities. They find the presentations to be uniquely engaging and meaningful for their students. Teacher's find that Arroyo Classroom is complementary to other 3rd grade units of study such as life cycles and animal adaptations and that the chance to have live animals in their classrooms really helps students integrate what they've learned. As one teacher puts it, "There is much more of an 'a ha' moment when students see this in natural forms versus a created classroom environment. Further, when they meet the animals, they like them and there is more of a connection that they can hurt that animal if they do not respect the environment" (Kelly, MLK).

Teacher's continue to ask for extension activities and some kind of pre-presentation activity to help prime students for the content presented. With the addition of 3 classes this year, there was not as much additional time as was hoped to work on providing these resources to teachers. However the creation of online/virtual/at-home alternatives to our in-class presentations (in case of future school closures) will also provide us with resources teachers can use before and after presentations during normal programming.

Highlights from teacher feedback:

"My students really got an understanding of conservation and their impact." -Lewis, MLK

"My students really enjoyed the program this year. I thought the changes to the owl/bird presentation made it so much more interactive! The greatest learning outcomes my students had were the connections they made to their surroundings and community. They were able to learn about an ecosystem that they basically lived in. They connected these ideas when learning about animal and plant reproduction and traits." - Eisenberg, MLK

"Exposure to local ecology and have students start thinking about how they can make a difference in our community to promote conservation. Increase curiosity and knowledge of local wildlife." - Cooper, Enchanted Hills

"We really enjoyed the owls and the bats! Students are more excited to learn about a subject when they have an experience to attach/ relate their learning to. We also enjoyed the hands-on activities provided with each of the lessons." -Davis, Puesta del Sol

"I believe this past year was the best year to date. The presenters were engaging and were able to manage student conduct in a knowledgeable way. The activities were also relevant and engaging. The introduction to watersheds allowed students a hands-on activity that related well to the content being taught. The arroyo walk is also a great way to expose the students to the environment directly around them , looking at it through a different lens". - O'Connor, MLK

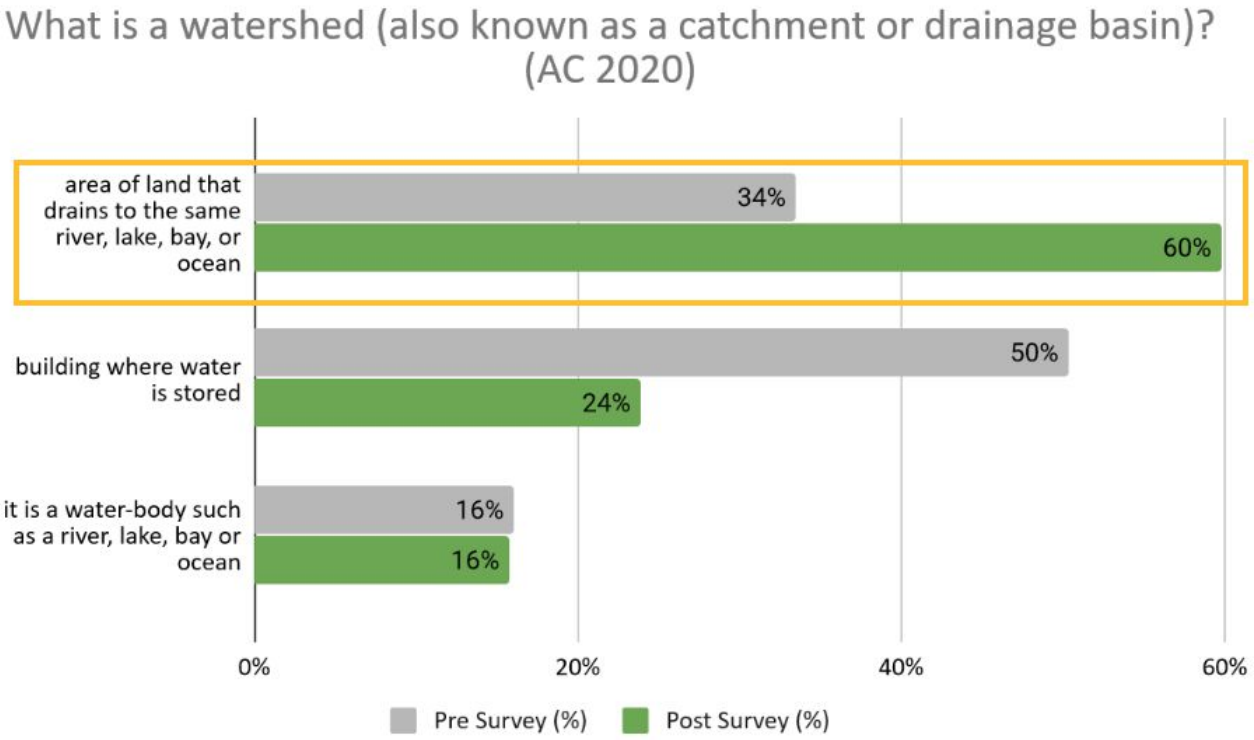
Survey Summary

This is the second year that we've administered the pre and post surveys for Arroyo Classroom and we ran into a significant challenge in getting post-survey responses because it was distributed to teachers just before COVID-19 shut down the schools. It was recommended to teachers to share it on an online platform, like google classroom, but we only received 232 responses compared to 518 pre-survey responses.

Even with fewer responses this year, in reviewing the metrics there appear to be other challenges with the survey. Across questions a majority of students are answering correctly in the pre-survey. On one hand this is great news to hear that students have an awareness of what arroyos are, arroyo habit and arroyo safety. However, this doesn't tell us much about the program's impact. We will revisit these questions over the summer to try to narrow down the learning outcomes and growth we are looking for. This survey does not have behavior questions either. While we are finding behavior change questions have their own challenges to evaluate, it may be more significant to evaluate behavior change for Arroyo Classroom in order to see how their learning is translated.

Survey Metrics:

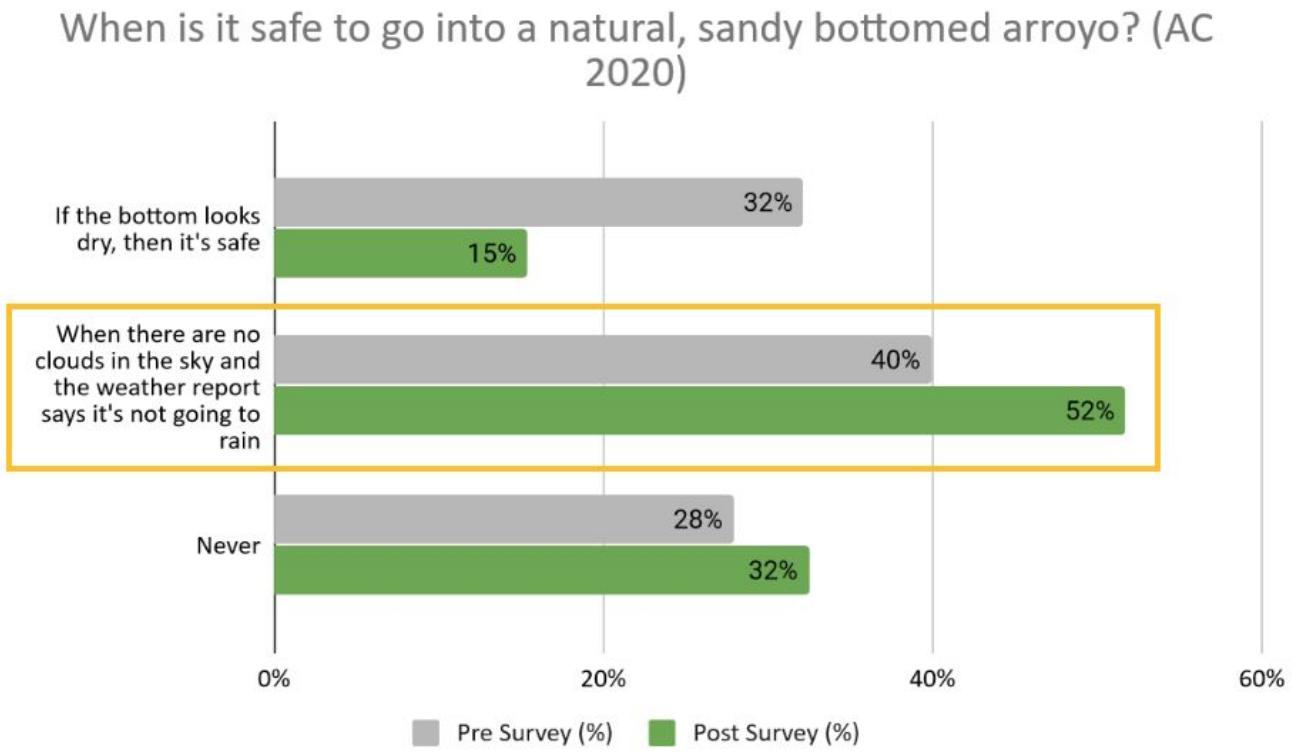
Item 1



The increase in correct answers for 'what is a watershed' is notable. This could be a result of the improved watershed lesson that was implemented last year, or that teachers are doing a better job of reinforcing the concept. Another interesting finding is that there is an increase in kids claiming it is

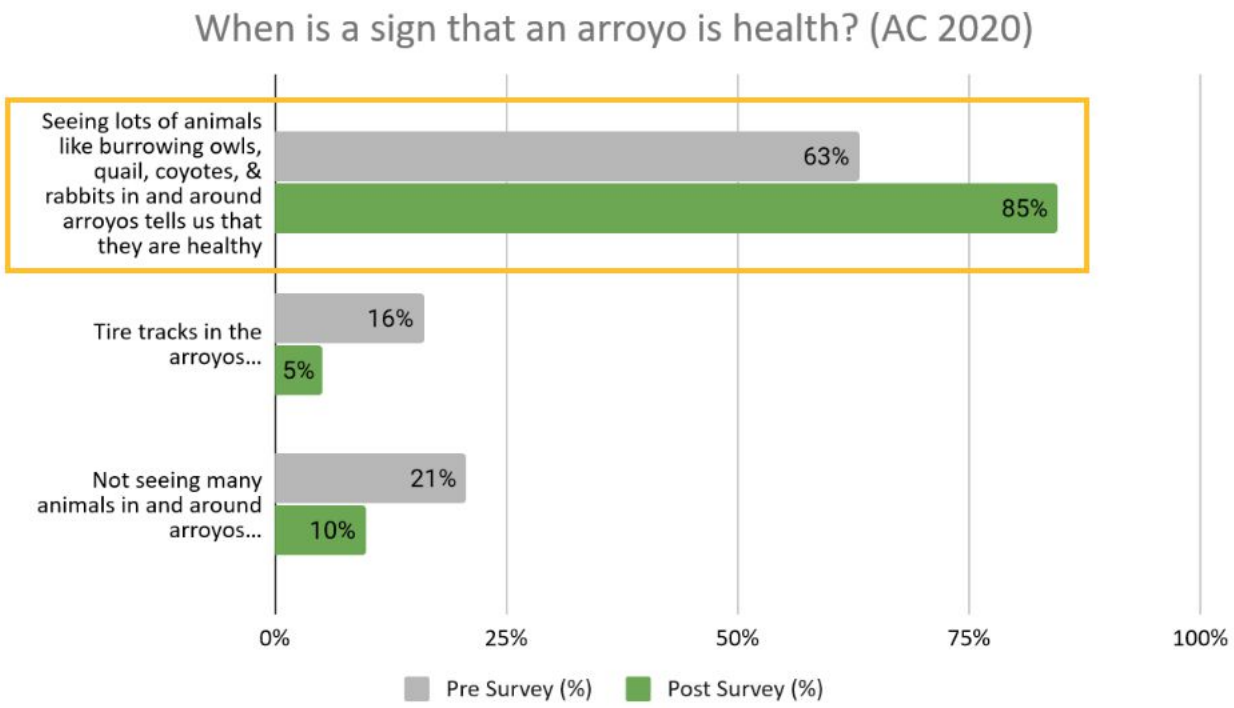
never safe to go in an arroyo in the post-survey. This happened last year as well.

Item 2



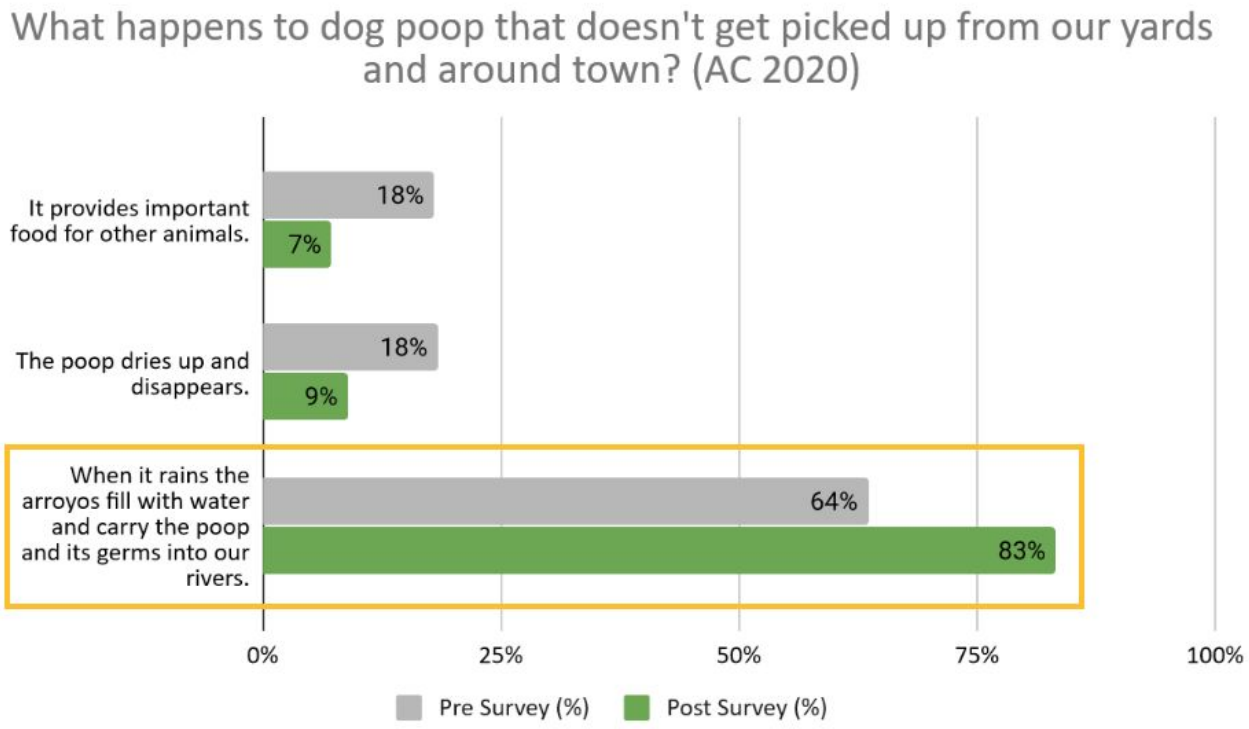
Another interesting finding is that there is an increase in kids claiming it is never safe to go in an arroyo in the post-survey. This happened last year as well. Extension activities that follow up on the presentation would be helpful in clarifying when it is safe to go in a sandy-bottomed arroyo. The Arroyo Walk can be a stimulating experience and some kids might just miss this information. It may be worth repeating in the watershed presentation as well.

Item 3

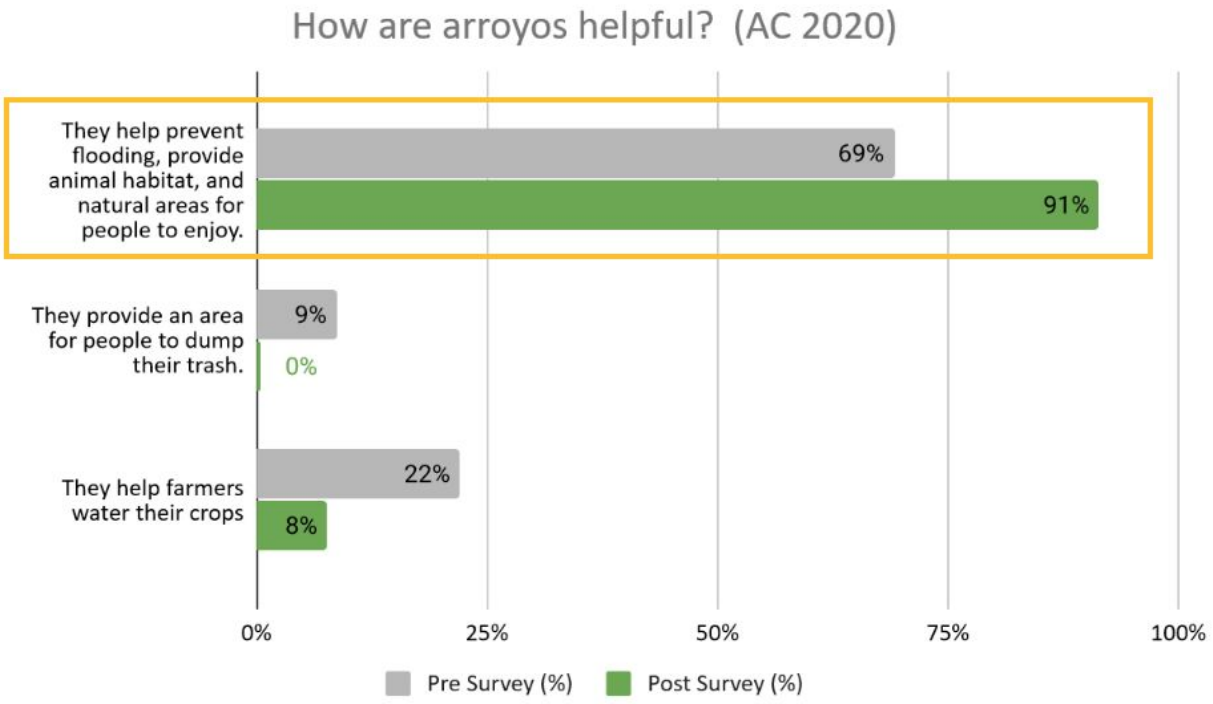


The incorrect answers in the question may be too leading. Kids might not understand the importance of species diversity when they answer this in the pre-survey, but they can assume that tire tracks and lack of animals is not a sign of health. They may have more contextual understanding in the post-survey, but we can not know for sure.

Item 4


What happens to dog poop that doesn't get picked up from our yards and around town? (AC 2020)
It provides important food for other animals.
18%
7%
The poop dries up and disappears.
18%
9%
When it rains the arroyos fill with water and carry the poop and its germs into our rivers.
64%
83%
0%
25%
50%
75%
100%
Pre Survey (%)
Post Survey (%)

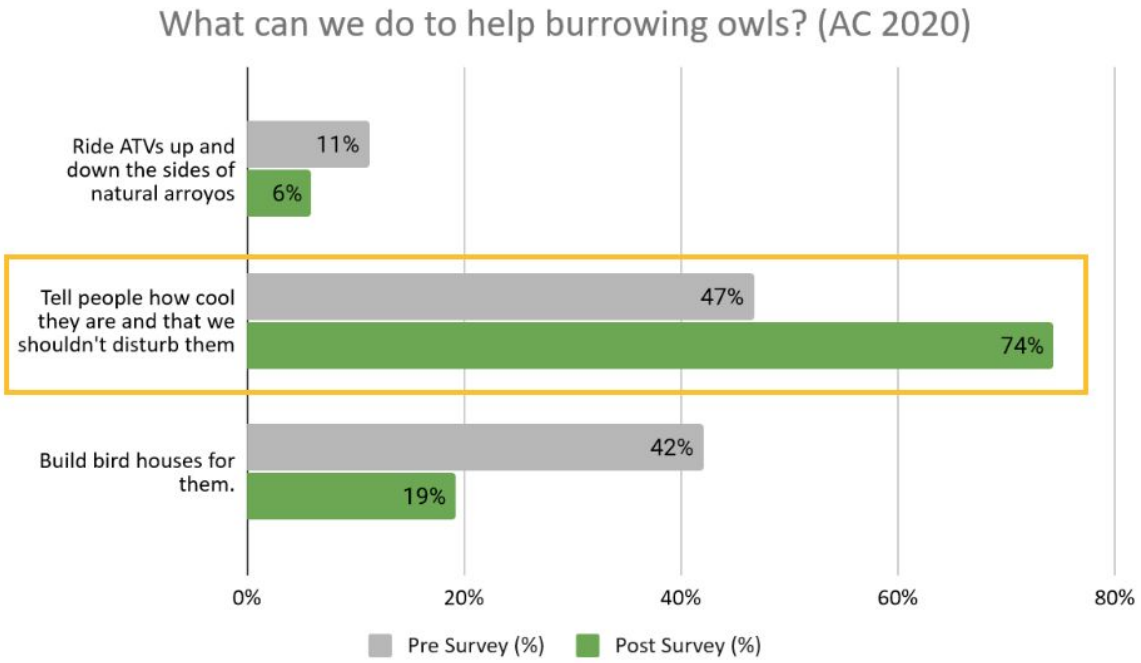
Item 5



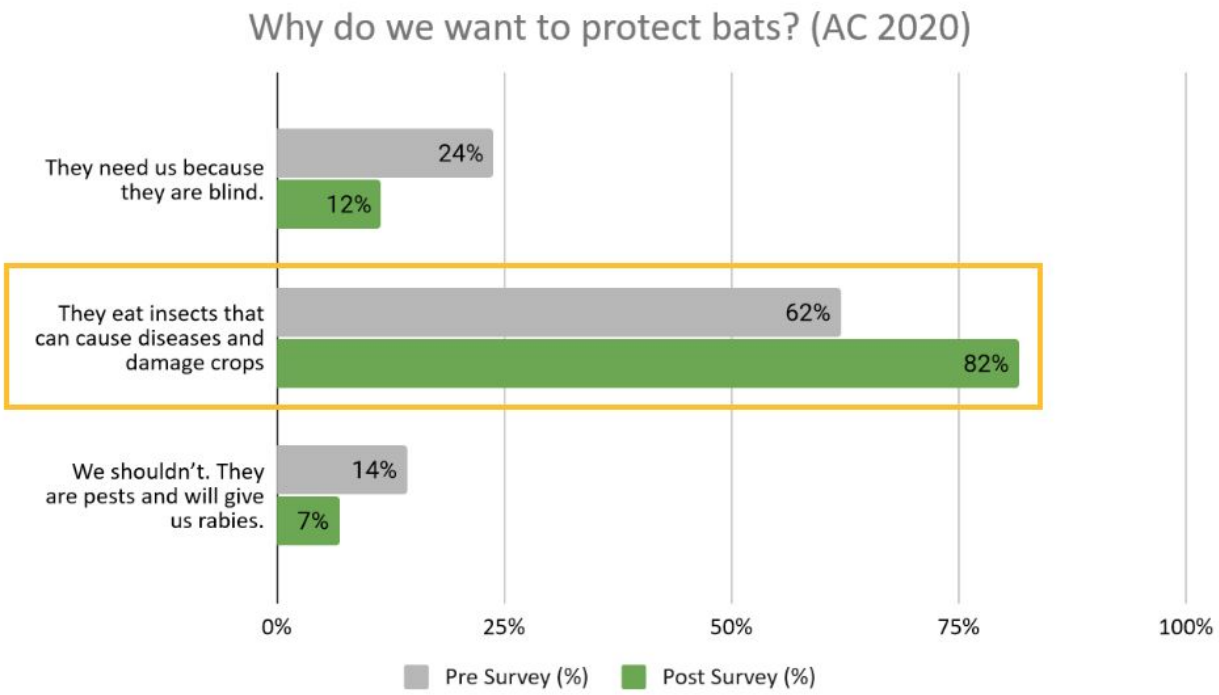
This question was adjusted to make the answers less obvious. The most important finding is that no one answered that arroyo is a place to dump trash in the post-survey!

The following items 6, 7 and 8 demonstrate similar patterns to those above where the majority of students are answering correctly on the pre-survey , with a positive increase in correct responses on the post. These results are also extremely similar to the year before and this is not particularly informative. The questions will need to be revised for next year.

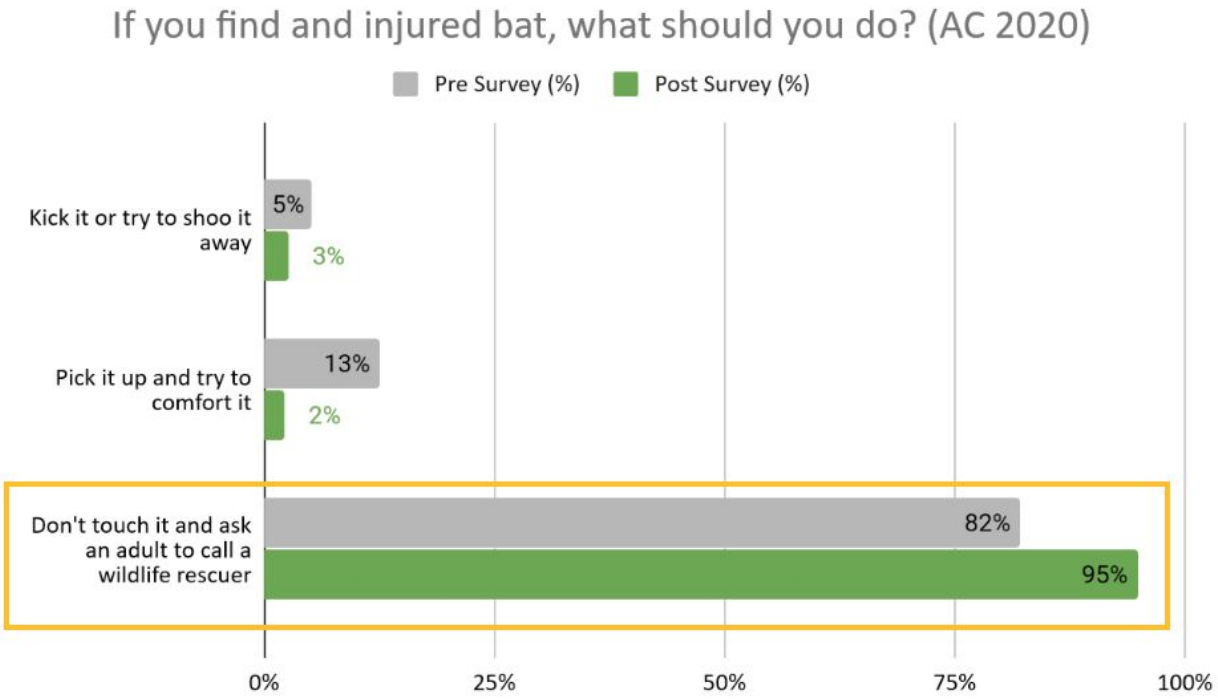
Item 6



Item 7


Why do we want to protect bats? (AC 2020)
They need us because they are blind.
24%
12%
They eat insects that can cause diseases and damage crops
62%
82%
We shouldn't. They are pests and will give us rabies.
14%
7%
0%
25%
50%
75%
100%
Pre Survey (%)
Post Survey (%)

Item 8


If you find and injured bat, what should you do? (AC 2020)
Pre Survey (%)
Post Survey (%)
Kick it or try to shoo it away
5%
3%
Pick it up and try to comfort it
13%
2%
Don't touch it and ask an adult to call a wildlife rescuer
82%
95%
0%
25%
50%
75%
100%

Appendix A contains lesson plans; Appendix B contains supplemental materials; Appendix C contains photos.

Appendix A
Lesson Plans

Activity Guide for 3rd Grade – Animal and Plant Adaptations

1. What are we trying to teach the students in this activity?
Arroyos are cool places where animals live, animals and plants are adapted to live in the desert.

2. How can we tie this activity to our teaching goals:

Our Goals	Where we can relate our goals to this activity
Animals live in arroyos	Look for evidence of animals.
We should visit arroyos carefully	Talk about when it is safe.
Picking up dog poop keeps germs out of our river	We'll probably see poop, talk about how it can make animals sick.

Supplies:
- Thermometers
- Clipboards
- Poster of leaf adaptations
- Wax paper
- Paper towels
- Tape

3. How can we tie this activity to standards?
- Measure energy (temperature change)
- Posing a question, using numerical data, various methods to display results
- Animals and plants have adaptations that improve chances of survival
- Classifying animals and plants
- Living things cause changes to their environment, some detrimental, some beneficial

5. How should this activity be organized?

I. Pre-activity (10 minutes)
- Do you ever visit/play in arroyos? What do you do?
- What are arroyos for? Managing stormwater to keep our town from flooding when we get a heavy rain. **Show first flush video.**
- Talk about arroyo safety – don't go into arroyos when you see clouds in the sky.
- Because our arroyos are natural, with sandy sides and bottom, they are safer.
- In Albuquerque, the arroyos have concrete sides and water travels so fast, it is really dangerous to ever go in arroyos. Some arroyos come from the canyon where it might be raining but you can't see.
- Our arroyos are home to all kinds of animals and plants, so they are a wonderful place to enjoy nature. What kinds of animals do you think might live in the arroyo?
- Walk out to arroyo

II. Lizard activity (15 min)
- 5min Look for evidence of animals. What kind of evidence? Scat, tracks, holes.

- What kind of animals live in holes (besides snakes)?
- What do you think makes it difficult to live out here? Heat, sunburn, not much water, cold at night. Animals and plants have special **adaptations** (special things about their bodies) that make it easier for them to live in this habitat.
- How do they get water? From plants, from condensation under rocks.
- How could they avoid heat? Stay in burrows or shade during the day, active at night.
- Some animals love the heat, though! Lizards are cold-blooded, which doesn't mean they are actually cold. It means their body temperature is determined by the environment. They need to absorb heat from their surroundings to function.
- Each student take a thermometer. This is a lizard, and it needs to maintain its body temperature at a certain level: fence lizard 35C (95F), whiptail 38.6C (101F). How can it keep from getting too hot? How can it keep from getting too cold? Lizards regulate their body temperature through behavior.
- Plants do kind of the same thing – hold one palm out flat, one sideways. Which feels hotter? Prickly pear cactus pads grow sideways instead of flat to keep themselves cool!

IV. Plant activity (15 min)

- What do plants need in order to survive? Water, sunlight, air, soil
- What makes it difficult for plants in the desert? It's so hot and there's so little rain.
- How do plants get water? **Show evapotranspiration diagram.** It's kind of like when we're hot, we sweat. But if we lose too much water from sweating we get dehydrated.
- How do they keep cool? Remember prickly pear? **Show pictures of hedgehog and prickly pear cacti.** Desert plants can **s**hade themselves! Hedgehog cactus has lots of spines that shade the surface and also blocks the wind.
- The leaves of many desert plants are **adapted** so that they don't lose too much water.
- Show leaf adaptations poster (fuzzy, small, curled, waxy, green stems but no leaves)

If weather is ok:

- Out in arroyo, we'll do an investigation.
- How many of the plants we see will have these adaptations? Hypothesize.
- To be fair, we can't just pick the plants we like. Standing in one spot, collect the first 6 *different* leaves you see.
- Draw each one, and describe what adaptation it has.
- How many of your 6 leaves have one of the adaptations listed?
- Why don't all have it? Some plants avoid the heat by just growing and producing seed really fast before the weather gets hot, and then they just die off and leave their seeds to grow next year!
- Search for seeds.

If windy, inside activity:

- Let's investigate one way they keep water. **Dab water on board, cover one spot with paper towel, one spot with wax paper.** Which do you think will evaporate faster?
- **Show prickly pear picture.** Make model of prickly pear pad: paper towels with wax paper taped around the outside. **Show cut prickly pear pad.**
- Maybe do an experiment: soak wax-covered and non wax-covered leaves in water and time how long they take to dry.

V. Conclusion (10 min)

- Arroyos are for flood control, and we shouldn't play in them when clouds are in the sky.
- But they are cool places where animals and plants live, and we can visit when it's clear weather.
- Animals and plants are adapted to live in the desert climate.
- What we do in arroyos affects the plants, and animals' habitats. Should we ride ATVs up the sides? That's something humans do to change our environment for the worse.
- Picking up dog poop is important because it can make animals sick. Where does the water go when it flows down the arroyo? The Rio Grande! Keeping dog poop out of the river is one way humans can change our environment for the better.
- Walk back to classroom

Leaf Adaptations

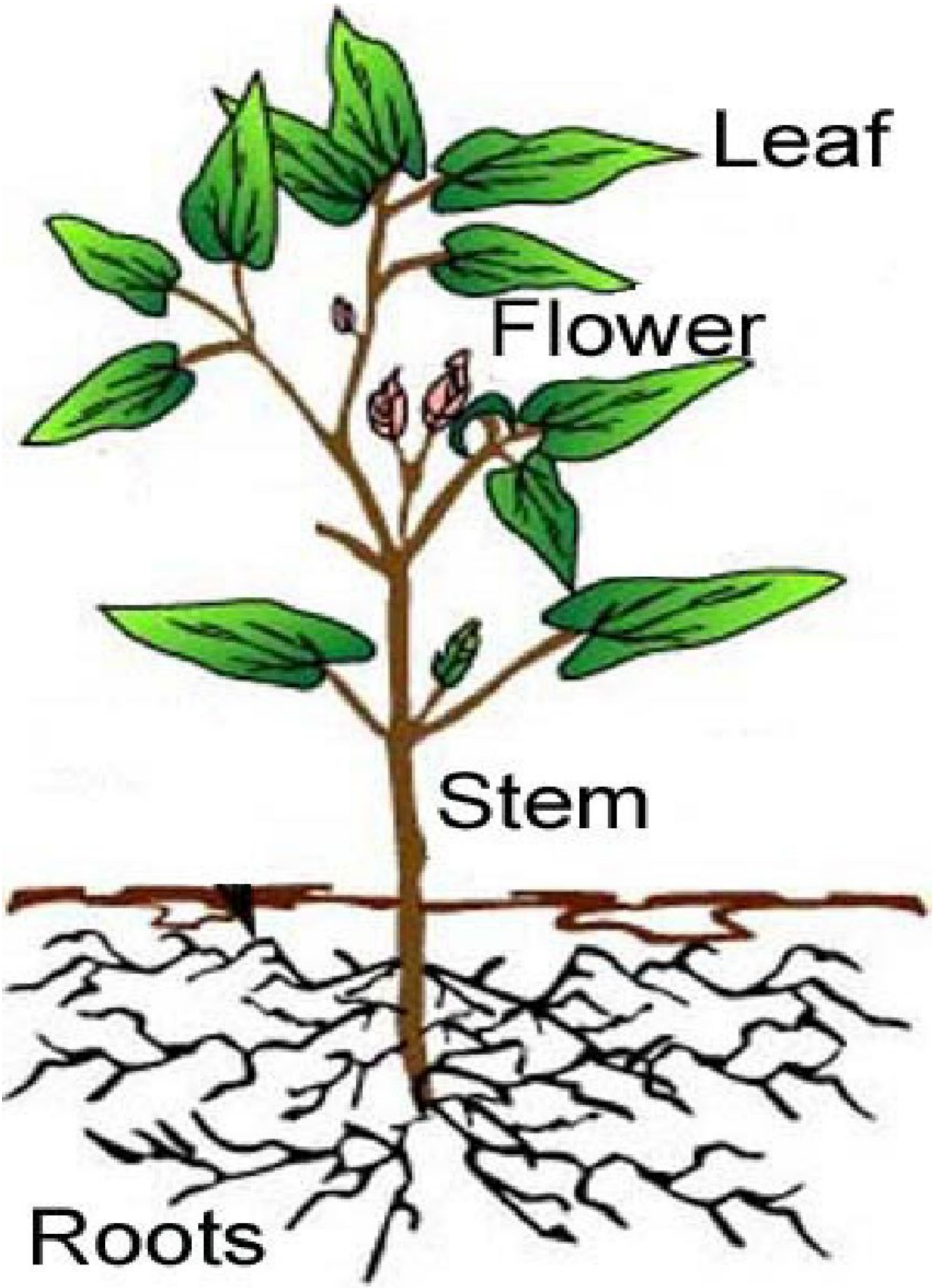
1. **Fuzzy leaves or lots of spines**

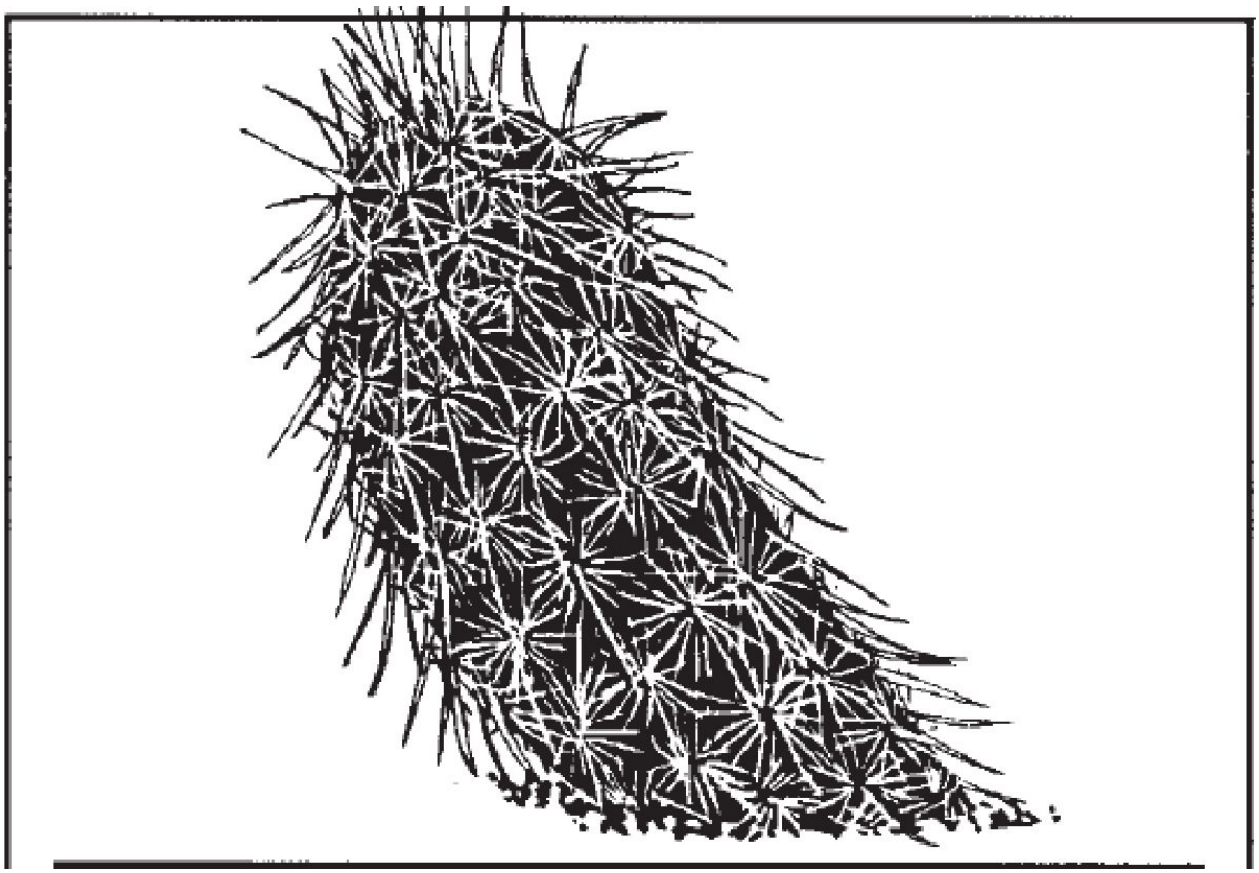
2. **Small leaves**

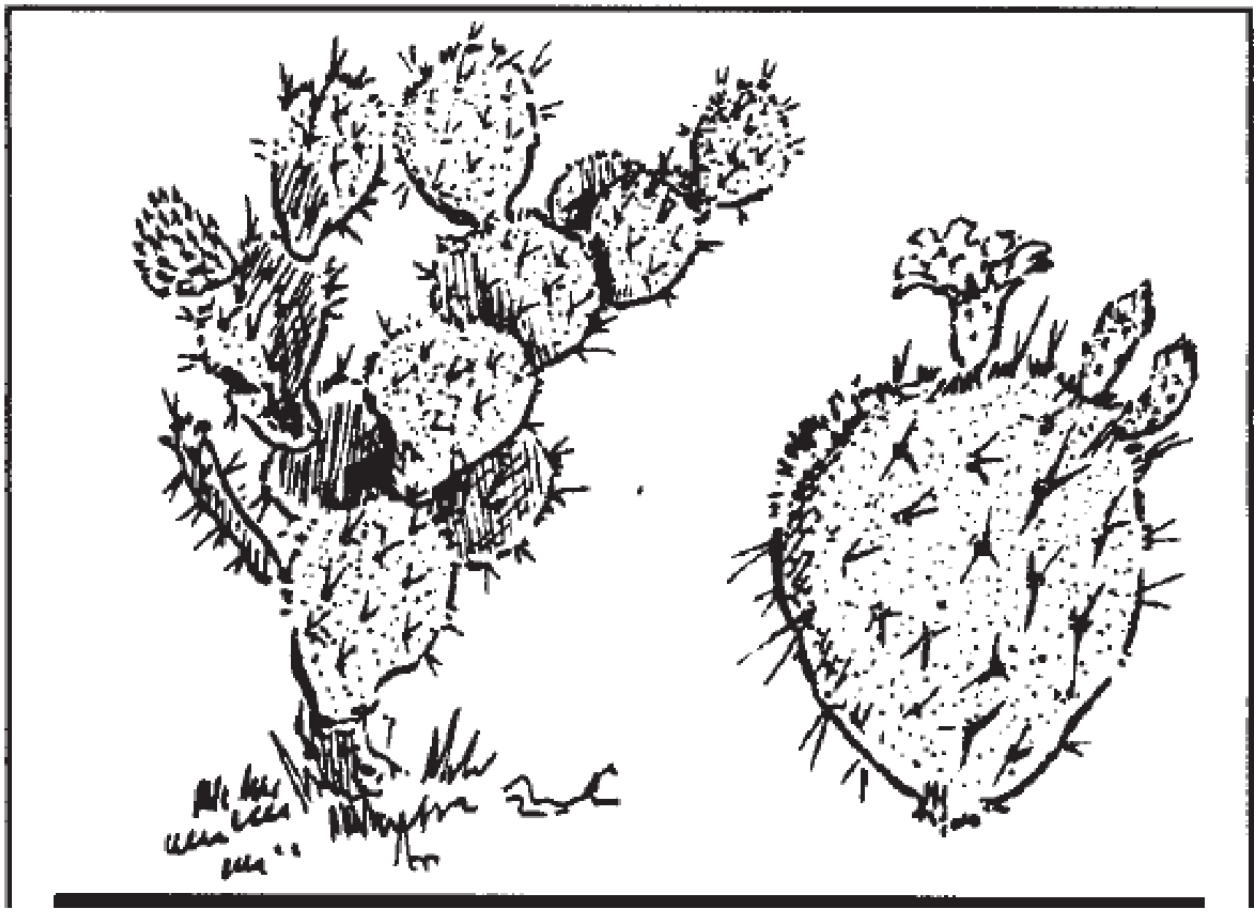
3. **Curled leaves**

4. **Waxy leaves**

5. **Green stems but no leaves!**


Leaf
Flower
Stem
Roots





Build a Watershed Activity Guide for Arroyo Classroom

1. What are we trying to teach the students in this activity?
What is a watershed? How does the water cycle work? What are different forms of pollution and how does it impact our river? Arroyos lead to the river and carries different types of pollution with it.

NM State Science Standards:

3rd Grade
Water cycles through the atmosphere, plants, soil, and bodies of water in various forms.
Describe pollution and identify different types (can be naturally occurring or human made materials). Pollutants can get into our water and harm living things.
Some animals can survive better in certain environments, some will not survive at all.
Describe how roots take up water and soil nutrients, and leaves make food from sunlight.

2. How can we tie this activity to our teaching goals:

Our Goals	**Where we can relate our goals to this activity**
How does the water cycle work?	Describe the processes of the water cycle: evaporation, condensation, precipitation, collection, run-off and infiltration.
What is a watershed?	A watershed is all the land that drains into a river or other body of water, from mountain forests to riparian zone.
What makes water dirty?	Pollution comes from all over the watershed, and erosion is one form of pollution.
Why are arroyos important?	Arroyos provide important drainage in a storm event and provide unique and critical habitat for wildlife and plants.
How does vegetation help our river?	Forests, wetlands and healthy arroyos help keep the river clean and prevent flash floods. Plants in these areas slow the runoff of water into the river, reducing erosion and flooding. They can also remove nasty chemicals from the water by taking them up through their roots.

3. What is effective in this activity? Being in small groups, students enjoy creating the model and discussing what they are observing.

4. What makes this activity difficult to teach? Students get excited and want to play with materials while you are talking.

Activity Materials

- Blank paper, markers, aluminum pans to capture water
- markers (ex: black for oil, brown for dog poop, red for trash)

- a watershed map (ex: SSCAFCA watershed map, It's All Connected in a Watershed poster)
- NM relief map

Preparation

- Post watershed map
- Draw sketch of the water cycle
- Have materials laid out and desks arranged (papers, trays, sets of markers)
- Optional: write out key for marker colors (keep hidden until time to show students)

I. Intro – 5 minutes

1. Introduce yourself and the Arroyo Classroom program: Respect and Know your Arroyos
2. Cover guidelines/expectations in order to be able to have a good time and learn together
3. Introduce what we will be learning: What is a watershed? Where does it go when it rains? We are going to find out how water moves across land, and through our arroyos, when it rains or snows. And learn about how it carries things with it as it flows.

II. Warm Up – 10-15 minutes

1. How many of you used water before you came to school today? How did you use it?
2. How else do people use water on a daily basis?
3. Where do you think all this water comes from? (Discuss the aquifer and it's connection to precipitation). Point out groundwater shown on the "It's All Connected in a Watershed" poster.
4. Pull out the NM relief map. Discuss the purpose of a map. Walk through so each student can view. Introduce the concept of a "key". Have them help you find ABQ on the map and the Rio Grande. Point out the area of Rio Rancho. Explore the map together.

Ask: (Really engage with students and listen to their ideas)

- Has anyone heard of the term "watershed" before? You can highlight that it is a compound word. Have students share what they think of when they hear this word usually, "a shed full of water." It's kind of like that! Except the shed (or container) is an area of land. *Everyone lives, plays and works on land that draws to a body of water, like a river, lake, bay or ocean.*
- Point out the Rio Grande Watershed through the middle of the NM relief map.
- Where are there mountains and hills? Where do you see rivers and lakes?
- What would happen if we sprayed water on the mountain peaks, what will happen to it? *It will flow downhill.*
- Where does the water come from in nature? *Rain or snow*

III. Activity – 25 minutes

Where does the water go? Let's find out by making our own model/map, similar to the relief map.
Part A: 10 min
While students are still sitting, demonstrate activity → crumpling paper to drawing on the ridges. Identify the ridges. Ridge as high point of range of hills or mountains. Point out that it is where the

paper has a peak pointing up not down. Maybe identify the difference between a peak and a valley using the paper.

1. With your imagination, imagine that this piece of paper is a piece of land.
2. Crumple up the piece of paper and then smooth it back out most of the way. Leave it a bit crumpled, showing small ridges (high points) and valleys (low points).
3. Find the ridgelines (tops of the fold lines). Use the blue marker to color along the ridgelines on your "land".

Model this for students briefly. Be sure everyone understands the activity. Ask students to crumple their paper and draw their ridgelines. Once they are complete - Hands on their hand so we know they are ready for the next step.

Pair students (groups of 2 or 3), with teachers help. Assign roles 1-2, or 1-3.

Give Roles***: We're all observers, everyone will have a turn.

Have groups gather around their tray. Drawers can begin drawing their ridgelines. Announce that students have 30 more seconds when it seems that each group has enough ridgelines.

Next, demonstrate a "rain event". Model for students the distance we want them to aim from as they spray (i.e. the length of your elbow to hand, vertically placed on the tray). And 4 sprays. (idea: Students can be drill sergeants about the three sprays, acknowledge that sometimes the spray bottles act funny but that we are trusting our classmates to count for themselves to do only four full sprays...).

Ask:

- What do you think will happen to your land when it "rains"?
- What will happen to the blue ridge lines? / Where will the "rainwater" travel?

1. Altogether, sprayers squirt your model a few times to create a "rainstorm" over your land.
2. Observe what happens.
3. As your rainfall accumulates, watch the pathways where the excess "rainfall" travels.

With teachers, walk around to ask each pair to explain what the water is doing and show you rivers and streams in their model.

Have teachers help pick up all the spray bottles, and ask everyone to place their hands on their head and have a small group discussion about their observations.

Part B: 15 min

Have pairs switch roles, “disposers” can throw out previous model. Tell students they will keep the same number assigned earlier and tell them what role they will be playing. You could write these on a whiteboard.

What’s In the Water?
Experiment with how “pollutants” might travel through their watersheds.

With a new piece of “land”, imagine this represents the City of Rio Rancho or the Rio Grande Watershed. Show one of the Watershed posters and point out all the human activity that happens in a watershed (driving cars, making things (manufacturing), farming, walking our dogs, etc.)

Ask:

- What might be on this land that we wouldn’t want in our water?
- What is pollution?
    - Have you ever seen it? What does it look like?

As students share, note the types of pollution on a poster or white board and create a key for groups to use. (Roads/Cars - black, Trash - Green, Dog poop-brown (and/or orange if you have more groups than markers)) Depending on the group, you could also identify Factories - Red

Before crumpling, have drawers (with their support drawers) mark their papers with the brown, red and black marker to represent farms, factories, houses, streets, dog poop and trash.
Announce that students have 30 more seconds when it seems that each group has drawn enough. Then ask all students to put their hands on their head.

Then have crumplers -crumple paper and then partially smooth it out.

Altogether, have sprayers spray the piece of paper.

Ask:

- What happened to the pollution when it rained?
- Describe what happened at the highest and lowest point in your watershed.
- How quickly did it spread? Are there any places on the land where it didn’t go?

WRAP UP: -5-10min
What do you think this means for our watershed - the Middle Rio Grande?
The water we drink comes from our watershed. Animals and plants also depend on this water. That’s why it’s important that we try not to pollute either the water or the land. Anything that pollutes the land will eventually wind up in the water.

What might be ways we could reduce pollution in our watershed?

*By picking up trash and picking up dog poop if we have dogs. (*I like to emphasize to this age group that **being responsible is powerful** and they can make a difference by caring and picking up their own trash. I also tell them that last year a whole grade level of 3rd graders at Cielo Azul Elementary helped pick up 1.8 tons of trash!)

Thank the class for their attention and participation. Tell them we look forward to seeing them again and expect that they show the wildlife biologists the same respect they have shown us.

*****Groups of 3: Each person gets to spray 3x. Model this for them.**
For groups of 3, you'll need two blue markers for Part A.

May be helpful to tell students each turn has a Lead Role and a Supporting role (Supporting role noted in parentheses).

Part A Roles:
1 - Drawers (+ spray)
2 - Crumplers (+ drawing / spray)
3 - 1st Spray (+ disposers) -- Spray 3, 2, 1

Part B Roles:
1 - 1st Spray (+ disposers)
2 - Drawers (+ spray) --Spray 2, 1, 3
3 - Crumpler (+ draw)

Groups of 2:

Part A Roles:
1 - Crumpler / Drawer
2 - Sprayer / Disposer

Part B Roles:
1 - Sprayer / Disposer
2 - Crumpler / Drawer

Appendix B
Supplemental Materials

-SSCAFCA Activity Book and Educational Videos:

KNOW YOUR ARROYOS
ENJOY • RESPECT • PROTECT

-SSCAFCA handouts:



Did you know?

SSCAFCA protects our community from flooding and erosion caused by big rain storms, and works to keep stormwater clean. Stormwater flows down arroyos into the Rio Grande.

Bugs like to live in stagnant water that collects in ponds and low places in the arroyos. Insects like mosquitoes can carry diseases that make us sick.

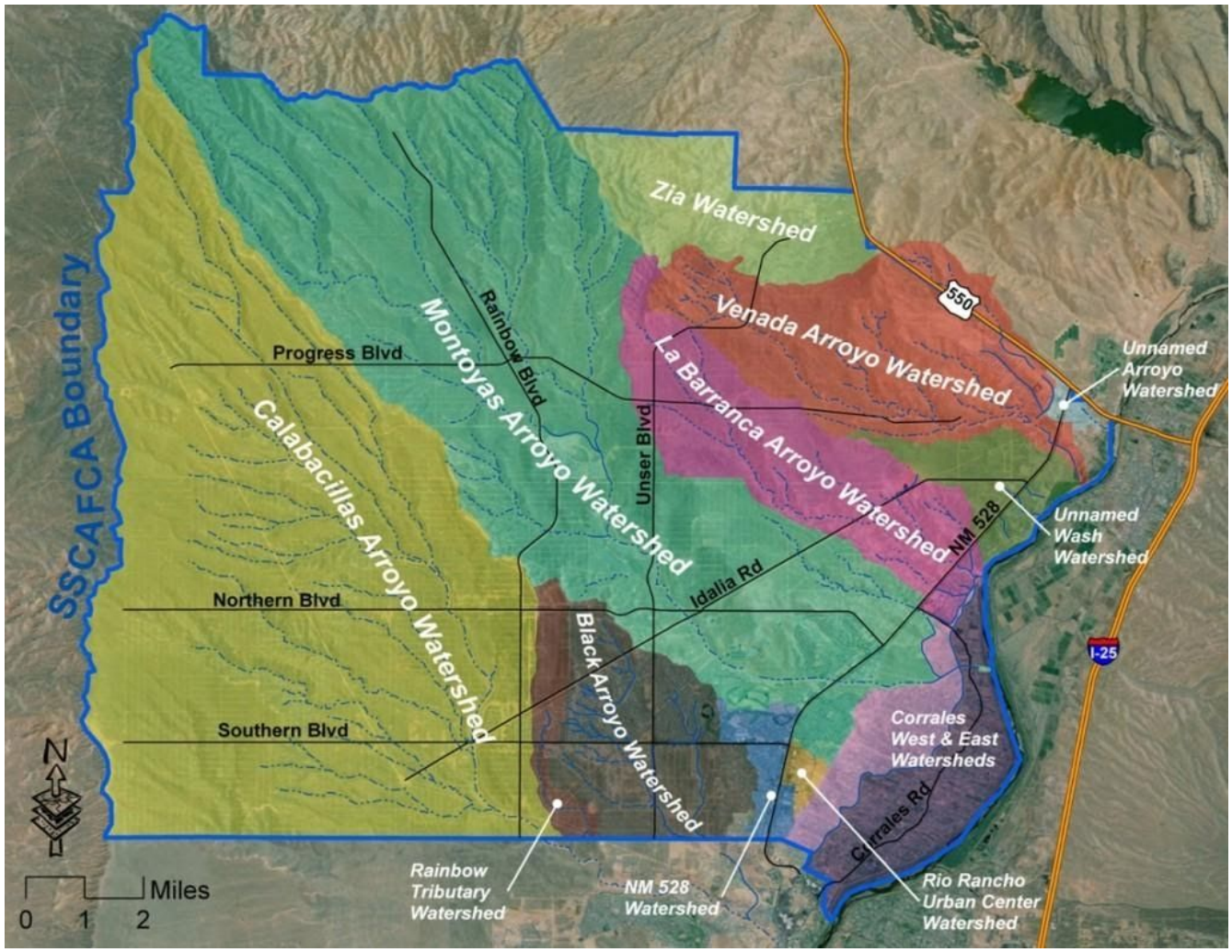
Brought to you by:
SSCAFCA

Almost all U.S. bats feed exclusively on bugs, and 1 bat can eat between 600 and 1,000 mosquitoes and other insect pests in just one hour. One bat can eat its own weight in insects in a single night!

SSCAFCA provides bat houses to encourage bats to make their homes near our arroyos, and especially near detention ponds where stormwater runoff is captured and allowed to slowly drain.

The more we help bats, the more pests they eat, so we don't have to spray pesticide that could wash down to the Rio Grande and pollute it.

SSCAFCA watershed map:



Appendix C
Program Photos



LEFT - Melissa McLamb discussing desert animal and plant adaptations by Maggie Cordova Arroyo.

BELOW - Students observing and discussing the watershed model.





ABOVE - Students having fun during the arroyo walk on school property. Students gather in between activities to discuss findings such as looking for evidence of wildlife (scat, tracks, burrows, etc.).

RIGHT- Mikal Deese with a Swainson's hawk at Maggie Cordova Elementary.

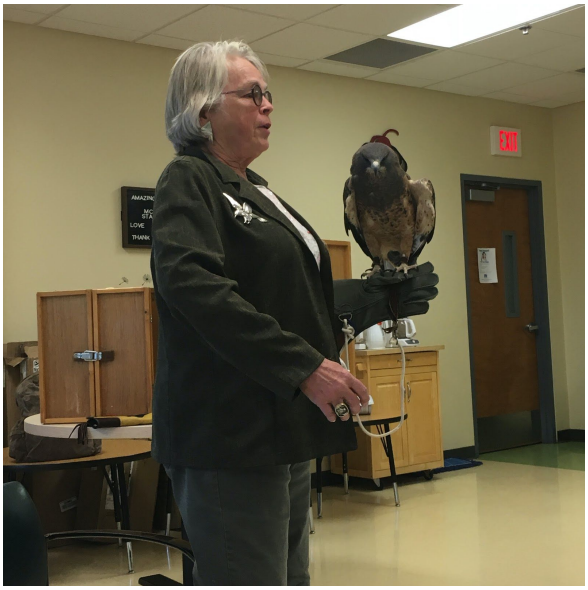


Exhibit 4

RiverXchange
2019-2020 Final Report

Making Meaningful Connections by Integrating Water Resources Topics with Language Arts & Science

2020 Report

Presented by
Ciudad Soil & Water Conservation District

May 2020

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SUMMARY

This year, funding enabled 38 NM classes (932 students and 38 teachers) to participate in RiverXchange® and learn about critical water resource issues in their watershed. The majority of participating classes were from Title I schools. Every NM class was connected to out-of-state partner classes on the blogging platform for a total of over 1,254 participants. All program costs and coordination are provided free of charge to NM teachers. Training, technical support, and curriculum materials are provided free of charge to partner teachers. The program required $56,157.11in cash and generated total match valued at **$82,115.32** in the form of in-kind contributions including workshop space, classroom resources, presenters' time in the classroom, field trip docents, donated trees, as well as teachers' and students' time.

Even with the impacts of the COVID-19 pandemic and the transition to a new education coordinator mid-year, RiverXchange was able to run smoothly with only a few classes missing a presentation or a field trip due to school closures mid March. The end of the year teacher feedback responses confirm that this year's program was strong as any, as many spoke to their students increased ability to understand local water resources and the impacts of society on those resources, as well as how they can take part in protecting those resources, upon completion of the programs. The following sections discuss how coordination efforts were spent keeping RiverXchange a high quality, relevant program and responding to on-going needs and challenges.

Presentations

Program presentations were completed as follows:

Agriculture: 29/38
Stormwater: 38/38
Wastewater: 38/38
Drinking Water: 36/36
Planting Field Trips: 32/38

Program Strengths

Teachers continue to report that the presentations are consistently high-quality, hands-on experiences that engage students; and that the field trip is a highlight of the year for all involved. The presentations explore different aspects of water usage in our community with professionals and experts in the field and continually reinforce to students how they can protect their watershed and the Rio Grande. The pole planting field trip allows students the opportunity to give back to the environment they have learned so much about and their enthusiasm for service learning is palpable on the trip! Furthermore, RiverXchange supports the active participation of teachers in the program by providing professional development opportunities, training to teachers on program implementation, extension activities, and access to a blogging platform for students to connect. RiverXchange incorporates STEM, place-based learning, hands-on activities; and puts conservation actions into the hands of local students and teachers while partnering with stakeholders in the community.

The following sections discuss highlights from RiverXchange this year:

I. Teacher Workshop

The teacher workshops this year were held at Valle Del Oro and Bachechi Open Space. The workshop schedule included an introduction to the site as an educational resource, an overview of RiverXchange presentations and curriculum, a break-out session, blog training, presentation scheduling and lunch. During the RiverXchange overview, we encouraged teachers to introduce RiverXchange to their class using the River Geography activities. We emphasized that starting students off with an overview of our local watershed, including the Rio Grande is a great way to kick-off the program and bring context to the future presentations. We also suggested that introducing their watershed on the blog as their first class post would be a great way to synthesize this introduction.

This year we also choose to give teachers a focused break-out session with their 5th grade team to consider each presentation and plan how to integrate their own lessons or RiverXchange presentation extension activities to deepen their students' learning experience. The goal was to highlight teacher expertise and give teachers more time to share how they make RiverXchange work in their classrooms with each other. Teachers worked in groups to discuss an assigned presentation and what activities they recommend or wanted to try out. Then they presented to the whole group so that each presentation was covered. Teachers seemed to enjoy getting ideas from each other and the chance to share their practice with everyone. It also gave each 5th grade team a chance to talk about how they were going to integrate RiverXchange into their year.

The teacher workshop also included in-depth training on Kidblog. Each teacher was able to connect to their individual blog, navigate their page, and find important information that would help them be successful. Overall, the time at the teacher workshop felt productive, engaging, reciprocal and fun.

II. Teacher Feedback

Every year teachers are asked to complete an evaluation survey to tell us why they choose RiverXchange, what works well and how we could improve. This year teachers continued to have positive feedback and shared that the presentations are exceptional and the field trip is “second to none!” Of the reasons teachers state that they participate in RiverXchange, teaching about water resources and incorporating more science into their classrooms are the top choices. Teachers also are finding more and more that RiverXchange helps their students achieve NM STEM READY! standards through hands-on experience, inquiry-based learning, solving real world problems, and engaging in the community. Some teachers still report that they struggle finding computer time and feel unsuccessful on the blog. We also had great feedback from our visually-impaired teachers about the field trip, but that it could be helpful to adapt the presentations for special education students or reach out to the teachers beforehand so they can support those students better.

Here are a few quotes about student’s greatest learning outcomes from participating in RiverXchange:

“A heightened sense of their surrounding community and the overall impact water has on our society.” - Peter Hornbecker, Colinas Del Norte

“Teamwork...the students loved working in groups during the presentations and the pole planting trip. Many of them were still talking about it before school was cancelled”. - Stanee Kitts, MLK

"Students became more aware of their environment close to their home and the impact their actions can have on the river." -Debbie Beer, Duranes

"Their knowledge about the watershed and how to care for it. The content sticks with them so well because of all the experiential learning." -Ashley Anthony, Monte Vista

"My students were able to move toward understanding water as something to think about, not just a given, unappreciated, unlimited resource." -Rona Gomez, Georgia O'Keeffe

Finally, this quotes summarizes the opportunities teachers get from participating in RiverXchange:

"RiverXchange has helped me step outside my comfort zone to explore, demonstrate, and teach areas that are new to me. It was definitely a benefit as shared by students!" -Randi Sevigny, Seven Bar

III. Supporting Next Generation Science Standards

The Next Generation Science Standards have been adopted by the New Mexico Department of Education and are in the second year of implementation. The framework of NGSS moves the focus from teaching science facts to the process of *doing* science and requires both curriculum developers and teachers to re-think science education instruction. RiverXchange supports many of the "3 Dimensions" of NGSS framework by delivering inquiry-based curriculum, hands-on learning opportunities and locally focused water resource topics. The next steps are to fully align RiverXchange to the NGSS, and while this is a lengthy process that requires practice before understanding, it will be key in both promoting RiverXchange as a 21st century science education program and encouraging the next generation of scientific thinking and problem solving.

Program Challenges and Opportunities

In an effort to remain relevant to students, stay updated on current science and technology, and keep up with teacher needs, RiverXchange is constantly evolving. While at its core the deliverables remain constant, each iteration of the program aims to be a more improved, polished version of itself. As the recently hired Education Coordinator, I believe it is valuable to share some of the insights that I have gained as a consultant to the program, and document them here as a way to convey some of the challenges and opportunities that Melissa McLamb and I were responding to during our time working together. Especially as the program is now faced with new challenges and opportunities in responding to the COVID-19 pandemic, this section serves to hold that institutional knowledge and will be important to remember once things settle down.

I. Ensuring High Quality Presentations and In-kind Partnerships

Challenge: Maintaining our agreements for in-kind partner presentations when we lose a partner.

RiverXchange is dependent on our in-kind partners to deliver the four in-class presentations and relies both on the availability of these partners and their expertly crafted lessons to meet our objectives. The only

drawback of such a strong partnership is that when an agency is no longer able to provide this service, it takes time to find another partner who can meet such a specific niche. This has been the experience with the agriculture presentation that was previously provided by Bernalillo County Extension to APS participants. As a response to this gap in 2018-2019, RiverXchange staff developed a presentation that explored the regional history of agriculture and irrigation techniques, which highlighted acequia culture and the effects of human settlement on the Rio Grande. During that year we entered discussions with CESOSS (Center for Social Sustainable Systems), as they were working on creating an Acequia Education Office in the South Valley and agreed they would be a good candidate for providing these presentations. However, the timeline for the development of the Acequia Office and their limited funds have proved to be barriers for now.

Response: Maintaining a network of in-kind partners who can provide RiverXchange presentations.

This year, we were able to call on the help of BernCo Master Naturalists and found that they are a well-suited group to recruit presenters from. This summer we intend to recruit Master Naturalists earlier to ensure availability and cover all presentations, as working with volunteers requires flexibility and grace. Furthermore, it should be noted here that all future RiverXchange staff should have an up to date understanding of each presentation and the capacity for networking to ensure partnering opportunities are easily accessible.

II. Kidblog: The current blogging platform

The continued agreement with an educational contractor this year allowed for an increase in capacity for blogging support. Time was spent working with the Kidblog support specialist, Laura Kniffin, to understand the platform and how it can work with the specific needs of our program. The following changes this year were the result of those conversations.

- **Rostering**: Rostering is an efficient way to create new blogs and users using .CSV files at once, rather than doing each blog and user one by one.
- **Individual class blogs**: We returned to each class having their own blog rather than grouping two or three on one with the goal to reduce confusion on how the blog is used and encourage classes to build a more unique identity on their blog. It also allows returning teachers to keep the same blog year after year, and further reduces time spent getting new blogs set up for both teachers and coordinators.

III. Connecting NM classes with partner classes via Kidblog.

In working closely with partner classes the previous year, our goal this year was to increase posting by partner classes and strengthen connection with NM classes. The following were challenges identified from the previous year and our responses in 2020-2021.

Challenge: Creating strong partnerships with NM and out-of-state partners on the blog takes significant coordination.

- **Out-of-state partners have varied schedules and the timing of their water-related lessons do not always line up well with our program.** This creates a challenge on both sides. Partner classes

are recruited on the premise that we will provide them with an active class on the blog that will be discussing water related topics. For a one-on-one partnership to be successful, the NM class has to be active and do so within a time frame that is convenient for the partner class and vice versa.

- **Active participation on the blog varies by teacher by year.** A teacher might be super active on the blog one year and completely absent the next. Circumstances change year by year, it is hard to rely on one teacher behaving similar to the year before.
- **Organizing who is doing their water-focused unit at what point in the school year takes time that is not well spent if neither partner actively participates on the blog.**

Response: Use coordination time available to make blog user-friendly and increase teachers fluency on the blog to increase active participation for NM and out-of-state classes.

- **Teacher workshop included training on each teacher's actual blog.** Teacher's were able to work side by side on their own blog (rather than just see examples), ask direct questions and troubleshoot. This requires all blogs to be set up before the teacher workshop, but allows for better understanding.
- **Out-of-state partners attention increased.** Each partner was interviewed to better understand their goals and their timeline. They received one-on-one, virtual training on the blog, technical assistance and general support for implementing the blog in the classroom throughout the year.
- **NM and partner classes all connected on the blog.** Kidblog has a "Connection" function that links classes to other classes visibly on each blog page - where they can easily go to another classes blog, see posts and comment. This year in addition to having assigned partners, all classes were linked to all other RiverXchange classes under the "connection" feature on Kidblog. While the goal was to create more ease in finding active classes to comment on- the number of connections seemed to have over-stressed the system and slowed down loading times on Kidblog for our users. Even with improved accessibility to partner classes, there were only a few classes that corresponded with other out of state classes this year by sharing comments back and forth.
- **Distribution of monthly Mailchimp emails with blog highlights, tips and resources.** To further increase creative blog posting, instigate class connections, and improve Kidblog fluency, a monthly newsletter went out that provided a summary of blog activity, shout-outs for recent posts and updates on out-of-state partner posts with links directly to those blogs to see their work.

Opportunity: Connect with regional upper elementary watershed programs that might provide sustained partnerships between teachers and programs over the years.

In 2020, Ciudad SWCD acquired the licensed trademark of RiverXchange® from Amy White, which grants CSCWD the sole oversight of the program and the ability to evolve the way we meet the "exchange" mission so integral to the program. Considering the challenges with the blogging platform, teacher engagement on the blog and connecting NM students with out-of-state students, we have been in search of other opportunities. One avenue is to strengthen a partnership with an out-of-state program that is similar to RiverXchange and develop a long term relationship. Another is to explore in-state programs that are similar and devise a strategy that would allow our students to connect possibly through the blog, via snail mail or even create podcasts to share. Santa Fe Watershed Association manages a 5th grade program called My Water My Watershed and could be a great candidate to try for a stronger exchange between students - one that would connect students across watersheds along the Rio Grande.

PROGRAM DESCRIPTION

Mission

The mission of RiverXchange is to deepen students' and teachers' understanding and appreciation for their local river ecosystem, motivate participants to protect local water resources by conserving water and keeping their source water clean, and to provide a high quality, high impact outreach opportunity for funders and in-kind contributors.

The Big Water Questions

The optional curriculum frames program outcomes as "guiding questions," known as *Big Water Questions*. A long term goal of RiverXchange is that students understand these questions and can formulate logical, fact-based answers by the time they finish elementary school. We believe that students who can synthesize water facts to understand larger water issues will have the proper critical thinking skills and foundation for further discussion in middle and high school so that they will become informed citizens and voters on water issues.

Understanding a Watershed

- Is every place in the world part of a watershed?
- Where does your community's stormwater go?
- How can surface water become polluted?
- How does the water cycle relate to weather?
- How are groundwater and surface water connected?
- How can groundwater become polluted?
- What actions can all of us take to keep water clean?

Water in Our Society

- In what ways does our society use water?
- Where does your community's drinking water come from?
- Does everyone have the right to use as much water as they want?
- Where does your community's wastewater go?
- What actions can all of us take to conserve water?

River Ecosystem

- How does water affect living things in an ecosystem?
- What role do forests play in a watershed?
- What role do wetlands play in a watershed?
- What are some of the ways scientists can determine the health of a river, lake, bay or ocean?
- What actions can all of us take to improve the health of our ecosystem?

Background

As producers of children's water festivals and other grade K12 water resources outreach in NM since 2007, the RiverXchange program creators observed early on that NM elementary teachers rarely incorporated water concepts in the classroom beyond what is required by the state (e.g., water cycle), and that most elementary teachers considered "water" strictly as a science topic. While teachers personally acknowledged the importance of conserving water and keeping source water clean, they continued to find that upper elementary students had little or no understanding of major water resources topics unless the teacher specifically integrates a wide range of water topics into the curriculum. For this reason, as well as successful festival work with upper elementary students, this age level was selected as the focus for the RiverXchange program.

RiverXchange was created to provide a free program that is fun, interesting, and easy to integrate into the normal curriculum. The hope was to motivate participants to explore water resources topics in depth. The program was originally designed to be carried out over eight months so that students spend more time developing a sense of pride and personal connection to their own river ecosystem, as well as a personal connection to a distant river ecosystem and the students who live near it. Today RiverXchange runs over the course of 3-4 months, as a response to the challenges of implementing a year-long curriculum with the ongoing demands on teachers and students time and requirements for testing and other curriculum.

RiverXchange began in 2007 as a pilot project of Experiential EE, LLC (under a services agreement with the New Mexico Water Conservation Alliance) and the National Great Rivers Research and Education Center, featuring partnerships between two fourth grade classes in Albuquerque, NM, and two fifth grade classes in Godfrey, IL. A curriculum was developed, a field trip to the river was coordinated, and partner classes "met" three times during the year via video tele-conferencing to present what they had learned.

After the pilot project, RiverXchange transitioned to a web-based technology called a wiki. This enabled the program to overcome limitations such as the high cost, availability, and time zone logistical issues associated with video teleconferencing – and easily involve more classes. The curriculum was updated to incorporate the writing component and classroom guest speakers were introduced to reduce teacher workload and bring up-to-date technical information into the classroom. In 2017, the program switched to a blogging platform called Kidblog, which is still being used today.

In 2012, ownership of RiverXchange transferred to Amy White of Orilla Consulting, LLC, who managed the program through July 2015. In August 2015, RiverXchange became part of the Ciudad Soil & Water Conservation District. In 2020, ownership and the trademark registration of RiverXchange® was transferred fully to Ciudad Soil and Water Conservation.

Since 2007, we have served over 18,500 students!

This year, the program featured the following components:

- Optional standards-based curriculum including hands on science and social studies lessons, as well as writing assignments
- KidBlog online posting and communication
- Partner class engagement support

- Teacher training on curriculum implementation and use of KidBlog
- Ongoing technical and motivational support
- Monthly newsletters to NM and out-of-state teachers
- End of year teacher survey
- Pre and post student surveys (NM only)
- Payment for teacher workshop substitute teachers (NM only)
- Coordination of at least four guest speakers into the classroom (NM only)
- Coordination of a field trip to the local river or important watershed feature (NM only)
- Field trip bus transportation payment (NM only)
- Field trip leadership and activity planning (NM only)

Program Management and Financial Support

The program timeframe was July 1, 2018 through June 14, 2019. All components including fundraising, design, planning, implementation, and analysis were carried out by employees and contractors of Ciudad Soil & Water Conservation District, including:

Melissa McLamb
Erin Blaz
Jenny Lloyd-Strovas
Astrid Hueghlin

Sponsors

- Southern Sandoval County Arroyo and Flood Control Authority (SSCAFCA)
- Middle Rio Grande Stormwater Quality Team (MRGSQT)

Sponsors provided a total of $56,157.11 in cash.
MRGSQT - $41,415.55 | SSCAFCA - $14,741.56

Program expenses included:

- Substitute teachers for NM teacher workshops
- Teacher workshop space rental and meals
- Field trip bus transportation for NM classes
- Field trip portable toilet rentals for NM classes
- Technology services
- Office and educational supplies
- Coordination services (planning, implementing and assessing all program components)
- Trademark Registration Fees
- Rain barrel project funds executed by The Nature Conservancy

New Mexico In-Kind Partners

- Albuquerque Bernalillo County Water Utility Authority
- Bernalillo County - Public Works Division
- City of Albuquerque – Open Space Division

- City of Rio Rancho – Environmental Programs Office
- City of Rio Rancho — Parks, Recreation and Community Services Department
- Sandia Labs
- Sandoval County Cooperative Extension
- Southern Sandoval County Arroyo and Flood Control Authority

In-Kind contributions totaled $82,115.32. For NM classes, in-kind contributions included classroom guest speakers, field trip docents, planting materials, workshop space and computer lab use, and teachers' and students' time attending the presentations and field trips. For partner classes, in-kind contributions were not calculated this year. Sponsors and in-kind partners were recognized on our website and in presentations.

Participant Selection

All 38 participating NM classes were fifth grade classes, distributed as follows:

Bernalillo County	**Sandoval County**
North Valley Academy (3)	Colinas del Norte Elementary (5)*
Cochiti Elementary (3) *	Martin Luther King, Jr. Elementary (6)*
Duranes Elementary (1) *	Sandia Vista Elementary (1)
Georgia O'Keeffe Elementary (2)	
John Baker Elementary (1)	
Monte Vista Elementary (3)	
Seven Bar Elementary (5)	
Zia Elementary (4) *	
26 classes, 607 students	**12 classes, 325 students**
* Title 1 school	**TOTAL - 38 classes, 932 students, 40 teachers**

Curriculum

A component of RiverXchange is the hands-on optional curriculum, which is offered to all participating teachers. It was developed to help students reach for deeper meaning through hands-on learning and reinforce what they have learned through the process of writing on the blog. Over the years, we have developed a curated list of activities from the curriculum, along with reflection prompts specific to each presentation. Organizers strive to incorporate emerging water resources issues into the curriculum, increase networking opportunities for teachers, reduce teacher workload, and align the curriculum with public school curriculum priorities.

Each class learns about its own local water resources issues through hands-on activities, classroom guest speakers, and a field trip. Students write about what they are learning via a private educational website that can be viewed by their partner classes. The computer technology and writing components provide a unique opportunity to reinforce what was learned, increase student motivation to learn, and collect valuable metrics about student performance.

Through RiverXchange, students take pride in sharing their knowledge of the local ecosystem and learning from their peers about another river ecosystem. Comparing the two geographical areas gives students a broader understanding of the importance of a river ecosystem to human and other life. Students gain the unique opportunity to share personal experiences and ask questions about a distant place. Teachers feel this kind of personal connection is a big deal for kids – many of whom have never traveled beyond their city limits.

All activities are correlated to NM state standards and benchmarks for Social Studies. All activities (because they require that students communicate information on the KidBlog) address Common Core Language Arts standards for writing. Some activities also address Common Core Mathematics and Science standards. As mentioned above, RiverXchange lessons and curriculum support the NGSS and will be evaluated for full alignment to the NGSS, beginning with the presentation activities and field trip. Projected date of completion: May 2021. For a summary of the RiverXchange Curriculum, see Appendix 1. For a summary of the extension activities, see Appendix 2.

Guest Speakers

We coordinated at least three guest presentations to visit each NM classroom. In all cases, guest speakers were water resources professionals from local agencies. Topics included:

- watershed/nonpoint source pollution
- drinking water
- wastewater
- water and agriculture

Field Trips

The program requires that all classes attend at least one field trip to their local river or important watershed feature, which should incorporate a service learning component if possible. Throughout the winter and spring, students planted 539 native trees and helped restore critical riparian habitat along the Rio Grande in Albuquerque near Shining River Parking Area, Albuquerque Open Space.

EVALUATION

Blog Evaluation

Engagement

Considerable effort was made to make the blog an effective resource and easily accessible to teachers. An instructional document was reviewed at the teacher workshop and made available to them to return to at any point. We also included links to curriculum and extension activities on their blog page, hoping that might encourage teachers to visit the blog more frequently. Additionally a monthly newsletter was sent out to encourage posting, with links to the instructional document and other helpful resources. Our aim was to continually remind teachers to post and make sure the information they needed was easily accessible.

Of our total number of classes, Kidblog was used by 71% of RiverXchange teachers this year and the number of blog posts ranged from 1 to 32 per class over the year. This is a similar rate of use to last year. Teacher feedback suggests that many still feel challenged about how to incorporate blogging into their classrooms as a lesson for students. One North Valley Academy teacher reached out directly for support and Erin Blaz visited his class to do an in-class tutorial of posting on the blog. This visit was highly informative as Erin was witness to some of the issues that occur from getting students onto the blog and submitting their work. However, other teachers still express that they think the blog is an important aspect to the program, as it allows students an opportunity to enhance writing skills, think critically and reflect upon what they have learned.

We ran a contest this year for creative and excellent blogging. We used a rubric to score posts for each class to determine the winner. While class use and posting was about the same as last year, this year posts were more creative and used a wider variety of media. Some favorites were videos using the changing river model, artwork that modeled stormwater impacts on a city and PSA's on poster boards that encourage water conservation. Two 1st place winners received $75 gift certificates to Acorn Naturalists, and five 2nd place winners received $25 gift certificates. The original 1st place prize was going to be a rolling river presentation or edible aquifer activity, but with school closures that was not possible.

Considering the likely need for online technology next year and teacher familiarity with the blog, RiverXchange will continue the use of Kidblog.

Student Voices

Student voices rang loud and clear this year in support of conserving water, keeping trash and pollution out of stormwater and the importance of Rio Grande!

The following are examples are from this year's students:

NEW MEXICO CLASSES

Thank you for the presentation 😃.

What we learned was clean up dog poop, or if we don't the river will be contaminated water and will kill the fish. If you litter you can kill animals so we learned that we should CLEAN UP DOG POOP!

What can we do? We can put more trash cans and recycling bins, we can ban plastic stuff. We can save more water. The community can clean trash🗑. We should make more electric cars🚗. We can stop pollution from happening in water 💧.

Hello Again! Today we'll be discussing a pretty fun topic. Storm water! A better name for storm water is polluted water! This is a bigger issue than lightning and thunder! ***We need to help save local rivers anyway we can!***

In our presentation, we learned how contaminated our river gets every time it rains. These things get in to our river and poison it...

1. Pesticides. Pesticides hurt our river by running into the Rio Grande, poisoning our fish and killing our algae witch is vital because the fish eat it!

2. Fertilizer. Extra fertilizer run into the Rio Grande because we put too much on same things with Pesticides! Any way the fertilizer does what it was meant to do under water. They make the algae grow too much and use up all the river oxygen, killing all the living things in the river!

3. Poop. All kinds of poop hurts our water! Cow poop, dog poop, etc. They release germs like E-coli into our water which is very difficult to filter out!

4. Factory oil. They harm our river by leaking or dumping their left over chemicals into the Rio Grande! The chemicals can harm the water in many ways!

5. Livestock. Livestock can harm our river by eroding the soil so we end up with slit and dirt all mixed in!

6. Trash. Trash is a very big factor. Trash floats through storm drains and blows in the wind to our river and kills fish because they swallow it.

There are a ***lot*** of things that pollute our water. We are not that happy about that.

Here are some solutions to the problems we have with our river pollution!

1. For your pesticides you can still put it on but just put the right amount on! The bag tells you how much to put on so put that amount on! Or you could use bug paper.

2. Fertilizer is the same. You can still use but just put the right amount on!

3. Pick up your animals poop! This will help decrease the pollution greatly!

4. You cant do a lot about the factory oils. But you can write letters to important figures asking to make dumping your chemicals in the river illegal!

5. How we can help the issue of livestock is, if you own livestock put a fence up around their pastures and living areas so they can not wonder down to the river and pollute it!!!

6. For trash the easiest solution to this problem is to not litter and if you do pick it up!!! But we have a bigger idea! We will try to get plastic water bottles banned in our school and try ***TRY*** to get them banned in New Mexico! Plastic bags were banned so why cant plastic bottles be banned to!!!

Trout

The Bosque means forest in Spanish.People plant native trees in the Bosque because they don't regrow by them selfs.We all agree that we all enjoy being at the Bosque because the feel of nature, planting trees, smelling fresh air, and helping the environment. Aswell as having the feeling of after planting a tree.we all felt proud, exhausted, and seeing the planted trees was beautiful.Our class planted 17 trees!We all love the beautiful nature aswell. We recommend going to the bosque because you can ride your bike around or walk and see the sights, the smells, and the feeling.There are animals there too! Like fish, squirrels, porky pines, eagles and turtles. It is worth going to the Rio Grande.

Feb 27, 2020, 1:34pm (209.189.162.95) Edit | Remove | Reply | Approve



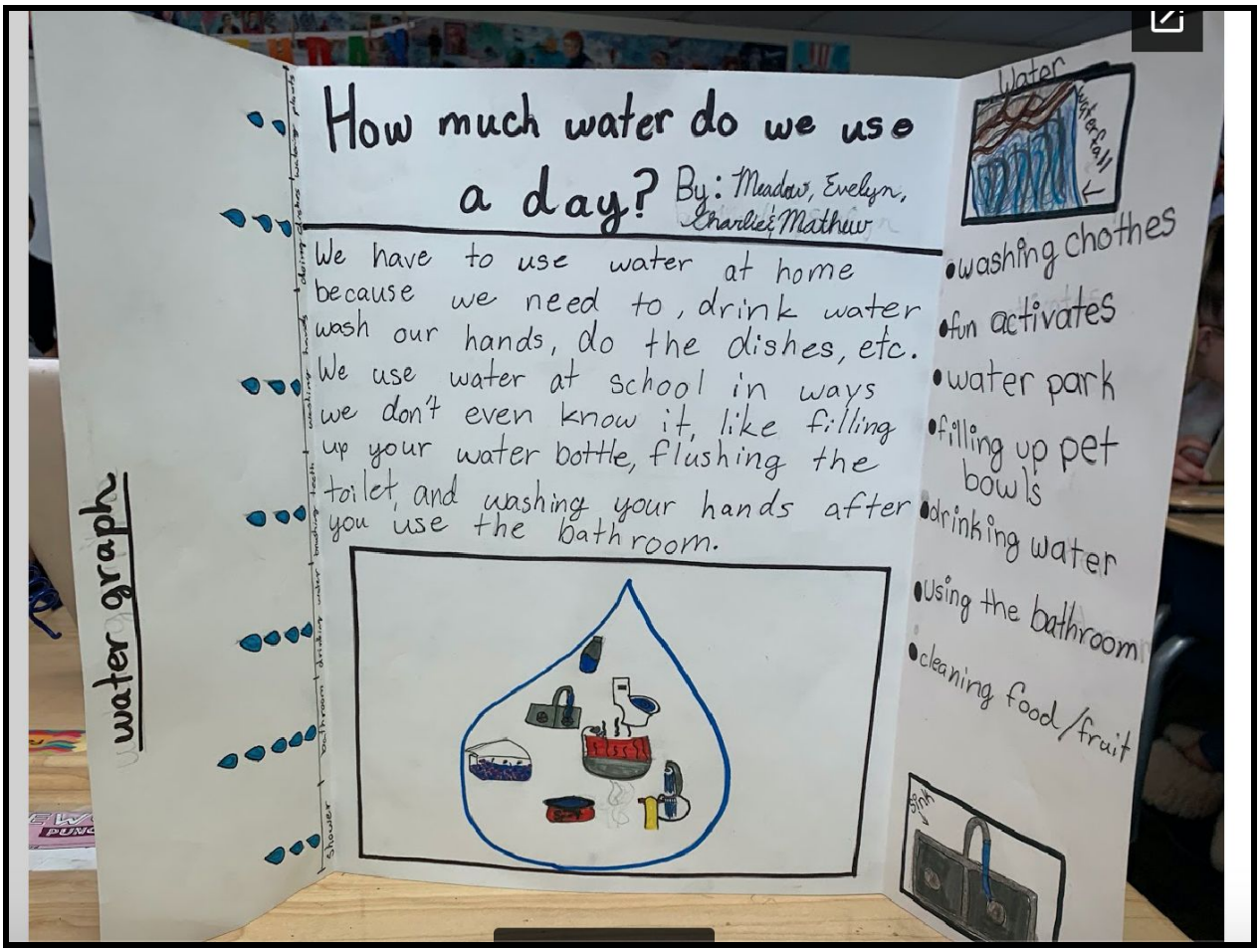
This image shows how everywhere that you go, you'll always see pollution, stores, neighborhoods, schools, farms, anywhere, you'll always see pollution. Not only will you see trash as pollution, you can see chemicals or polluted liquids like, Oil, Gasoline and Sewage. You can also see smoke from factories and animal droppings! We should always try to be responsible and try to stop throwing our trash on the roads.

save the planet



By Irrigation Insiders on Nov 20, 2019

So I want to write this because we need to save all the beautiful animals that are being affected by pesticides and cow mi-newer.Did you know that point source pollution is were you can see the point that the pollution is coming out of.Non point source pollution is were you cant see or don't recognize it like pesticides and animal wast.In concoction don't use pesticides.



Waste Water

By Snakes on Jan 9, 2020

We learned about waste water presentation. There is a bar screen that catches every thing that clumps up that goes down the drain or toilet. Even though there is flush-able wipes your not supposed to flush them down the toilet because they can clog your toilet. Every thing that you flush down your toilet ends up turning into sludge. Waste water goes to a waste water facility and once it's cleaned it goes back into your house to be used as waste water again. A machine that cleans the waste water is called a clarifier and how the clarifier works is the waste water goes into a huge bucket and a metal arm skims the top of the big bucket of waste water and picks up the trash and waste. The last part of cleaning the waste water is called a digester, it injects chlorine into the dirty water and once that is done and the water is clean they relies it back into your homes.

Pole Planting

By Snakes on Mar 9, 2020

We went on a field trip to plant cottonwoods. We planted them because older trees are dying and we don't want them to die out. We used augers to dig the holes for the cottonwoods. We had to dig holes 10ft to 12 ft deep to get to the water line and so the trees can take root. We split into teams and took turns twisting the augers. When we pulled the augers up from the ground it was heavy because of the dirt. As we got down to the mud it was even heaver. When we thought our hole was deep enough we would yell "tree check." The conservation officers would come and see if our hole was deep enough. The poles were limbs from older cottonwoods. At the end we sat at the bank of the river and had lunch. In all we planted 39 poles. It was a great learning expirience.

PARTNER CLASSES

Should you drink New Haven River Water?

By Quinby on Dec 6, 2019

After testing three different rivers for four different things. PH, Nitrates, Dissolved Oxygen, and Temperature, New Haven water is not perfectly clean, but still drinkable. After struggling through knee deep water, my class and I have established that water in New Haven is clean enough to drink, at least after you treat it. To go along with that, my class also used leaf-packs, nets with leaves in them, that allow animals to live inside of them. We put them in the Mill River, and retrieved them two months later. We found so many macro-invertebrates, it was hard to believe! We found a lot of Macro invertebrates that could only live in clean water, which means that they were group 1.

FRESHWATER MUSSELS

By Wetland on Nov 25, 2019

Freshwater mussels live in streams they filter feed to stay alive.Freshwater mussels are related to water quality because.They filter feed and make the water clean.I learned that the mussels filter feeded and made the foggy dirty water clean.I learned how the mussels life cycle goes.They are born and spit onto fish gills when they are ready they are dropped and the mussels grow.`

the housatonic river and long island sound

By Harbor Seals on Dec 6, 2019

the housatonic river starts in massachusetts and goes into long island sound. There are a lot of things to do in the housatonic river like fishing and activities like hunting for animals.There are alot of types of fish in the housatonic river like the striped bass,brown trout,blue fish,white perch,mouth bass,sea bass and many others.

Student Evaluation

A key component of RiverXchange is measuring student learning outcomes. We collect quantitative data on learning outcomes and behavior changes by way of a pre and post survey. We make qualitative observations by reading what students submitted on KidBlog. In 2019 we were able to compile comparative metrics from the last 4 years of RiverXchange surveys to observe the longitudinal impacts of our program. Working with a team, we continue to refine the survey questions to better reflect RiverXchange learning objectives, while maintaining the ability to track comparative learning outcomes across years.

Pre/Post Behavior Survey

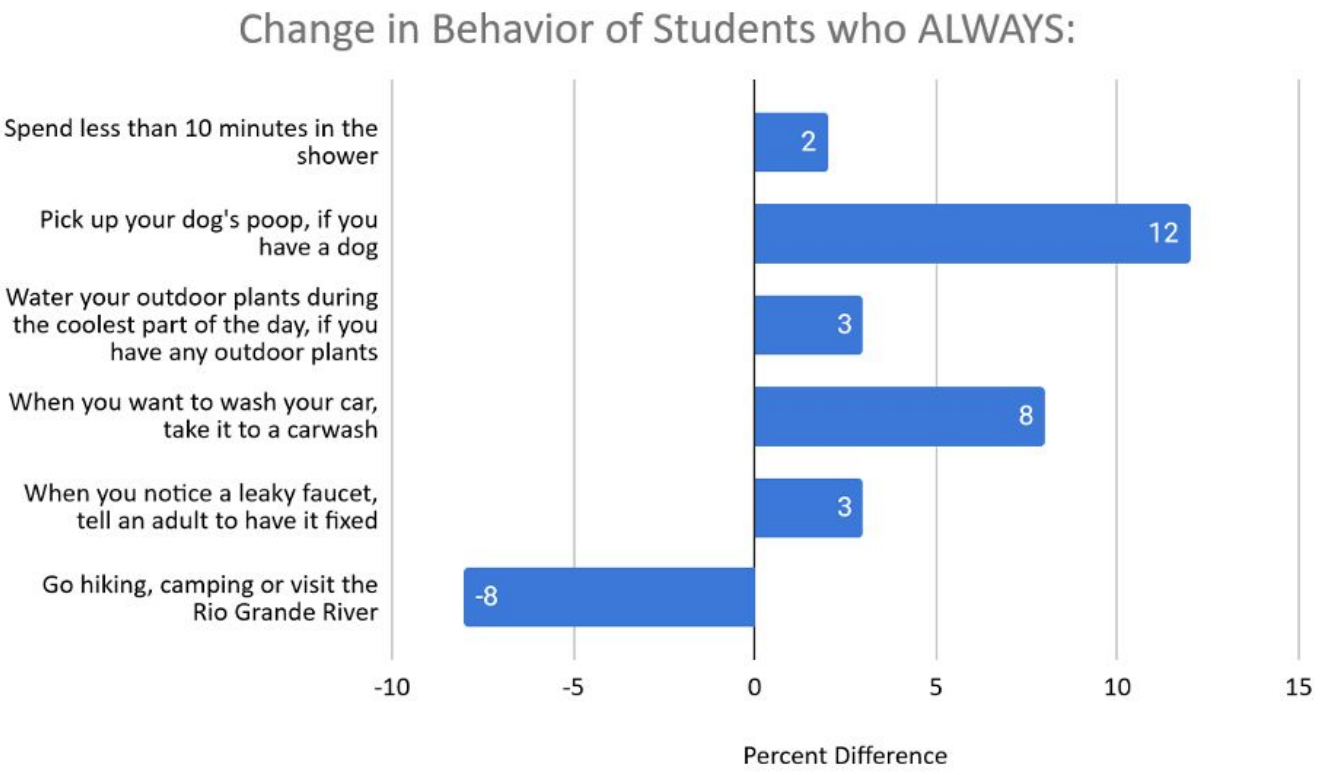
In order to quantify the learning outcomes achieved through RiverXchange, we ask our teachers to have their students fill out a survey prior to, and upon completion of the program. This year's survey was updated in summer of 2019 to reflect the suggestions for improvements that were identified at the end of 2018-2019. The survey went from 18 questions to 13 in an effort to be more concise and eliminate questions that were found to be irrelevant to programmatic impact.

Below, you will find a series of graphs used to illustrate the change in responses between the pre and post surveys. This year, 795 students completed the pre-survey, while only 410 completed the post-survey. This was due to school closures occurring right after post-surveys were distributed to teachers. Most students completed the survey from home. In order to account for the discrepancy in participation, the number of each given answer has been calculated as a percent of the total number of responses received for each given survey.

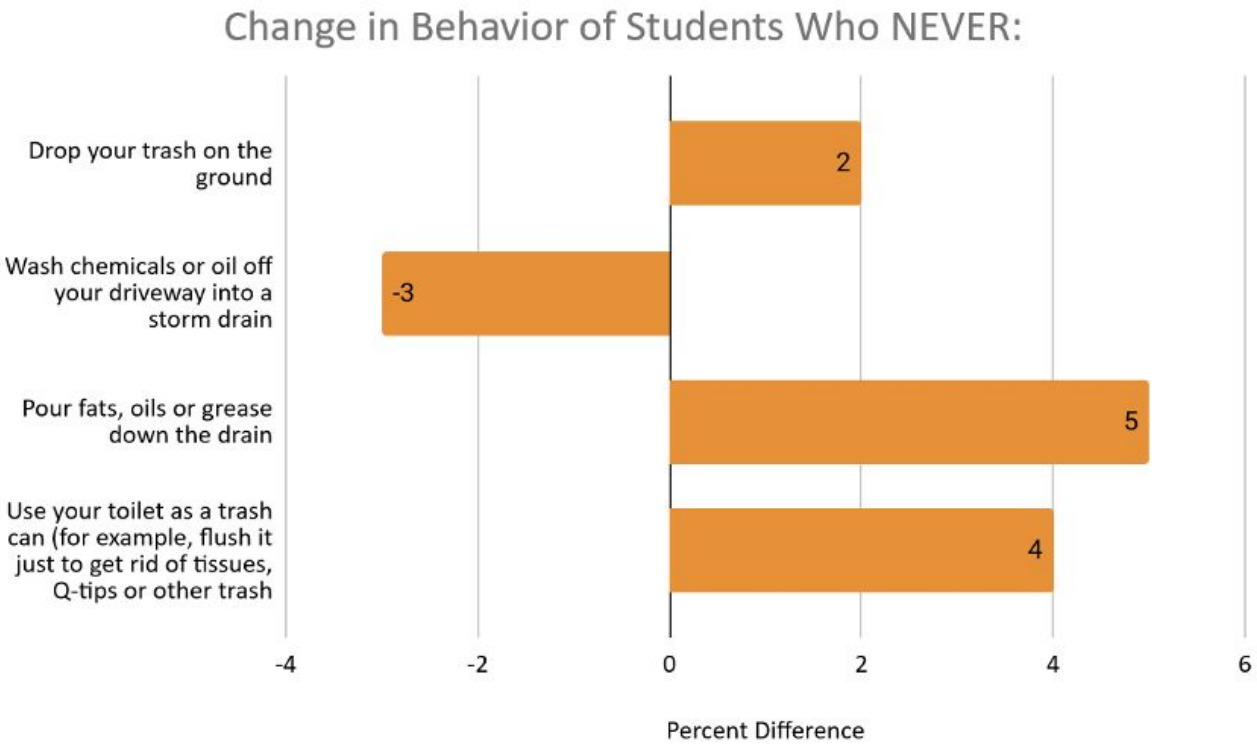
The metrics demonstrate an overall positive increase in students' knowledge about local water resources, water conservation strategies, and human impacts on water quality. After participating in RiverXchange more students correctly defined a watershed, the annual precipitation in our region and the origin and outlet of the Rio Grande. In reviewing the graphs, notes were made below on findings that were significant, or on areas where the survey needs to improve. The first question below aims to understand how students' water conservation and environmental behaviors change after taking the program. The final question highlights some responses from the open ended question: *Do you think everyone has a right to water and why?* You will find some passionate, thoughtful, and critical responses that tell us that even if they don’t fully understand what happens along the stormwater pathway yet, they overwhelmingly understand that water is life and has to be protected.

Item # 1: How Often questions

The following two graphs demonstrate the percent change in responses on questions that reflect positive and negative behaviors in regards to water consumption and conservation. The questions are framed as "How often do you…?"

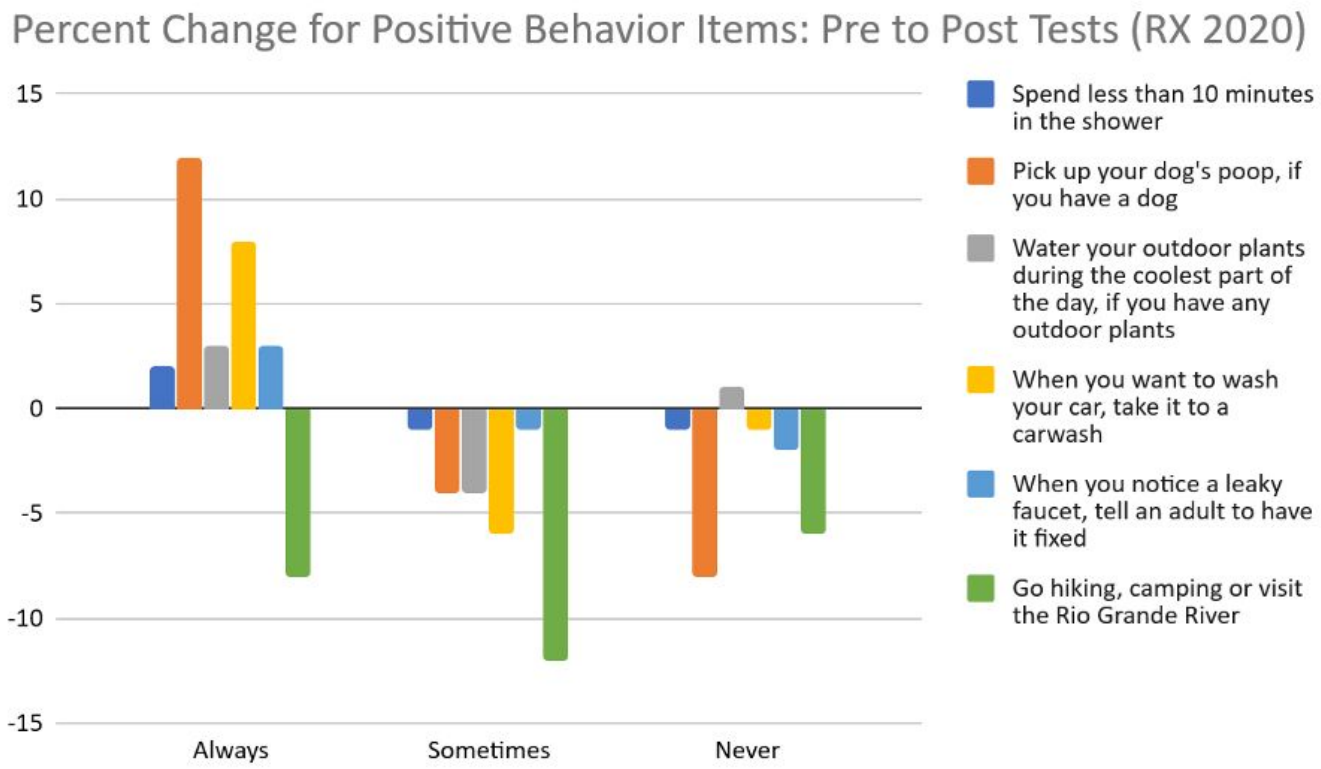


- After going through RiverXchange, 12% more students said that they pick up their dog poop (i.e. 12% more students said they learned from the program and report to have changed behaviors from the pre to the post test). However, in the pre-test, more students reported going hiking and visiting the Rio Grande than those who reported this behavior in the post-test. Two considerations are taken into account for the negative percent change in students reporting camping, hiking or visiting the river. One is that the stay-at-home order might have impacted their response and students are answering literally not in the context of normal family behaviors. Another is that once students participate in the pole planting field trip, where they walk a good distance to the river and find themselves surrounded by nature without a house in site, they might reconsider their initial answer with a different perspective on what it means to visit the river.

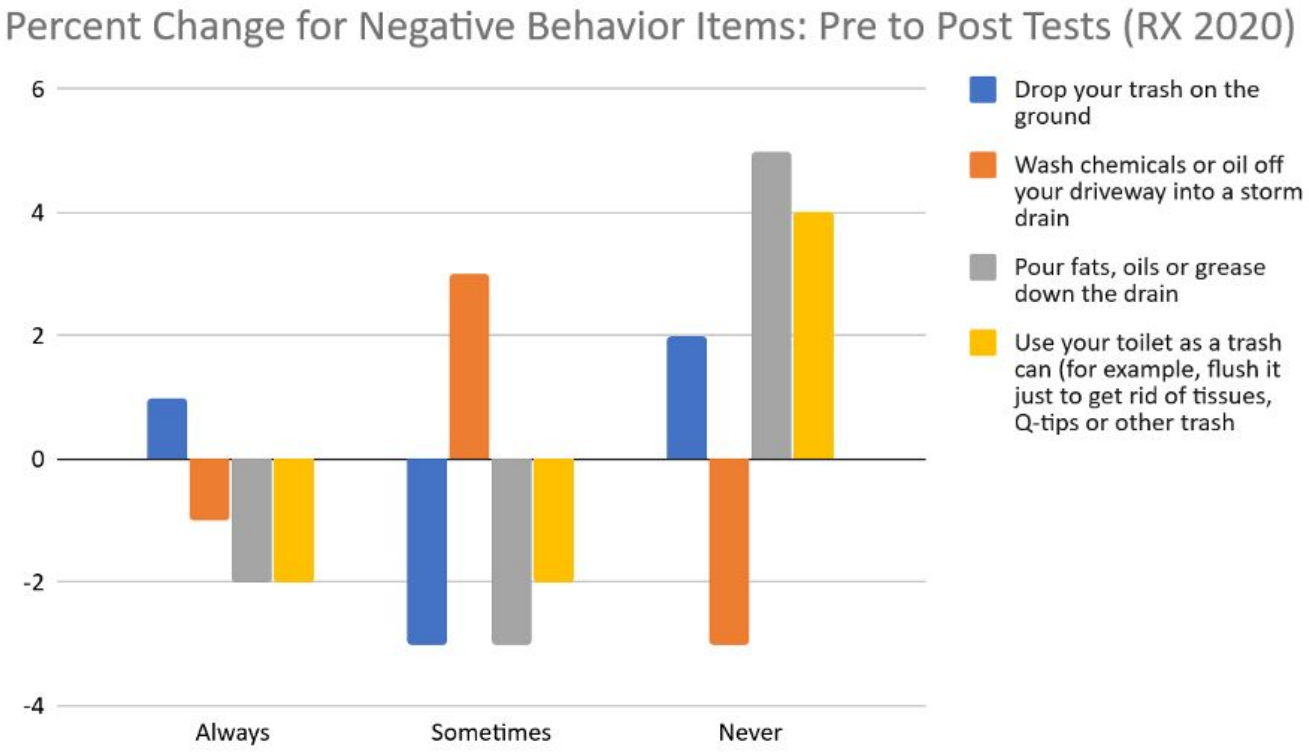


➢ In the post-test, 5% more students reported to NEVER pour fats down the drain. This means that they gained valuable information from RiverXchange and report to change their behavior (likely because of the program itself). However, we see that more students reported to NEVER wash chemicals or oil off the driveway into a storm drain in the pre-test than they did in the post test, resulting in a negative number. Likely, this is just due to error since it's such a small percentage and that there was really no change.

The following two percent change graphs include the ‘sometimes’ option for the ‘How often’ questions:

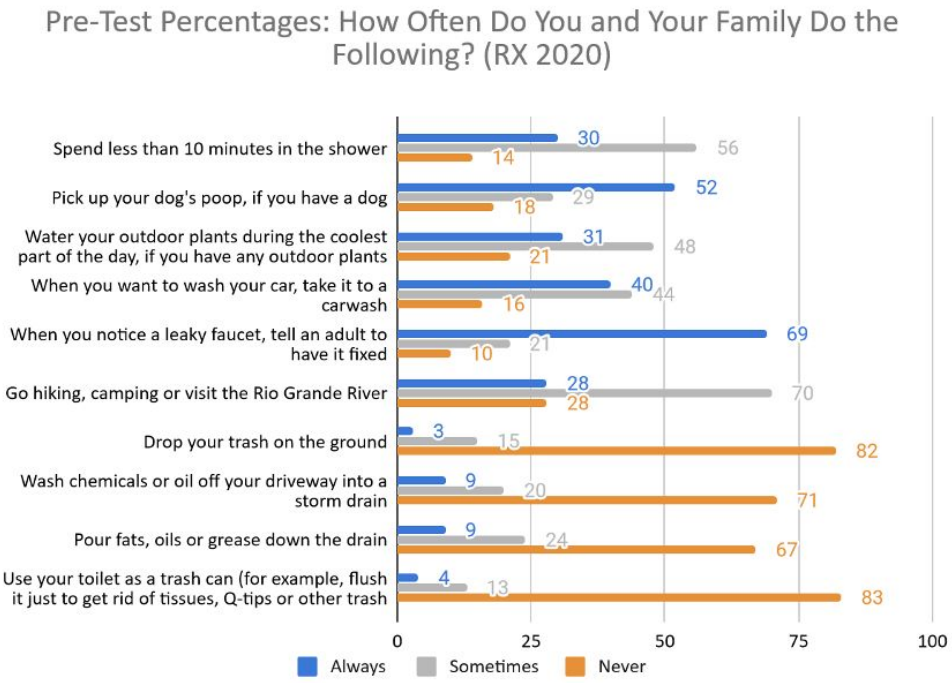


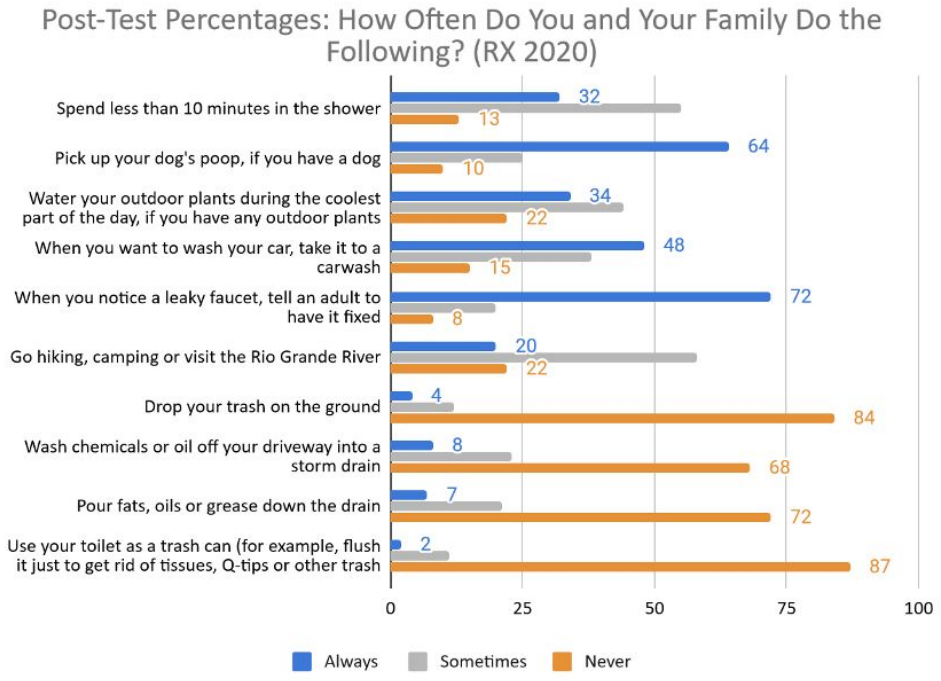
- Again, the most significant change is more students saying they always pick up their dog’s poop. However, it appears that both ‘sometime’s’ and ‘no’ answers decreased slightly, meaning that some students' behaviors changed for the positive.



➢ The increase in responses from never to sometimes "washing chemicals into a storm drain" is interesting here. This may be a case of students answering more honestly if they observed or participated in this at home after they learned about stormwater pollution.

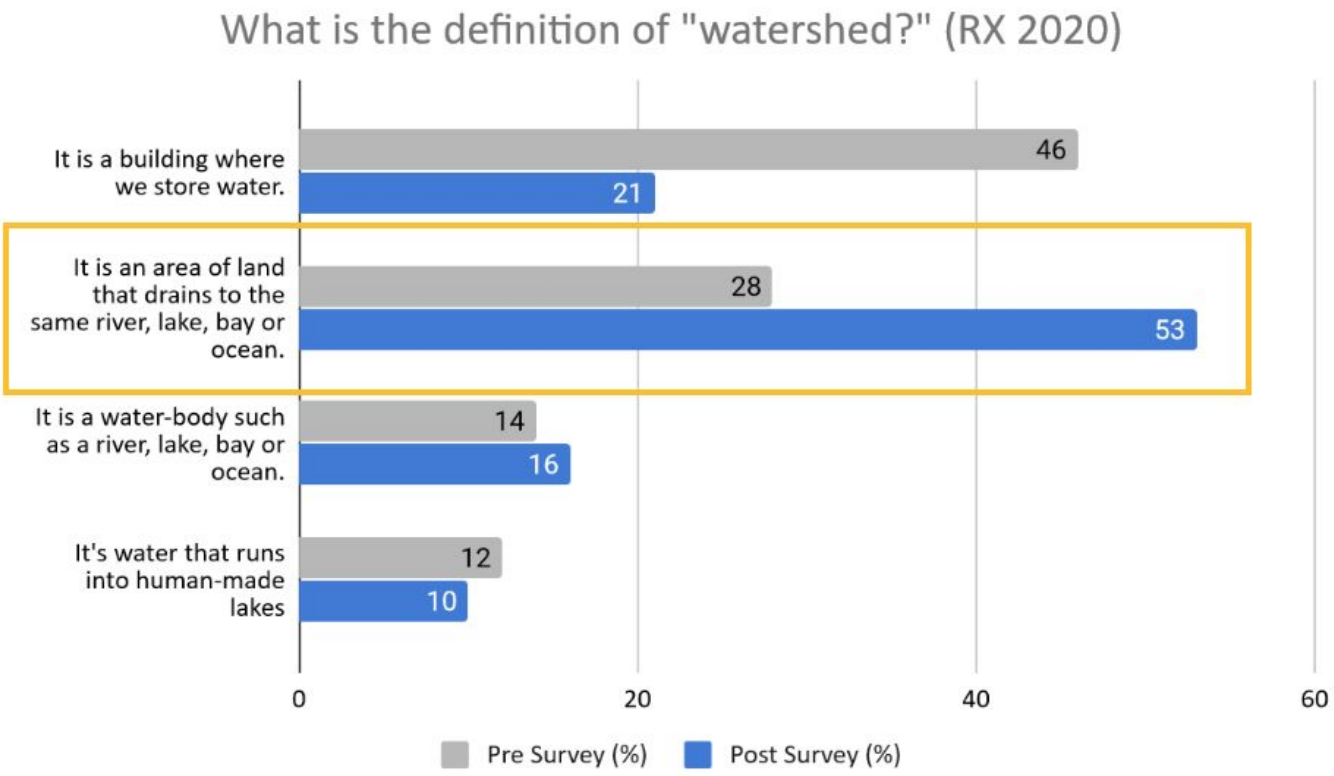
The following graphs are the raw percentages for the pre and post *how often* survey questions:



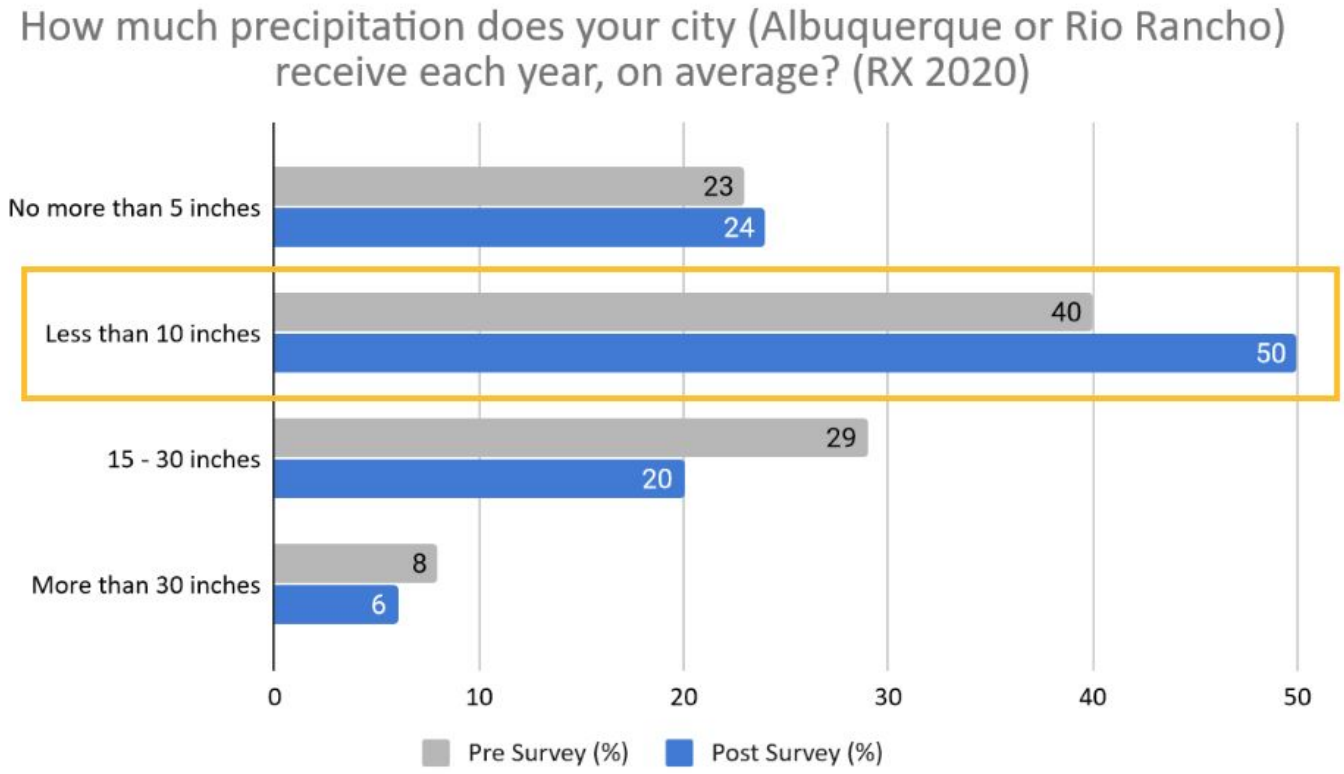


The next section of survey questions correspond to the learning objectives of RiverXchange and demonstrate student learning outcomes from pre to post evaluation. Correct answers, where applicable have been noted with a yellow outline or stars.

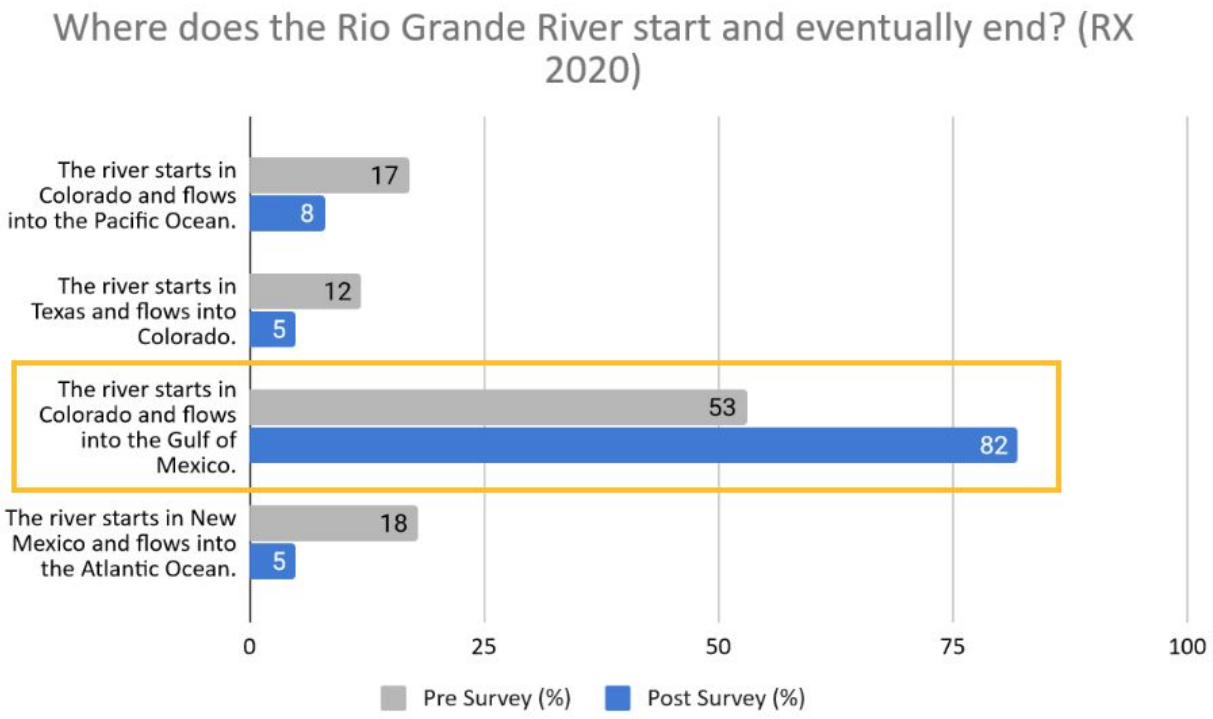
Item # 2: What is the definition of a "watershed"?



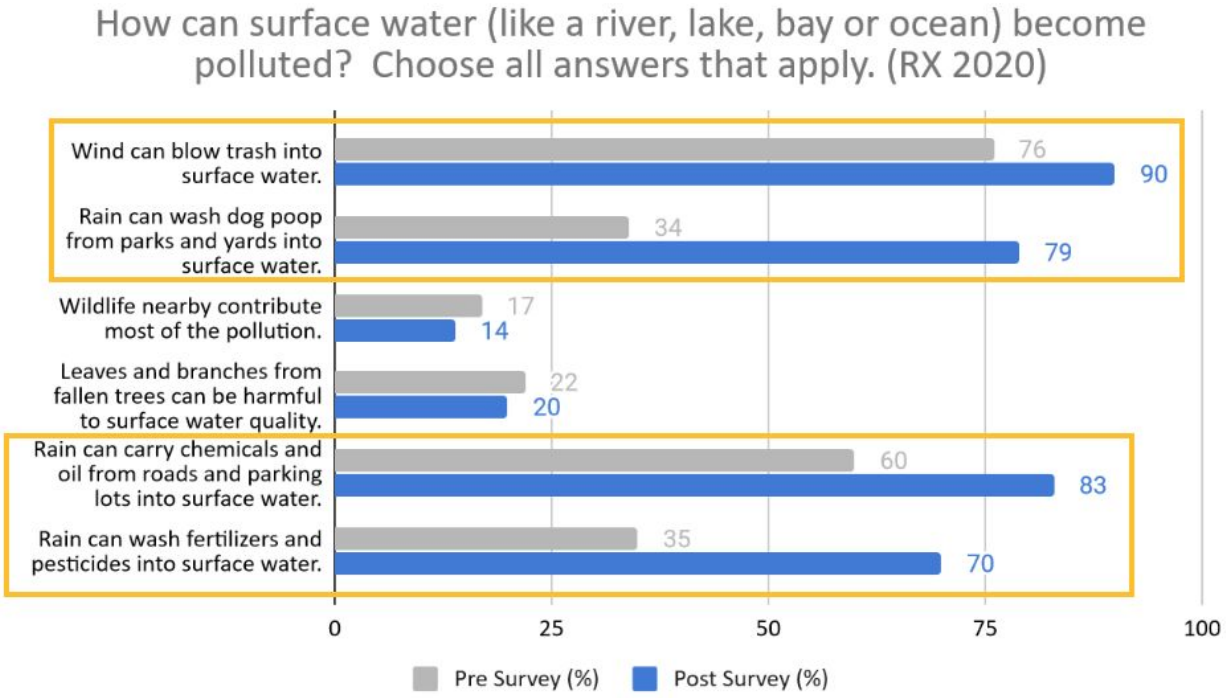
Item #3: How much precipitation does your city receive each year on average?



Item #4: Where does the Rio Grande River start and eventually end?

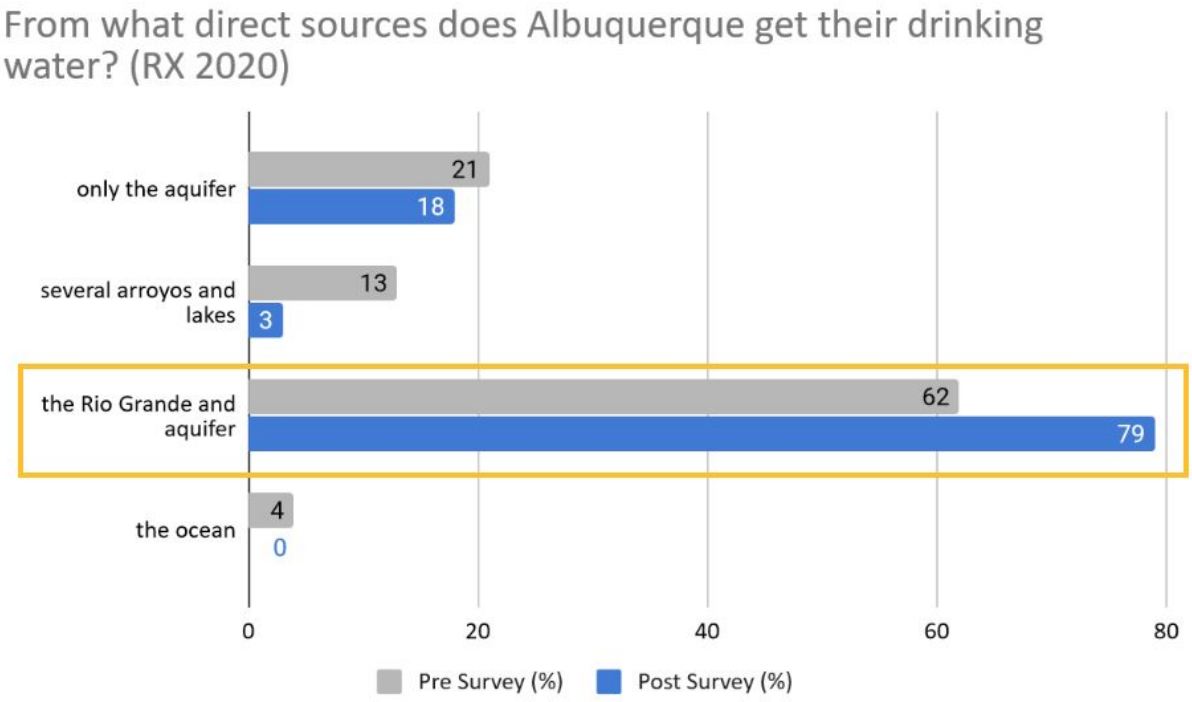


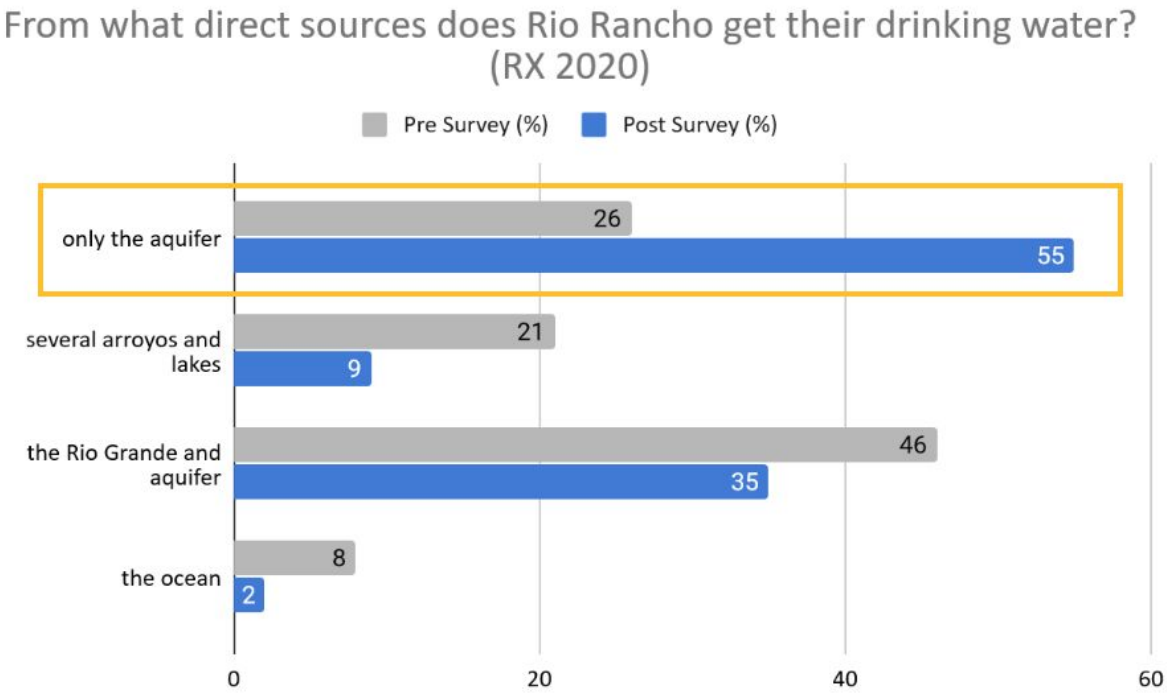
Item #5: How can surface water become polluted?



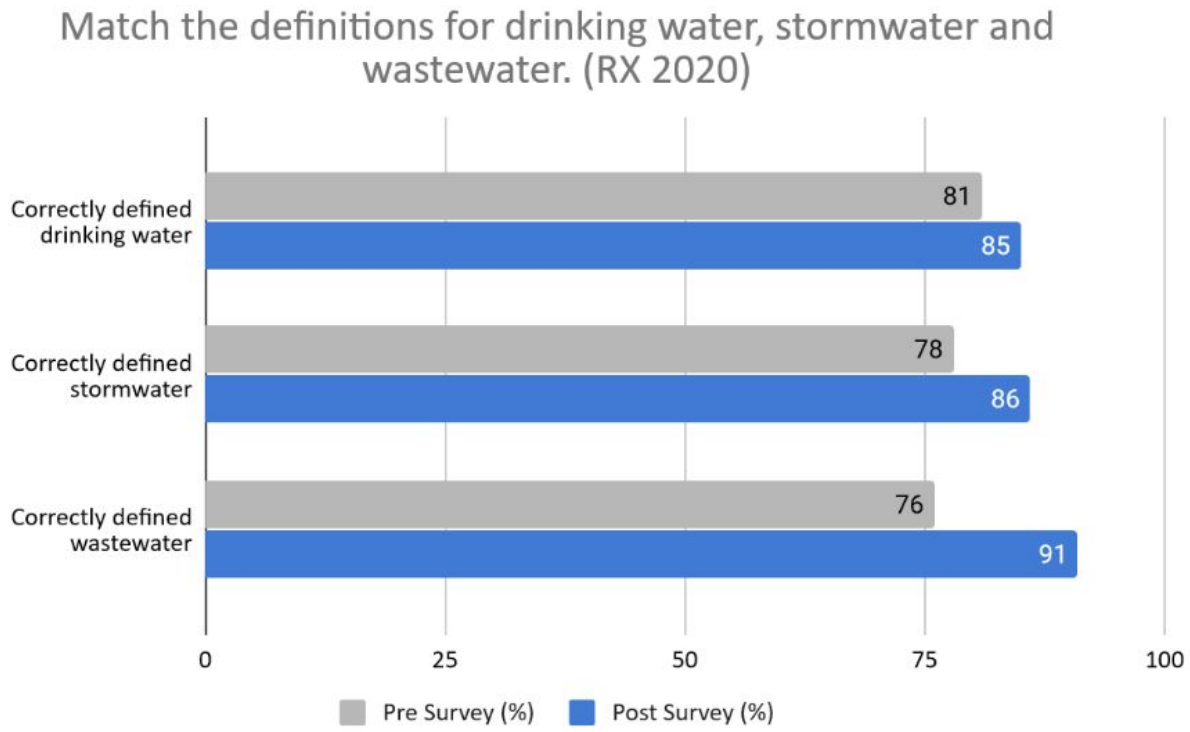
- Responses to this question were adjusted from last year to remove "all the pollution comes from factories" and "all the pollution comes from just a few people" as those answers seemed too obvious. Since this question allows for multiple responses, students who choose the incorrect answers are likely also choosing correct answers. We do see a reduction in the incorrect responses from pre to post survey. With the change in responses it may mean that our stormwater presentation may also need to incorporate some myth busting as well to clarify the incorrect responses.

Item #6: From what direct sources does ABQ/RR get their drinking water? Students are directed to only answer the question for the city in which they live.





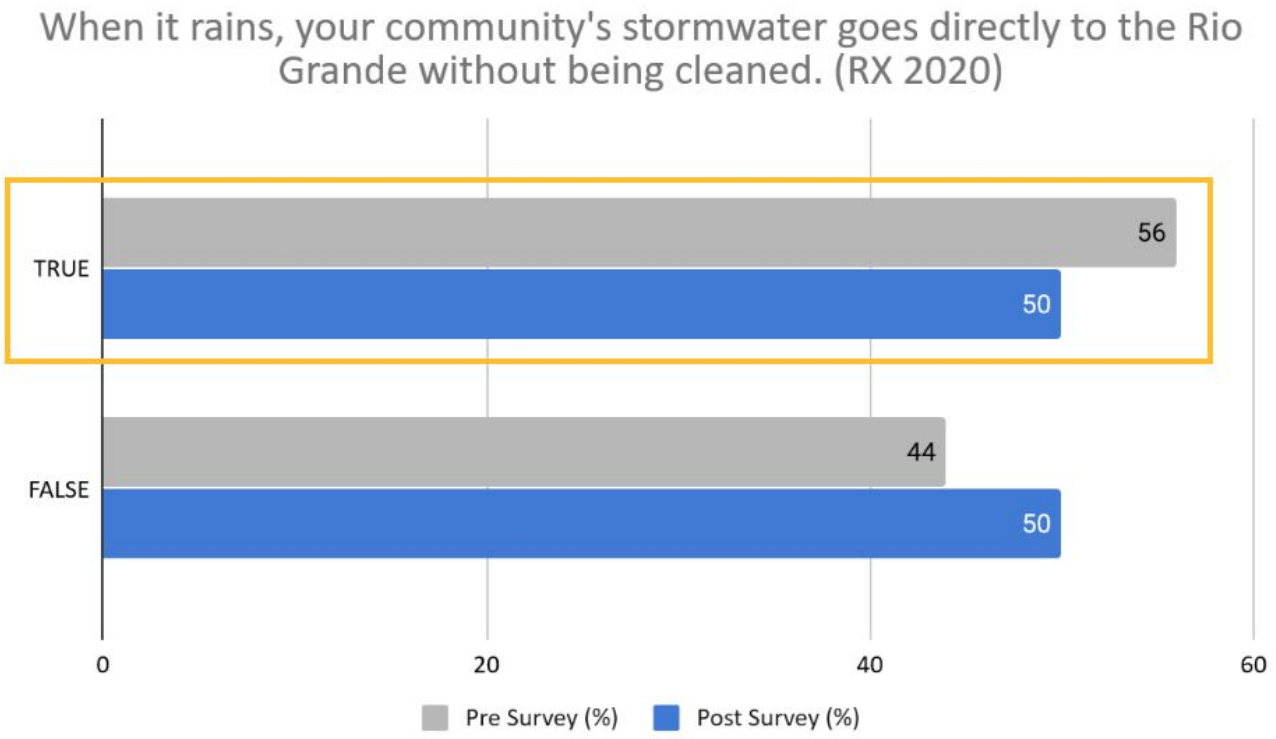
Item #7: Match the definitions for drinking water, stormwater, and wastewater.



|

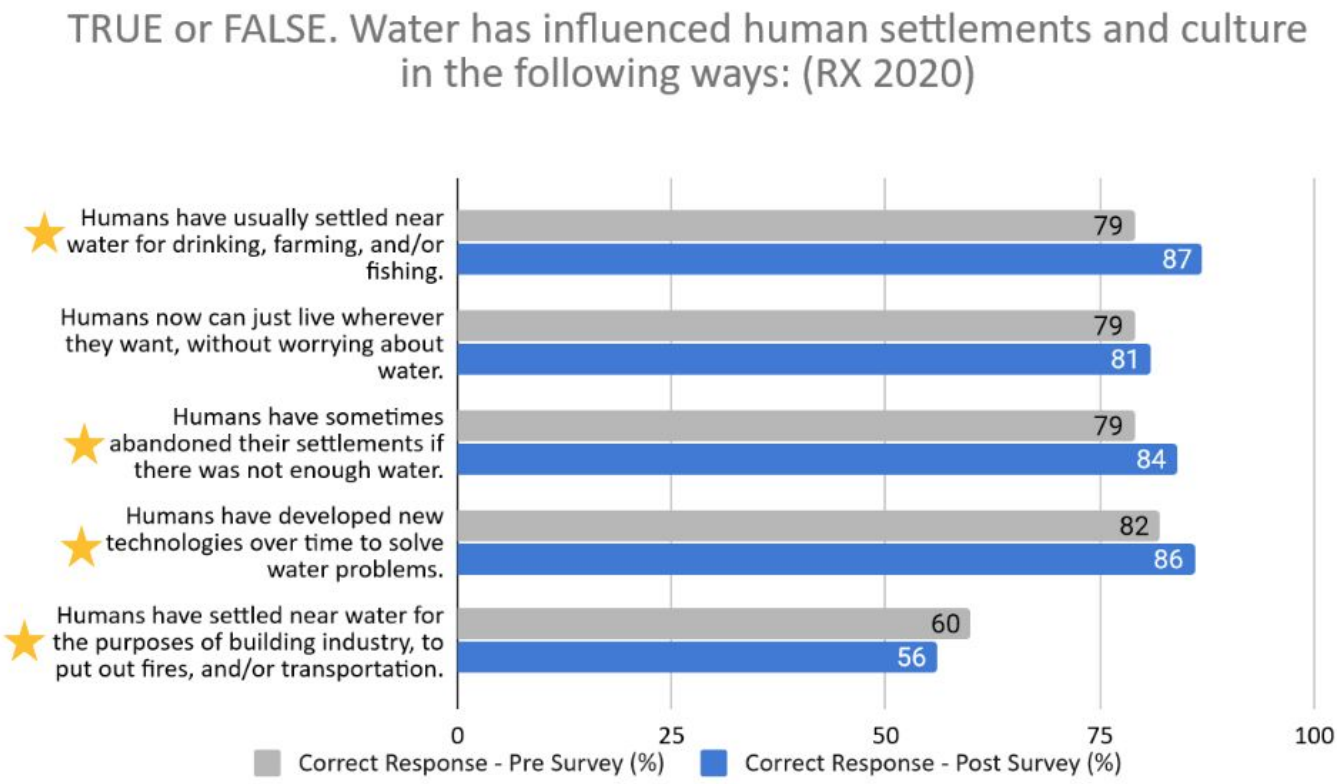
➢ The responses to this question do not suggest RiverXchange teaches these definitions to students as it may already be prior knowledge, although it may be that it is clear enough in the descriptions that students can easily choose answers correctly. We will explore if there is a better way to evaluate if students understand concepts that are taught about drinking water, wastewater and stormwater.

Item #8: When it rains, your community's stormwater goes directly to...



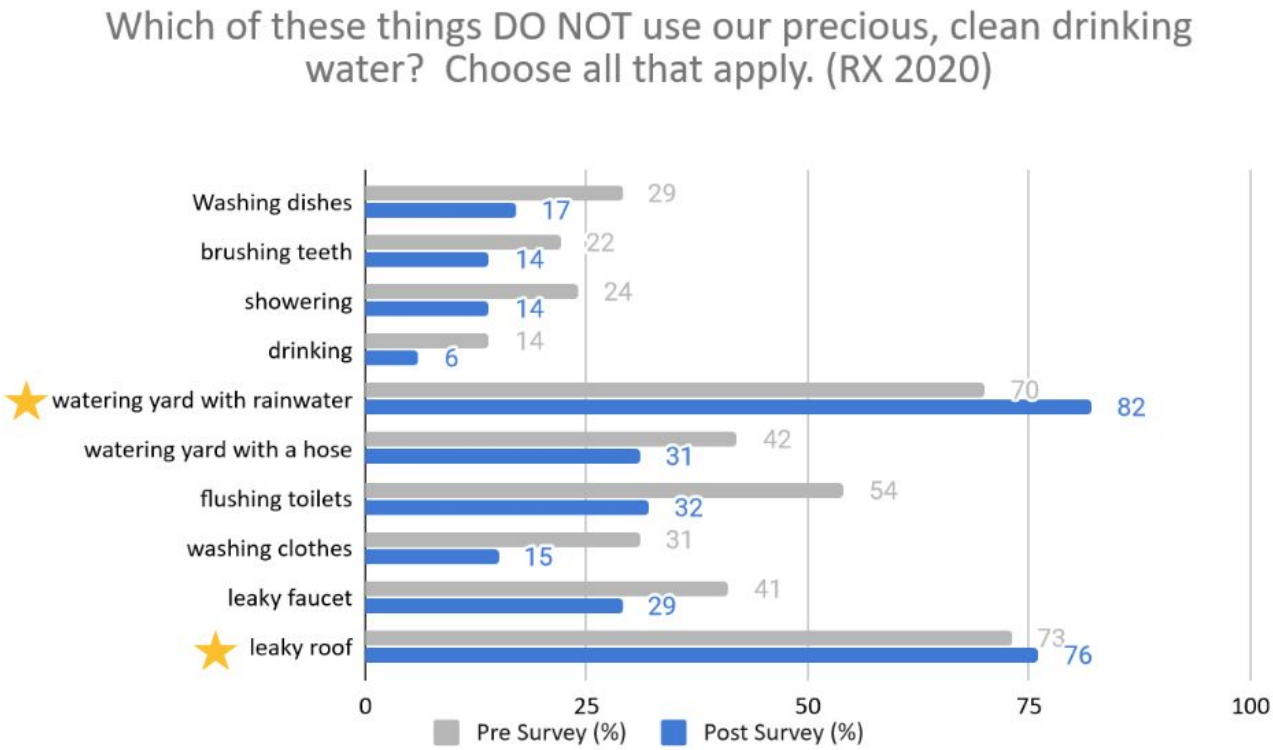
- This graph demonstrates a small decrease in correctly defining the stormwater pathway. This continues from last year, as we saw a similar percentage decrease in the correct answer. We met with presenters prior to program implementation this year and shared the concern about this misunderstanding and that it may be rooted in misinformation or confusion about a sewer drain versus a stormwater drain. However, we are still seeing similar results. It may be that there is confusion about a storm versus sewer drain. It could also be that presenters are discussing green stormwater infrastructure techniques that might lend students to think it is cleaned. They may also be another variable that is influencing this result that we have yet to identify.

Item #9: Water has influences human settlements in the following ways:



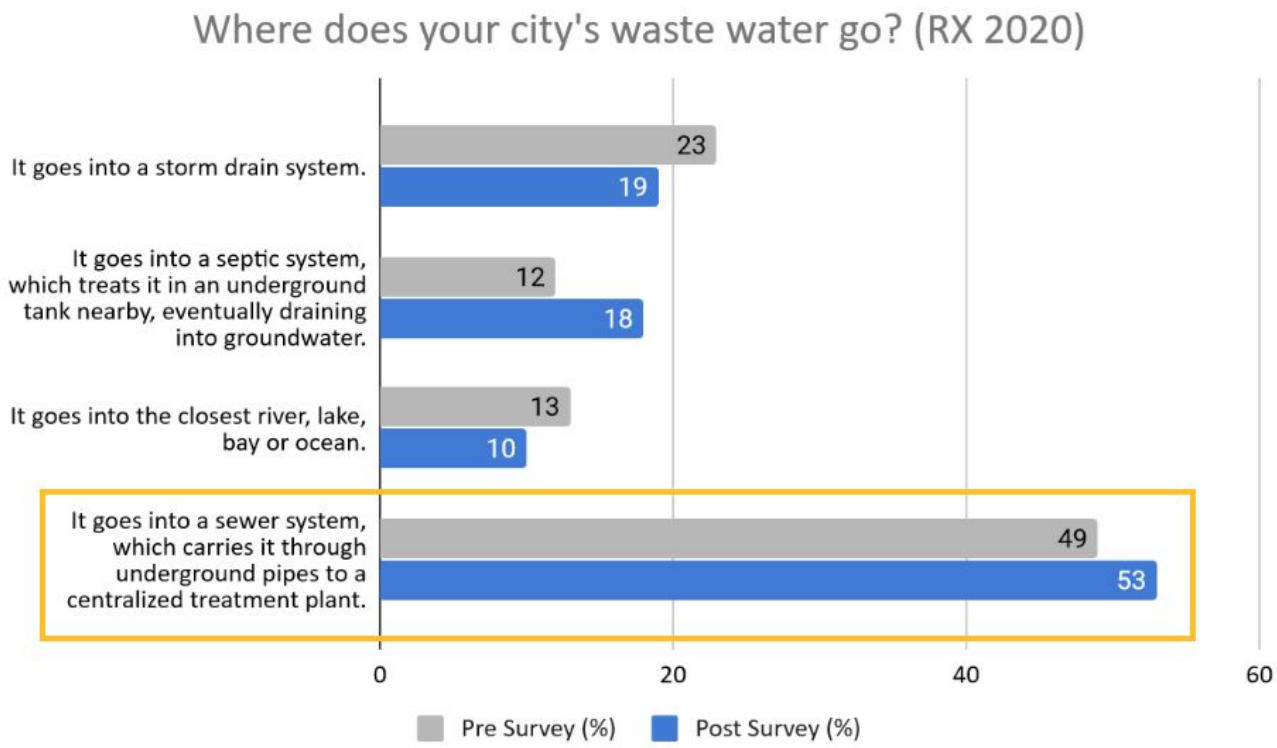
- This question was adjusted from last year to allow students to choose true or false for each response, rather than only picking true answers. We see students are answering correctly in high percentages on the pre-survey but there is still positive growth for each answer, except the final "Humans have settled near water for the purpose of…." This could be the result of the changes made in the APS agriculture presentation that highlights the historical and cultural uses of the Rio Grande with a focus on Puebloan and Spanish settlements. The discussion does not always reach modern commercial uses of rivers that are more relevant to waterways outside of New Mexico.

Item #10: Which of these things DO NOT use our precious, clean drinking water?



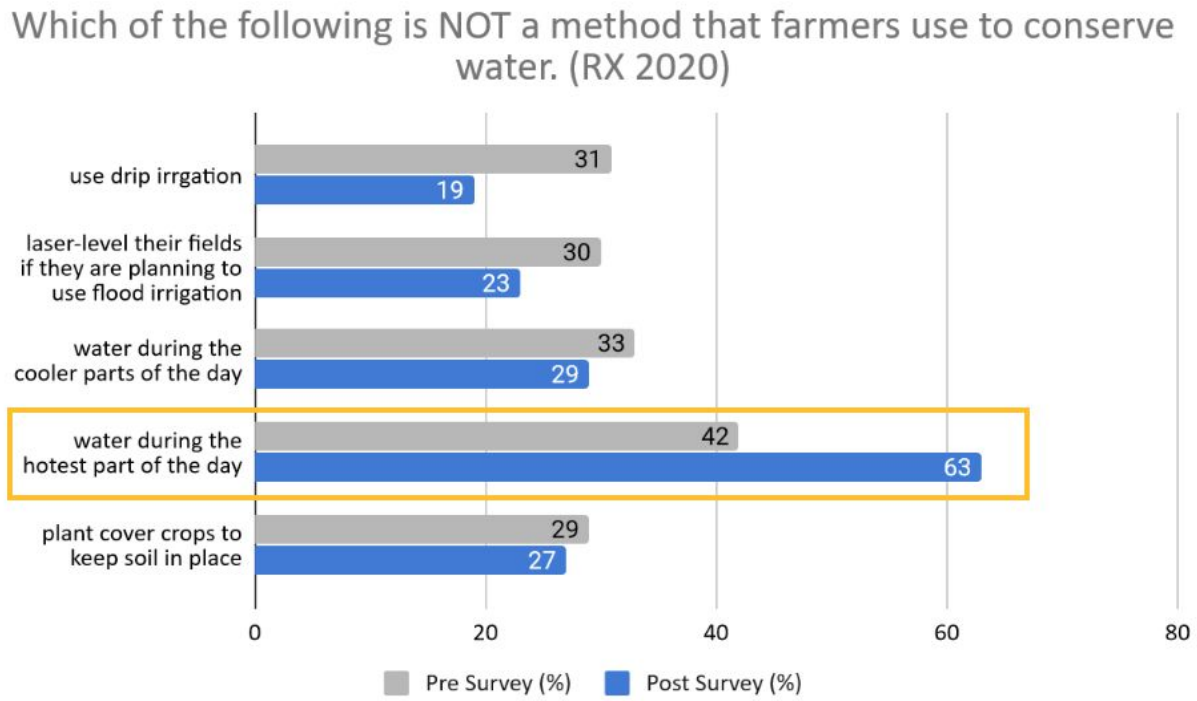
➢ This graph suggests that after participating in RiverXchange it was further clarified how often we use clean drinking water in our daily lives as the incorrect responses were reduced by 8-22 percent.

Item #11: Where does your city's wastewater go?



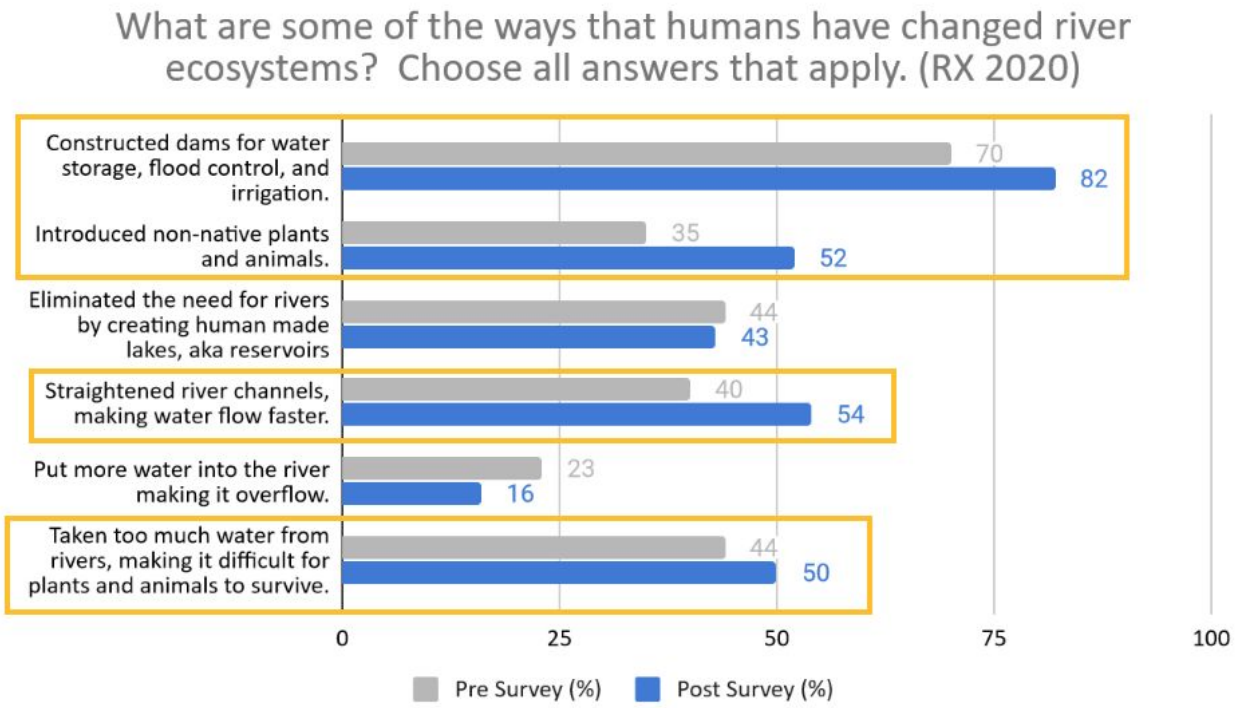
➢ This question was updated from last year's "When it rains, where does your community's stormwater go?" as the answer changes depending on where students live. The hope was that asking where your city's wastewater goes would prompt students to remember that Albuquerque and Rio Rancho have centralized treatment plants for the majority of residents. Considering that both incorrect answers saw a reduction in responses demonstrates that students are understanding that wastewater is either cleaned at a treatment plant or goes into a septic system (as is the case for many Rio Rancho students).

Item #12: Which of the following is NOT a method farmers use to conserve?



- Water conservation strategies for different farming methods and irrigation systems were only covered in the Sandoval County Extension agriculture presentation with Rio Rancho schools this year. Moving forward this question may need to be redefined or removed to account for the different presentations in each district.

Item #13: What are some ways that humans have changed river ecosystems?



- Overall this graph demonstrates that students increased their understanding of human impacts on river ecosystems. It is notable that their understanding of the impacts from the introduction of non-native species, straightening the river, and building dams significantly increased. The field trip experience really drives home a lot of key concepts about the Rio Grande's timeline and how anthropogenic influences on the river have impacted the riparian ecosystem.

Item #14: Does you think everyone has a right to drinking water and why? (short answer)

“Yes Everyone Has A Right To Drinking Water Because They Are Living Creatures They Need Water To Survive.”

“I think everyone should have a right to clean drinking water because water is a necessity to life.”

“Yes. If not everybody has water, then the human population will die off. I think that everybody should have access to water, especially in places where they don’t have access to supplies of water.”

“yes, I think that all people have the right to clean drinking water because humans need water to live and survive and people do have the right to live off of clean water for everyday use. Also all people should be treated fairly when it comes to drinking clean fresh water.”

“Yes! I think this because the government can’t be like you don’t have money for us so you can’t have water. That is basically starving them”

“Yes I do. I think this because everyone needs to drink water to survive and the water they drink should be clean so that they don’t get sick or get a disease.”

“I think everyone has a right to drink clean drinking water because if we drinker dirty water, we would be like Mexico because in Mexico, the only water they drink is dirty water and the people who live there often get sick by the water.”

“I think everyone doesn't have a right drinking water because some states have no clean water they still have water, but it's not all clean. Some people get sick from drinking dirty water all the time because there is no clean water.”

“This is a yes and no question for me. I don’t believe that people that waste our water should have any, but than again everyone needs water to survive. So I do think that people should have it because they need it, but some people just don’t deserve it.”

“Yes , I think that everyone should have the right to have clean drinking water . As long as people don’t waste it people should have it , and be great full for it to .”

“I think everyone has a right to drinking water but, some places in the world are really dry, so it's hard to find clean, decent drinking water.”

“Everyone of every race and country has the right to drinking water because it is a source of life and everyone in the world deserves it.”

“I think everyone has a right to drinking water because, in order to live as humans and as a community, we must have water. Water is life! But I also think everyone has a right to know how to conserve it!”

“Every one has a right to drink water because no one owns it”

Appendix 1 includes the extension activities from the RiverXchange curriculum, Appendix 2 includes photos.

Appendix 1
Extension Questions and Activities

Understanding Our Watershed:

River Geography



- **Suggested Reading:**
  - **Books:**
    - *Follow the Water from Brook to Ocean* by Arthur Dorros
    - *Paddle-to-the-Sea* by Holling C. Holling
    - *One Well: The Story of Water on Earth (CitizenKid)* Strauss, Rochelle
  - **Articles:**
    - *Albuquerque Journal:* "As Bad as it Gets: Drought Returns to New Mexico."
    - *Albuquerque Journal:* "Drought Affecting 99% of New Mexico."

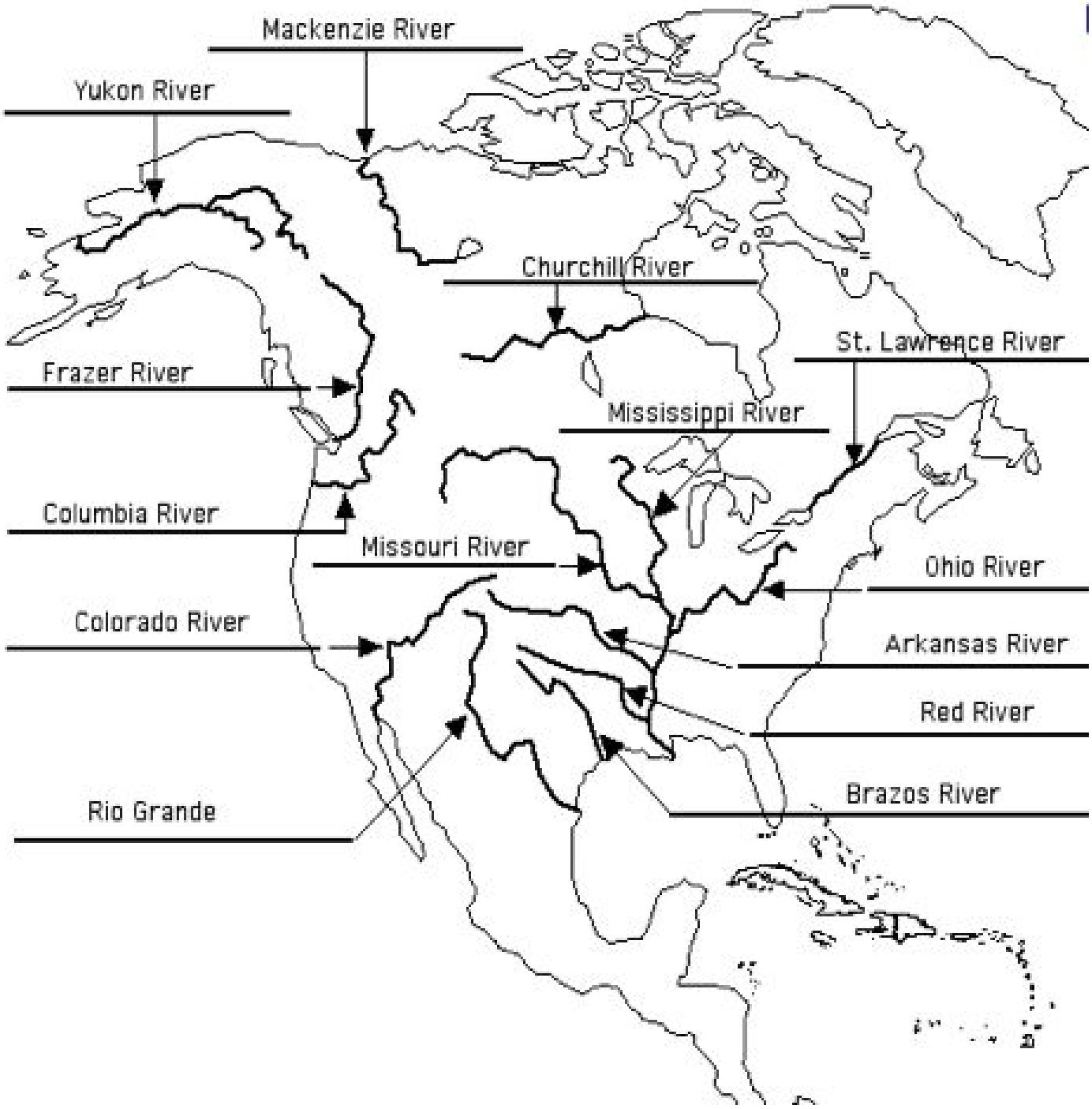
- **Watch:**
  - Watch Save Water - Save Our Rio!, a 17 minute video created by local summer camp students, sponsored by Albuquerque Water Utility Authority. Follow up with *When is the Drought Out?* http://www.abcwua.org/education/pdfs/Drought_GraphingOption.pdf

- **Write a letter to your partners or create a project, explaining:**
  - what a watershed is
  - the name of your river - this is also the name of your watershed!
  - the journey of your river from its headwaters to the ocean

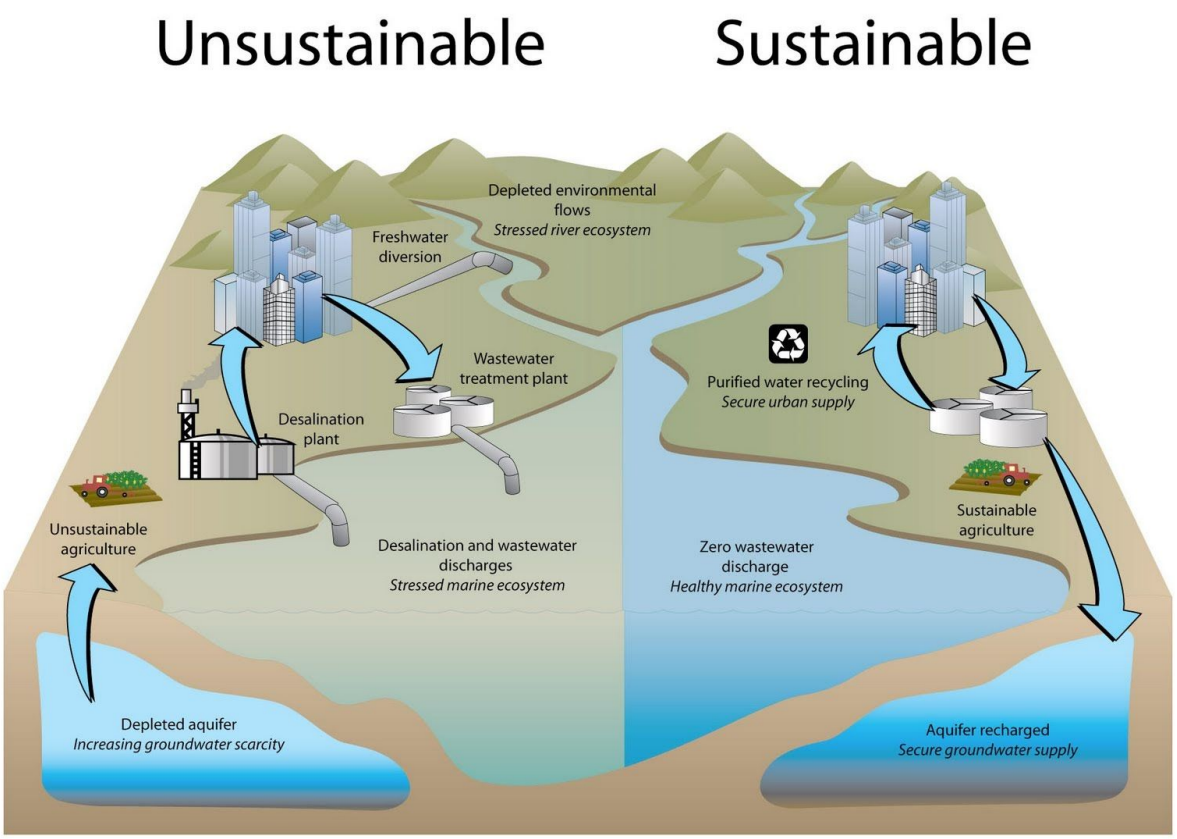
- ➢ what the river is like in your area - big/small, clear/muddy, fast/slow?
- ➢ how much precipitation your area receives each year, and what season gets the most precipitation

- ❖ **Want to explore further?** Refer to Project 1 in the RiverXchange Curriculum "Understanding a Watershed".
  - ➢ You can access the curriculum on your Kidblog homepage or by following this link: https://riverxchange.com/teachers2/curriculumpage/

North American River Map



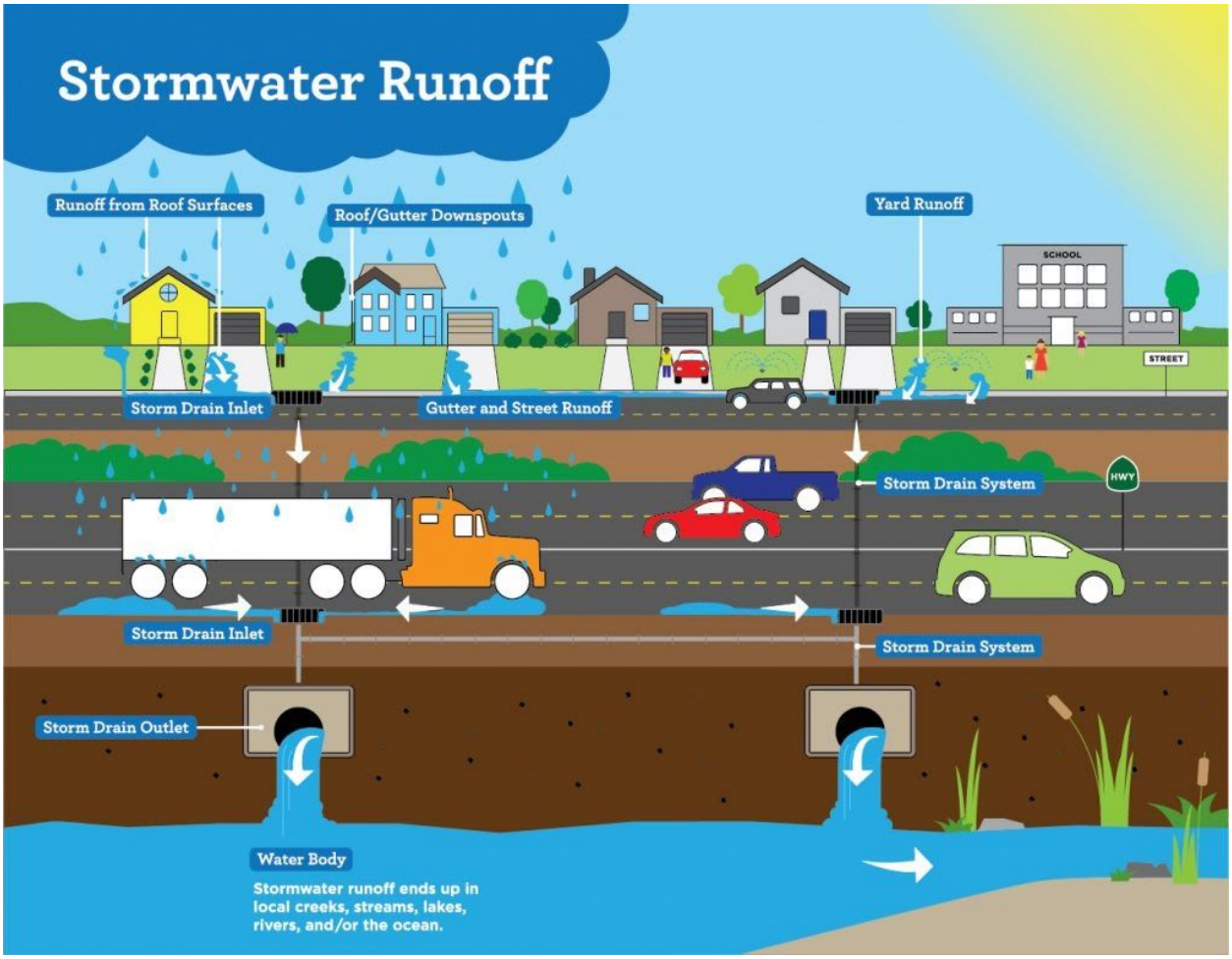
The urban water cycle



Clean Ocean Foundation 2009 - www.cleanocean.org

Understanding a Watershed:

Watershed Model / Infiltration and Runoff



Graphic credit: City of Columbia, MO

Enhance your student's blog posting and extend their learning beyond the Stormwater presentation with the following activities:

- **Suggested Reading:**
  - **Articles:**
    - *CNN* article. 2013. "Garbage Man of the River" http://www.cnn.com/2013/04/18/us/cnnheroes-pregracke-rivers-garbage
    - *Science News for Kids* article. 2012. "Suffocating Waters" https://www.sciencenewsforstudents.org/article/suffocating-waters
- **Watch:**
  - *The Human Solution to Water Pollution* video (to right of screen): http://sscafca.org/teacher-resources/
  - *The Majestic Plastic Bag* video (mockumentary): https://vimeo.com/14221747
    - For a 60 minute class activity, include this lesson to explore the Great Pacific Garbage Patch and what students can do to respond.

- Explore The Ocean Cleanup project and how an 18 year old started with a simple idea which is now making a difference in the effort to clean up the world's oceans.

❖ **Explore your watershed**

➢ Follow the link below to zoom in and explore your watershed and the watershed that family and friends live in, perhaps even your RiverXchange partners who live outside of New Mexico! Interactive Topographic Watershed Map of Earth

❖ **Lesson plan**

➢ *Don't Trash Our Rio Activity Guide* - A math based extension where students learn how much trash is pulled from Albuquerque's storm drain system yearly, and calculate how many trash bags or classrooms it would fill. (Follow links for additional handouts)

- **Reflection Questions**
  - Discuss how the gutters in our streets lead to **storm drains**, which often lead directly to the nearest body of water. Discuss the difference between **stormwater** and **wastewater** (from household drains and toilets).
  - What is stormwater and where does your community's stormwater go?
  - What did you learn about stormwater that was surprising to you?
  - How do things that happen in your yard or your neighbor's yard impact the watershed?
  - What have you noticed about stormwater in your own neighborhood?
  - What are some things you can do to clean up stormwater?
  - How can surface water become polluted?
  - What's happens when rain falls on a pervious surface compared to an impervious surface? Give examples of impervious surfaces.
  - How are groundwater and surface water connected?
  - What are ways you can minimize stormwater pollution?

❖ **Want to explore further?** Refer to Project 2 in the RiverXchange Curriculum "The Watershed".

➢ You can access the curriculum on your Kidblog homepage or by following the link below: https://riverxchange.files.wordpress.com/2018/09/riverxchange-curriculum-20181.pdf

Water in Our Society:

Drinking Water



Enhance your student's blog posting and extend their learning beyond the Drinking Water presentation with the following activities:

- **Suggested Reading:**
  - **Book:** *A Long Walk to Water*, by Linda Sue Park (2010: Clarion Books)
  - **Articles:**
    - **Albuquerque drinking water info**
      - from ABQ Water Utility Authority http://www.abcwua.org/education/pdfs/WaterUse_Text.pdf
      - About the San Juan Chama Project, ABQ Journal 2008: https://riverxchange.files.wordpress.com/2015/08/san-juan-chama-project.pdf
    - **Santa Fe drinking water info**
      - Buckman Diversion, ABQ Journal 2010: https://riverxchange.files.wordpress.com/2015/08/buckman-diversion.pdf
    - **Santa Fe drinking water info**
      - Buckman Diversion, ABQ Journal 2010: https://riverxchange.files.wordpress.com/2015/08/buckman-diversion.pdf

- **Lesson Plan: The Water Project**
  https://thewaterproject.org/resources/WaterLogs_5to8.pdf
  - Five simple activities and lessons to assist students in exploring how water scarcity may impact their lives and how they can contribute by conserving water.
  - Suggested activity: Students log their personal use and observation of other forms of water use over two days, then discuss their findings and explore what would happen if water scarcity were an issue. Another lesson also includes a TRUE/FALSE game to learn about water and how it impacts the human body and communities.

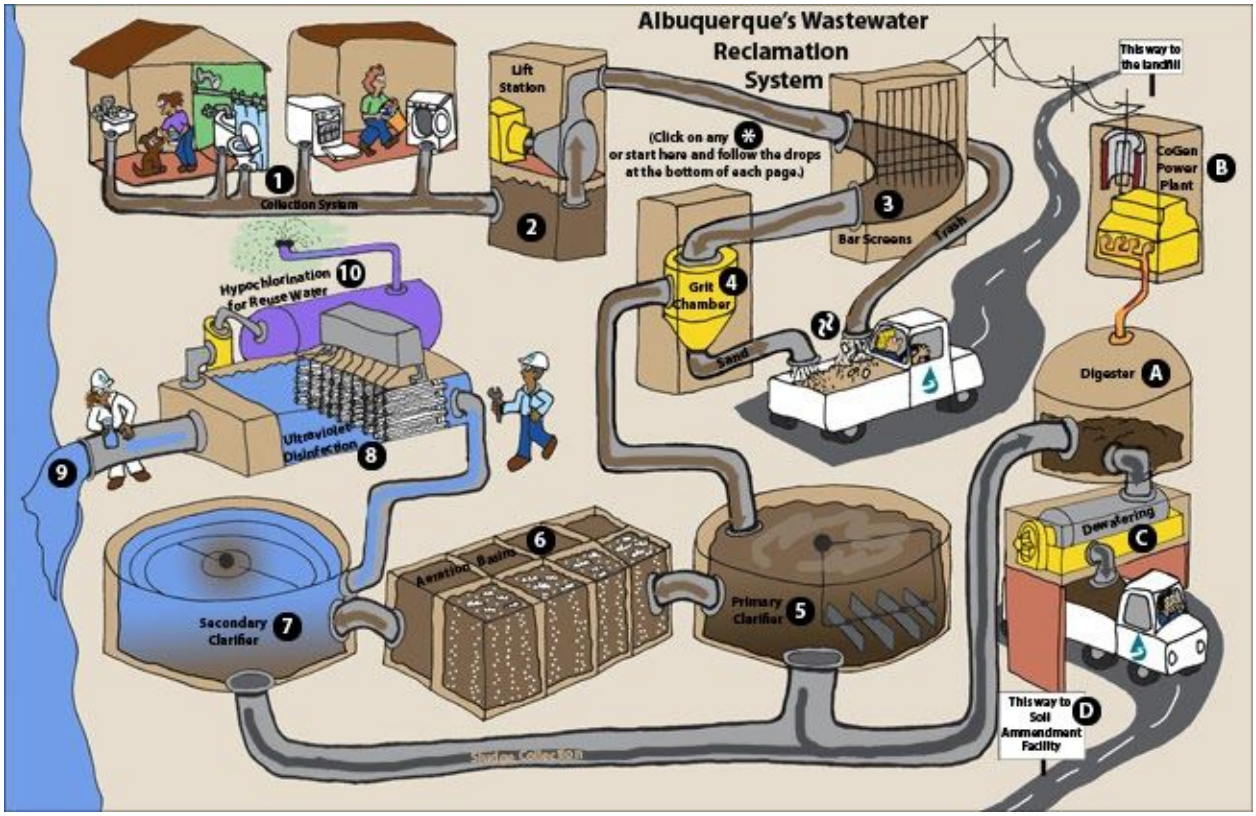
- **Lesson Plan: Cleaning Water**
  http://seplessons.ucsf.edu/node/1754
  - Create a filter in class to clean contaminated water and investigate your findings with the lesson linked below. This activity can be done over the course of a few days in class, or you can demonstrate how a filter works with your class in a shorter lesson.

- **Reflection Questions**
  - Where does your drinking water come from and what communities rely on it?
  - Drinking water is used for much more than bathing, flushing toilets and drinking. What are other ways you and your community use drinking water?
  - Did you learn anything surprising about how we use drinking water, if so what?
  - What percentage of the Earth is covered in water? Out of that amount, how much is accessible fresh water? How much is available as drinking water and why is it important to conserve it?
  - One third of the world's population does not have access to clean drinking water. How would your life be different if you had to walk miles to bring back water to your family?

- **Want to explore further?** Refer to Project 6 in the RiverXchange Curriculum "Drinking Water".
  - You can access the curriculum on your Kidblog homepage or by following this link: https://riverxchange.files.wordpress.com/2018/09/riverxchange-curriculum-20181.pdf

Water in Our Society:

Wastewater / Groundwater



Enhance your student's blog posting and extend their learning beyond the Wastewater presentation with the following activities:

- **Suggested Reading:**
  - *KOAT* news. 2015. "Aging Pipes Mean Higher Water Bills" http://www.koat.com/news/aging-pipes-could-mean-water-bill-hike/34284754
  - Combined sewer overflows article, by Anne Jefferson, a geology professor from Kent State. http://all-geo.org/highlyallochthonous/2013/03/combined-sewer-overflows-solving-a-19th-century-problem-in-the-21st-century/

- **Activities:**
  - Follow this link to the ABQ Water Utility Authority's website to navigate virtually through Albuquerque's wastewater system: http://www.abcwua.org/Education/SWRP_home.html
    - Want to add a project-based learning component to this exercise? Use these questions and activities to go along with your tour: http://www.abcwua.org/education/educators_WSDcur2_quest.html

- ➢ Show students the *Septic System* poster (the poster can be shown on a smartboard and explain the difference between a **sewer system** and a **septic system** – they both treat wastewater essentially the same way, but a septic tank is right by the house and uses a drainfield in rural areas.

- ➢ Create a Public Service Announcement with your class inspired about what you've learned. Take a video and post it on the blog to share with your partner class!

❖ **Watch:**

- ➢ Watch one of these videos in class to review the process of wastewater and what students can do to take care of wastewater: https://www.youtube.com/watch?v=Ldz29NqwK78 (An animation narrated by a young student)
- ➢ https://www.youtube.com/watch?v=tuYB8nMFxQA (A video of the water treatment process created by New Jersey American Water)
- ➢ Learn about recharging the aquifer in the City of Rio Rancho https://rrnm.gov/4024/Rio-Rancho-Pure

- **Reflection & Discussion:**
  - ○ What is wastewater and how does it impact your community?
  - ○ What is the difference between wastewater, stormwater and drinking water?
  - ○ How can you use what you've learned to make a difference at home and at school?
  - ○ What is the process of treating wastewater in your community? (For RRPS students, generally you are on a septic system). What is the difference between a sewer and septic system?
  - ○ What surprised you about the process of treating wastewater from the presentation?
  - ○ Why is it important to do what we can to keep certain things out of our wastewater, whether it goes to septic system or a wastewater treatment plant?

❖ **Want to explore further?** Refer to Project 8 in the RiverXchange Curriculum "Wastewater".

- ➢ You can access the curriculum on your Kidblog homepage or by following this link: https://riverxchange.files.wordpress.com/2018/09/riverxchange-curriculum-20181.pdf

Water in Our Society:

Commercial Uses of Our Waterways: Agriculture



Photo credit: Erich Schlegel

Enhance your student's blog posting and extend their learning beyond the Agriculture presentation with the following activities:

- **Suggested Reading:**
  - **Book:** *Out of the Dust* by Karen Hesse (1997: Scholastic Press)
    Written from the poetic perspective of 14 year old Billie Jo as she narrates her family's struggle in Oklahoma during the years of the Depression and the Dust Bowl.
  - **Articles:**
    - *ABQ Journal* article, 2013. "Deal Allows Farmers to Sell Irrigation Water" http://www.abqjournal.com/221194/news/deal-allows-farmers-to-sell-irrigation-water.htm
    - *National Geographic* article, 2014. "Parched: A New Dust Bowl Forms in the Heartland" http://news.nationalgeographic.com/news/2014/05/140516-dust-bowl-drought-oklahoma-panhandle-food/

- **Explore more about the Dust Bowl:** Check out the link below for an informative, interactive website developed by PBS. http://www.pbs.org/kenburns/dustbowl/educators/overview/

- **Lesson Plan: Soil is Not Trivial**
  - Using facts about the Dust Bowl, students write questions and play a trivia activity focused around the establishment of a national soil conservation program and the importance of soil. Students then explore and/or develop a plan to address a local soil conservation issue.
  - http://www.ncagr.gov/SWC/educational/documents/FLP_soil_is_not_trivial.pdf

- **Write a short story**
  - Write a short story from the perspective of someone who is living during, and affected by the Dust Bowl. Explore the PBS website link, or the suggested reading.

- **Lesson plan: Growing Plants**
  - Students will use the story of *The Empty Pot* to explore literature and science, practicing story mapping and learning about the needs of plants and the importance of soil and water. Like the characters in the story, students will plant and observe the growth of seeds. https://www.agclassroom.org/teacher/matrix/lessonplan.cfm?lpid=484&author_state=0&grade=3&search_term_lp=growing%20plants

- **Reflection Questions**
  - What was the Dust Bowl and how did it impact people?
  - What do you think are the major agricultural lessons for us from the Dust Bowl?
  - How may we be able to prevent a dust bowl from occurring again?
  - What is important for farmers to consider when planning how to irrigate their farm and why?
  - How does agriculture relate to water and to our daily lives?
  - What did you discover in your planting activity about the different types of irrigation?

- **Want to explore further?** Refer to Project 5 in the RiverXchange Curriculum “Commercial Uses of Our Waterways”.
  - You can access the curriculum on your Kidblog homepage or by following this link: https://riverxchange.files.wordpress.com/2018/09/riverxchange-curriculum-20181.pdf

Water in Our Society:
Commercial Uses of Our Waterways: Acequias



Enhance your student's blog posting and extend their learning beyond the Agriculture presentation with the following activities:

- **Suggested Reading:**
  - **Articles:**
    - *ABQ Journal* article, 2013. "Deal Allows Farmers to Sell Irrigation Water" http://www.abqjournal.com/221194/news/deal-allows-farmers-to-sell-irrigation-water.htm
    - *National Geographic* article, 2014. "Parched: A New Dust Bowl Forms in the Heartland" http://news.nationalgeographic.com/news/2014/05/140516-dust-bowl-drought-oklahoma-panhandle-food/

- **Watch:**
  - *Nuestras Acequias* (20 minutes) and/or *South Valley Acequias* (4 minutes). Discuss the **acequia** system which was put in place by the Pueblo people and early Spanish settlers, how is it organized amongst the community and maintained? What is its cultural and ecological significance?

- Explore the acequia tradition further with *El Agua Es Vida* lessons.

❖ **Lesson Plan: Prior Appropriation**

➢ Using the *Prior Appropriation* activity guide, act out the two different methods of assigning water rights to all the water users. Discuss the difference between the Riparian Rights and Prior Appropriation doctrines. Research the history of water rights in your community and compare the differences in water rights issues with your partners' area. Prior Appropriation is used in the western states, which receive far less precipitation.

❖ **Discuss**

➢ How people have developed technological solutions to solve water problems. For example, many ancient settlements in the West were abandoned because of lack of water, but irrigation technology has made it easier to survive. Dams have made it easier to control the flow of rivers, reservoirs store water, and fish ladders are built so that dams don't prevent their migration. High-efficiency toilets and other appliances help conserve water.

- **Reflection Questions**
  - What did you learn about acequias that you didn't know before this presentation?
  - How are acequias important to life and culture in New Mexico?
  - What would happen to the land if people didn't maintain acequias?
  - What is important for farmers to consider when planning how to irrigate their farm and why?
  - How does agriculture relate to water and to our daily lives?

❖ **Want to explore further?** Refer to Project 5 in the RiverXchange Curriculum "Commercial Uses of Our Waterways".

➢ You can access the curriculum on your Kidblog homepage or by following this link: https://riverxchange.files.wordpress.com/2018/09/riverxchange-curriculum-20181.pdf

River Ecosystems:

Pole Planting Field Trip



Enhance your student's blog posting and extend their learning beyond the Field Trip with the following activities:

- **Suggested Reading:**
  - **For teacher:** Read or review the 1st part of Chapter 4 of the Bosque Education Guide: A River of Change and discuss with your class the history of the Rio Grande River, the changes made to it's flow and channel, and the impact on the Bosque ecosystem.
- **Make a food web**
  - Make a food web for our local ecosystem, identifying producers, consumers and decomposers, native species and invasive species, as well as local endangered species. Discuss how wildlife are "water users" too. Like humans, wildlife needs clean water to live, so as a community we must consider their needs when making choices about water. Use Bosque plant and animal cards to do *The Web* activity, discussing how all living things depend on each other.
- **Learn about the STRAW Project**
  - An ongoing watershed restoration project first inspired by 4th graders in 1992, based in Marin Co. California! Add it to your school's library and show the documentary in class. http://www.pointblue.org/our-science-and-services/conservation-science/conservation-trai

ning/straw-program or read about the project in this article and discuss how youth can make an impact: http://www.marinij.com/article/NO/20150325/NEWS/150329872

- **Reflection & Discussion:**
  - What did you learn about the history of the Rio Grande River and the floodplain we planted in? How does this history impact the future of cottonwoods in the area?
  - Identify some common invasive species. Where did they come from and how are they impacting the Bosque?
  - What is the process of planting cottonwoods and willows and why do we do it in the wintertime?
  - After this field trip, how may you see and understand the Bosque differently?
  - What did you most enjoy while being down in the Bosque?
  - How can you apply what you learned or enjoyed on your field trip in your everyday life?

❖ **Want to explore further?** Refer to Project 9 in the RiverXchange Curriculum "Field Trip".

➢ You can access the curriculum on your Kidblog homepage or by following the link below: https://riverxchange.files.wordpress.com/2018/09/riverxchange-curriculum-20181.pdf

Appendix 2
Photos

Below is a selection of images from our planting field trips:





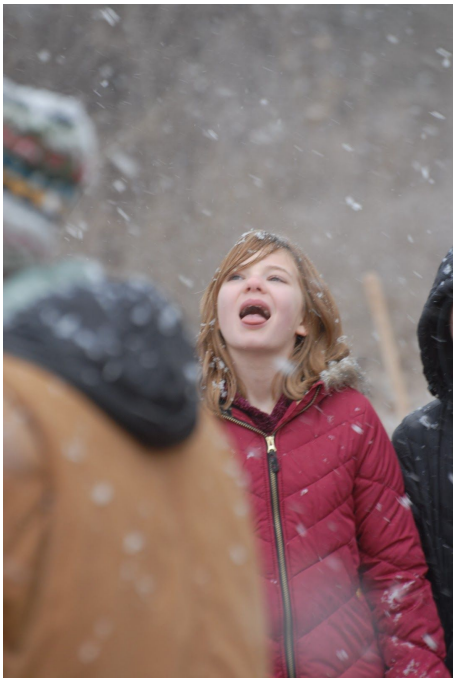
















Thank you for all your hard work and dedication to RiverXchange Melissa McLamb! We will miss you!



Exhibit 5

Bosque Ecosystem Monitoring Program (BEMP) 2019-2020 Final Report

Bosque Ecosystem Monitoring Program (BEMP)
Report to the Storm Team of the
2019-2020 Stormwater Science Education Program

The main objective of the *Stormwater Science* outreach education program is to teach students how the health of the Rio Grande is directly related to the health of the surrounding watershed and what their responsibility and opportunities are to help keep the "Rio Grand." BEMP educators have developed a Stormwater Science program that includes a 90-minute classroom activity, a four-to-five-hour study trip to the Rio Grande, and optional curriculum extensions incorporating hands-on data analysis, graphing, and system modeling. **During the 2019-2020 school-year and before the schools shut down due to COVID-19, 737 students participated in Stormwater Science** activities in their classrooms, in the field, both, or in outreach events. The classroom program was delivered to **245 students** in **14 classrooms** at **3 different schools** in **Albuquerque.** After the schools shut down, BEMP continued to create new or adapted existing activities related to the Stormwater Science curriculum with the goal of creating equitable educational outreach during the pandemic (see section 10 for outreach numbers and further information).

In addition to the Stormwater Science outreach, BEMP actively involves students in water quality monitoring through the *E. coli* monitoring contract with the Mid Rio Grande Stormwater Quality Team. **11 students from La Academia de Esperanza (LADE)**, **21 University of New Mexico (UNM) undergraduates,** and **3 students from Bosque School** were directly involved in water quality monitoring of the Rio Grande in support of this contract. Students are taught the proper protocols for collecting field parameters and *E. coli* data, but, consistent with our quality assurance plan, are only allowed to collect field parameter data. Typically, students then graph and analyze the data and are supported in presenting their findings at BEMP-supported conferences, professional conferences, and to policy makers; however, this year, these events were canceled due to COVID-19. During this school year, BEMP educators started to create a field journal specific to this water quality monitoring collection to help strengthen student learning and understanding of the data and bigger picture applications.

For the regular school curriculum, the BEMP Stormwater Science program targets middle and high school students using two main formats: an indoor classroom lesson and an outdoor field experience or *Stormwater Study Trip*. This year, during the pre-COVID-19 2019-2020 school year, we continued improving our existing curriculum by making it more NGSS aligned and age appropriate. We also started to incorporate a new assessment tool, Plickers, to assess teaching and lesson content effectiveness. During the pandemic, COVID-19 limited the number of

students we could engage through classroom and field education; however, BEMP continued to support students with a variety of activities through the APS Grab & Go Lunch program in partnership with other STEM organizations across the state to support equitable education, BEMP's social media, and the BEMP's website (See section 10 of this document for more detailed information). BEMP also worked on adapting, when possible, all the spring events to become virtual events (Luquillo-Sevilleta Virtual Symposium and Crawford Symposium; see section 8). BEMP provides handouts for all activities in English and Spanish to better support inclusion and accessibility of STEM resources for New Mexico's diverse communities.

Note: This year, we have structured this report so that in the following sections, we will paraphrase and italicize from previous reports the parts of the curriculum or report that haven't changed and that we continue to adopt. We highlight new work from this contract year in a different, non-italicized paragraph

1. Classroom curriculum*: Preparation and delivery of Stormwater Science activities in the classroom for middle and high school students* **(245 students)**

The core classroom curriculum and approaches utilizing the watershed model did not change during this school year:

The principal objective for the middle school classroom curriculum is to demonstrate how some of our daily, individual actions impact the health of the Rio Grande. To reach that goal, students construct a model of the Rio Grande Watershed (See pages 2 & 15 of the curriculum attached as Appendix A & F). The watershed model has five different communities along the river: a cattle ranch, upstream and downstream eco-friendly towns, an urban city, and agricultural fields. Students add different 'runoff cards' to the river downstream of the communities where the runoff constituents originate. Some of the runoff is naturally occurring (e.g. turbidity) while some is human-caused (e.g. pesticides or oil). The model runs through two different scenarios: (1) before-the-storm and (2) after-the-storm. While working through different variations of the model, students record the number of runoff cards introduced into the river before and after a storm event (See handout table; page 2, appendix A). This helps them to conceptualize, quantify, and further discuss the impacts of these changes to the overall river health. Exploring these two scenarios demonstrates the harmful effects that stormwater contamination can have on aquatic organisms and downstream communities.

The high school classroom lesson builds upon these core concepts. After discussing the aforementioned watershed model, students learn about some key water quality parameters: temperature, conductivity, dissolved oxygen, turbidity, and dissolved organic matter. Students divide into groups assigned one parameter each. They must then predict how their parameter might be affected by a storm event along with providing justification for their prediction. Students are given graphed data of their parameter before and after actual storm events and must analyze the graphs to determine if the data supports their hypothesis. When classes have more time available, this activity is supplemented by two different curriculum extensions. The first curriculum extension uses the same key water quality parameters introduced in the regular classroom activity, but the students analyze provided data and create their own graphs. We provide (1) a blank graphing sheet with the axis labeled and with the river flow data (used as a reference to talk about the time gap between the increase in cfs and parameter peaking) and (2) a table with measurements for each parameter. This activity helps students learn how to analyze and graph data and then interpret the results, using skills aligned with Next Generation Science

Standards (NGSS). The second curriculum extension is a soil porosity and permeability experiment that deepens students' understanding of how different surfaces (natural vs. anthropogenic, permeable vs. impermeable) impact the overall water budget and water quality.

BEMP updated the middle school classroom curriculum in the 2019-2020 school year to offer the lesson as two separate visits when time allows. The second session involves a graphing activity that includes a stronger action component (page 3, appendix A). The graphing exercise helps students conceptualize the recorded numbers and better understand the impacts of each of the different 'runoff cards' to the overall river health. The action component of the lesson intends to empower students to create change in their daily actions individually but also within their family and community to help keep the "Rio Grand."

This school year, following NGSS guidelines, we added a model/simulation into our high school classroom lesson from a scientific publication (page 4, appendix A) to illustrate the impact of storm surface runoff in the overall water quality of urban versus non-urban areas. This allows us to construct an explanation based on scientific evidence using students' local ecosystem while also hitting a variety of Disciplinary Core Ideas and Performance Expectations within the same NGSS domain (ESS – Earth and Space Science, in this case). This addition also gives high school students the chance to work with recent and local science research.

2. Stormwater Study Trip: *Delivery and coordination of place-based Stormwater Science experiences* **(53 students)**

The structure and content of the Stormwater Study Trip did not significantly change from past years:

The centerpiece of BEMP's stormwater outreach is the Stormwater Study Trip. This activity builds upon classroom activities and facilitates hands-on student experiences including performing water quality testing at the Rio Grande. The Stormwater Study Trip is a four to five-hour trip to the river during which students investigate how stormwater moves through the city and sweeps pollutants and debris into the river. Students also collect and interpret water quality data. The middle school version of the program begins with an explanation of the arroyo system in Albuquerque (See map page 5, appendix B) followed by an arroyo pollution survey where students examine and categorize the amount of visible pollutants (e.g. plastics, paper, dog poop, animal scat, etc.) in Albuquerque's San Antonio arroyo which drains into the bosque. In the arroyo, students test water quality using a LaMotte water quality monitoring kit (page 6, appendix B). When the students hike to the Rio Grande, they do additional water quality testing from two locations. Students then share their results with each other, compare Rio Grande and arroyo water quality data, and discuss what their results could mean in terms of the river's health. This section of the curriculum allows students to have a more hands-on learning experience involving different types of data collection and scientific tools. The high school Stormwater Study Trip uses a similar format with an emphasis on the water quality indices (percent EPT and biotic index) through analyzing collected macroinvertebrates. At the end, the goal for high school students is to connect and understand the two collected data sets and develop a deeper sense of how the system functions on a broader scale.

In the 2019-2020 school year, BEMP revised the study trips in several ways to strengthen student learning, scientific practices, and stewardship on a local and global scale. This year, BEMP connected the study trips to GLOBE, or Global Learning and Observations to Benefit the Environment. This community science program connects data collection around the world to contribute to our global understanding of the Earth and its processes. BEMP staff redesigned the study trip handout for all grades to better reflect the GLOBE data entry layout in effort to strengthen the stewardship component of the program (pages 5-8, appendix B). BEMP adopted that tool as a way to compare the data collected in our ecosystem to other ecosystems across the globe while also stressing the importance of stewardship from a local to worldwide scale. This tool is being used mainly in our study trip portion of the curriculum.

As part of the high school study trips, BEMP has also began using a multiparameter sonde along with the LaMotte TesTabs that students have used in the past. The multiparameter sonde provides high resolution water quality measurements (temperature, conductivity, specific conductance, pH, turbidity and dissolved oxygen). Using the handout and any additional discussions led by BEMP educators, students learn how to compare results from different methodologies to see how accurate different scientific tools can be. In addition, BEMP staff have also begun to develop a new version of the study trip to work with students during monthly water chemistry monitoring. Part of this work has been spent developing a new handout so this experience has a stronger educational component. This will be further developed in the next school year. Also, the data collected during study trips is now saved in our local drive and can be shared with the Storm Team as requested.

During the 2019-2020 school year, BEMP stopped using the leaf packs for macroinvertebrate identification due to time constraints of the study trips and because of difficulties with the leaf packs themselves. Moving forward, BEMP wants to reassess this methodology in light of challenges we faced last year, as leaf packs ended up buried by sediment or swept away downstream because of the irregular water pulses in the Rio Grande.

BEMP also continued to include Stormwater Science concepts as a part of the after-school program, BEMP After School Science (BASS). A small group of high school students worked with BASS to analyze water samples and collect aquatic macroinvertebrates to gain insight into the overall health of their local ecosystems.

3. Elementary school outreach: *Continued delivery and coordination of Stormwater Science experiences for elementary school students* **(300 students)**

BEMP participated again in the Children's Water Festival at the Santa Ana Star Center (300 students and 12 teachers) where BEMP educators, using a new macroinvertebrate activity (See page 9, appendix C), taught fourth grade students about their watershed, how humans impact the health of this system, how aquatic organisms are affected by pollution, and what everyone can do to improve the health of the Middle Rio Grande.

4. Monthly Monitoring: *Continued development and delivery of Stormwater Science outreach during Monthly Monitoring*

From last year's report:
BEMP monthly monitoring is often a space where educational concepts are introduced based upon what students encounter in the bosque or what they are currently studying in class. Because of this, Stormwater Science is only taught intermittently during Monthly Monitoring and has not yet been granularly tracked.

BEMP continued to include stormwater science topics during the introductory monthly monitoring conversations and whenever appropriate. This helped students see the bigger picture of how the health of the *bosque* is directly tied to the health of the Rio Grande and its watershed.

Furthermore, in addition to the stormwater related conversations, BEMP also adapted an activity that was initially used in the 2018 Children's Water Festival to talk about stormwater related concepts like water pollution and the use of macroinvertebrates as bioindicators of water quality (See page 10, appendix D). The goal of this activity is for students to figure out which one of the four different communities in an imaginary watershed has the best water quality. To reach that goal, students identify the different types of macroinvertebrates that live in each of those communities using a key. The activity ends with a quick group brainstorm about ways to help keep the downstream ecosystems clean (pick up trash and dog poop, fix leaky cars, don't use chemicals, etc.). This activity was piloted during Fall 2019 and can be incorporated as part of the monthly monitoring educational curriculum in the future.

5. Summer programming: *Preparation and delivery of Stormwater Science presentations during summer programming* **(200 students + 750 families)**

As in past years, BEMP partnered with Horizons Albuquerque, a tuition-free academic enrichment program that intends to fill the summer learning gap that students from low-income families often encounter. Over six weeks during the summer of 2020, 200 students in grades K-8 learned about how storms impact the overall water quality of our river by working on two of the Stormwater Science activities created during the COVID-19 closure (See page 11 & 14, Appendix E). These activities help connect the students' learning with BEMP and Horizons to the places they live.

This summer, BEMP also partnered with the NM Out-of-School Time Network for their summer Storytime in the Park program where one of the Stormwater Science activities (page 11, appendix E) was given to the 750 families that participated in this year's event.

6. Stormwater Science curriculum development: *Continued development of Stormwater Science curriculum*

Part of the 2019-20 school year (before COVID-19 closure) was spent making changes to the Stormwater Science curriculum, continuing to make it more hands-on, engaging, and appropriate for a wider range of students according to NGSS principles. After the closure, BEMP staff shifted to develop curriculum, including Stormwater Science concepts, that would be easily accessible for the communities around New Mexico (see section 10 for more information).

7. BEMP educational outreach events*: *Funding covers partial costs for classrooms to participate in Otter Day and BEMP Student Congress*

Because both of these events were scheduled to happen in April 2020, they were cancelled due to COVID-19. However, BEMP expanded the educational and community outreach during the closure through other platforms including the Grab and Go APS meal program, BEMP'S social media, and BEMP's website (see section 10 for more details).

*Funds that covered partial costs for these different BEMP educational outreach events were reallocated for printing and other materials, additional translation efforts to support accessible and equitable education, and staff time in order to continue to support the Stormwater Science program.

8. Additional BEMP educational outreach and events*: *Funding covers partial costs for classrooms to participate in Luquillo-Sevilleta Virtual Symposium and Crawford Symposium* **(39 students)**

This year, due to the COVID-19 closure, BEMP continued to organize and deliver the two annual educational events where stormwater science concepts were presented by adopting a fully virtual approach. The Luquillo-Sevilleta Virtual Symposium (LSVS) brings together students involved with the Luquillo Long Term Ecological Research Site in Puerto Rico and students from Albuquerque to share their watershed research with each other via Zoom in Spanish. This year, the LSVS involved 31 students and 19 adults (See page 17, Appendix F). BEMP's Crawford Symposium is an annual conference honoring BEMP's co-founder Dr. Clifford Crawford which celebrates community science along the Middle Rio Grande and showcases environmental research by both students and professionals. The Virtual Crawford Symposium had 8 students and 4 adult presenters, with 60 participants during the live video screening and 210 views after the video was posted on our YouTube channel (page 17, Appendix F).

As part of our outreach, BEMP also participates in other types of activities labeled as "other" in the outreach table (See table page 18, appendix G). These activities included a variety of community educational outreach, ranging from variations of the regular study trip to a student independent research project presented at a water conference with different pueblo representatives in Nambe Pueblo.

9. Plickers – Assessment tool: *This tool was used to assess the overall effectiveness of the curriculum in the classroom and study trips*

For the 2019-2020 school year, BEMP started using an assessment tool, Plickers, to monitor the effectiveness of the delivery and content in the Stormwater Science curriculum. Plickers is usually used by teachers to instantly collect multiple-choice responses from students. This tool doesn't require students to have any device; instead, BEMP staff provides printed cards with a unique design (similar to a QR code) to each student and then scans student responses using a phone app (See page 16, Appendix F). Although BEMP cannot publish the results of the assessments in this report due to a lack of IRB approval for research with human subjects, BEMP staff are using assessment results to learn what parts of the stormwater science curriculum are working well or could be improved. Due to time constraints in the classroom and field, BEMP will evaluate the continued use of this tool while also pursuing funding for more formal assessment of student learning.

10. Outreach during COVID-19 closures: *Continued delivery of Stormwater Science concepts through the APS Grab & Go Lunch program, BEMP's social media and BEMP's website* **(5811 students)**

Paraphrased and updated from BEMP's report to City of Albuquerque:

Due to the COVID-19 pandemic, Albuquerque Public Schools closed on March 16th, 2020, through the remainder of the 2019-2020 school year. During this time, BEMP continued educational support with 5 of the BASS schools (Van Buren MS, Arroyo del Oso ES, Sombra del Monte ES, Inez ES, and Comanche ES). As many students in New Mexico do not have consistent or reliable access to the Internet, computers, or printers for online distance learning, BEMP created equitable educational outreach through both virtual and physical access.

BEMP delivered weekly, bilingual STEAM activities to each school for distribution in the APS Grab & Go Lunch program. Each school requested at least 150 copies of the activities in English as well as 20-50 copies in Spanish. BEMP staff followed best practices for handling these materials with gloves, washing hands or using hand sanitizer frequently, and packing materials in Ziploc bags. Since early April, BEMP has collaborated with other STEAM organizations, such as NM MESA, Wild Friends and ABCWUA (for full list, see page 16, appendix F) to distribute these activities to even more schools and community locations around Albuquerque and New Mexico as a whole. The BEMP activities focus on getting students and their families to look outside and/or explore their yards and neighborhoods for life around them, while also collecting their own data. Four of those activities had a direct stormwater science focus (pages 11-14, appendix E).

From March 26 to June 30, 2020, approximately 10,100 students received BEMP activities through the five Grab & Go meal locations and free Little Libraries around the city. About 5,800 of those students received an activity with a stormwater science focus. During that time frame, BEMP also worked with Children's Choice coordinators at three of the schools to distribute 270 handouts to participating students, many of which were children of essential workers during the pandemic. For summer 2020's Storytime in the Park program through the NM Out-of-School Time Network, BEMP reached 750 families with a hands-on, place-based SWS activity.

In addition to distribution at the Grab & Go locations, these activities were also posted on BEMP's website (www.bemp.org/education-resources ; See page 16, appendix F) using a GitHub database to keep track of engagement through the number of downloads and views. These numbers can be provided directly to the Storm Team upon request.

BEMP has also increased presence on social media, such as Facebook and Instagram, to reach more of the community. The weekly Grab & Go activities were shared on social media to engage people who might not get them from the schools. Every day of the week, BEMP staff highlighted BEMP activities, ecological information, and resources from partners. SWS related concepts were presented usually once a week in our Water Wednesday posts (Page 17, appendix F). These posts included topics like (1) water pollution and its effect on wildlife, along with how to help; (2) local water use/consumption; (3) good practices to reduce impacts on water quality; (4) FOG waste disposal; (5) options to reduce water usage, and more. Besides Water Wednesday, the

weeks that the Grab & Go activities were about stormwater concepts, BEMP also dedicated the full week in social media to talk about water-related topics. BEMP provided English and Spanish versions of all the activities and social media posts previously mentioned.

Table 1: Social media interactions from March 16 – June 30, 2020

	INSTAGRAM	FACEBOOK
REACHES	3344	5007
ENGAGEMENTS	539	509

Note: BEMP used Creator Studio to track Facebook and Instagram engagement through a variety of different metrics. “Reaches” refers to how many people saw either a specific post or any content from the social media pages. Then, “engagements” refers to the total number of likes, shares, clicks, and people clicking “see more” for longer posts.

Exhibit 6

Children's Water Festival
2019 Report

Children's Water Festival

Rio Rancho, 2019



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Executive Summary

The 2019 Children's Water Festival (Festival) was held Monday, October 21st and Tuesday, October 22nd at the Santa Ana Star Center in Rio Rancho. 1,437 students, mostly fourth-graders, attended from 61 classrooms from Placitas Elementary School, St. Thomas Aquinas, and all of the elementary schools in Rio Rancho Public Schools. The students attend three 30 minute presentations in a half-day format. Eighteen presenters taught the classes and three to four schools were on-site at one time. Schools attended a morning or afternoon program.





The eighteen presentations represented twenty-one professional organizations that ranged from federal, state, regional governments, and private industry. The organizations all have water interests and focused on subjects such as the water cycle, water quantity and conservation, water distribution, and water quality/pollution.

Students were evaluated on basic water knowledge before and after the Festival. On average, for all testing returned, **the students showed an increase in knowledge of 6 percentage points on the post testing**.

A teacher wrote on the event evaluation, "Very well organized, thank you! My 9th year with this event and you guys always do a great job. I will say that activities this year were very hands on and engaging."

The Festival costs an estimated $24,000. The City of Rio Rancho contributed $10,000 to the Festival and additional funding was raised through the New Mexico Water Conservation Alliance 501(c)(3). Festival sponsors include: Jacobs, Waste Management, Southern Sandoval County Arroyo Flood Control Authority, NM Water, CWA Strategic Communication, Carollo Engineers, All Type, and Baker Utility Supply.

Introduction

The Children's Water Festival (Festival) has been held in Rio Rancho since 2007. The 2010 Festival was the first event hosted by the City of Rio Rancho's Water Conservation Office. This report is for the 2019 Festival; the tenth event hosted by the Water Conservation Office. As in years past, the Festival was held at the Santa Ana Star Center. 1,437 students attending from 61 classrooms; Placitas Elementary School, St. Thomas Aquinas, and all of the elementary schools in Rio Rancho Public Schools. The event was held on Monday, October 21st and Tuesday, October 22nd.

Purpose and Intent

The principal focus of the Festival is to educate fourth-grade school children about water and its relationship to humans, animals and other natural resources in a fun and interactive atmosphere. The Festival's vision is to:

- Introduce students and teachers to new ideas, options, and solutions so they will conserve and protect water for the future,
- Lay the foundation for further learning, and
- Reach as many students and teachers as possible.

Public participation is essential to successful water conservation, and educating the public promotes better water conservation planning and implementation. Early education influences the future acceptance of water conservation concepts. This early education experience also has shown that training efforts affected behavioral changes and improved water use practices. Water conservation goals are only as effective as water users' willingness to adopt and implement appropriate water conservation measures. Through special training activities, water users are taught proper water use practices and techniques. Efficient use of water supplies decreases waste and prevents degradation of water quality leading to healthier ecosystems for fish and wildlife, including locally listed endangered species, such as, the Rio Grande Silvery Minnow (*Hybognathus amarus)* and the Southwestern Willow Flycatcher (*Empidonax traillii extimus*).

The Festival was designed specifically to introduce and explain new and unfamiliar water management tools to present and future water users and managers. Research concerning water conservation education indicates the targeted group of the Festival, fourth-grade students, is ideal for achieving long-term goals. Through sharing water conservation and water quality tools at home and with extended family, the estimated 1,600 participants (students, teachers, and chaperones) represent a potential audience of 10,000 to 15,000 people for the Festival program.

A series of activities that cover a wide range of core curriculum areas were presented at the Festival. These activities included language arts, mathematics, science, social studies, visual arts, and health/wellness; all of which are tied to water conservation, water quality, and water quantity in the arid Southwest desert.

The updated Water Resources Management Plan (Plan), adopted by the City of Rio Rancho Governing Body in 2014, details water efficiencies and water conservation measures to be taken by the City to better manage the existing water supplies. Policy E.4 of the Plan sets forth this

initiative: “Continue consulting with and improving the partnership with Rio Rancho Public Schools to implement a robust water resources educational curriculum.”

Additionally, the City of Rio Rancho Strategic Plan was formally adopted by the City of Rio Rancho Governing Body on March 25, 2009 and updated August 2017. One important element of the Infrastructure Strategies section of the Strategic Plan pertains to water sustainability and conservation to support growth and development of the City.

Funds

Festival Cost

The Festival costs are listed in the table below. Please note that the cost for the Santa Ana Star Center is only for the personnel time, including two police officers per day for security. This will be the last year for pipe and drape rental as we have purchased the pipe and drape. The cost of the buses is estimated because not all invoices were received as of the report date.

Cost Description	**Amount**
Santa Ana Star Center	$2,839.71
Pipe and Drape rental	$3,000.00
Catering for volunteers & presenters	$4,479.80
Buses *	$4,000.00
T-shirts with art/logos (1,471 shirts)	$7,420.00
Shadow box (for T-shirt winner)	$42.07
Banner for Display Stand	$72.00
Poster	$76.00
White paper for T-shirt artwork	$37.29
Thank you cards	$88.66
Fiscal Sponsor	$1,000.00
Olla activity supplies	$504.97
Stamps for VIP invitations/thank you cards	$63.50
Total	**$23,624.00**

*Estimated, final invoice still pending.

Sponsorships

Through its fiscal partner, the New Mexico Water Conservation Alliance, a 501(c)3 non-profit organization, the City of Rio Rancho was able to secure several sponsors to fund the Festival. Additionally, the City sponsored $10,000 for the Festival.

A heartfelt "thank you" to these valuable Festival partners!



Steering Committee

The Festival was directed by a diverse steering committee. The core group contained members from:

- City of Rio Rancho's Water Conservation Office
- City of Rio Rancho's Keep Rio Rancho Beautiful Office
- Jacobs
- Sandoval County Master Gardeners
- Sandoval County Master Composters
- New Mexico Environment Department – Surface Water Quality Bureau
- Citizen volunteers

Design of Festival

Students attended the Festival for a half day program that included three presentations. This ensures participation by all Rio Rancho fourth graders. There is a transition period in the middle of the day where the morning classes are leaving and the afternoon classes are arriving.

Teachers and students experienced the Festival in three parts: pre-Festival activities, the Festival itself, and post-Festival activities.

Pre-Festival Activities

- Each school provides a lead fourth grade teacher who confirms their commitment to participate, provides the number and names of the teacher/classes and the number of anticipated students for each.
- Elementary schools are provided the information on how to participate in the student T-shirt artwork project; student art work is submitted to the Water Conservation Office and a winner is selected.
- The pre-Festival tests are provided to the schools via Google Forms and the teachers administered the test to the students. The post-Festival tests were sent after the Festival, again via Google Forms. Two schools were given paper tests for the students because they were not able to do Google Forms for tests.
- Teachers received resource kit materials that included the T-shirts and miscellaneous items donated by our sponsors (e.g., pens, rulers.).

Rio Rancho Children's Water Festival Event





Students at the "Rio Grande Bosque Water Cycle" activity.

- The Water Festival ran from 9:45 a.m. through 1:30 p.m.
- Students attending the Festival in the morning boarded buses at 9:15 a.m. at their school. Students attending the afternoon program boarded the buses at 11:25 a.m.
- Each class was met by a guide/timekeeper who escorted them to each of their three assigned presentations.

- Presentations lasted 30 minutes and topics included: water quality, water conservation, water cycle, wastewater, ecosystems, and built water infrastructure.
- All students received a Festival T-shirt. Lilianna Lugo from Ms. Straley's class at Puesta del Sol Elementary, was the winner of the T-shirt student artwork contest. Her design was displayed on the front of the T-shirt and Festival sponsor logos were on the back.



Lilliana Lugo – T-shirt artwork winner from Ms. Straley's
Puesta del Sol Elementary class

Post-Festival Activities

- Post-Festival tests were completed by students.
- Teacher evaluation forms were completed.
- Teachers will receive a copy of this report.

All aspects of the Festival planning and implementation were created with the *Big Water Questions* in mind. Each presentation addressed at least one of the *Big Water Questions*, as well as the Festival's mission and objectives. The long-term outcome goal is that all elementary

school students will be able to provide reasonable answers to these questions by the time they reach middle school.

Big Water Questions

- Why is water so important to life?
- How do all living things depend on each other?
- What is the water cycle?
- What is a watershed?
- Where does my drinking water come from?
- What makes water dirty?
- How much water does my family use?
- Who are the other water users in our society?
- How can *I* protect our water?
- Where does my wastewater go?

Schools Attending the Festival

The following table outlines which schools attended.

Elementary School	**Number of Teachers**	**Number of Students**
Cielo Azul Elementary	6	156
Colinas del Norte Elementary	5	133
Enchanted Hills Elementary	6	137
Ernest Stapleton Elementary	6	136
Maggie Cordova Elementary	7	165
Martin Luther King Elementary	6	145
Placitas Elementary	1	27
Puesta del Sol Elementary	6	113
Rio Rancho Elementary	5	122
Sandia Vista Elementary	6	137
St. Thomas Aquinas Elementary	2	51
Vista Grande Elementary	5	115
Totals	**61**	**1,437**

Festival Presentations

One teacher wrote, "My students loved all of the presentations we went to."



"Let's Settle This Outside" activity. Students learn about wastewater treatment while becoming a wastewater operator.

Each year the Festival relies on numerous professionals who volunteer their expertise and presentation time. These professionals represent federal, state and regional government entities, local engineering firms, and the school district. They choose presentations that represent their missions or specialties. A description of all the presentations, the presenters and their contact information has been provided in Appendix A.

Volunteer Hours

The Festival could not be held without the assistance of a number of volunteers, presenters, and steering committee members. New in 2017, was a requirement that the volunteers use the City's on-line application process to have a background check. It was hopeful that this year process would be smoother and it was not.

The table below lists an estimate of the in-kind volunteer hours.

Presenters	394.25 hours
Volunteers	185.25 hours
Steering Committee Meetings	66 hours
Total Hours	**645.5 hours**

Lessons Learned

Steering Committee Comments from the Festival

There were only a few comments from the steering committee including:

- Bus issues continued and were worse than last year. On the second day, we had four schools late because of bus issues, missing the entire first rotation. Next year, we will try to find a better solution for the transportation.
- Food for the vegetarian presenters and volunteers was very poor in 2018. We made sure that the vegetarian meal options were available especially since the meals were enchiladas one day and lasagna the other.
- A comment from last year was to have ice packs, or something quick, when a child either pinches a finger or trips. We had ice packs at the registration table this year. We did have a student get an elbow to his mouth and we were able to quickly have ice for the child.
- The food was awesome!





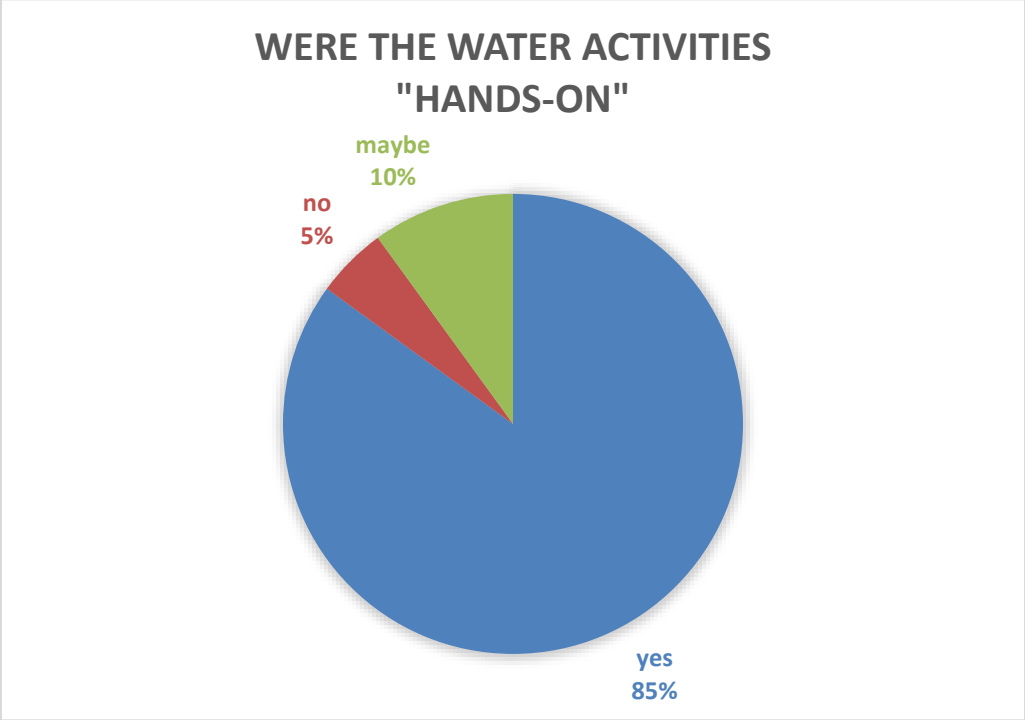
Comments from Teacher Evaluation Forms

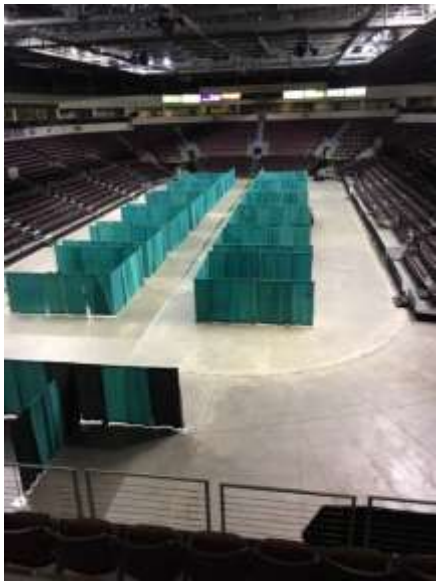
Problems or issues you had with the buses

- The bus for our wheel-chair accessibility was late, causing a domino effect for the other buses.
- We needed a special education us for a wheelchair at MLK. The bus was not here. One class was supposed to go with this bus. We had to fit 6 classes on 2 buses. My class had to split up on the two buses. The students had to wait for the wheelchair accessible bus and that group was about an hour late.
- No specific problems.
- None. Our bus driver was wonderful, arrived on time, left on time. All was great!
- Only got 2 buses, when we ordered 3.
- Our bus was 30 minutes late. The transportation director (Liz) was very rude when I called to inquire about when the bus might arrive.

- SVE had no issues with buses. Thank you.
- Everything was fine with the transportation.

Were the water activities your students attended informative and "hands-on" and did they learn anything from the activities?





Festival layout.

If there was an activity that could have been presented better, which one was it and how do you think it could be improved?

- Our activities were all well done!
- All of our activities were great!
- To Discharge or Not presented by Insight Lighting. First of all, using an IPad to show a video of his business was not effective. It was a cool business, just hard to see. Only a few of the students were able to participate in hands on activities. However, I thought he was really interesting. Just a little tweaking would make the presentation even better.
- I think they were o.k.
- The water pollution one because students are crowded around and unable to see very well.
- My students loved all of the presentations we went to. I loved that they had one with a "make-and-take" activity. Other teachers from our school said there was a presenter that was less than professional with the students in her group. I do not know which presentation, but I believe that it was in the foyer of the Star Center.
- Some of the presentations were good, but a few only incorporated a small amount of students doing the "hands-on".
- All were informative.
- Booth that was presented by UNM students could have been presented better. Although they tried to make it hands-on, they did not think of logistics. I think of they called on a few students to add items to the display one at t time, instead of all at one, it would increase focus and understanding. I appreciate the students taking their time to share. I just think they don't think about the "how" as much as the "what" they would present.
- All of the activities were at least partly "hands-on". Some more than others. Several years ago, three was an activity where the students acted out the water cycle. I would like to see more activities like that.

How to improve overall organization

- Seemed smaller and disorganized. It didn't seem like the presenters put any effort to make the presentations child friendly. The water festival is becoming less hands on every year. It is very hard for fourth graders to sit and listen to a lecture for 30+ minutes and have only a small amount of time for a hands on activity.
- Very organized and easy. I would like to have more time. Due to buses and getting there we only has about an hour and 20 minutes for the booths and it was very fast. A longer day would be nice.
- I thought it was very organized. No improvement needs noted.
- Very well organized, thank you! My 9th year with this event and you guys always do a great job. I will say the activities this year were very ands on and engaging. We may need to look at moving this event to another grade level because our science standards have changed.
- It would have been nice to have attended sessions that covered different topics. Our first and third sessions were very similar about testing pH levels, oxygen, acidity, etc.. The first one was about Water Quality and each student got to participate. It was presented by USGS. It was very cool. The male presenter should probably talk a little less so the students have time to finish the activity. The second activity was about following the

path of the trash in the river. It was very well done. The message came across beautifully. Every student got to participate. I thought it was very well organized. Well done City of Rio Rancho.

- I just feel like it isn't exciting for kids. You hear festival and you get there nobody seems as though they want to be there. The volunteers seem to hate it and honestly, it isn't a fourth grade standard, so I feel as though a different grade should go.
- Have third graders attend as it is a third grade standard.
- Apply to grade level standards.
- I love the location being so close to our schools. However, it does become difficult to hear the presenters in this venue. Maybe have the presenters speak up a little?
- Because of the venue it was difficult to hear the presenters at times. Microphones?
- As always the water festival runs very efficiently. I appreciate you putting this all together. It is a classroom favorite of field trips.
- It is fine. It would be better if it was a little longer.

Festival Event

The two days of the Festival ran very smooth except for issues with buses:

- St. Thomas Aquinas – the bus was late and students missed the first rotation
- ML King – the lift bus was late and those students on that bus missed the first rotation
- M. Cordova – two buses were late and the students missed the first rotation
- E. Stapleton – one of the buses was late causing one class to miss the first rotation

A new source for buses will be investigated for next year's water festival because this was the third year in a row that there has been issues with transportation.

The City of Santa Fe held their Water Fiesta on Tuesday and Wednesday, October 22nd and 23rd. All of our presenters decided to participate with our two days. The City of Rio Rancho was unable to participate with the Fiesta because of the conflict.

We did not have a dedicated photographer this year and there was a low return of the photo release forms from the parents. Because of this, we did not take very many photos. Many of the photographs of students in Appendix C are from prior years.

Appendix A - Working Timeline

The following was used to ensure that steps of the Festival preparation were completed in a timely manner.

- April - Ask for sponsors (done 5/13/19)
- May update VIP list
- June 15 – Design poster with the theme
- August 1 – PO for RR Sponsorship
- August 1 – PO for Buses
- August 14 – RR schools starts
- August 20 - Email teachers about CWF date and artwork delivery
- August 22 – Drop off artwork paperwork, poster, photo release forms
- September 5 – email volunteers
- September 4 - email reminder to teachers including schedule
- September 5 – Pick up artwork, photo release forms
- September 11 – Meeting to select the winner
- September 11 – Artwork to Wayne at Rio Rancho T Shirts
- September 15 - update VIP list and mail invitations
- September meet with SASC about food, etc.
- October 11 – Pick up T Shirts
- October 15 - email layout to SASC
- October 15 – Meeting to pack bags
- October 17 – Drop off bags this week
- October 21st and 22nd – Water Festival
- October 28 – Remind teachers about post-test pickup
- November 30 - Pick up post-tests

Appendix B – Teacher/Class Rotation Schedule

Booth	MON Oct 21 morning		9:45 – 10:15	10:18 – 10:48	10:51 – 11:21
#	**Presentation**	**Category**			
1	Incredible Journey – NMED	Water Cycle	Valdez Sandia Vista	XXXXXX XXXXXX	Ulibarri Puesta del Sol
2	RG Bosque Water Cycle - RGNC	Water Cycle	Armendariz Puesta del Sol	Andujo Colinas del Norte	Fox Sandia Vista
3	NM Past and Present – NM Cultural Services	Historical Perspective	Serna Puesta del Sol	Pichette Sandia Vista	Andujo Colinas del Norte
4	Water Jeopardy – Bohannan Huston	General Water	Silva Colinas del Norte	Serna Puesta del Sol	Wiberg Colinas del Norte
5	My Water Footprint – OSE	General Water	Morrissette Colinas del Norte	Niman Colinas del Norte	Rambaldi Sandia Vista
6	BEMPing it Up – BEMP	Ecosystems	Smith Puesta del Sol	Silva Colinas del Norte	XXXXXX XXXXXX
7	Leaky Faucet – RRPS	Conservation	Ulibarri Puesta del Sol	Morrissette Colinas del Norte	Serna Puesta del Sol
8	Olla Olé - SCMG	Historical Perspective	Wadsworth Sandia Vista	Armendariz Puesta del Sol	Straley Puesta del Sol
9	Watersheds & Aquifers – UNM	Source Water	Fox Sandia Vista	Straley Puesta del Sol	Silva Colinas del Norte
10	To Discharge or Not - Insight Lighting	Wastewater	Pichette Sandia Vista	Romero/Langdon Colinas del Norte	Armendariz Puesta del Sol
11	Basic Surface Water Treatment – Carollo	Water Quality	Niman Colinas del Norte	Smith Puesta del Sol	Glauvitz/Cook Sandia Vista
12	Nitrogen – The Other Cycle – Fish & Wildlife	Water Quality	Straley Puesta del Sol	Valdez Sandia Vista	Romero/Langdon Colinas del Norte
13	Stormwater & Watersheds – SNL	Watersheds	Glauvitz/Cook Sandia Vista	Wadsworth Sandia Vista	Morrissette Colinas del Norte
14	Weather or Not - NOAA	Weather	Wiberg Colinas del Norte	Ulibarri Puesta del Sol	Wadsworth Sandia Vista
15	Let's Settle this Outside – Jacobs	Wastewater	XXXXXX XXXXXX	Glauvitz/Cook Sandia Vista	Pichette Sandia Vista
16	Recycle Relay – Waste Management	General Water	Andujo Colinas del Norte	Rambaldi Sandia Vista	Niman Colinas del Norte
17	Keep the Rio Grande – Stormwater Team	Watersheds	Romero/Langdon Colinas del Norte	Wiberg Colinas del Norte	Smith Puesta del Sol

18	Water Quality- USGS	Water Quality	Rambaldi Sandia Vista	Fox Sandia Vista	Valdez Sandia Vista
	18 Presenters		**17 Classes**		

Booth	MON Oct 21 afternoon		11:54 – 12:24	12:27 – 12:57	1:00 – 1:30
#	**Presentation**	**Category**			
1	Incredible Journey – NMED	Water Cycle	Boldt Rio Rancho	Dannenberg Enchanted Hills	Armstead Cielo Azul
2	RG Bosque Water Cycle - RGNC	Water Cycle	Marsh Enchanted Hills	Lambson Cielo Azul	Fuchs Enchanted Hills
3	NM Past and Present – NM Cultural Services	Historical Perspective	Carey Enchanted Hills	Klein Rio Rancho	Bailey/Baum Rio Rancho
4	Water Jeopardy – Bohannan Huston	General Water	XXXXXX XXXXXX	Carey Enchanted Hills	Marsh Enchanted Hills
5	My Water Footprint – OSE	General Water	Estes/OS Cielo Azul	Bailey/Baum Rio Rancho	Griego/Murphy Rio Rancho
6	BEMPing it Up – BEMP	Ecosystems	Dannenberg Enchanted Hills	Armstead Cielo Azul	Lambson Cielo Azul
7	Leaky Faucet – RRPS	Conservation	Rivera Rio Rancho	Estes/OS Cielo Azul	Mandich Enchanted Hills
8	Olla Olé - SCMG	Historical Perspective	McCann Cielo Azul	Infantino Cielo Azul	Klein Rio Rancho
9	Watersheds & Aquifers – UNM	Source Water	Bailey/Baum Rio Rancho	Boldt Rio Rancho	McCann Cielo Azul
10	To Discharge or Not - Insight Lighting	Wastewater	Infantino Cielo Azul	Marsh Enchanted Hills	Wiebelhaus Enchanted Hills
11	Basic Surface Water Treatment – Carollo	Water Quality	Griego/Murphy Rio Rancho	XXXXXX XXXXXX	Boldt Rio Rancho
12	Nitrogen – The Other Cycle – Fish & Wildlife	Water Quality	Armstead Cielo Azul	Fuchs Enchanted Hills	Infantino Cielo Azul
13	Stormwater & Watersheds – SNL	Watersheds	Lambson Cielo Azul	Messenger Cielo Azul	XXXXXX XXXXXX
14	Weather or Not - NOAA	Weather	Fuchs Enchanted Hills	Griego/Murphy Rio Rancho	Rivera Rio Rancho
15	Let's Settle this Outside – Jacobs	Wastewater	Messenger Cielo Azul	Rivera Rio Rancho	Carey Enchanted Hills
16	Recycle Relay – Waste Management	General Water	Mandich Enchanted Hills	McCann Cielo Azul	Messenger Cielo Azul
17	Keep the Rio Grande – Stormwater Team	Watersheds	Klein Rio Rancho	Wiebelhaus Enchanted Hills	Dannenberg Enchanted Hills
18	Water Quality - USGS	Water Quality	Wiebelhaus Enchanted Hills	Mandich Enchanted Hills	Estes/OS Cielo Azul
	18 Presenters		**17 Classes**		

Booth	TUE Oct 22 morning		9:45 – 10:15	10:18 – 10:48	10:51 – 11:21
#	**Presentation**	**Category**			
1	Incredible Journey – NMED	Water Cycle	Grant Vista Hills	Pasternaki Vista Grande	Lawton St. Thomas
2	RG Bosque Water Cycle - RGNC	Water Cycle	XXXXXX XXXXXX	Walker/Haase Vista Grande	Landreth ML King
3	NM Past and Present – NM Cultural Services	Historical Perspective	Hollingshead Vista Grande	XXXXXX XXXXXX	Zeilman ML King
4	Water Jeopardy – Bohannan Huston	General Water	Walker/Haase Vista Grande	Lewis ML King	O'Conor ML King
5	My Water Footprint – OSE	General Water	Pasternaki Vista Grande	Landreth ML King	XXXXXX XXXXXX
6	BEMPing it Up – BEMP	Ecosystems	Griego St. Thomas	Kelly ML King	Hollingshead Vista Grande
7	Leaky Faucet – RRPS	Conservation	XXXXXX XXXXXX	Griego St. Thomas	Kelly ML King
8	Olla Olé - SCMG	Historical Perspective	Bird Vista Grande	Eisenberg/Fritch ML King	Lewis ML King
9	Vacant				
10	To Discharge or Not - Insight Lighting	Wastewater	Lawton St. Thomas	Bird Vista Grande	Walker/Haase Vista Grande
11	Basic Surface Water Treatment – Carollo	Water Quality	O'Conor ML King	Grant Vista Hills	Griego St. Thomas
12	Nitrogen – The Other Cycle – Fish & Wildlife	Water Quality	Lewis ML King	Zeilman ML King	Eisenberg/Fritch ML King
13	Stormwater & Watersheds – SNL	Watersheds	Landreth ML King	Hollingshead Vista Grande	Pasternaki Vista Grande
14	Weather or Not - NOAA	Weather	Eisenberg/Fritch ML King	XXXXXX XXXXXX	Grant Vista Hills
15	Vacant				
16	Recycle Relay – Waste Management	General Water	Kelly ML King	O'Conor ML King	Bird Vista Grande
17	Keep the Rio Grande – Stormwater Team	Watersheds	Zeilman ML King	Lawton St. Thomas	XXXXXX XXXXXX
	15 Presenters		**13 Classes**		

Booth	TUE Oct 22 afternoon		11:54 – 12:24	12:27 – 12:57	1:00 – 1:30
#	**Presentation**	**Category**			
1	Incredible Journey – NMED	Water Cycle	Zirpel M Cordova	Shafer M Cordova	Marcotte E Stapleton
2	RG Bosque Water Cycle - RGNC	Water Cycle	Rojas E Stapleton	Sidor M Cordova	Lautt E Stapleton
3	NM Past and Present – NM Cultural Services	Historical Perspective	Kirby E Stapleton	Olivas Placitas	Shafer M Cordova
4	Water Jeopardy – Bohannan Huston	General Water	Shafer M Cordova	Sheering M Cordova	Pineda M Cordova
5	My Water Footprint – OSE	General Water	Skousen M Cordova	Kirby E Stapleton	Sheering M Cordova
6	BEMPing it Up – BEMP	Ecosystems	Sheering M Cordova	Pineda M Cordova	Sidor M Cordova
7	Leaky Faucet – RRPS	Conservation	Marcotte E Stapleton	Lautt E Stapleton	Skousen M Cordova
8	Olla Olé - SCMG	Historical Perspective	Lowe E Stapleton	Presser M Cordova	XXXXXX XXXXXX
9	Vacant				
10	To Discharge or Not - Insight Lighting	Wastewater	Lautt E Stapleton	XXXXXX XXXXXX	Kirby E Stapleton
11	Basic Surface Water Treatment – Carollo	Water Quality	Zuniga E Stapleton	Zirpel M Cordova	Rojas E Stapleton
12	Nitrogen – The Other Cycle – Fish & Wildlife	Water Quality	XXXXXX XXXXXX	Lowe E Stapleton	Presser M Cordova
13	Stormwater & Watersheds – SNL	Watersheds	Sidor M Cordova	Marcotte E Stapleton	Zirpel M Cordova
14	Weather or Not - NOAA	Weather	Presser M Cordova	Skousen M Cordova	Zuniga E Stapleton
15	Vacant				
16	Recycle Relay – Waste Management	General Water	Pineda M Cordova	Zuniga E Stapleton	Olivas Placitas
17	Keep the Rio Grande – Stormwater Team	Watersheds	Olivas Placitas	Rojas E Stapleton	Lowe E Stapleton
	15 Presenters		**14 Classes**		

Appendix C – Festival Presentations

This appendix lists all of the Festival presentations and contacts. For each section, there is the name of the presentation, a brief description of the activity, the correlation of the presentation with the Next Generation Science Standards (NGSS), the contact information of the presenter and if available, where the teacher can locate a similar presentation if they would like to teach it in the classroom.

****

Basic Surface Water Treatment
Students learn about processes used to clean water in a contemporary water treatment facility through an interactive process. This activity teaches children about the importance of water quality for drinking water.

Next Generation Science Standards, Grades 3-5:
Practice 2, Practice 3

Carollo Engineers
Rob Buss rbuss@carollo.com





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BEMPin' It Up
Students learn about the plants, mammals, arthropods, and water table along the Bosque and how they are all supported by water in the Rio Grande.

Next Generation Science Standards, Grades 3-5:
Practice 6, Practice 7

Bosque Ecosystem Monitoring Program, UNM Dept. Biology & Bosque School
Alex Levine alex.levine@bosqueschool.org

Similar activity found on web: Habitats of the World, Discovery Education
http://www.discoveryeducation.com/teachers/free-lesson-plans/habitats-of-the-world.cfm



****

Incredible Journey
During this activity, students become water molecules and move through the water cycle. They learn about the movement and distribution of water – as well as pollution – on the earth.

Next Generation Science Standards, Grades 3-5:
Practice 6, Practice 7

NM Environment Department, Surface Water Quality Bureau
Heidi Henderson heidi.henderson@state.nm.us

A similar activity found on web: Incredible Journey, Project WET
http://files.dnr.state.mn.us/education_safety/education/project_wet/sample_activity.pdf



****

Keep the Rio Grande

Keep the Rio Grande Activity is an interactive game where the students become an arroyo supplying stormwater to the Rio Grande. The stormwater picks up a variety of items as the flow increases creating a flood of raindrops, trash, pet waste, bacteria, and plastics as the students pass the items down to the river. The students learn about stormwater quality and the impact we have on water in our neighborhoods and town. After the rain has stopped, students discuss the water and debris on the ground around them and at the end of the line the river. Then they are tasked with sorting all of the items to bins labeled: trash, compost, recycle and rain.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 2

Middle Rio Grande Stormwater Quality Team
Xavier Pettes (505) 891-5045 xpettes@rrnm.gov





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Leaky Faucet

Students create a water leak and scientifically measure the leak using graduated cylinders over three tests. The students then compute the average milliliters of water leaked over one minute to the amount of gallons of water leaked and wasted over one year.

Next Generation Science Standards, Grades 3-5:
Practice 4, Practice 5

Rio Rancho Public Schools
Lou Cusimano (505) 975-0326 lou.cusimano@rrps.net

A similar activity found on web: Leaky Faucet, Utah Education Network
http://www.uen.org/Lessonplan/preview.cgi?LPid=27247



****

Let's Settle This Outside
Students become wastewater operators and learn how the wastewater treatment plant cleans dirty water. They then create wastewater using everyday materials and clean the wastewater by sorting it into three stations: water, sludge, and trash.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 2

Jacobs
Bill Jaquez (505) 891-5024 billy.jaquez@jacobs.com
Wendell McCall (505) 891-5017 wmccall@rrnm.gov



A similar activity found on web:
Wastewater: We Treat it Right, City of Boise
http://bee.cityofboise.org/media/216580/43385_Wastewater.pdf

****

My Water Footprint

A Water Footprint represents how a person uses water to meet their needs (direct use) and the water that others such growers, manufacturers, processers use (indirect use) to provide the products we purchase and use every day. The activity teaches the importance of water and introduces/explains the terms direct and indirect water use and challenges students to think of ways to conserve water. The students also create a collage that illustrates their water needs by incorporating both direct and indirect water use along with ways to conserve water.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 2

New Mexico Office of the State Engineer, Water Conservation Bureau
Julie Valdez julie.valdez@state.nm.us





****

New Mexico Past and Present

Students learn where water comes from (the water cycle), where water is today in New Mexico, and what they can do to protect and conserve water. The students then become detectives using fossils to discover where water occurred in the past in New Mexico.

Next Generation Science Standards, Grades 3-5:
Practice 3, Practice 6

New Mexico Museum of Natural History and Science
Mike Sanchez (505) 841-2583 michael.sanchez1@state.nm.us





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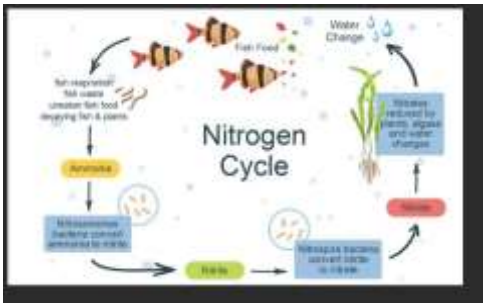
Nitrogen – the Other Cycle

Students are introduced to the nitrogen cycle. Where is nitrogen found on Earth? Why is it important? They learn that nitrogen travels with the help of bacteria, water, fish, and plants in an aquatic system. Students role-play various organisms in the nitrogen cycle; nitrosomonas bacteria, nitrobacter bacteria, fish, or plants. Students learn how each organism creates or consumes various forms of nitrogen, creating a dependency on other organisms for provide food or to remove toxins from the aquatic environment.

Next Generation Science Standards, Grades 3-5:
Practice 6, Practice 7

US Fish and Wildlife Service
Angela Palacios (505) 342-9900 angela_palacios@fws.gov





A similar activity found on web: UCAR Center for Science Education
https://scied.ucar.edu/activity/nitrogen-cycle-game

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Olla Olé
Students learn the history of collecting water in the ancient southwestern United States using clay pots. They also learn how ollas (clay pots) were used as an irrigation technique for crops and then the students make an olla to take home for use.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 2

Sandoval County Master Gardeners
Pat Barger pfbarger@gmail.com

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Recycle Relay
Students were provided with examples of indirect water savings through recycling and learned about what resources are and how the use of resources, like water, is decreased when they recycled. Students participated in a fun, educational obstacle course made almost entirely of recycled materials. They navigated the obstacle course in relay teams, building communication and teamwork skills. Stations included a crab walk, army crawl, and trash bag hop.

Next Generation Science Standards, Grades 3-5:
Practice 1

Waste Management
Laila Amerman lamerman@wm.com

****

Rio Grande Bosque Water Cycle

In the semi-arid climate of New Mexico, our scarce precipitation limits the quantity of water available for use by plants, animals and humans. Students become water molecules traveling through a water cycle. The presentation emphases, with evidence and cause and effect, why we need to consider all water users when making water-use decisions.

Next Generation Science Standards, Grades 3-5:
Practice 6, Practice 7

Rio Grande Nature Center
Tanja George (505) 344-7240 Tanja.George@state.nm.us

A similar activity found on web: Incredible Journey, Project WET
http://files.dnr.state.mn.us/education_safety/education/project_wet/sample_activity.pdf







****

Stormwater and Watersheds

Students learn about watersheds by examining and manipulating watershed models. They learn that a watershed is the land area that drains to a water body such as a river or lake. They see for themselves how watersheds can influence water quality.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 2

Sandia National Laboratories
John Kay (505) 344-7240 jtkay@sandia.gov



A similar activity found on web: Protecting Our Water Resources, Midwest Research Institute (See Level 2)
http://www.stormwater.ucf.edu/toolkit/vol3/Contents/pdfs/Student%20Activities/student_activities.pdf

****

To Discharge or Not

Students learned the importance of how industrial process water is tested and brought to an acceptable pH level before it is allowed to be disposed of into the sanitary sewer prior to discharge to the river.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 3

Insight Lighting, Inc.
Craig Barta (505) 348-0888
cbarta@insightlighting.com



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Water Jeopardy

Students learn basic concepts and differences about groundwater vs. surface water supply for potable drinking water. The concepts are reinforced by participation in a Jeopardy game where students compete to determine the correct water "question" for a series of given "answers" (like the TV show).

Next Generation Science Standards, Grades 3-5:
Practice 1

Bohannon Huston, Inc.
Nathan Roberts (505) 823-1000
nroberts@bhinc.com



A similar activity found on web: The Water Cycle Jeopardy, Super Teacher Tools (online Flash game for up to 5 teams)
http://www.superteachertools.com/jeopardy/usergames/Jan201205/game1327973751.php

****

Water Quality

Students learn about water quality and test their water sample for several parameters including pH, temperature, dissolved oxygen, and turbidity. Students learn about what these parameters mean, how they are related to each other, and why they are important for humans and organisms dependent on the water.

Next Generation Science Standards, Grades 3-5:
Practice 2, Practice 3



United States Geological Survey
Amy Galanter (505) 830-7939
agalanter@usgs.gov

****

Watersheds and Aquifers
Students learn about watersheds by examining and manipulating both types of models. They learn that a watershed is the land area that drains to a water body such as a river or lake. The students also learn how drinking water comes from aquifers and how pollution can influence water quality.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 2

University of New Mexico, Civil Engineering
Alysha Toya atoya01@unm.edu



A similar activity found on web: Protecting Our Water Resources, Midwest Research Institute (See Level 2)
http://www.stormwater.ucf.edu/toolkit/vol3/Contents/pdfs/Student%20Activities/student_activities.pdf

****

Weather or Not
Students analyze meteorological and hydrological data to determine if a flash flood might occur, issue warnings, and monitor the flood event.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 2, Practice 3,

National Oceanic & Atmospheric Administration, National Weather Service
Kerry Jones (505) 243-0702 kerry.jones@noaa.gov

A similar activity found on web: Create Your Own Water Cycle, The Water Project
http://thewaterproject.org/resources/lesson-plans/create-a-mini-water-cycle.php







Appendix D – Information to Teachers

The following information was included in the teacher packets.

2019 Children's Water Festival

Monday, October 21st
Tuesday October 22nd

Santa Ana Star Center

3001 Civic Center Circle NE
Rio Rancho, NM 87144

Theme: "***Who are the other water users?***"

The Children's Water Festival has been arranged so **ALL** fourth-grade students in Rio Rancho can attend the event. This is a ***FREE*** event for the students and teachers using monies donated from local businesses who care about water-related education.

The water festival is organized with three activities in the morning and three activities in the afternoon. Each school will attend on one day at either the morning or afternoon session. Each class will attend three activities during their session.

Morning Session	Afternoon Session
9:45-10:15	11:54-12:24
10:18-10:48	12:27-12:57
10:51-11:21	1:00-1:30

Chaperones

It is recommend at least one adult be present for every ten students. Chaperones are responsible for their own transportation to the Star Center. They have not been included in the bus count. Please ask all chaperones and any volunteers from the school to wear their school badges. **We ask that only the approved chaperones attend from your school. Please no "extra" parents/grandparents that show up to watch; they will be turned away!** If you do have any of these "extras", have them contact me prior to the event and I can assign them to be volunteers at the event.

Transportation

Buses are provided and paid by the Children's Water Festival. There will be no place or time for students to eat lunch at the Star Center, so plan on your students' lunch period to be at your school either before or after the water festival.

RRPS TEACHERS ARE RESPONSIBLE FOR FILLING OUT THE TRIP TRACKER.

- **Morning Sessions - Schedule for 9:15 pick up and 11:25 pick up**
- **Afternoon Sessions – Schedule for 11:25 pick up and 1:30 pick up**
- **St. Thomas will be scheduled by City Staff**

These are the schools that will be attending with dates and arrival times.

Elementary School	Lead Teacher	Email	Number Classes	Day	Time
Colinas Del Norte	Ashley Niman	ashley.niman@rrps.net	5	10/21	9:45
Puesta del Sol	Kristy Straley	kristy.straley@rrps.net	6	10/21	9:45
Sandia Vista	Merry Wadsworth Veronica Valdez (Mont.)	merry.wadsworth@rrps.net veronica.valdez@rrps.net	6	10/21	9:45
Rio Rancho	Angela Murphy	angela.murphy@rrps.net	5	10/21	11:54
Cielo Azul	Karin McCann	karin.mccann@rrps.net	6	10/21	11:54
Enchanted Hills	Christina Mandich	christina.mandich@rrps.net	6	10/21	11:54
Vista Grande	Bethany Grant	bethany.grant@rrps.net	5	10/22	9:45
M.L. King	Sinta O'Connor	Sinta.oconnor@rrps.net	6	10/22	9:45
St. Thomas	Pat Lawton	pat.lawton@stasnm.net	2	10/22	9:45
M. Cordova	Amanda Garcia-Presser	amanda.garcia-presser@rrps.net	7	10/22	11:54
E. Stapleton	Carey Rojas	carey.rojas@rrps.net	6	10/22	11:54
Placitas	M. Olivas	molivas@bps.k12.nm.us	1	10/22	11:54
Total (as of 9/6/19)			61		

Water Conservation staff would love to meet with all your 4th grade teachers to go over the festival and the logistics. The meeting should take about 15 minutes or so.

Please contact Marian Wrage, Rio Rancho Environmental Programs Manager and Festival Director, if there are any questions and to schedule the meeting with your 4th grade team.

Marian's telephone number is (505) 896-8737, her cell is (505) 681-7325, and her email is mwrage@rrnm.gov.

The Rio Rancho Children's Water Festival funding has been provided by:

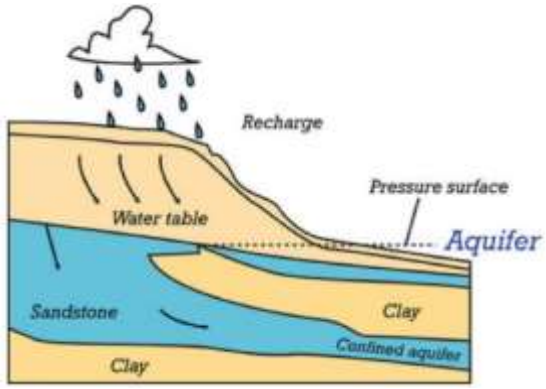
SPONSORS

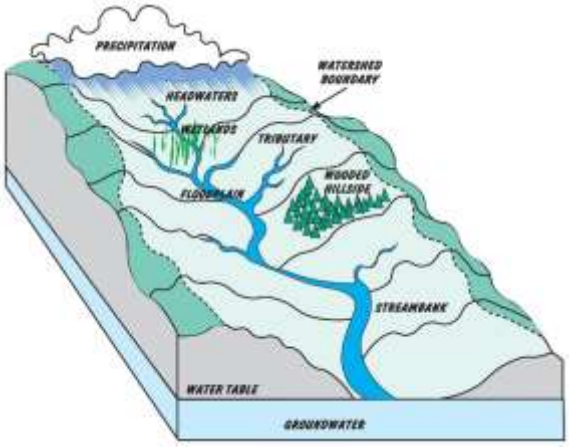
Appendix E - Pre and Post Test

The Festival steering committee rewrote the student test in 2017; diagrams and pictures were added to help the students visualize the concepts. In 2019, Google Forms was used with the Rio Rancho students to take the tests. These tests were without diagrams and pictures. Google Forms was able to grade all the tests and run statistics on the answers. St. Thomas Aquinas and Placitas did not have that technology available so paper tests were given. Note that references to "Rio Rancho" on the test was changed to "Placitas" for the students attending from Placitas Elementary.

1. Many substances and objects can make river water dirty. Which of the following items can make the Rio Grande dirty?
   a) Trash
   b) Dog poop
   c) Leaky cars
   d) All the above

2. An **aquifer** is a layer of water-saturated porous rock. It lies below the water table. Most people who live in New Mexico get drinking water from a well drilled into an aquifer. If you live in Rio Rancho, is the water coming from your faucet from an aquifer?
   a) True
   b) False





3. A **watershed** is an area of land that drains all the streams and rainfall to a common outlet such as the outflow of a reservoir, mouth of a bay, or any point along a stream channel. Is the following statement true or false: We all live in a watershed?
   a) False
   b) True

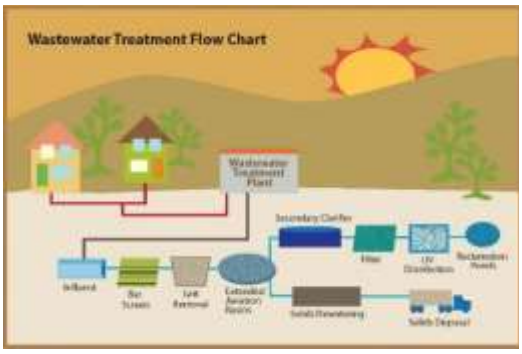
4. Everyone in Rio Rancho uses, on average, about 65 gallons of water per person per day. If you have four people in your home, what is your family's daily average water use?
   a) 260 gallons of water per day
   b) 200 gallons of water per day
   c) 2,600 gallons of water per day

5. Water users in our state include plants, animals, and people. Why is water so important to life?
   a) People need it to survive
   b) Plants need it to survive
   c) The river needs it to support nature
   d) All the above

6. The **water cycle** happens as the earth is warmed by the sun and water circulates between the earth's oceans, atmosphere, and land. Which of the following are terms associated with the water cycle?
   a) Pumping, Treatment, Delivery
   b) Evaporation, Condensation, Precipitation
   c) River, stream, aquifer



7. How can we protect our water?
   a) Litter
   b) Tell your parents when you see a leak
   c) Pour chemicals on the ground



8. **Wastewater** (or sewer water) is the used water from toilets, showers, and clothes washers and it is too dirty to go straight into the river or into the ground. Septic tanks and wastewater treatment plants clean the water before it goes to the river or into the ground.
   a) True
   b) False

Appendix F - Outcomes from Students' Tests by Question

The following table shows the percentage of correct answers on both the pre and post-test. Because most of the answers were provided using Google Forms, there was no way to distinguish answers by class or school. Not every teacher from every school provided pre and post-tests. The questions are in the same order as in Appendix E.

There was a 6 percentage point increase from pre- to post-tests for all the participating students.

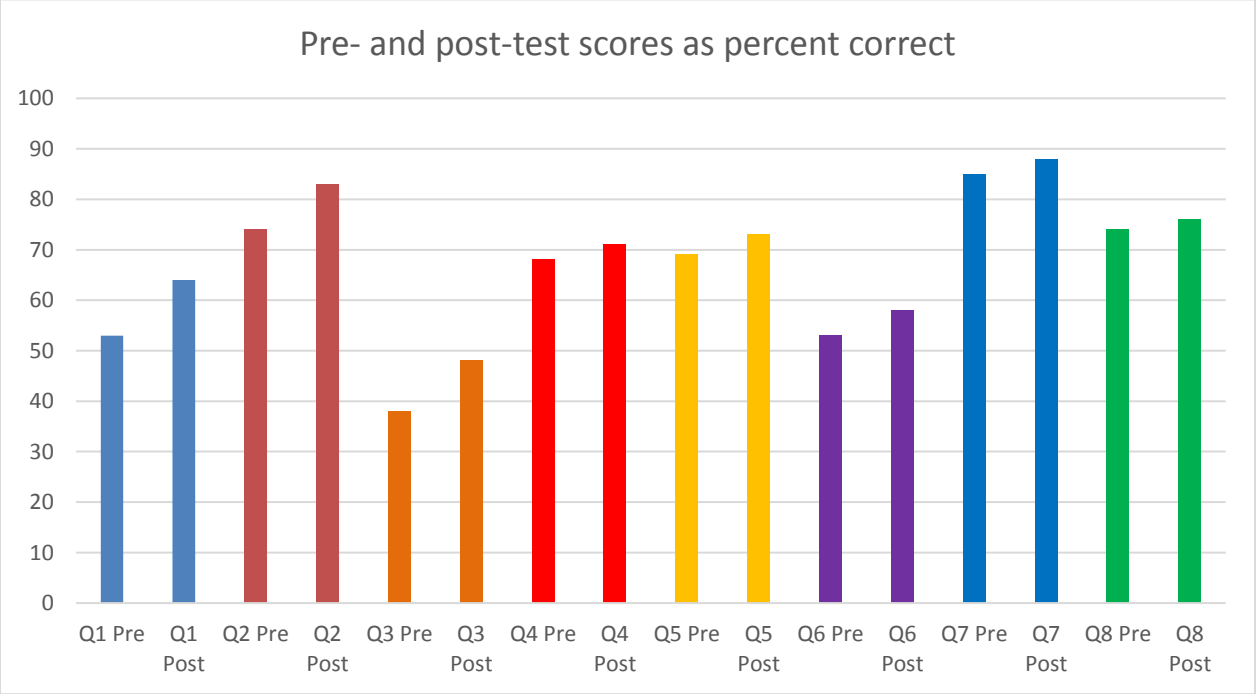


Table 1 shows the increase/decrease by question for the entire testing group.

Table 1 **Test Question**	**Increase from Pre to Post-Test**
1 Makes river dirty	12%
2 DW come from	9%
3 Watershed	10%
4 How much Water	3%
5 H2O important to life	4%
6 Water Cycle	4%
7 Protect water	3%
8 Wastewater	2%

As in year's past, the students do not have a good understanding of what a watershed is or the fact that we all live in a watershed.

During the period from July 1, 2019, through June 30, 2020, the Mid Rio Grande Stormwater Quality Team (MRGSQT) continued its educational outreach activities. When pandemic quarantine restrictions took effect in March 2020, many in-person events were canceled and some ongoing outreach activities were reconfigured to accommodate this new reality. However, the majority of the year was business as usual. This report will highlight all activities, including the late-year programmatic pivots, including:

- Partnering with the Bosque Ecosystem Monitoring Program (BEMP), Arroyo Classroom and RiverXChange
- Continuing to maintain and update the keeptheriogrand.com website, as well as post relevant information to the Keep the Rio Grand Facebook page
- Participating in high-profile community events, including the Los Ranchos Lavender Festival, the NM State Fair Parade, the Corrales Harvest Festival, the Rio Rancho Children's Water Festival and New Mexico's Animal Humane Society's Doggie Dash and Dawdle
- Repairing and strengthening hardware for the team's interactive kiosk and moving it to Albuquerque's South Valley Library
- Participating in a variety of community events throughout the year

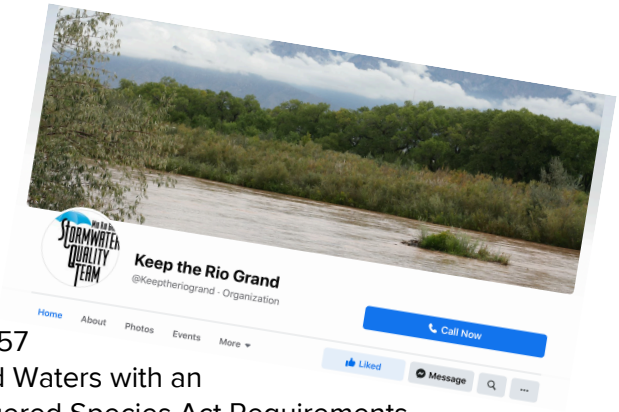
Team partners and supporters disseminated information on stormwater quality and pollution prevention through municipal water quality reports to stakeholders. Specialty advertising giveaways relating to stormwater quality awareness were ordered (or reordered) for use at public events. MRGSQT's annual budget for all these activities, excluding Type 9 items, donated hours by team members and funding for Arroyo Classroom, RiverXchange and BEMP is $50,000. The contractor, CWA Strategic Communications (CWA), donated $119.45 in services during the 12-month period. The following is a review of the activities in which the Team has participated.

There is a possibility that there was some duplication in the counts of individuals who attended more than one event, but numbers are close.

WEBSITE (www.keeptheriogrand.org)

CWA redesigned the website in October 2018 and has continued to maintain and update the content.

KEEP THE RIO GRAND FACEBOOK PAGE (www.facebook.com/Keeptheriogrand)



In conjunction with the SQT website, a Facebook page continues to post information educating the general public about stormwater team members, MS4-related topics, events and more. The page has 157 "likes" (a 4% increase from the previous year) and the team occasionally boosts posts during events to obtain more visibility.

Estimated number of individuals reached by this activity: 157

Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen Strategy; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.e Control of Floatables; Part 1.D.5.g, Public Education and Outreach on Stormwater Impacts.

Audience(s): Children, Adults

EVENTS

Between July 1, 2019, and June 20, 2020, MRGSQT members and their partner agencies reported participating in a total of 51 community outreach/educational events reaching adults and children.

Estimated number of individuals reached by these community outreach/education events: 84,675
Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen Strategy; Part 1.D.5.c(i)(f) and (h) Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.e Control of Floatables; Part 1.D.5.g, Public Education and Outreach on Stormwater Impacts.
Audience(s): Children, Adults

Details can be found in Exhibit 1 at the end of this report.

GENERAL MATERIALS DISTRIBUTION/STORMWATER AWARENESS SURVEY

As appropriate, team members distribute materials at events in return for event attendees filling out a stormwater awareness survey. Total distribution correlates to number of surveys completed.

STORMWATER QUALITY TEAM Inventory July 1, 2019, through June 30, 2020			
Item	***Starting Qty as of 7/1/2019***	***Distributed***	***Ending Qty as of 6/30/2020***
"Keep the Rio Grand" Bumper Stickers *	250		631
"Reduce Stormwater Pollution at Home" Brochure * **	84		4,365
Dog-Shaped Poop Bag Dispensers	1,750	355	1,395
"Don't Contaminate the River" Oval Stickers	3,750	1,659	2,091
Poop Emoji Squeezies	1,464	1,243	221
Morphing Fish Bags	2,500	720	1,780
Silicone Pet Food Can Lids	1,311	240	1,071
New Pet Rack Cards *	4,394		4,424
FOG Rack Cards	4,412	143	4,269
No Poop Fairy Rack Cards	4,427	278	4,149
Professionals Harmful Chemicals Rack Card	4,720	293	4,427
Reduce Stormwater Pollution at Home Rack Card *	4,358		4,365
Large Stormwater display – 8 ft	1	-	1
Tabletop Stormwater display – 6 ft	1	-	1
SQT 6' x 3' banner	1	-	1
TOTAL DISTRIBUTION		**4,931**	

** Inventory was inaccurate in the previous year, so these numbers show an increase from starting and ending quantities.*

*** These materials were reprinted; the distributed number reflects the net decrease.*

Estimated number of individuals reached by these community outreach/education events: 4,931
Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen

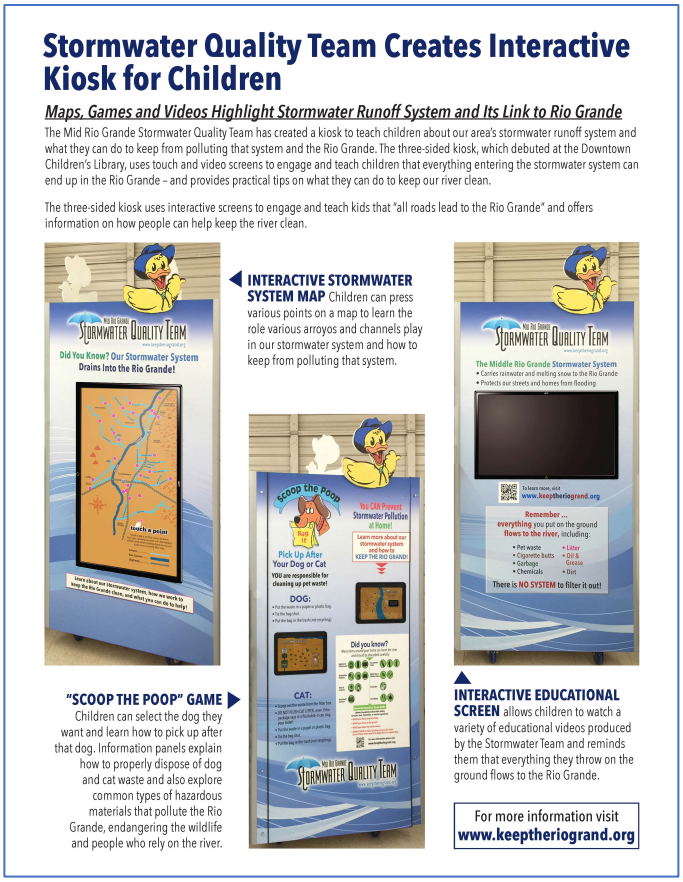
Strategy; Part 1.D.5.c(i)(f) and (h) Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.e Control of Floatables; Part 1.D.5.g, Public Education and Outreach on Stormwater Impacts.
Audience(s): Children, Adults

Sample surveys and survey analytics can be found in Exhibit 2 at the end of this report.

EDUCATIONAL ACTIVITIES

Educational Kiosk at Albuquerque's Rudolfo Anaya North Valley Public Library and South Valley Public Library

At the beginning of the year, the team's interactive kiosk was installed at the Rudolfo Anaya North Valley Public Library. Over time and regular use, it became obvious that the kiosk would need some maintenance and repair. CWA contracted with a moving company to pack and move the kiosk from the Rudolfo Anaya North Valley Public Library to the CWA offices at the end of December, where we assessed the damage and determined what repairs needed to be made. Staff from SSCAFCA made those repairs.



Arrangements were then made with staff at the South Valley Public Library to move the kiosk there. It was moved and set up March 12th, the week before the pandemic quarantine took effect. The library was reopened June 2nd.

The kiosk is a valuable educational tool and we look forward to its use as the libraries are better able to accommodate regular activity so that children can learn from these kiosk features:

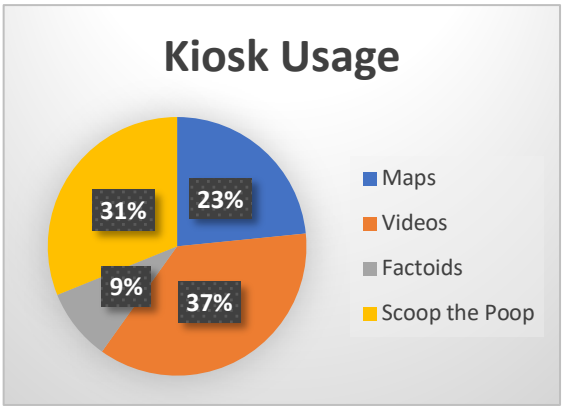
- An interactive stormwater system map of the Middle Rio Grande that allows children to press various points to learn the roles arroyos and channels play in the stormwater system and how to keep from polluting that system. The system stretches from Bernalillo on the north through Rio Rancho and into Albuquerque.
- A "Scoop the Poop" game that allows children to choose a dog and learn how to properly pick up after their dog. This is important because pet waste is a major source of E. coli contamination in the Rio Grande.
- An educational panel on common types of trash, debris and chemicals that pollute the Rio Grande, including appliances and electronics; automotive products such as oil, batteries and gasoline; fertilizers and pesticides; household cleaners; yard waste; and prescription and over-the-counter medicines.
- A touchscreen that includes facts about each arroyo and the Rio Grande.
- A touchscreen that allows viewers to select and watch stormwater-related videos:

- Rio the Duck
- Keep the Rio Grand
- Scoop the Poop!
- 100 Billion Gallons
- Arroyo Safety
- Respect Your Arroyos

Educational Kiosk Statistics

From July 1, 2019, to December 27, 2019, while the kiosk was installed at the Rudolfo Anaya North Valley Library, 36,192 people visited the library and had the opportunity to view information presented by the kiosk and interact with the kiosk. Of the 36,192 visitors, approximately 3,837 (primarily) children interacted with the kiosk.

From March 12, 2020, to June 30, 2020, after the kiosk was installed at the South Valley Library, only, 2,500 people visited the library (the library was closed March 16 – June 1) and had the opportunity to view information presented by the kiosk and interact with the kiosk. Of the 2,488 visitors, approximately 130 (primarily) children interacted with the kiosk. These numbers are understandably low, as visits to the library were still impacted by the pandemic and families continuing to self-quarantine.



	July 2019			
	Map	**Videos**	**Factoids**	**Scoop the Poop**
People	188	386	118	275
Touches	2,399	386	367	738

	August 2019			
	Map	**Videos**	**Factoids**	**Scoop the Poop**
People	156	301	97	212
Touches	1,751	301	252	534

	September 2019			
	Map	**Videos**	**Factoids**	**Scoop the Poop**
People	183	350	35	235
Touches	2,015	350	144	541

	October 2019			
	Map	**Videos**	**Factoids**	**Scoop the Poop**
People	145	268	0	200
Touches	1,991	268	0	443

	November 2019			
	Map	**Videos**	**Factoids**	**Scoop the Poop**
People	145	89	44	157
Touches	1,870	89	138	381

	June 2020			
	Maps	**Videos**	**Factoids**	**Scoop the Poop**
People	35	18	22	55
Touches	293	18	100	136

Total estimated number of people reached by these educational activities: 38,680
Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen Strategy; Part 1.D.5.c(i)(f) and (h) Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.e Control of Floatables; Part 1.D.5.g Public Education and Outreach on Stormwater Impacts.
Audience(s): Children, Adults

STUDENTS AND TEACHERS REACHED THROUGH PARTNER EDUCATIONAL PROGRAMS – ARROYO CLASSROOM, RIVERXCHANGE AND BOSQUE ECOSYSTEM MONITORING PROGRAM (BEMP)

Arroyo Classroom

The Arroyo Classroom program utilizes natural arroyos as outdoor classrooms and brings local animals into the classroom to educate and motivate third-grade students to respect the arroyos as important wildlife habitat. In the 2019-2020 school year, the program served 35 classes within the Rio Rancho Public School System, reaching approximately 37 teachers and 736 students. Their deliverables included 35 of 35 planned Watershed Presentations, 29 of 35 planned Arroyo Walks (six were not completed due to school closures because of the pandemic), 32 of 35 planned Bat Presentations (some classes doubled up due to a scheduling issue, but all classes were completed) and 35 of 35 planned Owl/Bird Presentations.



For more information, see Exhibit 3, Arroyo Classroom's 2019-2020 report to the Mid Rio Grande Stormwater Quality Team.

RiverXchange

RiverXchange is an innovative, long-term outreach program that integrates water resource topics with computer technology, student writing and a hands-on curriculum to meet specific, measurable outcomes.

Since 2007, the program has enabled upper elementary classes from New Mexico to become "high-tech pen pals" with classes outside the state to share what they learn about the geography, culture and ecology of their local river and watershed. This year there were more 1,254 total participants. Each student spends about 25 hours engaged with the program over the course of the school year. The

curriculum incorporates hands-on activities and multiple classroom presentations by local water resources experts. During the 2019-2020 season, 38 fifth-grade classes, 19 of which were from Title I schools, participated in RiverXchange in New Mexico. RiverXchange worked with 26 classes (607 students) in Bernalillo County and 12 classes (325) students in Sandoval County. A total of 40 teachers were involved. Even with the impacts of the COVID-19 pandemic and the transition to a new education coordinator mid-year, RiverXchange was able to run smoothly with only a few classes missing a presentation or a field trip due to school closures mid-March.



For more information, see Exhibit 4, RiverXchange's 2029-2020 report to the Mid Rio Grande Stormwater Quality Team.

Bosque Ecosystem Monitoring Program (BEMP)

The main objective of the Stormwater Science outreach education program of the Bosque Ecosystem Monitoring Program (BEMP) is to teach students that the health of the Rio Grande is directly related to the health of the surrounding watershed, as well as what their responsibilities and opportunities are to help "Keep the Rio Grand." The Stormwater Science program includes a 1.5-hour classroom activity, a 4- to 5-hour study trip to the Rio Grande and optional curriculum extensions incorporating hands-on data analysis, graphing and system modeling. During the 2019-2020 school year, 737 students participated in Stormwater Science activities in their classrooms, in the field, both or in outreach events. The classroom program was delivered to 245 students in 14 classrooms at 3 different schools in Albuquerque. E. coli monitoring was conducted by 35 students from La Academia de Esperanza, the University of New Mexico and Bosque School. 53 students participated in the Stormwater Study Trip. BEMP participated in the Children's Water Festival, working with 300 4th-grade students and 12 teachers. Stormwater Science presentations during summer programming were made to 200 students in grades K-8. Additionally, BEMP participated in a Storytime in the Park program where one activity was shared with 750 families. From the end of March through June, approximately 10,100 students received BEMP activities through the five Grab & Go meal locations and free Little Libraries around the city. About 5,800 of those students received an activity with a stormwater science focus. Additionally, materials were placed on their website and posted on their social media accounts.

For more information, see Exhibit 5, BEMP's 2019-2020 report to the Mid Rio Grande Stormwater Quality Team.

Total estimated number of people reached by these educational activities: 7,398
Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen

Strategy; Part 1.D.5.c(i)(f) and (h) Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.e Control of Floatables; Part 1.D.5.g, Public Education and Outreach on Stormwater Impacts; Part 1.D.5.h Public Involvement and Participation.
Audience(s): Children, Adults

PUBLIC EDUCATION CAMPAIGNS ON PROPER DISPOSAL OF FATS, OILS & GREASE

In November and December 2019, the cities of Albuquerque and Rio Rancho each ran public education campaigns on how to dispose of cooking grease properly. Their campaigns were timed to coincide with the holiday cooking season (Thanksgiving through Christmas).

In Albuquerque:
Outdoor Boards – two 14'x48' boards ran two weeks each month in November and December. The estimated number of people reached, with duplication, was 2,305,492.



Television Advertising – two two-week schedules each in November and December on Comcast (three zones), KOAT TV, KOB TV and KRQE TV. A total of 900 spots were placed for an estimated reach of 1,012,834.

Radio Advertising – two two-week schedules each in November and December targeting women 25+. A total of 491 spots ran on KOB AM/FM, KBQI FM, KPEK FM and KRST FM. Reach was estimated at 210,000.

In Rio Rancho:
Digital Outdoor Boards – Artwork ran on six boards during November and December. Alternating the red and green images, two boards ran for two weeks in November (11/18 – 12/1/19) and four boards ran one week (11/18 – 11/26/19). In December, artwork ran on all six boards for a week around Christmas (12/23 – 12/29/19). A total estimated audience of 184,321 adults (18 years of age and older) with duplication were reached.



Print Advertising – Two ads were each run on two separate pages in the *Rio Rancho Observer* (for a total of four ads) on one Sunday in November (11/24/19) and again on one Sunday in December (12/22/19) for a total of 128 column inches of ad space. Each ad was 4 columns by 4 inches in size. Circulation for the *Rio Rancho Observer* is 18,500.

Total estimated audience reached: 3,731,147
Permit Reference(s): Part 1.C.2 Discharges to Impaired Waters with and without an Approved TMDL; Part 1.C.3.a; Endangered Species Act Requirements, Dissolved Oxygen Strategy; Part 1.D.5.c(i)(f) Pollution Prevention/Good Housekeeping for Municipal Co-permittee Operations; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.g, Public Education and Outreach on Stormwater Impacts.
Audience(s): Children, Adults

ARROYO SAFETY CAMPAIGN

MRGSQT member SSCAFCA continued its Arroyo Safety Campaign by producing a 1.5-minute video with help from a local girl scout troop. After an initial discussion about arroyo safety and best practices for staying safe, the troop met several times to brainstorm and develop strategies to reach their peers. Their solution was to create a “rap” song with accompanying video to share the message. One of the girls wrote the rap lyrics and several others took video footage, which were incorporated into the video. The video was posted (and boosted) on the Arroyo Safety Facebook page, the Mid Rio Grande Stormwater Quality Team’s (MRGSQT) website www.keeptheriogrand.org, YouTube, Instagram and the SSCAFCA website.

KNOW YOUR ARROYOS

ENJOY • RESPECT • PROTECT

Walkin’ in arroyos is pretty great
But there’s a few rules, no need to hate
Ya’ wanna’ stay safe while havin’ fun
So sit right down and listen to em’.

Ya’ really don’t wanna’ get swept away,
So get outta’ there when the clouds turn gray!
Cause even if the clouds are far away
the rain travels fast – now hear me, OK?

Before you go out to have a blast
Look at the sky, and check the forecast!
And if you see gray clouds out to the west–
It’s a definite sign, no time to rest.

Get yourself to higher ground
Or better yet, get homeward bound
Stay off the unstable arroyo wall
It’s fragile, it’s weak and you might fall

Keep your trash from hittin’ the sand,
Cause’ it’ll end up in the Rio Grande
And pollution’s something you want no part of
Keep the river clean, treat it with love

Bein’ in arroyos is pretty great
But there’s a few rules, no need to hate
When you’re out on the mesa havin’ fun
Staying safe is rule number one!

Watch the video on the kiosk at the Rudolfo Anaya North Valley Library or at www.sscafca.org



In addition, an Arroyo Safety game to be played on mobile devices was developed and is now available on Apple's AppStore and GooglePlay. The goal is to teach basic Arroyo Safety messages through a fun game.



A news release was sent to the *Rio Rancho Observer* and social media announcements were made on the Arroyo Safety Facebook page, SSCAFCA's website and the Mid Rio Grande Stormwater Quality Team's website. All media provided the link to the AppStore and Googleplay to download the game.

Total estimated audience reached: 22,422
Permit Reference(s): Part 1.C.2 Discharges to Impaired Waters with an without an Approved TMDL; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen Strategy; Part 1.D.5.c(i)(f) and (h) Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.g, Public Education and Outreach on Stormwater Impacts.
Audience(s): All ages, especially middle school students

SEPTIC SYSTEM EDUCATION, OUTREACH AND ENFORCEMENT PROGRAM

Bernalillo County administers the septic system permitting program in the unincorporated portions of Bernalillo County under the Bernalillo County Wastewater Ordinance, ensuring the proper disposal of septic waste and proper operation and maintenance of septic systems. The wastewater ordinance was passed in 2015.

The County began a campaign in 2012 to get unpermitted systems permitted or properly abandoned, with an established goal of contacting a minimum of 300 unpermitted system or aging system owners per year. During the period July 1, 2019, to June 30, 2020, Bernalillo County had 579 total wastewater operator permits, 432 total wastewater system permits, as well as 67 septic abandonments and connections to public sewer utilities. Bernalillo County sent 813 letters through the "unpermitted and aging wastewater system campaigns" which resulted in an estimated 235 properties permitted (included in the total numbers listed above) for septic systems in FY2020.

Total estimated audience reached: 813
Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen Strategy; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.g, Public Education and

Outreach on Stormwater Impacts.
Audience(s): Adults

NM STATE FAIR PARADE FLOAT

AMAFCA created a float for the State Fair Parade, which takes place every September in Albuquerque. With signs saying "Keep the Rio Grand" and "There is No Poop Fairy," the team borrowed a concept developed by Greenville County Soil and Water Conservation District in South Carolina. A staff member dressed up as the "Poop Fairy" and tossed Poop Emoji Squeezies to the crowd.



Total estimated audience reached: 50,000
Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.e Control of Floatables; Part 1.D.5.g, Public Educatino and Outreadh on Stormwater Impacts; Part 1.D.5.h, Public Involvement and Participation.
Audience(s): All ages

CHILDREN'S WATER FESTIVAL

The 2019 Children's Water Festival (Festival) was held Monday, October 21, and Tuesday, October 22, at the Santa Ana Star Center in Rio Rancho. Some 1,437 students, mostly 4th-graders, attended from 61 classrooms at Placitas Elementary School, St. Thomas Aquinas and all of the elementary schools in Rio Rancho Public Schools. The students attend three 30-minute presentations in a half-day format. Eighteen presenters taught the classes and three to four schools were on site at one time. Schools attended a morning or afternoon program.



The principal focus of the Festival is to educate 4th-grade schoolchildren about water and its relationship to humans, animals and other natural resources in a fun and interactive atmosphere. The Festival's vision is to introduce students and teachers to new ideas, options and solutions so they will conserve and protect water for the future; lay the foundation for further learning; and reach as many students and teachers as possible.

Total estimated audience reached: 1,437
Permit Reference(s): Part 1.C.2.b(i)(e) Discharges to Impaired Waters with an Approved TMDL, Impairment for Bacteria; Part 1.C.3.a Endangered Species Act Requirements, Dissolved Oxygen Strategy; Part 1.D.5.c(i)(f) and (h) Pollution Prevention/Good Housekeeping for Municipal/Co-permittee Operations; Part 1.D.5.e Illicit Discharges and Improper Disposal; Part 1.D.5.e Control of Floatables; Part 1.D.5.g Public Education and Outreach on Stormwater

Impacts.
Audience(s): fourth-graders

For more information, see Exhibit 6, Children's Water Festival Report, 2019-2020.

DONATIONS/SPONSORSHIPS

Stormwater Team members donated $91,000 to organizations for additional educational and training programs.

MEMBER	AMOUNT DONATED	RECIPIENT	PURPOSE
AMAFCA	$2,000	Land and Water Summit	For Public Involvement and Participation
Bernalillo County	$5,000	Land and Water Summit	For Public Involvement and Participation
Bernalillo County	$75,000	BEMP	For Education and Outreach
City of Rio Rancho	$2,000	Land and Water Summit	For Public Involvement and Participation
Mid Rio Grande Stormwater Quality Team	$5,000	Land and Water Summit	For Public Involvement and Participation
SSCAFCA	$2,000	Land and Water Summit	For Public Involvement and Participation
	$91,000		

ESTIMATED TOTAL NUMBER OF PEOPLE REACHED THROUGH ALL ADVERTISING, EDUCATIONAL AND PUBLIC OUTREACH ACTIVITIES DURING 2019-2020

Obviously, some people were reached by more than one activity, but in gross numbers an estimated **3,943,687** people were reached with a stormwater quality/stormwater pollution prevention message during the 2019-2020 fiscal year.

Exhibit 1

Event Participation 2019-2020

NAME OF PROGRAM/EVENT	EVENT DATE	TYPE OF AUDIENCE	MS4 CATEGORY	TOTAL REACHED	NOTES
2019					
"There is No Poop Fairy" float in State Fair Parade	9/17/19	All Ages	AS, PW, SWP	50,000	Provided education information about Scoop the Poop, There is No Poop Fairy, why it is important to pick up after your pet as well as proper household hazardous waste disposal.
Corrales Harvest Festival	9/28 & 9/29/19	All Ages	AS, PW, SWP	10,000	Booth handing out information, swag and collecting surveys to determine public knowledge regarding stormwater issues.
Rio Rancho Children's Water Festival	10/21 & 10/22/19	Elementary Students and Teachers	SWP	1,437	Students attended from 61 classrooms; Placitas Elementary School, St. Thomas Aquinas and all of the elementary schools in Rio Rancho Public Schools. Students attend three 30-minute presentations in a half-day format. Up to 3 to 4 schools were on site at one time. Schools attended a morning or afternoon session.
Animal Humane's Doggie Dash and Dawdle	11/3/19	All Ages	AS, PW, SWP	4,000	Animal Humane's signature event and largest fundraiser; booth handing out information, swag and collecting surveys.
Georgia O-Keefe Elementary	12/5/19	All Ages	SWP	24	Planted 17 poles.
Zia Elementary	12/6/19	All Ages	SWP	20	Planted 17 poles.
John Baker Elementary	12/19/19	All Ages	SWP	29	Planted 25 poles.
EPA Region6 Stormwater Conference – Responding to Change: Dynamic Stormwater Management in Economic, Political and Climatic Transitions, Denton, TX	7/28 – 8/1/19	Adults	SWP	75	Kali Bronson, Bernalillo County Stormwater Program Compliance Manager, attended, served as a session moderator, and presented at the 2019 EPA Region 6 Stormwater Conference in Denton, TX. Attendance at the Bernalillo County presentation is estimated at 75 people.
Rocky Mountain Youth Corps	July 2019	Adults, Children	AS	53	In partnership with Bernalillo County Parks and Recreation, the youth corps participants worked to support and expand wildlife habitat throughout the South Valley while also leading environmental education activities for local youth. 8 Corps members and 2 Supervisors completed 1,400 hours of service, educated 43 local youth and led 4 field trips.
Southwest Conservation Corps	July 2019	Adults	SWP	5	Participants completed approximately 800 hours of work removing invasive species, constructing a trellis, removing fence and planting cottonwoods at Sanchez Farm Open Space the the Westside Community Center.
Valle de Oro Youth Corps	July 2019	Youth	SWP	5	Participants completed approximately 60 hours of work restoring Tijeras Creek, adobe hornos and performing La Plazita Garden maintenance.
2019 Arid LID Workshop	9/19 – 9/20/19	Adults	SWP	66	Arid LID is a coalition of interdisciplinary professionals in the Middle Rio Grande area working to promote the use of GSI and LID in development. The coalition held a workshop which brought together policy makers, engineers, biologists, developers, and others to educate and make future plans for GSI/LID opportunities. Attendance included 66 people.

NAME OF PROGRAM/EVENT	EVENT DATE	TYPE OF AUDIENCE	MS4 CATEGORY	TOTAL REACHED	NOTES
2019					
East Mountain Celebration	9/22/19	All Ages	SWP	1,500	This is a family-friendly event and kids enjoyed free activities like face painting, fun jumps, a petting zoo and obstacle courses. Both Bernalillo County and Tijeras Creek Watershed Collaborative had a water quality booth which provided information to educate County residents on stormwater quality, water conservation methods and incentive programs, and groundwater monitoring programs.
Tijeras Creek Watershed Collaborative Youth Conservation Corps Workday	10/5/19	All Ages	SWP	31	Bernalillo County is a partner in the Tijeras Creek Watershed Collaborative. The Youth Conservation Corps completed a workday helping to restore the creek. The group were also weeding in the area and repaired a spillway and berms. 31 people participated in the event and performed approximately 160 volunteer hours.
2020					
Georgia O'Keefe Elementary	1/9/20	All Ages	SWP	43	Planted 28 poles.
John Baker Elementary	1/10/20	All Ages	SWP	21	Planted 25 poles.
North Valley Elementary	2/6/20	All Ages	SWP	28	Planted 16 poles.
Sandia Vista Elementary	2/7/20	All Ages	SWP	34	Planted 28 poles.
North Valley Academy	2/13/20	All Ages	SWP	32	Planted 30 poles.
Martin Luther King Elementary	2/14/20	All Ages	SWP	49	Planted 30 poles.
Duranes Elementary	2/15/20	All Ages	SWP	31	Planted 26 poles.
7 Bar Elementary	2/20/20	All Ages	SWP	41	Planted 20 poles.
Monte Vista Elementary	2/21/20	All Ages	SWP	27	Planted 17 poles.
7 Bar Elementary	2/27/20	All Ages	SWP	32	Planted 24 poles.
Martin Luther King Elementary	2/28/20	All Ages	SWP	62	Planted 39 poles.
Zia Elementary	3/5/20	All Ages	SWP	49	Planted 17 poles.
Monte Vista Elementary	3/6/20	All Ages	SWP	53	Planted 32 poles.
Cochiti Elementary	3/11/20	All Ages	SWP	46	Planted 38 poles.
Martin Luther King Elementary	3/12/20	All Ages	SWP	57	Planted 38 poles.
Holy Ghost	1/23/20	All Ages	SWP	63	Planted 53 poles.
Cottonwood Gulch/RMYC	1/24/20	All Ages	SWP	24	Planted 41 poles.
Nahalot Shalom	1/26/20	All Ages	SWP	26	Planted 33 poles.
Peace Corps	2/8/20	All Ages	SWP	39	Planted 60 poles.
Congregation Albert	2/9/20	All Ages	SWP	34	Planted 28 poles.
Mountain Mahogany Families	2/29/20	All Ages	SWP	19	Planted 33 poles.
Sandia Civitans	3/7/20	Adults	SWP	16	Planted 100 poles.
Bernalillo County Septic Systems Permits, "Unpermitted" and Aging System Wastewater System Campaign Outreach Program	7/1/19 – 6/30/20	Adults	SSS	813	Bernalillo County had 579 total wastewater operator permits, 432 total wastewater system permits, as well as 67 septic abandonments and connections to public sewer utilities. Bernalillo County sent 813 letters through the "unpermitted and aging wastewater system campaigns" which resulted in an estimates 235 properties permitted (included in the total numbers listed above) for septic systems in FY2020.

NAME OF PROGRAM/EVENT	EVENT DATE	TYPE OF AUDIENCE	MS4 CATEGORY	TOTAL REACHED	NOTES
2020					
BernCo at A Glance Monthly Newsletters	7/1/19 – 6/30/20	Adults	SWP	12,000	An estimated 500 hardcopies of each newsletter are printed and distributed via County offices and provided at neighborhood association meetings by the neighborhood coordinator. The neighborhood coordinator also sends the monthly electronic newsletter to all County and City neighborhood associations. It is estimated that these monthly newsletters reach 1,000 people per month and 12,000 people annually.
Bernalillo County HHW Neighborhood Collection Events	7/1/19 – 6/30/20	AdAults	HHW	241	In FY2020, Bernalillo County hosted 7 HHW weekend neighborhood collection events in association with mini-cleanup events. During the 7 events, 241 individuals participated and 5,206 pounds of HHW were collected. An HHW report is available upon request. The HHW report includes historical trend analysis for this outreach program as well as specific collection data per location.
Bernalillo County Solid Waste Illegal Dumping Partnership (IDP) Educational Outreach	7/1/19 – 6/30/20	Adults	HHW	1,200	Hosted 15 community cleanup events. Participated in a virtual Junk Jog with the COA. Created a Tire Recycling and Disposal committee to educate business on the proper way to dispose of tires. Visits began September 2019 and will be ongoing. Distributed to date over 1,200 Carlos Coyote coloring books to various entities in the community.
Bosque Environmental Monitoring Program (BEMP) Monitoring and Educational Outreach Programs	7/1/19 – 6/30/20	Children	AS, ID, PW		Bernalillo County classrooms participated in monthly monitoring programs at 33 monitoring sites. BEMP provided in-classroom and field-based educational programming for 50 Bernalillo county schools. Bernalillo County gave $75,000 in support of this program.
Bernalillo County Employee Training – Stormwater Quality Training and IDDE Training	7/1/19 – 6/30/20	Adults	SWP	71	Bernalillo County began using a video training service, Excal Visual, Inc., in FY 2018. In FY 2020, 41 people completed the IDDE training and 30 completed the Rain Check Training (general stormwater quality training).
Master Naturalists Volunteering at Bernalillo County Open Space	7/1/19 – 6/30/20	Adults	SWP		Master Naturalists volunteer at the Bernalillo County Open Space workday events as well as with tour and education events for the public. Since the program began in 2010, there have been more than 500 registered volunteers. In FY 2020, there were 906 documented volunteer hours.
RiverXchange Program by Ciudad Soil and Watter Conservation District	2019 – 2020 Academic Year	Adults, Children	SWP	972	Bernalillo County supports RiverXchange which gave a series of presentations and hosted field trips for 38 5th-grade classes. Program elements included addressing topics in stormwater, wastewater, drinking water, water use in agriculture and planting field trips. Attendance included 932 students and 40 teachers.

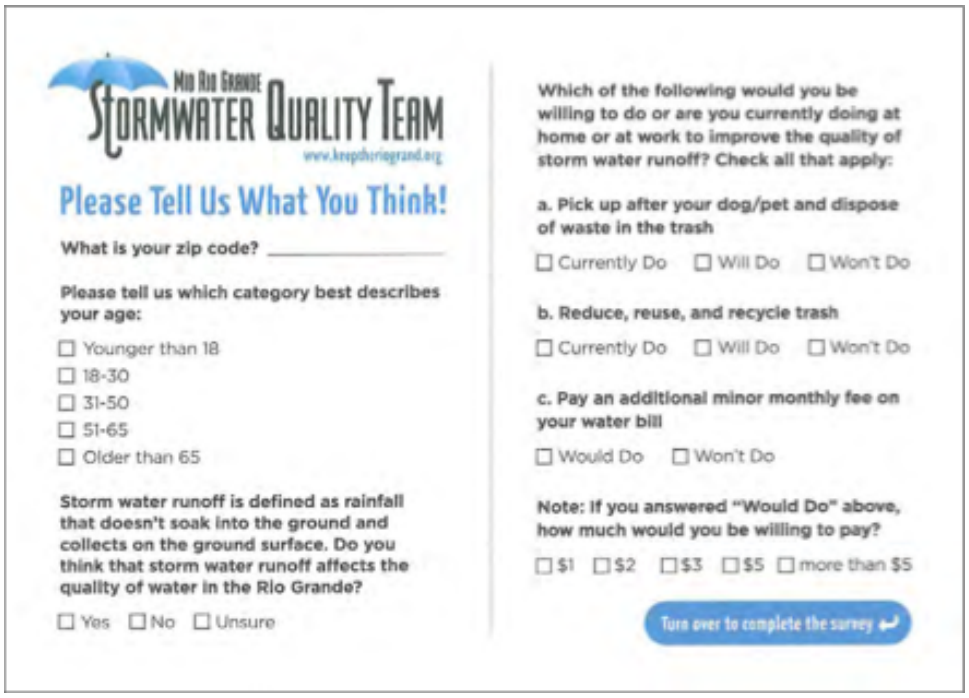
NAME OF PROGRAM/EVENT	EVENT DATE	TYPE OF AUDIENCE	MS4 CATEGORY	TOTAL REACHED	NOTES
2020					
Arroyo Classroom Program, by Ciudad Soil and Water Conservation District	2019 – 2020 Academic Year	Adults, Children	SWP	736	The program, partially funded by Bernalillo County, reaches 736 students in 35 classes. Both in-class presentations and a field trip to an arroyo habitat were part of the program. Students built a watershed model to facilitate their understanding of surface water pollution and prevention.
Annual Bosque Planting Day	2/22/20	Adults	SWP	167	Bernalillo County supported the Bosque Cultural Healing Garden Project for a day of reforestation with volunteers revitalizing the Albuquerque Bosque. Attendance is estimated at 167 volunteers.
Sponsorship of New Mexico Land and Water Summit	2/27 – 2/28/20	Adults	SWP	154	Bernalillo County provided the New Mexico Land and Water Summit with a sponsorship of $5,000. Topics discussed at the summit included green stormwater infrastructure, watershed restoration and management, and public outreach and engagement. Atendees included 154 professionals in the fields of hydrology, landscape architecture, landscaping and engineering. The field trips included two Bernalillo County projects – Alameda Drain Train and South 2nd Street Project.
New Mexico Arbor Day Celebration	3/14/20	All Ages	SWP		Bernalillo County sponsored an event promoting tree care, environmental responsibility and community involvement in making Albuquerque "greener." The event included tree care and planting demos.
Talking Talons Youth Leadership	4/29/20	Children	SWP		Bernalillo County provided online resources and worksheets to teach 6th-graders about land use impacts on stormwater and the river, human activities and their impacts, and things kids can do to reduce stormwater pollution.
Pueblo of Isleta Environment Department Alternative 2020 Environmental Fair	6/26/20	All Ages	SWP	250	Bernalillo County put together an online activity book with educational information about pet waste and watershed health for 250 fair participants
SSCAFCA Facility Outreach	2019-2020	All Ages	SWP		SSCAFCA deployed approximately 100 "There is no Poop Fairy" signs at all SSCAFCA-owned facilities to inform the public and encourage them to scoop and remove animal waste

AS: Animal Sources
CON: Construction
HHW: Household Hazardous Waste
ID: Illicit Discharges
PW: Pet Waste
SSS: Septic & Sanitary Sewer Systems
SWP: General Stormwater Pollution Prevention

Exhibit 2

Sample Surveys and Survey Analytics 2019-2020

The Mid Rio Grande Storm Water Quality Team organized a short survey addressing various water quality issues affecting the Rio Grande. The graphs on the following pages reflect the tallied results of the 10-question voluntary questionnaire from May 2014 – November 2019. The total number of surveys recorded are 5,830.



Mid Rio Grande Stormwater Quality Team
www.keepthatriogrand.org

Please Tell Us What You Think!

What is your zip code? _____

Please tell us which category best describes your age:

- ☐ Younger than 18
- ☐ 18-30
- ☐ 31-50
- ☐ 51-65
- ☐ Older than 65

Storm water runoff is defined as rainfall that doesn't soak into the ground and collects on the ground surface. Do you think that storm water runoff affects the quality of water in the Rio Grande?

☐ Yes ☐ No ☐ Unsure

Which of the following would you be willing to do or are you currently doing at home or at work to improve the quality of storm water runoff? Check all that apply:

a. Pick up after your dog/pet and dispose of waste in the trash

☐ Currently Do ☐ Will Do ☐ Won't Do

b. Reduce, reuse, and recycle trash

☐ Currently Do ☐ Will Do ☐ Won't Do

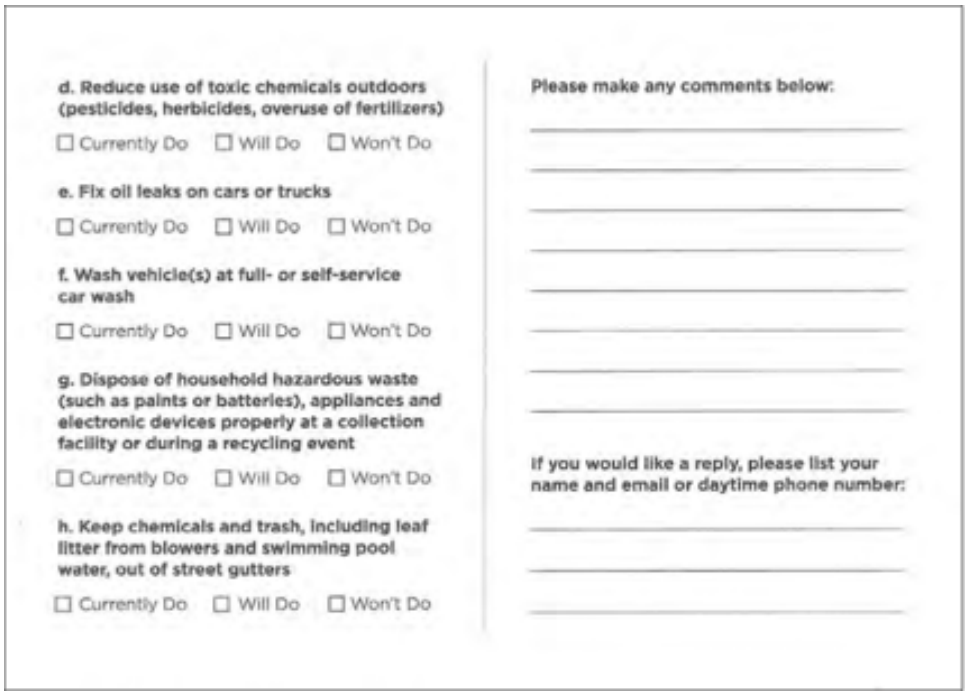
c. Pay an additional minor monthly fee on your water bill

☐ Would Do ☐ Won't Do

Note: If you answered "Would Do" above, how much would you be willing to pay?

☐ $1 ☐ $2 ☐ $3 ☐ $5 ☐ more than $5

Turn over to complete the survey



d. Reduce use of toxic chemicals outdoors (pesticides, herbicides, overuse of fertilizers)

☐ Currently Do ☐ Will Do ☐ Won't Do

e. Fix oil leaks on cars or trucks

☐ Currently Do ☐ Will Do ☐ Won't Do

f. Wash vehicle(s) at full- or self-service car wash

☐ Currently Do ☐ Will Do ☐ Won't Do

g. Dispose of household hazardous waste (such as paints or batteries), appliances and electronic devices properly at a collection facility or during a recycling event

☐ Currently Do ☐ Will Do ☐ Won't Do

h. Keep chemicals and trash, including leaf litter from blowers and swimming pool water, out of street gutters

☐ Currently Do ☐ Will Do ☐ Won't Do

Please make any comments below:

_____

_____

_____

_____

_____

_____

_____

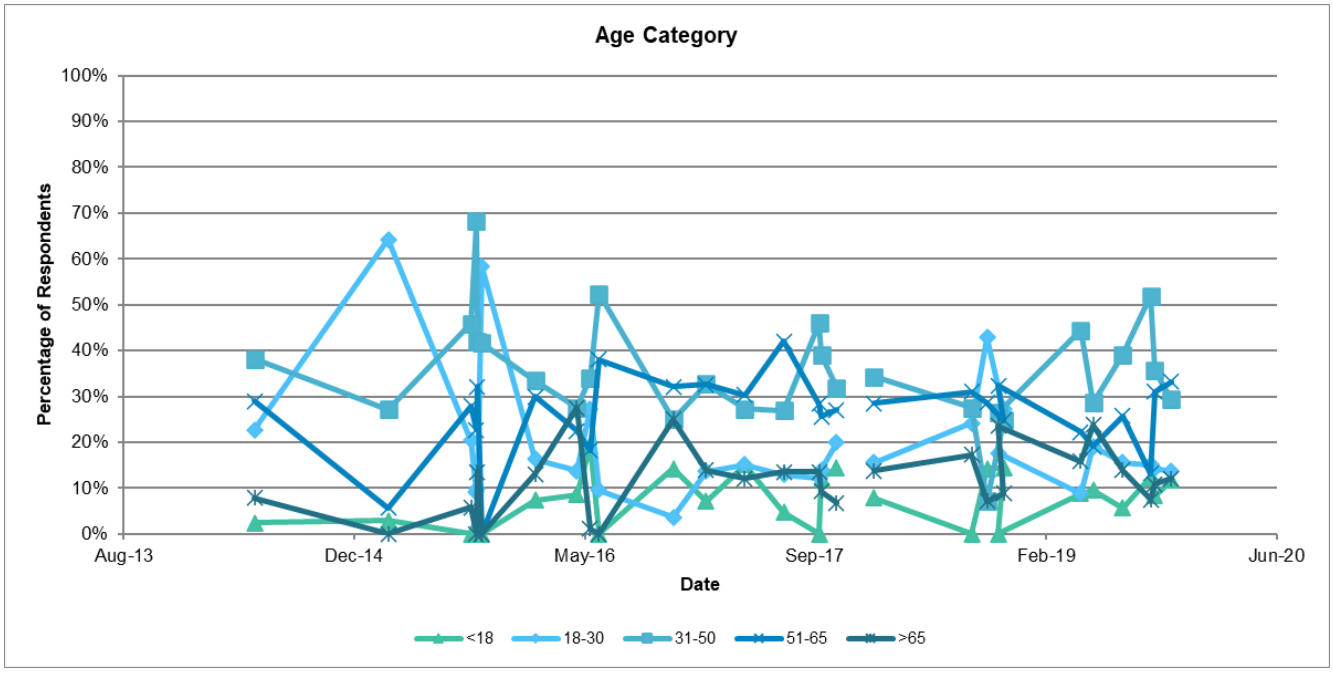
_____

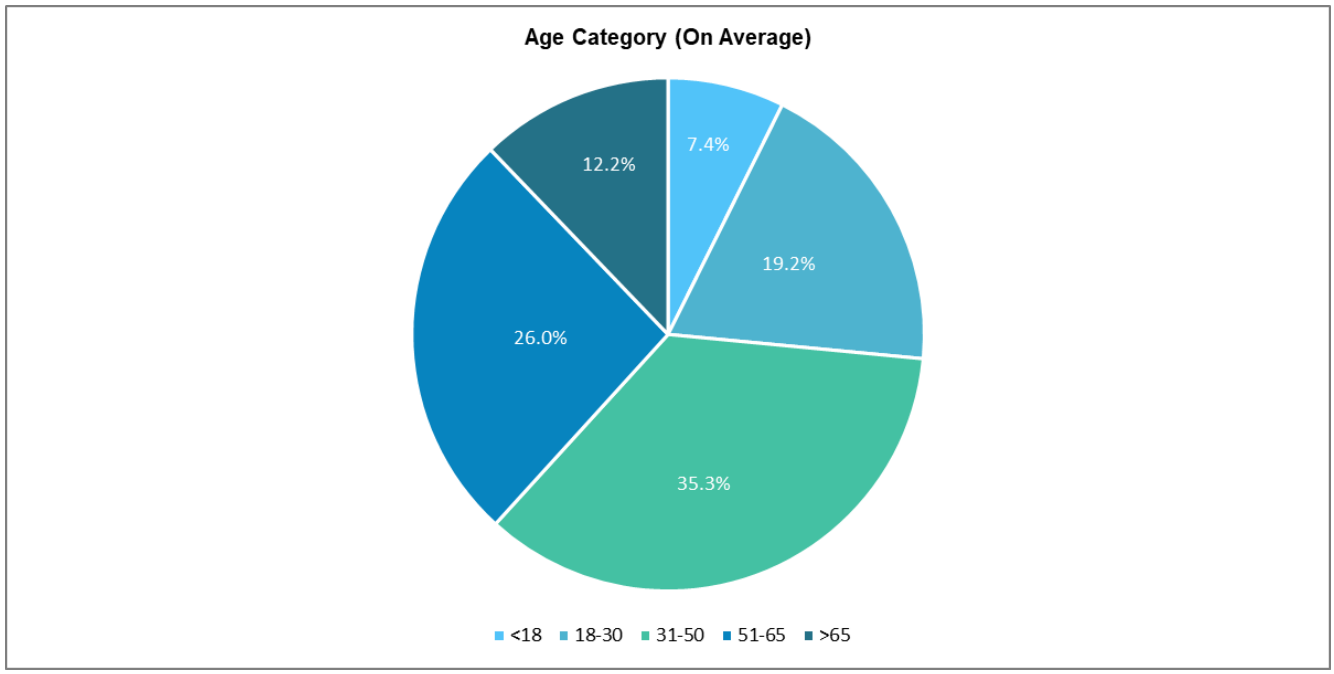
If you would like a reply, please list your name and email or daytime phone number:

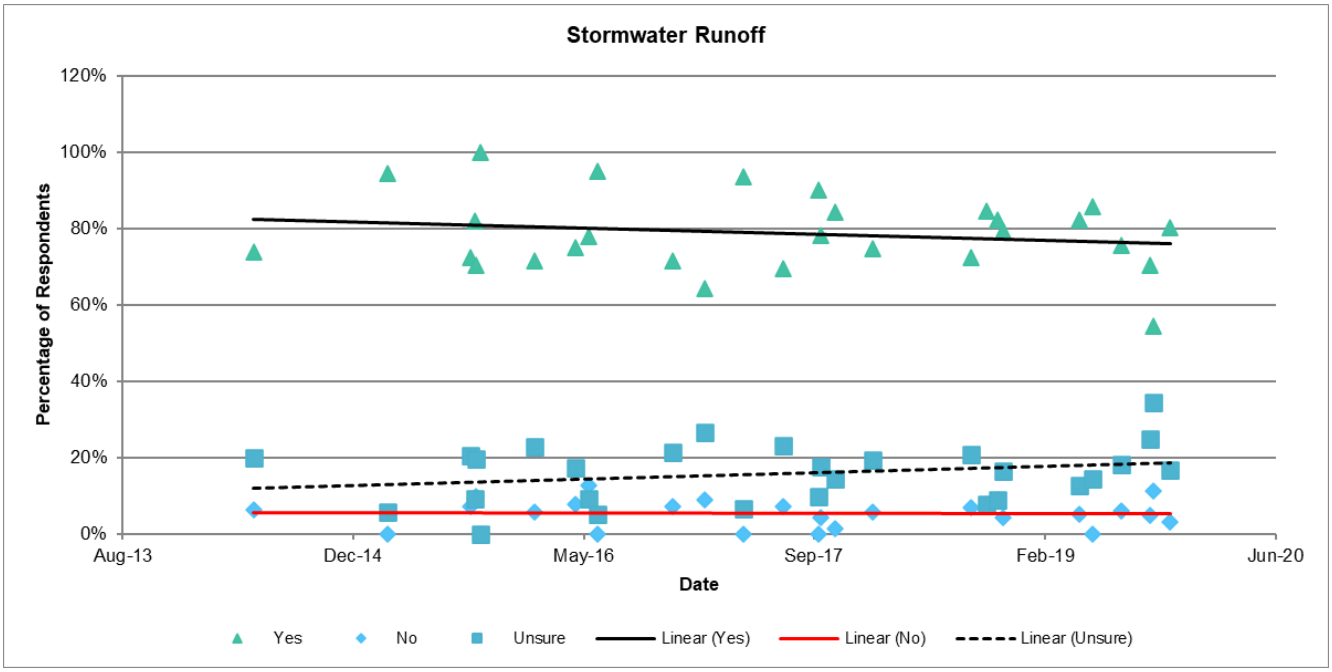
_____

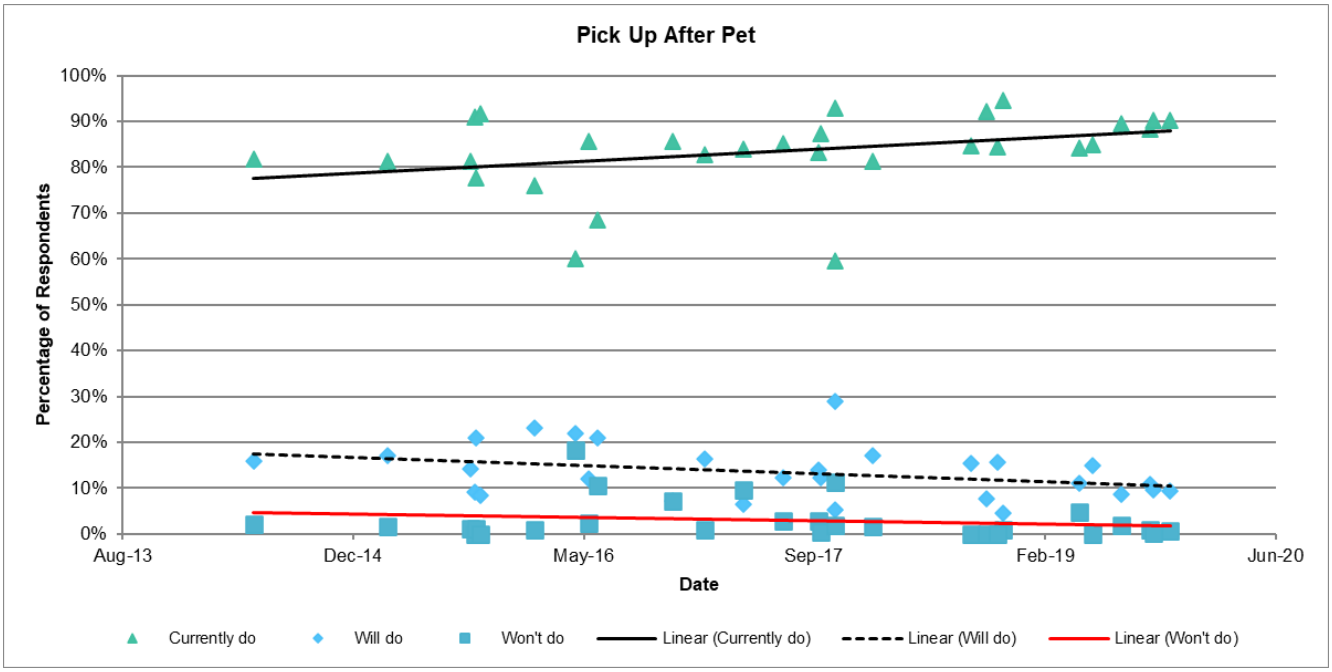
_____

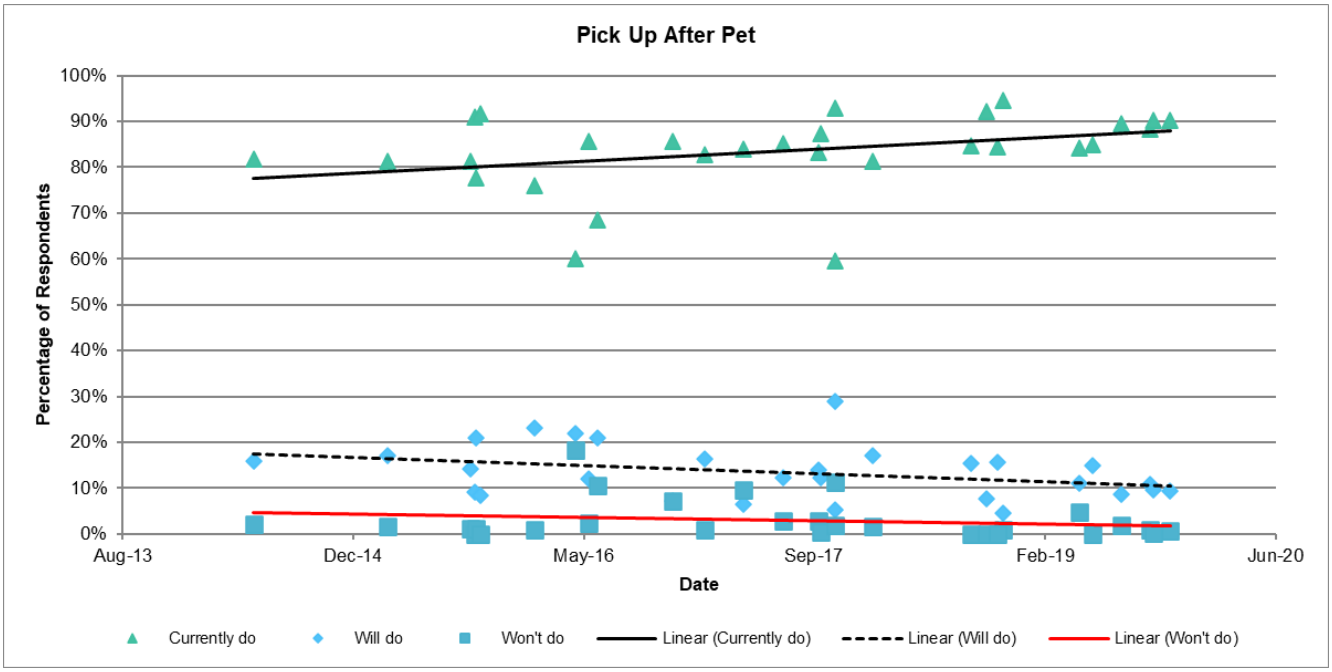
_____

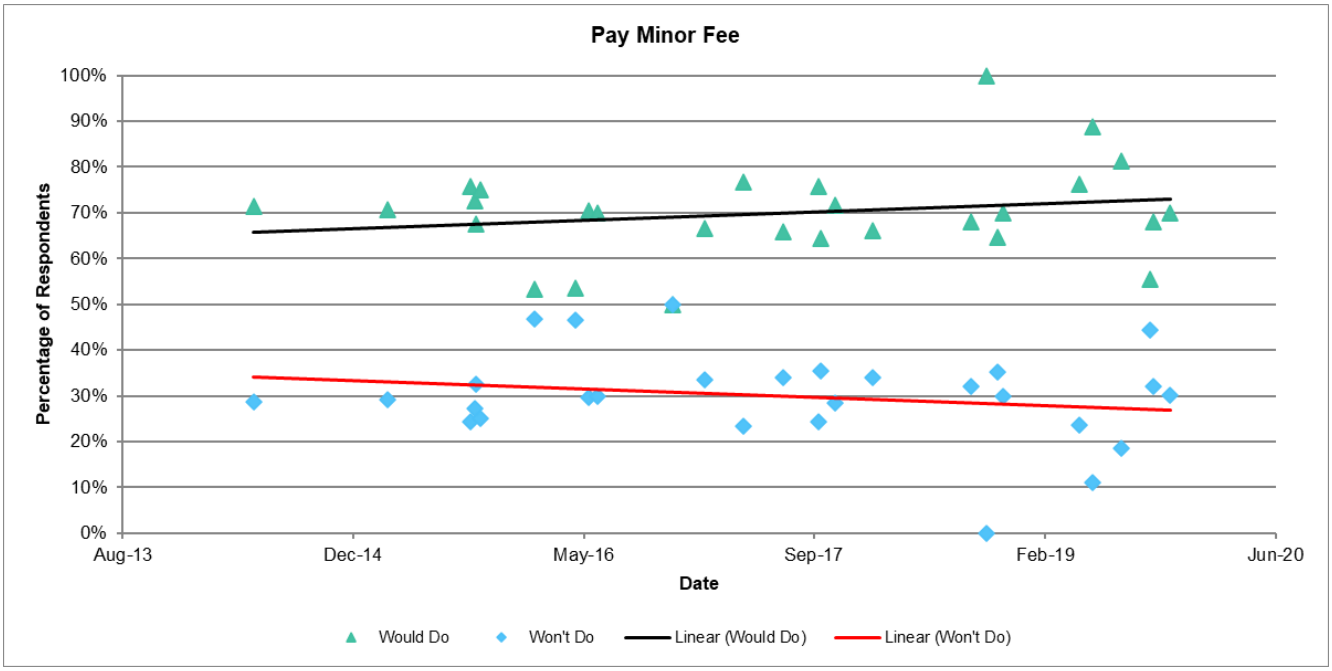

Age Category
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
<18
18-30
31-50
51-65
>65

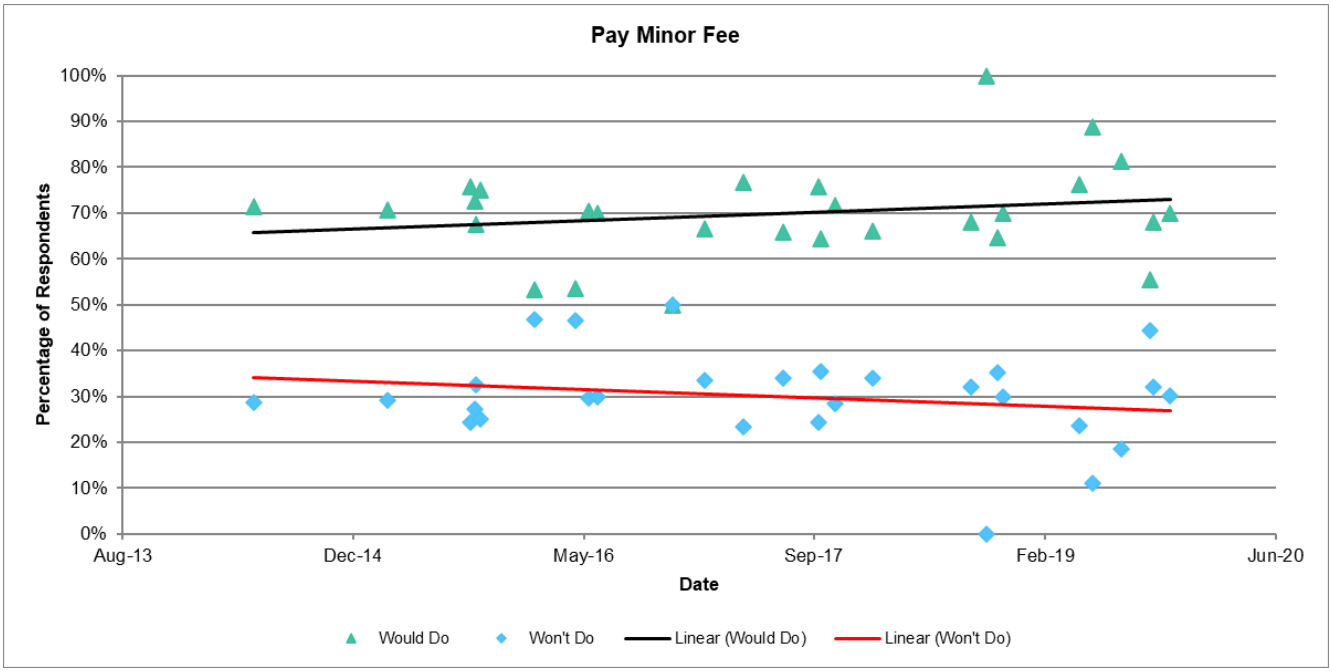

Age Category (On Average)
7.4%
19.2%
35.3%
26.0%
12.2%
<18
18-30
31-50
51-65
>65

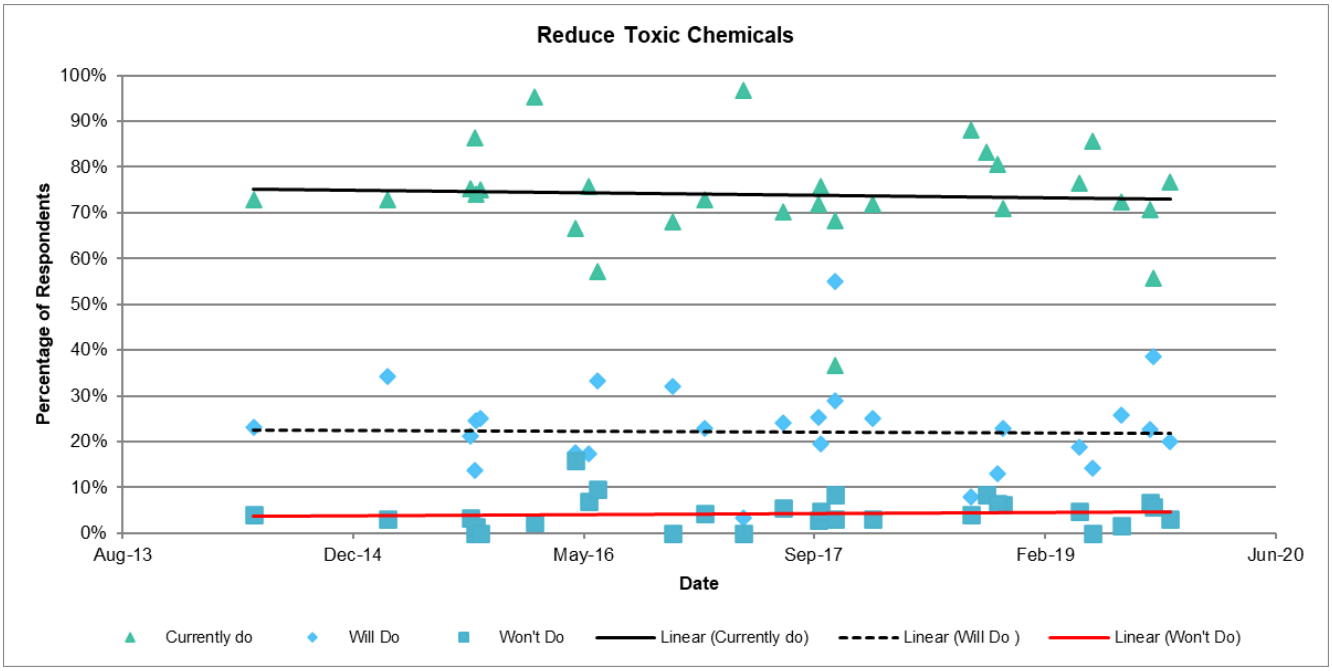

Stormwater Runoff
120%
100%
80%
60%
40%
20%
0%
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Yes
No
Unsure
Linear (Yes)
Linear (No)
Linear (Unsure)

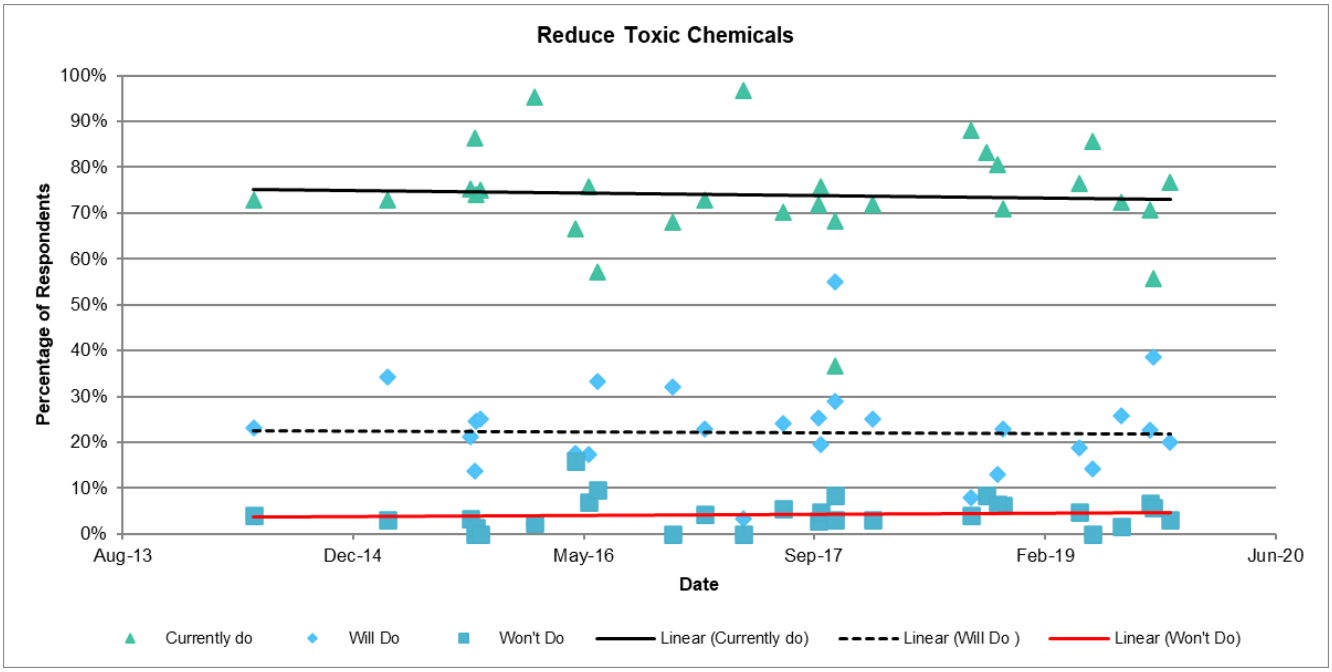

Pick Up After Pet
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Currently do
Will do
Won't do
Linear (Currently do)
Linear (Will do)
Linear (Won't do)

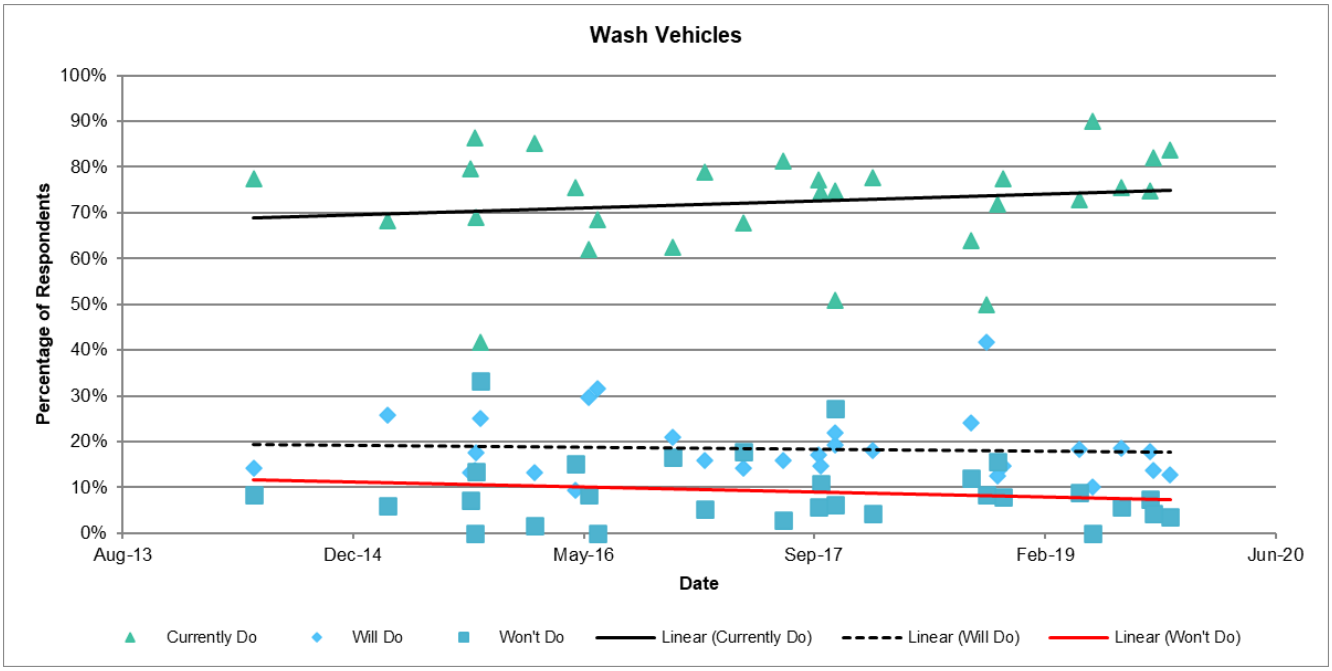

Pick Up After Pet
Percentage of Respondents
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Currently do
Will do
Won't do
Linear (Currently do)
Linear (Will do)
Linear (Won't do)

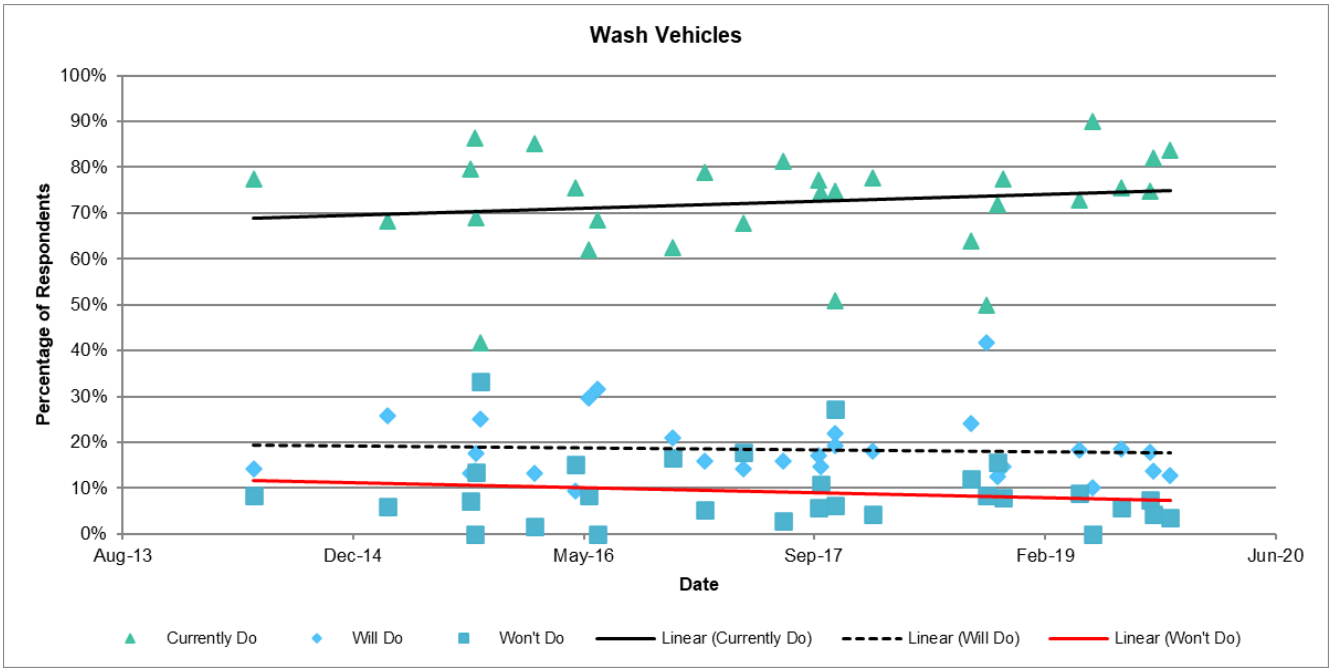

Pay Minor Fee
Percentage of Respondents
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Would Do
Won't Do
Linear (Would Do)
Linear (Won't Do)

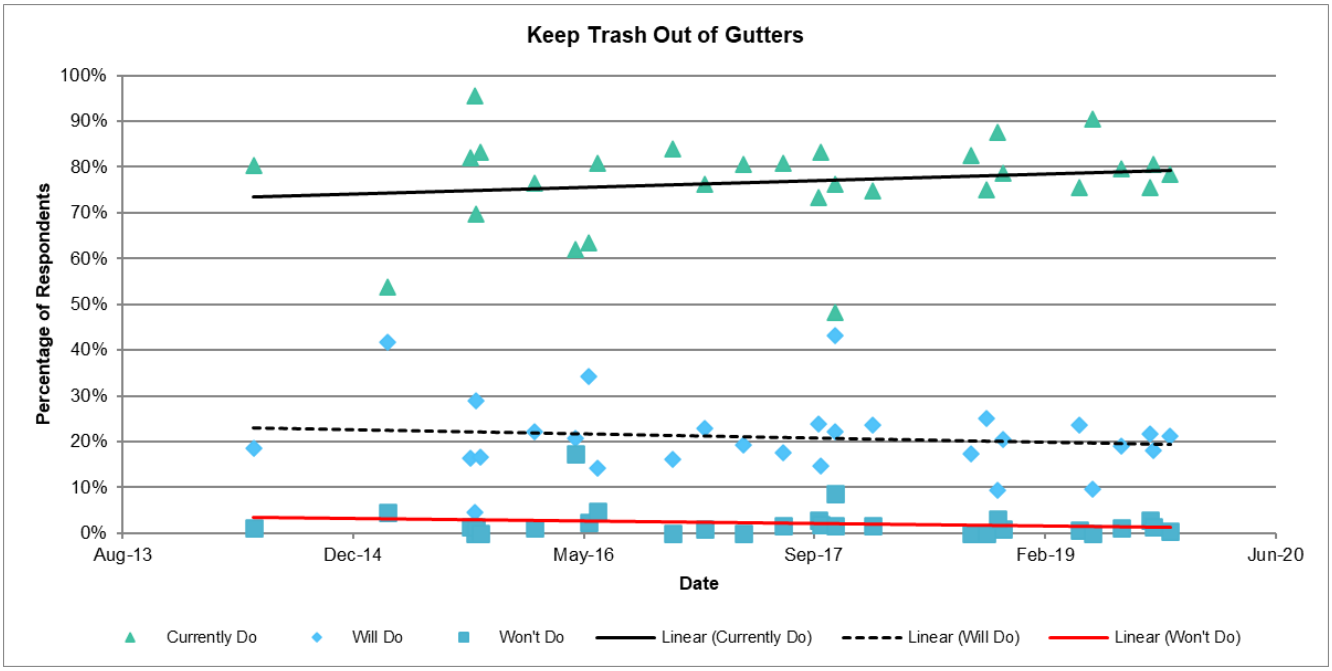

Pay Minor Fee
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Would Do
Won't Do
Linear (Would Do)
Linear (Won't Do)

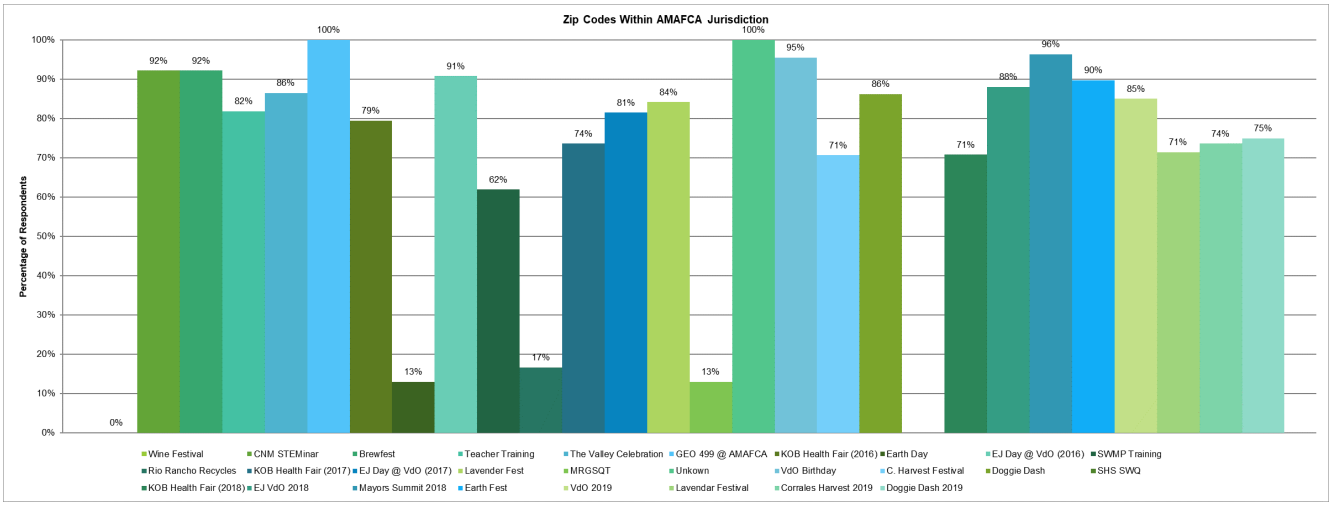

Reduce Toxic Chemicals
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Currently do
Will Do
Won't Do
Linear (Currently do)
Linear (Will Do)
Linear (Won't Do)

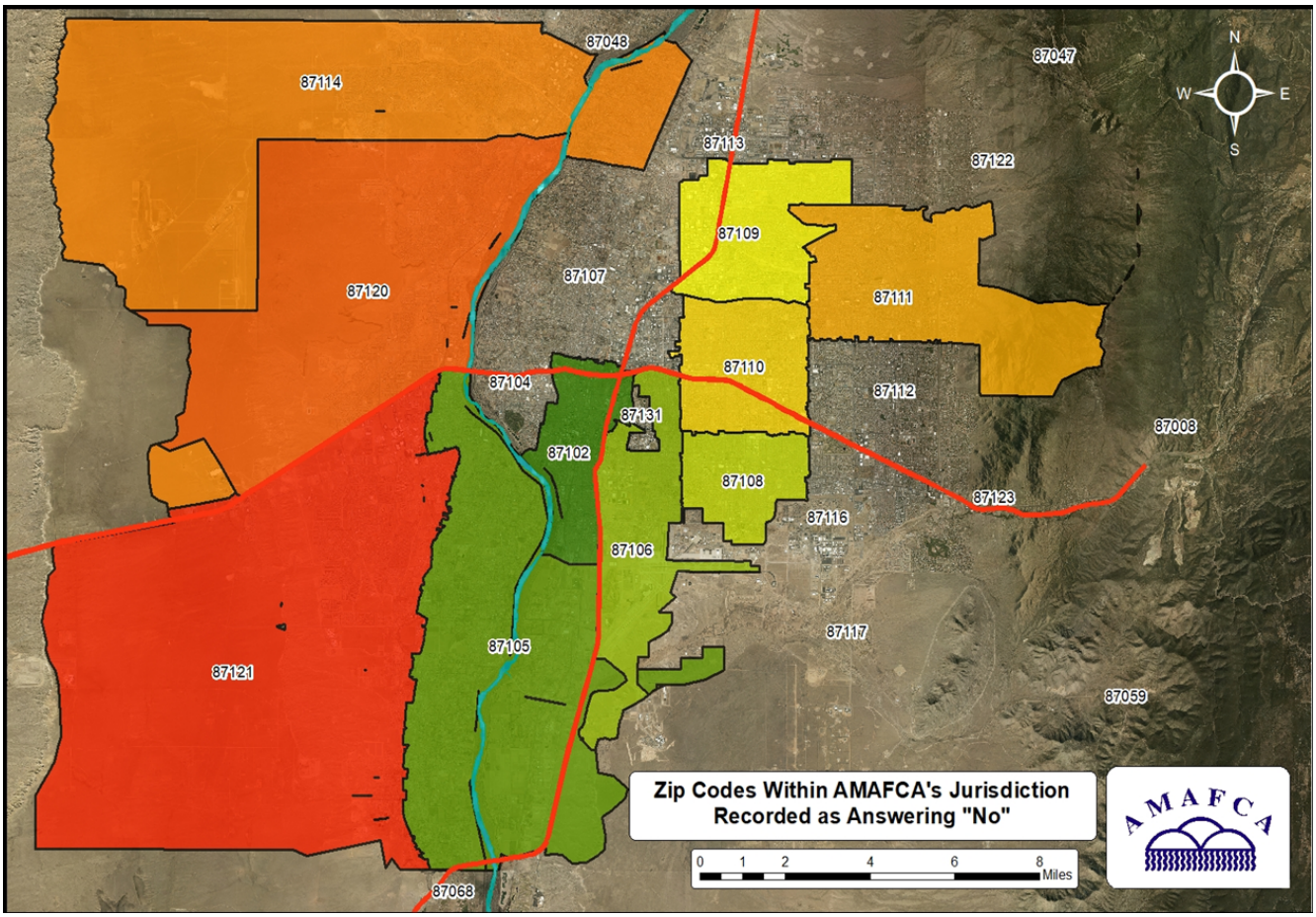

Reduce Toxic Chemicals
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Currently do
Will Do
Won't Do
Linear (Currently do)
Linear (Will Do)
Linear (Won't Do)

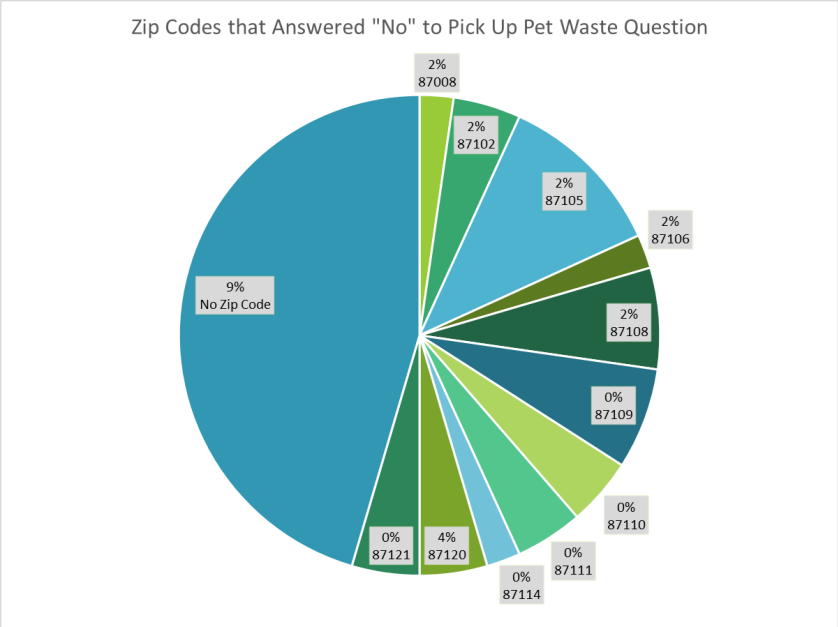

Wash Vehicles
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Currently Do
Will Do
Won't Do
Linear (Currently Do)
Linear (Will Do)
Linear (Won't Do)


Wash Vehicles
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Currently Do
Will Do
Won't Do
Linear (Currently Do)
Linear (Will Do)
Linear (Won't Do)


Keep Trash Out of Gutters
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Percentage of Respondents
Aug-13
Dec-14
May-16
Sep-17
Feb-19
Jun-20
Date
Currently Do
Will Do
Won't Do
Linear (Currently Do)
Linear (Will Do)
Linear (Won't Do)


Zip Codes Within AMAFCA Jurisdiction
Percentage of Respondents
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0%
92%
92%
82%
86%
100%
79%
13%
91%
62%
17%
74%
81%
84%
13%
100%
95%
71%
86%
71%
88%
96%
90%
85%
71%
74%
75%
Wine Festival
CNM STEMinar
Brewfest
Teacher Training
The Valley Celebration
GEO 499 @ AMAFCA
KOB Health Fair (2016)
Earth Day
EJ Day @ VdO (2016)
SWMP Training
Rio Rancho Recycles
KOB Health Fair (2017)
EJ Day @ VdO (2017)
Lavender Fest
MRGSQT
Unkown
VdO Birthday
C. Harvest Festival
Doggie Dash
SHS SWQ
KOB Health Fair (2018)
EJ VdO 2018
Mayors Summit 2018
Earth Fest
VdO 2019
Lavendar Festival
Corrales Harvest 2019
Doggie Dash 2019


87048
87047
87114
87113
87122
87109
87107
87120
87111
87110
87104
87112
87131
87008
87102
87108
87123
87116
87106
87117
87105
87121
87059
87068
N
W
E
S
Zip Codes Within AMAFCA's Jurisdiction
Recorded as Answering "No"
0 1 2 4 6 8
Miles
AMAFCA



Answered No to Pick up Pet Waste	*Number of Votes*	*% of Votes*
79109	1	2%
79782	1	2%
87008	1	2%
87043	1	2%
87044	1	2%
87047		0%
87048		0%
87059		0%
87068		0%
87102	2	4%
87104		0%
87105	5	9%
87106	1	2%
87107		0%
87108	3	5%
87109	3	5%
87110	2	4%
87111	2	4%
87112		0%
87113		0%
87114	1	2%
87116		0%
87117		0%
87120	2	4%
87121	2	4%
87122		0%
87123		0%
87124	1	2%
87131		0%
87144	3	5%
87528	1	2%
87557	1	2%
88310	1	2%
No Zip Code	20	36%
87024	1	2%

Statistics for Pet Waste Question

Item	*# of Respondents*	*% of Respondents*
Total Number Who Answered No	56	
Total % w/in AMAFCA Jurisdiction		43%
Total Who Answered "Pet" Question	2,774	
% of Total "Pet" Votes		1.28%
Total “Already Do”	4,526	84.76%
Total “Will Do”	756	14.16%
Total “Wont Do”	108	2.02%
Total Question (Summation)	5,340	100.94%
Error		1.04%

Survey Question	Answer	Mean ± MoE
Stormwater Runoff	Yes	78%±10%
	No	06%±4%
	Unsure	16%±7%
Pick up after pet	Currently do	83%±11%
	Will do	14%±7%
	Won't do	03%±3%
Reduce, Recycle, and Recycle Trash	Currently do	89%±10%
	Will do	10%±6%
	Won't do	01%±2%
Pay Minor Fee	Would Do	70%±11%
	Won't Do	30%±9%
Reduce Use of Toxic Chemicals	Currently do	74%±11%
	Will Do	22%±9%
	Won't Do	05%±4%
Fix Oil Leaks on Vehicle(s)	Currently do	79%±12%
	Will Do	17%±7%
	Won't Do	04%±3%
Wash Vehicles at Full or Self Service Car wash	Currently Do	73%±13%
	Will Do	18%±8%
	Won't Do	09%±5%
Dispose Household Hazardous Waste	Currently Do	75%±12%
	Will Do	21%±8%
	Won't Do	03%±3%
Keep Chemicals/Trash Out of Street Gutters	Currently Do	77%±12%
	Will Do	20%±8%
	Won't Do	03%±3%

Exhibit 3

Arroyo Classroom
2019-2020 Final Report

Arroyo Classroom

2019-2020 final report

submitted by
Erin Blaz, CSWCD
May 2020

SUMMARY

The Arroyo Classroom program utilizes our natural arroyos as outdoor classrooms and brings local animals into the classroom to motivate 3rd graders to respect the arroyos as important wildlife habitat. Orilla Consulting, LLC developed the program in 2012 and initially implemented the program for 7 classes at Maggie Cordova Elementary in Rio Rancho. In 2013, the program grew to serve 20 classes. On July 1st, 2015, Orilla Consulting, LLC transferred the program to Ciudad Soil and Water Conservation District as part of the larger education and outreach efforts we are involved in throughout Bernalillo and Sandoval Counties. In the 2019-2020 school year, we served 35 classes within Rio Rancho Public Schools, reaching approximately 37 teachers and 736 students.

Participating Schools

SCHOOL	Number of classes	Number of Students
Enchanted Hills Elem.	6	104
Martin Luther King Elem. *	6	145
Sandia Vista Elem.	4	79
Maggie Cordova Elem. *	7	151
Cielo Azul Elem. *	6	132
Puesta del Sol Elem. *	6	125
TOTALS	**35**	**736**

* Title 1 school

Sponsor

- Southern Sandoval County Arroyo and Flood Control Authority (SSCAFCA)

Sponsor provided a total of $17,762.77 in cash.

Deliverables:

All presentations were completed except for 6 Arroyo Walks due to school closures due to the global pandemic.

- Watershed Presentations: 35:35
- Arroyo Walk: 29:35
- Bat Presentations: 32:35 (some classes doubled up due to a scheduling issue, all classes completed)
- Owl/Bird Presentations: 35:35

Program Description

The program consists of a four-part series of lessons, based on grade-level science standards and addressing areas of interest to SSCAFCA, such as bats, burrowing owls, ATV use, pet waste, and arroyo safety. Educators Melissa McLamb and Erin Blaz delivered two of the lessons – an introductory lesson about watersheds, and a walking field trip to nearby arroyo habitat. Justin Stevenson of RD Wildlife Management, LLC delivered a lesson using live microbats. Mikal Deese, certified wildlife rehabilitator of non-profit On A Wing And A Prayer, delivered presentations with a live Burrowing Owl or other birds of prey when requested.

The watershed lesson expounds on the water cycle, already integral in 3rd grade curriculum. This year, we developed a hands on lesson where students were able to build a model of a watershed. This lesson introduces the concept of a watershed to students, demonstrates how surface water becomes polluted through a variety of waste, and discusses the importance of keeping our arroyos clean.

The arroyo walk is a highlight for students and teachers, as the majority of participating classes only receive one other field trip during the school year, and students always come away learning something new and interesting about the uniqueness of arroyo habitat. This lesson is about the unique adaptations of arroyo animals and plants, incorporates a walk out to a nearby arroyo (when available) and extensive discussion about arroyo safety *(see lesson plan in Appendix A.)* Melissa first talked to students about the difference between concrete-lined channels and sandy-bottomed arroyos, and emphasized that it is never safe to go into concrete-lined channels, while sandy-bottomed arroyos can be visited when there are no clouds in the sky. Students searched for evidence of animals living in the arroyo banks, learned about how lizards and other cold-blooded animals are adapted to the desert environment by moving about to regulate their temperature. They also looked for certain adaptations of desert plants to minimize water loss in the desert.

In the lesson about bats, Justin discussed common myths about bats while pointing out how

these myths can pose issues for bat populations as he addressed each one. He taught students about species common in their area, including what habitat they prefer, what they eat, the challenges they face, and what to do if one sees an injured bat. He talked about how important bats are in keeping insect populations under control, shared ways to encourage and protect bats and emphasized that kids should not be frightened of them, but also should never touch a bat if they find one. Students were able to view two different species of live microbats.

This year in addition to the burrowing owl lesson Mikal Deese, certified wildlife rehabilitator of non-profit On A Wing And A Prayer,, was able to offer an alternative lesson using other birds of prey, as an accommodation for students and teachers that have cultural sensitivities to owls. When requested, Mikal brough in three birds for students to observe - an American Kestrel, Peregrine Falcon and a Swainson's Hawk. In this presentation Mikal gives a wonderful talk that covers habitat, behaviors and threats to these species. As a bird rehabilitator she also shares the personal story of each bird. After each bird, Mikal gives students a turn to ask questions and students sit attentively in and engage in a stimulating back and forth session sparked by their curiosity.

When presenting the burrowing owl, Mikal included an fun role-playing activity for students where they had to collect food (dried beans) and bring them back to their chicks. Some kids played adults, others were hungry chicks and in the midst of all the fun and chaos, important lessons are learned. Students get to experience the challenges in competing for food, and learn about human impacts on the food chain - some beans are colored differently and represent pesticides or poisons, which sadly kills off burrowing owls. Students also get to observe the burrowing owl up close and learn about ways to respect and protect their habitat.

Evaluation

Teacher feedback for 2019-2020 was positive and encouraging. Teachers overwhelmingly say they choose to participate in Arroyo Classroom to teach about local ecology and conservation issues, incorporate more science in the classroom and to offer experiential learning opportunities. They find the presentations to be uniquely engaging and meaningful for their students. Teacher's find that Arroyo Classroom is complementary to other 3rd grade units of study such as life cycles and animal adaptations and that the chance to have live animals in their classrooms really helps students integrate what they've learned. As one teacher puts it, "There is much more of an 'a ha' moment when students see this in natural forms versus a created classroom environment. Further, when they meet the animals, they like them and there is more of a connection that they can hurt that animal if they do not respect the environment" (Kelly, MLK).

Teacher's continue to ask for extension activities and some kind of pre-presentation activity to help prime students for the content presented. With the addition of 3 classes this year, there was not as much additional time as was hoped to work on providing these resources to teachers. However the creation of online/virtual/at-home alternatives to our in-class presentations (in case of future school closures) will also provide us with resources teachers can use before and after presentations during normal programming.

Highlights from teacher feedback:

"My students really got an understanding of conservation and their impact." -Lewis, MLK

"My students really enjoyed the program this year. I thought the changes to the owl/bird presentation made it so much more interactive! The greatest learning outcomes my students had were the connections they made to their surroundings and community. They were able to learn about an ecosystem that they basically lived in. They connected these ideas when learning about animal and plant reproduction and traits." - Eisenberg, MLK

"Exposure to local ecology and have students start thinking about how they can make a difference in our community to promote conservation. Increase curiosity and knowledge of local wildlife." - Cooper, Enchanted Hills

"We really enjoyed the owls and the bats! Students are more excited to learn about a subject when they have an experience to attach/ relate their learning to. We also enjoyed the hands-on activities provided with each of the lessons." -Davis, Puesta del Sol

"I believe this past year was the best year to date. The presenters were engaging and were able to manage student conduct in a knowledgeable way. The activities were also relevant and engaging. The introduction to watersheds allowed students a hands-on activity that related well to the content being taught. The arroyo walk is also a great way to expose the students to the environment directly around them , looking at it through a different lens". - O'Connor, MLK

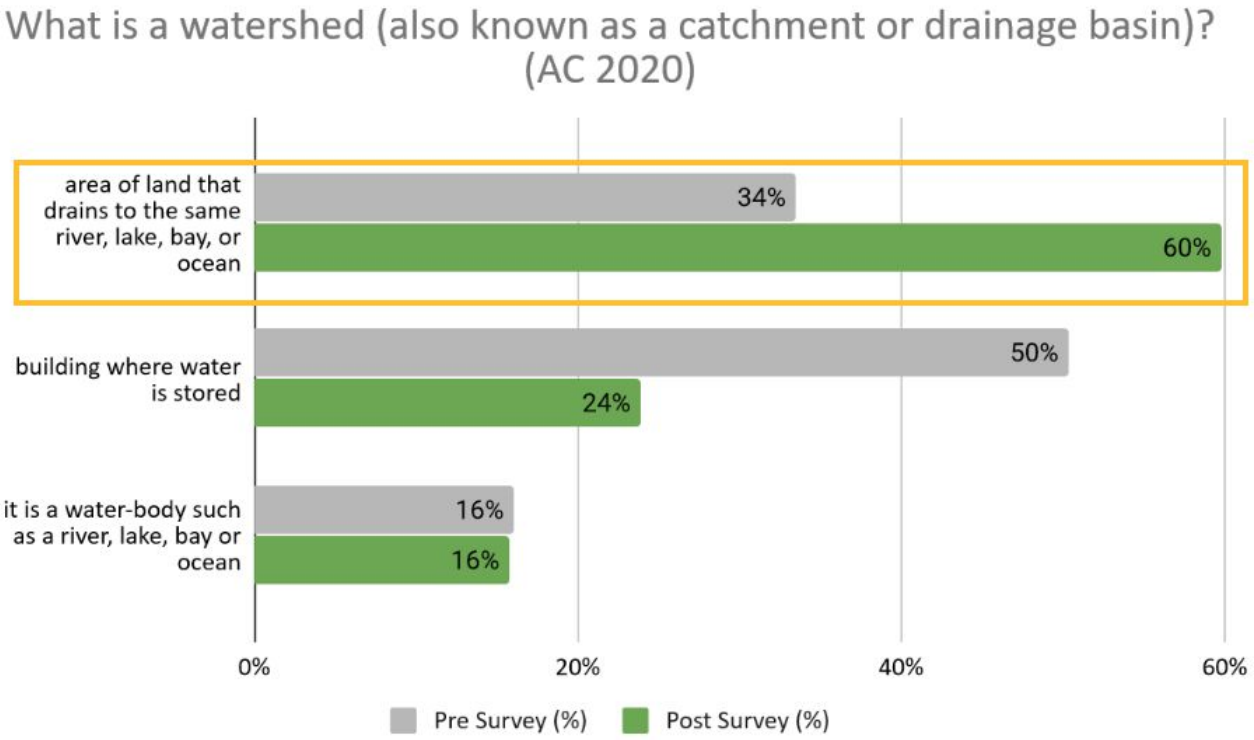
Survey Summary

This is the second year that we've administered the pre and post surveys for Arroyo Classroom and we ran into a significant challenge in getting post-survey responses because it was distributed to teachers just before COVID-19 shut down the schools. It was recommended to teachers to share it on an online platform, like google classroom, but we only received 232 responses compared to 518 pre-survey responses.

Even with fewer responses this year, in reviewing the metrics there appear to be other challenges with the survey. Across questions a majority of students are answering correctly in the pre-survey. On one hand this is great news to hear that students have an awareness of what arroyos are, arroyo habit and arroyo safety. However, this doesn't tell us much about the program's impact. We will revisit these questions over the summer to try to narrow down the learning outcomes and growth we are looking for. This survey does not have behavior questions either. While we are finding behavior change questions have their own challenges to evaluate, it may be more significant to evaluate behavior change for Arroyo Classroom in order to see how their learning is translated.

Survey Metrics:

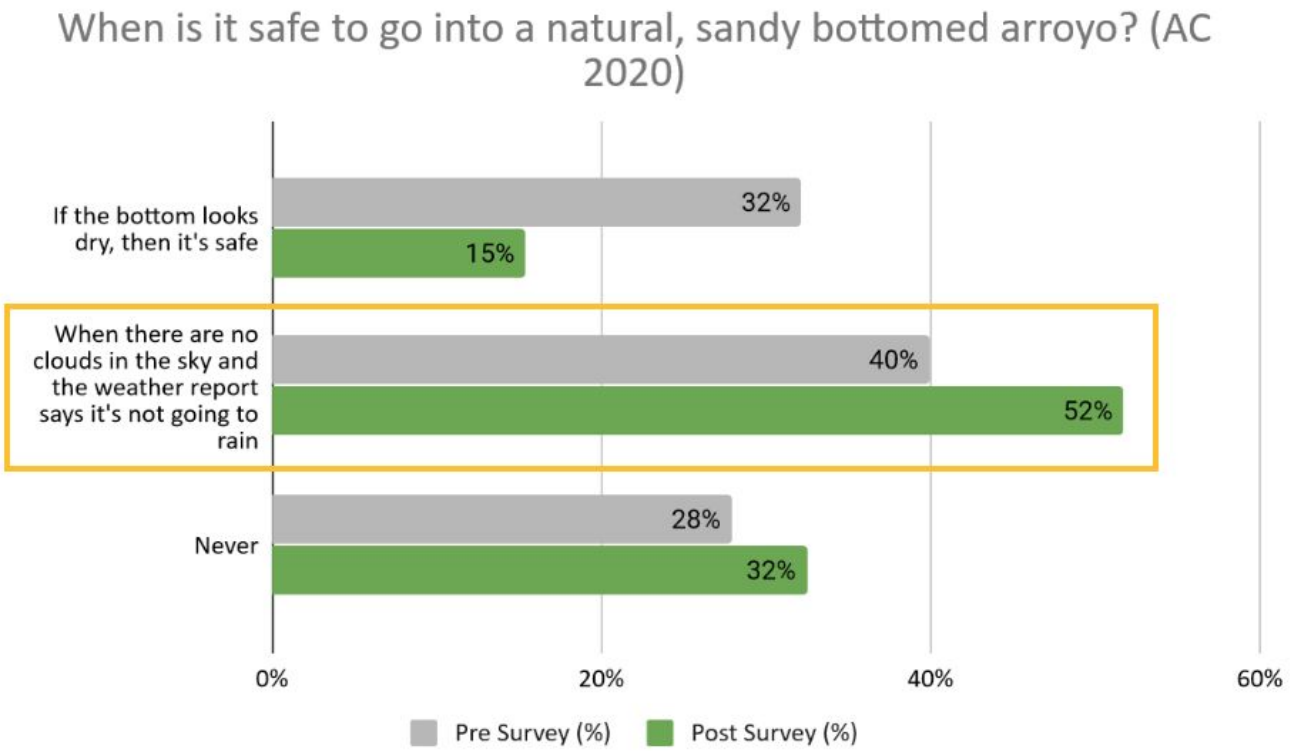
Item 1



The increase in correct answers for 'what is a watershed' is notable. This could be a result of the improved watershed lesson that was implemented last year, or that teachers are doing a better job of reinforcing the concept. Another interesting finding is that there is an increase in kids claiming it is

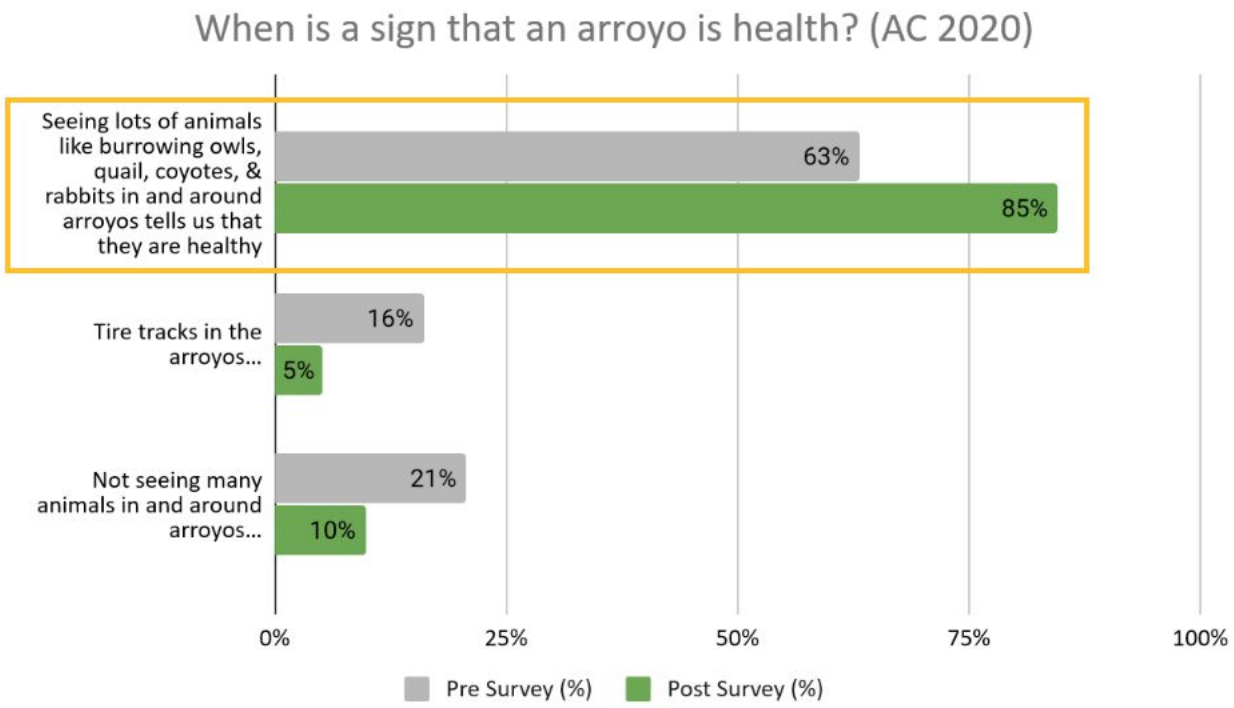
never safe to go in an arroyo in the post-survey. This happened last year as well.

Item 2



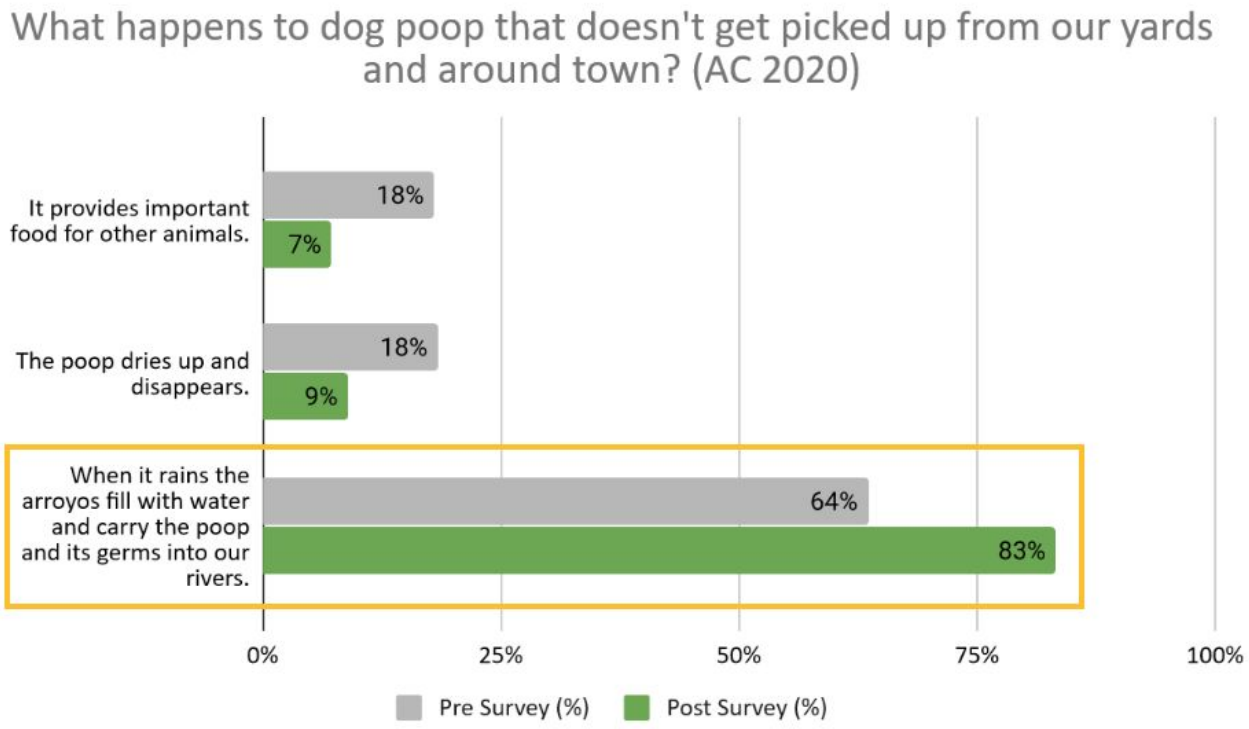
Another interesting finding is that there is an increase in kids claiming it is never safe to go in an arroyo in the post-survey. This happened last year as well. Extension activities that follow up on the presentation would be helpful in clarifying when it is safe to go in a sandy-bottomed arroyo. The Arroyo Walk can be a stimulating experience and some kids might just miss this information. It may be worth repeating in the watershed presentation as well.

Item 3

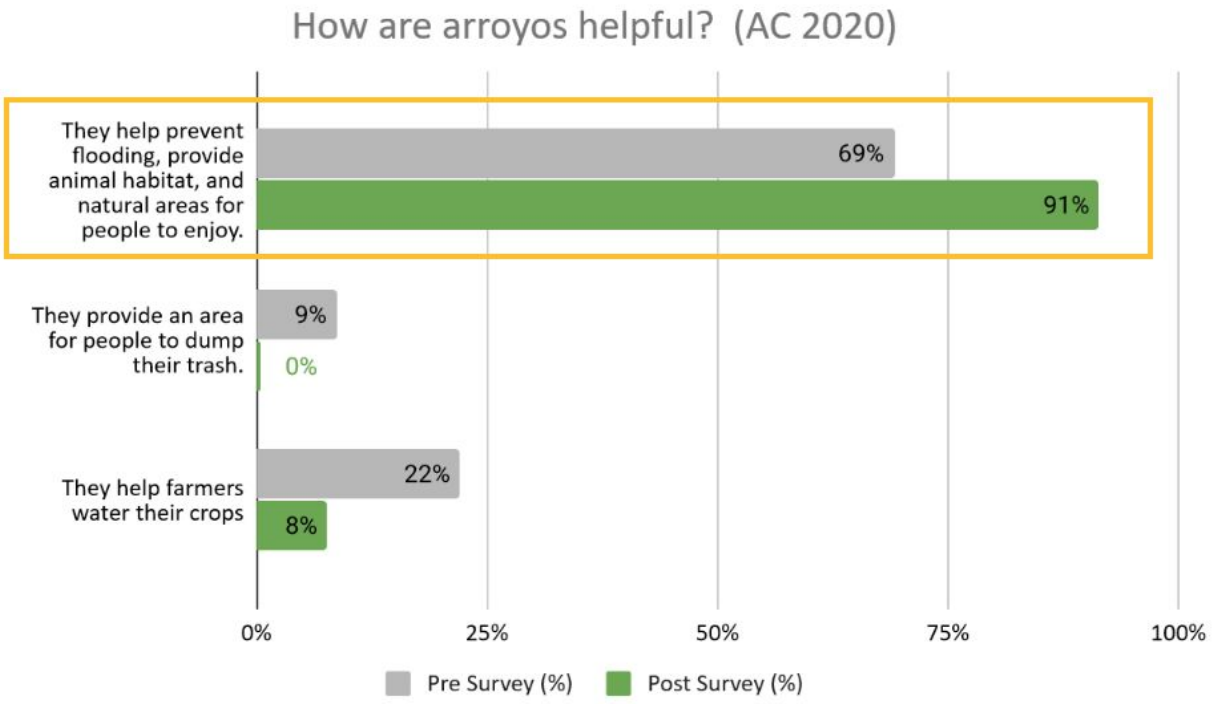


The incorrect answers in the question may be too leading. Kids might not understand the importance of species diversity when they answer this in the pre-survey, but they can assume that tire tracks and lack of animals is not a sign of health. They may have more contextual understanding in the post-survey, but we can not know for sure.

Item 4


What happens to dog poop that doesn't get picked up from our yards and around town? (AC 2020)
It provides important food for other animals.
18%
7%
The poop dries up and disappears.
18%
9%
When it rains the arroyos fill with water and carry the poop and its germs into our rivers.
64%
83%
0%
25%
50%
75%
100%
Pre Survey (%)
Post Survey (%)

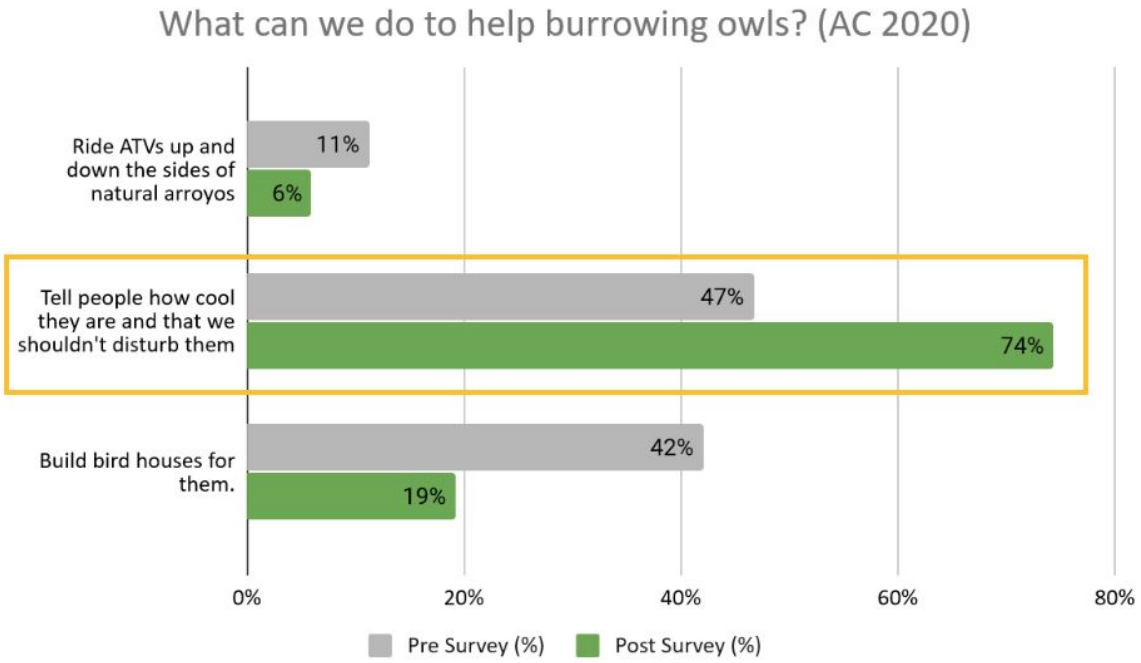
Item 5



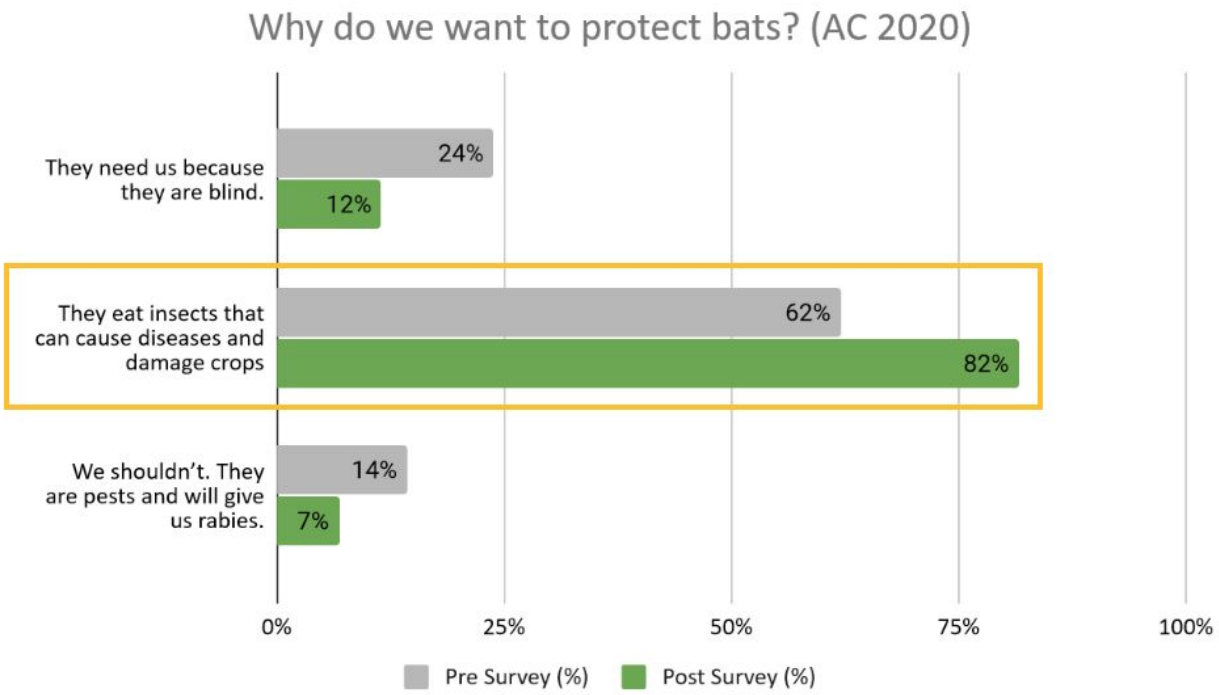
This question was adjusted to make the answers less obvious. The most important finding is that no one answered that arroyo is a place to dump trash in the post-survey!

The following items 6, 7 and 8 demonstrate similar patterns to those above where the majority of students are answering correctly on the pre-survey , with a positive increase in correct responses on the post. These results are also extremely similar to the year before and this is not particularly informative. The questions will need to be revised for next year.

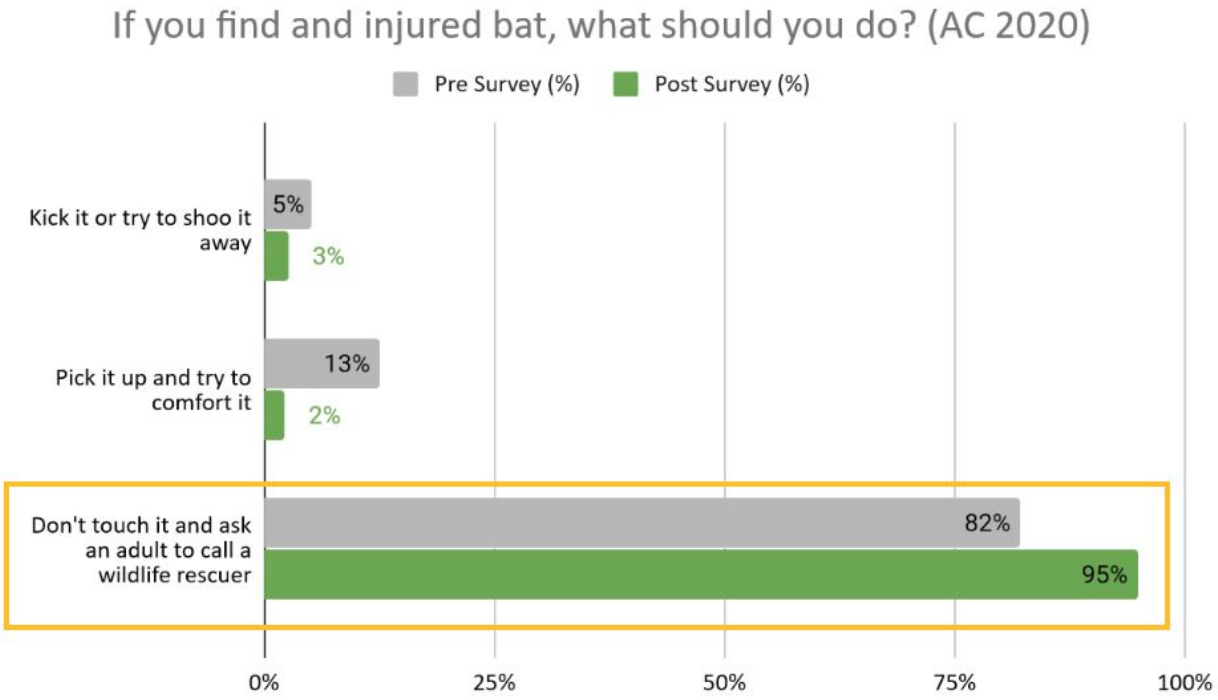
Item 6



Item 7


Why do we want to protect bats? (AC 2020)
They need us because they are blind.
24%
12%
They eat insects that can cause diseases and damage crops
62%
82%
We shouldn't. They are pests and will give us rabies.
14%
7%
0%
25%
50%
75%
100%
Pre Survey (%)
Post Survey (%)

Item 8


If you find and injured bat, what should you do? (AC 2020)
Pre Survey (%)
Post Survey (%)
Kick it or try to shoo it away
5%
3%
Pick it up and try to comfort it
13%
2%
Don't touch it and ask an adult to call a wildlife rescuer
82%
95%
0%
25%
50%
75%
100%

Appendix A contains lesson plans; Appendix B contains supplemental materials; Appendix C contains photos.

Appendix A
Lesson Plans

Activity Guide for 3rd Grade – Animal and Plant Adaptations

1. What are we trying to teach the students in this activity?
Arroyos are cool places where animals live, animals and plants are adapted to live in the desert.

2. How can we tie this activity to our teaching goals:

Our Goals	Where we can relate our goals to this activity
Animals live in arroyos	Look for evidence of animals.
We should visit arroyos carefully	Talk about when it is safe.
Picking up dog poop keeps germs out of our river	We'll probably see poop, talk about how it can make animals sick.

Supplies:
- Thermometers
- Clipboards
- Poster of leaf adaptations
- Wax paper
- Paper towels
- Tape

3. How can we tie this activity to standards?
- Measure energy (temperature change)
- Posing a question, using numerical data, various methods to display results
- Animals and plants have adaptations that improve chances of survival
- Classifying animals and plants
- Living things cause changes to their environment, some detrimental, some beneficial

5. How should this activity be organized?

I. Pre-activity (10 minutes)
- Do you ever visit/play in arroyos? What do you do?
- What are arroyos for? Managing stormwater to keep our town from flooding when we get a heavy rain. **Show first flush video.**
- Talk about arroyo safety – don't go into arroyos when you see clouds in the sky.
- Because our arroyos are natural, with sandy sides and bottom, they are safer.
- In Albuquerque, the arroyos have concrete sides and water travels so fast, it is really dangerous to ever go in arroyos. Some arroyos come from the canyon where it might be raining but you can't see.
- Our arroyos are home to all kinds of animals and plants, so they are a wonderful place to enjoy nature. What kinds of animals do you think might live in the arroyo?
- Walk out to arroyo

II. Lizard activity (15 min)
- 5min Look for evidence of animals. What kind of evidence? Scat, tracks, holes.

- What kind of animals live in holes (besides snakes)?
- What do you think makes it difficult to live out here? Heat, sunburn, not much water, cold at night. Animals and plants have special **adaptations** (special things about their bodies) that make it easier for them to live in this habitat.
- How do they get water? From plants, from condensation under rocks.
- How could they avoid heat? Stay in burrows or shade during the day, active at night.
- Some animals love the heat, though! Lizards are cold-blooded, which doesn't mean they are actually cold. It means their body temperature is determined by the environment. They need to absorb heat from their surroundings to function.
- Each student take a thermometer. This is a lizard, and it needs to maintain its body temperature at a certain level: fence lizard 35C (95F), whiptail 38.6C (101F). How can it keep from getting too hot? How can it keep from getting too cold? Lizards regulate their body temperature through behavior.
- Plants do kind of the same thing – hold one palm out flat, one sideways. Which feels hotter? Prickly pear cactus pads grow sideways instead of flat to keep themselves cool!

IV. Plant activity (15 min)

- What do plants need in order to survive? Water, sunlight, air, soil
- What makes it difficult for plants in the desert? It's so hot and there's so little rain.
- How do plants get water? **Show evapotranspiration diagram.** It's kind of like when we're hot, we sweat. But if we lose too much water from sweating we get dehydrated.
- How do they keep cool? Remember prickly pear? **Show pictures of hedgehog and prickly pear cacti.** Desert plants can **s**hade themselves! Hedgehog cactus has lots of spines that shade the surface and also blocks the wind.
- The leaves of many desert plants are **adapted** so that they don't lose too much water.
- Show leaf adaptations poster (fuzzy, small, curled, waxy, green stems but no leaves)

If weather is ok:

- Out in arroyo, we'll do an investigation.
- How many of the plants we see will have these adaptations? Hypothesize.
- To be fair, we can't just pick the plants we like. Standing in one spot, collect the first 6 *different* leaves you see.
- Draw each one, and describe what adaptation it has.
- How many of your 6 leaves have one of the adaptations listed?
- Why don't all have it? Some plants avoid the heat by just growing and producing seed really fast before the weather gets hot, and then they just die off and leave their seeds to grow next year!
- Search for seeds.

If windy, inside activity:

- Let's investigate one way they keep water. **Dab water on board, cover one spot with paper towel, one spot with wax paper.** Which do you think will evaporate faster?
- **Show prickly pear picture.** Make model of prickly pear pad: paper towels with wax paper taped around the outside. **Show cut prickly pear pad.**
- Maybe do an experiment: soak wax-covered and non wax-covered leaves in water and time how long they take to dry.

V. Conclusion (10 min)

- Arroyos are for flood control, and we shouldn't play in them when clouds are in the sky.
- But they are cool places where animals and plants live, and we can visit when it's clear weather.
- Animals and plants are adapted to live in the desert climate.
- What we do in arroyos affects the plants, and animals' habitats. Should we ride ATVs up the sides? That's something humans do to change our environment for the worse.
- Picking up dog poop is important because it can make animals sick. Where does the water go when it flows down the arroyo? The Rio Grande! Keeping dog poop out of the river is one way humans can change our environment for the better.
- Walk back to classroom

Leaf Adaptations

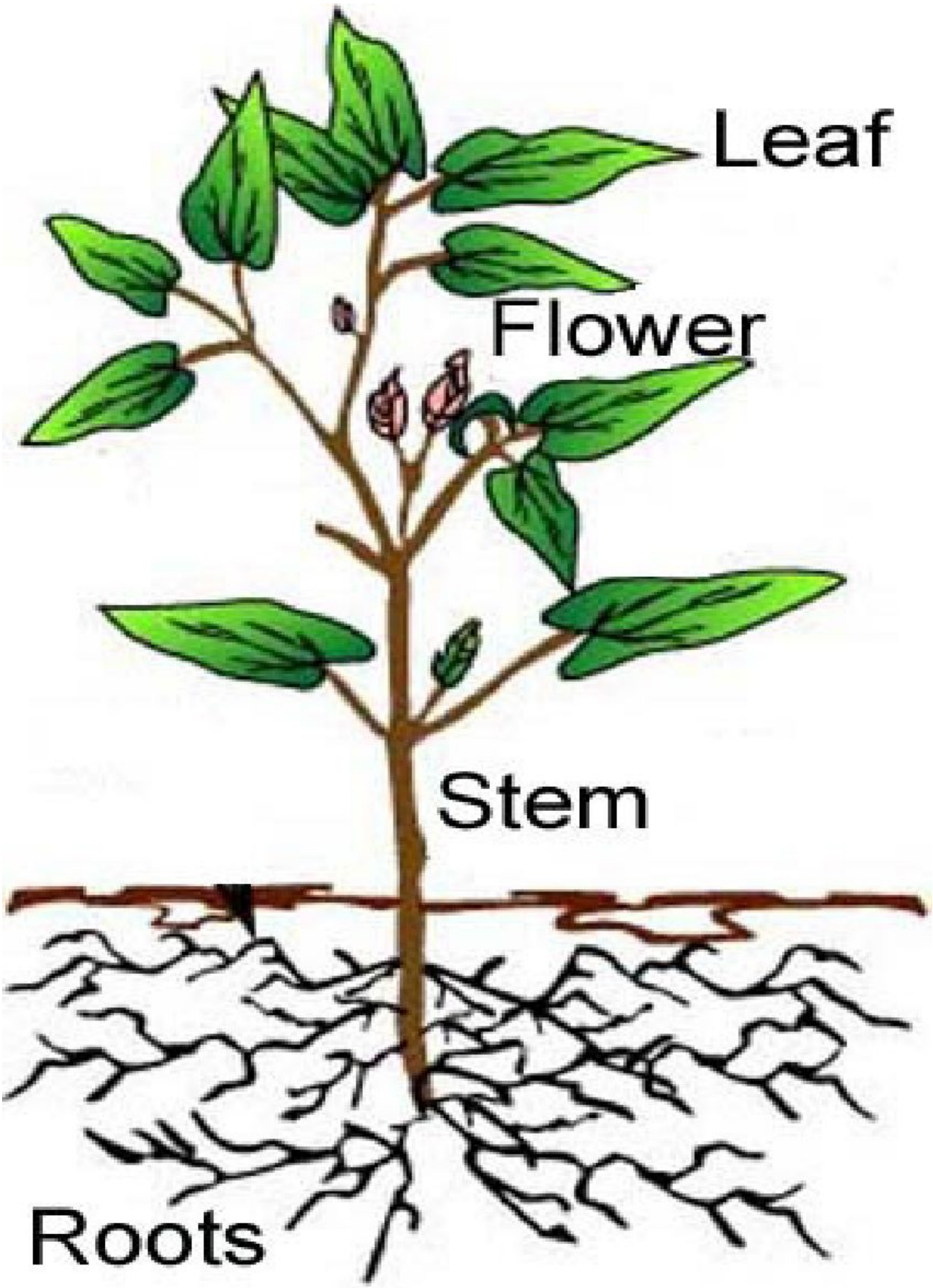
1. **Fuzzy leaves or lots of spines**

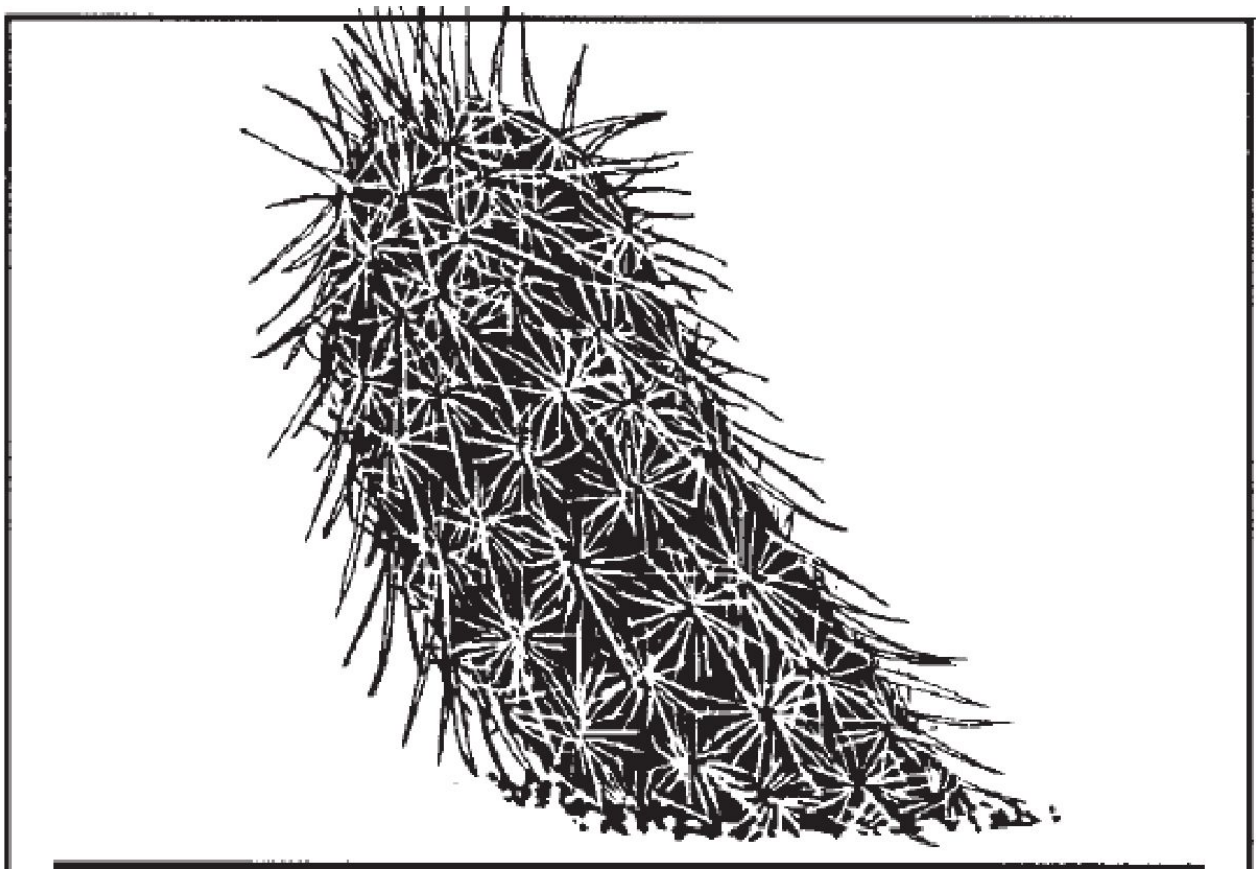
2. **Small leaves**

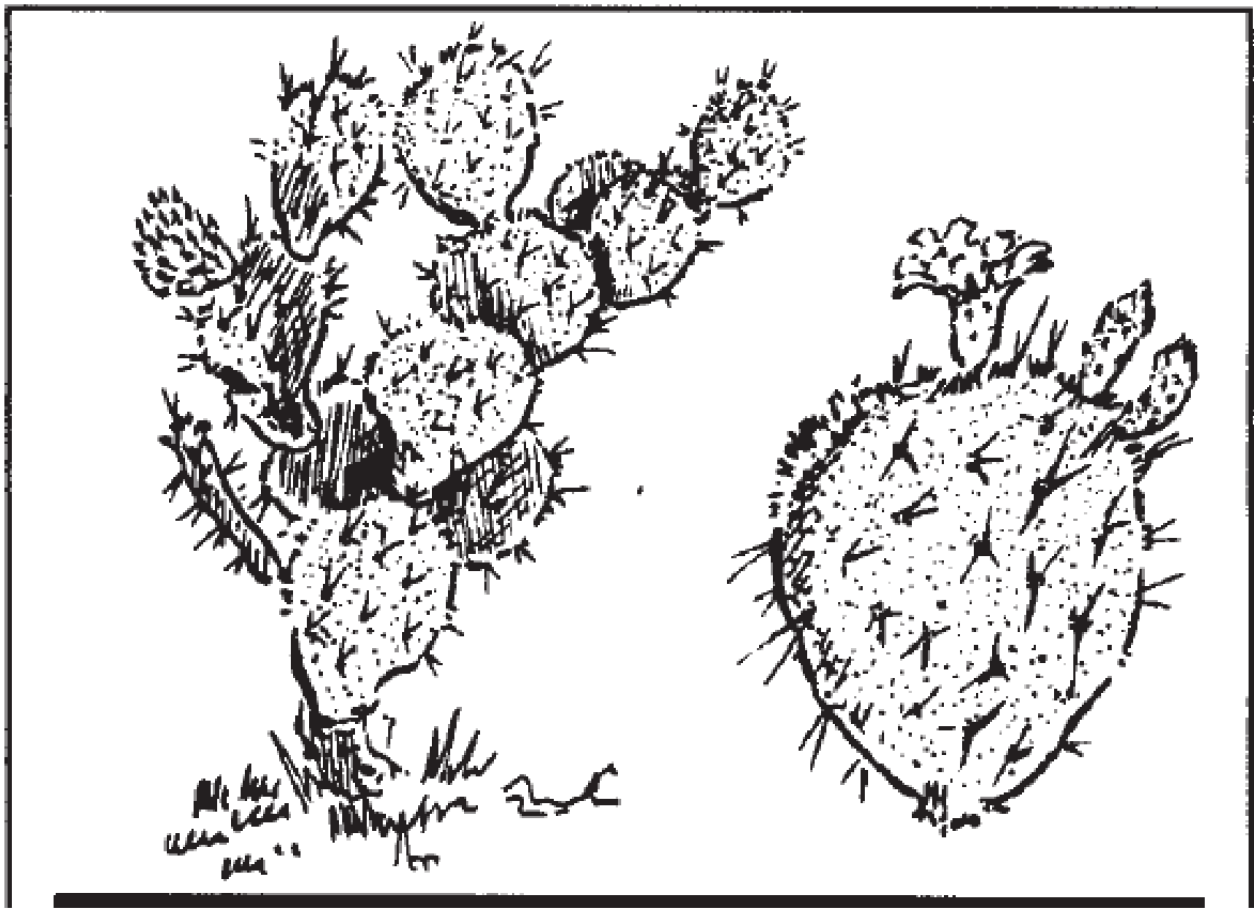
3. **Curled leaves**

4. **Waxy leaves**

5. **Green stems but no leaves!**


Leaf
Flower
Stem
Roots





Build a Watershed Activity Guide for Arroyo Classroom

1. What are we trying to teach the students in this activity?
What is a watershed? How does the water cycle work? What are different forms of pollution and how does it impact our river? Arroyos lead to the river and carries different types of pollution with it.

NM State Science Standards:

3rd Grade
Water cycles through the atmosphere, plants, soil, and bodies of water in various forms.
Describe pollution and identify different types (can be naturally occurring or human made materials). Pollutants can get into our water and harm living things.
Some animals can survive better in certain environments, some will not survive at all.
Describe how roots take up water and soil nutrients, and leaves make food from sunlight.

2. How can we tie this activity to our teaching goals:

Our Goals	**Where we can relate our goals to this activity**
How does the water cycle work?	Describe the processes of the water cycle: evaporation, condensation, precipitation, collection, run-off and infiltration.
What is a watershed?	A watershed is all the land that drains into a river or other body of water, from mountain forests to riparian zone.
What makes water dirty?	Pollution comes from all over the watershed, and erosion is one form of pollution.
Why are arroyos important?	Arroyos provide important drainage in a storm event and provide unique and critical habitat for wildlife and plants.
How does vegetation help our river?	Forests, wetlands and healthy arroyos help keep the river clean and prevent flash floods. Plants in these areas slow the runoff of water into the river, reducing erosion and flooding. They can also remove nasty chemicals from the water by taking them up through their roots.

3. What is effective in this activity? Being in small groups, students enjoy creating the model and discussing what they are observing.

4. What makes this activity difficult to teach? Students get excited and want to play with materials while you are talking.

Activity Materials

- Blank paper, markers, aluminum pans to capture water
- markers (ex: black for oil, brown for dog poop, red for trash)

- a watershed map (ex: SSCAFCA watershed map, It's All Connected in a Watershed poster)
- NM relief map

Preparation

- Post watershed map
- Draw sketch of the water cycle
- Have materials laid out and desks arranged (papers, trays, sets of markers)
- Optional: write out key for marker colors (keep hidden until time to show students)

I. Intro – 5 minutes

1. Introduce yourself and the Arroyo Classroom program: Respect and Know your Arroyos
2. Cover guidelines/expectations in order to be able to have a good time and learn together
3. Introduce what we will be learning: What is a watershed? Where does it go when it rains? We are going to find out how water moves across land, and through our arroyos, when it rains or snows. And learn about how it carries things with it as it flows.

II. Warm Up – 10-15 minutes

1. How many of you used water before you came to school today? How did you use it?
2. How else do people use water on a daily basis?
3. Where do you think all this water comes from? (Discuss the aquifer and it's connection to precipitation). Point out groundwater shown on the "It's All Connected in a Watershed" poster.
4. Pull out the NM relief map. Discuss the purpose of a map. Walk through so each student can view. Introduce the concept of a "key". Have them help you find ABQ on the map and the Rio Grande. Point out the area of Rio Rancho. Explore the map together.

Ask: (Really engage with students and listen to their ideas)

- Has anyone heard of the term "watershed" before? You can highlight that it is a compound word. Have students share what they think of when they hear this word usually, "a shed full of water." It's kind of like that! Except the shed (or container) is an area of land. *Everyone lives, plays and works on land that draws to a body of water, like a river, lake, bay or ocean.*
- Point out the Rio Grande Watershed through the middle of the NM relief map.
- Where are there mountains and hills? Where do you see rivers and lakes?
- What would happen if we sprayed water on the mountain peaks, what will happen to it? *It will flow downhill.*
- Where does the water come from in nature? *Rain or snow*

III. Activity – 25 minutes

Where does the water go? Let's find out by making our own model/map, similar to the relief map.
Part A: 10 min
While students are still sitting, demonstrate activity → crumpling paper to drawing on the ridges. Identify the ridges. Ridge as high point of range of hills or mountains. Point out that it is where the

paper has a peak pointing up not down. Maybe identify the difference between a peak and a valley using the paper.

1. With your imagination, imagine that this piece of paper is a piece of land.
2. Crumple up the piece of paper and then smooth it back out most of the way. Leave it a bit crumpled, showing small ridges (high points) and valleys (low points).
3. Find the ridgelines (tops of the fold lines). Use the blue marker to color along the ridgelines on your "land".

Model this for students briefly. Be sure everyone understands the activity. Ask students to crumple their paper and draw their ridgelines. Once they are complete - Hands on their hand so we know they are ready for the next step.

Pair students (groups of 2 or 3), with teachers help. Assign roles 1-2, or 1-3.

Give Roles***: We're all observers, everyone will have a turn.

Have groups gather around their tray. Drawers can begin drawing their ridgelines. Announce that students have 30 more seconds when it seems that each group has enough ridgelines.

Next, demonstrate a "rain event". Model for students the distance we want them to aim from as they spray (i.e. the length of your elbow to hand, vertically placed on the tray). And 4 sprays. (idea: Students can be drill sergeants about the three sprays, acknowledge that sometimes the spray bottles act funny but that we are trusting our classmates to count for themselves to do only four full sprays...).

Ask:

- What do you think will happen to your land when it "rains"?
- What will happen to the blue ridge lines? / Where will the "rainwater" travel?

1. Altogether, sprayers squirt your model a few times to create a "rainstorm" over your land.
2. Observe what happens.
3. As your rainfall accumulates, watch the pathways where the excess "rainfall" travels.

With teachers, walk around to ask each pair to explain what the water is doing and show you rivers and streams in their model.

Have teachers help pick up all the spray bottles, and ask everyone to place their hands on their head and have a small group discussion about their observations.

Part B: 15 min

Have pairs switch roles, “disposers” can throw out previous model. Tell students they will keep the same number assigned earlier and tell them what role they will be playing. You could write these on a whiteboard.

What’s In the Water?
Experiment with how “pollutants” might travel through their watersheds.

With a new piece of “land”, imagine this represents the City of Rio Rancho or the Rio Grande Watershed. Show one of the Watershed posters and point out all the human activity that happens in a watershed (driving cars, making things (manufacturing), farming, walking our dogs, etc.)

Ask:

- What might be on this land that we wouldn’t want in our water?
- What is pollution?
    - Have you ever seen it? What does it look like?

As students share, note the types of pollution on a poster or white board and create a key for groups to use. (Roads/Cars - black, Trash - Green, Dog poop-brown (and/or orange if you have more groups than markers)) Depending on the group, you could also identify Factories - Red

Before crumpling, have drawers (with their support drawers) mark their papers with the brown, red and black marker to represent farms, factories, houses, streets, dog poop and trash.
Announce that students have 30 more seconds when it seems that each group has drawn enough. Then ask all students to put their hands on their head.

Then have crumplers -crumple paper and then partially smooth it out.

Altogether, have sprayers spray the piece of paper.

Ask:

- What happened to the pollution when it rained?
- Describe what happened at the highest and lowest point in your watershed.
- How quickly did it spread? Are there any places on the land where it didn’t go?

WRAP UP: -5-10min
What do you think this means for our watershed - the Middle Rio Grande?
The water we drink comes from our watershed. Animals and plants also depend on this water. That’s why it’s important that we try not to pollute either the water or the land. Anything that pollutes the land will eventually wind up in the water.

What might be ways we could reduce pollution in our watershed?

*By picking up trash and picking up dog poop if we have dogs. (*I like to emphasize to this age group that **being responsible is powerful** and they can make a difference by caring and picking up their own trash. I also tell them that last year a whole grade level of 3rd graders at Cielo Azul Elementary helped pick up 1.8 tons of trash!)

Thank the class for their attention and participation. Tell them we look forward to seeing them again and expect that they show the wildlife biologists the same respect they have shown us.

*****Groups of 3: Each person gets to spray 3x. Model this for them.**
For groups of 3, you'll need two blue markers for Part A.

May be helpful to tell students each turn has a Lead Role and a Supporting role (Supporting role noted in parentheses).

Part A Roles:
1 - Drawers (+ spray)
2 - Crumplers (+ drawing / spray)
3 - 1st Spray (+ disposers) -- Spray 3, 2, 1

Part B Roles:
1 - 1st Spray (+ disposers)
2 - Drawers (+ spray) --Spray 2, 1, 3
3 - Crumpler (+ draw)

Groups of 2:

Part A Roles:
1 - Crumpler / Drawer
2 - Sprayer / Disposer

Part B Roles:
1 - Sprayer / Disposer
2 - Crumpler / Drawer

Appendix B
Supplemental Materials

-SSCAFCA Activity Book and Educational Videos:

KNOW YOUR ARROYOS
ENJOY • RESPECT • PROTECT

-SSCAFCA handouts:



Did you know?

SSCAFCA protects our community from flooding and erosion caused by big rain storms, and works to keep stormwater clean. Stormwater flows down arroyos into the Rio Grande.

Bugs like to live in stagnant water that collects in ponds and low places in the arroyos. Insects like mosquitoes can carry diseases that make us sick.

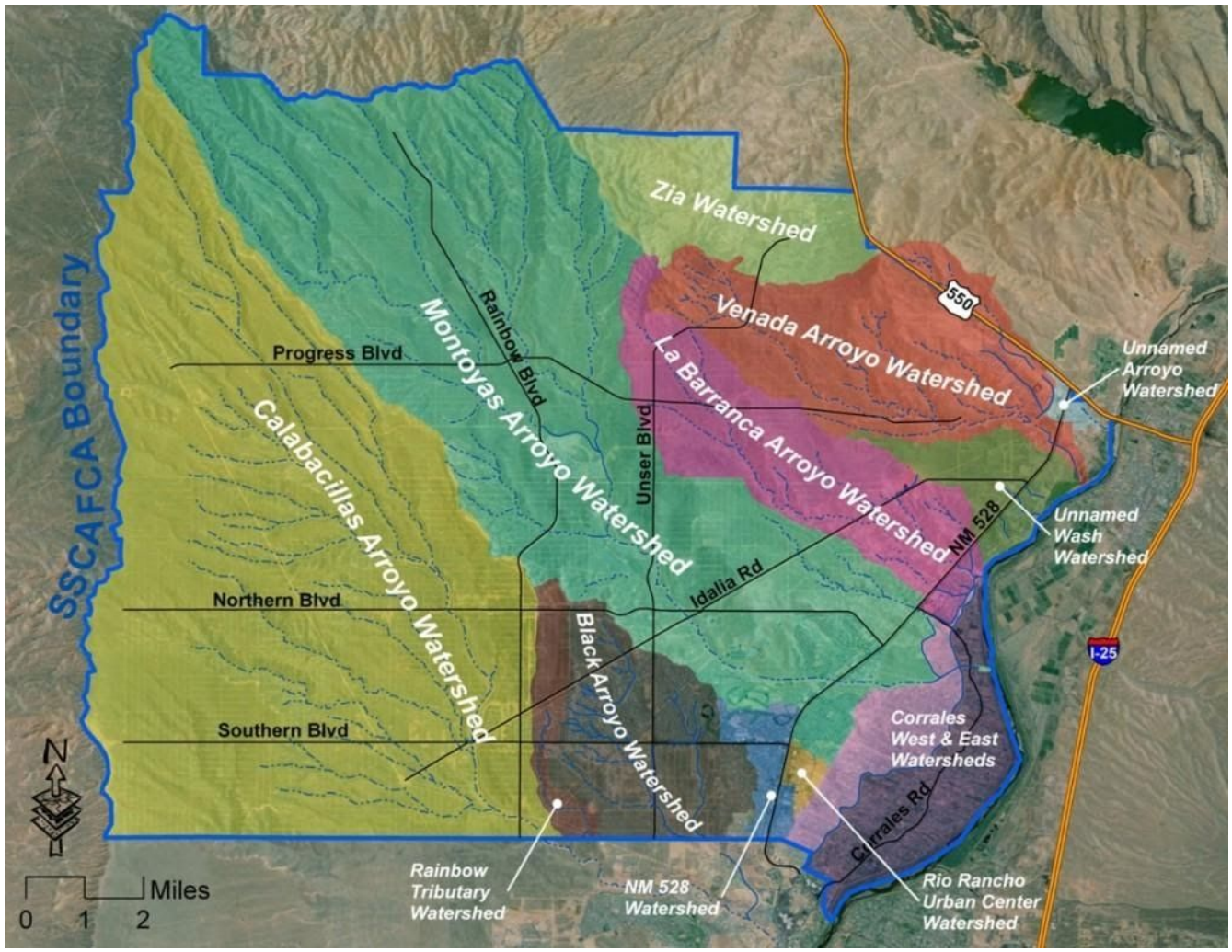
Brought to you by:
SSCAFCA

Almost all U.S. bats feed exclusively on bugs, and 1 bat can eat between 600 and 1,000 mosquitoes and other insect pests in just one hour. One bat can eat its own weight in insects in a single night!

SSCAFCA provides bat houses to encourage bats to make their homes near our arroyos, and especially near detention ponds where stormwater runoff is captured and allowed to slowly drain.

The more we help bats, the more pests they eat, so we don't have to spray pesticide that could wash down to the Rio Grande and pollute it.

SSCAFCA watershed map:



Appendix C
Program Photos



LEFT - Melissa McLamb discussing desert animal and plant adaptations by Maggie Cordova Arroyo.

BELOW - Students observing and discussing the watershed model.





ABOVE - Students having fun during the arroyo walk on school property. Students gather in between activities to discuss findings such as looking for evidence of wildlife (scat, tracks, burrows, etc.).

RIGHT- Mikal Deese with a Swainson's hawk at Maggie Cordova Elementary.

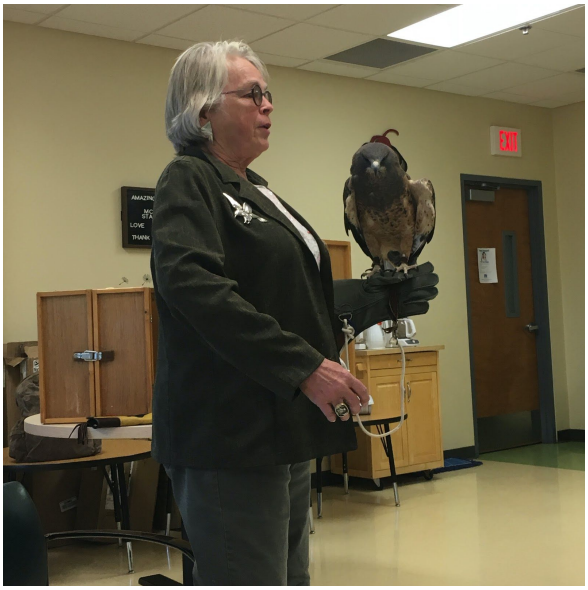


Exhibit 4

RiverXchange
2019-2020 Final Report

Making Meaningful Connections by Integrating Water Resources Topics with Language Arts & Science

2020 Report

Presented by
Ciudad Soil & Water Conservation District

May 2020

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SUMMARY

This year, funding enabled 38 NM classes (932 students and 38 teachers) to participate in RiverXchange® and learn about critical water resource issues in their watershed. The majority of participating classes were from Title I schools. Every NM class was connected to out-of-state partner classes on the blogging platform for a total of over 1,254 participants. All program costs and coordination are provided free of charge to NM teachers. Training, technical support, and curriculum materials are provided free of charge to partner teachers. The program required $56,157.11in cash and generated total match valued at **$82,115.32** in the form of in-kind contributions including workshop space, classroom resources, presenters' time in the classroom, field trip docents, donated trees, as well as teachers' and students' time.

Even with the impacts of the COVID-19 pandemic and the transition to a new education coordinator mid-year, RiverXchange was able to run smoothly with only a few classes missing a presentation or a field trip due to school closures mid March. The end of the year teacher feedback responses confirm that this year's program was strong as any, as many spoke to their students increased ability to understand local water resources and the impacts of society on those resources, as well as how they can take part in protecting those resources, upon completion of the programs. The following sections discuss how coordination efforts were spent keeping RiverXchange a high quality, relevant program and responding to on-going needs and challenges.

Presentations

Program presentations were completed as follows:

Agriculture: 29/38
Stormwater: 38/38
Wastewater: 38/38
Drinking Water: 36/36
Planting Field Trips: 32/38

Program Strengths

Teachers continue to report that the presentations are consistently high-quality, hands-on experiences that engage students; and that the field trip is a highlight of the year for all involved. The presentations explore different aspects of water usage in our community with professionals and experts in the field and continually reinforce to students how they can protect their watershed and the Rio Grande. The pole planting field trip allows students the opportunity to give back to the environment they have learned so much about and their enthusiasm for service learning is palpable on the trip! Furthermore, RiverXchange supports the active participation of teachers in the program by providing professional development opportunities, training to teachers on program implementation, extension activities, and access to a blogging platform for students to connect. RiverXchange incorporates STEM, place-based learning, hands-on activities; and puts conservation actions into the hands of local students and teachers while partnering with stakeholders in the community.

The following sections discuss highlights from RiverXchange this year:

I. Teacher Workshop

The teacher workshops this year were held at Valle Del Oro and Bachechi Open Space. The workshop schedule included an introduction to the site as an educational resource, an overview of RiverXchange presentations and curriculum, a break-out session, blog training, presentation scheduling and lunch. During the RiverXchange overview, we encouraged teachers to introduce RiverXchange to their class using the River Geography activities. We emphasized that starting students off with an overview of our local watershed, including the Rio Grande is a great way to kick-off the program and bring context to the future presentations. We also suggested that introducing their watershed on the blog as their first class post would be a great way to synthesize this introduction.

This year we also choose to give teachers a focused break-out session with their 5th grade team to consider each presentation and plan how to integrate their own lessons or RiverXchange presentation extension activities to deepen their students' learning experience. The goal was to highlight teacher expertise and give teachers more time to share how they make RiverXchange work in their classrooms with each other. Teachers worked in groups to discuss an assigned presentation and what activities they recommend or wanted to try out. Then they presented to the whole group so that each presentation was covered. Teachers seemed to enjoy getting ideas from each other and the chance to share their practice with everyone. It also gave each 5th grade team a chance to talk about how they were going to integrate RiverXchange into their year.

The teacher workshop also included in-depth training on Kidblog. Each teacher was able to connect to their individual blog, navigate their page, and find important information that would help them be successful. Overall, the time at the teacher workshop felt productive, engaging, reciprocal and fun.

II. Teacher Feedback

Every year teachers are asked to complete an evaluation survey to tell us why they choose RiverXchange, what works well and how we could improve. This year teachers continued to have positive feedback and shared that the presentations are exceptional and the field trip is “second to none!” Of the reasons teachers state that they participate in RiverXchange, teaching about water resources and incorporating more science into their classrooms are the top choices. Teachers also are finding more and more that RiverXchange helps their students achieve NM STEM READY! standards through hands-on experience, inquiry-based learning, solving real world problems, and engaging in the community. Some teachers still report that they struggle finding computer time and feel unsuccessful on the blog. We also had great feedback from our visually-impaired teachers about the field trip, but that it could be helpful to adapt the presentations for special education students or reach out to the teachers beforehand so they can support those students better.

Here are a few quotes about student’s greatest learning outcomes from participating in RiverXchange:

“A heightened sense of their surrounding community and the overall impact water has on our society.” - Peter Hornbecker, Colinas Del Norte

“Teamwork...the students loved working in groups during the presentations and the pole planting trip. Many of them were still talking about it before school was cancelled”. - Stanee Kitts, MLK

"Students became more aware of their environment close to their home and the impact their actions can have on the river." -Debbie Beer, Duranes

"Their knowledge about the watershed and how to care for it. The content sticks with them so well because of all the experiential learning." -Ashley Anthony, Monte Vista

"My students were able to move toward understanding water as something to think about, not just a given, unappreciated, unlimited resource." -Rona Gomez, Georgia O'Keeffe

Finally, this quotes summarizes the opportunities teachers get from participating in RiverXchange:

"RiverXchange has helped me step outside my comfort zone to explore, demonstrate, and teach areas that are new to me. It was definitely a benefit as shared by students!" -Randi Sevigny, Seven Bar

III. Supporting Next Generation Science Standards

The Next Generation Science Standards have been adopted by the New Mexico Department of Education and are in the second year of implementation. The framework of NGSS moves the focus from teaching science facts to the process of *doing* science and requires both curriculum developers and teachers to re-think science education instruction. RiverXchange supports many of the "3 Dimensions" of NGSS framework by delivering inquiry-based curriculum, hands-on learning opportunities and locally focused water resource topics. The next steps are to fully align RiverXchange to the NGSS, and while this is a lengthy process that requires practice before understanding, it will be key in both promoting RiverXchange as a 21st century science education program and encouraging the next generation of scientific thinking and problem solving.

Program Challenges and Opportunities

In an effort to remain relevant to students, stay updated on current science and technology, and keep up with teacher needs, RiverXchange is constantly evolving. While at its core the deliverables remain constant, each iteration of the program aims to be a more improved, polished version of itself. As the recently hired Education Coordinator, I believe it is valuable to share some of the insights that I have gained as a consultant to the program, and document them here as a way to convey some of the challenges and opportunities that Melissa McLamb and I were responding to during our time working together. Especially as the program is now faced with new challenges and opportunities in responding to the COVID-19 pandemic, this section serves to hold that institutional knowledge and will be important to remember once things settle down.

I. Ensuring High Quality Presentations and In-kind Partnerships

Challenge: Maintaining our agreements for in-kind partner presentations when we lose a partner.

RiverXchange is dependent on our in-kind partners to deliver the four in-class presentations and relies both on the availability of these partners and their expertly crafted lessons to meet our objectives. The only

drawback of such a strong partnership is that when an agency is no longer able to provide this service, it takes time to find another partner who can meet such a specific niche. This has been the experience with the agriculture presentation that was previously provided by Bernalillo County Extension to APS participants. As a response to this gap in 2018-2019, RiverXchange staff developed a presentation that explored the regional history of agriculture and irrigation techniques, which highlighted acequia culture and the effects of human settlement on the Rio Grande. During that year we entered discussions with CESOSS (Center for Social Sustainable Systems), as they were working on creating an Acequia Education Office in the South Valley and agreed they would be a good candidate for providing these presentations. However, the timeline for the development of the Acequia Office and their limited funds have proved to be barriers for now.

Response: Maintaining a network of in-kind partners who can provide RiverXchange presentations.

This year, we were able to call on the help of BernCo Master Naturalists and found that they are a well-suited group to recruit presenters from. This summer we intend to recruit Master Naturalists earlier to ensure availability and cover all presentations, as working with volunteers requires flexibility and grace. Furthermore, it should be noted here that all future RiverXchange staff should have an up to date understanding of each presentation and the capacity for networking to ensure partnering opportunities are easily accessible.

II. Kidblog: The current blogging platform

The continued agreement with an educational contractor this year allowed for an increase in capacity for blogging support. Time was spent working with the Kidblog support specialist, Laura Kniffin, to understand the platform and how it can work with the specific needs of our program. The following changes this year were the result of those conversations.

- **Rostering**: Rostering is an efficient way to create new blogs and users using .CSV files at once, rather than doing each blog and user one by one.
- **Individual class blogs**: We returned to each class having their own blog rather than grouping two or three on one with the goal to reduce confusion on how the blog is used and encourage classes to build a more unique identity on their blog. It also allows returning teachers to keep the same blog year after year, and further reduces time spent getting new blogs set up for both teachers and coordinators.

III. Connecting NM classes with partner classes via Kidblog.

In working closely with partner classes the previous year, our goal this year was to increase posting by partner classes and strengthen connection with NM classes. The following were challenges identified from the previous year and our responses in 2020-2021.

Challenge: Creating strong partnerships with NM and out-of-state partners on the blog takes significant coordination.

- **Out-of-state partners have varied schedules and the timing of their water-related lessons do not always line up well with our program.** This creates a challenge on both sides. Partner classes

are recruited on the premise that we will provide them with an active class on the blog that will be discussing water related topics. For a one-on-one partnership to be successful, the NM class has to be active and do so within a time frame that is convenient for the partner class and vice versa.

- **Active participation on the blog varies by teacher by year.** A teacher might be super active on the blog one year and completely absent the next. Circumstances change year by year, it is hard to rely on one teacher behaving similar to the year before.
- **Organizing who is doing their water-focused unit at what point in the school year takes time that is not well spent if neither partner actively participates on the blog.**

Response: Use coordination time available to make blog user-friendly and increase teachers fluency on the blog to increase active participation for NM and out-of-state classes.

- **Teacher workshop included training on each teacher's actual blog.** Teacher's were able to work side by side on their own blog (rather than just see examples), ask direct questions and troubleshoot. This requires all blogs to be set up before the teacher workshop, but allows for better understanding.
- **Out-of-state partners attention increased.** Each partner was interviewed to better understand their goals and their timeline. They received one-on-one, virtual training on the blog, technical assistance and general support for implementing the blog in the classroom throughout the year.
- **NM and partner classes all connected on the blog.** Kidblog has a "Connection" function that links classes to other classes visibly on each blog page - where they can easily go to another classes blog, see posts and comment. This year in addition to having assigned partners, all classes were linked to all other RiverXchange classes under the "connection" feature on Kidblog. While the goal was to create more ease in finding active classes to comment on- the number of connections seemed to have over-stressed the system and slowed down loading times on Kidblog for our users. Even with improved accessibility to partner classes, there were only a few classes that corresponded with other out of state classes this year by sharing comments back and forth.
- **Distribution of monthly Mailchimp emails with blog highlights, tips and resources.** To further increase creative blog posting, instigate class connections, and improve Kidblog fluency, a monthly newsletter went out that provided a summary of blog activity, shout-outs for recent posts and updates on out-of-state partner posts with links directly to those blogs to see their work.

Opportunity: Connect with regional upper elementary watershed programs that might provide sustained partnerships between teachers and programs over the years.

In 2020, Ciudad SWCD acquired the licensed trademark of RiverXchange® from Amy White, which grants CSCWD the sole oversight of the program and the ability to evolve the way we meet the "exchange" mission so integral to the program. Considering the challenges with the blogging platform, teacher engagement on the blog and connecting NM students with out-of-state students, we have been in search of other opportunities. One avenue is to strengthen a partnership with an out-of-state program that is similar to RiverXchange and develop a long term relationship. Another is to explore in-state programs that are similar and devise a strategy that would allow our students to connect possibly through the blog, via snail mail or even create podcasts to share. Santa Fe Watershed Association manages a 5th grade program called My Water My Watershed and could be a great candidate to try for a stronger exchange between students - one that would connect students across watersheds along the Rio Grande.

PROGRAM DESCRIPTION

Mission

The mission of RiverXchange is to deepen students' and teachers' understanding and appreciation for their local river ecosystem, motivate participants to protect local water resources by conserving water and keeping their source water clean, and to provide a high quality, high impact outreach opportunity for funders and in-kind contributors.

The Big Water Questions

The optional curriculum frames program outcomes as "guiding questions," known as *Big Water Questions*. A long term goal of RiverXchange is that students understand these questions and can formulate logical, fact-based answers by the time they finish elementary school. We believe that students who can synthesize water facts to understand larger water issues will have the proper critical thinking skills and foundation for further discussion in middle and high school so that they will become informed citizens and voters on water issues.

Understanding a Watershed

- Is every place in the world part of a watershed?
- Where does your community's stormwater go?
- How can surface water become polluted?
- How does the water cycle relate to weather?
- How are groundwater and surface water connected?
- How can groundwater become polluted?
- What actions can all of us take to keep water clean?

Water in Our Society

- In what ways does our society use water?
- Where does your community's drinking water come from?
- Does everyone have the right to use as much water as they want?
- Where does your community's wastewater go?
- What actions can all of us take to conserve water?

River Ecosystem

- How does water affect living things in an ecosystem?
- What role do forests play in a watershed?
- What role do wetlands play in a watershed?
- What are some of the ways scientists can determine the health of a river, lake, bay or ocean?
- What actions can all of us take to improve the health of our ecosystem?

Background

As producers of children's water festivals and other grade K12 water resources outreach in NM since 2007, the RiverXchange program creators observed early on that NM elementary teachers rarely incorporated water concepts in the classroom beyond what is required by the state (e.g., water cycle), and that most elementary teachers considered "water" strictly as a science topic. While teachers personally acknowledged the importance of conserving water and keeping source water clean, they continued to find that upper elementary students had little or no understanding of major water resources topics unless the teacher specifically integrates a wide range of water topics into the curriculum. For this reason, as well as successful festival work with upper elementary students, this age level was selected as the focus for the RiverXchange program.

RiverXchange was created to provide a free program that is fun, interesting, and easy to integrate into the normal curriculum. The hope was to motivate participants to explore water resources topics in depth. The program was originally designed to be carried out over eight months so that students spend more time developing a sense of pride and personal connection to their own river ecosystem, as well as a personal connection to a distant river ecosystem and the students who live near it. Today RiverXchange runs over the course of 3-4 months, as a response to the challenges of implementing a year-long curriculum with the ongoing demands on teachers and students time and requirements for testing and other curriculum.

RiverXchange began in 2007 as a pilot project of Experiential EE, LLC (under a services agreement with the New Mexico Water Conservation Alliance) and the National Great Rivers Research and Education Center, featuring partnerships between two fourth grade classes in Albuquerque, NM, and two fifth grade classes in Godfrey, IL. A curriculum was developed, a field trip to the river was coordinated, and partner classes "met" three times during the year via video tele-conferencing to present what they had learned.

After the pilot project, RiverXchange transitioned to a web-based technology called a wiki. This enabled the program to overcome limitations such as the high cost, availability, and time zone logistical issues associated with video teleconferencing – and easily involve more classes. The curriculum was updated to incorporate the writing component and classroom guest speakers were introduced to reduce teacher workload and bring up-to-date technical information into the classroom. In 2017, the program switched to a blogging platform called Kidblog, which is still being used today.

In 2012, ownership of RiverXchange transferred to Amy White of Orilla Consulting, LLC, who managed the program through July 2015. In August 2015, RiverXchange became part of the Ciudad Soil & Water Conservation District. In 2020, ownership and the trademark registration of RiverXchange® was transferred fully to Ciudad Soil and Water Conservation.

Since 2007, we have served over 18,500 students!

This year, the program featured the following components:

- Optional standards-based curriculum including hands on science and social studies lessons, as well as writing assignments
- KidBlog online posting and communication
- Partner class engagement support

- Teacher training on curriculum implementation and use of KidBlog
- Ongoing technical and motivational support
- Monthly newsletters to NM and out-of-state teachers
- End of year teacher survey
- Pre and post student surveys (NM only)
- Payment for teacher workshop substitute teachers (NM only)
- Coordination of at least four guest speakers into the classroom (NM only)
- Coordination of a field trip to the local river or important watershed feature (NM only)
- Field trip bus transportation payment (NM only)
- Field trip leadership and activity planning (NM only)

Program Management and Financial Support

The program timeframe was July 1, 2018 through June 14, 2019. All components including fundraising, design, planning, implementation, and analysis were carried out by employees and contractors of Ciudad Soil & Water Conservation District, including:

Melissa McLamb
Erin Blaz
Jenny Lloyd-Strovas
Astrid Hueghlin

Sponsors

- Southern Sandoval County Arroyo and Flood Control Authority (SSCAFCA)
- Middle Rio Grande Stormwater Quality Team (MRGSQT)

Sponsors provided a total of $56,157.11 in cash.
MRGSQT - $41,415.55 | SSCAFCA - $14,741.56

Program expenses included:

- Substitute teachers for NM teacher workshops
- Teacher workshop space rental and meals
- Field trip bus transportation for NM classes
- Field trip portable toilet rentals for NM classes
- Technology services
- Office and educational supplies
- Coordination services (planning, implementing and assessing all program components)
- Trademark Registration Fees
- Rain barrel project funds executed by The Nature Conservancy

New Mexico In-Kind Partners

- Albuquerque Bernalillo County Water Utility Authority
- Bernalillo County - Public Works Division
- City of Albuquerque – Open Space Division

- City of Rio Rancho – Environmental Programs Office
- City of Rio Rancho — Parks, Recreation and Community Services Department
- Sandia Labs
- Sandoval County Cooperative Extension
- Southern Sandoval County Arroyo and Flood Control Authority

In-Kind contributions totaled $82,115.32. For NM classes, in-kind contributions included classroom guest speakers, field trip docents, planting materials, workshop space and computer lab use, and teachers' and students' time attending the presentations and field trips. For partner classes, in-kind contributions were not calculated this year. Sponsors and in-kind partners were recognized on our website and in presentations.

Participant Selection

All 38 participating NM classes were fifth grade classes, distributed as follows:

Bernalillo County	**Sandoval County**
North Valley Academy (3)	Colinas del Norte Elementary (5)*
Cochiti Elementary (3) *	Martin Luther King, Jr. Elementary (6)*
Duranes Elementary (1) *	Sandia Vista Elementary (1)
Georgia O'Keeffe Elementary (2)	
John Baker Elementary (1)	
Monte Vista Elementary (3)	
Seven Bar Elementary (5)	
Zia Elementary (4) *	
26 classes, 607 students	**12 classes, 325 students**
* Title 1 school	**TOTAL - 38 classes, 932 students, 40 teachers**

Curriculum

A component of RiverXchange is the hands-on optional curriculum, which is offered to all participating teachers. It was developed to help students reach for deeper meaning through hands-on learning and reinforce what they have learned through the process of writing on the blog. Over the years, we have developed a curated list of activities from the curriculum, along with reflection prompts specific to each presentation. Organizers strive to incorporate emerging water resources issues into the curriculum, increase networking opportunities for teachers, reduce teacher workload, and align the curriculum with public school curriculum priorities.

Each class learns about its own local water resources issues through hands-on activities, classroom guest speakers, and a field trip. Students write about what they are learning via a private educational website that can be viewed by their partner classes. The computer technology and writing components provide a unique opportunity to reinforce what was learned, increase student motivation to learn, and collect valuable metrics about student performance.

Through RiverXchange, students take pride in sharing their knowledge of the local ecosystem and learning from their peers about another river ecosystem. Comparing the two geographical areas gives students a broader understanding of the importance of a river ecosystem to human and other life. Students gain the unique opportunity to share personal experiences and ask questions about a distant place. Teachers feel this kind of personal connection is a big deal for kids – many of whom have never traveled beyond their city limits.

All activities are correlated to NM state standards and benchmarks for Social Studies. All activities (because they require that students communicate information on the KidBlog) address Common Core Language Arts standards for writing. Some activities also address Common Core Mathematics and Science standards. As mentioned above, RiverXchange lessons and curriculum support the NGSS and will be evaluated for full alignment to the NGSS, beginning with the presentation activities and field trip. Projected date of completion: May 2021. For a summary of the RiverXchange Curriculum, see Appendix 1. For a summary of the extension activities, see Appendix 2.

Guest Speakers

We coordinated at least three guest presentations to visit each NM classroom. In all cases, guest speakers were water resources professionals from local agencies. Topics included:

- watershed/nonpoint source pollution
- drinking water
- wastewater
- water and agriculture

Field Trips

The program requires that all classes attend at least one field trip to their local river or important watershed feature, which should incorporate a service learning component if possible. Throughout the winter and spring, students planted 539 native trees and helped restore critical riparian habitat along the Rio Grande in Albuquerque near Shining River Parking Area, Albuquerque Open Space.

EVALUATION

Blog Evaluation

Engagement

Considerable effort was made to make the blog an effective resource and easily accessible to teachers. An instructional document was reviewed at the teacher workshop and made available to them to return to at any point. We also included links to curriculum and extension activities on their blog page, hoping that might encourage teachers to visit the blog more frequently. Additionally a monthly newsletter was sent out to encourage posting, with links to the instructional document and other helpful resources. Our aim was to continually remind teachers to post and make sure the information they needed was easily accessible.

Of our total number of classes, Kidblog was used by 71% of RiverXchange teachers this year and the number of blog posts ranged from 1 to 32 per class over the year. This is a similar rate of use to last year. Teacher feedback suggests that many still feel challenged about how to incorporate blogging into their classrooms as a lesson for students. One North Valley Academy teacher reached out directly for support and Erin Blaz visited his class to do an in-class tutorial of posting on the blog. This visit was highly informative as Erin was witness to some of the issues that occur from getting students onto the blog and submitting their work. However, other teachers still express that they think the blog is an important aspect to the program, as it allows students an opportunity to enhance writing skills, think critically and reflect upon what they have learned.

We ran a contest this year for creative and excellent blogging. We used a rubric to score posts for each class to determine the winner. While class use and posting was about the same as last year, this year posts were more creative and used a wider variety of media. Some favorites were videos using the changing river model, artwork that modeled stormwater impacts on a city and PSA's on poster boards that encourage water conservation. Two 1st place winners received $75 gift certificates to Acorn Naturalists, and five 2nd place winners received $25 gift certificates. The original 1st place prize was going to be a rolling river presentation or edible aquifer activity, but with school closures that was not possible.

Considering the likely need for online technology next year and teacher familiarity with the blog, RiverXchange will continue the use of Kidblog.

Student Voices

Student voices rang loud and clear this year in support of conserving water, keeping trash and pollution out of stormwater and the importance of Rio Grande!

The following are examples are from this year's students:

NEW MEXICO CLASSES

Thank you for the presentation 😃.

What we learned was clean up dog poop, or if we don't the river will be contaminated water and will kill the fish. If you litter you can kill animals so we learned that we should CLEAN UP DOG POOP!

What can we do? We can put more trash cans and recycling bins, we can ban plastic stuff. We can save more water. The community can clean trash🗑. We should make more electric cars🚗. We can stop pollution from happening in water 💧.

Hello Again! Today we'll be discussing a pretty fun topic. Storm water! A better name for storm water is polluted water! This is a bigger issue than lightning and thunder! ***We need to help save local rivers anyway we can!***

In our presentation, we learned how contaminated our river gets every time it rains. These things get in to our river and poison it...

1. Pesticides. Pesticides hurt our river by running into the Rio Grande, poisoning our fish and killing our algae witch is vital because the fish eat it!

2. Fertilizer. Extra fertilizer run into the Rio Grande because we put too much on same things with Pesticides! Any way the fertilizer does what it was meant to do under water. They make the algae grow too much and use up all the river oxygen, killing all the living things in the river!

3. Poop. All kinds of poop hurts our water! Cow poop, dog poop, etc. They release germs like E-coli into our water which is very difficult to filter out!

4. Factory oil. They harm our river by leaking or dumping their left over chemicals into the Rio Grande! The chemicals can harm the water in many ways!

5. Livestock. Livestock can harm our river by eroding the soil so we end up with slit and dirt all mixed in!

6. Trash. Trash is a very big factor. Trash floats through storm drains and blows in the wind to our river and kills fish because they swallow it.

There are a ***lot*** of things that pollute our water. We are not that happy about that.

Here are some solutions to the problems we have with our river pollution!

1. For your pesticides you can still put it on but just put the right amount on! The bag tells you how much to put on so put that amount on! Or you could use bug paper.

2. Fertilizer is the same. You can still use but just put the right amount on!

3. Pick up your animals poop! This will help decrease the pollution greatly!

4. You cant do a lot about the factory oils. But you can write letters to important figures asking to make dumping your chemicals in the river illegal!

5. How we can help the issue of livestock is, if you own livestock put a fence up around their pastures and living areas so they can not wonder down to the river and pollute it!!!

6. For trash the easiest solution to this problem is to not litter and if you do pick it up!!! But we have a bigger idea! We will try to get plastic water bottles banned in our school and try ***TRY*** to get them banned in New Mexico! Plastic bags were banned so why cant plastic bottles be banned to!!!

Trout

The Bosque means forest in Spanish.People plant native trees in the Bosque because they don't regrow by them selfs.We all agree that we all enjoy being at the Bosque because the feel of nature, planting trees, smelling fresh air, and helping the environment. Aswell as having the feeling of after planting a tree.we all felt proud, exhausted, and seeing the planted trees was beautiful.Our class planted 17 trees!We all love the beautiful nature aswell. We recommend going to the bosque because you can ride your bike around or walk and see the sights, the smells, and the feeling.There are animals there too! Like fish, squirrels, porky pines, eagles and turtles. It is worth going to the Rio Grande.

Feb 27, 2020, 1:34pm (209.189.162.95) Edit | Remove | Reply | Approve



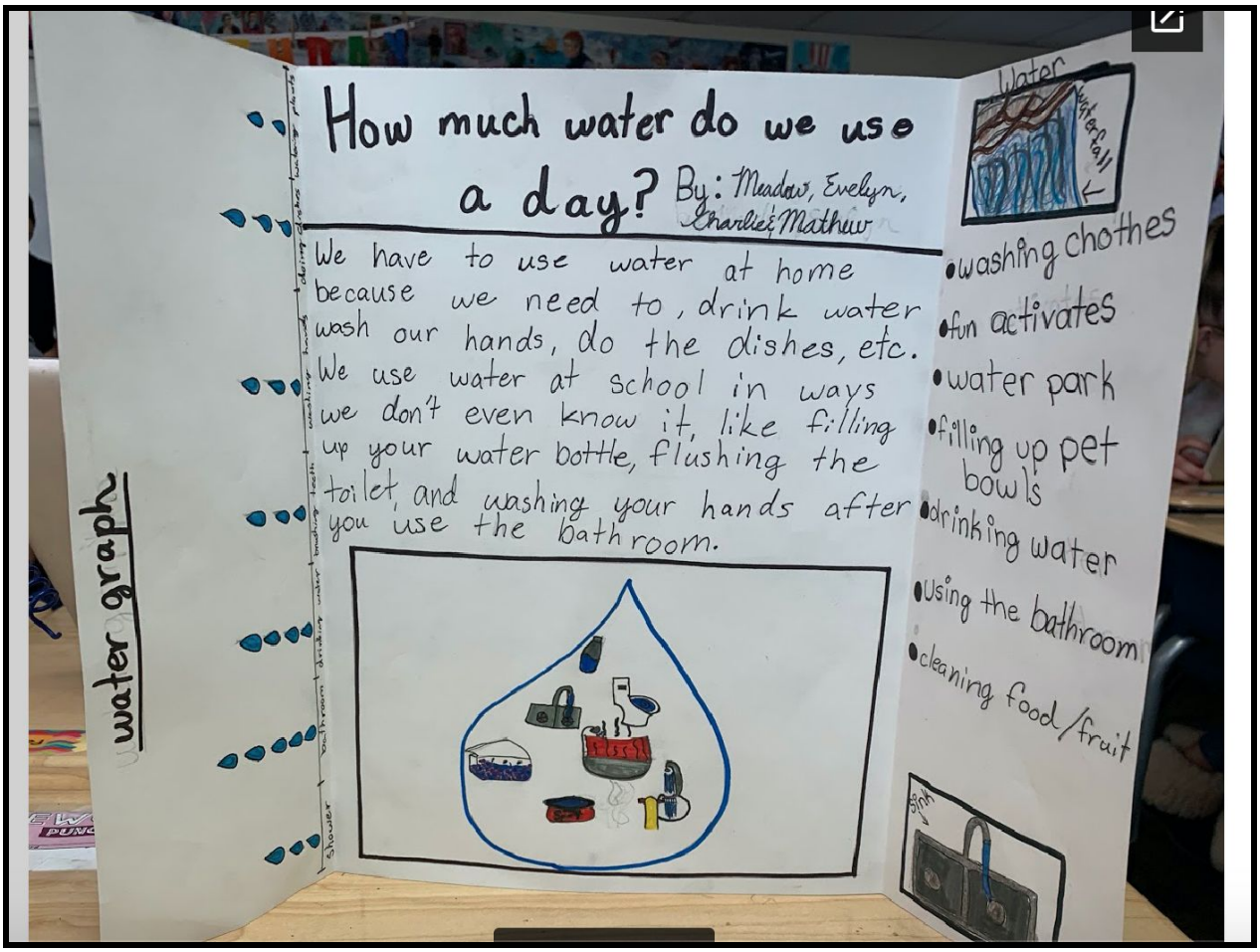
This image shows how everywhere that you go, you'll always see pollution, stores, neighborhoods, schools, farms, anywhere, you'll always see pollution. Not only will you see trash as pollution, you can see chemicals or polluted liquids like, Oil, Gasoline and Sewage. You can also see smoke from factories and animal droppings! We should always try to be responsible and try to stop throwing our trash on the roads.

save the planet



By Irrigation Insiders on Nov 20, 2019

So I want to write this because we need to save all the beautiful animals that are being affected by pesticides and cow mi-newer.Did you know that point source pollution is were you can see the point that the pollution is coming out of.Non point source pollution is were you cant see or don't recognize it like pesticides and animal wast.In concoction don't use pesticides.



Waste Water

By Snakes on Jan 9, 2020

We learned about waste water presentation. There is a bar screen that catches every thing that clumps up that goes down the drain or toilet. Even though there is flush-able wipes your not supposed to flush them down the toilet because they can clog your toilet. Every thing that you flush down your toilet ends up turning into sludge. Waste water goes to a waste water facility and once it's cleaned it goes back into your house to be used as waste water again. A machine that cleans the waste water is called a clarifier and how the clarifier works is the waste water goes into a huge bucket and a metal arm skims the top of the big bucket of waste water and picks up the trash and waste. The last part of cleaning the waste water is called a digester, it injects chlorine into the dirty water and once that is done and the water is clean they relies it back into your homes.

Pole Planting

By Snakes on Mar 9, 2020

We went on a field trip to plant cottonwoods. We planted them because older trees are dying and we don't want them to die out. We used augers to dig the holes for the cottonwoods. We had to dig holes 10ft to 12 ft deep to get to the water line and so the trees can take root. We split into teams and took turns twisting the augers. When we pulled the augers up from the ground it was heavy because of the dirt. As we got down to the mud it was even heaver. When we thought our hole was deep enough we would yell "tree check." The conservation officers would come and see if our hole was deep enough. The poles were limbs from older cottonwoods. At the end we sat at the bank of the river and had lunch. In all we planted 39 poles. It was a great learning expirience.

PARTNER CLASSES

Should you drink New Haven River Water?

By Quinby on Dec 6, 2019

After testing three different rivers for four different things. PH, Nitrates, Dissolved Oxygen, and Temperature, New Haven water is not perfectly clean, but still drinkable. After struggling through knee deep water, my class and I have established that water in New Haven is clean enough to drink, at least after you treat it. To go along with that, my class also used leaf-packs, nets with leaves in them, that allow animals to live inside of them. We put them in the Mill River, and retrieved them two months later. We found so many macro-invertebrates, it was hard to believe! We found a lot of Macro invertebrates that could only live in clean water, which means that they were group 1.

FRESHWATER MUSSELS

By Wetland on Nov 25, 2019

Freshwater mussels live in streams they filter feed to stay alive.Freshwater mussels are related to water quality because.They filter feed and make the water clean.I learned that the mussels filter feeded and made the foggy dirty water clean.I learned how the mussels life cycle goes.They are born and spit onto fish gills when they are ready they are dropped and the mussels grow.`

the housatonic river and long island sound

By Harbor Seals on Dec 6, 2019

the housatonic river starts in massachusetts and goes into long island sound. There are a lot of things to do in the housatonic river like fishing and activities like hunting for animals.There are alot of types of fish in the housatonic river like the striped bass,brown trout,blue fish,white perch,mouth bass,sea bass and many others.

Student Evaluation

A key component of RiverXchange is measuring student learning outcomes. We collect quantitative data on learning outcomes and behavior changes by way of a pre and post survey. We make qualitative observations by reading what students submitted on KidBlog. In 2019 we were able to compile comparative metrics from the last 4 years of RiverXchange surveys to observe the longitudinal impacts of our program. Working with a team, we continue to refine the survey questions to better reflect RiverXchange learning objectives, while maintaining the ability to track comparative learning outcomes across years.

Pre/Post Behavior Survey

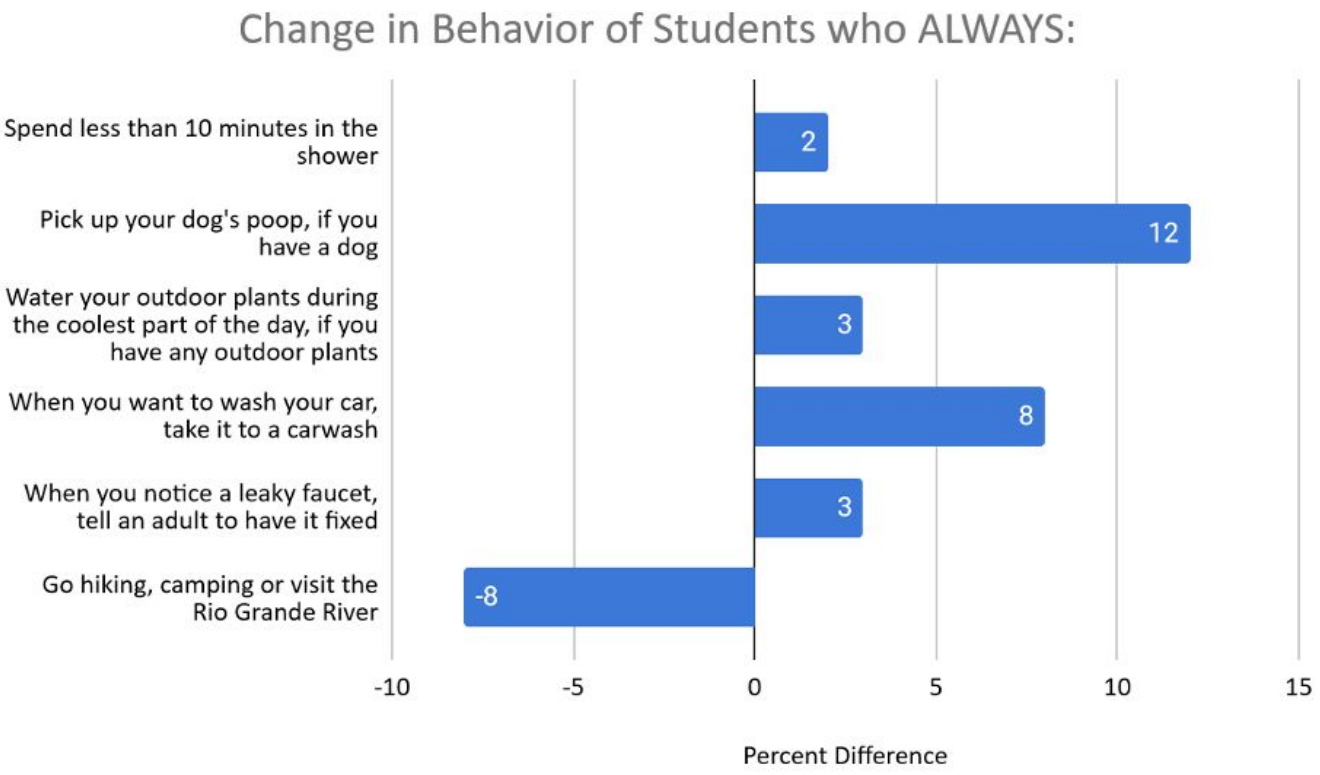
In order to quantify the learning outcomes achieved through RiverXchange, we ask our teachers to have their students fill out a survey prior to, and upon completion of the program. This year's survey was updated in summer of 2019 to reflect the suggestions for improvements that were identified at the end of 2018-2019. The survey went from 18 questions to 13 in an effort to be more concise and eliminate questions that were found to be irrelevant to programmatic impact.

Below, you will find a series of graphs used to illustrate the change in responses between the pre and post surveys. This year, 795 students completed the pre-survey, while only 410 completed the post-survey. This was due to school closures occurring right after post-surveys were distributed to teachers. Most students completed the survey from home. In order to account for the discrepancy in participation, the number of each given answer has been calculated as a percent of the total number of responses received for each given survey.

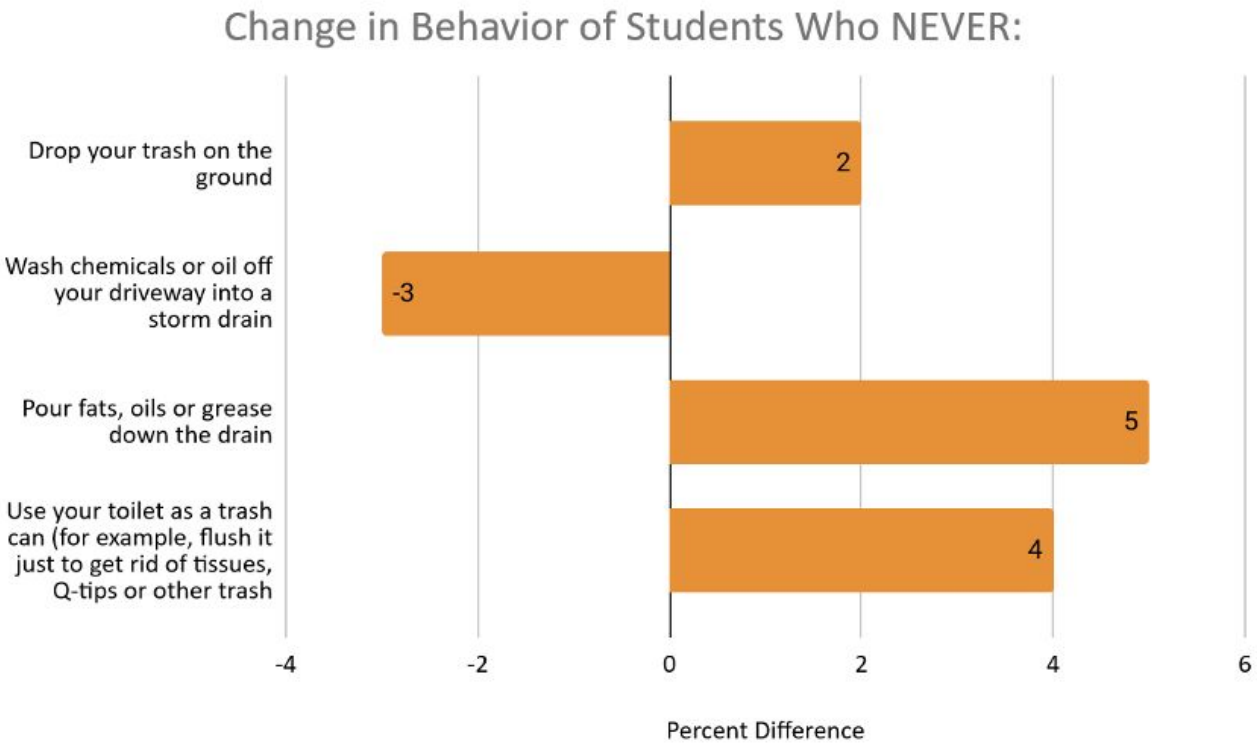
The metrics demonstrate an overall positive increase in students' knowledge about local water resources, water conservation strategies, and human impacts on water quality. After participating in RiverXchange more students correctly defined a watershed, the annual precipitation in our region and the origin and outlet of the Rio Grande. In reviewing the graphs, notes were made below on findings that were significant, or on areas where the survey needs to improve. The first question below aims to understand how students' water conservation and environmental behaviors change after taking the program. The final question highlights some responses from the open ended question: *Do you think everyone has a right to water and why?* You will find some passionate, thoughtful, and critical responses that tell us that even if they don’t fully understand what happens along the stormwater pathway yet, they overwhelmingly understand that water is life and has to be protected.

Item # 1: How Often questions

The following two graphs demonstrate the percent change in responses on questions that reflect positive and negative behaviors in regards to water consumption and conservation. The questions are framed as "How often do you…?"

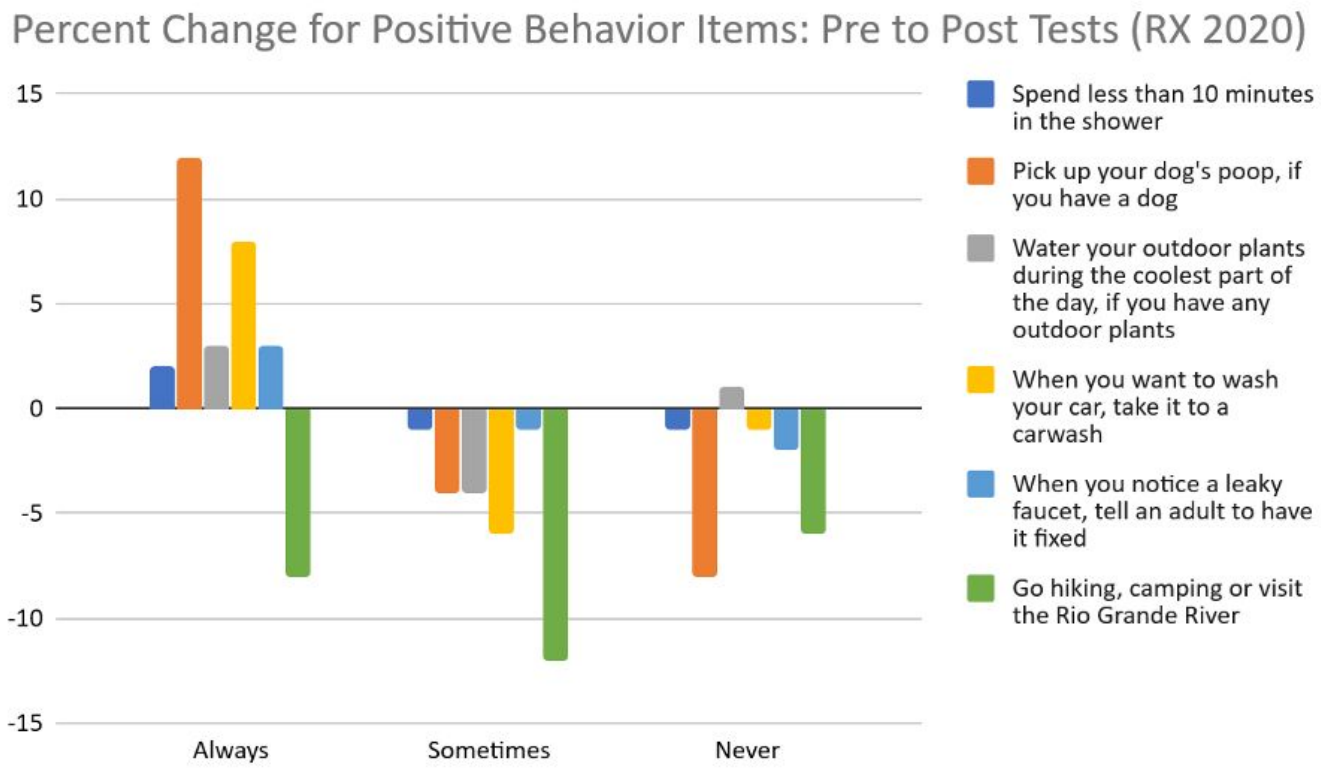


- After going through RiverXchange, 12% more students said that they pick up their dog poop (i.e. 12% more students said they learned from the program and report to have changed behaviors from the pre to the post test). However, in the pre-test, more students reported going hiking and visiting the Rio Grande than those who reported this behavior in the post-test. Two considerations are taken into account for the negative percent change in students reporting camping, hiking or visiting the river. One is that the stay-at-home order might have impacted their response and students are answering literally not in the context of normal family behaviors. Another is that once students participate in the pole planting field trip, where they walk a good distance to the river and find themselves surrounded by nature without a house in site, they might reconsider their initial answer with a different perspective on what it means to visit the river.

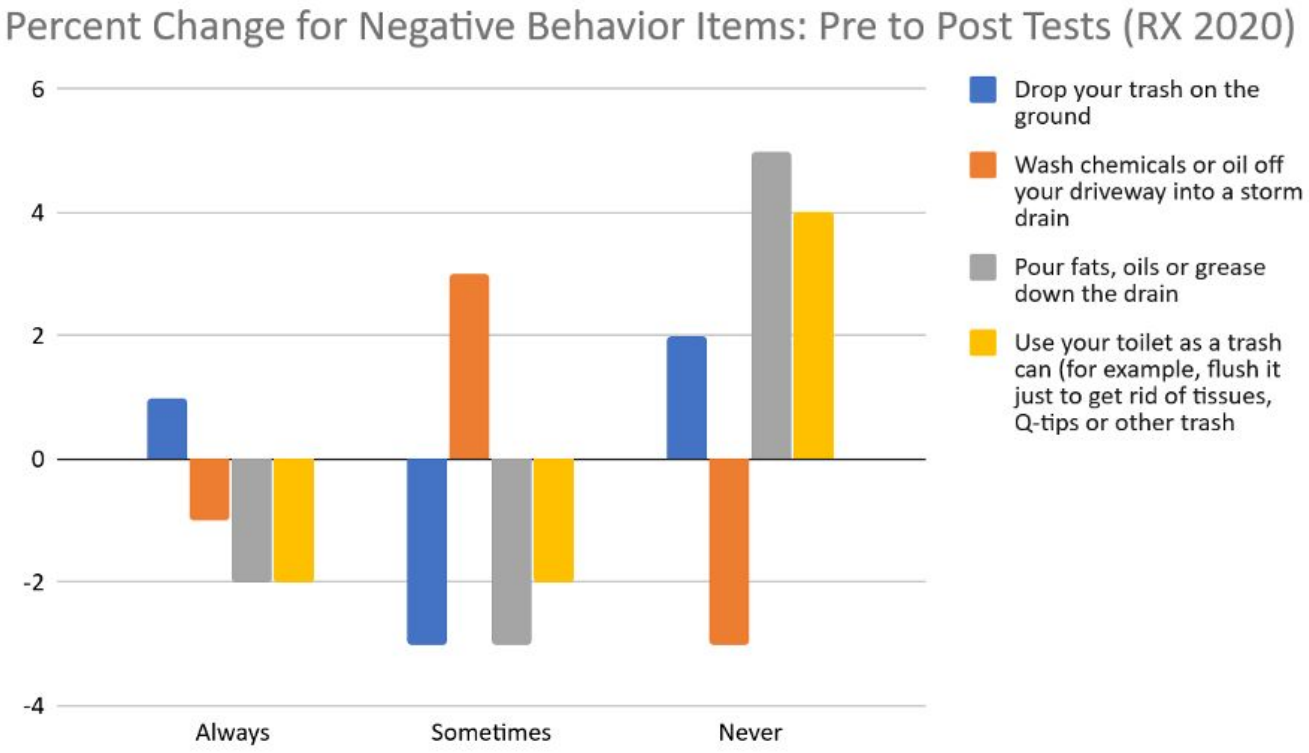


➢ In the post-test, 5% more students reported to NEVER pour fats down the drain. This means that they gained valuable information from RiverXchange and report to change their behavior (likely because of the program itself). However, we see that more students reported to NEVER wash chemicals or oil off the driveway into a storm drain in the pre-test than they did in the post test, resulting in a negative number. Likely, this is just due to error since it's such a small percentage and that there was really no change.

The following two percent change graphs include the ‘sometimes’ option for the ‘How often’ questions:

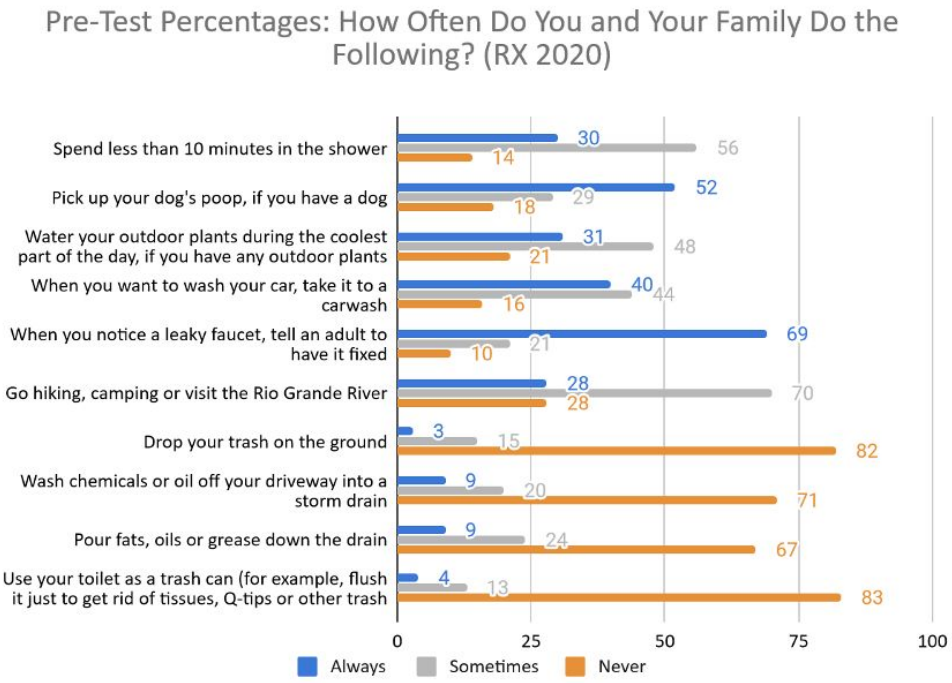


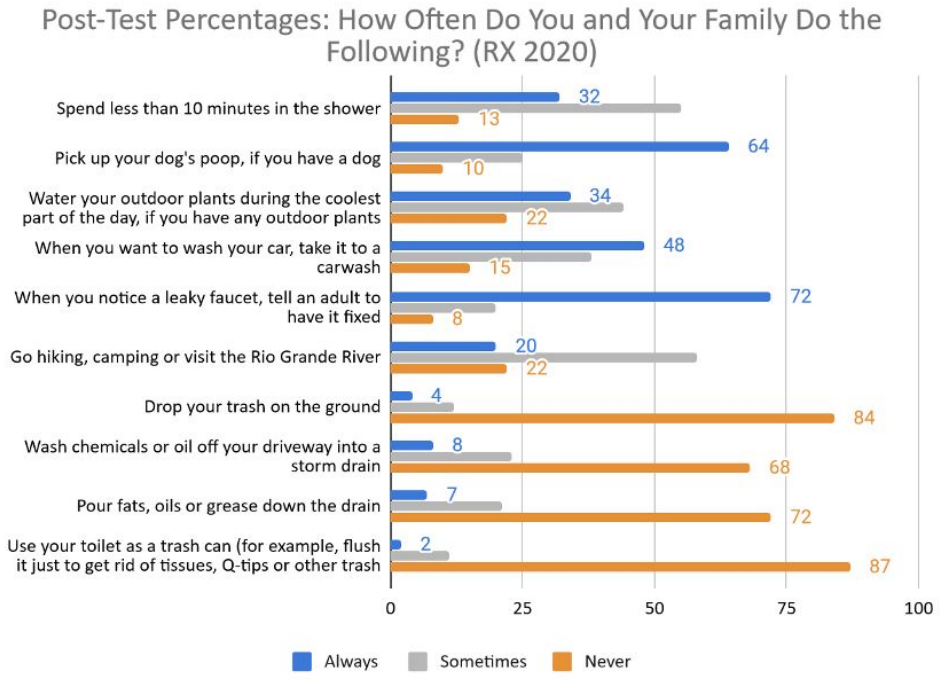
- Again, the most significant change is more students saying they always pick up their dog’s poop. However, it appears that both ‘sometime’s’ and ‘no’ answers decreased slightly, meaning that some students' behaviors changed for the positive.



➢ The increase in responses from never to sometimes "washing chemicals into a storm drain" is interesting here. This may be a case of students answering more honestly if they observed or participated in this at home after they learned about stormwater pollution.

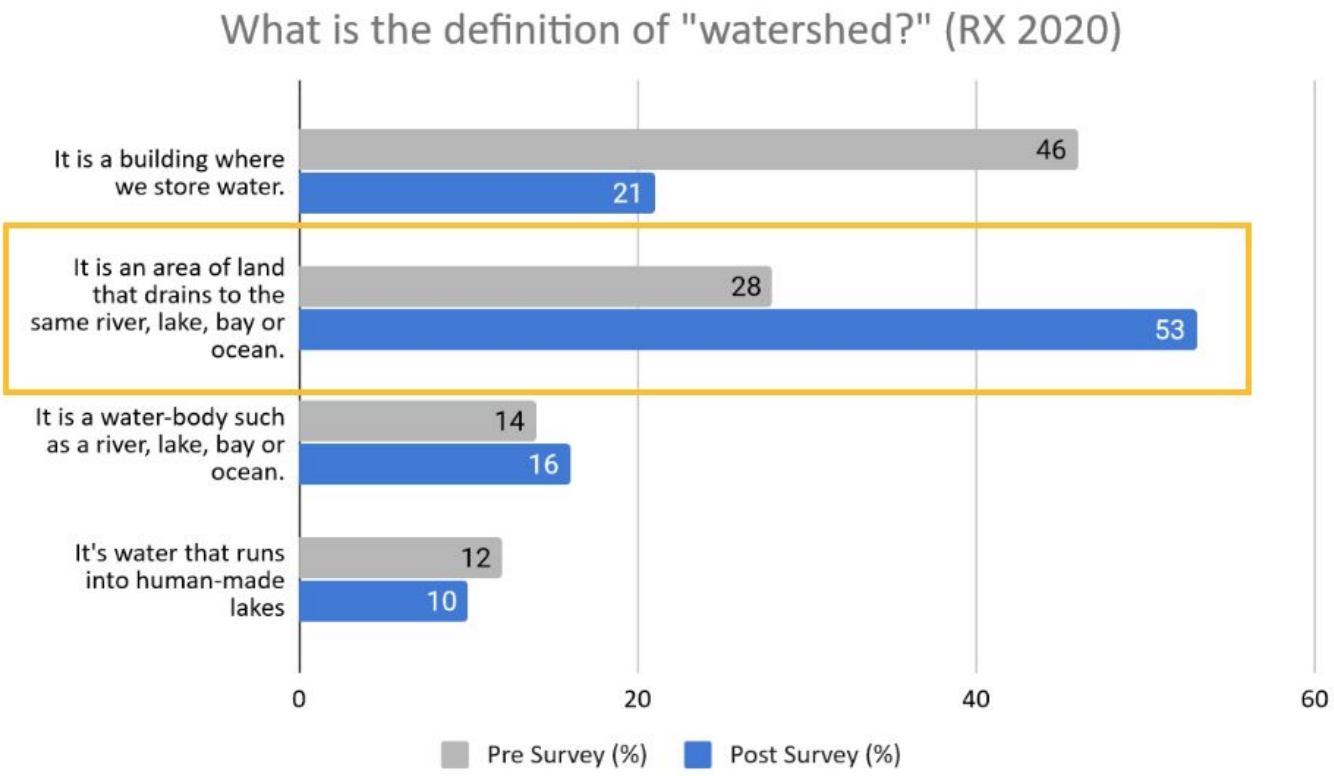
The following graphs are the raw percentages for the pre and post *how often* survey questions:



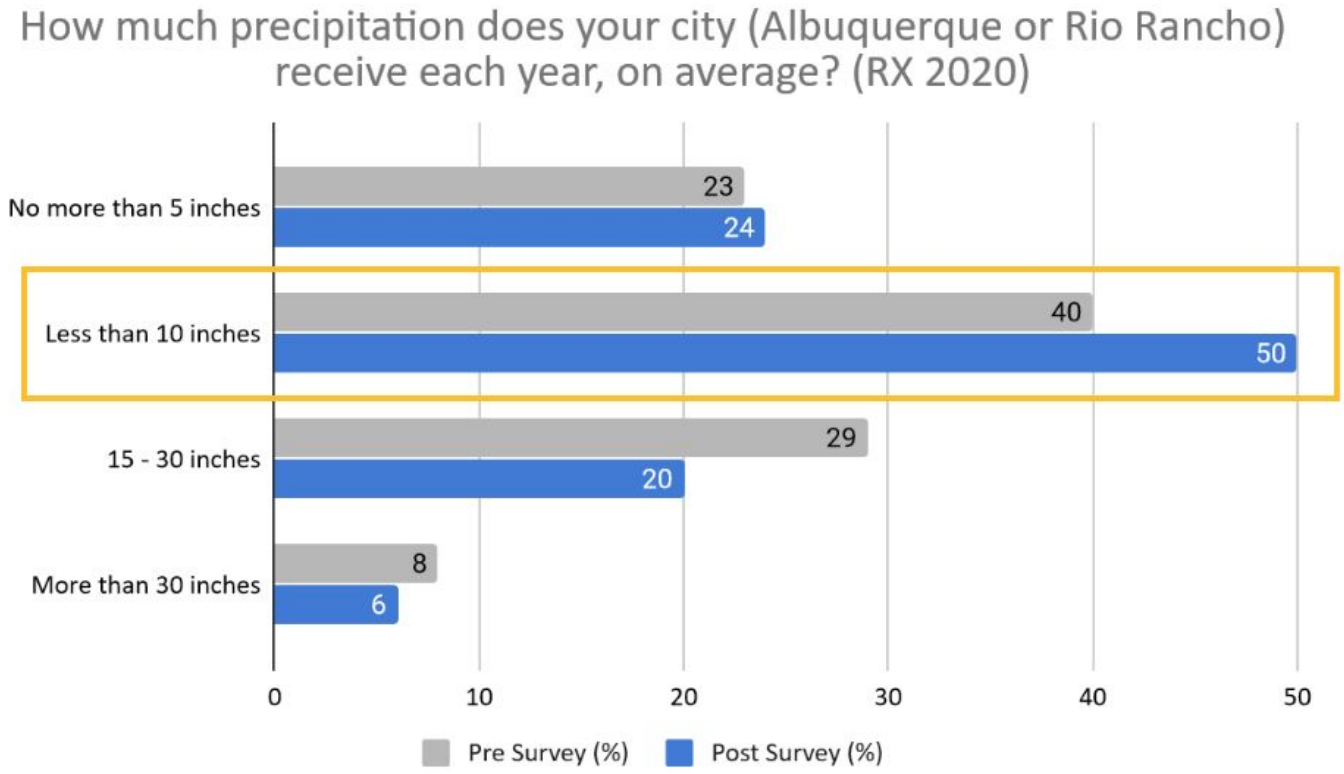


The next section of survey questions correspond to the learning objectives of RiverXchange and demonstrate student learning outcomes from pre to post evaluation. Correct answers, where applicable have been noted with a yellow outline or stars.

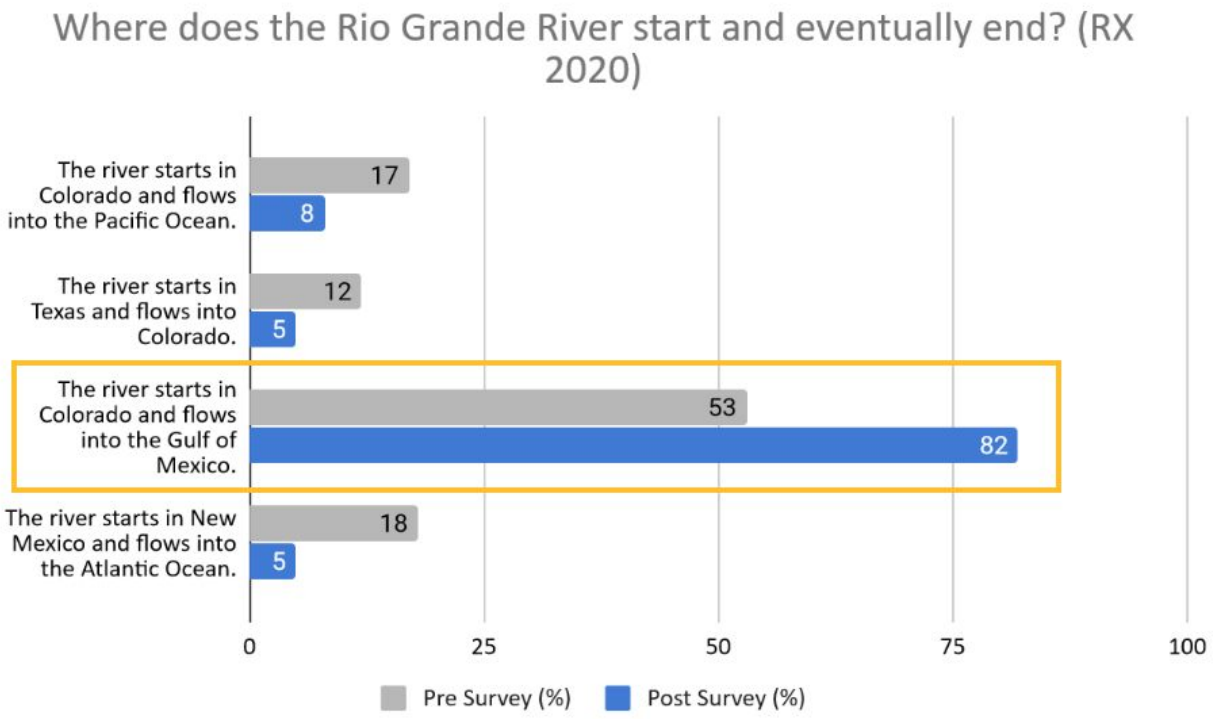
Item # 2: What is the definition of a "watershed"?



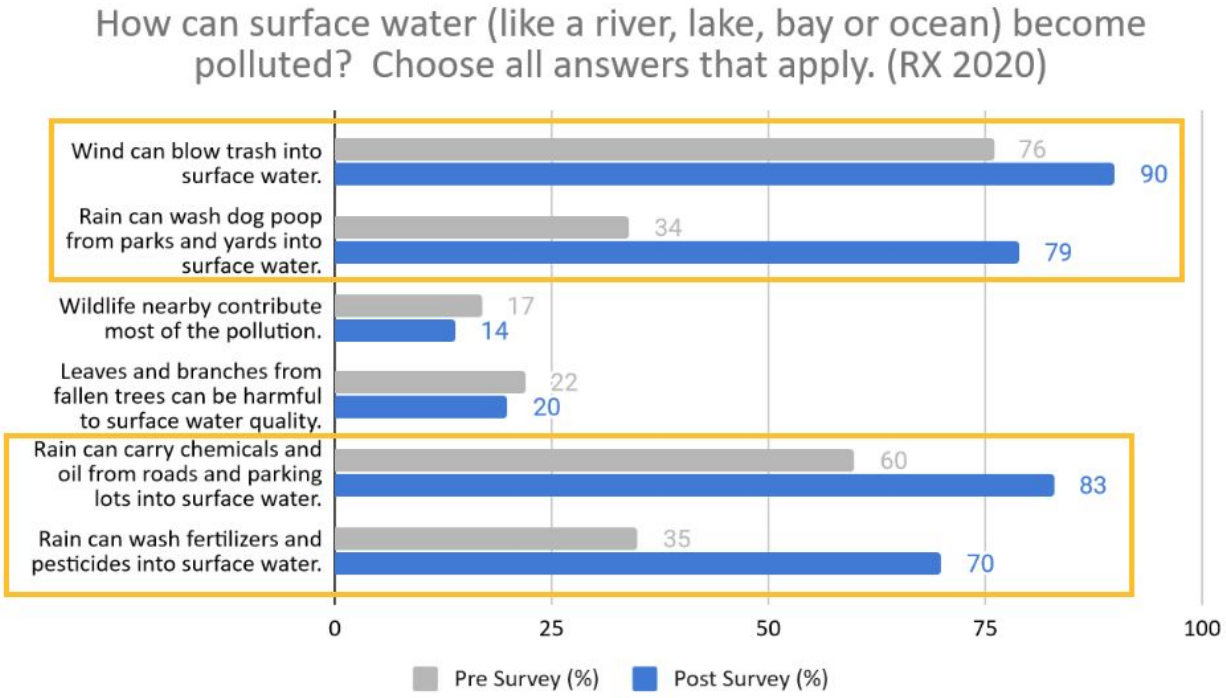
Item #3: How much precipitation does your city receive each year on average?



Item #4: Where does the Rio Grande River start and eventually end?

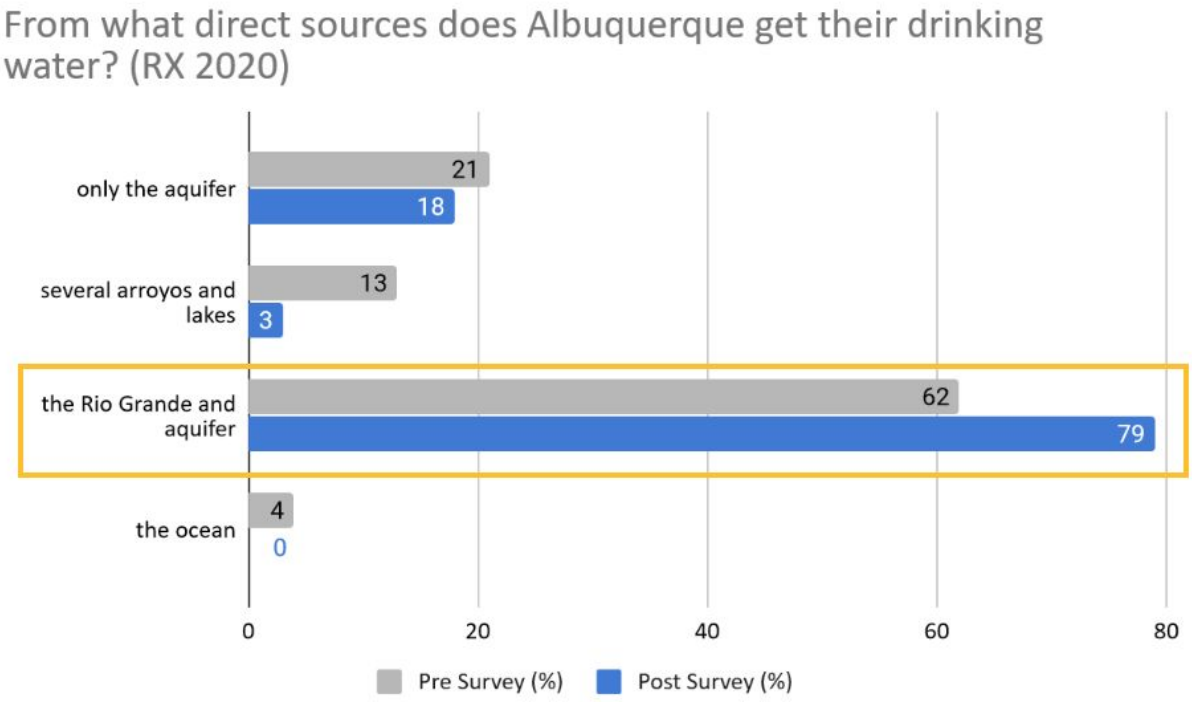


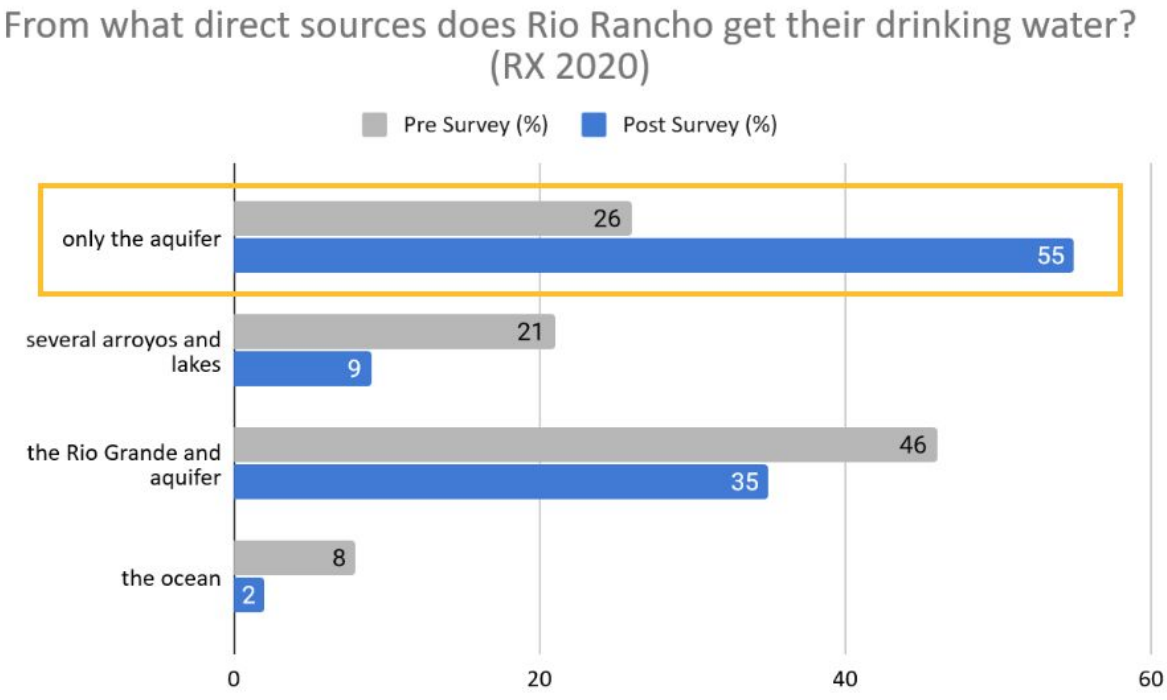
Item #5: How can surface water become polluted?



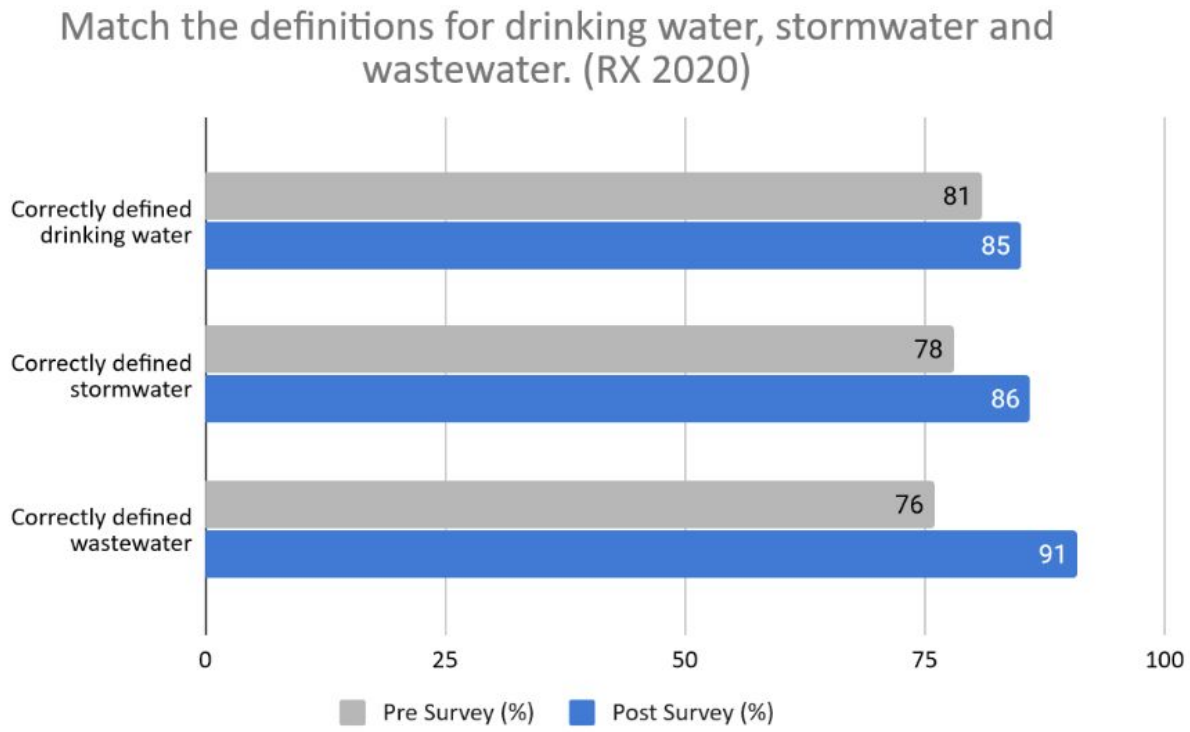
- Responses to this question were adjusted from last year to remove "all the pollution comes from factories" and "all the pollution comes from just a few people" as those answers seemed too obvious. Since this question allows for multiple responses, students who choose the incorrect answers are likely also choosing correct answers. We do see a reduction in the incorrect responses from pre to post survey. With the change in responses it may mean that our stormwater presentation may also need to incorporate some myth busting as well to clarify the incorrect responses.

Item #6: From what direct sources does ABQ/RR get their drinking water? Students are directed to only answer the question for the city in which they live.





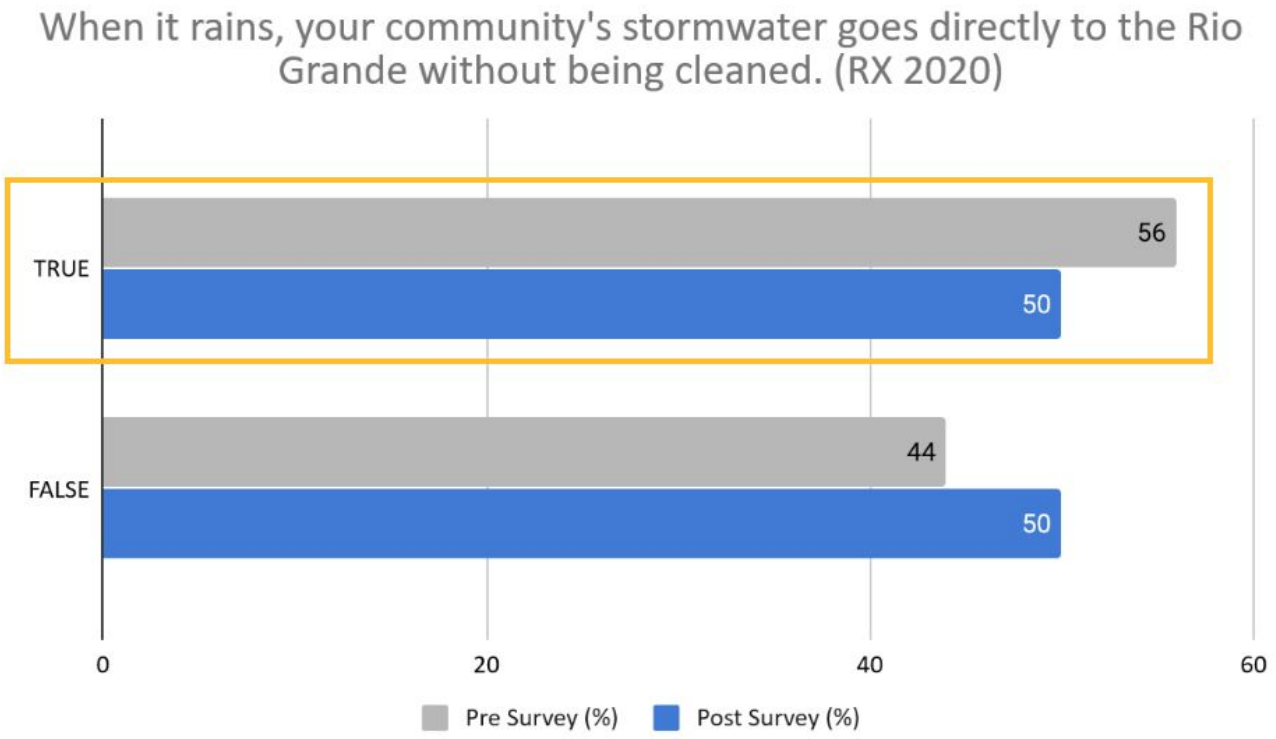
Item #7: Match the definitions for drinking water, stormwater, and wastewater.



|

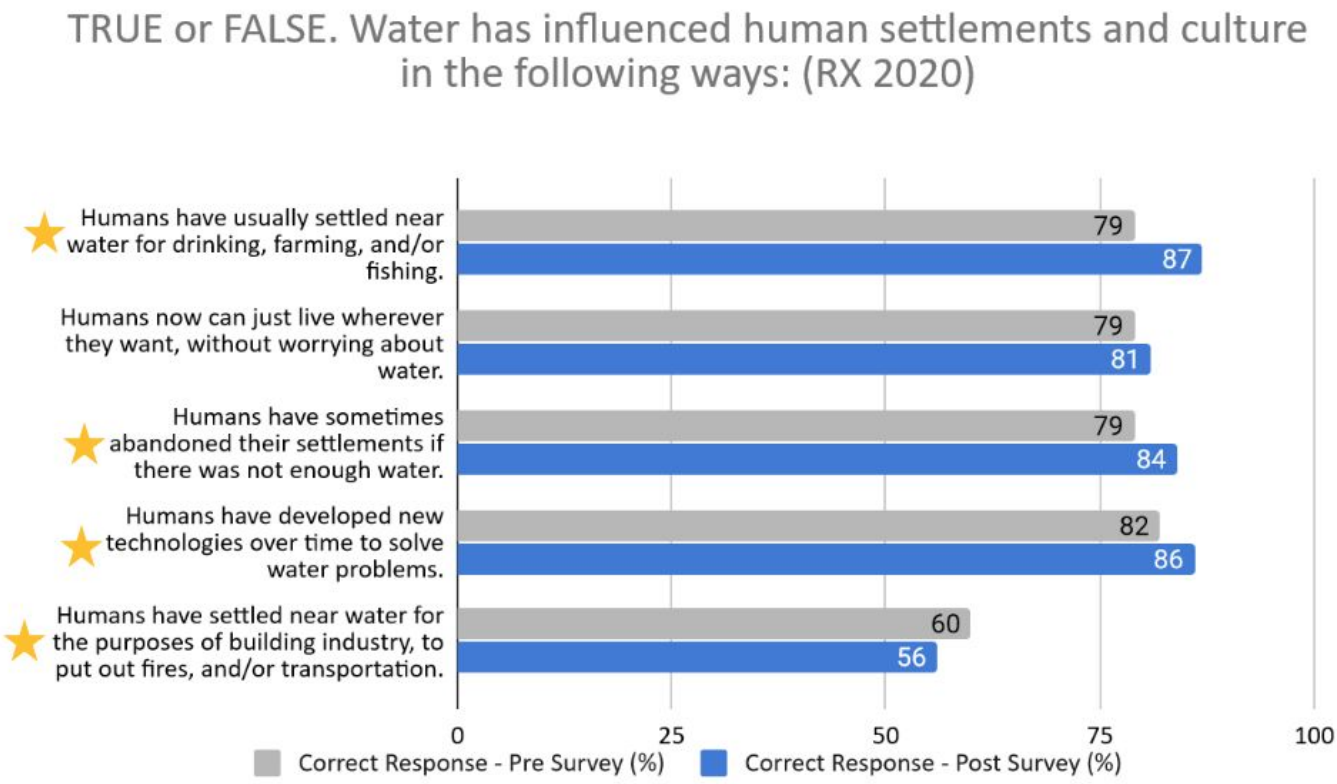
➢ The responses to this question do not suggest RiverXchange teaches these definitions to students as it may already be prior knowledge, although it may be that it is clear enough in the descriptions that students can easily choose answers correctly. We will explore if there is a better way to evaluate if students understand concepts that are taught about drinking water, wastewater and stormwater.

Item #8: When it rains, your community's stormwater goes directly to...



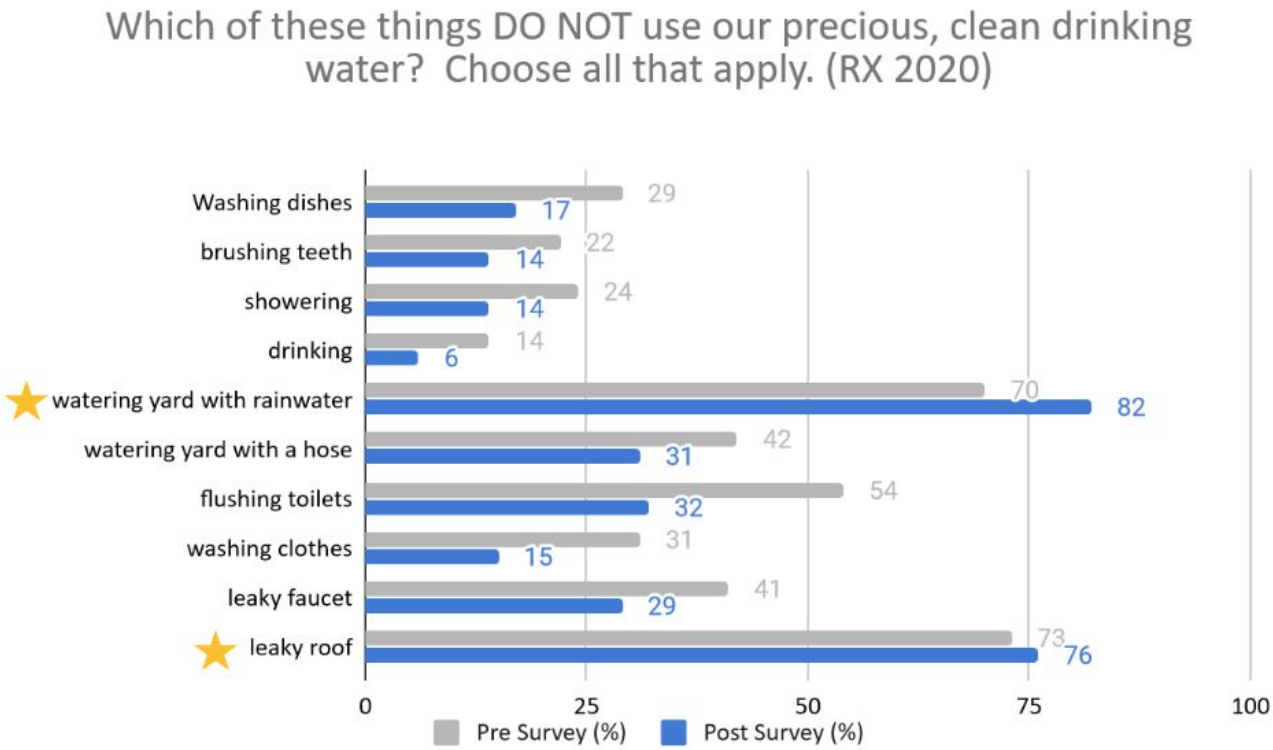
- This graph demonstrates a small decrease in correctly defining the stormwater pathway. This continues from last year, as we saw a similar percentage decrease in the correct answer. We met with presenters prior to program implementation this year and shared the concern about this misunderstanding and that it may be rooted in misinformation or confusion about a sewer drain versus a stormwater drain. However, we are still seeing similar results. It may be that there is confusion about a storm versus sewer drain. It could also be that presenters are discussing green stormwater infrastructure techniques that might lend students to think it is cleaned. They may also be another variable that is influencing this result that we have yet to identify.

Item #9: Water has influences human settlements in the following ways:



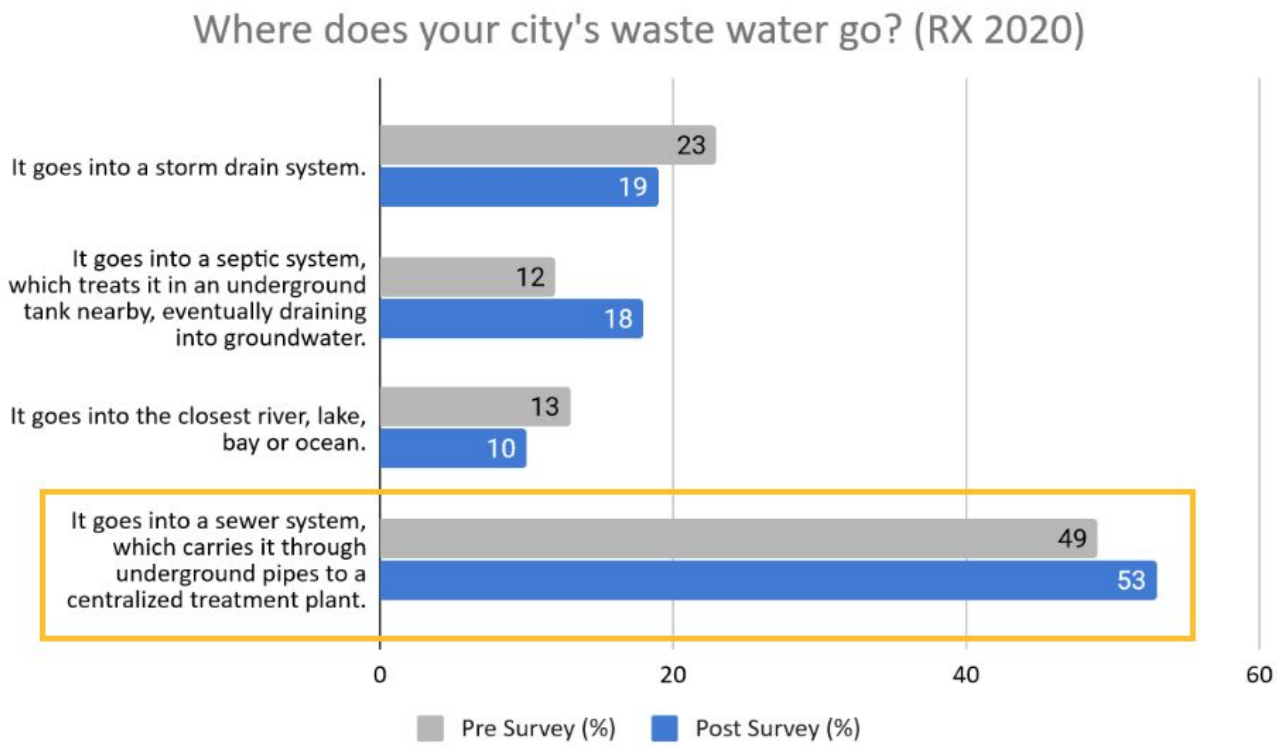
- This question was adjusted from last year to allow students to choose true or false for each response, rather than only picking true answers. We see students are answering correctly in high percentages on the pre-survey but there is still positive growth for each answer, except the final "Humans have settled near water for the purpose of…." This could be the result of the changes made in the APS agriculture presentation that highlights the historical and cultural uses of the Rio Grande with a focus on Puebloan and Spanish settlements. The discussion does not always reach modern commercial uses of rivers that are more relevant to waterways outside of New Mexico.

Item #10: Which of these things DO NOT use our precious, clean drinking water?



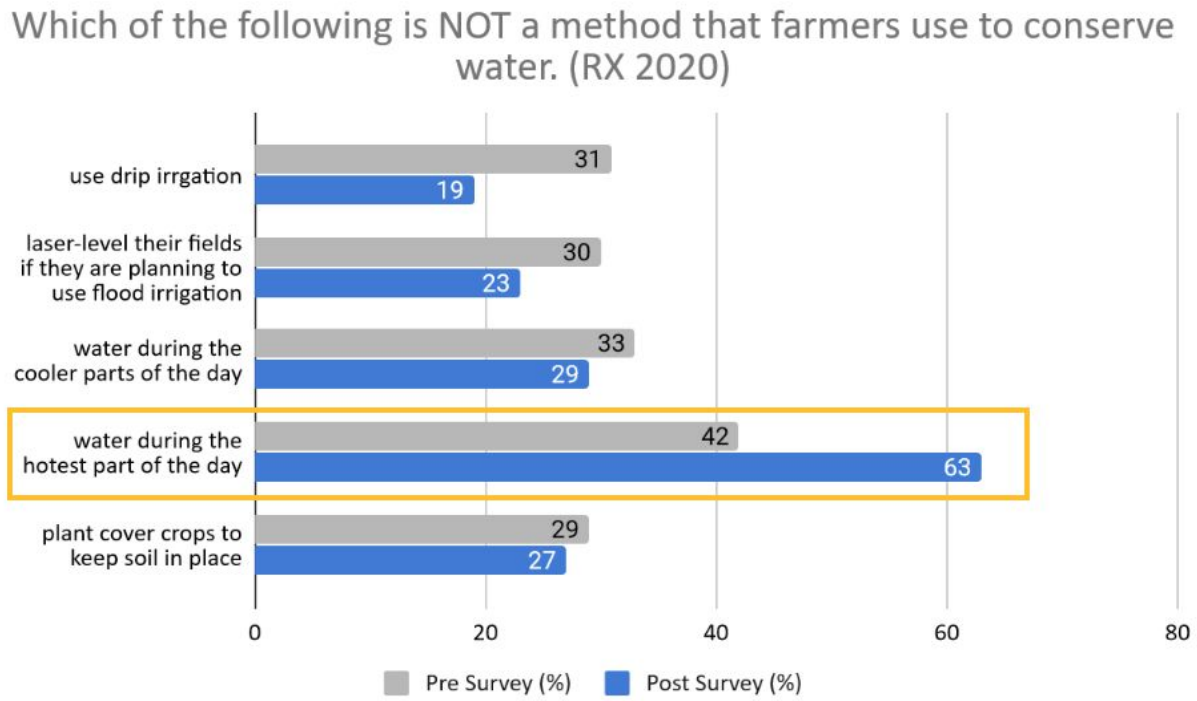
➢ This graph suggests that after participating in RiverXchange it was further clarified how often we use clean drinking water in our daily lives as the incorrect responses were reduced by 8-22 percent.

Item #11: Where does your city's wastewater go?



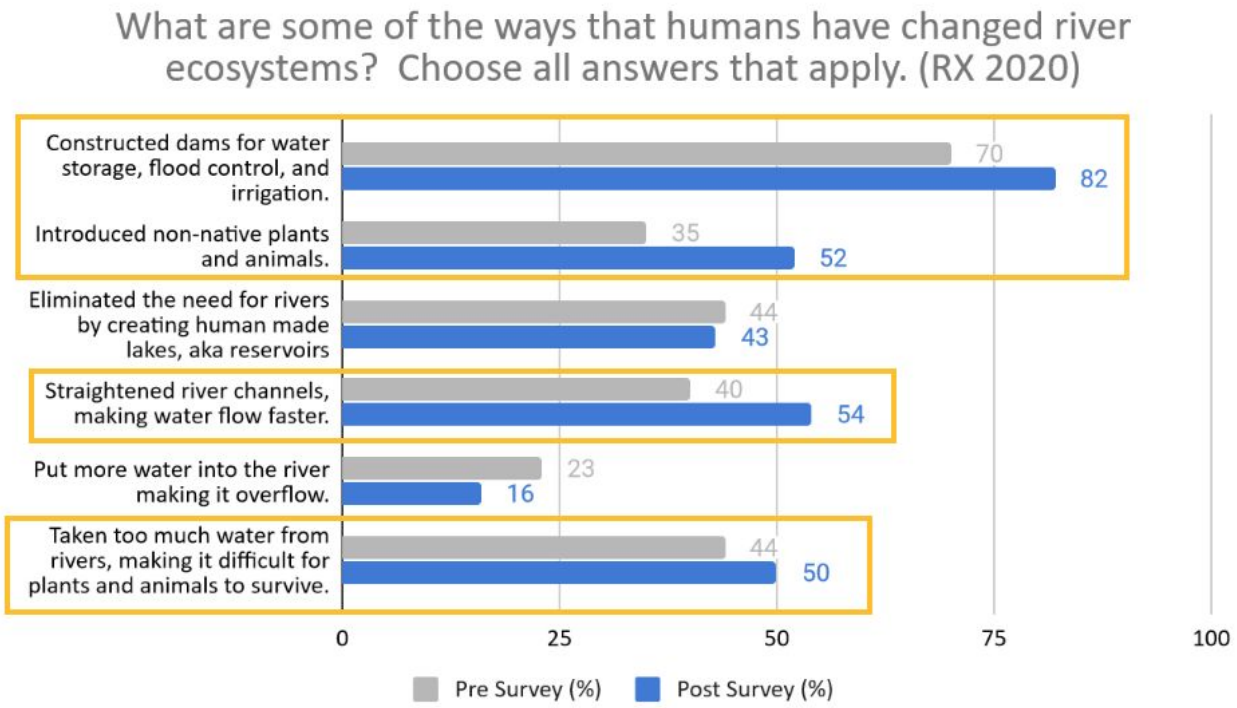
➢ This question was updated from last year's "When it rains, where does your community's stormwater go?" as the answer changes depending on where students live. The hope was that asking where your city's wastewater goes would prompt students to remember that Albuquerque and Rio Rancho have centralized treatment plants for the majority of residents. Considering that both incorrect answers saw a reduction in responses demonstrates that students are understanding that wastewater is either cleaned at a treatment plant or goes into a septic system (as is the case for many Rio Rancho students).

Item #12: Which of the following is NOT a method farmers use to conserve?



- Water conservation strategies for different farming methods and irrigation systems were only covered in the Sandoval County Extension agriculture presentation with Rio Rancho schools this year. Moving forward this question may need to be redefined or removed to account for the different presentations in each district.

Item #13: What are some ways that humans have changed river ecosystems?



- Overall this graph demonstrates that students increased their understanding of human impacts on river ecosystems. It is notable that their understanding of the impacts from the introduction of non-native species, straightening the river, and building dams significantly increased. The field trip experience really drives home a lot of key concepts about the Rio Grande's timeline and how anthropogenic influences on the river have impacted the riparian ecosystem.

Item #14: Does you think everyone has a right to drinking water and why? (short answer)

“Yes Everyone Has A Right To Drinking Water Because They Are Living Creatures They Need Water To Survive.”

“I think everyone should have a right to clean drinking water because water is a necessity to life.”

“Yes. If not everybody has water, then the human population will die off. I think that everybody should have access to water, especially in places where they don’t have access to supplies of water.”

“yes, I think that all people have the right to clean drinking water because humans need water to live and survive and people do have the right to live off of clean water for everyday use. Also all people should be treated fairly when it comes to drinking clean fresh water.”

“Yes! I think this because the government can’t be like you don’t have money for us so you can’t have water. That is basically starving them”

“Yes I do. I think this because everyone needs to drink water to survive and the water they drink should be clean so that they don’t get sick or get a disease.”

“I think everyone has a right to drink clean drinking water because if we drinker dirty water, we would be like Mexico because in Mexico, the only water they drink is dirty water and the people who live there often get sick by the water.”

“I think everyone doesn't have a right drinking water because some states have no clean water they still have water, but it's not all clean. Some people get sick from drinking dirty water all the time because there is no clean water.”

“This is a yes and no question for me. I don’t believe that people that waste our water should have any, but than again everyone needs water to survive. So I do think that people should have it because they need it, but some people just don’t deserve it.”

“Yes , I think that everyone should have the right to have clean drinking water . As long as people don’t waste it people should have it , and be great full for it to .”

“I think everyone has a right to drinking water but, some places in the world are really dry, so it's hard to find clean, decent drinking water.”

“Everyone of every race and country has the right to drinking water because it is a source of life and everyone in the world deserves it.”

“I think everyone has a right to drinking water because, in order to live as humans and as a community, we must have water. Water is life! But I also think everyone has a right to know how to conserve it!”

“Every one has a right to drink water because no one owns it”

Appendix 1 includes the extension activities from the RiverXchange curriculum, Appendix 2 includes photos.

Appendix 1
Extension Questions and Activities

Understanding Our Watershed:

River Geography



- **Suggested Reading:**
  - **Books:**
    - *Follow the Water from Brook to Ocean* by Arthur Dorros
    - *Paddle-to-the-Sea* by Holling C. Holling
    - *One Well: The Story of Water on Earth (CitizenKid)* Strauss, Rochelle
  - **Articles:**
    - *Albuquerque Journal:* "As Bad as it Gets: Drought Returns to New Mexico."
    - *Albuquerque Journal:* "Drought Affecting 99% of New Mexico."

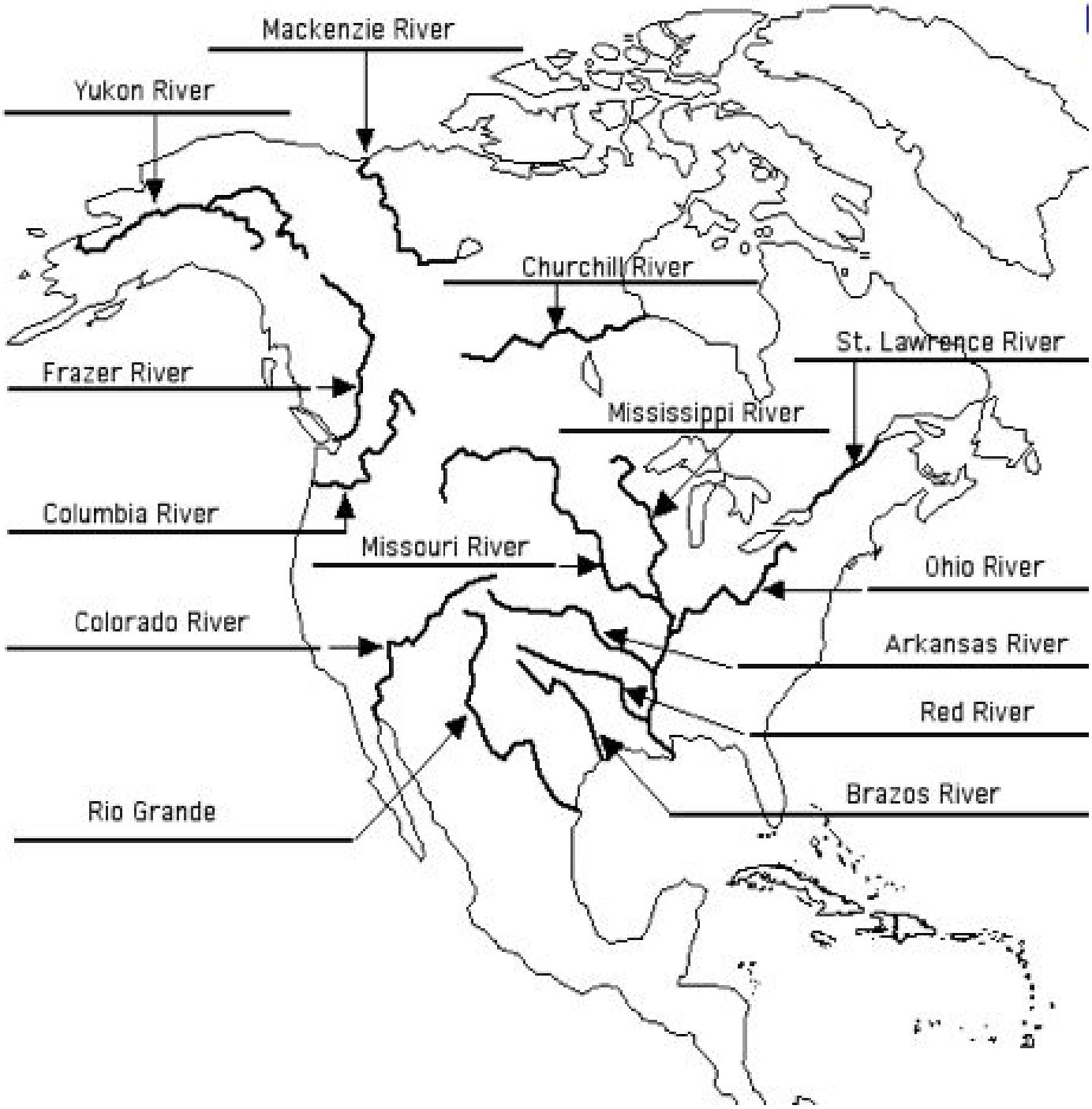
- **Watch:**
  - Watch Save Water - Save Our Rio!, a 17 minute video created by local summer camp students, sponsored by Albuquerque Water Utility Authority. Follow up with *When is the Drought Out?* http://www.abcwua.org/education/pdfs/Drought_GraphingOption.pdf

- **Write a letter to your partners or create a project, explaining:**
  - what a watershed is
  - the name of your river - this is also the name of your watershed!
  - the journey of your river from its headwaters to the ocean

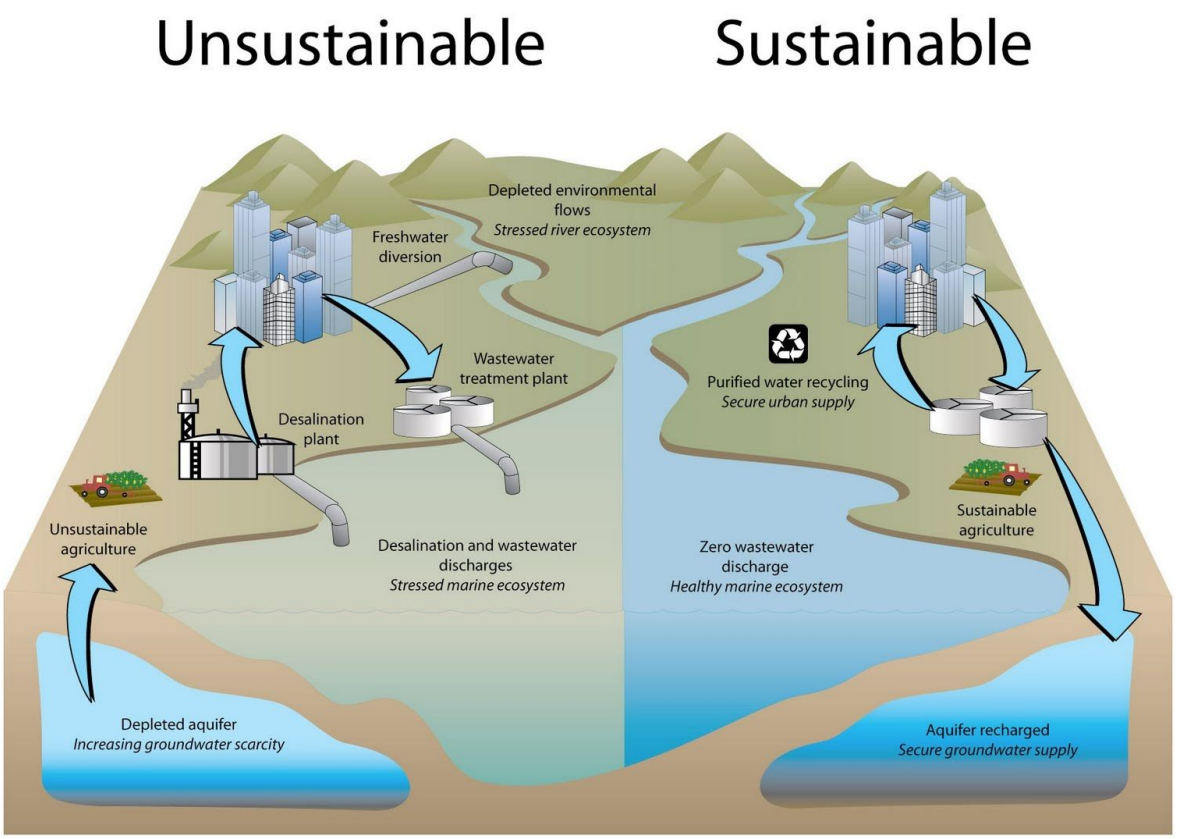
- ➢ what the river is like in your area - big/small, clear/muddy, fast/slow?
- ➢ how much precipitation your area receives each year, and what season gets the most precipitation

- ❖ **Want to explore further?** Refer to Project 1 in the RiverXchange Curriculum "Understanding a Watershed".
  - ➢ You can access the curriculum on your Kidblog homepage or by following this link: https://riverxchange.com/teachers2/curriculumpage/

North American River Map



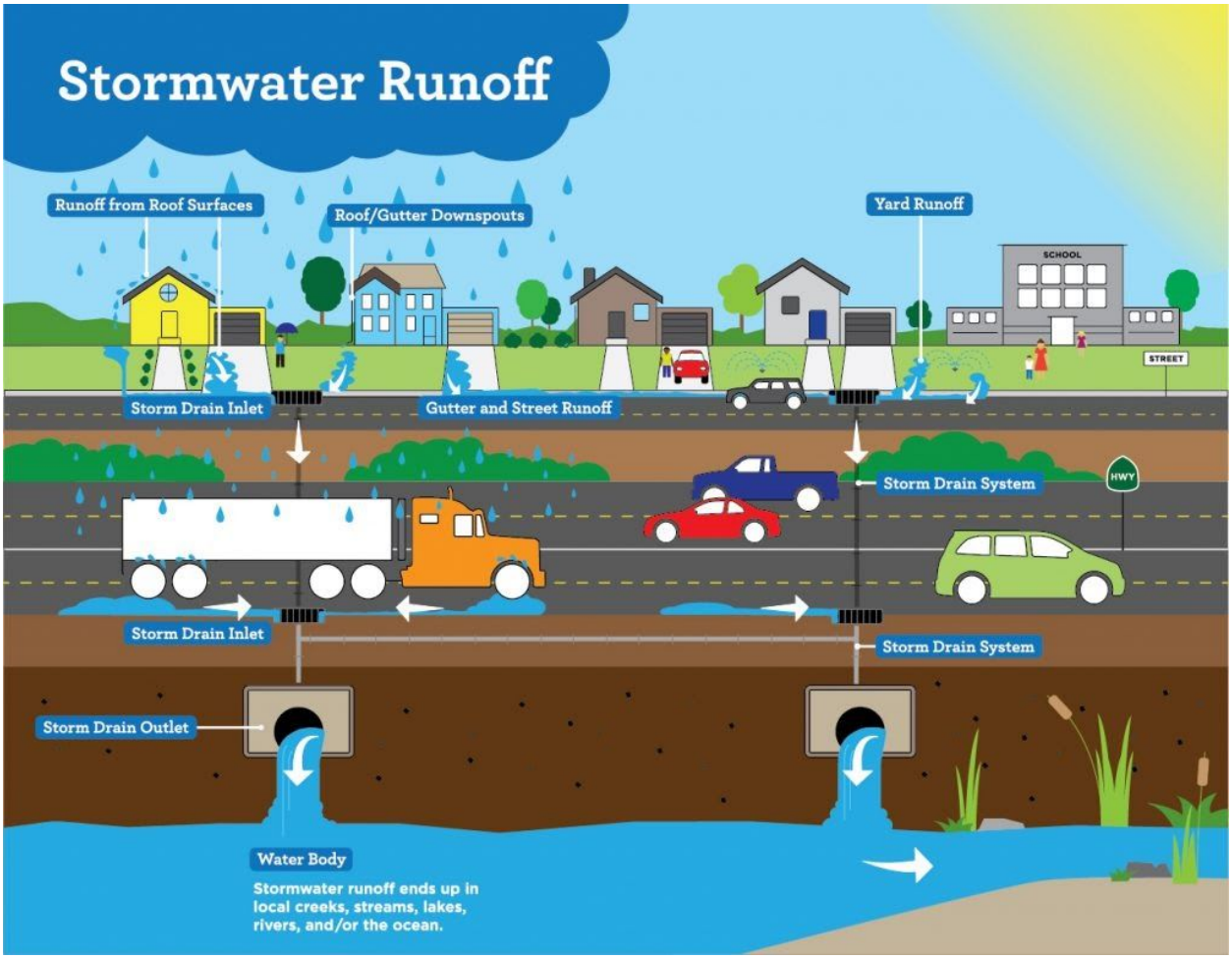
The urban water cycle



Clean Ocean Foundation 2009 - www.cleanocean.org

Understanding a Watershed:

Watershed Model / Infiltration and Runoff



Graphic credit: City of Columbia, MO

Enhance your student's blog posting and extend their learning beyond the Stormwater presentation with the following activities:

- **Suggested Reading:**
  - **Articles:**
    - *CNN* article. 2013. "Garbage Man of the River" http://www.cnn.com/2013/04/18/us/cnnheroes-pregracke-rivers-garbage
    - *Science News for Kids* article. 2012. "Suffocating Waters" https://www.sciencenewsforstudents.org/article/suffocating-waters
- **Watch:**
  - *The Human Solution to Water Pollution* video (to right of screen): http://sscafca.org/teacher-resources/
  - *The Majestic Plastic Bag* video (mockumentary): https://vimeo.com/14221747
    - For a 60 minute class activity, include this lesson to explore the Great Pacific Garbage Patch and what students can do to respond.

- Explore The Ocean Cleanup project and how an 18 year old started with a simple idea which is now making a difference in the effort to clean up the world's oceans.

❖ **Explore your watershed**

➢ Follow the link below to zoom in and explore your watershed and the watershed that family and friends live in, perhaps even your RiverXchange partners who live outside of New Mexico! Interactive Topographic Watershed Map of Earth

❖ **Lesson plan**

➢ *Don't Trash Our Rio Activity Guide* - A math based extension where students learn how much trash is pulled from Albuquerque's storm drain system yearly, and calculate how many trash bags or classrooms it would fill. (Follow links for additional handouts)

- **Reflection Questions**
  - Discuss how the gutters in our streets lead to **storm drains**, which often lead directly to the nearest body of water. Discuss the difference between **stormwater** and **wastewater** (from household drains and toilets).
  - What is stormwater and where does your community's stormwater go?
  - What did you learn about stormwater that was surprising to you?
  - How do things that happen in your yard or your neighbor's yard impact the watershed?
  - What have you noticed about stormwater in your own neighborhood?
  - What are some things you can do to clean up stormwater?
  - How can surface water become polluted?
  - What's happens when rain falls on a pervious surface compared to an impervious surface? Give examples of impervious surfaces.
  - How are groundwater and surface water connected?
  - What are ways you can minimize stormwater pollution?

❖ **Want to explore further?** Refer to Project 2 in the RiverXchange Curriculum "The Watershed".

➢ You can access the curriculum on your Kidblog homepage or by following the link below: https://riverxchange.files.wordpress.com/2018/09/riverxchange-curriculum-20181.pdf

Water in Our Society:

Drinking Water



Enhance your student's blog posting and extend their learning beyond the Drinking Water presentation with the following activities:

- **Suggested Reading:**
  - **Book:** *A Long Walk to Water*, by Linda Sue Park (2010: Clarion Books)
  - **Articles:**
    - **Albuquerque drinking water info**
      - from ABQ Water Utility Authority http://www.abcwua.org/education/pdfs/WaterUse_Text.pdf
      - About the San Juan Chama Project, ABQ Journal 2008: https://riverxchange.files.wordpress.com/2015/08/san-juan-chama-project.pdf
    - **Santa Fe drinking water info**
      - Buckman Diversion, ABQ Journal 2010: https://riverxchange.files.wordpress.com/2015/08/buckman-diversion.pdf
    - **Santa Fe drinking water info**
      - Buckman Diversion, ABQ Journal 2010: https://riverxchange.files.wordpress.com/2015/08/buckman-diversion.pdf

- **Lesson Plan: The Water Project**
  https://thewaterproject.org/resources/WaterLogs_5to8.pdf
  - Five simple activities and lessons to assist students in exploring how water scarcity may impact their lives and how they can contribute by conserving water.
  - Suggested activity: Students log their personal use and observation of other forms of water use over two days, then discuss their findings and explore what would happen if water scarcity were an issue. Another lesson also includes a TRUE/FALSE game to learn about water and how it impacts the human body and communities.

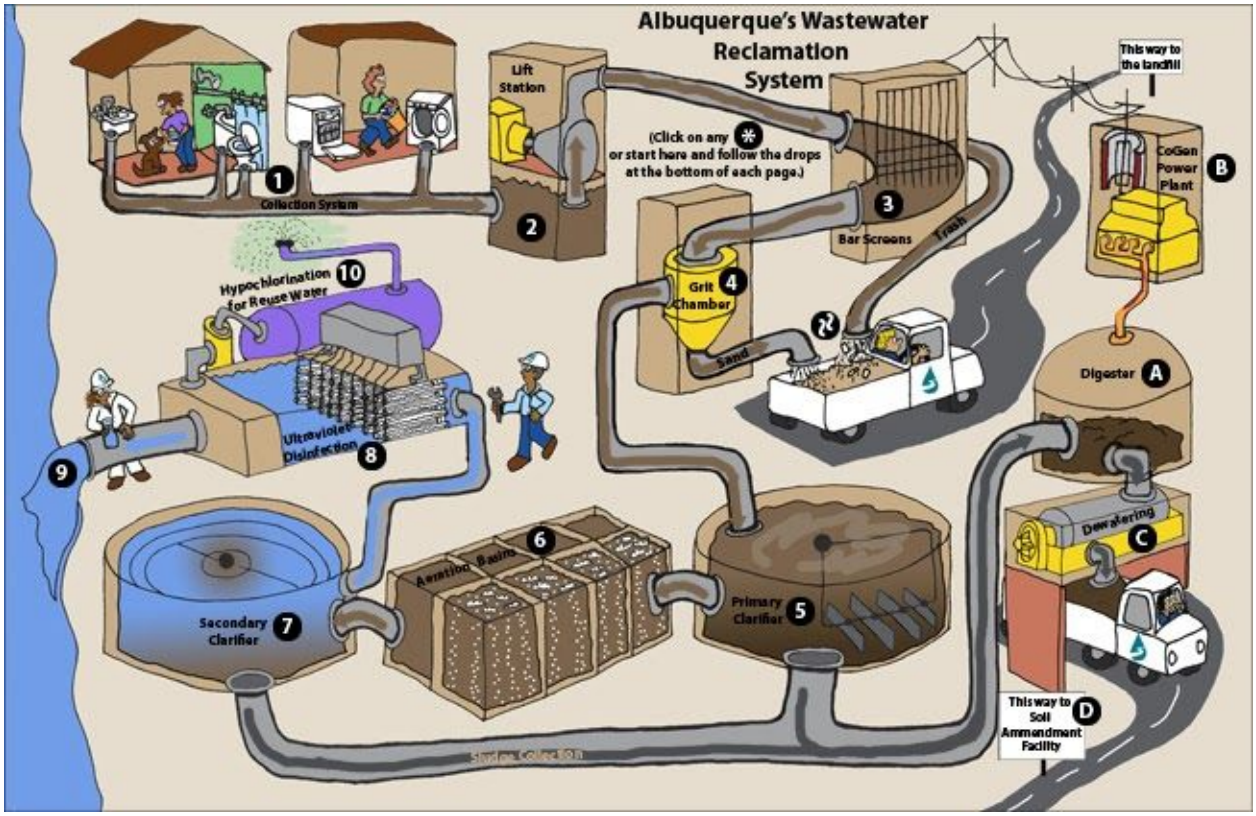
- **Lesson Plan: Cleaning Water**
  http://seplessons.ucsf.edu/node/1754
  - Create a filter in class to clean contaminated water and investigate your findings with the lesson linked below. This activity can be done over the course of a few days in class, or you can demonstrate how a filter works with your class in a shorter lesson.

- **Reflection Questions**
  - Where does your drinking water come from and what communities rely on it?
  - Drinking water is used for much more than bathing, flushing toilets and drinking. What are other ways you and your community use drinking water?
  - Did you learn anything surprising about how we use drinking water, if so what?
  - What percentage of the Earth is covered in water? Out of that amount, how much is accessible fresh water? How much is available as drinking water and why is it important to conserve it?
  - One third of the world's population does not have access to clean drinking water. How would your life be different if you had to walk miles to bring back water to your family?

- **Want to explore further?** Refer to Project 6 in the RiverXchange Curriculum "Drinking Water".
  - You can access the curriculum on your Kidblog homepage or by following this link: https://riverxchange.files.wordpress.com/2018/09/riverxchange-curriculum-20181.pdf

Water in Our Society:

Wastewater / Groundwater



Enhance your student's blog posting and extend their learning beyond the Wastewater presentation with the following activities:

- **Suggested Reading:**
  - *KOAT* news. 2015. "Aging Pipes Mean Higher Water Bills" http://www.koat.com/news/aging-pipes-could-mean-water-bill-hike/34284754
  - Combined sewer overflows article, by Anne Jefferson, a geology professor from Kent State. http://all-geo.org/highlyallochthonous/2013/03/combined-sewer-overflows-solving-a-19th-century-problem-in-the-21st-century/

- **Activities:**
  - Follow this link to the ABQ Water Utility Authority's website to navigate virtually through Albuquerque's wastewater system: http://www.abcwua.org/Education/SWRP_home.html
    - Want to add a project-based learning component to this exercise? Use these questions and activities to go along with your tour: http://www.abcwua.org/education/educators_WSDcur2_quest.html

- ➢ Show students the *Septic System* poster (the poster can be shown on a smartboard and explain the difference between a **sewer system** and a **septic system** – they both treat wastewater essentially the same way, but a septic tank is right by the house and uses a drainfield in rural areas.

- ➢ Create a Public Service Announcement with your class inspired about what you've learned. Take a video and post it on the blog to share with your partner class!

❖ **Watch:**

- ➢ Watch one of these videos in class to review the process of wastewater and what students can do to take care of wastewater: https://www.youtube.com/watch?v=Ldz29NqwK78 (An animation narrated by a young student)
- ➢ https://www.youtube.com/watch?v=tuYB8nMFxQA (A video of the water treatment process created by New Jersey American Water)
- ➢ Learn about recharging the aquifer in the City of Rio Rancho https://rrnm.gov/4024/Rio-Rancho-Pure

- **Reflection & Discussion:**
  - ○ What is wastewater and how does it impact your community?
  - ○ What is the difference between wastewater, stormwater and drinking water?
  - ○ How can you use what you've learned to make a difference at home and at school?
  - ○ What is the process of treating wastewater in your community? (For RRPS students, generally you are on a septic system). What is the difference between a sewer and septic system?
  - ○ What surprised you about the process of treating wastewater from the presentation?
  - ○ Why is it important to do what we can to keep certain things out of our wastewater, whether it goes to septic system or a wastewater treatment plant?

❖ **Want to explore further?** Refer to Project 8 in the RiverXchange Curriculum "Wastewater".

- ➢ You can access the curriculum on your Kidblog homepage or by following this link: https://riverxchange.files.wordpress.com/2018/09/riverxchange-curriculum-20181.pdf

Water in Our Society:

Commercial Uses of Our Waterways: Agriculture



Photo credit: Erich Schlegel

Enhance your student's blog posting and extend their learning beyond the Agriculture presentation with the following activities:

- **Suggested Reading:**
  - **Book:** *Out of the Dust* by Karen Hesse (1997: Scholastic Press)
    Written from the poetic perspective of 14 year old Billie Jo as she narrates her family's struggle in Oklahoma during the years of the Depression and the Dust Bowl.
  - **Articles:**
    - *ABQ Journal* article, 2013. "Deal Allows Farmers to Sell Irrigation Water" http://www.abqjournal.com/221194/news/deal-allows-farmers-to-sell-irrigation-water.htm
    - *National Geographic* article, 2014. "Parched: A New Dust Bowl Forms in the Heartland" http://news.nationalgeographic.com/news/2014/05/140516-dust-bowl-drought-oklahoma-panhandle-food/

- **Explore more about the Dust Bowl:** Check out the link below for an informative, interactive website developed by PBS. http://www.pbs.org/kenburns/dustbowl/educators/overview/

- **Lesson Plan: Soil is Not Trivial**
  - Using facts about the Dust Bowl, students write questions and play a trivia activity focused around the establishment of a national soil conservation program and the importance of soil. Students then explore and/or develop a plan to address a local soil conservation issue.
  - http://www.ncagr.gov/SWC/educational/documents/FLP_soil_is_not_trivial.pdf

- **Write a short story**
  - Write a short story from the perspective of someone who is living during, and affected by the Dust Bowl. Explore the PBS website link, or the suggested reading.

- **Lesson plan: Growing Plants**
  - Students will use the story of *The Empty Pot* to explore literature and science, practicing story mapping and learning about the needs of plants and the importance of soil and water. Like the characters in the story, students will plant and observe the growth of seeds. https://www.agclassroom.org/teacher/matrix/lessonplan.cfm?lpid=484&author_state=0&grade=3&search_term_lp=growing%20plants

- **Reflection Questions**
  - What was the Dust Bowl and how did it impact people?
  - What do you think are the major agricultural lessons for us from the Dust Bowl?
  - How may we be able to prevent a dust bowl from occurring again?
  - What is important for farmers to consider when planning how to irrigate their farm and why?
  - How does agriculture relate to water and to our daily lives?
  - What did you discover in your planting activity about the different types of irrigation?

- **Want to explore further?** Refer to Project 5 in the RiverXchange Curriculum “Commercial Uses of Our Waterways”.
  - You can access the curriculum on your Kidblog homepage or by following this link: https://riverxchange.files.wordpress.com/2018/09/riverxchange-curriculum-20181.pdf

Water in Our Society:
Commercial Uses of Our Waterways: Acequias



Enhance your student's blog posting and extend their learning beyond the Agriculture presentation with the following activities:

- **Suggested Reading:**
  - **Articles:**
    - *ABQ Journal* article, 2013. "Deal Allows Farmers to Sell Irrigation Water" http://www.abqjournal.com/221194/news/deal-allows-farmers-to-sell-irrigation-water.htm
    - *National Geographic* article, 2014. "Parched: A New Dust Bowl Forms in the Heartland" http://news.nationalgeographic.com/news/2014/05/140516-dust-bowl-drought-oklahoma-panhandle-food/

- **Watch:**
  - *Nuestras Acequias* (20 minutes) and/or *South Valley Acequias* (4 minutes). Discuss the **acequia** system which was put in place by the Pueblo people and early Spanish settlers, how is it organized amongst the community and maintained? What is its cultural and ecological significance?

- Explore the acequia tradition further with *El Agua Es Vida* lessons.

❖ **Lesson Plan: Prior Appropriation**

➢ Using the *Prior Appropriation* activity guide, act out the two different methods of assigning water rights to all the water users. Discuss the difference between the Riparian Rights and Prior Appropriation doctrines. Research the history of water rights in your community and compare the differences in water rights issues with your partners' area. Prior Appropriation is used in the western states, which receive far less precipitation.

❖ **Discuss**

➢ How people have developed technological solutions to solve water problems. For example, many ancient settlements in the West were abandoned because of lack of water, but irrigation technology has made it easier to survive. Dams have made it easier to control the flow of rivers, reservoirs store water, and fish ladders are built so that dams don't prevent their migration. High-efficiency toilets and other appliances help conserve water.

- **Reflection Questions**
  - What did you learn about acequias that you didn't know before this presentation?
  - How are acequias important to life and culture in New Mexico?
  - What would happen to the land if people didn't maintain acequias?
  - What is important for farmers to consider when planning how to irrigate their farm and why?
  - How does agriculture relate to water and to our daily lives?

❖ **Want to explore further?** Refer to Project 5 in the RiverXchange Curriculum "Commercial Uses of Our Waterways".

➢ You can access the curriculum on your Kidblog homepage or by following this link: https://riverxchange.files.wordpress.com/2018/09/riverxchange-curriculum-20181.pdf

River Ecosystems:

Pole Planting Field Trip



Enhance your student's blog posting and extend their learning beyond the Field Trip with the following activities:

- **Suggested Reading:**
  - **For teacher:** Read or review the 1st part of Chapter 4 of the Bosque Education Guide: A River of Change and discuss with your class the history of the Rio Grande River, the changes made to it's flow and channel, and the impact on the Bosque ecosystem.
- **Make a food web**
  - Make a food web for our local ecosystem, identifying producers, consumers and decomposers, native species and invasive species, as well as local endangered species. Discuss how wildlife are "water users" too. Like humans, wildlife needs clean water to live, so as a community we must consider their needs when making choices about water. Use Bosque plant and animal cards to do *The Web* activity, discussing how all living things depend on each other.
- **Learn about the STRAW Project**
  - An ongoing watershed restoration project first inspired by 4th graders in 1992, based in Marin Co. California! Add it to your school's library and show the documentary in class. http://www.pointblue.org/our-science-and-services/conservation-science/conservation-trai

ning/straw-program or read about the project in this article and discuss how youth can make an impact: http://www.marinij.com/article/NO/20150325/NEWS/150329872

- **Reflection & Discussion:**
  - What did you learn about the history of the Rio Grande River and the floodplain we planted in? How does this history impact the future of cottonwoods in the area?
  - Identify some common invasive species. Where did they come from and how are they impacting the Bosque?
  - What is the process of planting cottonwoods and willows and why do we do it in the wintertime?
  - After this field trip, how may you see and understand the Bosque differently?
  - What did you most enjoy while being down in the Bosque?
  - How can you apply what you learned or enjoyed on your field trip in your everyday life?

❖ **Want to explore further?** Refer to Project 9 in the RiverXchange Curriculum "Field Trip".

➢ You can access the curriculum on your Kidblog homepage or by following the link below: https://riverxchange.files.wordpress.com/2018/09/riverxchange-curriculum-20181.pdf

Appendix 2
Photos

Below is a selection of images from our planting field trips:





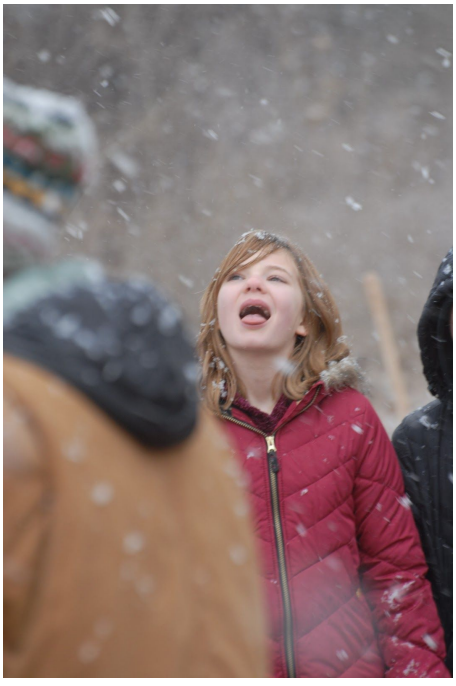
















Thank you for all your hard work and dedication to RiverXchange Melissa McLamb! We will miss you!



Exhibit 5

Bosque Ecosystem Monitoring Program (BEMP) 2019-2020 Final Report

Bosque Ecosystem Monitoring Program (BEMP)
Report to the Storm Team of the
2019-2020 Stormwater Science Education Program

The main objective of the *Stormwater Science* outreach education program is to teach students how the health of the Rio Grande is directly related to the health of the surrounding watershed and what their responsibility and opportunities are to help keep the "Rio Grand." BEMP educators have developed a Stormwater Science program that includes a 90-minute classroom activity, a four-to-five-hour study trip to the Rio Grande, and optional curriculum extensions incorporating hands-on data analysis, graphing, and system modeling. **During the 2019-2020 school-year and before the schools shut down due to COVID-19, 737 students participated in Stormwater Science** activities in their classrooms, in the field, both, or in outreach events. The classroom program was delivered to **245 students** in **14 classrooms** at **3 different schools** in **Albuquerque.** After the schools shut down, BEMP continued to create new or adapted existing activities related to the Stormwater Science curriculum with the goal of creating equitable educational outreach during the pandemic (see section 10 for outreach numbers and further information).

In addition to the Stormwater Science outreach, BEMP actively involves students in water quality monitoring through the *E. coli* monitoring contract with the Mid Rio Grande Stormwater Quality Team. **11 students from La Academia de Esperanza (LADE)**, **21 University of New Mexico (UNM) undergraduates,** and **3 students from Bosque School** were directly involved in water quality monitoring of the Rio Grande in support of this contract. Students are taught the proper protocols for collecting field parameters and *E. coli* data, but, consistent with our quality assurance plan, are only allowed to collect field parameter data. Typically, students then graph and analyze the data and are supported in presenting their findings at BEMP-supported conferences, professional conferences, and to policy makers; however, this year, these events were canceled due to COVID-19. During this school year, BEMP educators started to create a field journal specific to this water quality monitoring collection to help strengthen student learning and understanding of the data and bigger picture applications.

For the regular school curriculum, the BEMP Stormwater Science program targets middle and high school students using two main formats: an indoor classroom lesson and an outdoor field experience or *Stormwater Study Trip*. This year, during the pre-COVID-19 2019-2020 school year, we continued improving our existing curriculum by making it more NGSS aligned and age appropriate. We also started to incorporate a new assessment tool, Plickers, to assess teaching and lesson content effectiveness. During the pandemic, COVID-19 limited the number of

students we could engage through classroom and field education; however, BEMP continued to support students with a variety of activities through the APS Grab & Go Lunch program in partnership with other STEM organizations across the state to support equitable education, BEMP's social media, and the BEMP's website (See section 10 of this document for more detailed information). BEMP also worked on adapting, when possible, all the spring events to become virtual events (Luquillo-Sevilleta Virtual Symposium and Crawford Symposium; see section 8). BEMP provides handouts for all activities in English and Spanish to better support inclusion and accessibility of STEM resources for New Mexico's diverse communities.

Note: This year, we have structured this report so that in the following sections, we will paraphrase and italicize from previous reports the parts of the curriculum or report that haven't changed and that we continue to adopt. We highlight new work from this contract year in a different, non-italicized paragraph

1. Classroom curriculum*: Preparation and delivery of Stormwater Science activities in the classroom for middle and high school students* **(245 students)**

The core classroom curriculum and approaches utilizing the watershed model did not change during this school year:

The principal objective for the middle school classroom curriculum is to demonstrate how some of our daily, individual actions impact the health of the Rio Grande. To reach that goal, students construct a model of the Rio Grande Watershed (See pages 2 & 15 of the curriculum attached as Appendix A & F). The watershed model has five different communities along the river: a cattle ranch, upstream and downstream eco-friendly towns, an urban city, and agricultural fields. Students add different 'runoff cards' to the river downstream of the communities where the runoff constituents originate. Some of the runoff is naturally occurring (e.g. turbidity) while some is human-caused (e.g. pesticides or oil). The model runs through two different scenarios: (1) before-the-storm and (2) after-the-storm. While working through different variations of the model, students record the number of runoff cards introduced into the river before and after a storm event (See handout table; page 2, appendix A). This helps them to conceptualize, quantify, and further discuss the impacts of these changes to the overall river health. Exploring these two scenarios demonstrates the harmful effects that stormwater contamination can have on aquatic organisms and downstream communities.

The high school classroom lesson builds upon these core concepts. After discussing the aforementioned watershed model, students learn about some key water quality parameters: temperature, conductivity, dissolved oxygen, turbidity, and dissolved organic matter. Students divide into groups assigned one parameter each. They must then predict how their parameter might be affected by a storm event along with providing justification for their prediction. Students are given graphed data of their parameter before and after actual storm events and must analyze the graphs to determine if the data supports their hypothesis. When classes have more time available, this activity is supplemented by two different curriculum extensions. The first curriculum extension uses the same key water quality parameters introduced in the regular classroom activity, but the students analyze provided data and create their own graphs. We provide (1) a blank graphing sheet with the axis labeled and with the river flow data (used as a reference to talk about the time gap between the increase in cfs and parameter peaking) and (2) a table with measurements for each parameter. This activity helps students learn how to analyze and graph data and then interpret the results, using skills aligned with Next Generation Science

Standards (NGSS). The second curriculum extension is a soil porosity and permeability experiment that deepens students' understanding of how different surfaces (natural vs. anthropogenic, permeable vs. impermeable) impact the overall water budget and water quality.

BEMP updated the middle school classroom curriculum in the 2019-2020 school year to offer the lesson as two separate visits when time allows. The second session involves a graphing activity that includes a stronger action component (page 3, appendix A). The graphing exercise helps students conceptualize the recorded numbers and better understand the impacts of each of the different 'runoff cards' to the overall river health. The action component of the lesson intends to empower students to create change in their daily actions individually but also within their family and community to help keep the "Rio Grand."

This school year, following NGSS guidelines, we added a model/simulation into our high school classroom lesson from a scientific publication (page 4, appendix A) to illustrate the impact of storm surface runoff in the overall water quality of urban versus non-urban areas. This allows us to construct an explanation based on scientific evidence using students' local ecosystem while also hitting a variety of Disciplinary Core Ideas and Performance Expectations within the same NGSS domain (ESS – Earth and Space Science, in this case). This addition also gives high school students the chance to work with recent and local science research.

2. Stormwater Study Trip: *Delivery and coordination of place-based Stormwater Science experiences* **(53 students)**

The structure and content of the Stormwater Study Trip did not significantly change from past years:

The centerpiece of BEMP's stormwater outreach is the Stormwater Study Trip. This activity builds upon classroom activities and facilitates hands-on student experiences including performing water quality testing at the Rio Grande. The Stormwater Study Trip is a four to five-hour trip to the river during which students investigate how stormwater moves through the city and sweeps pollutants and debris into the river. Students also collect and interpret water quality data. The middle school version of the program begins with an explanation of the arroyo system in Albuquerque (See map page 5, appendix B) followed by an arroyo pollution survey where students examine and categorize the amount of visible pollutants (e.g. plastics, paper, dog poop, animal scat, etc.) in Albuquerque's San Antonio arroyo which drains into the bosque. In the arroyo, students test water quality using a LaMotte water quality monitoring kit (page 6, appendix B). When the students hike to the Rio Grande, they do additional water quality testing from two locations. Students then share their results with each other, compare Rio Grande and arroyo water quality data, and discuss what their results could mean in terms of the river's health. This section of the curriculum allows students to have a more hands-on learning experience involving different types of data collection and scientific tools. The high school Stormwater Study Trip uses a similar format with an emphasis on the water quality indices (percent EPT and biotic index) through analyzing collected macroinvertebrates. At the end, the goal for high school students is to connect and understand the two collected data sets and develop a deeper sense of how the system functions on a broader scale.

In the 2019-2020 school year, BEMP revised the study trips in several ways to strengthen student learning, scientific practices, and stewardship on a local and global scale. This year, BEMP connected the study trips to GLOBE, or Global Learning and Observations to Benefit the Environment. This community science program connects data collection around the world to contribute to our global understanding of the Earth and its processes. BEMP staff redesigned the study trip handout for all grades to better reflect the GLOBE data entry layout in effort to strengthen the stewardship component of the program (pages 5-8, appendix B). BEMP adopted that tool as a way to compare the data collected in our ecosystem to other ecosystems across the globe while also stressing the importance of stewardship from a local to worldwide scale. This tool is being used mainly in our study trip portion of the curriculum.

As part of the high school study trips, BEMP has also began using a multiparameter sonde along with the LaMotte TesTabs that students have used in the past. The multiparameter sonde provides high resolution water quality measurements (temperature, conductivity, specific conductance, pH, turbidity and dissolved oxygen). Using the handout and any additional discussions led by BEMP educators, students learn how to compare results from different methodologies to see how accurate different scientific tools can be. In addition, BEMP staff have also begun to develop a new version of the study trip to work with students during monthly water chemistry monitoring. Part of this work has been spent developing a new handout so this experience has a stronger educational component. This will be further developed in the next school year. Also, the data collected during study trips is now saved in our local drive and can be shared with the Storm Team as requested.

During the 2019-2020 school year, BEMP stopped using the leaf packs for macroinvertebrate identification due to time constraints of the study trips and because of difficulties with the leaf packs themselves. Moving forward, BEMP wants to reassess this methodology in light of challenges we faced last year, as leaf packs ended up buried by sediment or swept away downstream because of the irregular water pulses in the Rio Grande.

BEMP also continued to include Stormwater Science concepts as a part of the after-school program, BEMP After School Science (BASS). A small group of high school students worked with BASS to analyze water samples and collect aquatic macroinvertebrates to gain insight into the overall health of their local ecosystems.

3. Elementary school outreach: *Continued delivery and coordination of Stormwater Science experiences for elementary school students* **(300 students)**

BEMP participated again in the Children's Water Festival at the Santa Ana Star Center (300 students and 12 teachers) where BEMP educators, using a new macroinvertebrate activity (See page 9, appendix C), taught fourth grade students about their watershed, how humans impact the health of this system, how aquatic organisms are affected by pollution, and what everyone can do to improve the health of the Middle Rio Grande.

4. Monthly Monitoring: *Continued development and delivery of Stormwater Science outreach during Monthly Monitoring*

From last year's report:
BEMP monthly monitoring is often a space where educational concepts are introduced based upon what students encounter in the bosque or what they are currently studying in class. Because of this, Stormwater Science is only taught intermittently during Monthly Monitoring and has not yet been granularly tracked.

BEMP continued to include stormwater science topics during the introductory monthly monitoring conversations and whenever appropriate. This helped students see the bigger picture of how the health of the *bosque* is directly tied to the health of the Rio Grande and its watershed.

Furthermore, in addition to the stormwater related conversations, BEMP also adapted an activity that was initially used in the 2018 Children's Water Festival to talk about stormwater related concepts like water pollution and the use of macroinvertebrates as bioindicators of water quality (See page 10, appendix D). The goal of this activity is for students to figure out which one of the four different communities in an imaginary watershed has the best water quality. To reach that goal, students identify the different types of macroinvertebrates that live in each of those communities using a key. The activity ends with a quick group brainstorm about ways to help keep the downstream ecosystems clean (pick up trash and dog poop, fix leaky cars, don't use chemicals, etc.). This activity was piloted during Fall 2019 and can be incorporated as part of the monthly monitoring educational curriculum in the future.

5. Summer programming: *Preparation and delivery of Stormwater Science presentations during summer programming* **(200 students + 750 families)**

As in past years, BEMP partnered with Horizons Albuquerque, a tuition-free academic enrichment program that intends to fill the summer learning gap that students from low-income families often encounter. Over six weeks during the summer of 2020, 200 students in grades K-8 learned about how storms impact the overall water quality of our river by working on two of the Stormwater Science activities created during the COVID-19 closure (See page 11 & 14, Appendix E). These activities help connect the students' learning with BEMP and Horizons to the places they live.

This summer, BEMP also partnered with the NM Out-of-School Time Network for their summer Storytime in the Park program where one of the Stormwater Science activities (page 11, appendix E) was given to the 750 families that participated in this year's event.

6. Stormwater Science curriculum development: *Continued development of Stormwater Science curriculum*

Part of the 2019-20 school year (before COVID-19 closure) was spent making changes to the Stormwater Science curriculum, continuing to make it more hands-on, engaging, and appropriate for a wider range of students according to NGSS principles. After the closure, BEMP staff shifted to develop curriculum, including Stormwater Science concepts, that would be easily accessible for the communities around New Mexico (see section 10 for more information).

7. BEMP educational outreach events*: *Funding covers partial costs for classrooms to participate in Otter Day and BEMP Student Congress*

Because both of these events were scheduled to happen in April 2020, they were cancelled due to COVID-19. However, BEMP expanded the educational and community outreach during the closure through other platforms including the Grab and Go APS meal program, BEMP'S social media, and BEMP's website (see section 10 for more details).

*Funds that covered partial costs for these different BEMP educational outreach events were reallocated for printing and other materials, additional translation efforts to support accessible and equitable education, and staff time in order to continue to support the Stormwater Science program.

8. Additional BEMP educational outreach and events*: *Funding covers partial costs for classrooms to participate in Luquillo-Sevilleta Virtual Symposium and Crawford Symposium* **(39 students)**

This year, due to the COVID-19 closure, BEMP continued to organize and deliver the two annual educational events where stormwater science concepts were presented by adopting a fully virtual approach. The Luquillo-Sevilleta Virtual Symposium (LSVS) brings together students involved with the Luquillo Long Term Ecological Research Site in Puerto Rico and students from Albuquerque to share their watershed research with each other via Zoom in Spanish. This year, the LSVS involved 31 students and 19 adults (See page 17, Appendix F). BEMP's Crawford Symposium is an annual conference honoring BEMP's co-founder Dr. Clifford Crawford which celebrates community science along the Middle Rio Grande and showcases environmental research by both students and professionals. The Virtual Crawford Symposium had 8 students and 4 adult presenters, with 60 participants during the live video screening and 210 views after the video was posted on our YouTube channel (page 17, Appendix F).

As part of our outreach, BEMP also participates in other types of activities labeled as "other" in the outreach table (See table page 18, appendix G). These activities included a variety of community educational outreach, ranging from variations of the regular study trip to a student independent research project presented at a water conference with different pueblo representatives in Nambe Pueblo.

9. Plickers – Assessment tool: *This tool was used to assess the overall effectiveness of the curriculum in the classroom and study trips*

For the 2019-2020 school year, BEMP started using an assessment tool, Plickers, to monitor the effectiveness of the delivery and content in the Stormwater Science curriculum. Plickers is usually used by teachers to instantly collect multiple-choice responses from students. This tool doesn't require students to have any device; instead, BEMP staff provides printed cards with a unique design (similar to a QR code) to each student and then scans student responses using a phone app (See page 16, Appendix F). Although BEMP cannot publish the results of the assessments in this report due to a lack of IRB approval for research with human subjects, BEMP staff are using assessment results to learn what parts of the stormwater science curriculum are working well or could be improved. Due to time constraints in the classroom and field, BEMP will evaluate the continued use of this tool while also pursuing funding for more formal assessment of student learning.

10. Outreach during COVID-19 closures: *Continued delivery of Stormwater Science concepts through the APS Grab & Go Lunch program, BEMP's social media and BEMP's website* **(5811 students)**

Paraphrased and updated from BEMP's report to City of Albuquerque:

Due to the COVID-19 pandemic, Albuquerque Public Schools closed on March 16th, 2020, through the remainder of the 2019-2020 school year. During this time, BEMP continued educational support with 5 of the BASS schools (Van Buren MS, Arroyo del Oso ES, Sombra del Monte ES, Inez ES, and Comanche ES). As many students in New Mexico do not have consistent or reliable access to the Internet, computers, or printers for online distance learning, BEMP created equitable educational outreach through both virtual and physical access.

BEMP delivered weekly, bilingual STEAM activities to each school for distribution in the APS Grab & Go Lunch program. Each school requested at least 150 copies of the activities in English as well as 20-50 copies in Spanish. BEMP staff followed best practices for handling these materials with gloves, washing hands or using hand sanitizer frequently, and packing materials in Ziploc bags. Since early April, BEMP has collaborated with other STEAM organizations, such as NM MESA, Wild Friends and ABCWUA (for full list, see page 16, appendix F) to distribute these activities to even more schools and community locations around Albuquerque and New Mexico as a whole. The BEMP activities focus on getting students and their families to look outside and/or explore their yards and neighborhoods for life around them, while also collecting their own data. Four of those activities had a direct stormwater science focus (pages 11-14, appendix E).

From March 26 to June 30, 2020, approximately 10,100 students received BEMP activities through the five Grab & Go meal locations and free Little Libraries around the city. About 5,800 of those students received an activity with a stormwater science focus. During that time frame, BEMP also worked with Children's Choice coordinators at three of the schools to distribute 270 handouts to participating students, many of which were children of essential workers during the pandemic. For summer 2020's Storytime in the Park program through the NM Out-of-School Time Network, BEMP reached 750 families with a hands-on, place-based SWS activity.

In addition to distribution at the Grab & Go locations, these activities were also posted on BEMP's website (www.bemp.org/education-resources ; See page 16, appendix F) using a GitHub database to keep track of engagement through the number of downloads and views. These numbers can be provided directly to the Storm Team upon request.

BEMP has also increased presence on social media, such as Facebook and Instagram, to reach more of the community. The weekly Grab & Go activities were shared on social media to engage people who might not get them from the schools. Every day of the week, BEMP staff highlighted BEMP activities, ecological information, and resources from partners. SWS related concepts were presented usually once a week in our Water Wednesday posts (Page 17, appendix F). These posts included topics like (1) water pollution and its effect on wildlife, along with how to help; (2) local water use/consumption; (3) good practices to reduce impacts on water quality; (4) FOG waste disposal; (5) options to reduce water usage, and more. Besides Water Wednesday, the

weeks that the Grab & Go activities were about stormwater concepts, BEMP also dedicated the full week in social media to talk about water-related topics. BEMP provided English and Spanish versions of all the activities and social media posts previously mentioned.

Table 1: Social media interactions from March 16 – June 30, 2020

	INSTAGRAM	FACEBOOK
REACHES	3344	5007
ENGAGEMENTS	539	509

Note: BEMP used Creator Studio to track Facebook and Instagram engagement through a variety of different metrics. “Reaches” refers to how many people saw either a specific post or any content from the social media pages. Then, “engagements” refers to the total number of likes, shares, clicks, and people clicking “see more” for longer posts.

Exhibit 6

Children's Water Festival
2019 Report

Children's Water Festival

Rio Rancho, 2019



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Executive Summary

The 2019 Children's Water Festival (Festival) was held Monday, October 21st and Tuesday, October 22nd at the Santa Ana Star Center in Rio Rancho. 1,437 students, mostly fourth-graders, attended from 61 classrooms from Placitas Elementary School, St. Thomas Aquinas, and all of the elementary schools in Rio Rancho Public Schools. The students attend three 30 minute presentations in a half-day format. Eighteen presenters taught the classes and three to four schools were on-site at one time. Schools attended a morning or afternoon program.





The eighteen presentations represented twenty-one professional organizations that ranged from federal, state, regional governments, and private industry. The organizations all have water interests and focused on subjects such as the water cycle, water quantity and conservation, water distribution, and water quality/pollution.

Students were evaluated on basic water knowledge before and after the Festival. On average, for all testing returned, **the students showed an increase in knowledge of 6 percentage points on the post testing**.

A teacher wrote on the event evaluation, "Very well organized, thank you! My 9th year with this event and you guys always do a great job. I will say that activities this year were very hands on and engaging."

The Festival costs an estimated $24,000. The City of Rio Rancho contributed $10,000 to the Festival and additional funding was raised through the New Mexico Water Conservation Alliance 501(c)(3). Festival sponsors include: Jacobs, Waste Management, Southern Sandoval County Arroyo Flood Control Authority, NM Water, CWA Strategic Communication, Carollo Engineers, All Type, and Baker Utility Supply.

Introduction

The Children's Water Festival (Festival) has been held in Rio Rancho since 2007. The 2010 Festival was the first event hosted by the City of Rio Rancho's Water Conservation Office. This report is for the 2019 Festival; the tenth event hosted by the Water Conservation Office. As in years past, the Festival was held at the Santa Ana Star Center. 1,437 students attending from 61 classrooms; Placitas Elementary School, St. Thomas Aquinas, and all of the elementary schools in Rio Rancho Public Schools. The event was held on Monday, October 21st and Tuesday, October 22nd.

Purpose and Intent

The principal focus of the Festival is to educate fourth-grade school children about water and its relationship to humans, animals and other natural resources in a fun and interactive atmosphere. The Festival's vision is to:

- Introduce students and teachers to new ideas, options, and solutions so they will conserve and protect water for the future,
- Lay the foundation for further learning, and
- Reach as many students and teachers as possible.

Public participation is essential to successful water conservation, and educating the public promotes better water conservation planning and implementation. Early education influences the future acceptance of water conservation concepts. This early education experience also has shown that training efforts affected behavioral changes and improved water use practices. Water conservation goals are only as effective as water users' willingness to adopt and implement appropriate water conservation measures. Through special training activities, water users are taught proper water use practices and techniques. Efficient use of water supplies decreases waste and prevents degradation of water quality leading to healthier ecosystems for fish and wildlife, including locally listed endangered species, such as, the Rio Grande Silvery Minnow (*Hybognathus amarus)* and the Southwestern Willow Flycatcher (*Empidonax traillii extimus*).

The Festival was designed specifically to introduce and explain new and unfamiliar water management tools to present and future water users and managers. Research concerning water conservation education indicates the targeted group of the Festival, fourth-grade students, is ideal for achieving long-term goals. Through sharing water conservation and water quality tools at home and with extended family, the estimated 1,600 participants (students, teachers, and chaperones) represent a potential audience of 10,000 to 15,000 people for the Festival program.

A series of activities that cover a wide range of core curriculum areas were presented at the Festival. These activities included language arts, mathematics, science, social studies, visual arts, and health/wellness; all of which are tied to water conservation, water quality, and water quantity in the arid Southwest desert.

The updated Water Resources Management Plan (Plan), adopted by the City of Rio Rancho Governing Body in 2014, details water efficiencies and water conservation measures to be taken by the City to better manage the existing water supplies. Policy E.4 of the Plan sets forth this

initiative: “Continue consulting with and improving the partnership with Rio Rancho Public Schools to implement a robust water resources educational curriculum.”

Additionally, the City of Rio Rancho Strategic Plan was formally adopted by the City of Rio Rancho Governing Body on March 25, 2009 and updated August 2017. One important element of the Infrastructure Strategies section of the Strategic Plan pertains to water sustainability and conservation to support growth and development of the City.

Funds

Festival Cost

The Festival costs are listed in the table below. Please note that the cost for the Santa Ana Star Center is only for the personnel time, including two police officers per day for security. This will be the last year for pipe and drape rental as we have purchased the pipe and drape. The cost of the buses is estimated because not all invoices were received as of the report date.

Cost Description	**Amount**
Santa Ana Star Center	$2,839.71
Pipe and Drape rental	$3,000.00
Catering for volunteers & presenters	$4,479.80
Buses *	$4,000.00
T-shirts with art/logos (1,471 shirts)	$7,420.00
Shadow box (for T-shirt winner)	$42.07
Banner for Display Stand	$72.00
Poster	$76.00
White paper for T-shirt artwork	$37.29
Thank you cards	$88.66
Fiscal Sponsor	$1,000.00
Olla activity supplies	$504.97
Stamps for VIP invitations/thank you cards	$63.50
Total	**$23,624.00**

*Estimated, final invoice still pending.

Sponsorships

Through its fiscal partner, the New Mexico Water Conservation Alliance, a 501(c)3 non-profit organization, the City of Rio Rancho was able to secure several sponsors to fund the Festival. Additionally, the City sponsored $10,000 for the Festival.

A heartfelt "thank you" to these valuable Festival partners!



Steering Committee

The Festival was directed by a diverse steering committee. The core group contained members from:

- City of Rio Rancho's Water Conservation Office
- City of Rio Rancho's Keep Rio Rancho Beautiful Office
- Jacobs
- Sandoval County Master Gardeners
- Sandoval County Master Composters
- New Mexico Environment Department – Surface Water Quality Bureau
- Citizen volunteers

Design of Festival

Students attended the Festival for a half day program that included three presentations. This ensures participation by all Rio Rancho fourth graders. There is a transition period in the middle of the day where the morning classes are leaving and the afternoon classes are arriving.

Teachers and students experienced the Festival in three parts: pre-Festival activities, the Festival itself, and post-Festival activities.

Pre-Festival Activities

- Each school provides a lead fourth grade teacher who confirms their commitment to participate, provides the number and names of the teacher/classes and the number of anticipated students for each.
- Elementary schools are provided the information on how to participate in the student T-shirt artwork project; student art work is submitted to the Water Conservation Office and a winner is selected.
- The pre-Festival tests are provided to the schools via Google Forms and the teachers administered the test to the students. The post-Festival tests were sent after the Festival, again via Google Forms. Two schools were given paper tests for the students because they were not able to do Google Forms for tests.
- Teachers received resource kit materials that included the T-shirts and miscellaneous items donated by our sponsors (e.g., pens, rulers.).

Rio Rancho Children's Water Festival Event





Students at the "Rio Grande Bosque Water Cycle" activity.

- The Water Festival ran from 9:45 a.m. through 1:30 p.m.
- Students attending the Festival in the morning boarded buses at 9:15 a.m. at their school. Students attending the afternoon program boarded the buses at 11:25 a.m.
- Each class was met by a guide/timekeeper who escorted them to each of their three assigned presentations.

- Presentations lasted 30 minutes and topics included: water quality, water conservation, water cycle, wastewater, ecosystems, and built water infrastructure.
- All students received a Festival T-shirt. Lilianna Lugo from Ms. Straley's class at Puesta del Sol Elementary, was the winner of the T-shirt student artwork contest. Her design was displayed on the front of the T-shirt and Festival sponsor logos were on the back.



Lilliana Lugo – T-shirt artwork winner from Ms. Straley's
Puesta del Sol Elementary class

Post-Festival Activities

- Post-Festival tests were completed by students.
- Teacher evaluation forms were completed.
- Teachers will receive a copy of this report.

All aspects of the Festival planning and implementation were created with the *Big Water Questions* in mind. Each presentation addressed at least one of the *Big Water Questions*, as well as the Festival's mission and objectives. The long-term outcome goal is that all elementary

school students will be able to provide reasonable answers to these questions by the time they reach middle school.

Big Water Questions

- Why is water so important to life?
- How do all living things depend on each other?
- What is the water cycle?
- What is a watershed?
- Where does my drinking water come from?
- What makes water dirty?
- How much water does my family use?
- Who are the other water users in our society?
- How can *I* protect our water?
- Where does my wastewater go?

Schools Attending the Festival

The following table outlines which schools attended.

Elementary School	**Number of Teachers**	**Number of Students**
Cielo Azul Elementary	6	156
Colinas del Norte Elementary	5	133
Enchanted Hills Elementary	6	137
Ernest Stapleton Elementary	6	136
Maggie Cordova Elementary	7	165
Martin Luther King Elementary	6	145
Placitas Elementary	1	27
Puesta del Sol Elementary	6	113
Rio Rancho Elementary	5	122
Sandia Vista Elementary	6	137
St. Thomas Aquinas Elementary	2	51
Vista Grande Elementary	5	115
Totals	**61**	**1,437**

Festival Presentations

One teacher wrote, "My students loved all of the presentations we went to."



"Let's Settle This Outside" activity. Students learn about wastewater treatment while becoming a wastewater operator.

Each year the Festival relies on numerous professionals who volunteer their expertise and presentation time. These professionals represent federal, state and regional government entities, local engineering firms, and the school district. They choose presentations that represent their missions or specialties. A description of all the presentations, the presenters and their contact information has been provided in Appendix A.

Volunteer Hours

The Festival could not be held without the assistance of a number of volunteers, presenters, and steering committee members. New in 2017, was a requirement that the volunteers use the City's on-line application process to have a background check. It was hopeful that this year process would be smoother and it was not.

The table below lists an estimate of the in-kind volunteer hours.

Presenters	394.25 hours
Volunteers	185.25 hours
Steering Committee Meetings	66 hours
Total Hours	**645.5 hours**

Lessons Learned

Steering Committee Comments from the Festival

There were only a few comments from the steering committee including:

- Bus issues continued and were worse than last year. On the second day, we had four schools late because of bus issues, missing the entire first rotation. Next year, we will try to find a better solution for the transportation.
- Food for the vegetarian presenters and volunteers was very poor in 2018. We made sure that the vegetarian meal options were available especially since the meals were enchiladas one day and lasagna the other.
- A comment from last year was to have ice packs, or something quick, when a child either pinches a finger or trips. We had ice packs at the registration table this year. We did have a student get an elbow to his mouth and we were able to quickly have ice for the child.
- The food was awesome!





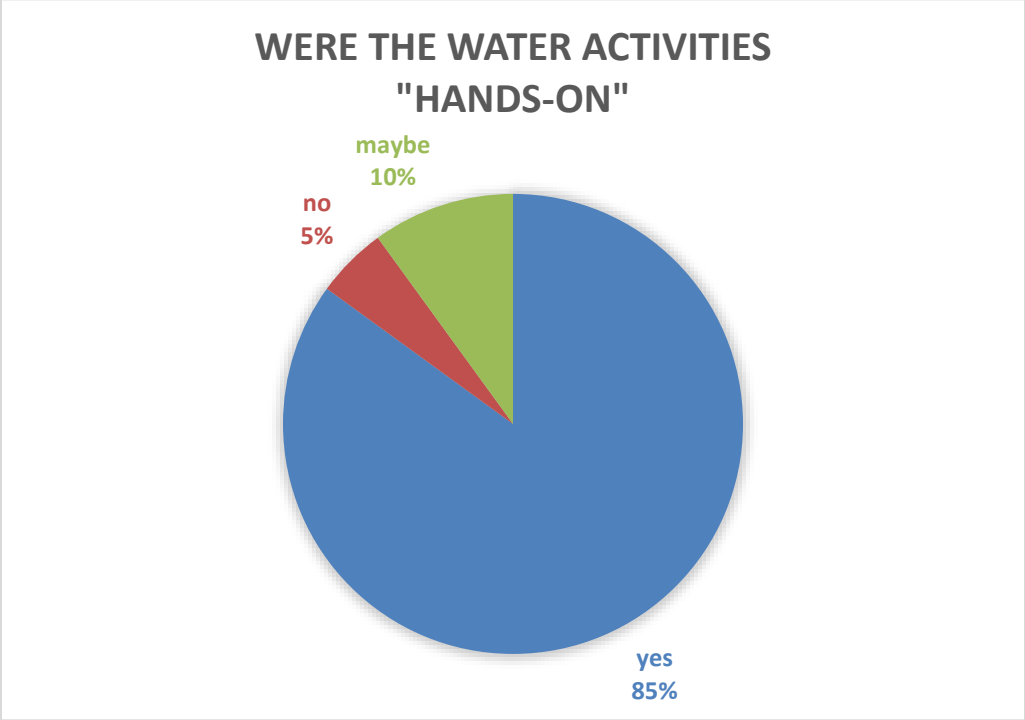
Comments from Teacher Evaluation Forms

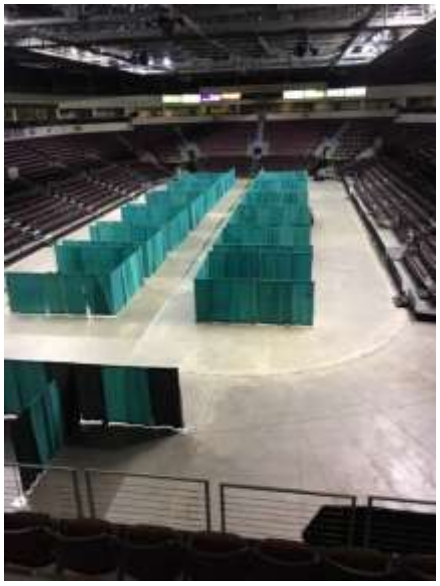
Problems or issues you had with the buses

- The bus for our wheel-chair accessibility was late, causing a domino effect for the other buses.
- We needed a special education us for a wheelchair at MLK. The bus was not here. One class was supposed to go with this bus. We had to fit 6 classes on 2 buses. My class had to split up on the two buses. The students had to wait for the wheelchair accessible bus and that group was about an hour late.
- No specific problems.
- None. Our bus driver was wonderful, arrived on time, left on time. All was great!
- Only got 2 buses, when we ordered 3.
- Our bus was 30 minutes late. The transportation director (Liz) was very rude when I called to inquire about when the bus might arrive.

- SVE had no issues with buses. Thank you.
- Everything was fine with the transportation.

Were the water activities your students attended informative and "hands-on" and did they learn anything from the activities?





Festival layout.

If there was an activity that could have been presented better, which one was it and how do you think it could be improved?

- Our activities were all well done!
- All of our activities were great!
- To Discharge or Not presented by Insight Lighting. First of all, using an IPad to show a video of his business was not effective. It was a cool business, just hard to see. Only a few of the students were able to participate in hands on activities. However, I thought he was really interesting. Just a little tweaking would make the presentation even better.
- I think they were o.k.
- The water pollution one because students are crowded around and unable to see very well.
- My students loved all of the presentations we went to. I loved that they had one with a "make-and-take" activity. Other teachers from our school said there was a presenter that was less than professional with the students in her group. I do not know which presentation, but I believe that it was in the foyer of the Star Center.
- Some of the presentations were good, but a few only incorporated a small amount of students doing the "hands-on".
- All were informative.
- Booth that was presented by UNM students could have been presented better. Although they tried to make it hands-on, they did not think of logistics. I think of they called on a few students to add items to the display one at t time, instead of all at one, it would increase focus and understanding. I appreciate the students taking their time to share. I just think they don't think about the "how" as much as the "what" they would present.
- All of the activities were at least partly "hands-on". Some more than others. Several years ago, three was an activity where the students acted out the water cycle. I would like to see more activities like that.

How to improve overall organization

- Seemed smaller and disorganized. It didn't seem like the presenters put any effort to make the presentations child friendly. The water festival is becoming less hands on every year. It is very hard for fourth graders to sit and listen to a lecture for 30+ minutes and have only a small amount of time for a hands on activity.
- Very organized and easy. I would like to have more time. Due to buses and getting there we only has about an hour and 20 minutes for the booths and it was very fast. A longer day would be nice.
- I thought it was very organized. No improvement needs noted.
- Very well organized, thank you! My 9th year with this event and you guys always do a great job. I will say the activities this year were very ands on and engaging. We may need to look at moving this event to another grade level because our science standards have changed.
- It would have been nice to have attended sessions that covered different topics. Our first and third sessions were very similar about testing pH levels, oxygen, acidity, etc.. The first one was about Water Quality and each student got to participate. It was presented by USGS. It was very cool. The male presenter should probably talk a little less so the students have time to finish the activity. The second activity was about following the

path of the trash in the river. It was very well done. The message came across beautifully. Every student got to participate. I thought it was very well organized. Well done City of Rio Rancho.

- I just feel like it isn't exciting for kids. You hear festival and you get there nobody seems as though they want to be there. The volunteers seem to hate it and honestly, it isn't a fourth grade standard, so I feel as though a different grade should go.
- Have third graders attend as it is a third grade standard.
- Apply to grade level standards.
- I love the location being so close to our schools. However, it does become difficult to hear the presenters in this venue. Maybe have the presenters speak up a little?
- Because of the venue it was difficult to hear the presenters at times. Microphones?
- As always the water festival runs very efficiently. I appreciate you putting this all together. It is a classroom favorite of field trips.
- It is fine. It would be better if it was a little longer.

Festival Event

The two days of the Festival ran very smooth except for issues with buses:

- St. Thomas Aquinas – the bus was late and students missed the first rotation
- ML King – the lift bus was late and those students on that bus missed the first rotation
- M. Cordova – two buses were late and the students missed the first rotation
- E. Stapleton – one of the buses was late causing one class to miss the first rotation

A new source for buses will be investigated for next year's water festival because this was the third year in a row that there has been issues with transportation.

The City of Santa Fe held their Water Fiesta on Tuesday and Wednesday, October 22nd and 23rd. All of our presenters decided to participate with our two days. The City of Rio Rancho was unable to participate with the Fiesta because of the conflict.

We did not have a dedicated photographer this year and there was a low return of the photo release forms from the parents. Because of this, we did not take very many photos. Many of the photographs of students in Appendix C are from prior years.

Appendix A - Working Timeline

The following was used to ensure that steps of the Festival preparation were completed in a timely manner.

- April - Ask for sponsors (done 5/13/19)
- May update VIP list
- June 15 – Design poster with the theme
- August 1 – PO for RR Sponsorship
- August 1 – PO for Buses
- August 14 – RR schools starts
- August 20 - Email teachers about CWF date and artwork delivery
- August 22 – Drop off artwork paperwork, poster, photo release forms
- September 5 – email volunteers
- September 4 - email reminder to teachers including schedule
- September 5 – Pick up artwork, photo release forms
- September 11 – Meeting to select the winner
- September 11 – Artwork to Wayne at Rio Rancho T Shirts
- September 15 - update VIP list and mail invitations
- September meet with SASC about food, etc.
- October 11 – Pick up T Shirts
- October 15 - email layout to SASC
- October 15 – Meeting to pack bags
- October 17 – Drop off bags this week
- October 21st and 22nd – Water Festival
- October 28 – Remind teachers about post-test pickup
- November 30 - Pick up post-tests

Appendix B – Teacher/Class Rotation Schedule

Booth	MON Oct 21 morning		9:45 – 10:15	10:18 – 10:48	10:51 – 11:21
#	**Presentation**	**Category**			
1	Incredible Journey – NMED	Water Cycle	Valdez Sandia Vista	XXXXXX XXXXXX	Ulibarri Puesta del Sol
2	RG Bosque Water Cycle - RGNC	Water Cycle	Armendariz Puesta del Sol	Andujo Colinas del Norte	Fox Sandia Vista
3	NM Past and Present – NM Cultural Services	Historical Perspective	Serna Puesta del Sol	Pichette Sandia Vista	Andujo Colinas del Norte
4	Water Jeopardy – Bohannan Huston	General Water	Silva Colinas del Norte	Serna Puesta del Sol	Wiberg Colinas del Norte
5	My Water Footprint – OSE	General Water	Morrissette Colinas del Norte	Niman Colinas del Norte	Rambaldi Sandia Vista
6	BEMPing it Up – BEMP	Ecosystems	Smith Puesta del Sol	Silva Colinas del Norte	XXXXXX XXXXXX
7	Leaky Faucet – RRPS	Conservation	Ulibarri Puesta del Sol	Morrissette Colinas del Norte	Serna Puesta del Sol
8	Olla Olé - SCMG	Historical Perspective	Wadsworth Sandia Vista	Armendariz Puesta del Sol	Straley Puesta del Sol
9	Watersheds & Aquifers – UNM	Source Water	Fox Sandia Vista	Straley Puesta del Sol	Silva Colinas del Norte
10	To Discharge or Not - Insight Lighting	Wastewater	Pichette Sandia Vista	Romero/Langdon Colinas del Norte	Armendariz Puesta del Sol
11	Basic Surface Water Treatment – Carollo	Water Quality	Niman Colinas del Norte	Smith Puesta del Sol	Glauvitz/Cook Sandia Vista
12	Nitrogen – The Other Cycle – Fish & Wildlife	Water Quality	Straley Puesta del Sol	Valdez Sandia Vista	Romero/Langdon Colinas del Norte
13	Stormwater & Watersheds – SNL	Watersheds	Glauvitz/Cook Sandia Vista	Wadsworth Sandia Vista	Morrissette Colinas del Norte
14	Weather or Not - NOAA	Weather	Wiberg Colinas del Norte	Ulibarri Puesta del Sol	Wadsworth Sandia Vista
15	Let's Settle this Outside – Jacobs	Wastewater	XXXXXX XXXXXX	Glauvitz/Cook Sandia Vista	Pichette Sandia Vista
16	Recycle Relay – Waste Management	General Water	Andujo Colinas del Norte	Rambaldi Sandia Vista	Niman Colinas del Norte
17	Keep the Rio Grande – Stormwater Team	Watersheds	Romero/Langdon Colinas del Norte	Wiberg Colinas del Norte	Smith Puesta del Sol

18	Water Quality- USGS	Water Quality	Rambaldi Sandia Vista	Fox Sandia Vista	Valdez Sandia Vista
	18 Presenters		**17 Classes**		

Booth	MON Oct 21 afternoon		11:54 – 12:24	12:27 – 12:57	1:00 – 1:30
#	**Presentation**	**Category**			
1	Incredible Journey – NMED	Water Cycle	Boldt Rio Rancho	Dannenberg Enchanted Hills	Armstead Cielo Azul
2	RG Bosque Water Cycle - RGNC	Water Cycle	Marsh Enchanted Hills	Lambson Cielo Azul	Fuchs Enchanted Hills
3	NM Past and Present – NM Cultural Services	Historical Perspective	Carey Enchanted Hills	Klein Rio Rancho	Bailey/Baum Rio Rancho
4	Water Jeopardy – Bohannan Huston	General Water	XXXXXX XXXXXX	Carey Enchanted Hills	Marsh Enchanted Hills
5	My Water Footprint – OSE	General Water	Estes/OS Cielo Azul	Bailey/Baum Rio Rancho	Griego/Murphy Rio Rancho
6	BEMPing it Up – BEMP	Ecosystems	Dannenberg Enchanted Hills	Armstead Cielo Azul	Lambson Cielo Azul
7	Leaky Faucet – RRPS	Conservation	Rivera Rio Rancho	Estes/OS Cielo Azul	Mandich Enchanted Hills
8	Olla Olé - SCMG	Historical Perspective	McCann Cielo Azul	Infantino Cielo Azul	Klein Rio Rancho
9	Watersheds & Aquifers – UNM	Source Water	Bailey/Baum Rio Rancho	Boldt Rio Rancho	McCann Cielo Azul
10	To Discharge or Not - Insight Lighting	Wastewater	Infantino Cielo Azul	Marsh Enchanted Hills	Wiebelhaus Enchanted Hills
11	Basic Surface Water Treatment – Carollo	Water Quality	Griego/Murphy Rio Rancho	XXXXXX XXXXXX	Boldt Rio Rancho
12	Nitrogen – The Other Cycle – Fish & Wildlife	Water Quality	Armstead Cielo Azul	Fuchs Enchanted Hills	Infantino Cielo Azul
13	Stormwater & Watersheds – SNL	Watersheds	Lambson Cielo Azul	Messenger Cielo Azul	XXXXXX XXXXXX
14	Weather or Not - NOAA	Weather	Fuchs Enchanted Hills	Griego/Murphy Rio Rancho	Rivera Rio Rancho
15	Let's Settle this Outside – Jacobs	Wastewater	Messenger Cielo Azul	Rivera Rio Rancho	Carey Enchanted Hills
16	Recycle Relay – Waste Management	General Water	Mandich Enchanted Hills	McCann Cielo Azul	Messenger Cielo Azul
17	Keep the Rio Grande – Stormwater Team	Watersheds	Klein Rio Rancho	Wiebelhaus Enchanted Hills	Dannenberg Enchanted Hills
18	Water Quality - USGS	Water Quality	Wiebelhaus Enchanted Hills	Mandich Enchanted Hills	Estes/OS Cielo Azul
	18 Presenters		**17 Classes**		

Booth	TUE Oct 22 morning		9:45 – 10:15	10:18 – 10:48	10:51 – 11:21
#	**Presentation**	**Category**			
1	Incredible Journey – NMED	Water Cycle	Grant Vista Hills	Pasternaki Vista Grande	Lawton St. Thomas
2	RG Bosque Water Cycle - RGNC	Water Cycle	XXXXXX XXXXXX	Walker/Haase Vista Grande	Landreth ML King
3	NM Past and Present – NM Cultural Services	Historical Perspective	Hollingshead Vista Grande	XXXXXX XXXXXX	Zeilman ML King
4	Water Jeopardy – Bohannan Huston	General Water	Walker/Haase Vista Grande	Lewis ML King	O'Conor ML King
5	My Water Footprint – OSE	General Water	Pasternaki Vista Grande	Landreth ML King	XXXXXX XXXXXX
6	BEMPing it Up – BEMP	Ecosystems	Griego St. Thomas	Kelly ML King	Hollingshead Vista Grande
7	Leaky Faucet – RRPS	Conservation	XXXXXX XXXXXX	Griego St. Thomas	Kelly ML King
8	Olla Olé - SCMG	Historical Perspective	Bird Vista Grande	Eisenberg/Fritch ML King	Lewis ML King
9	Vacant				
10	To Discharge or Not - Insight Lighting	Wastewater	Lawton St. Thomas	Bird Vista Grande	Walker/Haase Vista Grande
11	Basic Surface Water Treatment – Carollo	Water Quality	O'Conor ML King	Grant Vista Hills	Griego St. Thomas
12	Nitrogen – The Other Cycle – Fish & Wildlife	Water Quality	Lewis ML King	Zeilman ML King	Eisenberg/Fritch ML King
13	Stormwater & Watersheds – SNL	Watersheds	Landreth ML King	Hollingshead Vista Grande	Pasternaki Vista Grande
14	Weather or Not - NOAA	Weather	Eisenberg/Fritch ML King	XXXXXX XXXXXX	Grant Vista Hills
15	Vacant				
16	Recycle Relay – Waste Management	General Water	Kelly ML King	O'Conor ML King	Bird Vista Grande
17	Keep the Rio Grande – Stormwater Team	Watersheds	Zeilman ML King	Lawton St. Thomas	XXXXXX XXXXXX
	15 Presenters		**13 Classes**		

Booth	TUE Oct 22 afternoon		11:54 – 12:24	12:27 – 12:57	1:00 – 1:30
#	**Presentation**	**Category**			
1	Incredible Journey – NMED	Water Cycle	Zirpel M Cordova	Shafer M Cordova	Marcotte E Stapleton
2	RG Bosque Water Cycle - RGNC	Water Cycle	Rojas E Stapleton	Sidor M Cordova	Lautt E Stapleton
3	NM Past and Present – NM Cultural Services	Historical Perspective	Kirby E Stapleton	Olivas Placitas	Shafer M Cordova
4	Water Jeopardy – Bohannan Huston	General Water	Shafer M Cordova	Sheering M Cordova	Pineda M Cordova
5	My Water Footprint – OSE	General Water	Skousen M Cordova	Kirby E Stapleton	Sheering M Cordova
6	BEMPing it Up – BEMP	Ecosystems	Sheering M Cordova	Pineda M Cordova	Sidor M Cordova
7	Leaky Faucet – RRPS	Conservation	Marcotte E Stapleton	Lautt E Stapleton	Skousen M Cordova
8	Olla Olé - SCMG	Historical Perspective	Lowe E Stapleton	Presser M Cordova	XXXXXX XXXXXX
9	Vacant				
10	To Discharge or Not - Insight Lighting	Wastewater	Lautt E Stapleton	XXXXXX XXXXXX	Kirby E Stapleton
11	Basic Surface Water Treatment – Carollo	Water Quality	Zuniga E Stapleton	Zirpel M Cordova	Rojas E Stapleton
12	Nitrogen – The Other Cycle – Fish & Wildlife	Water Quality	XXXXXX XXXXXX	Lowe E Stapleton	Presser M Cordova
13	Stormwater & Watersheds – SNL	Watersheds	Sidor M Cordova	Marcotte E Stapleton	Zirpel M Cordova
14	Weather or Not - NOAA	Weather	Presser M Cordova	Skousen M Cordova	Zuniga E Stapleton
15	Vacant				
16	Recycle Relay – Waste Management	General Water	Pineda M Cordova	Zuniga E Stapleton	Olivas Placitas
17	Keep the Rio Grande – Stormwater Team	Watersheds	Olivas Placitas	Rojas E Stapleton	Lowe E Stapleton
	15 Presenters		**14 Classes**		

Appendix C – Festival Presentations

This appendix lists all of the Festival presentations and contacts. For each section, there is the name of the presentation, a brief description of the activity, the correlation of the presentation with the Next Generation Science Standards (NGSS), the contact information of the presenter and if available, where the teacher can locate a similar presentation if they would like to teach it in the classroom.

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Basic Surface Water Treatment
Students learn about processes used to clean water in a contemporary water treatment facility through an interactive process. This activity teaches children about the importance of water quality for drinking water.

Next Generation Science Standards, Grades 3-5:
Practice 2, Practice 3

Carollo Engineers
Rob Buss rbuss@carollo.com





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BEMPin' It Up
Students learn about the plants, mammals, arthropods, and water table along the Bosque and how they are all supported by water in the Rio Grande.

Next Generation Science Standards, Grades 3-5:
Practice 6, Practice 7

Bosque Ecosystem Monitoring Program, UNM Dept. Biology & Bosque School
Alex Levine alex.levine@bosqueschool.org

Similar activity found on web: Habitats of the World, Discovery Education
http://www.discoveryeducation.com/teachers/free-lesson-plans/habitats-of-the-world.cfm



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Incredible Journey
During this activity, students become water molecules and move through the water cycle. They learn about the movement and distribution of water – as well as pollution – on the earth.

Next Generation Science Standards, Grades 3-5:
Practice 6, Practice 7

NM Environment Department, Surface Water Quality Bureau
Heidi Henderson heidi.henderson@state.nm.us

A similar activity found on web: Incredible Journey, Project WET
http://files.dnr.state.mn.us/education_safety/education/project_wet/sample_activity.pdf



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Keep the Rio Grande

Keep the Rio Grande Activity is an interactive game where the students become an arroyo supplying stormwater to the Rio Grande. The stormwater picks up a variety of items as the flow increases creating a flood of raindrops, trash, pet waste, bacteria, and plastics as the students pass the items down to the river. The students learn about stormwater quality and the impact we have on water in our neighborhoods and town. After the rain has stopped, students discuss the water and debris on the ground around them and at the end of the line the river. Then they are tasked with sorting all of the items to bins labeled: trash, compost, recycle and rain.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 2

Middle Rio Grande Stormwater Quality Team
Xavier Pettes (505) 891-5045 xpettes@rrnm.gov





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Leaky Faucet

Students create a water leak and scientifically measure the leak using graduated cylinders over three tests. The students then compute the average milliliters of water leaked over one minute to the amount of gallons of water leaked and wasted over one year.

Next Generation Science Standards, Grades 3-5:
Practice 4, Practice 5

Rio Rancho Public Schools
Lou Cusimano (505) 975-0326 lou.cusimano@rrps.net

A similar activity found on web: Leaky Faucet, Utah Education Network
http://www.uen.org/Lessonplan/preview.cgi?LPid=27247



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Let's Settle This Outside
Students become wastewater operators and learn how the wastewater treatment plant cleans dirty water. They then create wastewater using everyday materials and clean the wastewater by sorting it into three stations: water, sludge, and trash.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 2

Jacobs
Bill Jaquez (505) 891-5024 billy.jaquez@jacobs.com
Wendell McCall (505) 891-5017 wmccall@rrnm.gov



A similar activity found on web:
Wastewater: We Treat it Right, City of Boise
http://bee.cityofboise.org/media/216580/43385_Wastewater.pdf

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My Water Footprint

A Water Footprint represents how a person uses water to meet their needs (direct use) and the water that others such growers, manufacturers, processers use (indirect use) to provide the products we purchase and use every day. The activity teaches the importance of water and introduces/explains the terms direct and indirect water use and challenges students to think of ways to conserve water. The students also create a collage that illustrates their water needs by incorporating both direct and indirect water use along with ways to conserve water.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 2

New Mexico Office of the State Engineer, Water Conservation Bureau
Julie Valdez julie.valdez@state.nm.us





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New Mexico Past and Present

Students learn where water comes from (the water cycle), where water is today in New Mexico, and what they can do to protect and conserve water. The students then become detectives using fossils to discover where water occurred in the past in New Mexico.

Next Generation Science Standards, Grades 3-5:
Practice 3, Practice 6

New Mexico Museum of Natural History and Science
Mike Sanchez (505) 841-2583 michael.sanchez1@state.nm.us





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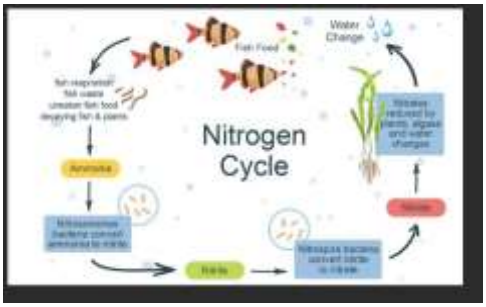
Nitrogen – the Other Cycle

Students are introduced to the nitrogen cycle. Where is nitrogen found on Earth? Why is it important? They learn that nitrogen travels with the help of bacteria, water, fish, and plants in an aquatic system. Students role-play various organisms in the nitrogen cycle; nitrosomonas bacteria, nitrobacter bacteria, fish, or plants. Students learn how each organism creates or consumes various forms of nitrogen, creating a dependency on other organisms for provide food or to remove toxins from the aquatic environment.

Next Generation Science Standards, Grades 3-5:
Practice 6, Practice 7

US Fish and Wildlife Service
Angela Palacios (505) 342-9900 angela_palacios@fws.gov





A similar activity found on web: UCAR Center for Science Education
https://scied.ucar.edu/activity/nitrogen-cycle-game

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Olla Olé
Students learn the history of collecting water in the ancient southwestern United States using clay pots. They also learn how ollas (clay pots) were used as an irrigation technique for crops and then the students make an olla to take home for use.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 2

Sandoval County Master Gardeners
Pat Barger pfbarger@gmail.com

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Recycle Relay
Students were provided with examples of indirect water savings through recycling and learned about what resources are and how the use of resources, like water, is decreased when they recycled. Students participated in a fun, educational obstacle course made almost entirely of recycled materials. They navigated the obstacle course in relay teams, building communication and teamwork skills. Stations included a crab walk, army crawl, and trash bag hop.

Next Generation Science Standards, Grades 3-5:
Practice 1

Waste Management
Laila Amerman lamerman@wm.com

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Rio Grande Bosque Water Cycle

In the semi-arid climate of New Mexico, our scarce precipitation limits the quantity of water available for use by plants, animals and humans. Students become water molecules traveling through a water cycle. The presentation emphases, with evidence and cause and effect, why we need to consider all water users when making water-use decisions.

Next Generation Science Standards, Grades 3-5:
Practice 6, Practice 7

Rio Grande Nature Center
Tanja George (505) 344-7240 Tanja.George@state.nm.us

A similar activity found on web: Incredible Journey, Project WET
http://files.dnr.state.mn.us/education_safety/education/project_wet/sample_activity.pdf







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Stormwater and Watersheds

Students learn about watersheds by examining and manipulating watershed models. They learn that a watershed is the land area that drains to a water body such as a river or lake. They see for themselves how watersheds can influence water quality.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 2

Sandia National Laboratories
John Kay (505) 344-7240 jtkay@sandia.gov



A similar activity found on web: Protecting Our Water Resources, Midwest Research Institute (See Level 2)
http://www.stormwater.ucf.edu/toolkit/vol3/Contents/pdfs/Student%20Activities/student_activities.pdf

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To Discharge or Not

Students learned the importance of how industrial process water is tested and brought to an acceptable pH level before it is allowed to be disposed of into the sanitary sewer prior to discharge to the river.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 3

Insight Lighting, Inc.
Craig Barta (505) 348-0888
cbarta@insightlighting.com



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Water Jeopardy

Students learn basic concepts and differences about groundwater vs. surface water supply for potable drinking water. The concepts are reinforced by participation in a Jeopardy game where students compete to determine the correct water "question" for a series of given "answers" (like the TV show).

Next Generation Science Standards, Grades 3-5:
Practice 1

Bohannon Huston, Inc.
Nathan Roberts (505) 823-1000
nroberts@bhinc.com



A similar activity found on web: The Water Cycle Jeopardy, Super Teacher Tools (online Flash game for up to 5 teams)
http://www.superteachertools.com/jeopardy/usergames/Jan201205/game1327973751.php

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Water Quality

Students learn about water quality and test their water sample for several parameters including pH, temperature, dissolved oxygen, and turbidity. Students learn about what these parameters mean, how they are related to each other, and why they are important for humans and organisms dependent on the water.

Next Generation Science Standards, Grades 3-5:
Practice 2, Practice 3



United States Geological Survey
Amy Galanter (505) 830-7939
agalanter@usgs.gov

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Watersheds and Aquifers
Students learn about watersheds by examining and manipulating both types of models. They learn that a watershed is the land area that drains to a water body such as a river or lake. The students also learn how drinking water comes from aquifers and how pollution can influence water quality.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 2

University of New Mexico, Civil Engineering
Alysha Toya atoya01@unm.edu



A similar activity found on web: Protecting Our Water Resources, Midwest Research Institute (See Level 2)
http://www.stormwater.ucf.edu/toolkit/vol3/Contents/pdfs/Student%20Activities/student_activities.pdf

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Weather or Not
Students analyze meteorological and hydrological data to determine if a flash flood might occur, issue warnings, and monitor the flood event.

Next Generation Science Standards, Grades 3-5:
Practice 1, Practice 2, Practice 3,

National Oceanic & Atmospheric Administration, National Weather Service
Kerry Jones (505) 243-0702 kerry.jones@noaa.gov

A similar activity found on web: Create Your Own Water Cycle, The Water Project
http://thewaterproject.org/resources/lesson-plans/create-a-mini-water-cycle.php







Appendix D – Information to Teachers

The following information was included in the teacher packets.

2019 Children's Water Festival

Monday, October 21st
Tuesday October 22nd

Santa Ana Star Center

3001 Civic Center Circle NE
Rio Rancho, NM 87144

Theme: "***Who are the other water users?***"

The Children's Water Festival has been arranged so **ALL** fourth-grade students in Rio Rancho can attend the event. This is a ***FREE*** event for the students and teachers using monies donated from local businesses who care about water-related education.

The water festival is organized with three activities in the morning and three activities in the afternoon. Each school will attend on one day at either the morning or afternoon session. Each class will attend three activities during their session.

Morning Session	Afternoon Session
9:45-10:15	11:54-12:24
10:18-10:48	12:27-12:57
10:51-11:21	1:00-1:30

Chaperones

It is recommend at least one adult be present for every ten students. Chaperones are responsible for their own transportation to the Star Center. They have not been included in the bus count. Please ask all chaperones and any volunteers from the school to wear their school badges. **We ask that only the approved chaperones attend from your school. Please no "extra" parents/grandparents that show up to watch; they will be turned away!** If you do have any of these "extras", have them contact me prior to the event and I can assign them to be volunteers at the event.

Transportation

Buses are provided and paid by the Children's Water Festival. There will be no place or time for students to eat lunch at the Star Center, so plan on your students' lunch period to be at your school either before or after the water festival.

RRPS TEACHERS ARE RESPONSIBLE FOR FILLING OUT THE TRIP TRACKER.

- **Morning Sessions - Schedule for 9:15 pick up and 11:25 pick up**
- **Afternoon Sessions – Schedule for 11:25 pick up and 1:30 pick up**
- **St. Thomas will be scheduled by City Staff**

These are the schools that will be attending with dates and arrival times.

Elementary School	Lead Teacher	Email	Number Classes	Day	Time
Colinas Del Norte	Ashley Niman	ashley.niman@rrps.net	5	10/21	9:45
Puesta del Sol	Kristy Straley	kristy.straley@rrps.net	6	10/21	9:45
Sandia Vista	Merry Wadsworth Veronica Valdez (Mont.)	merry.wadsworth@rrps.net veronica.valdez@rrps.net	6	10/21	9:45
Rio Rancho	Angela Murphy	angela.murphy@rrps.net	5	10/21	11:54
Cielo Azul	Karin McCann	karin.mccann@rrps.net	6	10/21	11:54
Enchanted Hills	Christina Mandich	christina.mandich@rrps.net	6	10/21	11:54
Vista Grande	Bethany Grant	bethany.grant@rrps.net	5	10/22	9:45
M.L. King	Sinta O'Connor	Sinta.oconnor@rrps.net	6	10/22	9:45
St. Thomas	Pat Lawton	pat.lawton@stasnm.net	2	10/22	9:45
M. Cordova	Amanda Garcia-Presser	amanda.garcia-presser@rrps.net	7	10/22	11:54
E. Stapleton	Carey Rojas	carey.rojas@rrps.net	6	10/22	11:54
Placitas	M. Olivas	molivas@bps.k12.nm.us	1	10/22	11:54
Total (as of 9/6/19)			61		

Water Conservation staff would love to meet with all your 4th grade teachers to go over the festival and the logistics. The meeting should take about 15 minutes or so.

Please contact Marian Wrage, Rio Rancho Environmental Programs Manager and Festival Director, if there are any questions and to schedule the meeting with your 4th grade team.

Marian's telephone number is (505) 896-8737, her cell is (505) 681-7325, and her email is mwrage@rrnm.gov.

The Rio Rancho Children's Water Festival funding has been provided by:

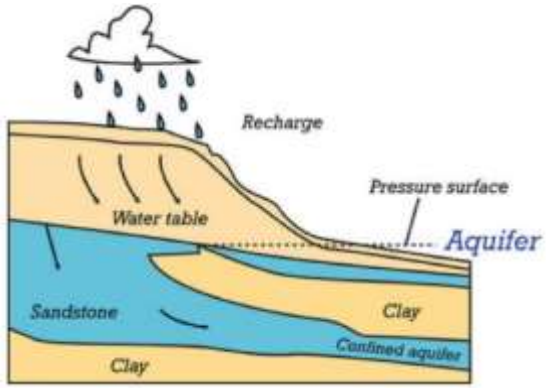
SPONSORS

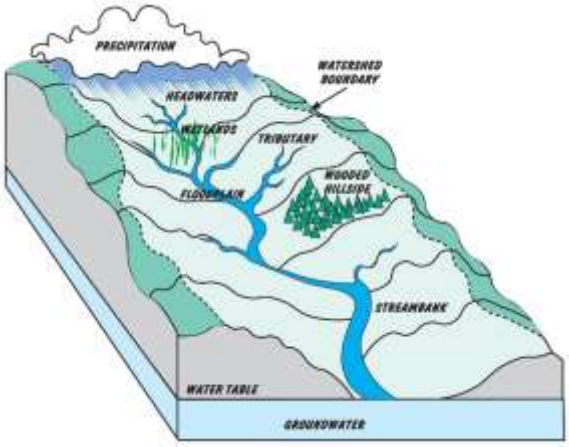
Appendix E - Pre and Post Test

The Festival steering committee rewrote the student test in 2017; diagrams and pictures were added to help the students visualize the concepts. In 2019, Google Forms was used with the Rio Rancho students to take the tests. These tests were without diagrams and pictures. Google Forms was able to grade all the tests and run statistics on the answers. St. Thomas Aquinas and Placitas did not have that technology available so paper tests were given. Note that references to "Rio Rancho" on the test was changed to "Placitas" for the students attending from Placitas Elementary.

1. Many substances and objects can make river water dirty. Which of the following items can make the Rio Grande dirty?
   a) Trash
   b) Dog poop
   c) Leaky cars
   d) All the above

2. An **aquifer** is a layer of water-saturated porous rock. It lies below the water table. Most people who live in New Mexico get drinking water from a well drilled into an aquifer. If you live in Rio Rancho, is the water coming from your faucet from an aquifer?
   a) True
   b) False





3. A **watershed** is an area of land that drains all the streams and rainfall to a common outlet such as the outflow of a reservoir, mouth of a bay, or any point along a stream channel. Is the following statement true or false: We all live in a watershed?
   a) False
   b) True

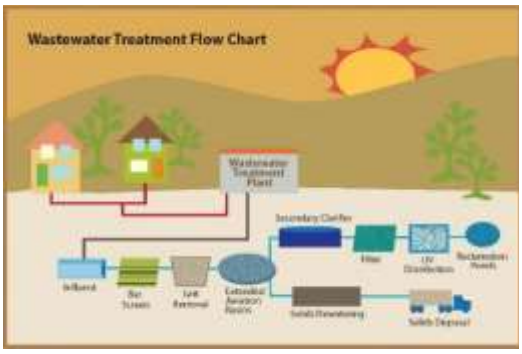
4. Everyone in Rio Rancho uses, on average, about 65 gallons of water per person per day. If you have four people in your home, what is your family's daily average water use?
   a) 260 gallons of water per day
   b) 200 gallons of water per day
   c) 2,600 gallons of water per day

5. Water users in our state include plants, animals, and people. Why is water so important to life?
   a) People need it to survive
   b) Plants need it to survive
   c) The river needs it to support nature
   d) All the above

6. The **water cycle** happens as the earth is warmed by the sun and water circulates between the earth's oceans, atmosphere, and land. Which of the following are terms associated with the water cycle?
   a) Pumping, Treatment, Delivery
   b) Evaporation, Condensation, Precipitation
   c) River, stream, aquifer



7. How can we protect our water?
   a) Litter
   b) Tell your parents when you see a leak
   c) Pour chemicals on the ground



8. **Wastewater** (or sewer water) is the used water from toilets, showers, and clothes washers and it is too dirty to go straight into the river or into the ground. Septic tanks and wastewater treatment plants clean the water before it goes to the river or into the ground.
   a) True
   b) False

Appendix F - Outcomes from Students' Tests by Question

The following table shows the percentage of correct answers on both the pre and post-test. Because most of the answers were provided using Google Forms, there was no way to distinguish answers by class or school. Not every teacher from every school provided pre and post-tests. The questions are in the same order as in Appendix E.

There was a 6 percentage point increase from pre- to post-tests for all the participating students.

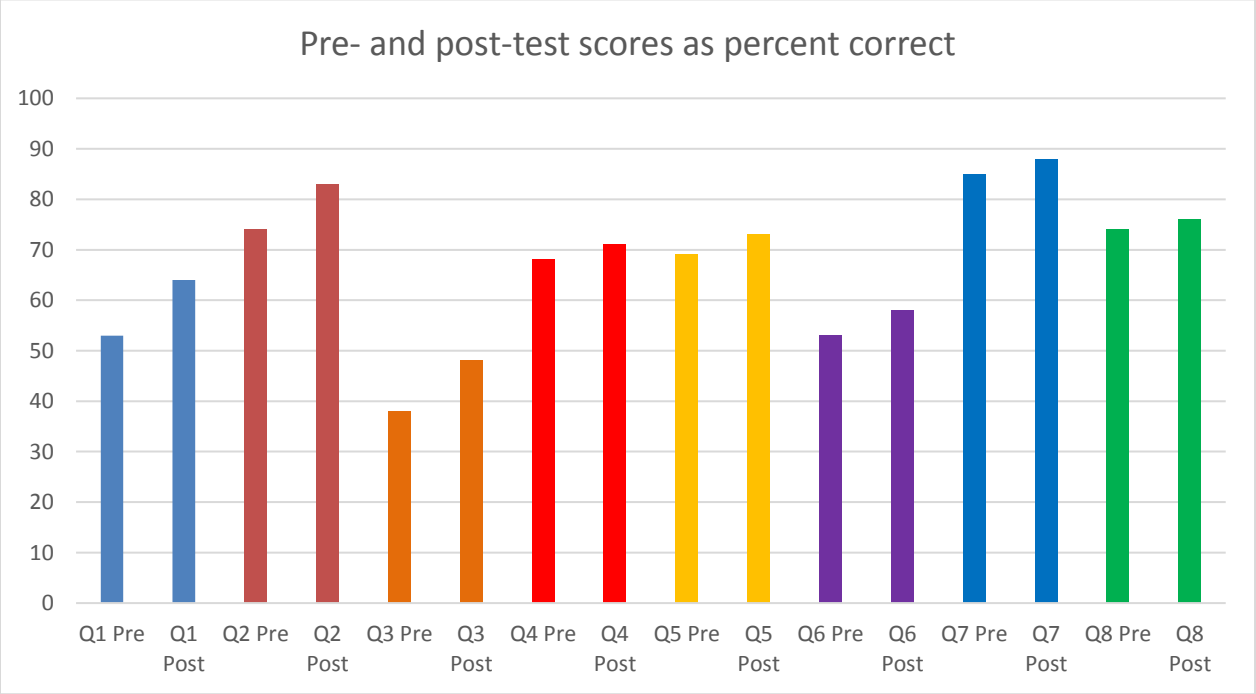


Table 1 shows the increase/decrease by question for the entire testing group.

Table 1 **Test Question**	**Increase from Pre to Post-Test**
1 Makes river dirty	12%
2 DW come from	9%
3 Watershed	10%
4 How much Water	3%
5 H2O important to life	4%
6 Water Cycle	4%
7 Protect water	3%
8 Wastewater	2%

As in year's past, the students do not have a good understanding of what a watershed is or the fact that we all live in a watershed.