

June 2025
EM2025-0144

Surface Water Data at Los Alamos National Laboratory, Water Year 2024



Newport News Nuclear BWXT-Los Alamos, LLC (N3B), under the U.S. Department of Energy Office of Environmental Management Contract No. 89303318CEM000007 (the Los Alamos Legacy Cleanup Contract), has prepared this document. The public may copy and use this document without charge, provided that this notice and any statement of authorship are reproduced on all copies.

CONTENTS

INTRODUCTION	1
Qualifiers	1
STREAM DISCHARGE GAGING STATIONS	5
Station Identification Numbers	5
Data Collection and Computation.....	5
Accuracy of Records	6
Data Presentation.....	7
<i>Station Analysis</i>	7
<i>Station Manuscript</i>	7
<i>Data Tables</i>	8
Los Alamos/Pueblo Watershed	9
E026 Los Alamos Canyon below Ice Rink.....	13
E030 Los Alamos Canyon above DP Canyon.....	16
E038 DP Canyon above Technical Area 21 (TA-21).....	19
E039.1 DP Canyon below Grade-Control Structure	22
E040 DP Canyon above Los Alamos Canyon.....	25
E042.1 Los Alamos above Low-Head Weir	28
E050.1 Los Alamos Canyon below Low-Head Weir.....	31
E055 Pueblo Canyon above Acid Canyon	34
E055.5 South Fork of Acid Canyon	37
E056 Acid Canyon above Pueblo Canyon	40
E059.5 Pueblo Canyon below Los Alamos County WWTF.....	43
E059.8 Pueblo Canyon below Wetlands	46
E060.1 Pueblo Canyon below Grade-Control Structure.....	49
E099 Guaje Canyon at SR-502	52
E110.7 Lower Los Alamos Canyon at Rio Grande.....	55
Sandia Watershed	58
E121 Sandia Canyon Right Fork at Power Plant	59
E122 Sandia Canyon near Roads and Grounds at TA-03	63
E123 Sandia Canyon below Wetlands	67
E124 Sandia above Firing Range.....	71
E125 Sandia Canyon above SR 4.....	74
Mortandad Watershed	77
E201 Mortandad Canyon above Ten Site Canyon	78
E201.5 Ten Site Canyon above Mortandad Canyon.....	81
E204 Mortandad Canyon at LANL Boundary	84
E229.3 Cañada del Buey at SR 4.....	87
Pajarito Watershed	90
E240 Pajarito Canyon below SR 501	91
E243 Pajarito Canyon above Twomile Canyon.....	94
E244 Twomile Canyon above Pajarito Canyon	97
E245.5 Pajarito Canyon above Threemile Canyon	100
E246 Threemile Canyon above Pajarito Canyon	103
E250 Pajarito Canyon above SR 4.....	106
Water Canyon and Cañon de Valle Watershed	109
E252 Water Canyon above SR 501	111
E253 Cañon de Valle above SR 501.....	114

E256 Cañon de Valle below MDA P	117
E265 Water Canyon below SR 4	120
E267 Potrillo Canyon above SR 4	123
Ancho Canyon and Chaquehui Canyon Watershed	126
E275 Ancho Canyon below SR 4	127
E338 Chaquehui at TA-33	130
E340 Chaquehui Tributary at TA-33	133
PRECIPITATION GAGING STATIONS	136
Data Collection and Computation	136
Accuracy of Records	136
Data Presentation	136
Extended Precipitation Network	139
RG038 DP Canyon above TA-21	141
RG042.1 Los Alamos above Low-Head Weir	143
RG055.5 South Fork of Acid Canyon	145
RG121.9 Sandia Canyon East of Power Plant	147
RG200.5 Mortandad Canyon Tributary Batch Plant at Sigma	149
RG203 Mortandad Canyon below Sediment Traps	151
RG240 Pajarito Canyon below SR 501	153
RG245.5 Pajarito Canyon above Threemile Canyon	155
RG253 Cañon de Valle above SR 501	157
RG257 Cañon de Valle Tributary at TA-16 Burn Grounds	159
RG262.4 PHERMEX	161
RG265 Water Canyon below SR 4	163
RG267.4 TA-36 Minie Site	165
RG340 Chaquehui Tributary at TA-33	167
Meteorological Tower Data	169
RG-TA-06 Meteorological Tower	169
RG-TA-49 Meteorological Tower	171
RG-TA-53 Meteorological Tower	173
RG-TA-54 White Rock Meteorological Tower	175
RG-North Community Meteorological Tower	177
REFERENCES AND BIBLIOGRAPHY	179
ABBREVIATIONS, ACRONYMS, AND GLOSSARY	179

Figures

Figure 1	Location of watersheds, canyons, streams, stream gaging stations, and precipitation gaging stations on and adjacent to (or near) LANL property	3
Figure 2	Total monthly volume of discharge (acre-ft) for WY 2024 for Los Alamos and DP Canyons	10
Figure 3	Total monthly volume of discharge (acre-ft) for WY 2024 for Acid and Pueblo Canyons	11
Figure 4	Total monthly volume of discharge (acre-ft) for WY 2024 for Guaje Canyon and BDD stations	12
Figure 5	Total monthly volume of discharge (acre-ft) for WY 2024 for Sandia Canyon	58

Figure 6	Total monthly volume (acre-ft) of discharge for WY 2024 in Mortandad Canyon and Cañada del Buey.....	77
Figure 7	Total monthly volume of discharge (acre-ft) for WY 2024 for Pajarito Canyon	90
Figure 8	Total monthly volume of discharge (acre-ft) for WY 2024 in Water Canyon, Cañon de Valle, and Fence Canyon.....	110
Figure 9	Total monthly volume of discharge (acre-ft) for WY 2024 in Ancho and Chaquehui Canyons.....	126
Figure 10	Total precipitation for the 2024 monsoon season, May 1–September 30, 2024, for the meteorological towers and extended precipitation network.....	138
Figure 11	Total monthly precipitation for the meteorological towers and the extended precipitation network gaging stations for WY 2024.....	139

INTRODUCTION

The annual surface water data report from Newport News Nuclear BWXT-Los Alamos, LLC (N3B) contains flow data from 38 stream gaging stations and precipitation data from the extended network and meteorological observation stations that cover most of the Los Alamos National Laboratory (LANL) property (Figure 1). This report is for water year (WY) 2024 from October 1, 2023, to September 30, 2024. Data are collected from LANL's upper boundary (approximated by New Mexico State Road [NM] 501) to the lower boundary (approximated by NM 4).

Gaging station data are used to support:

- the monitoring of Los Alamos/Pueblo Canyons under the June 2016 Compliance Order on Consent, as revised in 2024 (Consent Order),
- the Buckman Direct Diversion (BDD) Early Notification System,
- monitoring of upper Sandia Canyon for wetland stabilization, and
- LANL's Environmental Surveillance Program.

Precipitation gaging station data and stream discharge gaging stations support all the same programs, as well as the Multi-Sector General Permit and the National Pollutant Discharge Elimination System (NPDES) Individual Permit for Stormwater Discharge from Solid Waste Management Units and Areas of Concern (NM0030759).

Los Alamos, New Mexico has a semi-arid climate with an average rainfall of about 19 in. per year. Higher elevations are dominated by ponderosa pine stands that transition to piñon-juniper woodlands as elevation decreases. The Pajarito Plateau is separated into fingerlike mesas by west-to-east-oriented canyons. The majority of the stream discharge gaging stations are located within ephemeral streams. These streams flow briefly in response to precipitation in the surrounding area or snowmelt runoff from higher elevations and are dry for the remainder of the year. Perennial springs are present on the flanks of the Jemez Mountains and supply base flow to the upper reaches of some canyons, but the volume of flow from these springs is insufficient to maintain surface flows across the plateau. The remainder of the stream gaging stations are located in either intermittent or perennial streams.

Qualifiers

Raw data are qualified using a standard set of letters to determine the quality of the data. Qualifiers are noted with a letter or letters within the daily peak discharge tables. Unless otherwise noted, the data are qualified as good continuous records. Some of the data were reliably estimated; during short periods, reliable estimates are generated using precipitation data to verify no precipitation and/or, when applicable, stream gage data (upstream or downstream), according to N3B-DI-ER-4010, "Desktop Instruction for Managing Electronic Precipitation Data for Stormwater Projects, Revision 1," and N3B-SOP-ER-4015, "Managing Electronic Stage and Discharge Data from Stream Gaging Stations, Revision 0."

Qualifier Description	Qualifier	Comments
Equipment malfunction	E	Equipment failure occurred, or equipment was rendered inoperable by high-flow event.
Ice	I	Ice or snow was present in the channel, so discharge could not be determined.
Missing data	M	Data were missing for an unknown or inexplicable reason.
No data recorded	NR	The gaging station was inactive during the winter seasonal shutdown of precipitation gaging stations.
Snow	S	Precipitation as snow.

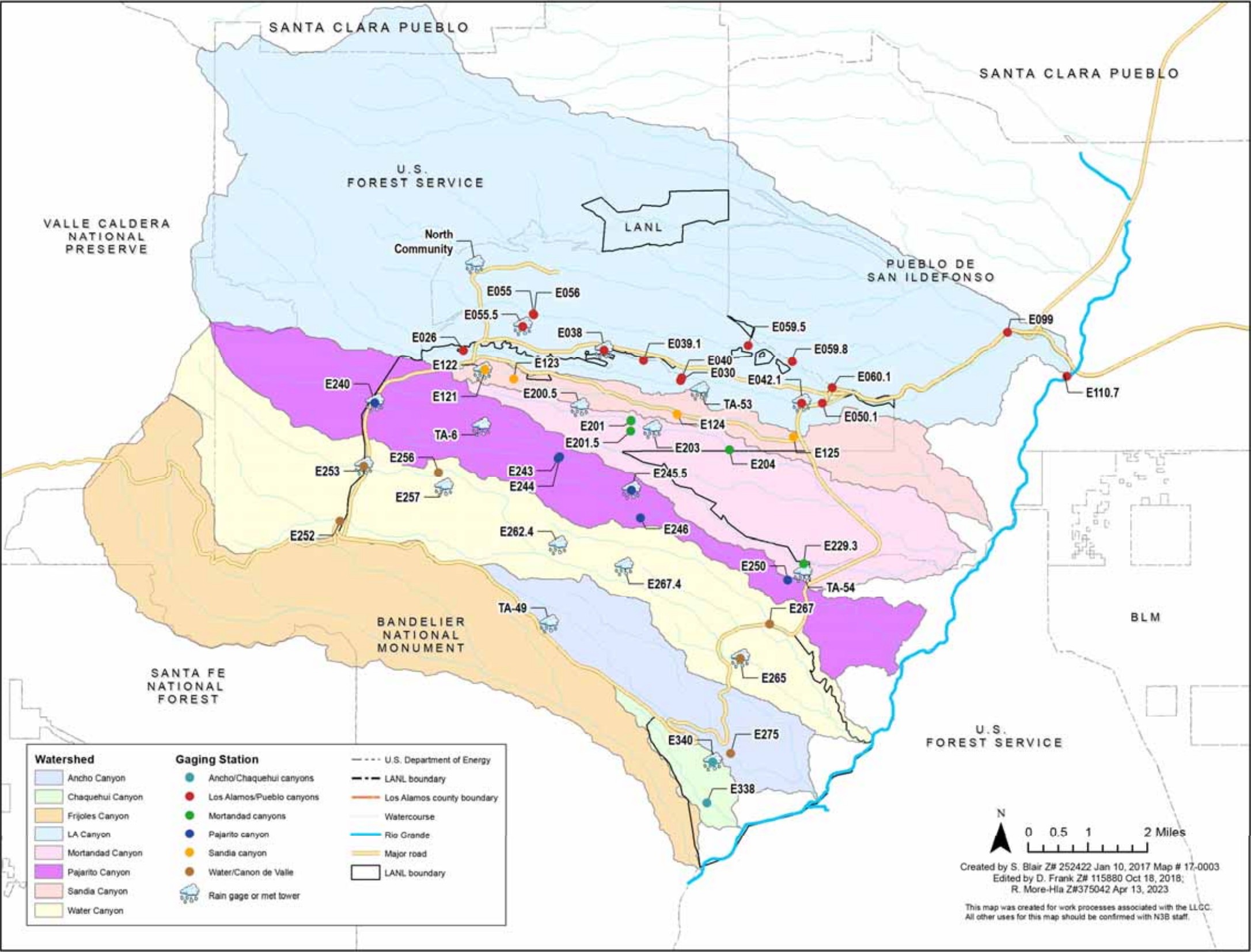


Figure 1 Location of watersheds, canyons, streams, stream gaging stations, and precipitation gaging stations on and adjacent to (or near) LANL property

STREAM DISCHARGE GAGING STATIONS

Station Identification Numbers

This report adheres to the U.S. Geological Survey (USGS) convention of downstream order system. The USGS Water Resources Division assigns a unique identification number to each stream gaging station it establishes. All sites numbered since 1950 are part of the downstream order system. Because of the proximity of stations in this network, the first five digits of all station numbers are 08313. This five-digit number string is replaced with the letter E in the station number as an abbreviation. The station numbers increase from upstream to downstream.

Data Collection and Computation

A complete record at a gaging station includes stage and discharge measurements from a stream or channel, directly observed factors that affect the stage/discharge relationship, and weather records. Records of stage are provided either as integrated 5-min records from a data logger or direct readings collected and verified on-site. The 36 dataloggers at streamflow gaging stations record stage measurements year-round, and the 14 dataloggers at the precipitation gaging stations record rainfall totals from April 1 to November 30. The precipitation stations are shut down during winter months to prevent damage to the equipment, and LANL's five meteorological towers are used to determine snowfall totals during this downtime. Data are collected from LANL's upper boundary (approximated by NM 501) to the lower boundary (approximated by NM 4).

The four streamflow gaging stations that are part of the BDD Early Notification System in Los Alamos and Pueblo Canyons are inspected every week year-round. The remaining streamflow gaging stations are inspected every 30 days year-round. The precipitation gaging stations are inspected biweekly during the monitoring season (April through November). The standard operating procedure (SOP), N3B-SOP-ER-4003, "Operation and Maintenance of Gaging Stations for Stormwater Projects," is used for operating and maintaining the gaging stations. Records of all field activities associated with the operation and maintenance of the LANL gaging stations are stored in Maintenance Connection, a work-order database. The guidance documents N3B-GDE-ER-4012, "Maintenance Connection Everywhere Application for Surface water Programs Data Collection," and N3B-DI-ER-4006, "Desktop Instruction for Generating Work Orders in Maintenance Connection," regulate the development, issuance, and recording of work orders.

Current meter discharge measurements are performed using the appropriate equipment manuals and USGS Form 9-275. Parshall flume discharge measurement methods are performed in accordance with N3B-SOP-3002, "Spring and Surface Water Sampling."

Rating curves were developed using

- the stage-discharge relationship curve determined from channel surveys, and
- hydraulic modeling using
 - ❖ the hydraulic modeling software of the Army Corps of Engineer's Hydrologic Engineering Center's River Analysis System (HEC-RAS), and
 - ❖ direct stage and discharge measurements.

When it is necessary to define the discharge extremes outside the range for current meter measurements, the curve is extended using logarithmic plotting; velocity area studies; results of indirect measurements of peak discharge, such as slope area or contracted opening measurements and computations of flow over dams or weirs; or step-backwater techniques.

Daily peak discharge is computed by applying daily peak gage height (stage) to the stage-discharge curves or tables. If the stage-discharge relationship is subject to change because of frequent or continual change in the physical features that form the control, the daily peak discharge is computed by the shifting-control method. In the shifting-control method, correction factors, based on individual discharge measurements and notes of personnel taking the measurements, are applied to the gage heights before discharges are determined from the curves or tables. Occasionally, during high-magnitude events, the gaging equipment will not capture the peak gage height. In such cases, when a visual high-water mark has been observed, the peak gage height is estimated.

The shifting-control method is also used if the stage-discharge relationship for a station is temporarily changed by natural vegetation, aggradation and degradation or debris, and/or sediment accumulation on the control. At some stream gaging stations, the stage-discharge relationship is affected by ice in the winter, and it is not possible to compute discharge. Temperature data, precipitation data, and discharge records from nearby stations are used to estimate discharge during these periods.

For some gaging stations, periods occur when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This occurs when the data logger stops recording or otherwise fails to operate properly. For such periods, the daily discharge is estimated based on recorded range-in-stage, previous and subsequent records, discharge measurements, weather records, and record comparisons made against other stations in the same or nearby basins.

Accuracy of Records

The following two factors determine the accuracy of stream discharge records:

- stability of the stage-discharge relationship or, if the control is unstable, the frequency of discharge measurements, and
- accuracy of stage measurements and of discharge measurements, and interpretation of records.

The number of significant figures used to report daily peak discharge is based on the magnitude of the discharge value.

If the value is	Then it is reported as
less than 1 ft ³ /s	nearest hundredth
1–10 ft ³ /s	nearest tenth
10–1000 ft ³ /s	whole number
above 1000 ft ³ /s	three significant figures

The same standard for significant figures is used for the data in the monthly summary tables, where the total volumes are reported in acre-feet (acre-ft), and the maximum daily peak flows and minimum daily flows are reported in ft³/s.

Data Presentation

The records published in this report consist of a summary table of all three parts for each stream discharge gaging station:

- station analysis summary
- station manuscript description with photo
- data tables for WY 2024

Station Analysis

The station analysis supplements each daily values table. It includes a description of monitoring equipment, problems associated with data collection during the water year, and other information used to compute stream flow discharge.

Equipment: A description of the monitoring equipment at each site is provided.

Datum Correction: Datum corrections for the period of record are listed.

Gage-Height Record: Information regarding the stage record itself, including accuracy and periods of inoperability, is provided.

Station Manuscript

The station manuscript provides a continuous record of discharge, including the following categories of descriptions:

Rating: This is a description of the rating used to calculate discharge at the stream gaging station site.

Location: The most accurate and available maps, coupled with the light detection and ranging digital elevation model (LIDAR DEM) using North American Datum of 1983 (NAD 83), provide location information.

Drainage Area: The most accurate and available maps provide drainage area measurements. The accuracy of drainage area measurements varies, depending on the type of map available for this purpose.

Revised Records: Because of new information, published records occasionally are found to be incorrect, and revisions are printed in later reports. If the record has been revised, the report in which the most recently revised figure was first published is given.

Period of Record: The period of record is the time during which published records exist for a station or its equivalent station. An equivalent station is one that was in operation when the present station was not in operation and was located so that its records can reasonably be considered equivalent to records from the present station.

Gage: This section describes the type of gage in current use. Under this heading, the datum of the current gage referred to in the National Geodetic Vertical Datum of 1929 (NGVD 29) (see section titled Abbreviations, Acronyms, and Glossary) is a condensed history of the types, locations, and data of previous gages.

Average Volume: The average volume is the average of the annual discharged volumes beginning in WY 2014.

Maximum Discharge for Period of Record: The record includes the maximum stage and discharge. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, by direct observation of a nonrecording gage, or by surveys of high-water marks. The minimum stage and discharge are included for perennial streams.

If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Maximum discharge before WY 2010 should be considered estimated because of differences in the validation and verification methodology.

Maximum Discharge for Current WY: Maximums given for the current WY are determined in a manner similar to that used for the maximum flows for the period of record. The time for occurrence of peaks is expressed in 24-hr local military time. For example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330. The minimums for perennial streams are recorded in a similar manner as the maximums.

Data Tables

The daily table of discharge records for stream-discharge gaging stations gives the daily peak discharge for each day of the water year.

Summary of Discharges from Stream Monitoring Stations for WY 2024

Canyon Sites	Estimated Days with Flow	Total Volume (acre-ft)	Instantaneous Maximum Discharge (ft ³ /s)
E026 Los Alamos Canyon below Ice Rink	29	0.14	6.2
E030 Los Alamos Canyon above DP Canyon	5	0	0.01
E038 DP Canyon above TA-21 ^a	84	43	189
E039.1 DP Canyon below Grade Control Structure	149	36	90
E040 DP Canyon above Los Alamos Canyon	45	1.6	13
E042.1 Los Alamos above Low-Head Weir	38	1.1	11
E050.1 Los Alamos Canyon below Low-Head Weir	25	0.17	0.66
E055 Pueblo Canyon above Acid Canyon	52	120	99
E055.5 South Fork of Acid Canyon	103	15	20
E056 Acid Canyon above Pueblo Canyon	13	1.8	31
E059.5 Pueblo Canyon below WWTF ^b	351	422	30
E059.8 Pueblo Canyon below Wetlands	272	83	5.5
E060.1 Pueblo Canyon below Grade Control Structure	118	24	4.5
E099 Guaje Canyon at SR ^c 502	12	159	817
E110.7 Lower Los Alamos Canyon at Rio Grande	14	n/a ^d	n/a
E121 Sandia Canyon Right Fork at Power Plant	345	263	99
E122 Sandia Canyon Left Fork at Asphalt Plant	366	62	12
E123 Sandia Canyon below Wetlands	361	1145	59
E124 Sandia above Firing Range	27	17	31
E125 Sandia Canyon above SR 4	45	0.47	5.3
E201 Mortandad Canyon above Ten Site Canyon	38	0.51	0.32

Summary of Discharges from Stream Monitoring Stations for WY 2024 (continued)

Canyon Sites	Estimated Days with Flow	Total Volume (acre-ft)	Instantaneous Maximum Discharge (ft ³ /s)
E201.5 Ten Site Canyon above Mortandad Canyon	0	0	0
E204 Mortandad Canyon at LANL Boundary	27	0.12	0.18
E229.3 Cañada del Buey at SR 4	18	1.1	7.8
E240 Pajarito Canyon below SR 501	18	2.1	2.4
E243 Pajarito Canyon above Twomile Canyon	1	2.4	73
E244 Twomile Canyon above Pajarito Canyon	71	7.2	10
E245.5 Pajarito Canyon above Threemile Canyon	33	14	25
E246 Threemile Canyon above Pajarito Canyon	40	0.08	0.09
E250 Pajarito Canyon above SR 4	8	0	0.04
E252 Water Canyon above SR 501	96	2.1	0.67
E253 Cañon de Valle above SR 501	102	18	6.7
E256 Cañon de Valle below MDA ^e P	116	64	15
E265 Water Canyon below SR 4	40	5.5	111
E267 Potrillo Canyon above SR 4	27	0.81	3.0
E275 Ancho Canyon below SR 4	23	59	704
E338 Chaquehui at TA-33	57	5.3	7.4
E340 Chaquehui Tributary at TA-33	52	34	25

^a TA = Technical Area.^b WWTF = Los Alamos County wastewater treatment facility.^c SR = State Road.^d n/a = Not Applicable. This site does not have volume and discharge measurements.^e MDA = Material Disposal Area.**Los Alamos/Pueblo Watershed**

The Los Alamos Canyon/Pueblo Canyon watershed is located at the northern end of Los Alamos County and LANL's northernmost boundary. The watershed headwaters are located to the west and northwest of LANL's property boundary on U.S. Forest Service land in the Sierra de los Valles. The highest point in the watershed is the summit of Pajarito Mountain at an elevation of 10,441 ft. The watershed extends for about 18.9 mi eastward from the headwaters, across the Pajarito Plateau, to its confluence with the Rio Grande at an elevation of 5504 ft. The Los Alamos/Pueblo watershed encompasses approximately 57 mi². The watershed includes Los Alamos, Pueblo, and DP Canyons. Tributary canyons in the watershed are Bayo, Guaje, Rendija, and Barranca Canyons. The watershed contains numerous springs, perennial and ephemeral stream segments, and alluvial groundwater. Portions of Santa Fe National Forest that are located within the Los Alamos/Pueblo watershed are managed by the U.S. Department of Energy (DOE), Los Alamos County (including the Los Alamos townsite), Santa Fe County, and Pueblo de San Ildefonso tribal lands.

Pueblo Canyon is located on the north side of the Los Alamos townsite and extends from the Jemez Mountains to its confluence with Los Alamos Canyon, approximately 4.5 mi east of the Los Alamos townsite at the intersection of NM 502 and NM 4. Los Alamos Canyon is the southernmost canyon in the watershed. DP Canyon is a tributary to Los Alamos Canyon, with its confluence occurring

upstream of gaging station E042.1. The Los Alamos/Pueblo watershed contains, or may influence, five wetland areas totaling approximately 12.16 acres.

Figure 2 shows the total monthly volume of discharge per month from the upper boundary station in Los Alamos and DP Canyons to the lower boundary stations (the upper boundary station is E026, and the lower boundary station is E050.1, located downstream of the Los Alamos low-head weir). As the discharge travels downstream, a considerable amount of transmission loss typically occurs from station to station. During the monsoon season, discharge will not always begin at the upper boundary stations and is highly dependent on the storm track.

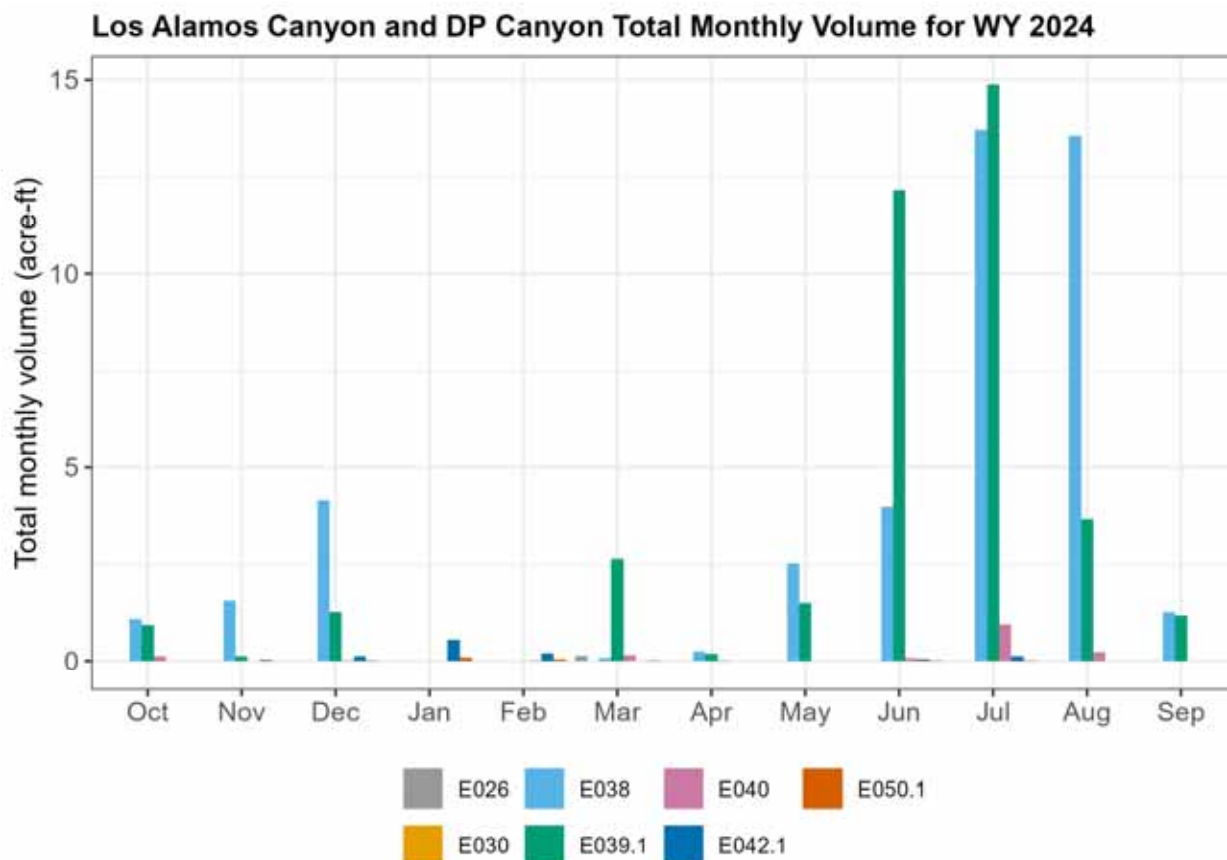


Figure 2 Total monthly volume of discharge (acre-ft) for WY 2024 for Los Alamos and DP Canyons

Figure 3 shows the total monthly volume of discharge per month from the stream-gaging discharge stations within Acid and Pueblo Canyons, located within the Los Alamos/Pueblo watershed. Station E055.5 is the highest station within Acid Canyon and receives the most discharge within this particular section of the watershed. As discharge travels downstream, it is lost via channel transmission. Gaging station E060.1 is located 1.71 mi downstream of the Los Alamos County wastewater treatment facility (WWTF), which releases effluent daily, and the Pueblo Canyon grade-control structure. Most of the year, this discharge does not reach E060.1.

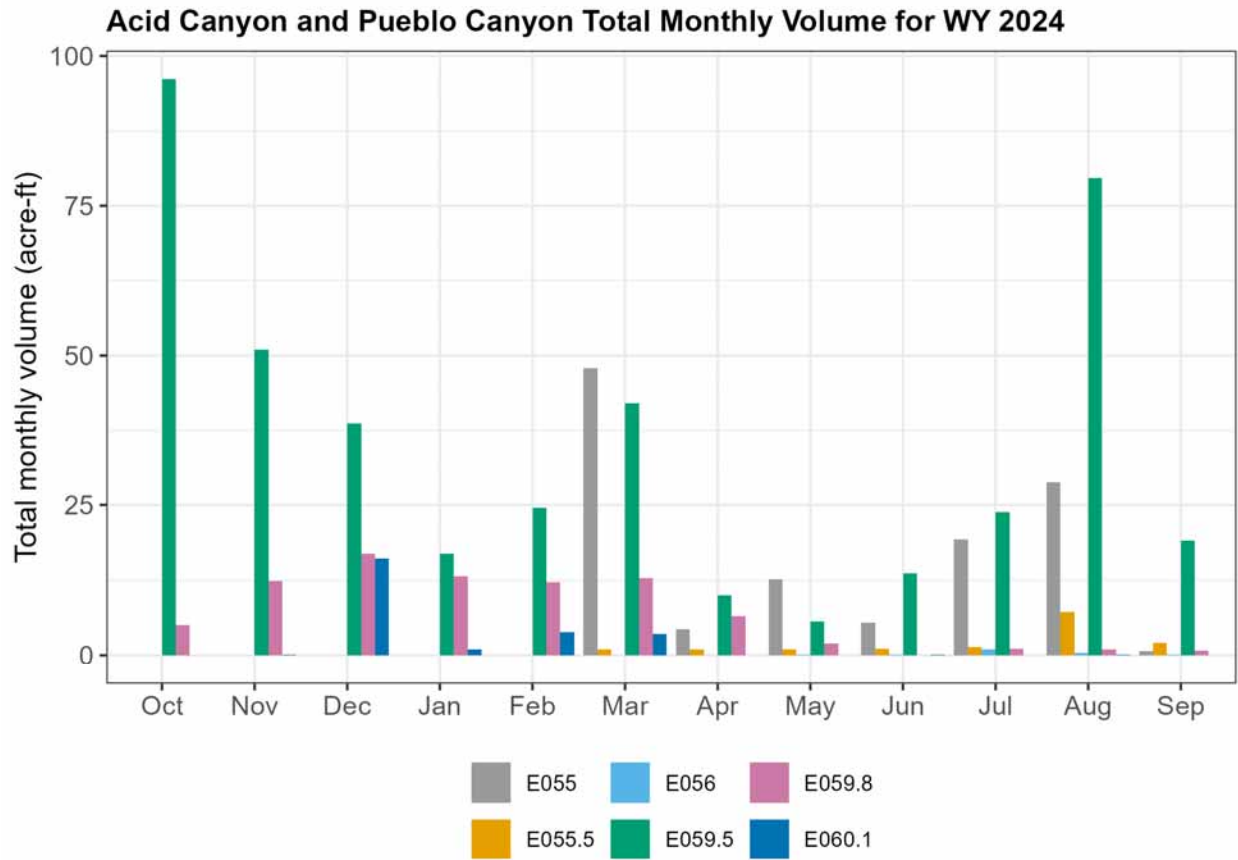


Figure 3 Total monthly volume of discharge (acre-ft) for WY 2024 for Acid and Pueblo Canyons

Figure 4 shows the total monthly volume of discharge per month from the stream-gaging discharge stations E050.1, E060.1, and E099, at the bottom of Los Alamos and Pueblo Canyons (BDD stations), located within the Los Alamos/Pueblo watershed to Guaje Canyon. Gaging station E099 is located about 3.5 mi downstream of the confluence of Pueblo and Los Alamos Canyons, where Guaje Canyon meets this stream (downstream of NM 502). The drainage area of gaging station E099 is 32.7 mi². Gaging station E110.7 is located about 2 mi downstream of gaging station E099, near the Rio Grande. The drainage area of gaging station E110.7 is 59 mi². Gaging station E110.7 does not have streamflow measurements and is not included in the volume figure.

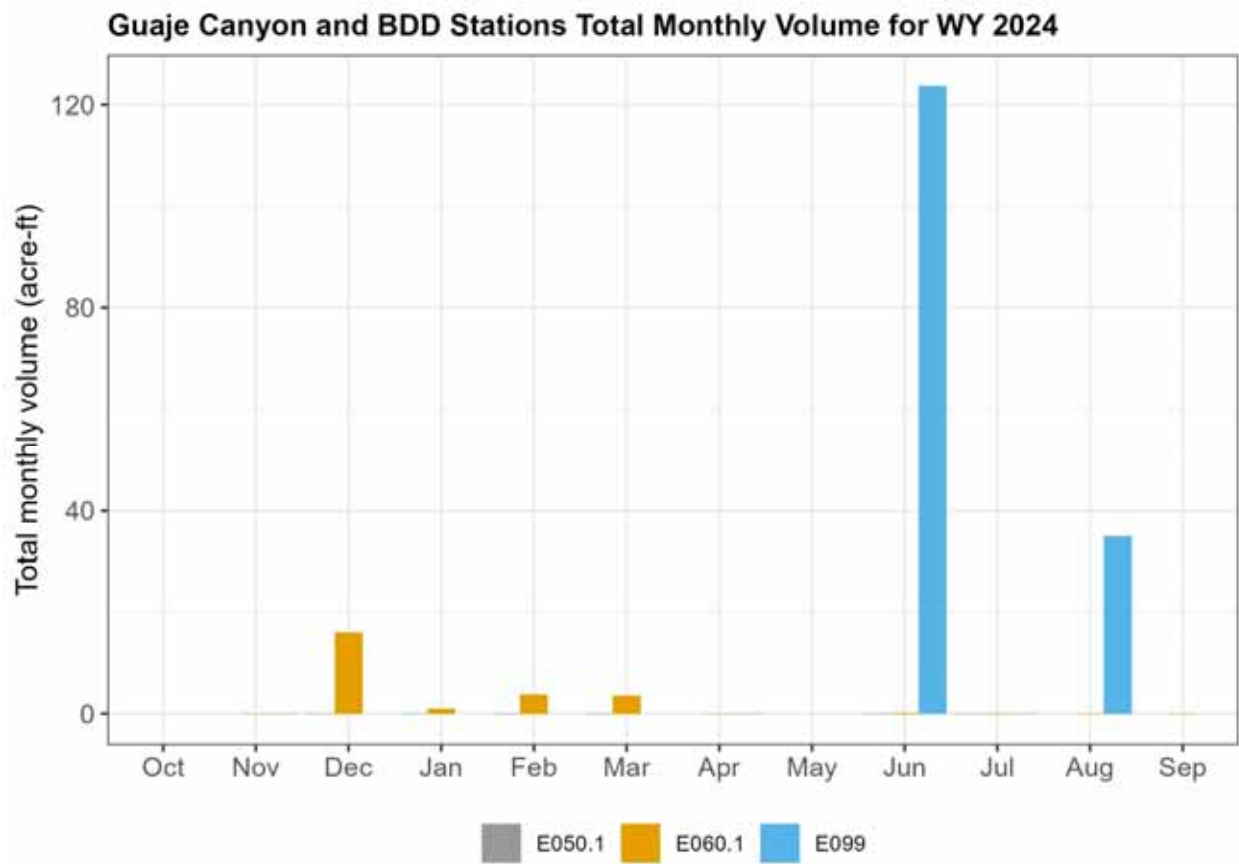


Figure 4 Total monthly volume of discharge (acre-ft) for WY 2024 for Guaje Canyon and BDD stations

E026 Los Alamos Canyon below Ice Rink

Location. Lat 35° 52' 49", Long -106° 19' 30", NE ¼, Sec. 17, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 7.07 mi².

Period of Record. February 26, 2001, to September 30, 2024.

Revised Record. Drainage area (2006); Section (2007).

Gage. Data logger with radio telemetry. Elevation of gage is 7177 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 203 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 850 ft³/s on September 13, 2013; maximum gage height exceeded.

Maximum Discharge for WY 2024. Maximum discharge 6.2 ft³/s on March 17, 2024; gage height 0.56 ft.



E026 Stream gaging station, downstream view

Equipment. The station's stream-gaging system is equipped with a Sutron 9210 data logger (5-min interval) and an MDS 4710 radio transceiver. An OTT Hydromet radar level sensor (RLS) was installed to measure stream-stage height. The system is powered by a solar-panel battery system housed in a National Electrical Manufacturers Association (NEMA) shelter on top of a 24-in. corrugated metal pipe (CMP) well. The station is equipped with an ISCO, Inc. pump sampler (12-count, 1-L glass and/or polyethylene bottles) to collect water-quality samples. The ISCO sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation. The sampler is triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for measurement above the wading stage. All high-flow measurements are computed by slope-area or critical-depth methods.

Datum Correction. Levels run on November 21, 2001, determined that the gage was within limits.

Gage-Height Record. The data logger, referenced to the inside staff gage, gave a complete and satisfactory record, except for November 24 and 25; November 28 to December 9; December 11 to 15; December 19 to 24; and December 27, 2023, to February 15, 2024, when the gaging-station sensor was affected by snow and ice in the channel.

Rating. The channel at the gaging station is about 20 ft wide and straight for 20 ft upstream where it bends to the left and then runs straight for about 150 ft downstream. The streambed through this reach is primarily gravel with cobbles. The low-flow control is a rock-and-gravel riffle located 15 ft downstream from the gaging station. The channel is the control for medium and high stages. The scour of this control leads to shift changes during the water year. Rating No. 4 was developed based on Rating No. 3 and extending the upper limits. Flow is partially regulated by the Los Alamos Reservoir about 1.5 mi upstream of the gaging station and the draining of this reservoir.

No discharge measurements were made during the year.

Discharge. Discharges were computed from Rating No. 4.

E026 Daily Peak Discharge WY 2024 (ft³/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.02	0	I*	I	I	0	0.52	0	0	0	0	0
2	0.02	0	I	I	I	0	0	0	0	0	0	0
3	0.02	0	I	I	I	0	0	0	0	0	0	0
4	0	0	I	I	I	0	0	0	0	0	0	0
5	0.02	0	I	I	I	0	0	0	0	0	0	0
6	0.02	0	I	I	I	0	0	0	0	0	0	0
7	0.02	0	I	I	I	0	0	0	0	0	0	0
8	0.02	0	I	I	I	0	0	0	0	0	0	0
9	0.02	0	I	I	I	0.22	0	0	0	0	0	0
10	0	0	0	I	I	0.80	0	0	0	0	0	0
11	0	0	I	I	I	0	0	0	0	0	0	0
12	0.02	0	I	I	I	0	0	0	0	0	0	0
13	0.02	0	I	I	I	0	0	0	0	0	0	0
14	0.02	0	I	I	I	0	0	0	0	0	0	0
15	0.02	0	I	I	I	4.3	0	0	0	0	0	0
16	0.02	0	0	I	0	0.04	0	0	0	0	0	0
17	0.02	0	0	I	0	6.2	0	0	0	0	0	0
18	0.02	0	0	I	0	0	0	0	0	0	0	0
19	0.02	0	I	I	0	0	0	0	0	0	0	0
20	0.02	0	I	I	0	0	0	0	0	0	0	0
21	0.02	0	I	I	0	0	0	0	0	0	0	0
22	0.02	0	I	I	0	0	0	0	0	0	0	0
23	0.02	0	I	I	0	0	0	0	0	0	0	0
24	0	I	I	I	0	0	0	0	0	0	0	0
25	0.02	I	0	I	0	0	0	0	0	0	0	0
26	0.04	0	0	I	0	0	0	0	0	0	0	0
27	0.04	0	I	I	0	0	0	0	0	0	0	0
28	0	I	I	I	0	0	0	0	0	0	0	0
29	0	I	I	I	0	0	0	0	0	0	0	0
30	0	I	I	I		0	0	0	0	0	0	0
31	0		I	I		0		0		0	0	

* I = Ice or snow present in channel.

E026 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	I ^{a,b}	I	I	0.14	0	0	0	0	0	0	0.14
Max Daily Peak (ft³/s)	0.04	0	I	I	I	6.2	0.52	0	0	0	0	0	6.2
Min Daily Flow (ft³/s)	0	0	I	I	I	0	0	0	0	0	0	0	0
Missing Days	0	5	25	31	15	0	0	0	0	0	0	0	76

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E030 Los Alamos Canyon above DP Canyon

Location. Lat 35° 52' 21", Long -106° 15' 36", SW ¼, Sec. 13, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 8.57 mi².

Period of Record. July 1994 to September 30, 2024.

Revised Record. Drainage area (2006); Township (2007).

Gage. Data logger with radio telemetry and concrete control. Elevation of gage is 6619 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 96 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 970 ft³/s on September 13, 2013; gage height 4.04 ft.

Maximum Discharge for WY 2024. Maximum discharge 0.01 ft³/s on March 8, 2024; gage height 0.85 ft.



E030 Stream gaging station, downstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a solar-panel battery system housed in a NEMA shelter on an 18-in. CMP well on the left bank. The station is equipped with an ISCO pump sampler (12-count, 1-L glass and/or polyethylene bottles) to collect water-quality samples. The ISCO sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation. The sampler is triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for direct discharge measurements above the wading stages.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record for the entire year, except for November 25, 30; December 1, 3 to 8, 14 to 19, 2023; and January 14 to 20, 2024, when the gaging sensor was affected by ice and snow in the channel.

Rating. The streambed is sand and gravel and is subject to slight movement during flow events. The channel is straight for 300 ft above the gaging station and 50 ft below. Vegetation on the bank is sparse grass.

No discharge measurements were made during the year.

Discharge. Discharge was computed using Rating No. 3.

E030 Daily Peak Discharge WY 2024 (ft³/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	I	0	0	0	0	0	0	0	0	0
4	0	0	I	0	0	0	0	0	0	0	0	0
5	0	0	I	0	0	0	0	0	0	0	0	0
6	0	0	I	0	0	0	0	0	0	0	0	0
7	0	0	I	0	0	0	0	0	0	0	0	0
8	0	0	I	0	0	0.01	0	0	0	0	0	0
9	0	0	0	0	0	0.01	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	I	I	0	0	0	0	0	0	0	0
15	0	0	I	I	0	0.01	0	0	0	0	0	0
16	0	0	I	I	0	0	0	0	0	0	0	0
17	0	0	I	I	0	0.01	0	0	0	0	0	0
18	0	0	I	I	0	0	0	0	0	0	0	0
19	0	0	I	I	0	0	0	0	0	0	0	0
20	0	0	0	I	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	I	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0.01	0	0	0	0	0	0	0	0	0	0
30	0	I	0	0		0	0	0	0	0	0	0
31	0		0	0		0		0		0	0	

* I = Ice or snow present in channel.

E030 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Daily Peak (ft³/s)	0	0.01	0	0	0	0.01	0	0	0	0	0	0	0.01
Min Daily Flow (ft³/s)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	2	13	7	0	0	0	0	0	0	0	0	22

E038 DP Canyon above Technical Area 21 (TA-21)

Location. Lat 35° 52' 49", Long -106° 16' 58", SW ¼, sec. 14, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 0.22 mi².

Period of Record. April 26, 2000, to September 30, 2024.

Revised Record. Drainage area (2006); Section (2007).

Gage. Data logger with radio telemetry. Elevation of gage is 7087 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 46 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 325 ft³/s on July 27, 2022; gage height 4.39 ft.

Maximum Discharge for WY 2024. Maximum discharge 189 ft³/s on August 9, 2024; gage height 3.55 ft.



E038 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a

solar-panel battery system housed in a NEMA shelter. The station is equipped with two ISCO pump samplers (one 12-count, 1-L glass and/or polyethylene bottles, and one 24-count, 1-L polyethylene bottles) to collect water-quality samples. The ISCO samplers are housed in a 3-ft × 4-ft metal box, separate from the other instrumentation. The samplers are triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for discharge measurements above the wading stage. All high-flow measurement will be by slope-area or peak-flow computation methods.

The precipitation system is equipped with a Campbell Scientific TE525 tipping-bucket rain gage. All equipment is powered with a solar-panel battery-charging system.

Datum Correction. Levels run in July 2005 show the gaging station to be within limits.

Gage-Height Record. The data logger, referenced to the outside gage, gave a complete and satisfactory record, except for December 13 to 23, 2023; and January 2 to March 18, 2024, when the gaging sensor was affected by ice and snow in the channel.

Rating. The channel is about 10 ft wide and straight for about 30 ft upstream and downstream. The streambed through this reach is primarily sand, gravel, and larger boulders. The low-flow control is a rock outcrop downstream from the gaging station about 5 ft away. The channel is the control for medium and high stages.

No discharge measurements were made during the year.

Discharge. Discharge was computed using Rating No. 5.

E038 Daily Peak Discharge WY 2024 (ft³/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.36	0	0.64	0	I*	I	2.3	0	0	39	27	0
2	0.93	0	0.36	I	I	I	0.46	0	0	0.24	0	0
3	0	0	0.27	I	I	I	0	0.58	0	0	52	0
4	0	0	0.24	I	I	I	0	0	0	0	5.0	0
5	0	0	0.27	I	I	I	0	0	0	0	12	52
6	0	0	0.27	I	I	I	0	0	0	0	1.2	0
7	0	0	0.27	I	I	I	0	0	0	0	1.2	0
8	0	0	0.21	I	I	I	0	0	0	0	0.06	0
9	0	0	0.15	I	I	I	0	0	29	49	189	0
10	0	0	0.18	I	I	I	0	0	0.67	0.39	0.27	0
11	0	0	0.18	I	I	I	0	32	0	0.33	0.09	0
12	0	0	0.18	I	I	I	0	0	0.06	5.4	1.5	0
13	0	0	I	I	I	I	0	0	0	3.6	22	0
14	0	0	I	I	I	I	0	0.79	0	0	0	0
15	0	0	I	I	I	I	0	7.5	0	0.39	0	0
16	0	0	I	I	I	I	0	4.5	0	51	0	0.82
17	0	0	I	I	I	I	0	0.12	0	112	0	0.27
18	0	1.1	I	I	I	I	0	0	0	65	0	0
19	0	1.5	I	I	I	0	0	0	0	0.61	0	0
20	0	0	I	I	I	0	1.3	0	7.9	0.73	0	0
21	0	0	I	I	I	0	0	0	11	14	0	0.88
22	0	0	I	I	I	0	0	0	0	0	0	0
23	0	0.52	I	I	I	0	0	0	0	0.21	1.1	0
24	0	0.21	0.46	I	I	0.67	0	0	0	0	0.33	0
25	0	3.2	0	I	I	0	0	0	0	0	0	0
26	0	0.36	0	I	I	0	0	0	0	4.6	1.2	0
27	0	0	0	I	I	0	0	0	23	13	0	0
28	0	0.06	0	I	I	0	0	0	0	0.39	0.09	0
29	0	0.18	0	I	I	0	0	0	13	0.46	0.06	0
30	0	3.4	0	I		0	0	0	2.3	0.42	0	0
31	0		0	I		0		0		0.36	0	

* I = Ice or snow present in channel.

E038 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	1.1	1.6	4.1	I ^{a,b}	I	I	0.25	2.5	4.0	14	14	1.3	43
Max Daily Peak (ft³/s)	0.93	3.4	0.64	I	I	I	2.3	7.5	29	112	189	52	189
Min Daily Peak (ft³/s)	0	0	0	I	I	I	0	0	0	0	0	0	0
Missing Days	0	0	11	30	29	18	0	0	0	0	0	0	88

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E039.1 DP Canyon below Grade-Control Structure

Location. Lat 35° 52' 40", Long -106° 16' 17", SE ¼, Sec. 14, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 0.40 mi².

Period of Record. April 4, 2010, to September 30, 2024.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 7016 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 87 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 400 ft³/s on September 13, 2013; gage height 4.0 ft.

Maximum Discharge for WY 2024. Maximum discharge 90 ft³/s on July 17, 2024; gage height 1.92 ft.



E039.1 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a

solar-panel battery system housed in a NEMA shelter. A trapezoidal supercritical flume with a 1-ft-wide throat controls flow through the gaging station reach. No provision has been made for direct-discharge measurements above the wading stage. An outside staff gage is available for reference. The station is equipped with two ISCO pump samplers (one 12-count, 1-L glass and/or polyethylene bottles, and one 24-count, 1-L polyethylene bottles) to collect water-quality samples. The ISCOs are housed in a 3-ft × 4-ft steel storage box, separate from the other instrumentation. The samplers are triggered by stage through the data logger. All high-flow measurements are computed by slope-area or peak-flow methods.

Datum Correction. None

Gage-Height Record. The data logger, referenced to the outside gage, gave a complete and satisfactory record, except for November 25 to December 12, December 26 to 31, 2023; and January 1 to March 2, 2024, when the gaging sensor was affected by ice and snow in the channel.

Rating. Rating No. 1 is based on precalibrated data for a trapezoidal supercritical flume with a 1-ft-wide throat (Kilpatrick and Schneider 1983) and was used throughout the period.

No discharge measurements were made during the year.

Discharge. Discharge was computed using Rating No. 1.

E039.1 Daily Peak Discharge WY 2024 (ft³/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	I	I	I	0.14	0.07	0.07	16	4.9	0
2	0	0	I	I	I	I	0.18	0.04	0.11	0.32	0.25	0
3	0	0	I	I	I	0.04	0.14	0.04	0.11	0.25	15	0.04
4	0	0	I	I	I	0.04	0	0.07	0.11	0.18	0.07	0.07
5	0	0	I	I	I	0.11	0	0.07	0.11	0.18	0	2.2
6	0	0	I	I	I	0.04	0	0.04	0.14	0.18	0	0.45
7	0	0	I	I	I	0.11	0	0.04	0.18	0.18	0	0
8	0	0	I	I	I	0.07	0	0.04	0.14	0.18	0	0
9	0	0	I	I	I	0.93	0	0.07	0.21	3.9	45	0
10	0	0	I	I	I	0.25	0.21	0.18	0.18	0.28	0.25	0
11	0	0.04	I	I	I	0.14	0.04		0.21	0.18	0	0.07
12	0	0.04	I	I	I	0.07	0	0.07	0.21	0.45	0	0
13	0	0.04	0	I	I	0.11	0	0	0.25	0.54	4.3	0
14	0	0.04	0.04	I	I	0.11	0	0.18	0.25	0.45	0.54	0
15	0	0.04	0.04	I	I	1.8	0	1.5	0.28	0.21	0	0
16	0	0.04	0	I	I	1.0	0	1.2	0.28	12	0	0
17	0	0.07	0.14	I	I	4.7	0	0	0.32	90	0	0
18	0	0.07	0.35	I	I	0.25	0	0	0.35	29	0	0
19	0	0	0.11	I	I	0.07	0	0	0.35	0.45	0	0
20	0	0	0	I	I	0	0	0.93	0.35	0.35	0	0
21	0	0	0	I	I	0	0	0.93	1.8	6.5	0	0.07
22	0	0	0	I	I	0	0	0.18	0.45	0.45	0.04	0
23	0	0	5.7	I	I	0	0	0.04	0.25	0.04	0.35	0.21
24	0	0	0.04	I	I	0	0	0.04	0.21	0	0.14	0
25	0	I	0.07	I	I	0	0	0.04	0.21	0	0.11	0.04
26	0	I	I	I	I	0	0	0.04	0.21	0.04	0.21	0
27	0	I	I	I	I	0	0	0	0.73	2.7	0.25	0.11
28	0	I	I	I	I	0	0	0	0.32	0.18	0.32	0.14
29	0	I	I	I	I	0	0.04	0	17	0	0.11	0.18
30	0	I	I	I		0	0.07	0.04	14	0	0.11	0.21
31	0		I	I		0		0.14		0	0.04	

* I = Ice or snow present in channel.

E039.1 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0.12	I ^{a,b}	I	I	2.6	0.19	1.5	12	15	3.6	1.2	36
Max Daily Peak (ft³/s)	0	0.07	I	I	I	4.7	0.21	1.5	17	90	45	2.2	90
Min Daily Flow (ft³/s)	0	0	I	I	I	0	0	0	0	0	0	0	0
Missing Days	0	6	18	31	29	2	0	1	0	0	0	0	87

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E040 DP Canyon above Los Alamos Canyon

Location. Lat 35° 52' 24", Long -106° 15' 34", SW ¼, Sec. 13, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 0.60 mi².

Period of Record. May 1999 to September 30, 2024.

Revised Record. Drainage area (2006); Section (2007).

Gage. Data logger with radio telemetry and concrete control. Elevation of gage is 6621 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 27 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 550 ft³/s on September 13, 2013; gage height 6.12 ft.

Maximum Discharge for WY 2024. Maximum discharge 13 ft³/s on July 17, 2024; gage height 3.25 ft.



E040 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS radar sensor. The system is powered

by a solar-panel battery system. All equipment is housed in a NEMA shelter. The station is also equipped with an ISCO pump sampler (12-count, 1-L glass and/or polyethylene bottles) to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. High-flow measurements can be made from the bridge upstream of the gaging station.

Datum Correction. None from levels.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record for the year, except for November 26 to 30; December 13 to 17, 23, 24, 2023; January 10 to 28; and February 10 to 13, 2024, when the gaging sensor was affected by ice and snow in the channel.

Rating. The channel is about 15 ft wide and bends to the right above the gaging station, then flows straight for about 100 ft downstream. The streambed through this reach is primarily sand with large boulders. The control at this site is concrete with a V-notch in the middle for low flow. The channel becomes the control for medium to high flows.

No discharge measurements were made during the year.

Discharge. Discharge was computed using Rating No. 3.

E040 Daily Peak Discharge WY 2024 (ft³/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.05	0	0	0	0.02	0	0.02	0	0	0.40	0	0
2	0.28	0	0	0	0.03	0	0.11	0	0	0.08	0	0
3	0.03	0	0	0	0	0	0	0	0	0	0.09	0
4	0.03	0	0	0	0	0	0	0	0	0	0	0
5	0.04	0	0	0.01	0	0	0	0	0	0	0.01	0
6	0	0	0	0.05	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0.01	0	0	0	0	4.3	0
10	0	0	0	I*	I	0	0	0	0	0	0.11	0
11	0	0	0	I	I	0	0	0	0	0	0	0
12	0	0	0	I	I	0	0	0	0	0	0.02	0
13	0	0	I	I	I	0	0	0	0	0	0.03	0
14	0	0	I	I	0	0	0	0	0	0	0.01	0
15	0	0	I	I	0	0	0	0	0	0	0	0
16	0	0	I	I	0	0	0	0	0	0	0	0
17	0	0	I	I	0	0.42	0	0	0	13	0	0
18	0	0	0.01	I	0	0.04	0	0	0	3.3	0	0
19	0	0	0.01	I	0	0.04	0	0	0	0.10	0	0
20	0	0	0	I	0	0	0	0	0	0.03	0	0
21	0	0	0	I	0	0	0	0	0	0.15	0	0
22	0	0	0	I	0	0	0	0	0	0	0	0
23	0	0	I	I	0	0	0	0	0	0	0	0
24	0	0	I	I	0	0.05	0	0	0	0.03	0	0
25	0	0.02	0	I	0	0.05	0	0	0	0.05	0	0
26	0	I	0	I	0	0	0	0	0	0.01	0	0
27	0	I	0	I	0	0	0	0	0	0.06	0	0
28	0	I	0.01	I	0	0	0	0	0	0	0	0
29	0	I	0.01	0	0	0	0	0	0	0	0	0
30	0	I	0.01	0		0	0	0	1.0	0.03	0	0
31	0		0.01	0		0		0		0.03	0	

* I = Ice or snow present in channel.

E040 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0.12	0	0.01	I ^{a,b}	0.01	0.16	0.01	0	0.08	0.96	0.23	0	1.6
Max Daily Peak (ft³/s)	0.28	0.02	0.01	I	0.03	0.42	0.11	0	1.0	13	4.3	0	13
Min Daily Flow (ft³/s)	0	0	0	I	0	0	0	0	0	0	0	0	0
Missing Days	0	5	7	19	4	0	0	0	0	0	0	0	35

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E042.1 Los Alamos above Low-Head Weir

Location. Lat 35° 52' 2", Long -106° 13' 25", NW ¼, Sec. 20, T. 19 N., R. 7 E., Santa Fe County.

Drainage Area. 10.13 mi².

Period of Record. May 4, 2010, to September 30, 2024.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 6377 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 58 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 740 ft³/s on September 13, 2013; gage height 5.59 ft.

Maximum Discharge for WY 2024. Maximum discharge 111 ft³/s on January 18, 2024; gage height 0.66 ft.



E042.1 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, an OTT RLS, and the Sutron Accubar air-purge bubble sensor. All the equipment is housed in a NEMA shelter, which is secured atop a stilling well (a vertical 2-ft-diameter CMP). An outside staff gage is available for reference. A trapezoidal supercritical flume with a 1-ft-wide throat controls flow through the gage reach. No provision has been made for direct discharge measurements above the wading stage.

Two ISCO pump samplers (one 12-count, 1-L glass and/or polyethylene bottles, and one 24-count, 1-L polyethylene bottles) to collect water-quality samples; the samplers are triggered by stage through the data logger. The station is powered by a solar-panel battery system. The samplers and batteries are in a 3-ft × 4-ft metal box, separate from the other instrumentation.

The precipitation system is equipped with a tipping-bucket rain gage with 0.01-in. resolution mounted about 30 ft from the station.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record for the year, except for December 13 to 15, 2023; and January 5, 6, 8 to 12, 14, 2024, when the gaging sensor was affected by ice and snow in the channel.

Rating. Rating No. 1 is based on pre-calibrated data for the flume used (Kilpatrick and Schneider 1983) and was used throughout the period.

No discharge measurements were made during the year.

Discharge. Discharge was computed directly by Rating No. 1 for the entire water year. Days estimated were based on precipitation using nearby gaging stations for verification. Flow is partially regulated by the Los Alamos Reservoir, located about 7.8 mi upstream.

E042.1 Daily Mean Discharge WY 2024 (ft³/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	0	6.7	0	0
2	0	0	4.5	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	I*	0	0	0	0	0	0	0	0
6	0	0	0	I	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	I	0	0	0	0	0	0	0	0
9	0	0	0	I	0	0	0	0	0	0.14	0	0
10	0	0	0	I	1.9	0	0	0	0	0	0.14	0
11	0	0	0	I	0.21	0	0	0	0	0	0.35	0.25
12	0	0	0	I	0	0	0	0	0	0.14	0.28	0
13	0	0	I	0	0	0	0	0	0	0.28	0.04	0
14	0	0	I	I	0	0	0	0.04	0	0	0	0
15	0	0	I	0.76	0	0.04	0	0.11	0	0	0	0
16	0	0	0	0.07	0	0	0	0.18	0	0	0	0
17	0	0	0.04	9.0	0	0.32	0	0	0	1.1	0	0
18	0	0	0	11	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0.35	0	0	0
20	0	0	2.7	0	0	0	0	0	0	0.35	0	0
21	0	0	0	2.7	0	0	0	0	0	0.25	0	0.21
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0.04	0
24	0	0	0	0	0	0	0	0	0.11	0	0	0
25	0	0.35	0	0	0	0	0	0	0	0	0.14	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0.11	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	1.2	0	0.14	0
30	0	0.50	0	0		0	0	0	2.0	0	0	0
31	0		0	0		0		0		0	0	

* I = Ice or snow present in channel.

E042.1 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0.03	0.12	0.55	0.20	0	0	0	0.04	0.13	0	0	1.1
Max Daily Peak (ft³/s)	0	0.50	4.5	11	1.9	0.32	0	0.18	2.0	6.7	0.35	0.25	11
Min Daily Flow (ft³/s)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	0	3	8	0	0	0	0	0	0	0	0	11

E050.1 Los Alamos Canyon below Low-Head Weir

Location. Lat 35° 52' 2", Long -106° 13' 3", NE ¼, sec. 20, T. 19 N., R. 7 E., Santa Fe County.

Drainage Area. 10.44 mi².

Period of Record. July 22, 2010, to September 30, 2024.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 6340 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 109 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 740 ft³/s on September 13, 2013; gage height 5.81 ft.

Maximum Discharge for WY 2024. Maximum discharge 0.66 ft³/s on June 19, 2024; gage height 0.17 ft.



E050.1 Stream gaging station, downstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, a shaft-encoder float system, an OTT RLS, and a Sutron Accubar air-purge bubble sensor. All the equipment is housed in a NEMA shelter, which is secured atop a stilling well (a vertical 2-ft-diameter CMP). An outside staff gage is available for reference. A trapezoidal supercritical flume with a 1-ft-wide throat controls flow through the gaging station reach. No provision has been made for direct-discharge measurements above the wading stage.

The station is also equipped with two ISCO pump samplers (one 12-count, 1-L glass and/or polyethylene bottles, and one 24-count polyethylene bottles) to collect water-quality samples. The samplers are housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and are triggered by a liquid level actuator. A line-of-sight radio transceiver provides 5-min stage data from the bubble sensor, radar, and encoder.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record, except for November 24, 25, 30; December 13 to 15, 2023; January 4, 5, 8, 11, and 13 to 15, 2024, when the gaging sensor was affected by ice and snow in the channel.

Rating. Rating No. 1 is based on precalibrated data for the flume used (Kilpatrick and Schneider 1983) and was used throughout the period.

No discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying Rating No. 1 for the entire water year.

E050.1 Daily Peak Discharge WY 2024 (ft³/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0.18	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	I	0	0	0	0	0	0	0	0
5	0	0	0	I	0	0	0	0	0	0	0	0
6	0	0	0	0.07	0	0	0	0	0	0	0	0
7	0	0	0	0.07	0.25	0	0	0	0	0	0	0
8	0	0	0	I	0	0	0	0	0	0	0	0
9	0	0	0	0.07	0	0	0	0	0	0	0	0
10	0	0	0	0.07	0.25	0	0	0	0	0	0	0
11	0	0	0	I	0.04	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	I	I	0	0	0	0	0	0	0	0
14	0	0	I	I	0	0	0	0	0	0	0	0
15	0	0	I	I	0	0.07	0	0	0	0	0	0
16	0	0	0.04	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0.15	0	0	0	0	0	0.11
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0.66	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0.04	0.04	0	0	0	0	0.07	0	0	0
22	0	0	0.04	0	0	0	0	0	0	0	0	0
23	0	0	0.04	0.04	0	0	0	0	0	0	0	0
24	0	I	0	0	0	0	0	0	0	0	0	0
25	0	I	0	0.04	0	0	0	0	0	0	0	0
26	0	0	0	0.04	0	0	0	0	0	0	0.25	0
27	0	0.04	0	0.04	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0
30	0	I	0	0.04		0	0	0	0	0	0	0
31	0		0	0		0		0		0	0	

* I = Ice or snow present in channel.

E050.1 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	0.01	0.09	0.04	0.01	0	0	0.01	0.01	0	0	0.17
Max Daily Peak (ft³/s)	0	0.04	0.04	0.07	0.25	0.15	0	0	0.66	0.18	0.25	0.11	0.66
Min Daily Flow (ft³/s)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	3	4	7	0	0	0	0	0	0	0	0	14

E055 Pueblo Canyon above Acid Canyon

Location. Lat 35° 53' 20", Long -106° 18' 14", SE ¼, Sec. 9, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 3.42 mi².

Period of Record. October 1, 2002, to September 30, 2024.

Revised Record. Average discharge (2007, 2008).

Gage. Data logger with radio telemetry. Elevation of gage is 6943 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 78 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 1200 ft³/s on September 13, 2013; gage height 6.86 ft.

Maximum Discharge for WY 2024. Maximum discharge 99 ft³/s on August 9, 2024; gage height 2.0 ft.



E055 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is also equipped with an ISCO pump sampler (12-count, 1-L glass and/or polyethylene bottles) to collect water-quality samples. The ISCO sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for direct discharge measurements above the wading stage.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record, except for December 13 to 15, 20 to 24, 2023; and January 17 to February 28, 2024, when the gaging sensor was affected by ice and snow in the channel and July 18 to 29, 2024, when the data logger malfunctioned.

Rating. The channel comes into the gaging station from a left-to-right bend and bends hard left at about 100 ft below the gaging station. The bed consists of unstable sand and gravel with some boulders. The left bank downstream from the gaging station is heavily wooded, tending to hold the flow to the right, away from the reach of the gaging station. The lower end of any stage-discharge relation will be unstable here. Rating No. 2 was developed using one critical-depth measurement of 850 ft³/s and various low-flow measurements from previous years. The low-water definition is poor, and the high end needs to be confirmed. The low end of the rating was verified by a dye study and was used to enhance the rating. Rating No. 2 is good. Rating No. 3 was developed using Rating No. 2 and by extending the upper range.

No discharge measurements were made during the year.

Discharge. Discharge was computed using Rating No. 3.

E055 Daily Peak Discharge WY 2024 (ft³/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	I ^a	0	2.6	0	0	7.3	1.7	0
2	0	0	0	0	I	0	1.8	0	0	4.5	1.4	0
3	0	0	0	0	I	0	0.83	0	0	1.1	0.25	0
4	0	0	0	0	I	0	0.42	0	0	0.42	0	0
5	0	0	0	0	I	0	0.25	0	0	0.08	0	7.3
6	0	0	0	0	I	0	0.25	0	0	0	0	0
7	0	0	0	0	I	0	0.25	0	0	0	0	0
8	0	0	0	0	I	0	0	0	0	0	0	0
9	0	0	0	0	I	0	0	0	0	0	99	0
10	0	0	0	0	I	0	0	0	0	0	5.8	0
11	0	0	0	0	I	0	0	15	0	0	1.8	0
12	0	0	0	0	I	0	0	4.0	0	0	1.0	0
13	0	0	I	0	I	0	0	0.75	0	0	0.83	0
14	0	0	I	0	I	0	0	0.33	0	0	0.58	0
15	0	0	I	0	I	4.5	0	0.17	0	0	0.33	0
16	0	0	0	0	I	6.4	0	1.1	0	0	0	0
17	0	0	0	I	I	8.6	0	0.83	0	87	0	0
18	0	0	0	I	I	3.2	0	0.33	0	E ^b	0	0
19	0	0	0	I	I	2.2	0	0	0	E	0	0
20	0	0	I	I	I	1.8	0	0	0	E	0	0
21	0	0	I	I	I	1.3	0	0	0	E	0	0
22	0	0	I	I	I	0.92	0	0	0	E	0	0
23	0	0	I	I	I	0.75	0	0	0	E	0	0
24	0	0	I	I	I	1.0	0	0	0	E	0	0
25	0	0	0	I	I	2.2	0	0	0	E	0	0
26	0	0	0	I	I	4.5	0	0	0	E	0	0
27	0	0	0	I	I	6.1	0	0	0	E	0	0
28	0	0	0	I	I	5.5	0	0	0	E	0	0
29	0	0	0	I	0	6.7	0	0	7.0	E	0	0
30	0	0	0	I		1.7	0	0	13	0.17	0	0
31	0		0	I		0.50		0		0	0	

^a I = Ice or snow present in channel.^b E = Equipment failure.

E055 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	0	I ^{a,b}	I	48	4.4	13	5.4	19	29	0.73	120
Max Daily Peak (ft³/s)	0	0	0	I	I	8.6	2.6	15	13	87	99	7.3	99
Min Daily Flow (ft³/s)	0	0	0	I	I	0	0	0	0	0	0	0	0
Missing Days	0	0	8	15	28	0	0	0	0	12	0	0	63

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E055.5 South Fork of Acid Canyon

Location. Lat 35° 53' 10", Long -106° 18' 26", SE ¼, Sec. 9, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 0.08 mi².

Period of Record. August 18, 2004, to September 30, 2024.

Revised Record. Period of record (2009).

Gage. Data logger with radio telemetry. Elevation of gage is 7101 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 17 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 90 ft³/s on September 13, 2013; gage height 6.2 ft.

Maximum Discharge for WY 2024. Maximum discharge 20 ft³/s on August 9, 2024; gage height 1.43 ft.



E055.5 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a solar-panel battery system. The station is also equipped with an ISCO pump sampler (12-count, 1-L glass and/or polyethylene bottles) to collect water-quality samples. The samples are triggered by stage through the data logger. The samplers are housed in a 3-ft × 4-ft metal box, separate from the other instrumentation. An outside staff gage is available for reference. No provision has been made for discharge measurements above the wading stage.

The precipitation system is equipped with a tipping-bucket rain gage. All equipment is powered with a solar-panel battery-charging system.

Datum Correction. Log check dams in Acid Canyon just below E055.5 (installed in 2017) caused the channel bed to fluctuate significantly through 2017. On March 22, 2018, the gaging station at E055.5 was relocated 35 ft upstream to a more stable location.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record, except for November 17, 2023, to February 27, 2024, when the gaging sensor was affected by ice and snow in the channel.

Rating. The channel is straight for about 40 ft upstream and 135 ft downstream. The channel is trapezoidal with little vegetation. The streambed through this reach is primarily bedrock with some sand catches above and a bed of sand starting about 30 ft downstream where the old station was located. The control is a bedrock nickpoint below the gaging station.

Rating No. 2 was developed by one discharge measurement of low flow and one slope-area measurement of peak flow. The rating curve was extended to 6.22 ft, based on a critical-depth computation. Rating No. 2 was used until October 2018 when one cross-section at the new gage station's sensor location and the channel slope were surveyed. The survey data were used to calculate multiple discharge measurements at different stage heights using Manning's formula to create Rating curve No. 3. Rating No. 4 was developed and used beginning January 2020.

No discharge measurements were made during the year.

Discharge. Discharge was computed by applying Rating No. 4.

E055.5 Daily Peak Stage WY 2024 (ft³/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	I	I	0	0.86	0.03	0	3.4	5.8	0.11
2	0.13	0	I	I	I	0.03	0	0.32	0	0.03	0	0.53
3	0.05	0	I	I	I	0.03	0	0	0	0	1.2	0.95
4	0.02	0	I	I	I	0.65	0	0.45	0	0	0	0.95
5	0	0	I	I	I	0	0	0.65	0	0	0	5.1
6	0	0	I	I	I	0	0	0.86	0	0	0	0
7	0	0	I	I	I	0	0.20	0.03	0	0	0	0
8	0	0	I	I	I	1.7	0	0	0	0	0	0
9	0	0	I	I	I	0.78	0	0.11	1.8	0.07	20	0
10	0	0	I	I	I	0.99	0	0.78	0.28	0	0.36	0
11	0	0	I	I	I	0	0.82	5.1	0	0	0.28	0
12	0	0	I	I	I	0.11	0.61	0.03	0	0.28	0.70	0
13	0	0	I	I	I	0	0	0	0	0.86	5.4	0
14	0	0	I	I	I	0.49	0	0.28	0	0	0.20	0
15	0	0	I	I	I	0.70	0.28	2.0	0	0	0.20	0
16	0	0	I	I	I	0.61	0	1.1	0	3.8	0.20	0.40
17	0	I	I	I	I	0.78	0	0	0	12	0.20	0.32
18	0	I	I	I	I	0	0	0	0	11	0.20	0.15
19	0	I	I	I	I	0	0	0	0	0.11	0.20	0.11
20	0	I	I	I	I	0	0.07	0	1.2	0.03	0.20	0
21	0	I	I	I	I	0.11	0	0	2.5	1.8	0.20	0
22	0	I	I	I	I	0	0	0	0.03	0	0.20	0
23	0	I	I	I	I	0	0	0	0	0.24	0.57	0
24	0	I	I	I	I	0.20	0	0	0	0	0.57	0
25	0	I	I	I	I	0.65	0.20	0	0.28	0	0.24	0
26	0	I	I	I	I	0	0	0	0.49	0.78	0.32	0
27	0	I	I	I	I	0.15	0.24	0	4.2	2.5	0.20	0
28	0	I	I	I	0.15	0.20	0.90	0.45	0	0	0.28	0
29	0	I	I	I	0.15	0	0.70	0	1.8	0	0.24	0
30	0	I	I	I		0	0.49	0	0.57	0	0.15	0
31	0		I	I		0		0		0	0	

* I = Ice or snow present in channel.

E055.5 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0.04	0	I ^{a,b}	I	I	0.98	1.0	1.0	1.1	1.4	7.2	2.1	15
Max Daily Peak (ft³/s)	0.13	0	I	I	I	1.7	0.90	5.1	4.2	12	20	5.1	20
Min Daily Value (ft³/s)	0	0	I	I	I	0	0	0	0	0	0	0	0
Missing Days	0	14	31	31	27	0	0	0	0	0	0	0	103

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E056 Acid Canyon above Pueblo Canyon

Location. Lat 35° 53' 19", Long -106° 18' 14" SE ¼, Sec. 9, T, 19 N., R. 6 E., Los Alamos County.

Drainage Area. 0.452 mi².

Period of Record. October 1, 2006, to September 30, 2024.

Revised Record. Period of record (2008).

Average Volume. 10 yr, 37 acre-ft/yr.

Gage. Data logger with radio telemetry. Elevation of gage is 6944 ft using LANL LIDAR DEM with NAD 83.

Maximum Discharge for Period of Record. Maximum discharge 470 ft³/s on September 13, 2013; gage height 8.6 ft.

Maximum Discharge for WY 2024. Maximum discharge, 31 ft³/s on July 17, 2024; gage height 3.17 ft.



E056 Stream gaging station, downstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is equipped with an ISCO pump sampler (12-count, 1-L glass and/or polyethylene bottles) to collect water-quality samples. The ISCO sampler is housed in a 3-ft × 4-ft metal box, separate from other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. No provisions have been made for measurements above the wading stage.

Datum Correction. None. The levels are from June 6, 2006. The gage is within acceptable limits.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record, except for November 15, 2023, to February 10, 2024, when the gaging sensor was affected by ice and snow in the channel.

Rating. The channel is about 20 ft wide and straight for about 15 ft upstream, then straight for about 40 ft downstream and 20 ft above the confluence of Pueblo Canyon. The streambed through this reach is primarily sand and cobbles. The low-water control is a 90°, sharp-crested weir. At high flow, the channel becomes the control.

Rating No. 3 is based on four discharge measurements and six indirect measurements made by a concurrent dye study at the site. Rating No. 4 is based on Rating No. 3 with an extension of the upper range.

No discharge measurements were taken during the year.

Discharge. Discharge was computed by applying the gage height to Rating No. 4.

E056 Daily Peak Discharge WY 2024 (ft³/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	I	I	0	0	0	0	0.71	0.98	0
2	0	0	I	I	I	0	0	0	0	0	0	0
3	0	0	I	I	I	0	0	0	0	0	0	0
4	0	0	I	I	I	0	0	0	0	0	0	0
5	0	0	I	I	I	0	0	0	0	0	0	2.2
6	0	0	I	I	I	0	0	0	0	0	0	0
7	0	0	I	I	I	0	0	0	0	0	0	0
8	0	0	I	I	I	0	0	0	0	0	0	0
9	0	0	I	I	I	0	0	0	0	0	16	0
10	0	0	I	I	I	0	0	0	0	0	0	0
11	0	0	I	I	0	0	0	1.1	0	0	0	0
12	0	0	I	I	0	0	0	0	0	0	0	0
13	0	0	I	I	0	0	0	0	0	0	0	0
14	0	0	I	I	0	0	0	0	0	0	0	0
15	0	I	I	I	0	0	0	0	0	0	0	0
16	0	I	I	I	0	0	0	0	0	0.25	0	0
17	0	I	I	I	0	0.22	0	0	0	31	0	0
18	0	I	I	I	0	0	0	0	0	3.8	0	0
19	0	I	I	I	0	0	0	0	0	0	0	0
20	0	I	I	I	0	0	0	0	0	0	0	0
21	0	I	I	I	0	0	0	0	0	0.35	0	0
22	0	I	I	I	0	0	0	0	0	0	0	0
23	0	I	I	I	0	0	0	0	0	0	0	0
24	0	I	I	I	0	0	0	0	0	0	0	0
25	0	I	I	I	0	0	0	0	0	0	0	0
26	0	I	I	I	0	0	0	0	0	0	0	0
27	0	I	I	I	0	0	0	0	0	0.67	0	0
28	0	I	I	I	0	0	0	0	0	0	0	0
29	0	I	I	I	0	0	0	0	0.86	0	0	0
30	0	I	I	I		0	0	0	0.69	0	0	0
31	0		I	I		0		0		0	0	

* I = Ice or snow present in channel.

E056 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total (acre-ft)	0	I ^{a,b}	I	I	0	0.03	0	0.15	0.13	1.0	0.40	0.08	1.8
Max Daily Peak (ft³/s)	0	I	I	I	0	0.22	0	1.1	0.86	31	16	2.2	31
Min Daily Flow (ft³/s)	0	I	I	I	0	0	0	0	0	0	0	0	0
Missing Days	0	16	31	31	10	0	0	0	0	0	0	0	78

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E059.5 Pueblo Canyon below Los Alamos County WWTF

Location. Lat 35° 52' 52.72" N, Long -106° 14' 22.89" W, Zone 13S, NM23, T. 19 N., R. 7 E., Santa Fe County.

Drainage Area. 3.26 mi².

Period of Record. May 10, 2014, to September 30, 2024.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 6483 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 979 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 104 ft³/s on July 31, 2022; gage height 1.89 ft.

Maximum Discharge for WY 2024. Maximum discharge 30 ft³/s on August 9, 2024; gage height 1.19 ft.



E059.5 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a Sutron Accubar bubble sensor. Two ISCO pump samplers (one 12-count, 1-L glass and/or polyethylene bottles, and one 24-count, 1-L polyethylene bottles) to collect water-quality samples; the samplers are triggered by stage through the data logger. The station is powered by a solar-panel battery system. The samplers and batteries are in a 3-ft × 4-ft metal box, separate from the other instrumentation. No flow-control structure exists in the channel. An outside staff gage is available for reference. No provision has been made for discharge measurements above the wading stage.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record.

Rating. Open channel.

Rating No. 1 was developed from a step-backwater survey conducted in September 2010. The control is the channel at all flows. The channel bed is highly mobile sand, and stage shifts will be required to account for frequent reshaping of the channel by discharge.

No discharge measurements were made during the year.

Discharge. Discharge was computed using Rating No. 1.

E059.5 Daily Peak Discharge WY 2024 (ft³/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	7.3	3.1	3.6	1.2	0.72	1.4	0.85	0.72	0.40	3.3	1.7	4.7
2	6.2	2.8	2.2	1.0	1.0	2.0	0.85	0.43	1.1	17	1.5	6.2
3	6.9	2.8	2.6	1.1	1.1	2.4	1.7	0.72	0	0.50	2.8	2.8
4	6.6	3.1	3.3	1.4	1.2	2.0	1.0	0.37	2.4	0.50	3.6	0.47
5	5.6	3.3	3.3	1.2	1.2	2.0	1.2	0.72	0.85	0.30	2.6	0.23
6	6.9	2.6	3.6	1.5	1.0	2.2	0.60	0.47	0	0.60	5.9	1.2
7	6.2	2.0	3.1	1.1	1.4	2.6	0.72	0.10	3.3	0	3.6	1.4
8	6.2	2.2	3.1	1.2	1.2	2.6	0.85	0.03	4.1	0	4.7	1.8
9	5.9	2.2	2.4	1.8	1.0	3.3	0.60	0	1.8	0.40	30	1.4
10	5.0	2.2	2.4	1.4	1.4	3.6	1.2	0.23	1.5	0.85	5.3	0.27
11	5.6	2.6	2.2	1.5	1.5	2.8	1.0	1.1	1.7	1.2	8.0	5.3
12	4.7	2.6	2.2	1.1	1.2	3.1	0.50	0.85	1.4	1.1	9.6	2.2
13	4.4	2.4	2.0	1.0	1.7	2.4	0.60	0.85	1.1	0.40	7.3	2.4
14	5.0	2.0	1.7	1.0	1.2	2.2	1.0	0.60	0	0.50	10	1.5
15	5.0	2.6	2.4	1.0	2.0	2.6	0.85	1.1	0	0.20	6.6	1.5
16	5.3	2.8	2.2	1.0	1.8	2.8	1.1	1.0	0.60	0.43	6.6	1.8
17	4.1	3.3	2.4	0.72	1.7	3.8	1.1	0.72	0	2.2	3.1	2.2
18	3.8	3.3	2.2	0.72	1.5	3.1	1.1	0.40	0	1.2	5.0	2.8
19	3.1	3.3	1.8	0.85	1.7	2.6	0.50	0.85	0	4.7	5.3	2.6
20	3.3	2.4	2.0	1.1	1.8	1.8	0.72	0.43	0	21	4.1	1.7
21	4.1	2.0	1.8	0.85	2.0	1.5	0.85	0.47	1.0	2.2	4.4	1.2
22	3.8	2.2	1.8	1.0	1.5	1.1	0.60	0.40	2.2	1.8	2.6	1.8
23	3.1	2.6	1.7	0.85	1.4	2.0	0.60	0.37	2.2	1.4	2.6	2.0
24	2.8	2.4	1.2	0.60	1.8	1.2	0.40	0	1.8	2.6	6.6	2.2
25	3.1	2.4	0.85	0.85	1.8	0.50	0.60	0	1.7	5.6	9.6	1.8
26	2.6	2.4	1.1	0.85	2.0	1.2	0.60	0	1.2	6.6	6.2	1.5
27	3.3	2.4	1.0	1.0	2.2	0.72	0.27	0.40	1.0	0.50	5.0	1.7
28	3.1	2.2	1.1	1.4	2.2	2.4	0.50	0.50	0.72	1.7	5.0	1.7
29	3.3	2.4	1.2	1.5	2.2	0.47	0.50	0.33	1.8	5.6	5.3	1.8
30	3.6	1.8	1.1	1.5		0.85	1.0	0	2.2	1.8	8.0	1.2
31	3.1		1.2	1.1		1.0		0.20		1.7	3.1	

E059.5 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	96	51	39	17	24	42	10	5.6	14	24	80	19	422
Max Daily Peak (ft³/s)	7.3	3.3	3.6	1.8	2.2	3.8	1.7	1.1	4.1	21	30	6.2	30
Min Daily Flow (ft³/s)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0	0

E059.8 Pueblo Canyon below Wetlands

Location. Lat 35° 52' 38.489" N, Long -106° 13' 35.418" W, Zone 13N, NM17, T. 19 N., R. 7 E., Santa Fe County.

Drainage Area. 7.75 mi².

Period of Record. October 9, 2015, to September 30, 2024.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 6410 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 9 yr, 67 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 10 ft³/s on October 21, 2015; gage height 1.51 ft.

Maximum Discharge for WY 2024. Maximum discharge 5.5 ft³/s on August 2, 2024; gage height 1.33 ft.



E059.8 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. Two ISCO pump samplers (one 12-count, 1-L glass and/or polyethylene bottles, and one 24-count, 1-L polyethylene bottles) to collect water-quality samples; the samplers are triggered by stage through the data logger. The station is powered by a solar-panel battery system. The samplers and batteries are in a 3-ft × 4-ft metal box, separate from the other instrumentation. A V-notch weir is the control. An outside staff gage is available for reference. No provision has been made for discharge measurements above the wading stage.

Datum Correction. None.

Gage-Height Record The data logger, referenced to the inside staff gage, gave a complete and satisfactory record.

Rating. 90°, V-notch weir with a board-crested weir above the notch.

Rating No. 1 was developed from a 90° weir plate formula and broad-crested weir computation above the notch.

No discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying using Rating No. 1 for the entire year.

E059.8 Daily Peak Discharge WY 2024 (ft³/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.18	0.39	0.50	0.36	0.31	0.29	0.36	0.20	0	0.15	4.5	0
2	0.23	0.39	0.47	0.31	0.34	0.29	0.36	0.23	0	0.39	5.5	0
3	0.21	0.34	0.47	0.34	0.34	0.36	0.34	0.21	0	0.15	0	0
4	0.25	0.29	0.53	0.39	0.34	0.36	0.34	0	0	0.06	0.07	0
5	0.25	0.39	0.53	0.36	0.34	0.31	0.31	0	0	0.04	0.09	0
6	0.18	0.39	0.56	0.36	0.36	0.29	0.29	0.15	0	0	0	0
7	0.17	0.36	0.50	0.39	0.36	0.31	0.36	0.12	0	0	0	0
8	0.21	0.34	0.50	0.39	0.36	0.34	0.34	0	0	0	0	0
9	0.25	0.31	0.47	0.74	0.34	0.39	0.31	0	0	0	0	0
10	0.21	0.27	0.47	0.44	0.36	0.41	0.31	0	0	0	0	0.02
11	0.20	0.36	0.50	0.41	0.39	0.39	0.27	0.10	0	0	0.14	0.01
12	0.23	0.39	0.41	0.53	0.36	0.36	0.21	0.20	0	0	0.23	0.11
13	0.25	0.39	0.44	0.63	0.39	0.36	0.21	0.21	0	0	0.21	0.12
14	0.23	0.39	0.47	0.36	0.36	0.36	0.34	0.29	0	0	0.14	0
15	0.34	0.39	0.50	0.36	0.39	0.39	0.34	0.25	0	0	0.12	0
16	0.36	0.39	0.47	0.39	0.36	0.41	0.27	0.27	0	0	0.09	0
17	0.34	0.39	0.47	0.36	0.36	0.47	0.31	0.27	0	0	0	0.18
18	0.31	0.47	0.44	0.34	0.34	0.44	0.34	0.17	0	0	0	0.18
19	0.27	0.50	0.44	0.36	0.36	0.41	0.23	0.23	0	0	0	0.08
20	0.17	0.41	0.39	0.36	0.36	0.41	0.23	0.25	0	0.14	0	0.07
21	0.20	0.36	0.39	0.36	0.36	0.36	0.34	0.17	0	0.14	0	0.08
22	0.31	0.41	0.41	0.36	0.39	0.34	0.34	0	0	0.15	0	0.11
23	0.31	0.44	0.41	0.39	0.34	0.34	0.23	0	0	2.2	0	0.17
24	0.27	0.41	0.36	0.34	0.34	0.39	0	0	0	0.12	0	0.23
25	0.25	0.44	0.31	0.31	0.39	0.34	0.15	0	0	0.31	0	0.14
26	0.27	0.44	0.34	0.31	0.39	0.31	0.18	0	0	0.31	0	0.05
27	0.29	0.44	0.29	0.31	0.36	0.31	0.15	0	0	0.20	0	0.03
28	0.25	0.44	0.31	0.34	0.36	0.31	0.21	0	0	0	0	0.10
29	0.39	0.47	0.31	0.41	0.36	0.27	0.23	0	0	0.18	0	0.10
30	0.39	0.41	0.36	0.41		0.29	0.23	0	0	0.09	0	0.17
31	0.36		0.36	0.36		0.36		0		0.10	0	

E059.8 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	5.0	12	17	13	12	13	6.6	1.9	0	1.1	1.0	0.84	83
Max Daily Peak (ft³/s)	0.39	0.50	0.56	0.74	0.39	0.47	0.36	0.29	0	2.2	5.5	0.23	5.5
Min Daily Flow (ft³/s)	0	0	0.01	0	0.02	0	0	0	0	0	0	0	0
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0	0

E060.1 Pueblo Canyon below Grade-Control Structure

Location. Lat 35° 52' 17", Long -106° 12' 53", NE ¼, Sec. 20, T. 19 N., R. 7 E., Santa Fe County.

Drainage Area. 8.30 mi².

Period of Record. April 15, 2010, to September 30, 2024.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 6329 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 12 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 1400 ft³/s on September 13, 2013; gage height 6.23 ft.

Maximum Discharge for WY 2024. Maximum discharge 4.5 ft³/s on June 19, 2024; gage height 0.42 ft.



E060.1 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, a shaft encoder float system, an OTT RLS, and a Sutron Accubar air-purge bubble sensor. All equipment is housed in a NEMA shelter, which is secured atop a stilling well (a vertical 2.5-ft-diameter CMP). An outside staff gage is available for reference. A trapezoidal supercritical flume with a 1-ft-wide throat controls flow through the gaging station reach. No provision has been made for direct discharge measurements above the wading stage.

Two ISCO pump samplers (one 12-count, 1-L glass and/or polyethylene bottles, and one 24-count, 1-L polyethylene bottles) to collect water-quality samples; the samplers are triggered by a liquid level actuator. The station is powered by a solar-panel battery system. The samplers and batteries are in a 3-ft × 4-ft steel storage box, separate from the other instrumentation. A line-of-sight radio transceiver provides 5-min stage data from the encoder, radar, and bubbler.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record, except for January 1 to 18, 2024, when the gage was affected by ice and snow in the flume.

Rating. Rating No. 1 is based on precalibrated data for the flume used (Kilpatrick and Schneider 1983) and the rating was used throughout the period.

No discharge measurements were taken during the year.

Discharge. Discharge was computed by directly applying Rating No. 1 for the entire water year.

E060.1 Daily Peak Discharge WY 2024 (ft³/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	1.1	I*	0.18	0.15	0.04	0	0	0	0.04	0
2	0	0	0.50	I	0.18	0.15	0.11	0	0	0.42	0	0
3	0	0	0.96	I	0.18	0.18	0.04	0	0	0	0	0
4	0	0	1.4	I	0.11	0.15	0	0	0	0	0	0
5	0	0	2.2	I	0.58	0.15	0	0	0	0	0	0
6	0	0	2.5	I	0.76	0.08	0	0	0	0	0	0
7	0	0	1.9	I	0.86	0.08	0	0	0	0	0	0
8	0	0	2.2	I	0.35	0.18	0	0	0	0	0	0
9	0	0	0.22	I	0.18	0.18	0	0	0	0	0	0
10	0	0	3.2	I	0.11	0.22	0	0	0	0	0	0
11	0	0	3.6	I	0.11	0.18	0	0	0	0	0	0
12	0	0	0.32	I	0.11	0.18	0	0	0	0	0	0
13	0	0	0.25	I	0.15	0.22	0	0	0	0	0	0
14	0	0	1.9	I	0.08	0.15	0	0	0	0	0	0
15	0	0	1.3	I	0.22	0.18	0	0	0	0	0	0
16	0	0	0.42	I	0.18	0.22	0	0	0	0	0	0
17	0	0	0.66	I	0.18	0.96	0	0	0	0	0	2.3
18	0	0	0.96	I	0.22	1.6	0	0	0	0.04	0	0
19	0	0	1.1	0.15	0.25	0.76	0	0	4.5	0	0	0
20	0	0	1.4	0.15	0.22	0.18	0	0	0	0	0	0
21	0	0	1.1	0.18	0.22	0.15	0	0	0	0	0	0
22	0	0	0.96	0.18	0.18	0.15	0	0	0	0	0	0
23	0	0	0.76	0.18	0.15	0.15	0	0	0	0	0	0
24	0	0.15	0.25	0.18	0.22	0.18	0	0	0	0	0	0
25	0	0.58	0.32	0.18	0.18	0.18	0	0	0	0	0	0
26	0	0	0.15	0.18	0.18	0.15	0	0	0	0	3.4	0
27	0	0	0.29	0.11	0.18	0.29	0	0	0	0	0	0
28	0	0	0.29	0.15	0.18	0.29	0	0	0	0	0.11	0
29	0	0	0.29	0.22	0.18	0.29	0	0	0	0	0	0
30	0	0.58	0.76	0.18		0.08	0	0	0	0.15	0	0
31	0		1.7	0.18		0.18		0		0	0	

* I = Ice or snow present in channel.

E060.1 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0.06	16	I ^{a,b}	3.9	3.6	0.01	0	0.14	0.01	0.09	0.02	24
Max Daily Peak (ft³/s)	0	0.58	3.6	I	0.86	1.6	0.11	0	4.5	0.42	3.4	2.3	4.5
Min Daily Flow (ft³/s)	0	0	0	I	0	0	0	0	0	0	0	0	0
Missing Days	0	0	0	18	0	0	0	0	0	0	0	0	18

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E099 Guaje Canyon at SR-502

Location. Lat 35° 53' 4", Long -106° 9' 44", NE ¼, Sec. 14, T. 19 N., R. 7 E., Santa Fe County.

Drainage Area. 32.7 mi².

Period of Record. January 8, 2002, to September 30, 2024. Period of record for calculated discharge begins October 1, 2011.

Revised Record. Rating table (2011) Drainage Area (2023).

Gage. Data logger with radio telemetry. Elevation of gage is 5656 ft using LANL's DEM, BareEarth_DEM_LANL.

Average Volume. 10 yr, 26 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 1600 ft³/s on September 13, 2013; gage height 3.27 ft.

Maximum Discharge for WY 2024. Maximum discharge 817 ft³/s on June 20 and August 10, 2024; gage height 2.39 ft.



Gaging Station E099 Downstream

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS to measure stage height. The system is powered by a solar-panel battery system housed in a NEMA shelter. An outside staff gage is available for reference. No provision has been made for measurement above the wading stage. All high-flow measurements are computed by slope-area or critical-depth methods.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the inside staff gage, gave a complete and satisfactory record, except for July 4 to 9, 2024, when the station lost power.

Rating. The channel is on the downstream side of NM 502 and has three 10-in. × 10-in. culverts upstream, creating a 75-ft-wide channel. The culverts are on a 3.5% slope and are 175 ft long, producing high-velocity, turbulent flow at the gage. The channel streambed consists of cobble and sand. The gage is located on a concrete pad that operates as a low-flow control with common minor silting. Downstream from the gage is a moderate- to high-flow control in the form of a rock gabion with a 4-ft downstream vertical face.

Rating No. 2 was developed based on a survey performed March 28, 2012, and on step-back water analysis.

No discharge measurements were made during the year.

Discharge. Discharges were computed from Rating No. 2.

E099 Daily Peak Discharge WY 2024 (ft³/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	E*	0	0
5	0	0	0	0	0	0	0	0	0	E	0	0
6	0	0	0	0	0	0	0	0	0	E	0	0
7	0	0	0	0	0	0	0	0	0	E	0	0
8	0	0	0	0	0	0	0	0	0	E	0	0
9	0	0	0	0	0	0	0	0	0	E	0.50	0
10	0	0	0	0	0	0	0	0	0	0	817	0
11	0	0	0	0	0	0	0	0	0	2.0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0.67	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	1.3	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	817	0	0	0
21	0	0	0	0	0	0	0	0	107	0	0	0
22	0	0	0	0	0	0	0	0	3.3	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	2.4	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	27	0	0	0
30	0	0.83	0	0		0	0	0	2.0	0	0	0
31	0		0	0		0		0		0	0	

* E = Equipment malfunction.

E099 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0.01	0	0	0	0	0.03	0	124	0.02	35	0	159
Max Daily Peak (ft³/s)	0	0.83	0	0	0	0	1.3	0	817	2.0	817	0	817
Min Daily Flow (ft³/s)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	0	0	0	0	0	0	0	0	6	0	0	0

E110.7 Lower Los Alamos Canyon at Rio Grande

Location. Lat 35° 53' 4", Long -106° 9' 44", SE ¼, Sec. 13, T. 19 N., R. 7 E., White Rock.

Drainage Area. 59 mi².

Period of Record. July 28, 2022, to September 30, 2024.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 5600 ft using BareEarth_DEM_LANL.

Average Volume. Not applicable. No calculated volume is available for this site.

Maximum Discharge for Period of Record. Not applicable. No calculated or measured discharge is available for this site.

Maximum Discharge for WY 2024. Not applicable. No calculated or measured discharge is available for this site.



Gaging Station E110.7 Downstream

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLSto measure stage height. The system is powered by a solar-panel battery system housed in a NEMA shelter. No outside staff gage is available for reference. No provision has been made for measurement above the wading stage. All high-flow measurements are computed by slope-area or critical-depth methods.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the inside staff gage, gave a complete and satisfactory record.

Rating. No rating has been developed for this site.

Discharge. No rating has been developed for this site.

E110.7 Days with Flow WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	NF ^a	NF	F ^b	NF	NF	NF	NF	NF	NF	NF	NF	NF
2	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
3	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
4	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
5	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
6	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
7	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	F
8	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
9	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	F	NF
10	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	F	NF
11	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	F	NF
12	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
13	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	F	NF
14	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
15	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
16	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
17	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
18	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
19	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
20	NF	NF	NF	NF	NF	NF	NF	NF	F	NF	NF	NF
21	NF	NF	NF	NF	NF	NF	NF	NF	F	NF	NF	NF
22	NF	NF	NF	NF	NF	NF	NF	NF	F	NF	NF	NF
23	NF	NF	NF	NF	NF	NF	NF	NF	F	NF	NF	NF
24	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
25	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
26	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
27	NF	NF	NF	NF	NF	NF	NF	NF	F	NF	NF	NF
28	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF	NF
29	NF	NF	NF	NF	NF	NF	NF	NF	F	NF	NF	NF
30	NF	F	NF	NF		NF	NF	NF	F	NF	NF	NF
31	NF		NF	NF		NF		NF		NF	NF	

^a NF = No Flow (no measured flow).^b F = Flow. Gage-height sensor measured flow at the site.**E110.7 Monthly Summary Table WY 2024**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Days with Flow	0	1	1	0	0	0	0	0	7	0	4	1	14
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0	0

Sandia Watershed

The Sandia Canyon and Mortandad Canyon watersheds are located within the central part of LANL. The Sandia watershed heads on LANL property within TA-03, at an elevation of approximately 7300 ft, and trends east-southeast across LANL property, Bandelier National Monument, and Pueblo de San Ildefonso. Sandia Canyon empties into the Rio Grande in White Rock Canyon at an elevation of 5450 ft. The area of the Sandia watershed is approximately 5.5 mi². There are no significant tributaries to the Sandia watershed. Perennial stream flow occurs in the upper and middle portions of the canyon system caused by sanitary wastewater and cooling tower effluent discharge to the canyon from operating facilities. The only known perennial spring in the watershed (Sandia Spring) is located in lower Sandia Canyon near the Rio Grande. The Sandia watershed contains, or may influence, eight wetland areas totaling approximately 5.39 acres.

Figure 5 shows the total monthly volume of discharge for the five stream gaging stations within Sandia watershed. Station E121 is directly downstream from the power plant and receives a nearly constant base flow from the power plant. Stations E121 and E122 both discharge into the wetland. Station E123 is located downstream of the Sandia Wetland. Station E124 is located in lower Sandia Canyon, adjacent to East Jemez Road. Station E125 is located near the edge of LANL property at the intersection of East Jemez Road and NM 4. E124 and E125 are ephemeral with occasional flow only during the monsoon season. Variations within the discharge are the result of the precipitation events throughout the monsoon season and changes in the volume of effluent from the cooling tower.

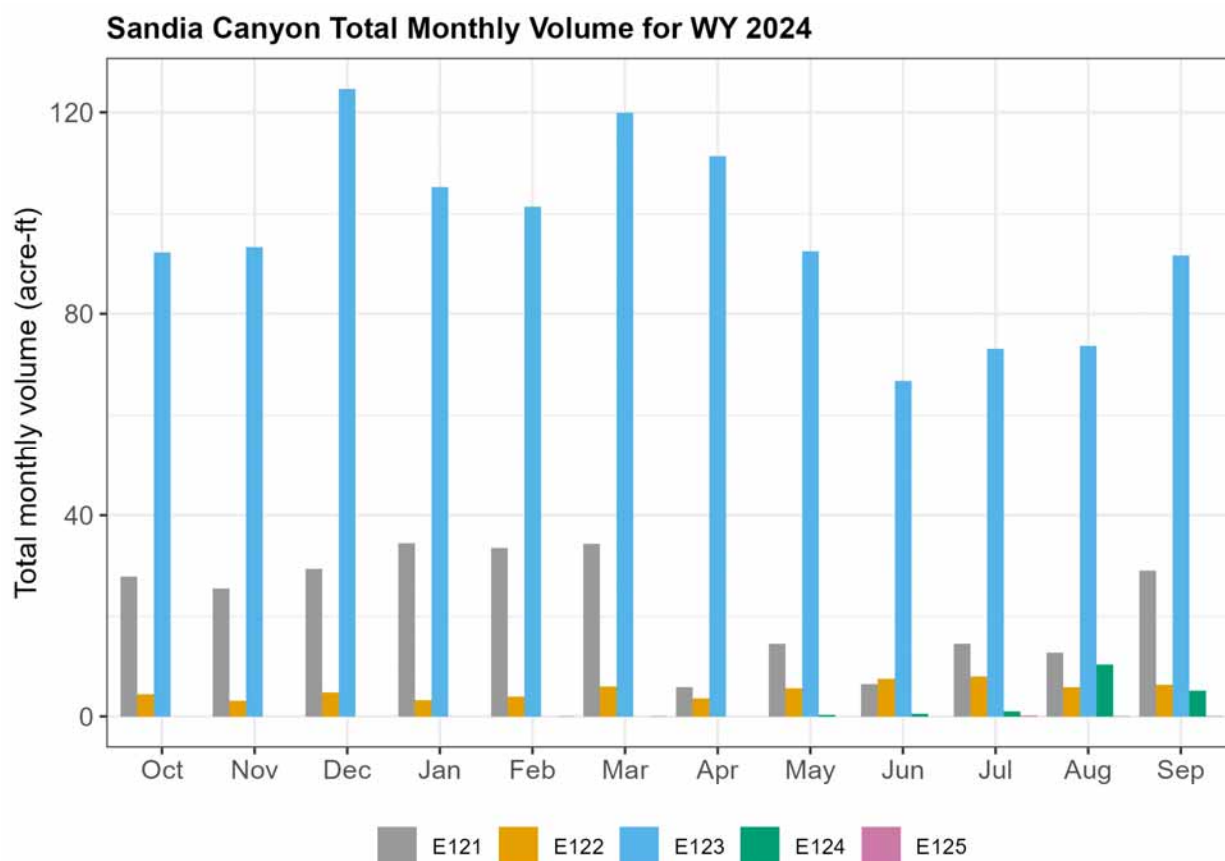


Figure 5 Total monthly volume of discharge (acre-ft) for WY 2024 for Sandia Canyon

E121 Sandia Canyon Right Fork at Power Plant

Location. Lat 35° 52' 31", Long -106° 19' 7", SW ¼, Sec. 16, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 0.08 mi².

Period of Record. October 1, 2006, to September 30, 2024.

Revised Record. Period of record (2008).

Gage. Data logger with radio telemetry. Elevation of gage is 7280 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 378 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 191 ft³/s on June 21, 2002, from peak-flow computation; gage height 7.62 ft.

Maximum Discharge for WY 2024. Maximum discharge 99 ft³/s on September 5, 2024; gage height 7.95 ft.



E121 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a Sutron Accubar bubble sensor. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is also equipped with two ISCO pump samplers (one 12-count, 1-L glass and/or polyethylene bottles, and one 24-count, 1-L polyethylene bottles) to collect water-quality samples. The samplers are housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and are triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for direct measurements above the wading stage.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record, except from April 2 to 22, 2024, when the bubble sensor malfunctioned.

Rating. The channel is straight for about 30 ft with a steep upstream slope and straight for 50 ft downstream with a sharp slope. The streambed through this reach consists primarily of sand, gravel, and cobbles, more so below the gaging station. The low-water control is a bedrock riffle below the gaging station.

Rating No. 5 was developed based on previous measurements.

No discharge measurements were made during the year.

Discharge. Discharge was computed by applying Rating No. 5.

E121 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.37	0.64	0.48	0.50	0.90	0.81	2.7	0.29	0.17	8.2	6.6	0.20
2	2.8	0.57	0.72	0.61	1.3	0.64	E*	0.32	0.06	0.13	0.27	0.18
3	0.64	0.57	0.68	0.64	0.90	0.57	E	0.34	0.13	0.05	0.24	0.15
4	0.86	0.64	0.61	0.72	0.77	0.50	E	0.32	0.21	0.24	0.17	0.16
5	0.68	0.44	0.57	0.72	0.77	0.77	E	0.13	0.18	0.29	0.17	99
6	0.72	0.68	0.57	0.86	0.77	0.81	E	0.35	0.03	0.24	0.15	0.50
7	0.72	0.64	0.39	0.68	1.4	0.72	E	0.34	0.04	0.18	0.34	0.64
8	0.68	0.50	0.57	0.72	1.1	0.72	E	0.34	0.16	0.24	0.23	0.61
9	0.72	0.44	0.57	0.72	0.72	1.3	E	0.32	43	0.07	52	0.61
10	0.68	0.57	0.68	0.72	0.68	1.0	E	0.27	0.26	0.06	0.29	1.1
11	0.68	0.64	0.53	0.95	0.95	0.68	E	15	0.09	0.29	0.26	0.72
12	0.77	0.57	0.72	0.90	0.81	0.68	E	0.32	0.13	0.24	0.41	0.72
13	0.81	0.50	0.81	0.90	0.90	0.77	E	0.30	0.16	3.2	8.0	0.72
14	0.72	0.50	0.95	0.95	0.81	1.2	E	5.7	0.23	0.26	0.26	0.57
15	0.68	0.44	0.72	0.90	0.77	2.3	E	2.7	0.17	0.57	0.26	0.53
16	0.61	0.68	1.1	0.77	0.77	1.6	E	1.7	0.11	4.0	0.23	1.6
17	0.48	0.68	0.53	0.90	0.81	1.9	E	0.30	0.02	64	0.23	1.5
18	0.50	0.95	0.61	1.2	0.77	1.2	E	0.30	0.02	24	0.21	0.64
19	0.50	1.2	0.68	0.86	0.81	1.1	E	0.29	0.21	0.30	0.20	0.53
20	0.53	0.64	0.61	0.86	0.72	0.72	E	0.30	3.9	0.32	0.20	0.57
21	0.50	0.48	14	0.86	0.68	0.86	E	0.29	2.2	3.7	0.20	0.53
22	0.61	0.64	2.0	1.0	0.72	0.86	E	0.32	0.21	0.30	0.20	0.57
23	0.57	0.64	2.3	1.1	0.72	0.81	0.34	0.32	0.13	1.7	3.2	0.53
24	0.48	0.72	0.68	0.86	0.86	1.4	0.37	0.23	0.12	0.21	0.34	0.50
25	0.86	1.1	0.72	0.72	0.72	0.68	0.37	0.15	0.05	0.39	0.23	0.53
26	0.90	0.68	0.68	0.86	1.3	0.68	0.37	0.07	0.07	0.37	2.2	0.57
27	0.68	0.48	0.64	0.64	1.0	0.90	0.43	0.24	2.9	2.4	0.37	0.77
28	0.44	0.53	0.53	0.64	0.90	0.77	0.35	0.24	0.23	0.24	0.34	0.61
29	0.44	0.77	0.53	0.95	0.72	0.77	0.27	0.26	3.1	0.07	0.07	0.61
30	0.53	0.81	0.53	1.2		0.72	0.26	0.23	0.46	0.29	0.23	0.57
31	0.57		0.57	0.90		0.72		0.20		0.24	0.20	

* E = Equipment malfunction.

E121 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	28	26	30	34	33	34	E ^{a,b}	15	6.4	15	13	29	263
Max Daily Peak (ft³/s)	2.8	1.2	14	1.2	1.4	2.3	E	15	43	64	52	99	99
Mean Daily Flow (ft³/s)	0.46	0.43	0.48	0.56	0.58	0.56	E	0.24	0.11	0.24	0.21	0.49	0.39
Min Daily Flow (ft³/s)	0.21	0.20	0.06	0.27	0.29	0.29	E	0.06	0.02	0.11	0	0.06	0
Missing Days	0	0	0	0	0	0	21	0	0	0	0	0	0

^a E = Equipment malfunction.^b Monthly summary is not calculated for months with mostly missing data.

E121 Daily Mean Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.3	0.47	0.4	0.42	0.59	0.56	0.65	0.18	0.13	0.33	0.37	0.13
2	0.36	0.49	0.44	0.43	0.61	0.48	E*	0.28	0.02	0.07	0.24	0.11
3	0.37	0.49	0.5	0.5	0.52	0.38	E	0.31	0.07	0.03	0.18	0.1
4	0.56	0.44	0.48	0.5	0.49	0.39	E	0.29	0.16	0.09	0.15	0.1
5	0.52	0.38	0.43	0.49	0.43	0.48	E	0.08	0.06	0.18	0.14	2.3
6	0.57	0.48	0.43	0.46	0.42	0.55	E	0.21	0.01	0.15	0.07	0.39
7	0.57	0.43	0.3	0.47	0.81	0.59	E	0.31	0.02	0.11	0.14	0.54
8	0.52	0.36	0.39	0.5	0.76	0.55	E	0.32	0.07	0.08	0.2	0.54
9	0.54	0.29	0.48	0.56	0.5	0.57	E	0.26	0.57	0.03	0.64	0.39
10	0.45	0.39	0.51	0.61	0.49	0.56	E	0.24	0.1	0.04	0.22	0.31
11	0.43	0.48	0.29	0.72	0.6	0.44	E	0.86	0.07	0.14	0.2	0.34
12	0.62	0.45	0.26	0.7	0.6	0.49	E	0.27	0.08	0.2	0.24	0.51
13	0.55	0.38	0.61	0.72	0.63	0.5	E	0.27	0.08	0.27	0.33	0.54
14	0.55	0.34	0.68	0.75	0.59	0.59	E	0.38	0.1	0.2	0.24	0.49
15	0.49	0.31	0.53	0.55	0.61	0.87	E	0.33	0.1	0.36	0.22	0.48
16	0.37	0.41	0.63	0.46	0.56	0.86	E	0.31	0.05	0.31	0.19	0.57
17	0.36	0.48	0.45	0.58	0.6	0.84	E	0.27	0	1.2	0.19	0.38
18	0.41	0.51	0.49	0.61	0.59	0.67	E	0.26	0	0.52	0.19	0.47
19	0.43	0.51	0.52	0.64	0.58	0.6	E	0.25	0.07	0.27	0.17	0.49
20	0.43	0.42	0.5	0.53	0.56	0.54	E	0.25	0.24	0.27	0.16	0.49
21	0.41	0.36	0.64	0.43	0.47	0.57	E	0.17	0.17	0.41	0.16	0.49
22	0.44	0.41	0.5	0.64	0.53	0.63	E	0.2	0.13	0.26	0.17	0.48
23	0.45	0.49	0.68	0.65	0.53	0.53	0.3	0.19	0.11	0.27	0.22	0.47
24	0.29	0.48	0.46	0.64	0.54	0.47	0.32	0.13	0.04	0.18	0.19	0.47
25	0.53	0.53	0.51	0.48	0.55	0.4	0.34	0.06	0	0.22	0.18	0.47
26	0.67	0.49	0.55	0.46	0.56	0.49	0.34	0.02	0	0.33	0.32	0.48
27	0.43	0.33	0.52	0.48	0.8	0.54	0.33	0.05	0.11	0.29	0.31	0.55
28	0.34	0.34	0.43	0.48	0.65	0.56	0.29	0.15	0.14	0.15	0.17	0.54
29	0.35	0.46	0.43	0.56	0.61	0.54	0.24	0.15	0.37	0.05	0.03	0.52
30	0.37	0.51	0.43	0.71		0.52	0.15	0.15	0.15	0.12	0.09	0.51
31	0.45		0.43	0.68		0.54		0.15		0.21	0.13	

* E = Equipment malfunction.

E122 Sandia Canyon near Roads and Grounds at TA-03

Location. Lat 35° 52' 31", Long -106° 19' 6", SW ¼, Sec. 16, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 0.08 mi².

Period of Record. October 1, 2006, to September 30, 2024.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 7288 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 85 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 18 ft³/s on September 13, 2013; gage height 3.03 ft.

Maximum Discharge for WY 2024. Maximum discharge 12 ft³/s on September 5, 2024; gage height 2.53 ft.



E122 Stream gaging station, downstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval) and an MDS 4710 radio transceiver. A VegaPul WL 61 radar sensor was used to determine stream water height. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is also equipped with two ISCO pump samplers (one 12-count, 1-L glass and/or polyethylene bottles, and one 24-count, 1-L polyethylene bottles) to collect water-quality samples. The samplers are housed in a 3-ft × 4-ft metal box, separate from other instrumentation, and are triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for discharge measurements above the wading stage.

Datum Correction. None. The levels of July 25, 2005, were found the gage to be within limits.

Gage-Height Record. The data logger, referenced to the inside gage height, gave a complete and satisfactory record for the year.

Rating. The channel is straight for about 20 ft above the gaging station with a steep downstream slope, and straight for 15 ft downstream with a sharp slope 5 ft downstream. The streambed through this reach is primarily bedrock with some cobbles below the gaging station. The low-water control is a bedrock riffle below the gage.

Rating No. 2 was developed based on past measurements.

No discharge measurements were made during the year.

Discharge. Discharge was computed from Rating No. 2.

E122 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.10	0.12	0.16	0.11	0.13	0.13	1.9	0.09	0.11	6.0	5.9	0.11
2	3.5	0.12	0.12	0.11	0.71	0.13	1.0	0.09	0.10	0.18	0.11	0.11
3	0.12	0.12	0.14	0.11	0.12	0.13	0.13	0.16	0.10	0.12	0.10	0.14
4	0.11	0.12	0.16	0.11	0.12	0.13	0.13	0.10	0.20	0.11	0.09	0.11
5	0.12	0.12	0.16	0.22	0.12	0.13	0.12	0.11	0.11	0.11	0.09	12
6	0.12	0.12	0.16	0.12	0.11	0.12	0.24	0.11	0.19	0.11	0.10	0.16
7	0.13	0.11	0.14	0.11	1.1	0.13	0.12	0.10	0.12	0.11	0.34	0.11
8	0.13	0.11	0.12	0.13	0.13	0.11	0.12	0.10	0.12	0.11	0.11	0.11
9	0.13	0.11	0.12	0.11	0.12	0.65	0.12	0.10	9.1	0.11	9.4	0.11
10	0.12	0.11	0.12	0.11	0.13	0.51	0.13	0.10	0.39	0.11	0.18	0.54
11	0.13	0.11	0.12	0.16	0.26	0.12	0.15	7.6	0.13	0.11	0.11	0.12
12	0.12	0.12	0.11	0.12	0.16	0.12	0.13	0.16	0.12	0.11	0.32	0.11
13	0.12	0.13	0.20	0.11	0.20	0.11	0.12	0.11	0.13	4.5	5.0	0.11
14	0.11	0.12	0.24	0.19	0.15	0.73	0.13	4.7	0.13	0.11	0.11	0.11
15	0.11	0.11	0.27	0.11	0.12	0.95	0.12	2.7	0.11	0.11	0.10	0.11
16	0.12	0.11	0.17	0.14	0.13	1.3	0.13	2.9	0.11	5.7	0.11	1.3
17	0.11	0.11	0.15	0.15	0.12	1.5	0.12	0.11	0.11	9.8	0.11	1.1
18	0.12	0.44	0.15	0.15	0.13	0.56	0.12	0.11	0.11	6.3	0.11	0.13
19	0.12	1.2	0.16	0.12	0.14	0.33	0.12	0.10	0.13	0.13	0.11	0.12
20	0.12	0.11	0.18	0.13	0.14	0.14	5.0	0.10	5.5	0.10	0.11	0.11
21	0.11	0.12	0.23	0.16	0.14	0.14	0.12	0.09	3.5	4.4	0.10	0.12
22	0.11	0.12	2.8	0.15	0.14	0.13	0.11	0.18	0.13	0.14	0.11	0.11
23	0.12	0.12	3.3	0.14	0.14	0.12	0.11	0.11	0.12	2.0	5.1	0.12
24	0.11	0.12	0.17	0.44	0.14	0.93	0.11	0.11	0.11	0.09	0.25	0.11
25	0.11	0.30	0.11	0.12	0.14	0.11	0.11	0.10	0.10	0.10	0.11	0.10
26	0.11	0.14	0.11	0.19	0.67	0.11	0.11	0.10	0.54	0.10	1.7	0.09
27	0.12	0.13	0.11	0.12	0.27	0.12	0.19	0.11	4.8	3.9	0.12	0.09
28	0.11	0.14	0.11	0.13	0.14	0.14	0.09	0.11	0.11	0.11	0.24	0.09
29	0.11	0.13	0.11	0.12	0.13	0.14	0.09	0.11	5.3	0.11	0.11	0.09
30	0.13	0.25	0.11	0.13		0.14	0.11	0.10	1.4	0.10	0.11	0.09
31	0.12		0.11	0.12		0.14		0.11		0.09	0.11	

E122 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	4.4	3.2	4.8	3.3	3.9	5.9	3.6	5.7	7.5	8.0	5.0	6.3	62
Max Daily Peak (ft³/s)	3.5	1.2	3.3	0.44	1.1	1.5	5.0	7.6	9.1	9.8	5.9	12	12
Mean Daily Flow (ft³/s)	0.07	0.05	0.08	0.05	0.07	0.10	0.06	0.09	0.13	0.13	0.09	0.11	0.09
Min Daily Flow (ft³/s)	0	0	0	0	0	0	0	0	0	0.01	0.01	0	0
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0	0

E122 Daily Mean Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.05	0.05	0.07	0.04	0.06	0.06	0.18	0.05	0.06	0.48	0.27	0.07
2	0.18	0.05	0.05	0.04	0.15	0.05	0.14	0.05	0.06	0.09	0.07	0.07
3	0.1	0.05	0.06	0.04	0.05	0.05	0.06	0.06	0.07	0.07	0.06	0.07
4	0.1	0.05	0.05	0.04	0.05	0.05	0.06	0.05	0.08	0.07	0.06	0.08
5	0.1	0.05	0.06	0.07	0.05	0.05	0.06	0.05	0.08	0.07	0.07	1.2
6	0.1	0.06	0.07	0.05	0.05	0.05	0.06	0.05	0.08	0.07	0.07	0.07
7	0.1	0.06	0.06	0.04	0.16	0.05	0.05	0.05	0.08	0.07	0.08	0.06
8	0.11	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.08	0.07	0.07	0.06
9	0.11	0.05	0.05	0.04	0.05	0.14	0.06	0.05	0.54	0.07	0.42	0.06
10	0.11	0.04	0.05	0.04	0.05	0.1	0.06	0.04	0.14	0.07	0.08	0.08
11	0.11	0.05	0.05	0.05	0.08	0.06	0.06	0.88	0.08	0.07	0.07	0.07
12	0.1	0.05	0.05	0.05	0.07	0.05	0.05	0.07	0.08	0.07	0.09	0.07
13	0.06	0.06	0.07	0.04	0.07	0.04	0.05	0.05	0.09	0.17	0.16	0.07
14	0.05	0.05	0.09	0.06	0.06	0.09	0.05	0.19	0.07	0.07	0.07	0.07
15	0.05	0.05	0.11	0.05	0.06	0.34	0.05	0.14	0.06	0.07	0.07	0.06
16	0.06	0.05	0.07	0.06	0.06	0.41	0.05	0.12	0.06	0.22	0.07	0.2
17	0.06	0.05	0.06	0.06	0.05	0.31	0.05	0.05	0.07	0.73	0.07	0.1
18	0.06	0.08	0.06	0.06	0.06	0.16	0.05	0.06	0.07	0.3	0.07	0.06
19	0.06	0.09	0.07	0.05	0.07	0.1	0.05	0.05	0.06	0.07	0.07	0.07
20	0.06	0.05	0.09	0.06	0.07	0.06	0.13	0.06	0.35	0.06	0.07	0.06
21	0.04	0.05	0.09	0.06	0.07	0.06	0.04	0.06	0.17	0.3	0.07	0.06
22	0.06	0.05	0.17	0.06	0.07	0.06	0.05	0.06	0.07	0.07	0.07	0.06
23	0.06	0.05	0.51	0.06	0.06	0.05	0.05	0.06	0.06	0.11	0.16	0.06
24	0.05	0.04	0.06	0.08	0.07	0.13	0.05	0.06	0.07	0.06	0.07	0.06
25	0.05	0.07	0.04	0.05	0.07	0.05	0.05	0.05	0.07	0.07	0.06	0.05
26	0.05	0.05	0.04	0.06	0.1	0.05	0.04	0.05	0.07	0.07	0.1	0.05
27	0.05	0.05	0.04	0.05	0.07	0.05	0.05	0.06	0.17	0.13	0.07	0.05
28	0.05	0.05	0.04	0.05	0.05	0.06	0.04	0.06	0.07	0.06	0.07	0.05
29	0.04	0.05	0.05	0.06	0.05	0.07	0.04	0.06	0.65	0.06	0.07	0.05
30	0.04	0.08	0.04	0.06		0.07	0.05	0.06	0.14	0.06	0.07	0.05
31	0.04		0.04	0.06		0.07		0.06		0.06	0.07	

E123 Sandia Canyon below Wetlands

Location. Lat 35° 52' 23", Long -106° 18' 35", SE ¼, Sec. 16, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 0.29 mi².

Period of Record. August 1, 1999, to September 30, 2024.

Revised Record. Drainage area (2006); Section (2007).

Gage. Data logger with radio telemetry. Elevation of gage is 7201 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 659 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 110 ft³/s on September 13, 2013; gage height 4.86 ft.

Maximum Discharge for WY 2024. Maximum discharge 59 ft³/s on September 5, 2024; gage height 3.26 ft.



E123 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a Sutron Accubar bubble sensor. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is also equipped with two ISCO pump samplers (one 12-count, 1-L glass and/or polyethylene bottles, and one 24-count, 1-L polyethylene bottles) to collect water-quality samples. The samplers are housed in a 3-ft × 4-ft metal box, separate from other instrumentation, and are triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for discharge measurements above the wading stage.

An auxiliary 6-in. Parshall flume, located downstream from E123, is used to verify the low-flow record.

Datum Correction. None; the levels run June 27, 2008, were found to be within limits.

Gage-Height Record. The data logger, referenced to the inside gage height, gave a complete and satisfactory record, except for January 10 to 13 and February 12, 2024, when the gaging sensor was affected by snow and ice.

Rating. The channel is trapezoidal with a rock outcrop and small depositional bars within pools. The banks have some grass that is not very tall or thick. The channel is straight for about 100 ft above and below the gaging station. Rating No. 5 was developed based on low-flow measurements and point-of-zero flow measurements during the water year and a slope-area measurement high flow in 2005.

No discharge measurements were made during the year.

Discharge. Discharge was computed from Rating No. 5.

E123 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.20	2.1	2.1	2.0	2.3	1.9	4.7	1.6	1.5	14	9.3	1.4
2	4.9	2.1	2.1	1.9	3.9	1.5	4.0	1.9	1.2	3.6	1.6	1.3
3	1.9	2.0	2.2	5.8	2.0	1.5	1.9	2.0	1.0	1.0	1.2	1.2
4	2.2	2.0	2.2	2.8	2.0	2.0	1.9	1.9	1.7	1.0	1.2	1.2
5	2.0	1.5	1.9	3.3	1.8	2.1	2.5	1.8	1.6	1.6	1.1	59
6	2.0	2.1	2.1	2.1	1.8	2.0	2.8	1.9	0.20	1.3	1.0	3.0
7	2.0	2.0	1.8	2.0	3.7	1.9	2.3	2.0	0.26	1.1	1.8	2.1
8	2.0	1.7	2.0	2.2	2.6	1.9	2.0	2.0	1.0	1.1	1.6	2.1
9	2.0	1.7	2.1	2.5	2.1	3.7	1.9	2.0	32	0.26	29	2.0
10	1.9	1.9	2.6	I*	1.7	3.4	2.0	1.7	5.0	0.20	2.4	2.1
11	1.8	1.9	2.4	I	2.7	1.9	2.0	32	1.4	0.80	1.6	0.80
12	2.2	1.9	2.8	I	I	1.7	1.9	2.5	1.4	1.0	2.5	2.0
13	2.1	1.8	3.0	I	2.5	1.8	1.9	1.7	1.3	7.1	9.8	2.1
14	2.0	1.6	3.3	2.8	2.3	3.4	1.9	9.5	1.4	1.3	1.5	1.6
15	1.9	1.5	2.8	2.4	2.1	4.5	1.9	8.4	1.5	2.4	1.3	1.5
16	1.8	1.9	3.3	1.9	2.0	4.9	1.8	6.0	1.5	8.4	1.2	4.9
17	1.5	1.9	2.2	2.3	2.0	6.0	1.9	1.8	0.20	57	1.2	3.2
18	1.6	3.0	2.3	2.4	2.0	3.7	2.0	1.7	0.09	22	1.1	1.8
19	1.6	3.6	2.4	2.3	1.9	3.1	2.0	1.6	1.5	2.0	1.1	1.7
20	1.6	2.3	2.3	2.2	1.9	2.1	4.9	1.5	16	1.3	1.5	1.7
21	1.7	1.4	6.6	1.8	1.7	2.3	2.0	1.5	14	10	1.4	1.9
22	1.8	1.9	4.5	2.6	1.8	2.3	1.9	1.7	2.2	2.2	1.3	1.9
23	1.7	2.0	8.5	2.5	1.8	2.2	2.0	1.8	1.6	4.6	1.7	1.9
24	1.7	2.0	2.6	3.0	1.8	3.7	2.1	1.7	1.5	0.80	6.3	1.9
25	2.3	2.8	2.6	2.2	1.8	1.7	2.1	1.7	0.26	1.5	1.6	1.7
26	2.3	2.0	3.0	1.9	2.0	1.8	2.1	0.20	0.20	1.6	5.1	1.7
27	2.0	2.0	3.3	1.6	3.5	2.3	2.5	0.90	6.7	5.4	2.5	2.3
28	1.3	1.6	2.3	1.6	2.3	2.1	2.1	1.7	1.7	1.1	2.3	2.0
29	1.2	2.5	2.0	2.4	1.9	2.1	1.7	1.6	19	0.26	1.2	2.0
30	1.3	4.6	1.9	2.4		1.9	1.7	1.6	20	0.80	1.2	1.9
31	1.8		1.9	2.4		1.8		1.6		1.0	1.5	

* I = Ice or snow present in channel.

E123 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	92	93	125	105	101	120	111	92	67	73	74	92	1145
Max Daily Peak (ft³/s)	4.9	4.6	8.5	5.8	3.9	6.0	4.9	32	32	57	29	59	59
Mean Daily Flow (ft³/s)	1.5	1.6	2.0	2.0	1.8	1.9	1.9	1.5	1.1	1.2	1.2	1.5	1.6
Min Daily Flow (ft³/s)	0.05	0.10	0.05	0.46	0.32	0.70	0.53	0.03	0	0	0.05	0.10	0
Missing Days	0	0	0	4	1	0	0	0	0	0	0	0	5

E123 Daily Mean Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.10	1.7	1.7	1.8	2.1	1.7	2.3	0.84	1.2	3.6	1.7	0.92
2	0.80	1.9	1.8	1.8	2.4	1.3	2.3	1.6	0.25	1.4	1.1	0.84
3	1.2	1.9	2.0	3.6	1.8	1.3	1.8	1.9	0.26	0.65	0.94	0.79
4	2.0	1.8	1.9	2.3	1.6	1.4	1.8	1.8	1.3	0.59	0.82	0.85
5	1.8	1.4	1.7	2.3	0.92	1.9	2.1	0.68	0.80	1.2	0.78	5.8
6	1.9	1.7	1.8	1.9	1.4	1.9	2.4	0.76	0.07	0.94	0.53	1.8
7	1.9	1.8	1.2	1.9	2.2	1.7	2.0	1.8	0.07	0.70	0.51	1.7
8	1.9	0.88	1.3	1.9	2.3	1.8	1.9	1.8	0.30	0.71	1.2	1.9
9	1.9	1.0	1.9	2.1	1.8	2.2	1.8	1.7	2.9	0.09	2.8	1.4
10	1.7	0.95	2.1	I*	1.4	2.1	1.8	1.5	2.1	0.05	1.6	0.61
11	1.7	1.7	1.5	I	1.8	1.2	1.8	4.9	1.2	0.22	1.3	0.35
12	2.1	1.7	0.51	I	I	1.6	1.8	1.9	1.1	0.78	1.5	1.5
13	2.0	1.5	2.8	I	2.1	1.6	1.8	1.5	1.0	1.3	1.9	1.6
14	1.9	0.82	2.7	2.4	2.0	1.6	1.8	2.2	1.3	0.89	1.2	1.3
15	1.8	1.1	2.4	1.9	2.0	3.2	1.7	2.2	1.3	1.5	0.99	1.2
16	1.3	1.1	2.5	1.1	1.9	3.3	1.7	2.1	0.90	2.0	0.86	2.1
17	0.82	1.8	1.9	2.0	1.9	3.6	1.8	1.6	0.07	4.3	0.78	1.1
18	1.5	2.0	2.0	2.2	1.9	2.7	1.8	1.5	0.04	3.1	0.69	1.1
19	1.5	2.0	2.2	2.1	1.8	2.2	1.9	1.4	0.57	1.4	0.72	1.4
20	1.5	1.7	2.2	1.9	1.7	1.9	1.9	1.3	1.8	1.1	1.0	1.5
21	1.4	1.2	2.4	1.1	1.4	1.9	1.9	0.96	2.6	2.1	0.96	1.7
22	1.6	1.3	2.1	2.0	1.6	2.2	1.8	0.81	1.7	1.3	0.95	1.7
23	1.6	1.8	3.7	2.3	1.6	2.0	1.8	1.6	1.5	1.3	1.0	1.7
24	0.91	1.8	2.1	2.3	1.7	2.0	1.9	1.6	0.81	0.50	1.7	1.5
25	1.3	2.1	2.1	1.8	1.7	1.0	2.0	0.97	0.11	0.58	1.2	1.5
26	2.1	1.8	2.6	1.5	1.7	1.7	2.0	0.09	0.08	1.5	2.4	1.5
27	1.7	1.3	2.6	1.4	2.4	1.9	2.1	0.09	1.1	1.5	2.3	1.8
28	1.1	0.74	1.8	1.4	2.1	2.0	1.9	1.5	1.5	0.61	1.7	1.8
29	1.0	1.8	1.8	1.6	1.8	1.9	1.5	1.4	2.7	0.09	0.40	1.8
30	1.0	2.8	1.8	2.3		1.7	1.2	1.4	3.2	0.18	0.53	1.7
31	1.6		1.7	2.3		1.7		1.4		0.71	1.1	

* I = Ice or snow present in channel.

E124 Sandia above Firing Range

Location. Lat 35° 51' 54.90" N, Long -106° 15' 46.36" W, Zone 13S, NM23, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 1.14 mi².

Period of Record. October 1, 2013, to September 30, 2024.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 6736 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 7.0 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 52 ft³/s on July 27, 2022; gage height 2.02 ft.

Maximum Discharge for WY 2024. Maximum discharge 31 ft³/s on September 5, 2024; gage height 0.95 ft.



E124 Stream gaging station, downstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is equipped with an ISCO pump sampler (12-count, 1-L glass and/or polyethylene bottles) to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for direct measurements above the wading stage.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record, except November 30, December 1, 2, 7, 8, 13 to 15, 19 to 31, 2023; January 1 to March 24, 2024, when the gaging sensor was affected by ice and snow in the channel, and June 6 to 10, 2024, when the power failed at the site.

Rating. Rating No. 2 was developed based on slope-area computations and discharge measurements.

No discharge measurements were made this year.

Discharge. Discharge was computed from Rating No. 2.

E124 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	I	I	I	0	0	0	0.46	0	0.46
2	0	0	I	I	I	I	0	0	0	0.73	0	0.55
3	0	0	0	I	I	I	0	0	0	0	0	0
4	0	0	0	I	I	I	0	0	0	0	0	0
5	0	0	0	I	I	I	0	0	0	0	0	31
6	0	0	0	I	I	I	0	0	E	0	0	0
7	0	0	I	I	I	I	0	0	E	0	0	0
8	0	0	I	I	I	I	0	0	E	0	0	0
9	0	0	0	I	I	I	0	0	E	0	0	0
10	0	0	0	I	I	I	0	0	E	0	0	0
11	0	0	0	I	I	I	0	9.1	0	0	0	0
12	0	0	0	I	I	I	0	0	0	0	0	0
13	0	0	I	I	I	I	0	0	0	0	6.1	0
14	0	0	I	I	I	I	0	0	0	0	0.82	0
15	0	0	I	I	I	I	0	0	0.46	0	0	0
16	0	0	0	I	I	I	0	0	0.36	0	0	0
17	0	0	0	I	I	I	0	0	0	24	0	0
18	0	0	0	I	I	I	0	0	0	0.36	1.6	0
19	0	0	I	I	I	I	0	0	0	0	3.8	0
20	0	0	I	I	I	I	0	0	0	0	1.1	0
21	0	0	I	I	I	I	0	0	0	0	0	0
22	0	0	I	I	I	I	0	0	0	0.09	0	0
23	0	0	I	I	I	I	0	0	0	0	0	0
24	0	0	I	I	I	I	0	0	0	0	0	0
25	0	0	I	I	I	0	0	0	0	0	0	0
26	0	0	I	I	I	0.09	0	0	0.36	0	4.4	0
27	0	0	I	I	I	0	0	0	2.2	0	7.7	0
28	0	0	I	I	I	0	0	0	0	0	9.1	0
29	0	0	I	I	I	0	0	0	1.0	0	3.8	0
30	0	I	I	I		0	0	0	2.7	0	0.46	0
31	0		I	I		0		0		0	0.55	

* I = Ice or snow present in channel.

E124 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	I ^{a,b}	I	I	I	0	0.34	0.58	1.0	10	5.2	17
Max Daily Peak (ft³/s)	0	0	I	I	I	I	0	9.1	2.7	24	9.1	31	31
Min Daily Flow (ft³/s)	0	0	I	I	I	I	0	0	0	0	0	0	0
Missing Days	0	1	20	31	29	24	0	0	5	0	0	0	110

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E125 Sandia Canyon above SR 4

Location. Lat 35° 51' 32", Long -106° 13' 34", SW ¼, Sec. 20, T. 19 N., R. 7 E., Santa Fe County.

Drainage Area. 2.05 mi².

Period of Record. October 1, 1994, to September 30, 2024.

Revised Record. Drainage area (2006).

Gage. Data logger with radio telemetry and concrete control. Elevation of gage is 6495 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 0.72 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 104 ft³/s on September 13, 2013; gage height 5.08 ft.

Maximum Discharge for WY 2024. Maximum discharge 5.3 ft³/s on July 2, 2024; gage height 1.74 ft.



E125 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a

solar-panel battery system. All equipment is housed in a NEMA shelter on an 18-in. CMP well. The station is also equipped with an ISCO pump sampler (12-count, 1-L glass and/or polyethylene bottles) to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. The control is a concrete, broad-crested weir. No provision has been made for measurements above the wading stage.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record, except on November 30, December 1 to 4, 6 to 8, 11 to 15, 19 to 31, 2023, and January 1 to 25, 2024, when the gaging sensor was affected by ice and snow.

Rating. The channel is straight for 150 ft above and 100 ft below the gaging station. The bed material is sand with vegetation on the banks, and the bottom is well supported.

Rating No. 2 was developed and applied beginning October 1, 2009, to account for 1 ft of channel aggradation along the reach. The channel slopes smoothly through the reach, replacing the broad-crested concrete weir as the control. The rating was computed using Manning's equation and measured channel characteristics of the 2-ft point of zero flow (PZF) to top of weir walls at 3.20 ft. Greater flow will require the extension of Rating No. 2 with a more detailed channel survey.

No discharge measurements were made during the year.

Discharge. Discharge was directly computed from Rating No. 2.

E125 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	I	0.02	0.01	0	0	0	0	0	0
2	0	0	I	I	0.02	0.01	0	0	0	5.3	0	0
3	0	0	I	I	0	0	0	0	0	0.06	0	0
4	0	0	I	I	0.02	0.01	0	0	0	0	0	0
5	0	0	0	I	0.02	0.01	0	0	0	0	0	0
6	0	0	I	I	0	0	0	0	0	0	0	0
7	0	0	I	I	0.08	0	0	0	0	0	0	0
8	0	0	I	I	0	0.06	0	0	0	0	0	0
9	0	0	0	I	0.02	0.03	0	0	0	0	0	0
10	0	0	0	I	0.08	0	0	0	0	0	0	0
11	0	0	I	I	0.08	0	0	0	0	0	0	0
12	0	0	I	I	0.71	0	0	0	0	0	0	0
13	0	0	I	I	0.07	0	0	0	0	0	0	0
14	0	0	I	I	0.02	0	0	0	0	0	0.03	0
15	0	0	I	I	0.02	1.7	0	0	0	0	0	0
16	0	0	0	I	0.02	0	0	0	0	0	0	0
17	0	0	0	I	0	0.35	0	0	0	0	0	3.9
18	0	0	0	I	0	0	0	0	0	0	0	0.03
19	0	0	I	I	0.02	0	0	0	0	0	0	0.03
20	0	0	I	I	0.01	0	0	0	0	0	0	0
21	0	0	I	I	0	0	0	0	0	0	0	0
22	0	0	I	I	0.01	0	0	0	0	0	0	0
23	0	0	I	I	0.01	0	0	0	0	0.03	0	0
24	0	0	I	I	0.01	0	0	0	0	0.03	0	0
25	0	0.15	I	I	0.01	0	0	0	0	0	0	0
26	0	0	I	0.08	0	0	0	0	0	0	2.5	0
27	0	0	I	0.03	0	0	0	0	0	0	0.03	0
28	0	0	I	0.03	0.01	0	0	0	0	0	0	0
29	0	0	I	0	0.01	0	0	0	0	0	0	0
30	0	I	I	0.03		0	0	0	0	0	0	0
31	0		I	0.03		0		0		0	0	

* I = Ice or snow present in channel.

E125 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	I ^{a,b}	I	0.04	0.11	0	0	0	0.17	0.06	0.09	0.47
Max Daily Peak (ft³/s)	0	0.15	I	I	0.71	1.7	0	0	0	5.3	2.5	3.9	5.3
Min Daily Flow (ft³/s)	0	0	I	I	0	0	0	0	0	0	0	0	0
Missing Days	0	1	25	25	0	0	0	0	0	0	0	0	51

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

Mortandad Watershed

The Mortandad Canyon watershed is located in the central portion of LANL and covers approximately 10 mi². The watershed contains an ephemeral stream; neither perennial springs nor natural perennial reaches occur. The Mortandad watershed trends east-to-southeast and heads on the Pajarito Plateau near the main LANL complex at TA-03 at an elevation of 7380 ft. The drainage extends from its headwaters to its confluence with the Rio Grande at an elevation of 5440 ft. Mortandad Canyon crosses Pueblo de San Ildefonso land for several miles before joining the Rio Grande.

The Mortandad watershed may be influenced by two significant tributaries: Ten Site Canyon and Cañada del Buey. Snowmelt runoff and stormwater runoff from seasonal snow and rainstorms flow for a limited distance in the upper canyon and occasionally reach as far as the sediment traps.

Ten Site Canyon lies south of, and extends parallel to, Mortandad Canyon for about 1.5 mi, and joins Mortandad Canyon in the lower portion of the drainage. Cañada del Buey heads on LANL property at TA-52 and TA-36 at an elevation of approximately 7200 ft and trends east-southeast across LANL, Pueblo de San Ildefonso land, and Los Alamos County, and ends at its confluence with Mortandad Canyon at an elevation of 5620 ft, approximately 0.5 mi upstream of the Rio Grande.

Figure 6 shows the total monthly volume of discharge at the four stream gaging stations within the Mortandad Canyon and Cañada del Buey watershed.

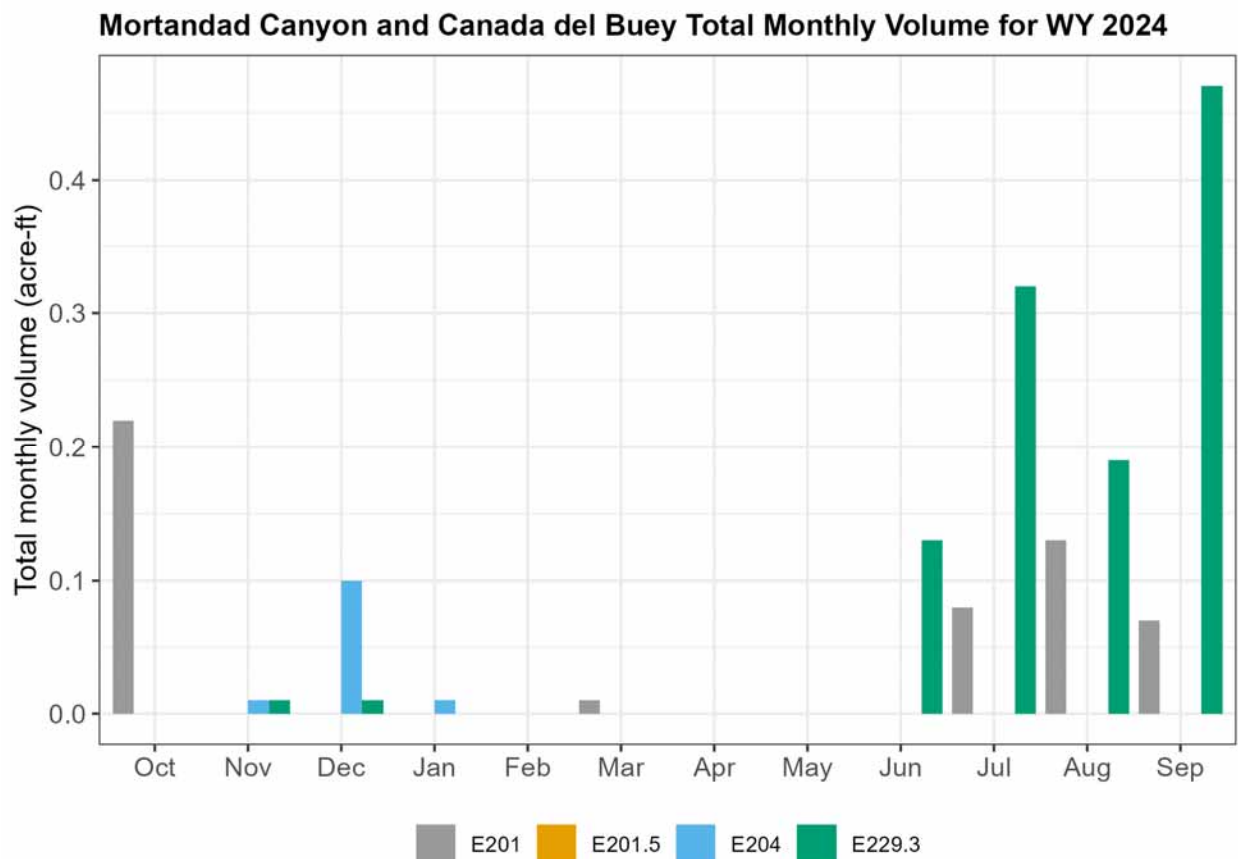


Figure 6 Total monthly volume (acre-ft) of discharge for WY 2024 in Mortandad Canyon and Cañada del Buey

E201 Mortandad Canyon above Ten Site Canyon

Location. Lat 35° 51' 46", Long -106° 16' 29", SW ¼, Sec. 22, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 0.25 mi².

Period of Record. October 1, 2006, to September 30, 2024.

Revised Record. Period of Record (2008).

Gage. Data logger with radio telemetry and a steel-fabricated nonstandard flume. Elevation of the gage is 6865 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 2.0 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 107 ft³/s on September 13, 2013; gage height 3.0 ft.

Maximum Discharge for WY 2024. Maximum discharge 0.32 ft³/s on October 11, 2023, and March 9, 2024; gage height 0.18 ft.



E201 Stream gaging, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS mounted on a 10-ft flume. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is also equipped with an ISCO pump sampler (12-count, 1-L glass and/or polyethylene bottles) to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for measurements above the wading stage.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record, except for November 14, 2023, to February 21, 2024, when the gaging sensor was affected by ice and snow in the channel.

Rating. The channel is straight above and below the modified flume. Flow is confined to the cutbanks. The channel bottom is 3 ft wide with some vegetation above and below the flume.

The streambed is sand and gravel, and the flume is subject to fill from low-flow events. The control is a fabricated steel flume 10 ft at the throat.

Rating No. 2 was developed based on slope-area computations and discharge measurements.

No discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying Rating No. 2.

E201 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	I	I	0	0	0	0	0.03	0	0
2	0.22	0	I	I	I	0	0	0	0	0.06	0	0
3	0.19	0	I	I	I	0	0	0	0	0.16	0.06	0
4	0	0	I	I	I	0	0	0	0	0	0.16	0
5	0	0	I	I	I	0	0	0	0	0	0.06	0.22
6	0	0	I	I	I	0	0.10	0	0	0	0.06	0.22
7	0	0	I	I	I	0	0	0	0	0	0.06	0.19
8	0	0	I	I	I	0.10	0	0	0	0	0.16	0
9	0	0	I	I	I	0.32	0	0	0	0.10	0.13	0.16
10	0.29	0	I	I	I	0	0	0	0	0	0.13	0.10
11	0.32	0	I	I	I	0	0	0	0	0	0.19	0.13
12	0	0	I	I	I	0	0	0	0	0.10	0	0
13	0	0	I	I	I	0	0	0	0	0.16	0	0
14	0	I	I	I	I	0	0	0	0	0.19	0	0
15	0	I	I	I	I	0	0	0	0	0	0	0
16	0	I	I	I	I	0	0	0	0	0	0	0.06
17	0	I	I	I	I	0	0	0	0	0	0	0
18	0	I	I	I	I	0	0	0	0	0	0	0
19	0	I	I	I	I	0	0	0	0	0	0	0
20	0	I	I	I	I	0	0	0	0	0	0	0
21	0	I	I	I	I	0	0	0	0	0	0	0
22	0	I	I	I	0	0	0	0	0	0	0	0
23	0	I	I	I	0	0	0	0	0	0	0	0.10
24	0.22	I	I	I	0	0	0	0	0	0	0	0
25	0	I	I	I	0	0	0	0	0	0	0	0
26	0	I	I	I	0	0	0	0	0	0	0	0.06
27	0	I	I	I	0	0	0	0	0	0	0	0.06
28	0	I	I	I	0	0	0	0	0	0	0	0.06
29	0	I	I	I	0	0	0	0	0	0	0	0.03
30	0	I	I	I		0	0	0	0	0	0	0
31	0		I	I		0.13		0.03		0	0	

* I = Ice or snow present in channel.

E201 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0.22	I ^{a,b}	I	I	I	0.01	0	0	0	0.08	0.13	0.07	0.51
Max Daily Peak (ft³/s)	0.32	I	I	I	I	0.32	0.10	0.03	0	0.19	0.19	0.22	0.32
Min Daily Flow (ft³/s)	0	I	I	I	I	0	0	0	0	0	0	0	0
Missing Days	0	17	31	31	21	0	0	0	0	0	0	0	100

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E201.5 Ten Site Canyon above Mortandad Canyon

Location. Lat 35° 51' 38", Long -106° 16' 30", SE ¼, Sec. 23, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 0.32 mi².

Period of Record. October 2000 to September 30, 2024.

Revised Record. Drainage area (2006).

Gage. Data logger with radio telemetry and 90° sharp-crested weir. Elevation of gage is 6858 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 3.2 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 303 ft³/s on August 25, 2006; gage height 4.6 ft (from slope-area measurement of peak flow).

Maximum Discharge for WY 2024. No discharge for the year.



E201.5 Stream gaging station, downstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is also equipped with an ISCO pump sampler to collect water-quality samples. The ISCO sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation. The sampler is triggered by stage through the data logger. An outside staff gage is available for reference. No provisions have been made for measurements above the wading stage.

Datum Correction. The gage was destroyed by flood on August 25, 2006. The bubbler outlet was reset to a gage datum of 1.33 ft. On May 24, 2007, the gage was set to correct the datum. A large runoff event on July 26, 2019, deposited large amounts of woody debris and sediment behind the 90° sharp-crested weir. The flood also knocked the radar sensor over and buried the ISCO intake lines. The station was quickly made operational after the flood, but removal of the weir was deemed necessary. On August 20, 2019, the 90° sharp-crested weir was removed. The gage datum remained the same.

Gage-Height Record. The data logger reference to the outside staff gage gave a complete and satisfactory record, except for November 25 to 30, December 1, 13 to 18, 2023, and January 12 to 20, 2024, when the gaging sensor was affected by snow and ice in the channel.

Rating. The channel is about 8 ft wide and straight for about 60 ft upstream and straight for about 30 ft downstream. The streambed through this reach is primarily sand with gravel.

Rating No. 2 is based on a theoretical computation for the 90° sharp-crested weir and one critical-depth computation. Because the 90° sharp-crested weir was removed on August 20, 2019, a new rating curve will be developed. Work on rating curve development was postponed during 2020 because field activities were curtailed for part of the season. The rating curve is in development for the 2024 season.

No discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying Rating No. 2.

E201.5 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	I	0	0	0	0	0	0	0	0
13	0	0	I	I	0	0	0	0	0	0	0	0
14	0	0	I	I	0	0	0	0	0	0	0	0
15	0	0	I	I	0	0	0	0	0	0	0	0
16	0	0	I	I	0	0	0	0	0	0	0	0
17	0	0	I	I	0	0	0	0	0	0	0	0
18	0	0	I	I	0	0	0	0	0	0	0	0
19	0	0	0	I	0	0	0	0	0	0	0	0
20	0	0	0	I	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	I	0	0	0	0	0	0	0	0	0	0
26	0	I	0	0	0	0	0	0	0	0	0	0
27	0	I	0	0	0	0	0	0	0	0	0	0
28	0	I	0	0	0	0	0	0	0	0	0	0
29	0	I	0	0	0	0	0	0	0	0	0	0
30	0	I	0	0		0	0	0	0	0	0	0
31	0		0	0		0		0		0	0	

* I = Ice or snow present in channel.

E201.5 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Daily Peak (ft³/s)	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Daily Flow (ft³/s)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	6	7	9	0	0	0	0	0	0	0	0	22

E204 Mortandad Canyon at LANL Boundary

Location. Lat 35° 51' 21", Long -106° 14' 43", NW ¼, Sec. 30, T. 19 N., R. 7 E., Santa Fe County.

Drainage Area. 1.61 mi².

Period of Record. October 1, 1993, to September 30, 2024.

Revised Record. Drainage area (2006).

Gage. Data logger with radio telemetry and concrete control. Elevation of gage is 6654 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 0.37 acre-ft.

Maximum Discharge for Period of Record. Maximum discharge 102 ft³/s on September 13, 2013; gage height 1.85 ft.

Maximum Discharge for WY 2024. Maximum discharge 0.18 ft³/s on December 14, 2024; gage height 0.84 ft.



E204 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a solar-panel battery system housed in a NEMA shelter on top of a 24-in. CMP well. The station is also equipped with an ISCO pump sampler (12-count, 1-L glass and/or polyethylene bottles) to collect water-quality samples. The ISCO sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for measurements above the wading stage. All high-flow measurements are computed by slope-area or critical-depth methods.

Datum Correction. Levels run on May 24, 2007, showed the gage to be reading within allowable limits.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record.

Rating. The channel is straight above and below the gaging station for 100 ft. The channel is not well-defined and resembles a low grass-covered swale. Flow is infrequent. The control is a broad-crested weir with a V-notch 5 ft downstream from the gaging station.

Rating No. 1 was developed using slope-area computations. The PZF is well defined for the concrete, broad-crested weir.

No discharge measurements were made during the year.

Discharge. No flow occurs most of the time. Discharge was computed by directly applying Rating No. 1.

E204 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0.12	0	0	0	0.13	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0.02	0	0	0	0	0
4	0	0	0	0	0	0	0.02	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0.02	0	0	0	0	0
7	0	0	0	0	0	0	0.02	0	0	0	0	0
8	0	0	0	0	0	0	0.02	0	0	0	0	0
9	0	0	0	0	0	0	0.02	0	0	0	0	0
10	0	0	0	0	0	0	0.02	0	0	0	0	0
11	0	0	0	0	0	0	0.02	0	0	0	0	0
12	0	0	0	0	0	0	0.02	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0.18	0.14	0	0	0	0	0	0	0	0
15	0	0	0.10	0	0	0.04	0.02	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0.12	0.02	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0.04	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0.11	0	0	0	0	0	0	0	0	0	0
26	0	0	0.02	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0.02	0.02	0	0	0	0	0
29	0	0	0	0	0	0.04	0	0	0	0	0	0
30	0	0.15	0	0		0.02	0	0	0	0	0	0
31	0		0	0		0.02		0		0	0	

E204 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0.01	0.1	0.01	0	0	0	0	0	0	0	0	0.12
Max Daily Peak (ft³/s)	0	0.15	0.18	0.14	0	0.12	0.13	0	0	0.04	0	0	0.18
Min Daily Flow (ft³/s)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0	0

E229.3 Cañada del Buey at SR 4

Location. Lat 35° 49' 41", Long -106° 13' 23", Ramon Vigil Land Grant, Los Alamos County.

Drainage Area. 1.81 mi².

Period of Record. April 24, 2013, to September 30, 2024.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 6510 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 0.33 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 28 ft³/s on August 8, 2013; gage height 1.84 ft.

Maximum Discharge for WY 2024. Maximum discharge 7.8 ft³/s on June 18, 2024; gage height 1.1 ft.



E229.3 Stream gaging, downstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS radio transceiver, and an OTT RLS that sits atop a 2-ft-wide × 1.5-ft-deep

Parshall flume. No provision has been made for direct discharge measurements above the wading stage. The station is also equipped with an ISCO pump sampler (12-count, 1-L glass and/or polyethylene bottles) to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. The line-of-sight MDS radio transceiver provides 5-min stage data from the radar sensor.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record.

Rating. Rating No. 1 is based on the formula for a 2-ft-wide × 1.5-ft-deep Parshall flume, with additional flow added for flow over the flume, based on a broad-crested weir equation. A gabion wall, for the flume overflow, forms a raised, rectangular cross-section 1.5 ft-deep × 15-ft wide.

No discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying Rating No. 1.

E229.3 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	0	1.2	1.5	0
2	0	0	0	0	0	0	0	0	0	1.9	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	1.6
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	3.1	0
11	0	0	0	0	0	0	0	0	0	2.1	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0.08	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0.02	0	0	0	0	0	6.9
18	0	0	0	0	0	0	0	0	7.8	0	0	0
19	0	0	0	0	0	0	0	0	0.34	3.2	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0.31	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0.05	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	1.5	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	1.6	0	0	0
30	0	0.14	0	0		0	0	0	0.03	0	0	0
31	0		0	0		0		0		0	0	

E229.3 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0.01	0.01	0	0	0	0	0	0.13	0.32	0.19	0.47	1.1
Max Daily Peak (ft³/s)	0	0.14	0.08	0	0	0.02	0	0	7.8	3.2	3.1	6.9	7.8
Min Daily Flow (ft³/s)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0	0

Pajarito Watershed

The Pajarito Canyon watershed is located in the central portion of LANL and is approximately 13.6 mi² in area. The head of the watershed is located at Pajarito Mountain in the Sierra de los Valles at an elevation of 10,441 ft. The watershed is a long, east-southeast-trending canyon that extends across Valles Caldera National Preserve land and Santa Fe National Forest before it enters LANL's western boundary.

Two major tributary canyons, Twomile and Threemile Canyons, intersect Pajarito Canyon on LANL property. The watershed reaches the Rio Grande at an elevation of approximately 5410 ft.

Twomile Canyon heads in the Sierra de los Valles and is approximately 5 mi long, with a drainage area of 3.1 mi², 70% of which is on LANL land. Sections of the upper portion of Pajarito watershed burned during the Las Conchas fire in June and July 2011. Both Twomile and Threemile Canyons contain ephemeral and intermittent streams. Seasonal springs in Twomile Canyon, and perennial springs in Threemile Canyon, support short reaches of ephemeral and perennial flow, respectively. East of the confluence with Threemile Canyon, Pajarito Canyon is ephemeral across LANL property to a point approximately 0.4 mi upstream from the confluence with the Rio Grande. In most years, snowmelt runoff extends onto LANL property downstream to near the confluence with Threemile Canyon. Local runoff and stream flow from seasonal rainstorms occasionally extend downstream as far as the Rio Grande.

The Pajarito watershed contains, or may influence, 12 wetland areas totaling approximately 15.80 acres. Figure 7 shows the total monthly volume of discharge for the six stream-discharge gaging stations within the Pajarito watershed.

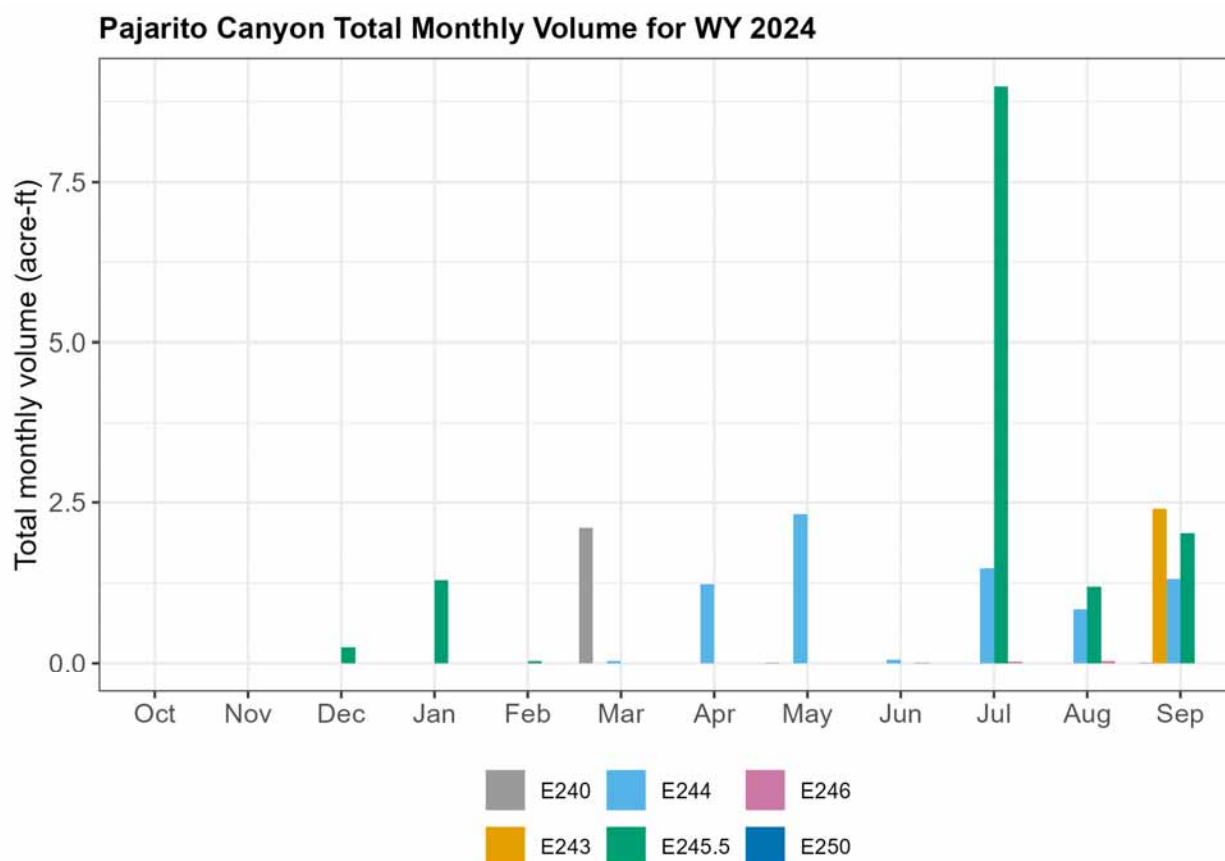


Figure 7 Total monthly volume of discharge (acre-ft) for WY 2024 for Pajarito Canyon

E240 Pajarito Canyon below SR 501

Location. Lat 35° 52' 02", Long -106° 21' 05", NW ¼, Sec. 19, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 1.90 mi².

Period of Record. October 1993 to June 28, 2000 (destroyed by flood); April 2001 to September 30, 2024.

Revised Record. Water Data Report 1997: "Gage Height Extremes for Period of Record." Drainage area (2006). Levels date published as 2004, correction to December 2001 (2008).

Gage. Data logger with radio telemetry. Elevation of gage is 7719 ft using LANL LIDAR DEM with NAD 83. Formerly published as "Pajarito Canyon above Highway 501 near Los Alamos, NM" at different datum.

Average Volume. 10 yr, 2.7 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 1020 ft³/s on June 28, 2000, from peak-flow computation; gage height not determined.

Maximum Discharge for WY 2024. Maximum discharge 2.4 ft³/s on March 17, 2024; gage height 1.47 ft.



E240 Stream gaging station, downstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a solar-panel battery system housed in a NEMA shelter on top of a 24-in. CMP well. The station is equipped with one ISCO pump sampler (12-count, 1-L glass and/or polyethylene bottles) to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for discharge measurements above the wading stage.

The precipitation system is equipped with a Campbell Scientific TE525 tipping-bucket rain gage.

Datum Correction. The levels run December 11, 2001, show the gage to be within limits.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record, except for November 29, 2023, to February 26, 2024, when the gaging sensor was affected by ice and snow.

Rating. The gaging station is about 300 ft below the outlet of two round culverts through the NM 501 roadbed. The channel bed is sand and gravel and is subject to movement. The grass and brush are thick in overbank areas. The banks are not high (about 1–2 ft in most places). Two gabions, which act as low-water controls, were installed in the fall of 2001. One gabion is 2 ft below the gaging station across the entire width of the channel, with a 6-in. V-notch for low water, and the other gabion is 50 ft above the gaging station.

Rating No. 4 was developed based on the six measurements and slope area from previous years.

No discharge measurements were made during the year.

Discharge. Discharge was computed by applying the gage height to Rating No. 4 using variable-shift diagrams.

E240 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	I	I	0	0.01	0	0	0	0	0
2	0	0	I	I	I	0	0	0	0	0	0	0
3	0	0	I	I	I	0	0	0	0	0	0	0
4	0	0	I	I	I	0	0	0	0	0	0	0
5	0	0	I	I	I	0	0	0	0	0	0	0.46
6	0	0	I	I	I	0	0	0	0	0	0	0
7	0	0	I	I	I	0	0	0	0	0	0	0
8	0	0	I	I	I	0	0	0	0	0	0	0
9	0	0	I	I	I	0.10	0	0	0	0	0.03	0
10	0	0	I	I	I	0.37	0	0	0	0	0	0
11	0	0	I	I	I	0	0	0.05	0	0	0	0
12	0	0	I	I	I	0	0	0.01	0	0	0	0
13	0	0	I	I	I	0	0	0	0	0	0	0
14	0	0	I	I	I	0.01	0	0	0	0	0	0
15	0	0	I	I	I	0.29	0	0	0	0	0	0
16	0	0	I	I	I	0.64	0	0	0	0	0	0
17	0	0	I	I	I	2.4	0	0	0	0.05	0	0
18	0	0	I	I	I	2.2	0	0	0	0.03	0	0
19	0	0	I	I	I	0.64	0	0	0	0	0	0
20	0	0	I	I	I	0.25	0	0	0.01	0	0	0
21	0	0	I	I	I	0.03	0	0	0	0	0	0
22	0	0	I	I	I	0	0	0	0	0	0	0
23	0	0	I	I	I	0	0	0	0	0	0	0
24	0	0	I	I	I	0	0	0	0	0	0	0
25	0	0	I	I	I	0	0	0	0	0	0	0
26	0	0	I	I	I	0	0	0	0	0	0	0
27	0	0	I	I	0	0	0	0	0	0	0	0
28	0	0	I	I	0	0	0	0	0	0	0	0
29	0	I	I	I	0	0	0	0	0	0	0	0
30	0	I	I	I		0	0	0	0	0	0	0
31	0		I	I		0		0		0	0	

* I = Ice or snow present in channel.

E240 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	I ^{a,b}	I	I	2.1	0	0.01	0	0	0	0.01	2.1
Max Daily Peak (ft³/s)	0	0	I	I	I	2.4	0.01	0.05	0.01	0.05	0.03	0.46	2.4
Min Daily Flow (ft³/s)	0	0	I	I	I	0	0	0	0	0	0	0	0
Missing Days	0	2	31	31	26	0	0	0	0	0	0	0	90

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E243 Pajarito Canyon above Twomile Canyon

Location. Lat 35° 51' 14", Long -106° 17' 48", Sec. 27, T. 19 N., R. 6 E., Ramon Vigil Grant, Los Alamos County.

Drainage Area. 4.24 mi².

Period of Record. February 2002 to August 11, 2011, and August 5, 2014, to September 30, 2024.

Revised Record. Drainage area (2006).

Gage. Data logger with radio telemetry. Elevation of gage 6941 ft above NGVD 29 from global positioning system (GPS) survey.

Average Volume. 10 yr, 0.27 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 746 ft³/s on August 21, 2011, estimated from high-water mark survey.

Maximum Discharge for WY 2024. Maximum discharge 73 ft³/s on September 5, 2024, gage height 1.56 ft.



E243 Stream gaging station, downstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a Sutron Accubar bubble sensor. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is also equipped with an ISCO pump sampler for water-quality sample collection. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation and is triggered by stage through the data logger. No provision has been made for direct measurement above the wading stage.

Datum Correction. None. The levels run on April 7, 2006, found the gage to be within limits. No corrections were needed.

Gage-Height Record. The data logger, referenced to the outside staff, gave a complete and satisfactory record for the year,

Rating. The channel is straight for 150 ft above and below the gaging station. The channel is trapezoidal with the bed fairly well armored with large gravel and some cobbles. The banks are well vegetated with grasses and should remain stable at all flows.

No discharge measurement was made during the year.

Rating No. 4 was continued in use.

Discharge. Discharge was computed by applying gage height to Rating No. 4 with shifts at low flow applied by V diagrams.

E243 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	73
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0		0	0	0	0	0	0	0
31	0		0	0		0		0		0	0	

E243 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	2.4	2.4
Max Daily Peak (ft³/s)	0	0	0	0	0	0	0	0	0	0	0	73	73
Min Daily Flow (ft³/s)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0	0

E244 Twomile Canyon above Pajarito Canyon

Location. Lat 35° 51' 15", Long -106° 17' 46", Sec. 27, T. 19 N., R. 6 E., Ramon Vigil Grant, Los Alamos County.

Drainage Area. 3.15 mi².

Period of Record. October 1, 2002, to July 13, 2011, and June 18, 2014, to September 30, 2024.

Revised Record. Drainage area (2006). Period of record (2008). Period of record (2014).

Gage. Data logger and radio telemetry. Elevation of gage is 6940 ft above NGVD 29 from GPS survey.

Average Volume. 10 yr, 28 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 628 ft³/s on August 25, 2006; gage height 6.01 ft (from flood marks).

Maximum Discharge for WY 2024. Maximum discharge, 10 ft³/s on August 2, 2024, and September 5, 2024; gage height 5.07 ft.



E244 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is also equipped with an ISCO pump sampler for water-quality sample collection. The sampler housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. Wading measurements can be taken near the gaging station. No provision has been made for measurement above the wading stages.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record for the year, except for November 24, 2023, to February 15, 2024, when the gaging sensor was affected by ice and snow.

Rating. The channel at the gaging station is straight for about 150 ft above the gaging station and 50 ft below the gaging station. The channel expands quite a bit below the gaging station. The bed material is coarse sand and gravel. The banks are grassy with some small trees and outcrops affecting roughness at higher flows.

No discharge measurements were made during the year.

Rating No. 2 was developed from previous measurements and one slope area measurement.

Discharge. Discharge was computed by directly applying Rating No. 2.

E244 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	I	I	0	0	0.41	0	0.23	0.03	0
2	0	0	I	I	I	0	0.07	0.98	0	0.25	10	0
3	0	0	I	I	I	0	0	0.98	0	0.15	2.5	0
4	0	0	I	I	I	0	0	0.66	0	0.70	3.5	0
5	0	0	I	I	I	0	0	0.66	0	0.62	0	10
6	0	0	I	I	I	0	0	0.88	0	0	0	0.17
7	0	0	I	I	I	0	0	0.88	0	0	0	0
8	0	0	I	I	I	0	0	0.51	0	0	0	0.35
9	0	0	I	I	I	0.06	0	0.38	0	0	0	0.11
10	0	0	I	I	I	0.17	0	0.38	0	0	0	0.19
11	0	0	I	I	I	0	0	1.1	0	0	0	0.41
12	0	0	I	I	I	0	0	0.02	0	0.19	0	0.47
13	0	0	I	I	I	0	0	0	0	1.4	0	0.32
14	0	0	I	I	I	0	0	0	0	0.25	0	0.27
15	0	0	I	I	I	0.47	0	0.17	0	0.14	0	0
16	0	0	I	I	0	0	0	0	0	1.6	0	0
17	0	0	I	I	0	0.09	0.21	0	0	1.7	0	0
18	0	0	I	I	0	0	0.11	0.04	0	1.6	0	0
19	0	0	I	I	0	0	0	0	0	0	0	0
20	0	0	I	I	0	0	0.93	0	0.38	0	0	0
21	0	0	I	I	0	0	0.14	0	0.06	0	0	0
22	0	0	I	I	0	0	0.19	0.79	0	0	0	0
23	0	0	I	I	0	0	0.06	0	0	0	0	0
24	0	I	I	I	0	0	0.06	0	0	0.12	0	0.11
25	0	I	I	I	0	0	0.47	0	0	1.7	0	0.04
26	0	I	I	I	0	0	0.12	0	0	0.81	0	0
27	0	I	I	I	0	0	0.58	0	0	0.56	0	0
28	0	I	I	I	0	0	0.44	0	0.30	0.18	0	0
29	0	I	I	I	0	0	0.14	0	1.9	0	0	0
30	0	I	I	I		0	0.15	0	0	0.18	0	0
31	0		I	I		0		0		0.13	0	

* I = Ice or snow present in channel.

E244 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	I ^{a,b}	I	I	0.04	1.2	2.3	0.06	1.5	0.84	1.3	7.2
Max Daily Peak (ft³/s)	0	0	I	I	I	0.47	0.93	1.1	1.9	1.7	10	10	10
Min Daily Flow (ft³/s)	0	0	I	I	I	0	0	0	0	0	0	0	0
Missing Days	0	7	31	31	15	0	0	0	0	0	0	0	84

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E245.5 Pajarito Canyon above Threemile Canyon

Location. Lat 35° 50' 45.3", Long -106° 16' 29", Sec. 16, T. 19 N., R. 6 E., Ramon Vigil Land Grant, Los Alamos County.

Drainage Area. 7.81 mi².

Period of Record. October 1, 2002, to September 30, 2024.

Revised Record. Drainage area (2008).

Gage. Data logger and radio telemetry. Elevation of gage is 6796 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 69 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 630 ft³/s on September 13, 2013; gage height 4.82 ft.

Maximum Discharge for WY 2024. Maximum discharge 25 ft³/s on December 31, 2023, and January 1, 2024; gage height 2.53 ft.



E245.5 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is also equipped with an ISCO pump sampler to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for direct discharge measurements above the wading stage.

The precipitation system is equipped with a Campbell Scientific TE525 tipping-bucket rain gage.

Datum Correction. Levels run May 12, 2008, show the gage to be within limits.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record, except November 29 to December 24, 2023, and January 11 to 24, 2024, when the gaging sensor was affected by ice and snow.

Rating. The channel is straight for 80 ft above and below the gaging station. The banks have some vegetation, and the streambed is sand and gravel.

Rating No. 4 was developed from previous measurements and one critical-depth computation.

No discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying Rating No. 4.

E245.5 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	25	0	0	0	0	0	0.73	0	0
2	0	0	I	0.20	0	0	0	0	0	5.2	0	0
3	0	0	I	0	0	0	0	0	0	0.40	0	0
4	0	0	I	0	0	0	0	0	0	0	0	0
5	0	0	I	0	0.03	0	0	0	0	0	0	5.4
6	0	0	I	0	0	0	0	0	0	0	0	0.43
7	0	0	I	0	0	0	0	0	0	0	0	0.03
8	0	0	I	0	0	0	0	0	0	0	0	0
9	0	0	I	0	0	0	0	0	0	1.7	0.97	0
10	0	0	I	0	0	0	0	0	0	0.40	0.30	0
11	0	0	I	I	0	0	0	0	0	0	0	0
12	0	0	I	I	0	0	0	0	0	1.2	0	0
13	0	0	I	I	0.20	0	0	0	0	0.37	0	0
14	0	0	I	I	0.23	0	0	0	0	0	0	0
15	0	0	I	I	0.20	0.07	0	0	0	0	0	0
16	0	0	I	I	0	0	0	0	0	0.10	0	0
17	0	0	I	I	0	0.13	0	0	0	13	0	1.1
18	0	0	I	I	0	0	0	0	0	4.2	0	0.33
19	0	0	I	I	0	0	0	0	0	0.73	0	0
20	0	0	I	I	0	0	0	0	0	0.60	0	0
21	0	0	I	I	0	0	0	0	0	0.33	0	0
22	0	0	I	I	0	0	0	0	0	0.23	0	0
23	0	0	I	I	0	0	0	0	0	0	0	0
24	0	0	I	I	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	3.5	0
27	0	0	0	0	0	0	0	0	0	0	0.50	0
28	0	0	0	0	0	0	0	0	0	0	0	0
29	0	I	0.03	0	0	0	0	0	0	0	0	0
30	0	I	0	0		0	0	0	0	0	0	0
31	0		25	0		0		0		0	0	

* I = Ice or snow present in channel.

E245.5 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	I ^{a,b}	1.3	0.04	0	0	0	0	9.0	1.2	2.0	14
Max Daily Peak (ft³/s)	0	0	I	25	0.23	0.13	0	0	0	13	3.5	5.4	25
Min Daily Flow (ft³/s)	0	0	I	0	0	0	0	0	0	0	0	0	0
Missing Days	0	2	24	14	0	0	0	0	0	0	0	0	40

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E246 Threemile Canyon above Pajarito Canyon

Location. Lat 35° 50' 20", Long -106° 16' 17", Sec. 35, T. 19 N., R. 6 E., Ramon Vigil Land Grant, Los Alamos County.

Drainage Area. 1.62 mi².

Period of Record. October 1998 to September 30, 2024.

Revised Record. Drainage area (2006).

Gage. Data logger and 9-in. Parshall flume with radio telemetry. Elevation of gage is 6759 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 0.88 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 900 ft³/s on September 13, 2013; gage height 4.6 ft.

Maximum Discharge for WY 2024. Maximum discharge 0.09 ft³/s on July 11, 2024; gage height 0.19 ft.



E246 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS mounted on a 9-in. Parshall flume. The system is powered by a solar-panel battery system housed in a NEMA shelter on the right bank. The station is also equipped with an ISCO pump sampler to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. The staff gage in the 90-in. Parshall flume is the reference gage. No provision has been made for direct discharge measurements above the wading stage.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record, except for November 30, 2023, to February 17, 2024, when the gaging sensor was affected by ice and snow.

Rating. The channel is straight above and below the gaging station. Streamflow is confined to the main channel by cutbanks on both sides. The bottom is 10 ft wide, and the channel is prone to some shifting with vegetation on each bank. The low-water control is the 9-in. Parshall flume.

Rating No. 1 was developed based on the computation of the 9-in. Parshall flume and was extended based on two critical-depth computations. The PZF is 0.00 gage height.

No discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying the gage height to Rating No. 1.

E246 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	I	I	0	0	0	0	0.08	0.01	0
2	0.01	0	I	I	I	0	0	0	0	0	0	0
3	0	0	I	I	I	0	0	0	0.01	0	0.01	0
4	0	0	I	I	I	0	0	0	0	0.04	0.06	0
5	0	0	I	I	I	0	0	0	0.03	0	0.03	0
6	0	0	I	I	I	0	0	0	0.06	0.01	0.06	0
7	0	0	I	I	I	0	0	0	0	0.03	0.05	0
8	0	0	I	I	I	0.01	0	0	0.04	0	0	0
9	0	0	I	I	I	0.01	0	0	0	0	0	0
10	0	0	I	I	I	0	0	0	0	0	0	0
11	0	0	I	I	I	0	0	0	0	0.09	0	0
12	0	0	I	I	I	0	0	0	0.01	0.05	0	0
13	0	0	I	I	I	0	0	0	0.05	0	0	0
14	0	0	I	I	I	0	0	0	0	0	0.05	0
15	0	0	I	I	I	0	0	0	0	0	0.01	0
16	0	0	I	I	I	0	0	0	0	0	0.03	0
17	0	0	I	I	I	0	0	0	0	0	0.04	0
18	0	0	I	I	0	0	0	0	0.04	0	0.06	0
19	0	0	I	I	0	0	0	0	0	0	0.05	0
20	0	0	I	I	0	0	0	0	0	0	0.05	0
21	0	0	I	I	0	0	0	0	0	0	0.05	0.01
22	0	0	I	I	0	0	0	0	0	0	0	0
23	0	0	I	I	0	0	0	0	0	0	0	0
24	0	0	I	I	0	0.01	0	0	0.05	0	0.01	0
25	0	0	I	I	0	0	0	0	0.04	0	0	0
26	0	0	I	I	0	0	0	0	0.02	0	0.03	0
27	0	0	I	I	0	0	0	0	0	0	0	0
28	0	0	I	I	0	0	0	0	0	0.02	0	0
29	0	0	I	I	0	0	0	0	0	0	0	0.03
30	0	I	I	I		0	0	0	0	0	0	0
31	0		I	I		0		0		0.05	0	

* I = Ice or snow present in channel.

E246 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	I ^{a,b}	I	I	0	0	0	0.01	0.03	0.04	0	0.08
Max Daily Peak (ft³/s)	0.01	0	I	I	I	0.01	0	0	0.06	0.09	0.06	0.03	0.09
Min Daily Flow (ft³/s)	0	0	I	I	I	0	0	0	0	0	0	0	0
Missing Days	0	1	31	31	17	0	0	0	0	0	0	0	80

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E250 Pajarito Canyon above SR 4

Location. Lat 35° 49' 26", Long -106° 13' 40", Sec. 5, T. 18 N., R. 7 E., Ramon Vigil Land Grant, Los Alamos County.

Drainage Area. 10.6 mi².

Period of Record. November 1993 to August 25, 2006 (destroyed by flood); September 2006 to September 13, 2013 (damaged by high-flow event); and October 1, 2014, to September 30, 2024.

Revised Record. Drainage area (2006).

Gage. Data logger with radio telemetry and concrete control. Elevation of gage is 6535 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 2.2 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 960 ft³/s on September 13, 2013; gage height 5.23 ft.

Maximum Discharge for WY 2024. Maximum discharge 0.04 ft³/s on March 15, 2024; gage height 1.1 ft.



E250 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a shaft-encoder float system. The system is powered by a solar-panel battery system housed in a NEMA shelter on an 18-in. CMP well. The station is also equipped with an ISCO pump sampler to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for direct discharge measurements above the wading stage.

Datum Correction. None. The most recent levels, run November 17, 2004, found the gage to be within acceptable limits.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record, except for November 26, 27, 30, December 1, 4, 5, 13 to 22, 2023, January 9 to 14, and February 9 to 13, 2024, when the gaging sensor was affected by ice and snow.

Rating. The channel is straight for 50 ft above and 100 ft below the gaging station. The streambed material is gravel. The control is concrete with a 90° weir plate.

Rating No. 1 was developed from a 90° weir plate formula and broad-crested weir computation above the notch. Rating No. 1 has been used and is considered good.

No discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying the gage height to Rating No. 1.

E250 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	0	0	0	0.01	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0.01	0	0	0	0	0	0	0	0	0
4	0	0	I	0	0	0	0	0	0	0	0	0
5	0	0	I	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	I	I	0	0	0	0	0	0	0
10	0	0	0	I	I	0	0	0	0	0	0	0
11	0	0	0	I	I	0	0	0	0	0	0	0
12	0	0	0	I	I	0	0	0	0	0	0	0
13	0	0	I	I	I	0	0	0	0	0	0	0
14	0	0	I	I	0	0	0	0	0	0	0	0
15	0	0	I	0	0	0.04	0	0	0	0	0	0
16	0	0	I	0	0	0	0	0	0	0	0	0
17	0	0	I	0	0	0.02	0	0	0	0	0	0
18	0	0	I	0	0	0	0	0	0	0	0	0
19	0	0.01	I	0	0	0	0	0	0	0	0	0
20	0	0	I	0	0	0	0	0	0	0	0	0
21	0	0	I	0	0	0	0	0	0	0	0	0
22	0	0	I	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0.02	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0	I	0	0	0	0	0	0	0	0	0	0
27	0	I	0	0	0	0	0	0	0	0	0	0
28	0	0.01	0	0	0	0	0	0	0	0	0	0
29	0	0.01	0	0	0	0	0	0	0	0	0	0
30	0	I	0	0		0	0	0	0	0	0	0
31	0		0	0		0		0		0	0	

* I = Ice or snow present in channel.

E250 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Daily Peak (ft³/s)	0	0.01	0.01	0	0	0.04	0.01	0	0	0	0	0	0.04
Min Daily Flow (ft³/s)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	3	13	6	5	0	0	0	0	0	0	0	27

Water Canyon and Cañon de Valle Watershed

The Water Canyon and Cañon de Valle watershed is an east-to-southeast-trending drainage that originates on the eastern slopes of the Sierra de los Valles in the Valles Caldera National Preserve at an elevation of 10,380 ft. The watershed remains on the Valles Caldera National Preserve for 0.4 mi and then passes through 2.8 mi of the Santa Fe National Forest before it crosses into LANL property at the western boundary of TA-16. Primary canyons within this watershed are Cañon de Valle (the primary tributary to Water Canyon) and Potrillo and Fence Canyons.

The Water Canyon and Cañon de Valle watershed consists mainly of occasional perennial reaches arising from springs that occur in the upper reaches of the watershed; however, all streams in Potrillo and Fence Canyons are ephemeral. Springs on the flanks of the Jemez Mountains, west of LANL's western boundary, supply flow to the upper reaches of the Water Canyon/Cañon de Valle watershed. Perennial water exists from NM 501 to the eastern edge of TA-28 in upper Water Canyon and from Peter Seep in Cañon de Valle. Streams in middle and lower Water Canyon are ephemeral, except for a perennial reach in the lower canyon supported by Spring 5AA. The Water Canyon/Cañon de Valle watershed contains, or may influence, three wetland areas totaling approximately 0.23 acres.

Water Canyon has a channel length of 13.8 mi and a drainage area of 8.8 mi². Several perennial springs are located in the upper reaches of Water Canyon and Cañon de Valle. Stream flow is ephemeral over most of the canyon passing through LANL property. Perennial springs located in upper Water Canyon in the Santa Fe National Forest include Armistead and American Springs. These springs result in perennial reaches. A small perennial spring in lower Water Canyon, below the confluence with Potrillo Canyon, supports a very short perennial reach. Snowmelt seldom extends downstream as far as the LANL boundary.

Cañon de Valle originates west of LANL property, on the eastern slopes of the Sierra de los Valles in the Valles Caldera National Preserve, at an elevation of 10,389 ft. The canyon extends east-southeast for 0.4 mi, crosses into the Santa Fe National Forest, and continues east-southeast for 2.8 mi before entering LANL property at the western boundary. Cañon de Valle has a channel length of 7.5 mi and a drainage area of 4.2 mi². Flow in Cañon de Valle is interrupted upstream of LANL's western boundary and is largely ephemeral on LANL property with short perennial reaches in the upper portion of the canyon. Several perennial springs located in the Santa Fe National Forest in upper Cañon de Valle result in perennial reaches.

Figure 8 shows the total monthly volume of discharge for the five stream gaging stations within the Water Canyon and Cañon de Valle watershed.

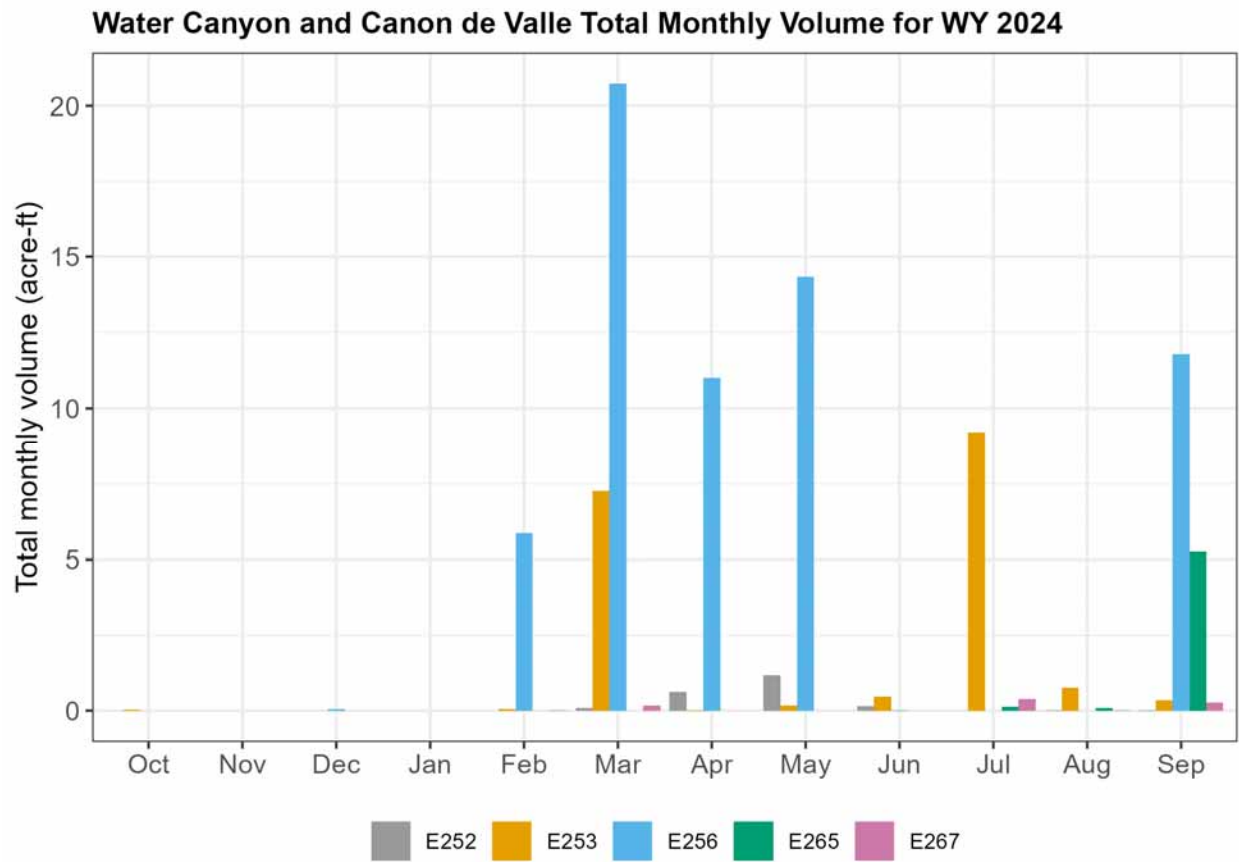


Figure 8 Total monthly volume of discharge (acre-ft) for WY 2024 in Water Canyon, Cañon de Valle, and Fence Canyon

E252 Water Canyon above SR 501

Location. Lat 35° 50' 18", Long -106° 21' 42", Sec. 36, T. 19 N., R. 5 E., Los Alamos County in Santa Fe National Forest.

Drainage Area. 3.25 mi².

Period of Record. October 1994 to June 2000 (destroyed by flood); April 2001 to September 30, 2024.

Revised Record. Drainage area (2006).

Gage. Data logger with radio telemetry. Elevation of gage is 7556 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 11 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 1577 ft³/s on August 21, 2011; estimated with high-water-mark survey.

Maximum Discharge for Current WY 2024. Maximum discharge 0.67 ft³/s on August 9, 2024; gage height 4.81 ft.



E252 Stream gaging station, downstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a solar-panel battery system housed in a NEMA shelter on a 24-in. CMP well. The station is also equipped with an ISCO pump sampler to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. There is no low-water control. No provision has been made for direct-discharge measurements above the wading stage.

Datum Correction. None. Levels were run when the gage was established on April 16, 2001.

Gage-Height Record. The data logger, referenced to the inside staff gage and reference point, gave a complete and satisfactory record, except for November 21, 2023, to February 12, 2024, when the gaging sensor was affected by ice and snow.

Rating. The channel at the gaging station is 30 ft wide and straight for about 40 ft upstream, then bends to the left; downstream from the gaging station it is straight for 100 ft. The streambed through this reach is primarily sand, gravel, and cobbles. The low-flow control is a rock riffle 5 ft below the gaging station. The channel has been scoured and filled significantly by high flows resulting from runoff from both the Cerro Grande and Las Conchas fires.

Rating No. 5 was based on a step-backwater survey conducted on November 18, 2011, after major channel aggradation during a runoff event on August 21, 2011. Steep slopes in the gaging station reach and throughout the region cause considerable movement of material as either scours or fills. Rating No. 5 was developed in 2015, extending Rating No. 4 using high-water-mark surveys.

No discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying the inside gage height to Rating No. 5.

E252 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	I	I	0	0.01	0.02	0.01	0	0	0
2	0	0	I	I	I	0	0.01	0.02	0.01	0	0	0.01
3	0	0	I	I	I	0	0.01	0.02	0.01	0	0	0.01
4	0	0	I	I	I	0	0.01	0.02	0.01	0	0	0.01
5	0	0	I	I	I	0	0.01	0.02	0.01	0	0	0.01
6	0	0	I	I	I	0	0.01	0.02	0.01	0	0	0.01
7	0	0	I	I	I	0	0.01	0.02	0.01	0	0.01	0.01
8	0	0	I	I	I	0	0.01	0.02	0.01	0	0	0
9	0	0	I	I	I	0	0.01	0.02	0.01	0	0.67	0
10	0	0	I	I	I	0	0.01	0.02	0.01	0	0.01	0
11	0	0	I	I	I	0	0.01	0.06	0	0	0	0
12	0	0	I	I	I	0	0.01	0.03	0	0	0	0
13	0	0	I	I	0	0	0.01	0.03	0	0	0.01	0
14	0	0	I	I	0	0	0.01	0.03	0	0	0	0
15	0	0	I	I	0	0	0.01	0.03	0	0	0	0
16	0	0	I	I	0	0	0.01	0.03	0	0	0	0
17	0	0	I	I	0	0	0.01	0.03	0	0	0	0
18	0	0	I	I	0	0	0.01	0.03	0	0	0	0
19	0	0	I	I	0	0	0.01	0.03	0	0	0	0
20	0	0	I	I	0	0	0.02	0.03	0	0	0	0
21	0	I	I	I	0	0	0.02	0.02	0	0	0	0
22	0	I	I	I	0	0	0.02	0.02	0	0	0	0
23	0	I	I	I	0	0.01	0.02	0.02	0	0	0	0
24	0	I	I	I	0	0.01	0.02	0.02	0	0	0	0
25	0	I	I	I	0	0.01	0.02	0.02	0	0	0.01	0
26	0	I	I	I	0	0.01	0.02	0.02	0	0	0.01	0
27	0	I	I	I	0	0.01	0.02	0.02	0	0	0.01	0
28	0	I	I	I	0	0.01	0.02	0.01	0	0	0.01	0
29	0	I	I	I	0	0.01	0.02	0.02	0	0	0.01	0
30	0	I	I	I		0.01	0.02	0.01	0	0	0.01	0
31	0		I	I		0.01		0.01		0	0	

* I = Ice or snow present in channel.

E252 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	I ^{a,b}	I	0	0.09	0.61	1.2	0.14	0	0.01	0.01	2.1
Max Daily Peak (ft³/s)	0	0	I	I	0	0.01	0.02	0.06	0.01	0	0.67	0.01	0.67
Min Daily Flow (ft³/s)	0	0	I	I	0	0	0	0.01	0	0	0	0	0
Missing Days	0	10	31	31	12	0	0	0	0	0	0	0	84

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E253 Cañon de Valle above SR 501

Location. Lat 35° 51' 6", Long -106° 21' 17", NE ¼, Sec. 25, T. 19 N., R. 5 E., Los Alamos County in Santa Fe National Forest.

Drainage Area. 2.27 mi².

Period of Record. October 1994 to June 2000 (gaging station destroyed by flood); January 31, 2001, to September 30, 2024.

Revised Record. Period of record (2012).

Gage. Data logger and 120° weir plate, rain gage with radio telemetry. Elevation of gage is 7707 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 21.1 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 1450 ft³/s on August 21, 2011; gage height 10 ft.

Maximum Discharge for WY 2024. Maximum discharge 6.7 ft³/s on March 17, 2024; gage height 3.26 ft.



E253 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a solar-panel battery system housed in a NEMA shelter on a 24-in. CMP well that is 16 ft long and attached to a 60-ft metal walkway. The station is also equipped with an ISCO pump sampler to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for direct-discharge measurements above the wading stage.

The precipitation system is equipped with a Campbell Scientific TE525 tipping-bucket rain gage.

Datum Correction. None. The levels were run on April 16, 2001, when the gaging station was reestablished.

Gage-Height Record. The data logger, referenced to the inside staff gage and reference point, gave a complete and satisfactory record, except for November 24 to December 7, December 12 to 23, 2023, and January 13 to February 1, 2024, when the gaging sensor was affected by ice and snow.

Rating. The channel at the gaging station is about 8 ft wide and is straight for about 50 ft upstream, then it bends to the left, is straight for 100 ft downstream, then bends to the right. The streambed through this reach is primarily gravel with cobbles. The low-flow control is a 120°, sharp-crested weir. The channel becomes the control at high flow.

Rating No. 4 was developed from PZF measurement levels on October 28, 2011. Stage values were adjusted +0.10 for each discharge to continue to match the V-notch weir table.

No discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying the gage height to Rating No. 4.

E253 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	0	I	0	0.26	0	0.04	0.22	0.07	0.04
2	0	0	I	0	0	0	0	0	0.07	0.19	0.11	0
3	0	0	I	0	0	0	0	0	0.04	0.22	0.07	0
4	0	0	I	0	0	0	0	0	0.04	0.26	0.11	0
5	0	0	I	0	0	0	0	0	0.04	0.22	0.11	0.30
6	0	0	I	0	0	0	0	0	0.04	0.22	0.07	0
7	0	0	I	0	0.22	0	0	0	0.04	0.22	0.11	0
8	0	0	0	0	0	0	0	0	0.04	0.19	0.11	0
9	0	0	0	0	0	1.1	0	0	0.04	0.15	0.07	0
10	0	0	0	0	0	0.52	0	0	0	0.22	0.04	0
11	0	0	0	0	1.4	0	0	0.74	0.04	0.15	0.11	0
12	0	0	I	0	0.04	0	0	0.15	0.04	0.26	0.11	0
13	0	0	I	I	0	0	0	0	0.04	0.30	0.07	0
14	0	0	I	I	0	0.15	0	0	0	0.19	0.07	0
15	0	0	I	I	0	3.6	0	0	0.04	0.15	0.11	0
16	0	0	I	I	0	3.9	0	0	0.04	0.22	0.11	0
17	0	0	I	I	0	6.7	0	0	0.04	0.33	0.11	0
18	0	0	I	I	0	1.0	0	0	0.04	0.33	0.07	0
19	0	0	I	I	0	0.44	0	0	0.04	0.30	0.11	0
20	0	0	I	I	0	0	0	0	0	0.30	0.07	0
21	0	0	I	I	0	0	0	0	0	0.22	0.07	0
22	0	0	I	I	0	0	0	0	0	0.19	0.07	0
23	0	0	I	I	0	0	0	0	0	0.22	0.07	0
24	0	I	0	I	0	0.07	0	0	0	0.22	0.07	0.11
25	0	I	0	I	0	0	0	0	0	0.22	0.07	0.11
26	0	I	0	I	0	0	0	0	0	0.22	0.04	0.11
27	0	I	0	I	0	0	0	0	0	0.22	0	0.07
28	0	I	0	I	0	0	0	0	0	0.22	0	0.07
29	0	I	0	I	0	0	0	0	0.26	0.22	0	0.07
30	0	I	0	I		0	0	0.04	0.19	0.22	0	0.07
31	0		0	I		0		0.04		0.19	0	

* I = Ice or snow present in channel.

E253 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	I ^{a,b}	I	0.05	7.3	0.01	0.17	0.47	9.2	0.76	0.35	18
Max Daily Peak (ft³/s)	0	0	I	I	1.4	6.7	0.26	0.74	0.26	0.33	0.11	0.30	6.7
Min Daily Flow (ft³/s)	0	0	I	I	0	0	0	0	0	0	0	0	0
Missing Days	0	7	19	19	1	0	0	0	0	0	0	0	46

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E256 Cañon de Valle below MDA P

Location. Lat 35° 51' 01", Long -106° 19' 56.4", Sec. 29, T. 19 N., R. 6 E., Ramon Vigil Land Grant, Los Alamos County.

Drainage Area. 3.25 mi².

Period of Record. January 24, 2002, to August 21, 2011; August 15, 2014, to September 30, 2024.

Revised Record. Period of record (2014).

Gage. Data logger and 24-in. Parshall flume. Elevation of gage is 7329 ft above NGVD 29 from GPS survey.

Average Volume. 10 yr, 58 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 1024 ft³/s on August 21, 2011; estimated with high-water-mark survey.

Maximum Discharge for WY 2024. Maximum discharge 15 ft³/s on September 5, 2024; gage height 1.76 ft.



E256 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval) and a Sutron Accubar bubble sensor within a 24-in. Parshall flume. The system is powered by a solar-panel battery system housed in a NEMA shelter on the left bank. The station is also equipped with an ISCO pump sampler to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation. An outside staff gage is available for reference. No provision has been made for discharge measurements above the wading stage.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the inside staff gage, gave a complete and satisfactory record, except for December 25 to 27, 2023, when the gaging sensor was affected by ice and snow.

Rating. The channel is straight for 50 ft upstream and 20 ft downstream from the gaging station. The streambed consists of sand with gravel and is subject to filling behind the flume caused by flow events and gaging station silting problems. The banks are covered with vegetation. Rating No. 1 is based on the 24-in. Parshall flume. The rating curve was extrapolated to accommodate the peak stage of 3.75 ft.

No discharge measurements were made during the year.

Discharge. Discharge was computed by applying the gage height to Rating No. 1 using variable shift.

E256 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0.27	0.51	0	0	0	0	0
2	0	0	0	0	0.03	0.27	0.51	0	0	0	0	0
3	0	0	0	0	0.16	0.23	0.51	0.11	0	0	0	0
4	0	0	0	0	0.16	0.23	0.47	0.20	0	0	0	0
5	0	0	0	0	0.11	0.23	0.47	0.27	0	0	0	15
6	0	0	0	0	0.05	0.20	0.42	0.27	0	0	0	0.88
7	0	0	0	0	0.16	0.20	0.42	0.30	0	0	0	0.61
8	0	0	0	0	0.20	0.16	0.38	0.30	0	0	0	0.56
9	0	0	0	0	0.20	0.16	0.34	0.34	0.02	0	0	0.56
10	0	0	0	0	0.16	0.20	0.34	0.34	0.01	0	0	0.51
11	0	0	0	0	0.11	0.23	0.30	0.66	0	0	0	0.47
12	0	0	0	0	0.11	0.23	0.30	0.66	0	0	0	0.42
13	0	0	0	0	0.05	0.23	0.25	0.51	0	0	0	0.34
14	0	0	0	0	0	0.23	0.23	0.51	0	0	0	0.27
15	0	0	0	0	0	0.27	0.20	0.71	0	0	0	0.16
16	0	0	0	0	0	0.42	0.16	0.71	0	0	0	0.16
17	0	0	0	0	0	0.56	0.16	0.56	0	0.03	0	0.20
18	0	0	0	0	0	0.66	0.11	0.47	0	0	0	0.20
19	0	0	0	0	0	0.66	0.08	0.38	0	0	0	0.16
20	0	0	0	0	0	0.66	0.02	0.30	0	0	0	0.13
21	0	0	0	0	0.06	0.56	0	0.27	0	0	0	0.03
22	0	0	0	0	0.16	0.56	0	0.23	0	0	0	0
23	0	0	0	0	0.20	0.51	0	0.20	0	0	0	0
24	0	0	0.08	0	0.20	0.56	0	0.16	0	0	0	0
25	0	0	I*	0	0.20	0.56	0	0.08	0	0	0	0
26	0	0	I	0	0.56	0.47	0	0	0	0	0	0
27	0	0	I	0	0.71	0.47	0	0	0	0	0	0
28	0	0	0	0	0.61	0.47	0	0	0	0	0	0
29	0	0	0	0	0.34	0.47	0	0	0	0	0	0
30	0	0	0	0		0.47	0	0	0	0	0	0
31	0		0	0		0.47		0		0	0	

* I = Ice or snow present in channel.

E256 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	0.05	0	5.9	21	11	14	0.02	0	0	12	64
Max Daily Peak (ft³/s)	0	0	0.08	0	0.71	0.66	0.51	0.71	0.02	0.03	0	15	15
Min Daily Flow (ft³/s)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	0	3	0	0	0	0	0	0	0	0	0	3

E265 Water Canyon below SR 4

Location. Lat 35° 48' 18", Long -106° 14' 31", Sec. 7, T. 18 N., R. 7 E., Ramon Vigil Land Grant, Los Alamos County.

Drainage Area. 13.11 mi².

Period of Record. October 1993 to September 30, 2024.

Revised Record. Drainage area (2006).

Gage. Data logger with radio telemetry and stabilized natural rock control. Elevation of gage is 6311 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 4.9 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 2560 ft³/s on September 13, 2013; gage height 6.23 ft.

Maximum Discharge for WY 2024. Maximum discharge 111 ft³/s on September 5, 2024; gage height 2.31 ft.



E265 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, an OTT RLS, and a tipping-bucket rain gage. The system is powered by a solar-panel battery system housed in a NEMA shelter on a 24-in. CMP well. The station is also equipped with one ISCO pump sampler to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for measurements above the wading stage.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record, except for November 25 to December 4, December 14 to 18, December 22 to 25, 2023, January 6 to 16, and February 2 to 16, 2024, when the gaging sensor was affected by snow and ice.

Rating. The channel is straight for 100 ft above and below the gaging station. The banks are low and have very little vegetation. The streambed is mostly rock with lenses of sand.

Rating No. 5 was used for the entire water year.

No discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying the gage height to Rating No. 5.

E265 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.01	0	I*	0	0	0	0	0	0	0	0	0
2	0.03	0	I	0	I	0	0	0	0	0.02	0	0
3	0.01	0	I	0	I	0	0	0	0	0.05	0	0
4	0	0	I	0	I	0	0	0	0	0.03	0	0
5	0	0	0	0	I	0	0	0	0	0.19	0	111
6	0	0	0	I	I	0	0	0	0	0.28	0	0.07
7	0	0	0	I	I	0	0	0	0	0.03	0	0
8	0	0	0	I	I	0	0	0	0	0	0	0.02
9	0	0	0	I	I	0.01	0	0	0	0.10	0	0.03
10	0	0	0	I	I	0	0	0	0	0	0	0
11	0	0	0	I	I	0	0	0	0	0	0	0
12	0	0	0	I	I	0	0	0	0	0	0	0
13	0	0	0.01	I	I	0	0	0	0	0	0	0
14	0	0	I	I	I	0	0	0	0	0	0	0
15	0	0	I	I	I	0	0	0	0	0	0	0
16	0	0	I	I	I	0	0	0	0	0	0	0
17	0	0	I	0	0	0	0	0	0	0.01	0	0
18	0	0.01	I	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0.02	0	0	0.01
20	0.01	0	0	0	0	0	0	0	0	0.01	0	0
21	0	0	0	0	0	0	0	0	0	0.02	0	0.02
22	0	0	I	0	0	0	0	0	0	0.02	0	0
23	0	0	I	0	0	0	0	0	0	0	0	0.01
24	0	0	I	0	0	0	0	0	0	0.06	0	0.01
25	0	I	I	0	0	0	0	0	0	0	0	0.01
26	0	I	0	0	0	0	0	0	0	0	0.22	0.01
27	0	I	0	0	0	0	0	0	0	0.03	0.03	0.01
28	0	I	0	0	0	0	0	0	0	0	0.05	0.02
29	0	I	0	0	0	0	0	0	0	0	0.02	0.02
30	0.01	I	0	0		0	0	0	0	0	0	0.02
31	0		0	0		0		0		0	0	

* I = Ice or snow present in channel.

E265 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total (acre-ft)	0	0	0	0	I ^{a,b}	0	0	0	0	0.13	0.08	5.3	5.5
Max Daily Peak (ft³/s)	0.03	0.01	0.01	0	I	0.01	0	0	0.02	0.28	0.22	111	111
Min Daily Flow (ft³/s)	0	0	0	0	I	0	0	0	0	0	0	0	0
Missing Days	0	6	13	11	15	0	0	0	0	0	0	0	45

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E267 Potrillo Canyon above SR 4

Location. Lat 35° 48' 48", Long -106° 14' 00", Sec. 6, T. 18 N., R. 7 E., Ramon Vigil Land Grant, Los Alamos County.

Drainage Area. 2.26 mi².

Period of Record. October 1, 1995, to September 30, 2024.

Revised Record. LA-13551-PR (1998): Station number. Drainage area (2006).

Gage. Data logger with radio telemetry and concrete control. Elevation of gage is 6455 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 1.6 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 99 ft³/s on September 13, 2013; gage height 2.94 ft.

Maximum Discharge for WY 2024. Maximum discharge 3.0 ft³/s on July 24, 2024; gage height 0.72 ft.



E267 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, a shaft-encoder float system, and an OTT RLS. The system is powered by a solar-panel battery system housed in a NEMA shelter on an 18-in. CMP well. The station is also equipped with an ISCO pump sampler to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for direct-discharge measurements above the wading stage.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside staff gage, gave a complete and satisfactory record, except for November 24 to 26, 30, December 1, 4 to 7, 12 to 31, 2023, and January 1 to February 15, 2024, when the gaging sensor was affected by snow and ice.

Rating. The channel is fairly straight for 300 ft above the gaging station and 150 ft below. The streambed is mostly sand. The brush is thick along the stream bank. The control is a concrete, broad-crested weir. The original shape and definition of the rating was derived by computation using weir geometry with the slope-area method to define peak discharge and slope of the upper end.

No discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying the gage height to Rating No. 2.

E267 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	I	I	0	0.06	0	0	0	0.43	0
2	0	0	0	I	I	0	0	0	0	0.56	0	0
3	0	0	0	I	I	0	0	0	0	0	0	0
4	0	0	I	I	I	0	0	0	0	0	0	0
5	0	0	I	I	I	0	0	0	0	2.4	0.03	1.1
6	0	0	I	I	I	0	0	0	0	0	0	0
7	0	0	I	I	I	0	0	0	0	0	0	0
8	0	0	0	I	I	0	0	0	0	0	0	0
9	0	0	0	I	I	0.06	0	0	0	0	0	0
10	0	0	0	I	I	0	0	0	0	0	0.11	0
11	0	0	0	I	I	0	0	0	0	0	0	0
12	0	0	I	I	I	0	0	0	0	0	0	0
13	0	0	I	I	I	0	0	0	0	0	0	0
14	0	0	I	I	I	0.03	0	0	0	0	0	0
15	0	0	I	I	I	0.43	0	0	0	0	0	0
16	0	0	I	I	0.06	0	0	0	0	0	0	0
17	0	0	I	I	0.03	0.83	0	0	0	0	0	2.5
18	0	0	I	I	0.03	0.03	0	0	0	0	0	0
19	0	0	I	I	0.03	0	0	0	0	0	0	0
20	0	0	I	I	0	0	0	0	0	0	0	0
21	0	0	I	I	0	0	0	0	0	0	0	0
22	0	0	I	I	0	0	0	0	0	0	0	0
23	0	0	I	I	0.03	0	0	0	0	0	0	0
24	0	I	I	I	0.03	0.06	0	0	0	3.0	0	0
25	0	I	I	I	0	0	0	0	0	0.11	0	0
26	0	I	I	I	0	0.03	0	0	0	0.06	0.17	0
27	0	0	I	I	0	0	0	0	0	0	0	0
28	0	0	I	I	0.03	0	0	0	0	0	0	0
29	0	0	I	I	0.03	0	0	0	0	0	0	0
30	0	I	I	I		0	0	0	0	0	0	0
31	0		I	I		0		0		0	0	

* I = Ice or snow present in channel.

E267 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	I ^{a,b}	I	I	0.16	0	0	0	0.38	0.01	0.26	0.81
Max Daily Peak (ft³/s)	0	0	I	I	I	0.83	0.06	0	0	3.0	0.43	2.5	3.0
Min Daily Flow (ft³/s)	0	0	I	I	I	0	0	0	0	0	0	0	0
Missing Days	0	4	25	31	15	0	0	0	0	0	0	0	75

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

Ancho Canyon and Chaquehui Canyon Watershed

Ancho Canyon is located in the southeastern portion of LANL and originates on LANL property in TA-49 at an elevation of approximately 7285 ft. The watershed extends southeast across LANL and enters the Rio Grande along the boundary between TA-33 and TA-70 at an elevation of approximately 5410 ft. Ancho Canyon is joined by North Ancho Canyon before it flows into the Rio Grande. The Ancho watershed has a channel length of 7.3 mi and an area of approximately 6.8 mi². Stream flow in Ancho Canyon is ephemeral over most of the canyon length, until about 0.8 mi upstream of the confluence with the Rio Grande, where Ancho Spring is located. This perennial spring supports perennial flow for a very short segment of the canyon until it converges with the Rio Grande.

Chaquehui Canyon originates in Bandelier National Monument at an elevation of 6580 ft. The watershed begins at the northeast corner of the monument, and trends southeast, extending 0.4 mi before entering LANL property at the northwestern corner of TA-33. The watershed continues across 2 mi of TA-33 and enters the Rio Grande at an elevation of 5370 ft. The area of the Chaquehui watershed is approximately 1.6 mi². Stream flow in Chaquehui Canyon is ephemeral.

Figure 9 shows the total monthly volume of discharge for the three stream gaging stations within the Ancho Canyon and Chaquehui Canyon watersheds.

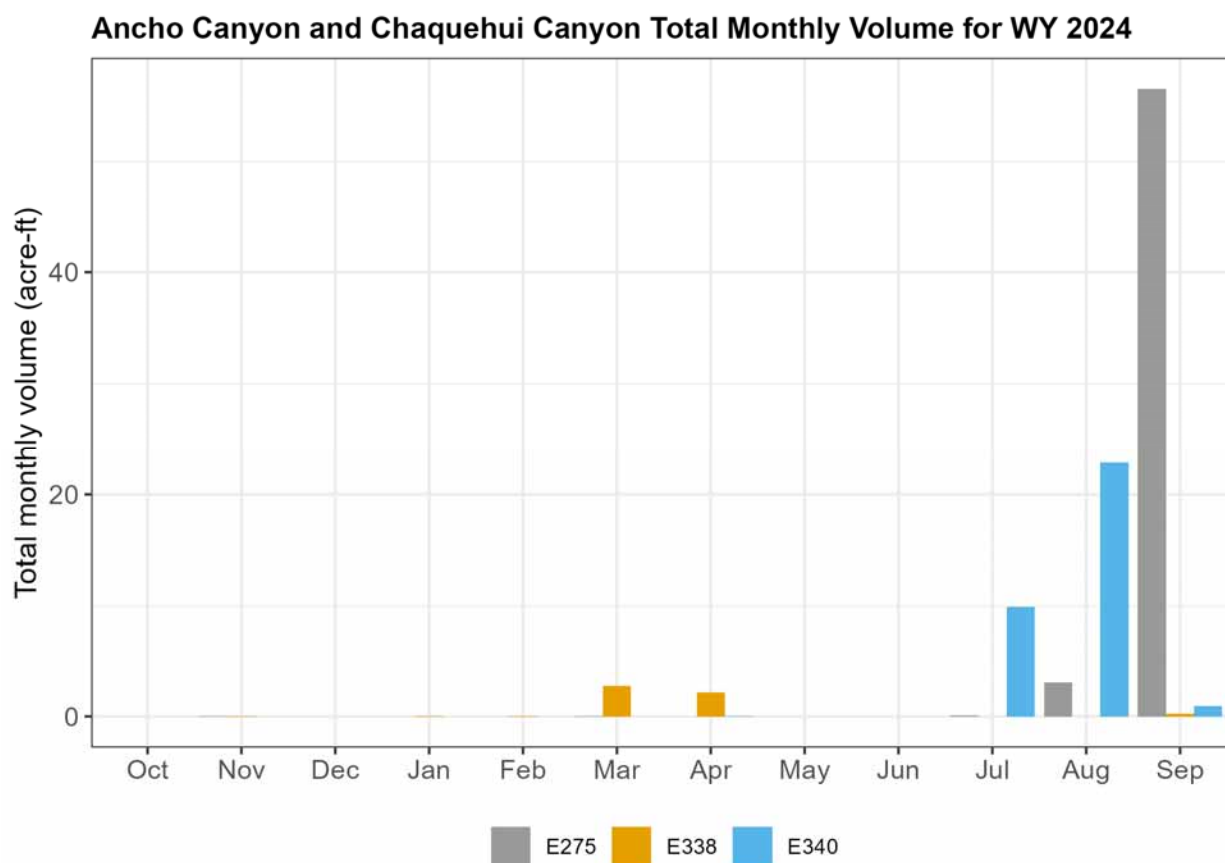


Figure 9 Total monthly volume of discharge (acre-ft) for WY 2024 in Ancho and Chaquehui Canyons

E275 Ancho Canyon below SR 4

Location. Lat 35° 46' 54", Long -106° 14' 42", Sec. 19, T. 18 N., R. 7 E., Ramon Vigil Land Grant, Los Alamos County.

Drainage Area. 4.75 mi².

Period of Record. December 1993 to September 30, 2024.

Revised Record. Drainage area (2006).

Gage. Data logger with radio telemetry and concrete stabilized natural control. Elevation of gage is 6193 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 12 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 817 ft³/s on July 12, 2023; gage height 4.08 ft.

Maximum Discharge for WY 2024. Maximum discharge 704 ft³/s on September 5, 2024; gage height 3.52 ft.



E275 Stream gaging station, upstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is also equipped with an ISCO pump sampler to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for measurements above the wading stage.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the outside gage, gave a complete and satisfactory record for the year, except for November 21, 2023, to February 15, 2024, when the gaging sensor was affected by ice and snow.

Rating. The streambed is a series of outcrops and sand pockets, with moderate sand movement during flow events. The high-water channel is straight for 200 ft upstream. Flow below the gaging station becomes supercritical as the fall increases radically below the station. One quarter-mile upstream, the channel has very low banks and the stream may spread out to large widths. The channel contracts markedly from there to the gaging station. The control is a natural rock outcrop stabilized by concrete.

Rating No. 1 was developed from the PZF, previous measurement, and slope area method.

No discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying the gage height to Rating No. 1.

E275 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	I	I	0	0	0	0	0	0	0
2	0	0	I	I	I	0	0	0	0	5.7	0	0
3	0	0	I	I	I	0	0	0	0	0.01	0	0
4	0	0	I	I	I	0	0	0	0	0.01	0	0
5	0	0	I	I	I	0	0	0	0	0.03	0	704
6	0	0	I	I	I	0	0	0	0	0	0	0
7	0	0	I	I	I	0	0	0	0	0	0.01	0
8	0	0	I	I	I	0	0	0	0	0	0	0
9	0	0	I	I	I	0	0	0	0	0	0	0
10	0	0	I	I	I	0	0	0	0	0	0	0
11	0	0	I	I	I	0	0	0	0	0	0	0
12	0	0.02	I	I	I	0	0	0	0	0	0.01	0
13	0	0	I	I	I	0	0	0	0	0	0.05	0
14	0	0.02	I	I	I	0	0	0	0	0	0.06	0
15	0	0.02	I	I	I	0.09	0	0	0	0	0	0
16	0	0	I	I	0	0	0	0	0	0	0	0
17	0	0	I	I	0	0	0	0	0	0	0	36
18	0	0.04	I	I	0	0	0	0	0	0	0	0
19	0	0.05	I	I	0	0	0	0	0	0	0.06	0
20	0	0	I	I	0	0	0	0	0	0	0	0
21	0	I	I	I	0	0	0	0	0	0	0	0
22	0	I	I	I	0	0	0	0	0	0	0	0
23	0	I	I	I	0	0	0	0	0	0	0	0
24	0	I	I	I	0	0	0	0	0	0	0	0
25	0	I	I	I	0	0	0	0	0	0	0.01	0
26	0	I	I	I	0	0	0	0	0	0	232	0
27	0	I	I	I	0	0	0	0	0	0	0	0
28	0	I	I	I	0	0.02	0	0	0	0	0	0.02
29	0	I	I	I	0	0	0	0	0	0	0	0.02
30	0	I	I	I		0	0	0	0	0	0	0.02
31	0		I	I		0		0		0	0	

* I = Ice or snow present in channel.

E275 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total (acre-ft)	0	0.02	I ^{a,b}	I	I	0.01	0	0	0	0.07	3.1	56	59
Max Daily Peak (ft³/s)	0	0.05	I	I	I	0.09	0	0	0	5.7	232	704	704
Min Daily Flow (ft³/s)	0	0	I	I	I	0	0	0	0	0	0	0	0
Missing Days	0	10	31	31	15	0	0	0	0	0	0	0	87

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

E338 Chaquehui at TA-33

Location. Lat 35° 46' 11", Long -106° 15' 7", Sec. 19, T. 18 N., R. 7 E., Ramon Vigil Land Grant, Los Alamos County.

Drainage Area. 12.18 mi².

Period of Record. October 1, 1999, to January 8, 2001; October 4, 2001, to September 30, 2024.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 6227 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 2.3 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 239 ft³/s on September 13, 2013; gage height 2.98 ft.

Maximum Discharge for WY 2024. Maximum discharge 7.4 ft³/s on September 5, 2024; gage height 0.92 ft.



E338 Stream gaging station, downstream view

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and an OTT RLS. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is also equipped with an ISCO sampler (12-count, 1-L glass and/or polyethylene bottles) to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for measurements above the wading stage. All high-flow measurements are computed by slope-area or critical-depth computation methods.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the inside staff gage, gave a complete and satisfactory record, except for November 29 to December 4, and December 12 to 20, 2023, when the gaging sensor was affected by ice and snow.

Rating. The channel makes a 30° turn approximately 25 ft upgrade from the staff plate and then runs straight downgrade for 80 ft. The channel is confined by steep cutbanks on both sides that should remain stable with flows confined within the channel. The channel bottom is approximately 4 ft wide and is made up of fine sand and pumice cobble. The control is the open channel.

Rating No. 1 was developed from previous measurement and slope-area.

No discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying the gage height to Rating No. 1.

E338 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	0	0	0	0.18	0	0	0	0	0
2	0	0	I	0	0	0	0.27	0	0	0	0	0
3	0	0	I	0	0	0	0.27	0	0	0	0	0
4	0	0	I	0	0	0	0.27	0	0	0	0	0
5	0	0	0	0.18	0	0	0.18	0	0	0	0	7.4
6	0	0	0	0.09	0	0	0.27	0	0	0	0	0
7	0	0	0	0	0.18	0	0.27	0	0	0	0	0
8	0	0	0	0.18	0	0	0.27	0	0	0	0	0
9	0	0	0	0.09	0	0	0.18	0	0	0	0	0.09
10	0	0	0	0.09	0.36	0	0.27	0	0	0	0	0
11	0	0	0	0	0.27	0	0.27	0	0	0	0	0
12	0	0	I	0	0	0.36	0.18	0	0	0	0	0
13	0	0	I	0	0	0.27	0.27	0	0	0	0	0
14	0	0	I	0	0	0.36	0.18	0	0	0	0	0
15	0	0	I	0	0	0.64	0.27	0	0	0	0	0
16	0	0	I	0	0	0.27	0.27	0	0	0	0	0
17	0	0	I	0	0	1.1	0.27	0	0	0	0	2.3
18	0	0	I	0	0	0.36	0.18	0	0	0	0	0
19	0	0	I	0	0	0.36	0.18	0	0	0	0	0
20	0	0	I	0	0	0.27	0	0	0	0	0	0
21	0	0	0	0	0	0.27	0.09	0	0	0	0	0
22	0	0	0	0	0	0.27	0.09	0	0	0	0	0
23	0	0	0	0	0	0.18	0	0	0	0	0	0
24	0	0	0	0	0	0.27	0.09	0	0	0	0	0
25	0	0.18	0	0	0	0.27	0	0	0	0	0	0
26	0	0.46	0	0	0	0.27	0	0	0	0	0	0
27	0	0.09	0	0	0	0.36	0.09	0	0	0	0	0
28	0	0	0	0	0	0.27	0	0	0	0	0	0
29	0	I	0	0	0	0.27	0	0	0	0	0	0
30	0	I	0	0		0.27	0	0	0	0	0	0
31	0		0	0		0.27		0		0	0	

* I = Ice or snow present in channel.

E338 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total (acre-ft)	0	0.04	0	0.01	0.04	2.8	2.2	0	0	0	0	0.24	5.33
Max Daily Peak (ft³/s)	0	0.46	0	0.18	0.36	1.1	0.27	0	0	0	0	7.4	7.4
Min Daily Flow (ft³/s)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	2	13	0	0	0	0	0	0	0	0	0	15

E340 Chaquehui Tributary at TA-33

Location. Lat 35° 46' 46", Long -106° 15' 1", Sec. 19, T. 18 N., R. 7 E., Ramon Vigil Land Grant, Los Alamos County.

Drainage Area. 1.33 mi².

Period of Record. February 7, 2001, to October 14, 2003; May 14, 2004, to September 30, 2024.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 6423 ft using LANL LIDAR DEM with NAD 83.

Average Volume. 10 yr, 4.6 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 64 ft³/s on July 12, 2022; gage height 2.13 ft.

Maximum Discharge for Current WY 2024. Maximum discharge 25 ft³/s on September 17, 2024; gage height 0.99 ft.



E340 Stream gaging station, downstream to the right

Equipment. The station's stream gaging system is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a Sutron Accubar bubbler sensor. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is also equipped with an ISCO sampler (12-count, 1-L glass and/or polyethylene bottles) to collect water-quality samples. The sampler is housed in a 3-ft × 4-ft metal box, separate from the other instrumentation, and is triggered by stage through the data logger. An outside staff gage is available for reference. No provision has been made for measurements above the wading stage. All high-flow measurements are computed by slope-area or critical-depth methods.

Datum Correction. None.

Gage-Height Record. The data logger, referenced to the inside staff gage, gave a complete and satisfactory record for the year, except for November 20, 2023, to April 6, 2024, when the gaging sensor was affected by ice and snow.

Rating. The channel zigzags downslope while dropping off low bedrock shelves into sandy bottoms both above and below the gaging station. The channel maintains an approximately 3-ft width while being contained by soil banks that may erode with heavy flows but otherwise, with low flows, remain stable. The control is a bedrock open channel that is stable at the staff plate.

Rating No. 1 was developed from previous measurement and slope-area.

No discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying the gage height to Rating No. 1.

E340 Daily Peak Discharge (ft³/s) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	I*	I	I	I	I	0	0	0	0.15	0
2	0	0	I	I	I	I	I	0	0	14	0.15	0
3	0	0	I	I	I	I	I	0	0	0.15	0.30	0
4	0	0	I	I	I	I	I	0	0	0.15	0.15	0
5	0	0	I	I	I	I	I	0	0	0	0.61	6.5
6	0	0	I	I	I	I	I	0	0	0	0.91	0
7	0	0	I	I	I	I	0	0	0	0	0.91	0
8	0	0	I	I	I	I	0	0	0	0.46	0.76	0
9	0	0	I	I	I	I	0	0	0	0.46	0.91	0
10	0	0	I	I	I	I	0	0	0	0.46	0.91	0
11	0	0	I	I	I	I	0	0	0	0.61	0.76	0
12	0	0	I	I	I	I	0	0	0	0.61	0.91	0
13	0	0	I	I	I	I	0	0	0	0.61	0.76	0
14	0	0	I	I	I	I	0	0	0	0.61	0.91	0
15	0	0	I	I	I	I	0	0	0	0.46	0.91	0
16	0	0	I	I	I	I	0	0	0	0.61	0.76	0
17	0	0	I	I	I	I	1.5	0	0	0.76	0.91	25
18	0	0	I	I	I	I	0	0	0	0.91	0.91	0
19	0	0	I	I	I	I	0	0	0	0.76	0.76	0
20	0	I	I	I	I	I	0	0	0	0.61	0.91	0
21	0	I	I	I	I	I	0	0	0	0.61	0.91	0
22	0	I	I	I	I	I	0	0	0	0.46	0.91	0
23	0	I	I	I	I	I	0	0	0	0.61	0.91	0
24	0	I	I	I	I	I	0	0	0	8.5	0.91	0
25	0	I	I	I	I	I	0	0	0	0.15	0.76	0
26	0	I	I	I	I	I	0	0	0	0	11	0
27	0	I	I	I	I	I	0	0	0	0	0.46	0
28	0	I	I	I	I	I	0	0	0	0	0	0
29	0	I	I	I	I	I	0	0	0	0	0	0
30	0	I	I	I		I	0	0	0	0	0	0
31	0		I	I		I		0		0.15	0	

* I = Ice or snow present in channel.

E340 Monthly Summary Table WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	I ^{a,b}	I	I	I	0.04	0	0	9.9	23	0.93	34
Max Daily Peak (ft³/s)	0	0	I	I	I	I	1.5	0	0	14	11	25	25
Min Daily Flow (ft³/s)	0	0	I	I	I	I	0	0	0	0	0	0	0
Missing Days	0	11	31	31	29	31	6	0	0	0	0	0	139

^a I = Ice or snow present in channel.^b Monthly summary is not calculated for months with mostly missing data.

PRECIPITATION GAGING STATIONS

Data Collection and Computation

A complete record at a precipitation gaging station consists of precipitation measurements directly observed using a tipping bucket. A data logger provided 5-min records of precipitation, which were validated and archived. The total daily precipitation is the sum of the 5-min precipitation records for the calendar day.

Accuracy of Records

The daily precipitation is based on measured precipitation and is reported to the nearest hundredth inch. Factors that affect the accuracy of the precipitation record include debris in the tipping bucket and precipitation in the form of hail or snow.

Data Presentation

The records published in this report consist of two parts for each precipitation gaging station:

- station analysis summary, with photo when available, and
- data table for the water year (October 1, 2023, to September 30, 2024).

The station analysis supplements each daily-values table and includes a description of the gaging station location, the period of record, gaging station information, a description of the monitoring equipment, fieldwork visits, the maximum daily total precipitation for the period of record and for the current monsoon season, and a description of the precipitation record.

Location: The most accurate and available maps, coupled with LIDAR DEM using NAD 83, provide location information.

Period of Record: The period of record is the time during which published records exist for a station or its equivalent station.

Equivalent Station: An equivalent station is one that was in operation when the present station was not in operation and was located so its records can be reasonably considered equivalent to records from the present station.

Gage: This section describes the datum of the current gage referred to in NAD 83.

Equipment: This section describes the equipment located at each site.

Maximum Daily Total Precipitation for Period of Record: The maximum total daily precipitation reported for any single date during the period of record.

Maximum Daily Total Precipitation for Current Monsoon Season: The maximum total daily precipitation reported for any single date during the current monsoon season.

Precipitation Record: The precipitation record includes the periods when the gaging station was shut down for winterization and when the record was incomplete because of problems with data collection.

The table below shows the total precipitation recorded at each of the precipitation-network gaging stations and meteorological towers for May 1 to September 30, 2024, the monsoon season when most of the

annual precipitation occurs. The column titled “Days with Precipitation” shows the total number of days on which measurable precipitation occurred during this period for each gaging station. The column titled “Total Precipitation” contains the sum of the daily precipitation totals for this period for each precipitation gaging station.

Precipitation Summary for Monsoon Season, May 1, 2024–September 30, 2024

Precipitation Gaging Station or Meteorological Tower	Days with Precipitation 2024	Total Precipitation 2024 (in.)	Maximum Daily Total Precipitation 2024 (in.)	Elevation (ft)
RG038	54	9.20	0.69	7084
RG042.1	50	8.22	0.92	6379
RG055.5	52	10.64	1.03	7102
RG121.9	46	10.37	1.07	7336
RG200.5	41	6.35	0.56	7214
RG203	51	8.73	0.83	6817
RG240	50	11.99	1.69	7719
RG245.5	54	8.43	0.65	6796
RG253	51	12.27	1.63	7719
RG257	43	12.59	2.59	7360
RG262.4	49	10.31	2.04	7124
RG265	56	9.19	0.67	6311
RG267.4	51	8.68	1.26	6865
RG340	55	8.31	0.76	6423
RG-TA-06	51	10.92	1.34	7423
RG-TA-49	51	9.38	1.3	7045
RG-TA-53	54	9.04	1.03	6992
RG-TA-54	49	8.18	0.81	6553
RG-North Community	47	9.18	1.1	7414

Figure 10 shows the total precipitation for the May 1–September 30, 2024, monsoon season, at each of the 5 meteorological towers (“North Comm” and the four identified as “RG-TA-XX”) and the 14 extended precipitation-network gaging stations.

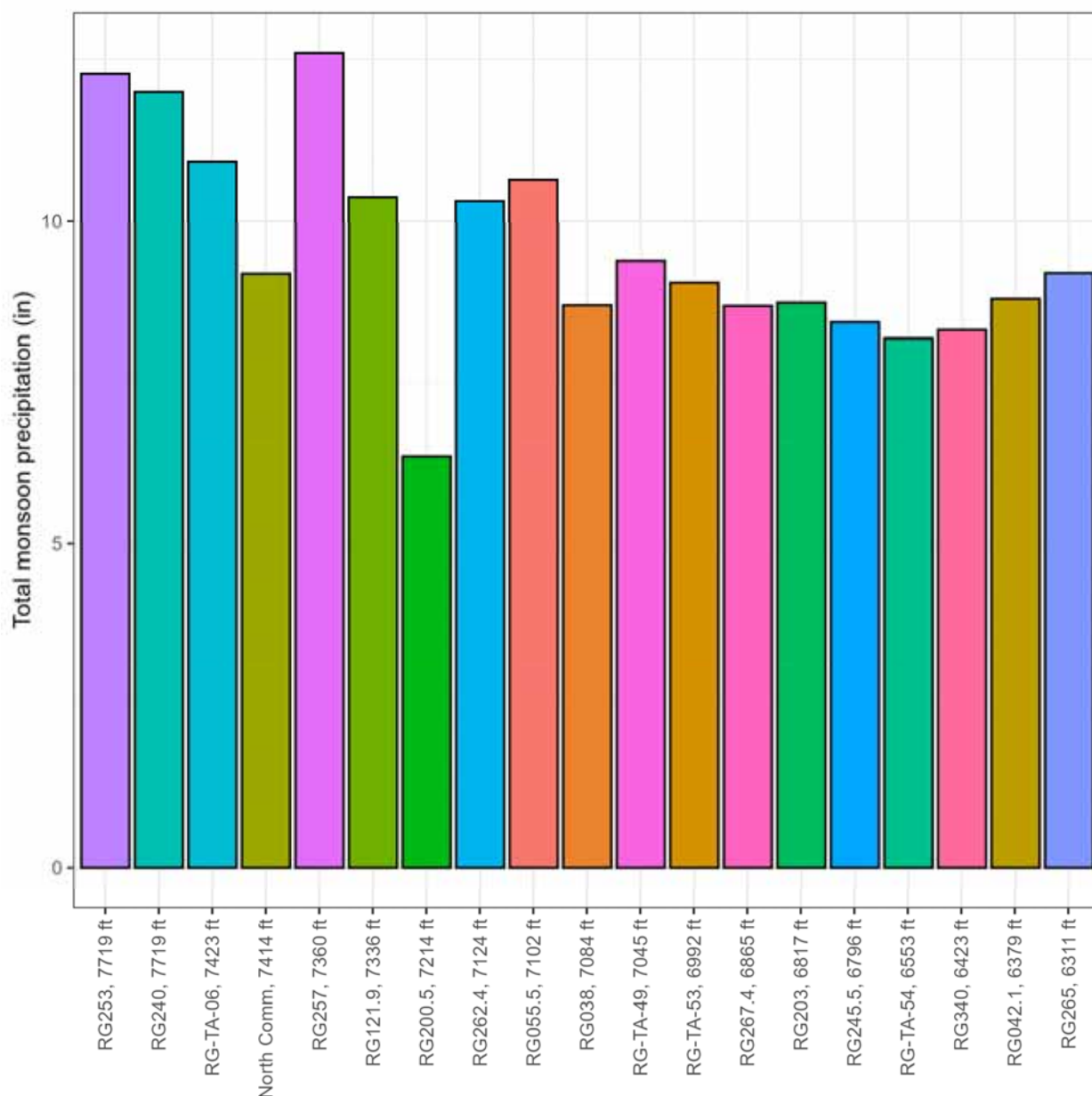


Figure 10 Total precipitation for the 2024 monsoon season, May 1–September 30, 2024, for the meteorological towers and extended precipitation network

Figure 11 shows the total monthly precipitation for the 5 meteorological towers and the 14 extended network-gaging stations from October 2023 to September 2024, with December to March omitted for the extended precipitation network because the gaging stations were shut down for winter.



Note: No data were recorded during the period of December 2023 to March 2024, when the extended precipitation network gaging stations were shut down for winter.

Figure 11 Total monthly precipitation for the meteorological towers and the extended precipitation network gaging stations for WY 2024

Extended Precipitation Network

Measurement, collection, and management of precipitation data and calculated results are required by LANL's NPDES Multi-Sector General Permit (NMR05GB21), the Construction General Permit, and the NPDES Individual Permit for Storm Water Discharge from Solid Waste Management Units and Areas of Concern (NM0030759), issued to LANL by the U.S. Environmental Protection Agency (EPA). The precipitation data are also used by the Consent Order and the environmental-surveillance stormwater projects to guide field activities such as monitoring-station inspections and sample retrieval. The use of the extended rain-gage network allows the stormwater projects to optimize field team response to those areas where precipitation likely resulted in runoff or exceeded a pre-established trigger amount.

The extended precipitation network consists of 14 precipitation-gaging stations. The gaging stations collect 5-min precipitation data in tipping buckets. The network is active from April to November when precipitation as rain is most likely to occur on the Pajarito Plateau. Each precipitation-gaging station is named after its colocated, or formerly colocated, stream-gaging station per the USGS Water Resources Division naming convention (previously described in the stream discharge gaging station section of this report).

RG038 DP Canyon above TA-21

Location. Lat 35° 52' 49", Long -106° 16' 58", SW ¼, Sec. 14, T. 19 N., R. 6 E., Los Alamos County.

Period of Record. April 23, 2008, to September 30, 2024.

Gage. Elevation of gage is 7084 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.08 in. on September 13, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 0.69 in. on June 29, 2024.

Equipment. The station is equipped with a Campbell Scientific tipping-bucket rain gage, TE525. The equipment is powered with a solar-panel, battery-charging system.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record, except for November 29, 2023, to March 19, 2024, when the gaging station was shut down for winter.



RG038 Precipitation gaging station

RG038 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.02	0	NR*	NR	NR	NR	0.17	0	0	0.34	0.18	0
2	0.10	0	NR	NR	NR	NR	0.18	0	0	0.09	0	0
3	0	0	NR	NR	NR	NR	0	0	0	0	0.20	0
4	0	0	NR	NR	NR	NR	0	0	0	0	0	0
5	0	0	NR	NR	NR	NR	0	0	0	0	0	0.35
6	0	0	NR	NR	NR	NR	0	0	0	0	0	0
7	0	0	NR	NR	NR	NR	0	0	0	0	0.06	0
8	0	0	NR	NR	NR	NR	0	0	0	0	0.01	0
9	0	0	NR	NR	NR	NR	0	0.01	0.48	0.41	0.41	0
10	0	0	NR	NR	NR	NR	0	0.07	0.08	0	0.02	0
11	0	0	NR	NR	NR	NR	0	0.35	0	0	0.11	0.12
12	0	0	NR	NR	NR	NR	0	0	0	0.22	0.05	0
13	0	0	NR	NR	NR	NR	0	0	0	0.11	0	0
14	0	0	NR	NR	NR	NR	0	0.07	0.02	0	0	0
15	0	0	NR	NR	NR	NR	0	0.26	0	0.05	0	0.02
16	0	0	NR	NR	NR	NR	0	0.01	0	0.16	0	0.29
17	0	0.01	NR	NR	NR	NR	0	0	0	0.49	0	0.17
18	0	0.19	NR	NR	NR	NR	0	0	0	0.34	0	0
19	0	0.15	NR	NR	NR	NR	0	0	0.01	0.10	0	0
20	0	0	NR	NR	NR	0	0.07	0	0.21	0.01	0	0
21	0	0	NR	NR	NR	0	0	0	0.22	0.29	0	0.20
22	0	0	NR	NR	NR	0	0	0	0	0.06	0	0
23	0	0	NR	NR	NR	0	0	0	0	0	0.10	0
24	0.01	0	NR	NR	NR	0.13	0	0	0	0.01	0	0
25	0	0.03	NR	NR	NR	0	0	0	0	0	0.12	0
26	0	0.06	NR	NR	NR	0	0	0	0.02	0.07	0.10	0
27	0	0.07	NR	NR	NR	0	0.03	0	0.25	0.15	0	0
28	0	0.10	NR	NR	NR	0	0	0	0	0	0.04	0
29	0	NR	NR	NR	NR	0	0	0	0.69	0	0.09	0.04
30	0	NR	NR	NR		0	0	0	0.32	0.03	0	0
31	0		NR	NR		0		0.01		0	0	

* NR = No data recorded during seasonal shutdown.

RG038 Monthly Total Precipitation (in.) WY 2024

	Oct	Nov ^a	Dec	Jan	Feb	Mar ^a	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.13	0.61	NR*	NR	NR	NR	0.45	0.78	2.30	2.93	1.49	1.70
Mean Monthly Total for Period of Record (in.)	0.00	0.02	NR	NR	NR	NR	0.02	0.03	0.08	0.09	0.05	0.04
Max Daily Total (in.)	0.10	0.19	NR	NR	NR	NR	0.18	0.35	0.69	0.49	0.41	0.35
Missing Days	0	2	31	31	29	19	0	0	0	0	0	0

^a Partial month because of inactivity, maintenance, or equipment failure.^b NR = No data recorded during seasonal shutdown, for majority of month.

RG042.1 Los Alamos above Low-Head Weir

Location. Lat 35° 52' 2", Long -106° 13' 25", NW ¼, Sec. 20, T. 19 N., R. 7 E., Santa Fe County.

Period of Record. July 27, 2010, to September 30, 2024.

Gage. Elevation of gage is 6379 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.27 in. on September 12, 2013, estimated.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 0.92 in. on July 2, 2024.

Equipment. The station is equipped with a Campbell Scientific TE525 tipping-bucket rain gage. The equipment is powered with a solar-panel, battery-charging system.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record, except for December 9, 2023, to March 19, 2024, when the gaging station was shut down for winter.



RG042.1 Precipitation gaging station

RG042.1 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	NR*	NR	NR	0.13	0	0	0.33	0.18	0
2	0.09	0	0	NR	NR	NR	0.01	0	0	0.92	0	0
3	0.01	0	0	NR	NR	NR	0	0	0	0	0	0
4	0.01	0	0	NR	NR	NR	0	0	0	0	0	0
5	0	0	0	NR	NR	NR	0	0	0	0.01	0	0.13
6	0	0	0	NR	NR	NR	0	0	0	0	0	0
7	0	0	0	NR	NR	NR	0	0	0	0	0.01	0
8	0	0	0	NR	NR	NR	0	0	0	0.01	0.02	0
9	0	0	NR	NR	NR	NR	0	0.02	0.20	0.09	0.20	0
10	0	0	NR	NR	NR	NR	0	0	0.06	0	0.11	0
11	0	0	NR	NR	NR	NR	0	0.20	0	0	0.05	0.07
12	0	0	NR	NR	NR	NR	0	0	0	0.02	0.17	0
13	0	0	NR	NR	NR	NR	0	0	0	0.02	0.11	0
14	0	0	NR	NR	NR	NR	0	0.08	0	0	0	0
15	0	0	NR	NR	NR	NR	0	0.22	0	0	0	0.03
16	0	0	NR	NR	NR	NR	0	0.05	0	0.02	0	0.26
17	0	0	NR	NR	NR	NR	0	0	0	0.12	0	0.41
18	0	0.20	NR	NR	NR	NR	0	0	0	0.32	0	0
19	0	0.17	NR	NR	NR	NR	0	0	0.48	0.01	0	0
20	0	0	NR	NR	NR	0	0.02	0	0.35	0.29	0	0
21	0	0	NR	NR	NR	0	0	0	0.30	0.18	0	0.07
22	0	0	NR	NR	NR	0	0	0	0	0	0	0
23	0	0	NR	NR	NR	0	0	0	0	0	0.01	0
24	0	0	NR	NR	NR	0.14	0	0	0.07	0	0.01	0
25	0	0.21	NR	NR	NR	0	0	0	0	0	0.07	0
26	0	0	NR	NR	NR	0	0.02	0	0	0.16	0.65	0
27	0	0	NR	NR	NR	0	0.01	0	0.39	0	0	0
28	0	0	NR	NR	NR	0	0	0	0	0	0.12	0
29	0	0	NR	NR	NR	0	0	0	0.56	0	0.05	0
30	0	0.30	NR	NR		0	0	0	0.17	0.22	0	0
31	0		NR	NR		0		0.19		0	0	

* NR = No data recorded during seasonal shutdown.

RG042.1 Monthly Total Precipitation (in.) WY 2024

	Oct	Nov	Dec ^a	Jan	Feb	Mar ^a	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.11	0.88	NR ^b	NR	NR	0.19	0.76	2.58	2.72	1.76	0.97	0.19
Mean Monthly Total for Period of Record (in.)	0.00	0.03	NR	NR	NR	NR	0.01	0.02	0.09	0.09	0.06	0.03
Max Daily Total (in.)	0.09	0.30	NR	NR	NR	NR	0.13	0.22	0.56	0.92	0.65	0.41
Missing Days	0	0	23	31	29	19	0	0	0	0	0	0

^a Partial month because of inactivity, maintenance, or equipment failure.^b NR = No data recorded during seasonal shutdown, for majority of month.

RG055.5 South Fork of Acid Canyon

Location. Lat 35° 53' 10", Long -106° 18' 26", SE ¼, Sec. 9, T. 19 N., R. 6 E., Los Alamos County.

Period of Record. July 29, 2008, to September 30, 2024.

Gage. Elevation of gage is 7102 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.26 in. on September 13, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 1.03 in. on May 11, 2024.

Equipment. The station is equipped with a tipping-bucket rain gage. The equipment is powered with a solar-panel, battery-charging system.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record, except for November 29, 2023, to March 20, 2024, when the gaging station was shut down for winter.



RG055.5 Precipitation gaging station

RG055.5 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0.01	NR*	NR	NR	NR	0.17	0	0	0.59	0.60	0
2	0.12	0	NR	NR	NR	NR	0.25	0	0	0.07	0	0
3	0	0	NR	NR	NR	NR	0	0	0	0	0.04	0
4	0.01	0	NR	NR	NR	NR	0	0	0	0	0	0
5	0	0	NR	NR	NR	NR	0	0	0	0	0	0.55
6	0	0	NR	NR	NR	NR	0.04	0	0	0	0	0
7	0	0	NR	NR	NR	NR	0	0	0	0	0.03	0
8	0	0	NR	NR	NR	NR	0	0	0	0	0	0
9	0	0	NR	NR	NR	NR	0	0.03	0.36	0.06	0.84	0
10	0	0	NR	NR	NR	NR	0	0	0.14	0	0.03	0.01
11	0	0	NR	NR	NR	NR	0	1.03	0	0	0	0.09
12	0	0	NR	NR	NR	NR	0	0	0	0.04	0.06	0
13	0	0	NR	NR	NR	NR	0	0	0	0.08	0.31	0
14	0	0	NR	NR	NR	NR	0	0.12	0.01	0	0.03	0
15	0	0	NR	NR	NR	NR	0	0.20	0	0	0	0
16	0.01	0	NR	NR	NR	NR	0	0.16	0	0.42	0	0.34
17	0	0.01	NR	NR	NR	NR	0	0	0	0.99	0	0.09
18	0	0.14	NR	NR	NR	NR	0	0	0.02	0.22	0	0
19	0	0.16	NR	NR	NR	NR	0	0	0.02	0	0	0
20	0	0	NR	NR	NR	NR	0.12	0	0.37	0	0	0
21	0	0	NR	NR	NR	0	0	0	0.23	0.35	0	0.02
22	0	0	NR	NR	NR	0	0	0.02	0.01	0	0	0
23	0	0	NR	NR	NR	0	0	0	0.01	0.05	0.15	0
24	0	0	NR	NR	NR	0.12	0	0	0	0	0.01	0
25	0	0.04	NR	NR	NR	0	0	0	0	0	0.02	0
26	0	0.14	NR	NR	NR	0	0	0	0.02	0.19	0.09	0
27	0	0.07	NR	NR	NR	0	0.04	0	0.38	0.20	0	0
28	0	0	NR	NR	NR	0	0	0	0	0	0.04	0
29	0	NR	NR	NR	NR	0	0	0	0.74	0.02	0.06	0
30	0	NR	NR	NR		0	0	0	0.08	0	0	0
31	0		NR	NR		0		0		0	0	

* NR = No data recorded during seasonal shutdown.

RG055.5 Monthly Total Precipitation (in.) WY 2024

	Oct	Nov ^a	Dec	Jan	Feb	Mar ^a	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.14	0.57	NR ^b	NR	NR	NR	0.62	1.56	2.39	3.28	2.31	1.10
Mean Total for Period of Record (in.)	0	0.02	NR	NR	NR	NR	0.02	0.05	0.08	0.11	0.07	0.04
Max Daily Total (in.)	0.12	0.16	NR	NR	NR	NR	0.25	1.03	0.74	0.99	0.84	0.55
Missing Days	0	2	31	31	29	20	0	0	0	0	0	0

^a Partial month because of inactivity, maintenance, or equipment failure.^b NR = No data recorded during seasonal shutdown, for majority of month.

RG121.9 Sandia Canyon East of Power Plant

Location. Lat 35° 52' 30", Long -106° 19' 10", SW ¼, Sec. 16, T. 19 N., R. 6 E., Los Alamos County.

Period of Record. May 2, 2007, to September 30, 2024.

Gage. Elevation of gage is 7336 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.35 in. on September 13, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 1.07 in. on September 5, 2024.

Equipment. The station is equipped with a Campbell Scientific TE525 tipping-bucket rain gage. The equipment is powered with a solar-panel battery-charging system.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record, except for December 5, 2023, to March 19, 2024, when the gaging station was shut down for winter.



RG121.9 Precipitation gaging station

RG121.9 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0.07	NR*	NR	NR	0.17	0	0	0.56	0.36	0
2	0.21	0	0	NR	NR	NR	0.25	0	0	0	0	0
3	0	0	0	NR	NR	NR	0	0	0	0	0.01	0
4	0.01	0	0	NR	NR	NR	0	0	0	0	0	0
5	0	0	NR	NR	NR	NR	0	0	0	0	0	1.07
6	0	0	NR	NR	NR	NR	0.05	0	0	0	0	0
7	0	0	NR	NR	NR	NR	0	0	0	0	0.03	0
8	0	0	NR	NR	NR	NR	0	0	0	0	0	0
9	0	0	NR	NR	NR	NR	0	0.02	0.63	0.02	0.56	0
10	0.02	0	NR	NR	NR	NR	0	0.01	0.12	0	0.03	0.09
11	0	0	NR	NR	NR	NR	0	0.98	0	0	0	0.01
12	0	0	NR	NR	NR	NR	0	0	0	0.02	0.07	0
13	0	0	NR	NR	NR	NR	0	0	0	0.18	0.26	0
14	0	0	NR	NR	NR	NR	0	0.25	0.01	0	0	0
15	0	0.01	NR	NR	NR	NR	0	0.22	0	0.01	0	0
16	0.01	0	NR	NR	NR	NR	0	0.1	0	0.23	0	0.33
17	0	0	NR	NR	NR	NR	0	0	0	1.05	0	0.08
18	0	0.16	NR	NR	NR	NR	0	0	0	0.34	0	0
19	0	0.15	NR	NR	NR	NR	0	0	0.02	0	0	0
20	0	0	NR	NR	NR	0	0.13	0	0.46	0	0	0
21	0	0	NR	NR	NR	0	0	0	0.22	0.33	0	0.01
22	0	0	NR	NR	NR	0	0	0	0	0	0	0
23	0	0	NR	NR	NR	0	0	0	0	0.07	0.16	0
24	0	0	NR	NR	NR	0.17	0	0	0	0	0	0
25	0	0.09	NR	NR	NR	0	0	0	0	0	0.01	0
26	0	0.21	NR	NR	NR	0	0	0	0.04	0.01	0.16	0
27	0	0	NR	NR	NR	0.01	0.04	0	0.17	0.14	0	0
28	0	0	NR	NR	NR	0	0	0	0	0	0.04	0
29	0	0	NR	NR	NR	0	0	0	0.79	0	0.01	0
30	0	0.22	NR	NR		0	0	0	0.08	0	0	0
31	0.03		NR	NR		0		0		0	0	

* NR = No data recorded during seasonal shutdown.

RG121.9 Monthly Total Precipitation (in.) WY 2024

	Oct	Nov	Dec ^a	Jan	Feb	Mar ^a	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.28	0.84	NR ^b	NR	NR	NR	0.64	1.58	2.54	2.96	1.70	1.59
Mean Total for Period of Record (in.)	0.01	0.03	NR	NR	NR	NR	0.02	0.05	0.08	0.10	0.05	0.05
Max Daily Total (in.)	0.21	0.22	NR	NR	NR	NR	0.25	0.98	0.79	1.05	0.56	1.07
Missing Days	0	0	27	31	29	19	0	0	0	0	0	0

^a Partial month because of inactivity, maintenance, or equipment failure.^b NR = No data recorded during seasonal shutdown, for majority of the month.

RG200.5 Mortandad Canyon Tributary Batch Plant at Sigma

Location. Lat 35° 51' 57", Long -106° 17' 24", NE ¼, Sec. 22, T.19 N., R. 6 E., Los Alamos County.

Period of Record. July 25, 2007, to September 30, 2024.

Gage. Elevation of gage is 7214 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.53 in. on September 13, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 0.56 in. on June 29, 2024.

Equipment. The station is equipped with a Campbell Scientific TE525 tipping-bucket rain gage. The equipment is powered with a solar-panel battery-charging system.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record, except for December 5, 2023, to March 19, 2024, when the gaging station was shut down for winter.



RG200.5 Precipitation gaging station

RG200.5 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0.09	NR*	NR	NR	0	0	0	0.48	0.04	0
2	0.1	0	0	NR	NR	NR	0.03	0	0	0.36	0	0
3	0	0	0	NR	NR	NR	0	0	0	0	0.28	0
4	0	0	0.01	NR	NR	NR	0	0	0	0	0	0
5	0	0	NR	NR	NR	NR	0	0	0	0	0	0.16
6	0	0	NR	NR	NR	NR	0.01	0	0	0	0	0
7	0	0	NR	NR	NR	NR	0	0	0	0	0	0
8	0	0	NR	NR	NR	NR	0	0	0	0	0	0
9	0	0	NR	NR	NR	NR	0	0	0	0.37	0.3	0
10	0	0	NR	NR	NR	NR	0	0	0.06	0	0.02	0
11	0	0	NR	NR	NR	NR	0	0.3	0	0	0.01	0.01
12	0	0	NR	NR	NR	NR	0	0	0	0.16	0.13	0
13	0	0	NR	NR	NR	NR	0	0	0	0	0	0
14	0	0	NR	NR	NR	NR	0	0.19	0	0	0	0
15	0	0.08	NR	NR	NR	NR	0	0.2	0	0.27	0	0
16	0	0	NR	NR	NR	NR	0	0.05	0	0.01	0	0
17	0	0	NR	NR	NR	NR	0	0	0	0.26	0	0.18
18	0	0.01	NR	NR	NR	NR	0	0	0	0.39	0	0
19	0	0.11	NR	NR	NR	NR	0	0	0	0.01	0	0
20	0	0	NR	NR	NR	0	0.29	0	0.04	0	0	0
21	0	0	NR	NR	NR	0	0	0	0.06	0.25	0	0.09
22	0	0	NR	NR	NR	0	0	0	0	0.02	0	0
23	0	0	NR	NR	NR	0	0	0	0	0.02	0	0
24	0	0	NR	NR	NR	0	0	0	0	0.02	0	0
25	0	0.2	NR	NR	NR	0	0	0	0	0	0	0
26	0	0	NR	NR	NR	0	0	0	0	0.11	0.4	0
27	0	0	NR	NR	NR	0	0	0	0.23	0.07	0	0
28	0	0	NR	NR	NR	0	0	0	0	0.01	0	0
29	0	0	NR	NR	NR	0	0	0	0.56	0	0.01	0.03
30	0	0.2	NR	NR		0	0	0	0.1	0.05	0	0
31	0		NR	NR		0		0.04		0	0	

* NR = No data recorded during seasonal shutdown.

RG200.5 Monthly Total Precipitation (in.) WY 2024

	Oct	Nov	Dec ^a	Jan	Feb	Mar ^a	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.10	0.60	NR ^b	NR	NR	NR	0.33	0.78	1.05	2.86	1.19	0.47
Mean Total for Period of Record (in.)	0.00	0.02	NR	NR	NR	NR	0.01	0.03	0.04	0.09	0.04	0.02
Max Daily total (in.)	0.10	0.20	NR	NR	NR	NR	0.29	0.30	0.56	0.48	0.40	0.18
Missing Days	0	0	27	31	29	19	0	0	0	0	0	0

^a Partial month because of inactivity, maintenance, or equipment failure.^b NR = No data recorded during seasonal shutdown, for majority of the month.

RG203 Mortandad Canyon below Sediment Traps

Location. Lat 35° 51' 39", Long -106° 16' 6", SE ¼, Sec. 23, T. 19 N., R. 6 E., Los Alamos County.

Period of Record. May 1, 2007, to September 30, 2024.

Gage. Elevation of gage is 6817 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.34 in. on September 13, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 0.83 in. on July 2, 2024.

Equipment. The station is equipped with a Campbell Scientific TE525 tipping-bucket rain gage. The equipment is powered with a solar-panel battery-charging system.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record, except for November 29, 2023, to March 28, 2024, when the gaging station was shut down for winter.



RG203 Precipitation gaging station

RG203 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	NR*	NR	NR	NR	0.12	0	0	0.57	0.04	0
2	0.11	0	NR	NR	NR	NR	0.24	0	0	0.83	0	0
3	0.01	0	NR	NR	NR	NR	0	0	0	0	0.25	0
4	0	0	NR	NR	NR	NR	0	0	0	0	0	0
5	0	0	NR	NR	NR	NR	0	0	0	0	0	0.25
6	0	0	NR	NR	NR	NR	0	0	0	0	0	0
7	0	0	NR	NR	NR	NR	0	0	0	0	0	0
8	0	0	NR	NR	NR	NR	0	0	0	0	0.04	0
9	0	0	NR	NR	NR	NR	0	0.02	0.13	0.23	0.4	0
10	0	0	NR	NR	NR	NR	0	0	0.16	0	0.03	0
11	0	0	NR	NR	NR	NR	0	0.2	0	0	0.03	0.04
12	0	0	NR	NR	NR	NR	0	0	0	0.24	0.15	0
13	0	0	NR	NR	NR	NR	0	0	0	0.02	0.12	0
14	0	0	NR	NR	NR	NR	0	0.16	0.02	0	0	0
15	0	0	NR	NR	NR	NR	0	0.47	0	0.02	0	0
16	0	0	NR	NR	NR	NR	0	0.09	0	0	0	0.3
17	0	0	NR	NR	NR	NR	0	0	0	0.55	0	0.24
18	0	0.23	NR	NR	NR	NR	0	0	0	0.29	0	0
19	0	0.1	NR	NR	NR	NR	0	0	0	0.28	0	0
20	0	0	NR	NR	NR	NR	0.2	0	0.19	0.02	0	0
21	0	0	NR	NR	NR	NR	0	0	0.03	0.24	0	0.14
22	0	0	NR	NR	NR	NR	0	0	0	0	0	0
23	0	0	NR	NR	NR	NR	0	0	0	0.04	0.18	0
24	0.01	0	NR	NR	NR	NR	0	0	0	0.06	0	0
25	0	0.21	NR	NR	NR	NR	0	0	0	0	0.07	0
26	0	0.03	NR	NR	NR	NR	0	0	0	0.09	0.28	0
27	0	0	NR	NR	NR	NR	0.02	0	0.22	0.04	0.01	0
28	0	0.04	NR	NR	NR	NR	0	0	0	0.01	0.01	0
29	0	NR	NR	NR	NR	0	0	0	0.51	0	0.05	0.04
30	0	NR	NR	NR		0	0	0	0.12	0.06	0	0
31	0		NR	NR		0		0.15		0	0	

* NR = No data recorded during seasonal shutdown.

RG203 Monthly Total Precipitation (in.) WY 2024

	Oct	Nov ^a	Dec	Jan	Feb	Mar ^a	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.13	0.61	NR ^b	NR	NR	NR	0.58	1.09	1.38	3.59	1.66	1.01
Mean Total for Period of Record (in.)	0.00	0.02	NR	NR	NR	NR	0.02	0.04	0.05	0.12	0.05	0.03
Max Daily total (in.)	0.11	0.23	NR	NR	NR	NR	0.24	0.47	0.51	0.83	0.40	0.30
Missing Days	0	2	31	31	29	28	0	0	0	0	0	0

^a Partial month because of inactivity, maintenance, or equipment failure.^b NR = No data recorded during seasonal shutdown, for majority of the month.

RG240 Pajarito Canyon below SR 501

Location. Lat 35° 52' 02", Long -106° 21' 05", NW ¼, Sec. 19, T. 19 N., R. 6 E., Los Alamos County.

Period of Record. June 5, 2002, to September 30, 2024.

Gage. Elevation of gage is 7719 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.20 in. on September 12, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 1.69 in. on September 5, 2024.

Equipment. The station is equipped with a Campbell Scientific TE525 tipping-bucket rain gage. All equipment is powered with a solar-panel battery-charging system.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record, except for December 4, 2023, to March 28, 2024, when the gaging station was shut down for winter.



RG240 Precipitation gaging station

RG240 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.01	0	0	NR*	NR	NR	0.23	0	0	0.61	0.35	0
2	0.33	0	0.01	NR	NR	NR	0.2	0	0	0	0	0
3	0	0	0.03	NR	NR	NR	0	0	0	0.01	0	0
4	0	0	NR	NR	NR	NR	0	0.01	0	0	0	0
5	0	0	NR	NR	NR	NR	0	0	0	0	0	1.69
6	0	0	NR	NR	NR	NR	0.03	0	0	0	0	0
7	0	0	NR	NR	NR	NR	0.01	0	0	0	0.19	0
8	0.02	0	NR	NR	NR	NR	0	0	0	0	0	0.02
9	0	0	NR	NR	NR	NR	0	0.02	0.61	0	0.66	0.01
10	0	0	NR	NR	NR	NR	0	0.01	0.14	0	0.03	0.08
11	0	0	NR	NR	NR	NR	0	1.09	0	0	0.01	0
12	0	0	NR	NR	NR	NR	0	0.01	0	0	0.11	0
13	0	0	NR	NR	NR	NR	0	0	0	0.17	0.03	0
14	0	0	NR	NR	NR	NR	0	0.25	0.03	0	0	0
15	0	0	NR	NR	NR	NR	0	0.25	0	0	0	0
16	0	0	NR	NR	NR	NR	0	0.11	0	0.21	0	0.39
17	0	0	NR	NR	NR	NR	0	0	0.02	0.88	0	0.06
18	0	0.21	NR	NR	NR	NR	0	0	0	0.37	0	0
19	0	0.11	NR	NR	NR	NR	0	0	0.06	0.02	0	0
20	0	0	NR	NR	NR	NR	0.05	0	0.86	0.27	0	0
21	0	0	NR	NR	NR	NR	0	0	0.03	0.38	0	0
22	0	0	NR	NR	NR	NR	0	0	0.01	0	0	0
23	0	0	NR	NR	NR	NR	0	0	0.01	0.01	0.21	0
24	0.02	0	NR	NR	NR	NR	0	0	0	0	0	0
25	0.05	0.03	NR	NR	NR	NR	0	0	0	0	0.09	0
26	0	0	NR	NR	NR	NR	0	0	0.06	0	0.16	0
27	0	0.01	NR	NR	NR	NR	0	0	0.1	0	0.03	0
28	0	0.11	NR	NR	NR	NR	0.06	0	0	0	0.02	0
29	0	0.06	NR	NR	NR	0	0	0	1.12	0	0.03	0
30	0	0	NR	NR		0	0	0	0.09	0	0	0
31	0		NR	NR		0		0		0	0	

* NR = No data recorded during seasonal shutdown.

RG240 Monthly Total Precipitation (in.) WY 2024

	Oct	Nov	Dec ^a	Jan	Feb	Mar ^a	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.43	0.53	NR ^b	NR	NR	NR	0.58	1.75	3.14	2.93	1.92	2.25
Mean Total for Period of Record (in.)	0.01	0.02	NR	NR	NR	NR	0.02	0.06	0.10	0.09	0.06	0.08
Max Daily Total (in.)	0.33	0.21	NR	NR	NR	NR	0.23	1.09	1.12	0.88	0.66	1.69
Missing Days	0	0	28	31	29	28	0	0	0	0	0	0

^a Partial month because of inactivity, maintenance, or equipment failure.^b NR = No data recorded during seasonal shutdown, for majority of the month.

RG245.5 Pajarito Canyon above Threemile Canyon

Location. Lat 35° 50' 45.3", Long -106° 16' 29", Sec. 16, T. 19 N., R. 6 E., Ramon Vigil Land Grant, Los Alamos County.

Period of Record. May 18, 2007, to September 30, 2024.

Gage. Elevation of gage is 6796 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.06 in. on September 13, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 0.65 in. on September 5, 2024.

Equipment. The station is equipped with a Campbell Scientific TE525 tipping-bucket rain gage. The equipment is powered with a solar-panel battery-charging system.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record, except for November 30, 2023, to March 19, 2024, when the gaging station was shut down for winter.



RG245.5 Precipitation gaging station

RG245.5 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	NR*	NR	NR	NR	0.11	0	0	0.57	0.16	0
2	0.14	0	NR	NR	NR	NR	0.23	0	0	0.64	0	0
3	0	0	NR	NR	NR	NR	0	0	0	0	0.12	0
4	0	0	NR	NR	NR	NR	0	0	0	0	0	0
5	0	0	NR	NR	NR	NR	0	0	0	0.04	0	0.65
6	0	0	NR	NR	NR	NR	0	0	0	0	0	0
7	0	0	NR	NR	NR	NR	0	0	0	0	0	0
8	0	0	NR	NR	NR	NR	0	0	0	0	0.14	0
9	0	0	NR	NR	NR	NR	0	0.02	0.23	0.31	0.28	0
10	0	0	NR	NR	NR	NR	0	0.02	0.11	0	0.06	0
11	0	0	NR	NR	NR	NR	0	0.02	0	0.01	0.02	0
12	0	0	NR	NR	NR	NR	0	0	0	0.12	0.20	0
13	0	0	NR	NR	NR	NR	0	0	0	0.01	0.04	0
14	0	0	NR	NR	NR	NR	0	0.14	0	0	0.03	0
15	0	0	NR	NR	NR	NR	0	0.36	0	0.02	0	0
16	0	0	NR	NR	NR	NR	0	0.01	0	0.04	0	0.27
17	0	0	NR	NR	NR	NR	0	0	0	0.36	0	0.33
18	0	0.23	NR	NR	NR	NR	0	0	0	0.30	0	0
19	0	0.09	NR	NR	NR	NR	0	0	0.01	0.13	0	0
20	0	0	NR	NR	NR	0	0.19	0	0.21	0.02	0	0
21	0	0	NR	NR	NR	0	0	0	0.07	0.21	0	0.15
22	0	0	NR	NR	NR	0	0	0	0.01	0	0	0
23	0	0	NR	NR	NR	0	0	0	0	0.01	0.12	0
24	0.01	0	NR	NR	NR	0	0	0	0	0.16	0	0
25	0	0.27	NR	NR	NR	0	0	0	0	0	0.07	0
26	0	0	NR	NR	NR	0	0	0	0	0.05	0.33	0
27	0	0	NR	NR	NR	0	0.02	0	0.34	0.01	0	0
28	0	0	NR	NR	NR	0	0	0	0.01	0.01	0.02	0
29	0	0	NR	NR	NR	0	0	0	0.50	0	0.01	0
30	0	NR	NR	NR		0	0	0	0.16	0.19	0	0
31	0		NR	NR		0		0		0	0	

* NR = No data recorded during seasonal shutdown.

RG245.5 Monthly Total Precipitation (in.) WY 2024

	Oct	Nov ^a	Dec	Jan	Feb	Mar	Apr ^a	May	Jun	Jul	Aug	Sep
Total (in.)	0.15	0.59	NR ^b	NR	NR	NR	NR	0.57	1.65	3.21	1.60	1.40
Mean Total for Period of Record (in.)	0.00	0.02	NR	NR	NR	NR	NR	0.03	0.06	0.10	0.05	0.05
Max Daily Total (in.)	0.14	0.27	NR	NR	NR	NR	NR	0.36	0.50	0.64	0.33	0.65
Missing Days	0	1	31	31	29	31	26	10	0	0	0	0

^a Partial month because of inactivity, maintenance, or equipment failure.^b NR = No data recorded during seasonal shutdown, for majority of the month.

RG253 Cañon de Valle above SR 501

Location. Lat 35° 51' 6", Long -106° 21' 17", NE ¼, Sec. 25, T. 19 N., R. 5 E., Los Alamos County in Santa Fe National Forest.

Period of Record. October 10, 2007, to September 2024.

Gage. Elevation of gage is 7719 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.59 in. on September 13, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 1.63 in. on May 11, 2024.

Equipment. The station is equipped with a Campbell Scientific TE525 tipping-bucket rain gage. The equipment is powered with a solar-panel battery-charging system.

Precipitation record. The precipitation gaging station gave a complete and satisfactory record, except for December 6, 2023, to March 28, 2024, when the gaging station was shut down for winter.



RG253 Precipitation gaging station

RG253 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0.15	NR*	NR	NR	0	0	0	0.58	0.18	0
2	0.36	0	0.01	NR	NR	NR	0	0	0	0	0	0
3	0	0	0.12	NR	NR	NR	0	0	0	0.01	0	0
4	0	0	0	NR	NR	NR	0	0	0	0	0	0
5	0	0	0	NR	NR	NR	0	0	0	0.02	0	1.23
6	0	0	NR*	NR	NR	NR	0.05	0	0	0	0	0
7	0	0	NR	NR	NR	NR	0	0	0	0	0.75	0
8	0.08	0	NR	NR	NR	NR	0	0	0	0	0	0.1
9	0	0	NR	NR	NR	NR	0	0.02	0.62	0	0.25	0
10	0	0	NR	NR	NR	NR	0	0	0.16	0.01	0.05	0.01
11	0	0	NR	NR	NR	NR	0	1.63	0.02	0	0.01	0
12	0	0	NR	NR	NR	NR	0	0.01	0	0.04	0.15	0
13	0	0	NR	NR	NR	NR	0	0	0	0.31	0.04	0
14	0	0	NR	NR	NR	NR	0	0.14	0.02	0	0	0
15	0	0	NR	NR	NR	NR	0	0.43	0	0	0	0
16	0	0	NR	NR	NR	NR	0	0.11	0	0.06	0	0.36
17	0	0	NR	NR	NR	NR	0	0	0.02	0.75	0	0.06
18	0	0.24	NR	NR	NR	NR	0	0	0	0.11	0	0
19	0	0.09	NR	NR	NR	NR	0	0	0.03	0.01	0	0
20	0	0	NR	NR	NR	NR	0.15	0	0.8	0.8	0.01	0
21	0	0	NR	NR	NR	NR	0	0	0.14	0.34	0	0
22	0	0	NR	NR	NR	NR	0	0	0	0	0	0
23	0	0	NR	NR	NR	NR	0	0	0.03	0.01	0.23	0
24	0.01	0	NR	NR	NR	NR	0	0	0	0	0	0
25	0.2	0.11	NR	NR	NR	NR	0	0	0	0	0.15	0
26	0	0.15	NR	NR	NR	NR	0	0	0.04	0	0.16	0
27	0	0.02	NR	NR	NR	NR	0.05	0	0.08	0	0.01	0
28	0	0	NR	NR	NR	NR	0.03	0	0	0	0.03	0
29	0	0	NR	NR	NR	0	0	0	1	0	0.07	0
30	0.02	0	NR	NR		0	0	0	0.07	0	0	0
31	0		NR	NR		0		0		0	0	

* NR = No data recorded during seasonal shutdown.

RG253 Monthly Total Precipitation (in.) WY 2024

	Oct	Nov	Dec ^a	Jan	Feb	Mar ^a	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.67	0.61	NR ^b	NR	NR	NR	0.28	2.34	3.03	3.05	2.09	1.76
Mean Total for Period of Record (in.)	0.02	0.02	NR	NR	NR	NR	0.01	0.08	0.10	0.10	0.07	0.06
Max Daily Total (in.)	0.36	0.24	NR	NR	NR	NR	0.15	1.63	1.00	0.80	0.75	1.23
Missing Days	0	0	26	31	29	28	0	0	0	0	0	0

^a Partial month because of inactivity, maintenance, or equipment failure.^b NR = No data recorded during seasonal shutdown, for majority of the month.

RG257 Cañon de Valle Tributary at TA-16 Burn Grounds

Location. Lat 35° 50' 47", Long -106° 19' 50", Sec. 29, T. 19 N., R. 6 E., Ramon Vigil Land Grant, Los Alamos County.

Period of Record. April 27, 2007, to September 30, 2024.

Gage. Elevation of gage is 7360 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.63 in. on September 13, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 2.59 in. on September 5, 2024.

Equipment. The station is equipped with a Campbell Scientific TE525 tipping-bucket rain gage. The equipment is powered with a solar-panel battery-charging system.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record, except for December 6, 2023, to March 26, 2024, when the gaging station was shut down for winter.



RG257 Precipitation gaging station

RG257 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	NR*	NR	NR	0.2	0	0	0.5	0.13	0
2	0.27	0	0	NR	NR	NR	0.17	0	0	0	0	0
3	0	0	0	NR	NR	NR	0	0	0	0	0	0
4	0	0	0	NR	NR	NR	0	0	0	0	0	0
5	0	0	0	NR	NR	NR	0	0	0	0.26	0	2.59
6	0	0	NR	NR	NR	NR	0.04	0	0	0	0	0
7	0	0	NR	NR	NR	NR	0	0	0	0	0.07	0
8	0	0	NR	NR	NR	NR	0	0	0	0	0	0
9	0	0	NR	NR	NR	NR	0	0.01	0.85	0	0.34	0
10	0	0	NR	NR	NR	NR	0	0	0.16	0	0.05	0.02
11	0	0	NR	NR	NR	NR	0	0.77	0	0	0	0
12	0	0	NR	NR	NR	NR	0	0	0	0.27	0.17	0
13	0	0	NR	NR	NR	NR	0	0	0	0.09	0.37	0
14	0	0	NR	NR	NR	NR	0	0.29	0.01	0	0	0
15	0	0	NR	NR	NR	NR	0	0.51	0	0	0	0
16	0	0	NR	NR	NR	NR	0	0.11	0	0	0	0.35
17	0	0	NR	NR	NR	NR		0	0	1.13	0	0.11
18	0	0.18	NR	NR	NR	NR	0	0	0	0.35	0	0
19	0	0.09	NR	NR	NR	NR	0	0	0.02	0.08	0	0
20	0	0	NR	NR	NR	NR	0.05	0	0.48	0.25	0	0
21	0	0.01	NR	NR	NR	NR	0	0	0.04	0.31	0	0
22	0	0	NR	NR	NR	NR	0	0	0.02	0	0	0
23	0	0	NR	NR	NR	NR	0	0	0.01	0.05	0.16	0
24	0.05	0	NR	NR	NR	NR	0	0	0	0	0	0
25	0.07	0	NR	NR	NR	NR	0	0	0	0	0.01	0
26	0	0	NR	NR	NR	NR	0	0	0.03	0	0.42	0
27	0	0	NR	NR	NR	0.01	0.06	0	0.14	0	0.01	0
28	0	0	NR	NR	NR	0	0	0	0	0	0.02	0
29	0	0	NR	NR	NR	0	0	0	0.94	0	0	0
30	0	0	NR	NR		0	0	0	0.08	0	0	0
31	0		NR	NR		0		0.01		0	0	

* NR = No data recorded during seasonal shutdown.

RG257 Monthly Total Precipitation (in.) WY 2024

	Oct	Nov	Dec ^a	Jan	Feb	Mar ^a	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.39	0.28	NR ^b	NR	NR	NR	0.52	1.70	2.78	3.29	1.75	3.07
Mean Total for Period of Record (in.)	0.01	0.01	NR	NR	NR	NR	0.02	0.05	0.09	0.11	0.06	0.10
Max Daily Total (in.)	0.27	0.18	NR	NR	NR	NR	0.20	0.77	0.94	1.13	0.42	2.59
Missing Days	0	0	26	31	29	26	1	0	0	0	0	0

^a Partial month because of inactivity, maintenance, or equipment failure.^b NR = No data recorded during seasonal shutdown, for majority of the month.

RG262.4 PHERMEX

Location. Lat 35° 49' 57", Long -106° 17' 47", Sec. 34, T. 19 N., R. 6 E., Ramon Vigil Land Grant, Los Alamos County.

Period of Record. August 8, 2004, to September 30, 2024.

Gage. Elevation of gage is 7124 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.27 in. on September 13, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 2.04 in. on September 5, 2024.

Equipment. The station is equipped with a Campbell Scientific TE525 tipping-bucket rain gage. The equipment is powered with a solar-panel battery-charging system.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record, except for November 22, 2023, to March 28, 2024, when the gaging station was shut down for winter.



RG262.4 Precipitation gaging station

RG262.4 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	NR*	NR	NR	NR	0.15	0	0	0.69	0.09	0
2	0.18	0	NR	NR	NR	NR	0.2	0	0	0.56	0	0
3	0	0	NR	NR	NR	NR	0	0	0	0	0.02	0
4	0	0	NR	NR	NR	NR	0	0	0	0	0	0
5	0	0	NR	NR	NR	NR	0	0	0	0.23	0	2.04
6	0	0	NR	NR	NR	NR	0.01	0	0	0	0	0
7	0	0	NR	NR	NR	NR	0	0	0	0	0.01	0
8	0	0	NR	NR	NR	NR	0	0	0	0	0.03	0
9	0	0	NR	NR	NR	NR	0	0.01	0.13	0	0.4	0
10	0	0	NR	NR	NR	NR	0	0	0.23	0	0.03	0.02
11	0	0	NR	NR	NR	NR	0	0.48	0	0	0	0
12	0	0	NR	NR	NR	NR	0	0	0	0.16	0.21	0
13	0	0	NR	NR	NR	NR	0	0	0	0	0.06	0
14	0	0	NR	NR	NR	NR	0	0.16	0.01	0	0	0
15	0	0	NR	NR	NR	NR	0	0.22	0	0	0	0
16	0	0	NR	NR	NR	NR	0	0.1	0	0.03	0	0.29
17	0	0	NR	NR	NR	NR	0	0	0	0.62	0	0.29
18	0	0.23	NR	NR	NR	NR	0	0.01	0	0.29	0	0
19	0	0.07	NR	NR	NR	NR	0	0	0	0.07	0	0
20	0	0.01	NR	NR	NR	NR	0.14	0	0.19	0.07	0.03	0
21	0	0	NR	NR	NR	NR	0	0	0.04	0.2	0	0.1
22	0	NR	NR	NR	NR	NR	0	0	0.01	0.03	0	0
23	0	NR	NR	NR	NR	NR	0	0	0	0.04	0.19	0
24	0.01	NR	NR	NR	NR	NR	0	0	0.01	0.1	0	0
25	0.02	NR	NR	NR	NR	NR	0	0	0	0	0.03	0
26	0	NR	NR	NR	NR	NR	0	0	0.01	0	0.2	0
27	0	NR	NR	NR	NR	NR	0.03	0	0.45	0	0	0
28	0	NR	NR	NR	NR	NR	0	0	0	0	0	0
29	0	NR	NR	NR	NR	0	0	0	0.62	0	0	0
30	0	NR	NR	NR		0	0	0	0.14	0.25	0	0
31	0		NR	NR		0		0.11		0	0	

* NR = No data recorded during seasonal shutdown.

RG262.4 Monthly Total Precipitation (in.) WY 2024

	Oct	Nov ^a	Dec	Jan	Feb	Mar ^a	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.21	0.31	NR ^b	NR	NR	NR	0.53	1.09	1.84	3.34	1.30	2.74
Mean Total for Period of Record (in.)	0.01	0.01	NR	NR	NR	NR	0.02	0.04	0.06	0.11	0.04	0.09
Max Daily Total (in.)	0.18	0.23	NR	NR	NR	NR	0.20	0.48	0.62	0.69	0.40	2.04
Missing Days	0	9	31	31	29	28	0	0	0	0	0	0

^a Partial month because of inactivity, maintenance, or equipment failure.^b NR = No data recorded during seasonal shutdown, for majority of the month.

RG265 Water Canyon below SR 4

Location. Lat 35° 48' 18", Long -106° 14' 31" Sec. 7, T. 18 N., R. 7 E., Ramon Vigil Land Grant, Los Alamos County.

Period of Record. May 15, 2007, to September 30, 2024.

Gage. Elevation of gage is 6311 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 3.08 in. on September 12, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 0.67 in. on July 1, 2024.

Equipment. The station is equipped with a Campbell Scientific TE525 tipping-bucket rain gage. The equipment is powered with a solar-panel battery-charging system.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record, except for November 30, 2023, to March 28, 2024, when the gaging station was shut down for winter.



RG265 Precipitation gaging station

RG265 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	NR*	NR	NR	NR	0.19	0	0	0.67	0.4	0
2	0.06	0	NR	NR	NR	NR	0	0	0	0.37	0.1	0
3	0.01	0	NR	NR	NR	NR	0	0	0	0	0	0
4	0.01	0	NR	NR	NR	NR	0	0	0	0	0	0
5	0	0	NR	NR	NR	NR	0	0	0	0.51	0	0.59
6	0	0	NR	NR	NR	NR	0	0	0.02	0	0	0.01
7	0	0	NR	NR	NR	NR	0	0	0	0	0.14	0
8	0	0	NR	NR	NR	NR	0	0.02	0	0	0.08	0
9	0	0	NR	NR	NR	NR	0	0.04	0.12	0.07	0.25	0
10	0	0	NR	NR	NR	NR	0	0	0.28	0	0.02	0
11	0	0	NR	NR	NR	NR	0	0.12	0	0.06	0.01	0.08
12	0	0	NR	NR	NR	NR	0	0	0	0	0.01	0.02
13	0	0	NR	NR	NR	NR	0	0	0	0	0.05	0
14	0	0	NR	NR	NR	NR	0	0	0.01	0	0.01	0
15	0	0.01	NR	NR	NR	NR	0	0	0	0	0	0
16	0.01	0	NR	NR	NR	NR	0	0.09	0	0.01	0	0.38
17	0	0	NR	NR	NR	NR	0	0	0.02	0.38	0	0.45
18	0	0.17	NR	NR	NR	NR	0	0	0	0.04	0	0
19	0	0.04	NR	NR	NR	NR	0	0	0.33	0.25	0	0
20	0	0	NR	NR	NR	NR	0.13	0	0.29	0.01	0	0
21	0	0	NR	NR	NR	NR	0	0.02	0.08	0.14	0	0.07
22	0	0	NR	NR	NR	NR	0	0	0.01	0	0	0
23	0	0	NR	NR	NR	NR	0	0	0	0.01	0.08	0
24	0	0	NR	NR	NR	NR	0	0	0	0.4	0	0.02
25	0	0.27	NR	NR	NR	NR	0	0	0	0	0.08	0
26	0	0	NR	NR	NR	NR	0	0	0.01	0.13	0.62	0
27	0	0	NR	NR	NR	NR	0.08	0	0.25	0	0	0
28	0	0	NR	NR	NR	NR	0	0	0	0	0.09	0
29	0	0	NR	NR	NR	0	0	0	0.55	0	0.03	0
30	0.01	NR	NR	NR		0	0	0	0.27	0	0	0
31	0		NR	NR		0		0		0.02	0	

* NR = No data recorded during seasonal shutdown.

RG265 Monthly Total Precipitation (in.) WY 2024

	Oct	Nov ^a	Dec	Jan	Feb	Mar ^a	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.10	0.49	NR ^b	NR	NR	NR	0.40	0.29	2.24	3.07	1.97	1.62
Mean Total for Period of Record (in.)	0.00	0.02	NR	NR	NR	NR	0.01	0.01	0.07	0.10	0.06	0.05
Max Daily Total (in.)	0.06	0.27	NR	NR	NR	NR	0.19	0.12	0.55	0.67	0.62	0.59
Missing Days	0	1	31	31	29	28	0	0	0	0	0	0

^a Partial month because of inactivity, maintenance, or equipment failure.^b NR = No data recorded during seasonal shutdown, for majority of the month.

RG267.4 TA-36 Minie Site

Location. Lat 35° 49' 38", Long -106° 16' 36", Sec. 35, T. 19 N., R. 6 E., Ramon Vigil Land Grant, Santa Fe National Forest.

Period of Record. July 13, 2007, to September 30, 2024.

Gage. Elevation of gage is 6865 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.13 in. on September 12, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 1.26 in. on September 5, 2024.

Equipment. The station is equipped with a Campbell Scientific TE525 tipping-bucket rain gage. The equipment is powered with a solar-panel battery-charging system.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record, except for November 22, 2023, to March 28, 2024, when the gaging station was shut down for winter.



RG267.4 Precipitation gaging station

RG267.4 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	NR*	NR	NR	NR	0.09	0	0	0.74	0.16	0
12	0.21	0	NR	NR	NR	NR	0.18	0	0	0.62	0.01	0
3	0	0	NR	NR	NR	NR	0	0	0	0	0.04	0
4	0	0	NR	NR	NR	NR	0	0	0	0	0	0
5	0	0	NR	NR	NR	NR	0	0	0	0.24	0	1.26
6	0	0	NR	NR	NR	NR	0	0	0	0	0	0
7	0	0	NR	NR	NR	NR	0	0	0	0	0.01	0
8	0	0	NR	NR	NR	NR	0	0	0	0	0.09	0
9	0	0	NR	NR	NR	NR	0	0.01	0.24	0.05	0.31	0
10	0	0	NR	NR	NR	NR	0	0	0.13	0	0.03	0
11	0	0	NR	NR	NR	NR	0	0.22	0	0.08	0.02	0
12	0	0	NR	NR	NR	NR	0	0	0	0.02	0.22	0
13	0	0	NR	NR	NR	NR	0	0	0	0	0.03	0
14	0	0	NR	NR	NR	NR	0	0.05	0	0	0.01	0
15	0	0	NR	NR	NR	NR	0	0.16	0	0	0	0
16	0	0	NR	NR	NR	NR	0	0.11	0	0.01	0	0.26
17	0	0	NR	NR	NR	NR	0	0	0	0.49	0	0.44
18	0.01	0.21	NR	NR	NR	NR	0	0	0	0.08	0	0
19	0	0.06	NR	NR	NR	NR	0	0	0.02	0.04	0	0
20	0	0.01	NR	NR	NR	NR	0.12	0	0.18	0.01	0.01	0.01
21	0	0	NR	NR	NR	NR	0	0	0.2	0.17	0	0.04
22	0	NR	NR	NR	NR	NR	0	0	0.01	0	0	0
23	0	NR	NR	NR	NR	NR	0	0	0	0.01	0.05	0
24	0.01	NR	NR	NR	NR	NR	0	0	0	0.15	0	0
25	0	NR	NR	NR	NR	NR	0	0	0	0	0.06	0
26	0	NR	NR	NR	NR	NR	0	0	0	0.01	0.39	0
27	0	NR	NR	NR	NR	NR	0.01	0	0.48	0	0	0
28	0	NR	NR	NR	NR	NR	0	0	0	0	0	0
29	0	NR	NR	NR	NR	0	0	0	0.42	0	0	0.01
30	0	NR	NR	NR		0	0	0	0.2	0.07	0	0
31	0		NR	NR		0		0		0	0	

* NR = No data recorded during seasonal shutdown.

RG267.4 Monthly Total Precipitation (in.) WY 2024

	Oct	Nov ^a	Dec	Jan	Feb	Mar ^a	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.23	0.28	NR ^b	NR	NR	NR	0.40	0.55	1.88	2.79	1.44	2.02
Mean Total for Period of Record (in.)	0.01	0.01	NR	NR	NR	NR	0.01	0.02	0.06	0.09	0.05	0.07
Max Daily Total (in.)	0.21	0.21	NR	NR	NR	NR	0.18	0.22	0.48	0.74	0.39	1.26
Missing Days	0	9	31	31	29	28	0	0	0	0	0	0

^a Partial month because of inactivity, maintenance, or equipment failure.^b NR = No data recorded during seasonal shutdown, for majority of the month.

RG340 Chaquehui Tributary at TA-33

Location. Lat 35° 46' 46", Long -106° 15' 1", Sec. 19, T. 18 N., R. 7 E., Ramon Vigil Land Grant, Los Alamos County.

Period of Record. May 16, 2007, to September 30, 2024.

Gage. Elevation of gage is 6423 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.30 in. on July 23, 2018.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 0.76 in. on September 17, 2024.

Equipment. The station is equipped with a Campbell Scientific TE525 tipping-bucket rain gage. Equipment is powered with a solar-panel battery-charging system.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record, except for November 30, 2023, to March 20, 2024, when the gaging station was shut down for winter.



RG340 Precipitation gaging station

RG340 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	NR*	NR	NR	NR	0.16	0	0	0.58	0.22	0
2	0.04	0	NR	NR	NR	NR	0	0	0	0.27	0.07	0
3	0	0	NR	NR	NR	NR	0	0	0	0	0	0
4	0.01	0	NR	NR	NR	NR	0	0	0	0	0	0
5	0	0	NR	NR	NR	NR	0	0	0	0.28	0	0.55
6	0	0	NR	NR	NR	NR	0	0	0	0	0	0
7	0	0	NR	NR	NR	NR	0	0	0.02	0	0.03	0
8	0	0	NR	NR	NR	NR	0	0.02	0	0	0.01	0
9	0	0	NR	NR	NR	NR	0	0.06	0.16	0.01	0.16	0
10	0	0	NR	NR	NR	NR	0	0.04	0.25	0	0.01	0
11	0	0	NR	NR	NR	NR	0	0.03	0	0.02	0.02	0.24
12	0	0	NR	NR	NR	NR	0	0	0	0	0	0
13	0	0	NR	NR	NR	NR	0	0	0	0	0.02	0
14	0	0	NR	NR	NR	NR	0	0	0.01	0	0.02	0
15	0	0	NR	NR	NR	NR	0	0	0	0	0	0
16	0.02	0.01	NR	NR	NR	NR	0	0.11	0	0.1	0	0.47
17	0	0	NR	NR	NR	NR	0	0	0	0.3	0	0.76
18	0	0.18	NR	NR	NR	NR	0	0	0.02	0.02	0	0
19	0	0.04	NR	NR	NR	NR	0	0	0.29	0.12	0	0
20	0	0	NR	NR	NR	NR	0	0	0.3	0.08	0	0
21	0	0	NR	NR	NR	0	0	0	0.19	0.1	0	0.07
22	0	0	NR	NR	NR	0	0	0	0.01	0	0	0
23	0	0	NR	NR	NR	0	0	0	0	0	0.11	0
24	0	0	NR	NR	NR	0.17	0	0	0.03	0.43	0.01	0.03
25	0.02	0.27	NR	NR	NR	0	0	0	0	0	0.06	0
26	0	0	NR	NR	NR	0	0	0	0.02	0.04	0.53	0
27	0	0	NR	NR	NR	0	0.08	0	0.1	0.01	0.02	0
28	0	0	NR	NR	NR	0	0	0	0	0	0.04	0
29	0	0	NR	NR	NR	0	0	0	0.36	0	0	0
30	0.02	NR	NR	NR		0	0	0	0.46	0	0	0
31	0		NR	NR		0		0		0.02	0	

* NR = No data recorded during seasonal shutdown.

RG340 Monthly Total Precipitation (in.) WY 2024

	Oct	Nov ^a	Dec	Jan	Feb	Mar ^a	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.11	0.50	NR ^b	NR	NR	NR	0.24	0.26	2.22	2.38	1.33	2.12
Mean Total for Period of Record (in.)	0.00	0.02	NR	NR	NR	NR	0.01	0.01	0.07	0.08	0.04	0.07
Max Daily Total (in.)	0.04	0.27	NR	NR	NR	NR	0.16	0.11	0.46	0.58	0.53	0.76
Missing Days	0	1	31	31	29	20	0	0	0	0	0	0

^a Partial month because of inactivity, maintenance, or equipment failure.^b NR = No data recorded during seasonal shutdown.

Meteorological Tower Data

The meteorological network is a comprehensive system that measures temperature, wind, humidity, pressure, precipitation, insolation, and other meteorological variables required for DOE facilities. The collected data are critical in emergency planning in the event of chemical or radiological release. The data demonstrate regulatory compliance in the areas of air quality, water quality, and waste management, and support monitoring programs in biology, hydrology, and health physics. Each station is named according to its location.

Precipitation gages from LANL's meteorological towers located throughout LANL collect 15-min precipitation data using heated tipping buckets. During snow precipitation events, the data are measured estimates of the amount of liquid precipitation from the total amount of snow. These data are commonly referred to as the snow water equivalent. Monthly data are compiled from each meteorological tower to show monthly precipitation amounts. LANL meteorologists qualify the meteorological tower precipitation data. The data are evaluated to be good or are replaced with a numerical code for missing data. Estimates are not made for missing data. Further documentation and precipitation information data can be found at <https://weathermachine.lanl.gov/>.

RG-TA-06 Meteorological Tower

Location. Lat 35° 51' 41", Long -106 19' 10.2102", NW ¼, Sec. 21, T. 19 N., R. 6 E., Los Alamos County.

Period of Record. February 1, 1990, to September 30, 2024.

Gage. Elevation of gage is 7423 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.92 in. on September 13, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 1.34 in. on September 5, 2024.

Equipment. The precipitation gage consists of a heated tipping bucket with wind screen.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record for the year.



RG-TA-06 Meteorological tower

RG-TA-06 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0.02	0	0	0	0.3	0	0	0.38	0.18	0
2	0.19	0	0	0	0.18	0	0	0	0	0.09	0	0
3	0	0	0	0	0	0	0	0	0	0	0.02	0
4	0	0	0	0.13	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0.01	0	1.34
6	0	0	0	0	0.01	0	0.05	0	0	0	0	0
7	0	0	0	0.03	0.13	0	0	0	0	0	0.04	0
8	0	0	0	0.01	0.01	0.33	0	0	0	0	0	0
9	0	0	0	0	0	0.03	0	0.01	0.62	0.01	0.35	0
10	0.01	0	0	0.01	0.33	0	0	0.01	0.12	0	0.03	0.03
11	0	0	0	0.07	0.01	0	0	0.9	0	0	0.01	0
12	0	0	0	0	0	0	0	0	0	0.26	0.2	0
13	0	0	0.07	0	0	0.01	0	0	0	0.32	0.44	0
14	0	0	0.64	0.02	0	0.3	0	0.29	0.02	0	0	0
15	0	0	0	0	0	0.38	0	0.31	0	0	0	0
16	0	0	0	0	0	0.17	0	0.11	0	0.05	0	0.3
17	0	0	0	0	0	0.27	0	0	0	0.74	0	0.12
18	0	0.18	0	0	0	0	0	0	0	0.71	0	0
19	0	0.1	0	0	0	0	0	0	0.03	0.04	0	0
20	0	0	0	0	0	0	0.04	0	0.44	0.06	0.03	0
21	0	0	0	0.01	0	0	0	0	0.04	0.33	0	0.02
22	0	0	0.16	0.01	0	0	0	0	0.01	0	0	0
23	0	0	0.32	0	0	0	0	0	0.01	0.08	0.16	0
24	0	0.14	0	0.05	0	0.18	0	0	0	0	0	0
25	0	0.01	0	0.06	0	0	0	0	0	0	0.02	0
26	0	0	0	0.03	0.1	0.02	0	0	0.04	0	0.29	0
27	0	0	0	0	0.01	0	0.05	0	0.24	0.02	0	0
28	0	0	0	0	0	0	0	0	0	0	0.03	0
29	0	0	0	0	0	0	0	0	0.68	0	0	0
30	0	0.36	0	0		0	0	0	0.31	0	0	0
31	0		0	0		0.04		0.02		0	0	

RG-TA-06 Monthly Total Precipitation (in.), WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.20	0.79	1.21	0.43	0.78	1.73	0.44	1.65	2.56	3.10	1.80	1.81
Mean Total for Period of Record (in.)	0.01	0.03	0.04	0.01	0.03	0.06	0.01	0.05	0.09	0.10	0.06	0.06
Max Daily Total (in.)	0.19	0.36	0.64	0.13	0.33	0.38	0.30	0.90	0.68	0.74	0.44	1.34
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0

RG-TA-49 Meteorological Tower

Location. Lat 35° 48' 48", Long -10617' 57.483", T. 18 N., R. 6 E., Ramon Vigil Land Grant.

Period of Record. June 24, 1987, to September 30, 2024.

Gage. Elevation of gage is 7045 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 3.68 in. on February 27, 1988.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 1.30 in. on September 5, 2024.

Equipment. The precipitation gage consists of a heated tipping bucket with wind screen.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record for the year.



RG-TA-49 Precipitation gaging station

RG-TA-49 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.01	0	0	0	0.01	0	0.25	0	0	0.52	0.24	0
2	0.19	0	0	0	0.25	0	0	0	0	0.3	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0.41	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0.31	0	1.30
6	0	0	0	0	0	0	0.01	0	0	0	0	0
7	0	0	0	0.09	0.13	0	0	0.01	0	0	0.4	0
8	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0.21	0	0.01	0.29	0	0.54	0
10	0.02	0	0	0	0.31	0	0	0.02	0.08	0	0	0.03
11	0	0	0	0.07	0	0	0	0.27	0	0	0.05	0.09
12	0	0	0	0	0	0	0	0	0	0.04	0.25	0
13	0	0	0.08	0	0	0.01	0	0	0	0	0.02	0
14	0	0	0.76	0.04	0	0.05	0	0.06	0.02	0	0	0
15	0	0	0	0	0	0.42	0	0.33	0	0	0	0.16
16	0	0	0	0	0	0.16	0	0.02	0	0.05	0	0.12
17	0	0	0	0	0	0.34	0	0	0	0.36	0	0.38
18	0	0.21	0	0	0	0	0	0	0	0.12	0	0
19	0	0.05	0	0	0	0	0	0	0	0.04	0	0
20	0	0	0	0	0	0	0.01	0	0.18	0.39	0.03	0.02
21	0	0	0	0	0	0	0	0	0.11	0.17	0	0.09
22	0	0	0.15	0	0	0	0	0	0	0.07	0	0
23	0	0	0.25	0	0	0	0	0	0	0	0.09	0
24	0.02	0.14	0	0.03	0	0.13	0	0	0.16	0.05	0	0
25	0.06	0.19	0	0.06	0	0	0	0	0	0	0.08	0
26	0	0	0	0.04	0.01	0	0	0	0.01	0.07	0.21	0
27	0	0	0	0	0	0	0.03	0	0.31	0.01	0	0
28	0	0	0	0	0	0	0	0	0	0	0.01	0
29	0	0	0	0	0	0	0	0	0.52	0	0	0
30	0	0.46	0	0		0	0	0	0.35	0.02	0	0
31	0		0	0		0		0		0	0	

RG-TA-49 Monthly Total Precipitation (in.), WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.30	1.05	1.24	0.74	0.71	1.32	0.30	0.72	2.03	2.52	1.92	2.19
Mean Total for Period of Record (in.)	0.01	0.04	0.04	0.02	0.02	0.04	0.01	0.02	0.07	0.08	0.06	0.07
Max Daily Total (in.)	0.19	0.46	0.76	0.41	0.31	0.42	0.25	0.33	0.52	0.52	0.54	1.30
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0

RG-TA-53 Meteorological Tower

Location. Lat 35° 52' 12", Long -106° 15' 15", NW ¼, Sec. 24, T. 19 N., R. 6 E., Los Alamos County.

Period of Record. February 8, 1992, to September 30, 2024.

Gage. Elevation of gage is 6992 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.01 in. on September 12, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 1.03 in. on July 2, 2024.

Equipment. The precipitation gage consists of a heated tipping bucket with wind screen.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record for the year.



RG-TA-53 Precipitation gaging station (foreground) and meteorological tower (background)

RG-TA-53 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0.01	0	0.01	0	0.13	0	0	0.38	0.07	0
2	0.11	0	0	0	0.24	0	0	0	0	1.03	0	0
3	0	0	0	0	0	0	0	0	0	0	0.22	0
4	0	0	0	0.33	0	0	0	0	0	0	0	0
5	0	0	0	0.01	0	0	0	0	0	0	0	0.18
6	0	0	0	0	0.01	0	0	0	0	0	0	0
7	0	0	0	0.01	0.13	0	0	0	0	0	0	0
8	0	0	0	0	0	0.23	0	0	0	0	0.01	0
9	0	0	0	0	0	0.01	0	0.04	0.21	0.16	0.24	0
10	0	0	0	0	0.24	0	0	0.02	0.06	0	0.05	0
11	0	0	0	0.06	0	0	0	0.22	0	0	0.06	0.14
12	0	0	0	0	0	0	0	0	0	0.31	0.14	0
13	0	0	0.08	0	0	0	0	0	0	0.04	0.17	0
14	0	0	0.67	0.02	0	0.12	0	0.15	0.02	0	0	0
15	0	0	0	0	0	0.4	0	0.45	0	0.01	0	0.13
16	0	0	0	0	0	0.14	0	0	0	0	0	0.13
17	0	0	0	0	0	0.32	0	0	0	0.45	0	0.24
18	0	0.22	0	0	0	0	0	0	0	0.21	0	0
19	0	0.12	0	0	0	0	0	0	0.01	0.4	0	0
20	0	0	0	0	0	0	0.06	0	0.27	0.4	0	0.01
21	0	0	0	0	0	0	0	0	0.05	0.23	0	0.16
22	0	0	0.14	0	0	0	0	0	0	0.07	0	0
23	0	0	0.21	0	0	0	0	0	0	0	0.17	0
24	0	0.09	0	0.01	0	0.16	0	0	0.01	0.05	0.01	0
25	0	0.02	0	0.02	0	0.01	0	0	0	0	0.13	0
26	0	0	0	0.02	0.06	0	0	0	0	0.08	0.2	0
27	0	0	0	0	0	0	0.04	0	0.26	0.02	0	0
28	0	0	0	0	0	0	0	0	0	0	0.03	0
29	0	0	0	0	0	0	0	0	0.47	0	0.07	0
30	0	0.34	0	0		0	0	0	0.16	0.09	0	0
31	0		0	0		0.1		0.14		0.01	0	

RG-TA-53 Monthly Total Precipitation (in.), WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.11	0.79	1.11	0.48	0.69	1.49	0.23	1.02	1.52	3.94	1.57	0.99
Mean Total for Period of Record (in.)	0.00	0.03	0.04	0.02	0.02	0.05	0.01	0.03	0.05	0.13	0.05	0.03
Max Daily Total (in.)	0.11	0.34	0.67	0.33	0.24	0.40	0.13	0.45	0.47	1.03	0.24	0.24
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0

RG-TA-54 White Rock Meteorological Tower

Location. Lat 35° 49' 33", Long -106° 13' 24", T. 18 N., R. 7 E., Ramon Vigil Land Grant.

Period of Record. January 29, 1992, to September 30, 2024.

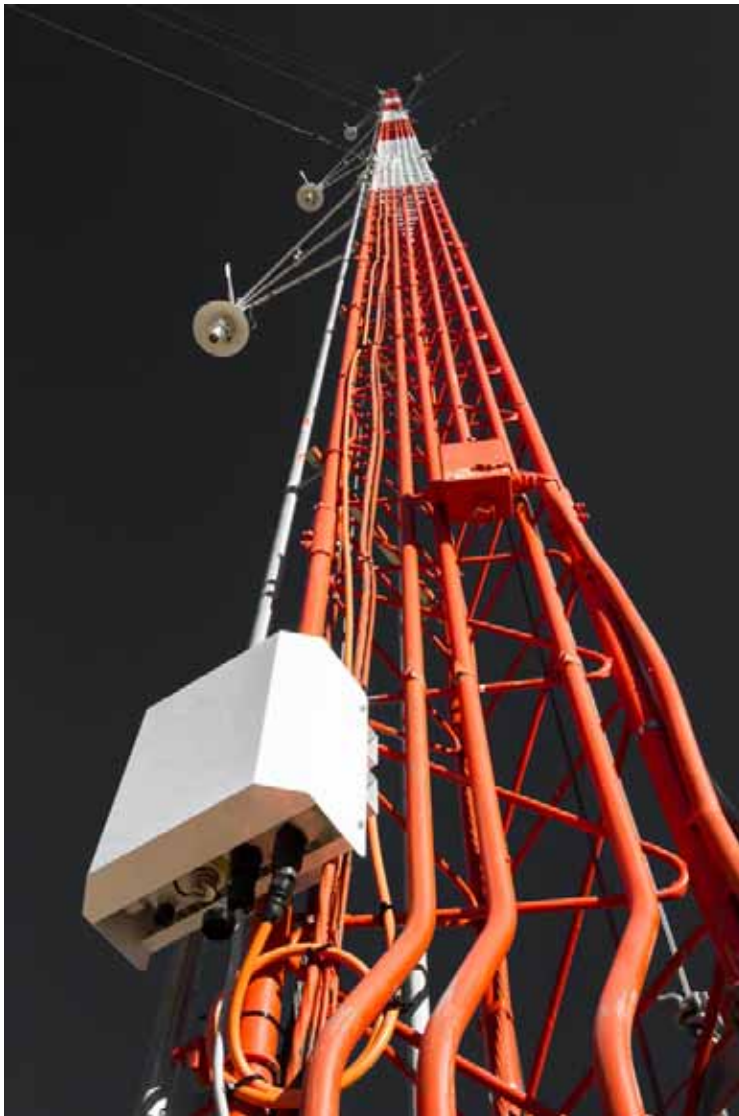
Gage. Elevation of gage is 6553 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 3.28 in. on September 12, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 0.81 in. on June 29, 2024.

Equipment. The precipitation gage consists of a heated tipping bucket with wind screen.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record for the year.



RG-TA-54 Meteorological tower

RG-TA-54 Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.02	0	0	0	0	0	0.09	0	0	0.5	0.33	0
2	0.05	0	0	0	0.3	0	0	0	0	0.35	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0.22	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0.06	0	0.41
6	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0.03	0.11	0	0	0	0	0	0	0
8	0	0	0	0.03	0	0.05	0	0	0	0	0.1	0
9	0	0	0	0	0	0.01	0	0.05	0.27	0.01	0.21	0
10	0	0	0	0	0.25	0	0	0	0.1	0	0.28	0
11	0	0	0	0.02	0	0	0	0.22	0	0.34	0.01	0
12	0	0	0	0	0	0	0	0	0	0	0.01	0
13	0	0	0.09	0	0	0.04	0	0	0	0	0.03	0
14	0	0	0.83	0.02	M	0.09	0	0.01	0.01	0	0	0
15	0	0	0	0	0	0.43	0	0.11	0	0	0	0.25
16	0	0	0	0	0	0.23	0	0.03	0	0	0	0.13
17	0	0	0	0	0	0.39	0	0	0	0.14	0	0.61
18	0	0.18	0	0	0	0	0	0	0	0.05	0	0
19	0	0.14	0	0	0	0	0	0	0.33	0.42	0	0
20	0	0	0	0	0	0	0.14	0	0.19	0.02	0	0.01
21	0	0	0	0	0	0	0	0	0.18	0.19	0	0.06
22	0	0	0.09	0	0	0	0	0	0	0	0	0
23	0	0	0.25	0	0	0	0	0	0	0	0.02	0
24	0	0.07	0	0	0	0.18	0	0	0.01	0.11	0	0
25	0	0.18	0	0.05	0	0.11	0	0	0	0	0.12	0
26	0	0	0	0.03	0	0	0.03	0	0.01	0.06	0.31	0
27	0	0	0	0	0	0	0.01	0	0.29	0.02	0	0
28	0	0	0	0	0	0	0	0	0	0	0.05	0
29	0	0	0	0	0	0	0	0	0.81	0	0	0.02
30	0	0.36	0	0		0	0	0	0.31	0.01	0	0
31	0		0	0		0.06		0.01		0	0	

RG-TA-54 Monthly Total Precipitation (in.), WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.07	0.93	1.26	0.40	0.66	1.59	0.27	0.43	2.51	2.28	1.47	1.49
Mean Total for Period of Record (in.)	0.00	0.03	0.04	0.01	0.02	0.05	0.01	0.01	0.08	0.07	0.05	0.05
Max Daily Total (in.)	0.05	0.36	0.83	0.22	0.30	0.43	0.14	0.22	0.81	0.50	0.33	0.61
Missing Days	0	0	0	0	1	0	0	0	0	0	0	0

RG-North Community Meteorological Tower

Location. Lat 35° 54' 3", Long -106° 19' 18", NE ¼, Sec. 5, T. 19 N., R. 6 E., Los Alamos County.

Period of Record. January 1, 1986, to September 30, 2024.

Gage. Elevation of gage is 7414 ft using LANL LIDAR DEM with NAD 83.

Maximum Daily Total Precipitation for Period of Record. 2.58 in. on September 12, 2013.

Maximum Daily Total Precipitation for Monsoon Season WY 2024. 1.10 in. on August 9, 2024.

Equipment. The precipitation gage consists of a heated tipping bucket with wind screen.

Precipitation Record. The precipitation gaging station gave a complete and satisfactory record for the year.

No image available for the North Community precipitation gaging station.

RG-North Community Daily Total Precipitation (in.) WY 2024

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0.01	0	0.01	0	0.29	0	0	0.28	0.25	0
2	0.19	0	0	0	0.14	0	0.14	0	0	0.05	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0.21	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0.04	0	0	0	0	0.62
6	0	0	0	0	0.01	0	0	0	0	0	0	0
7	0.01	0	0	0	0.25	0	0	0	0	0	0.14	0
8	0.01	0	0	0	0	0.12	0	0	0	0	0.01	0
9	0	0	0	0	0	0.24	0	0.03	0.42	0.08	1.10	0
10	0	0	0	0	0.12	0	0	0.03	0.02	0	0.02	0
11	0	0	0	0	0.08	0	0	0.9	0	0	0	0.4
12	0	0	0	0	0.04	0	0	0	0	0	0.05	0
13	0	0	0.09	0.02	0	0	0	0	0	0.02	0.04	0
14	0	0	0.52	0.02	0	0.16	0	0.03	0.01	0	0	0
15	0	0	0	0	0	0.56	0	0.18	0	0	0	0.07
16	0	0	0	0	0	0.41	0	0.11	0	0.32	0	0.21
17	0	0	0	0	0	0.5	0	0	0	0.75	0	0.05
18	0	0.1	0	0	0	0.01	0	0	0	0.15	0	0
19	0	0.16	0	0	0	0.04	0	0	0.08	0.02	0	0
20	0	0	0	0	0	0	0.01	0	0.79	0	0	0
21	0	0	0	0	0	0	0	0	0.01	0.34	0	0
22	0	0	0.21	0.04	0	0	0	0	0	0.07	0	0
23	0	0	0.35	0.02	0	0	0	0	0.14	0	0.15	0
24	0.05	0	0.01	0.09	0	0.1	0	0	0.01	0	0	0
25	0	0.01	0	0.04	0	0	0	0	0	0	0.05	0
26	0	0	0	0.02	0.14	0	0	0	0.02	0.12	0.02	0
27	0	0.01	0	0	0.01	0	0.01	0	0.15	0.11	0	0
28	0	0.01	0	0	0	0	0	0	0	0	0.02	0
29	0	0	0	0	0	0	0	0	0.57	0	0.06	0
30	0	0.23	0	0		0	0	0	0.11	0	0	0
31	0		0	0		0.05		0		0	0	

RG-North Community Monthly Total Precipitation (in.) WY 2024

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total (in.)	0.26	0.52	1.19	0.46	0.80	2.19	0.49	1.28	2.33	2.31	1.91	1.35
Mean Total for Period of Record (in.)	0.01	0.02	0.04	0.01	0.03	0.07	0.02	0.04	0.08	0.07	0.06	0.05
Max Daily Total (in.)	0.19	0.23	0.52	0.21	0.25	0.56	0.29	0.90	0.79	0.75	1.10	0.62
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0

REFERENCES AND BIBLIOGRAPHY

Kilpatrick, F.A., and V.R Schneider, 1983. "General Procedure for Gaging Streams," book 3, chapter A14, in *Techniques of Water-Resources Investigations of the United States Geological Survey*. United States Government Printing Office, Washington, D.C.

National Geodetic Vertical Datum of 1929.

North American Datum of 1983.

Previous LANL reports in this series: "Surface Water Data at Los Alamos National Laboratory" for WY 1995 to 2023 are available in pdf format. The reports can be accessed at the electronic public reading room at <http://epr.lanl.gov>.

ABBREVIATIONS, ACRONYMS, AND GLOSSARY

Acre-foot (acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet, 325,851 gallons, or 1233.49 cubic meters.

BDD is the Buckmann Direct Diversion.

CMP is corrugated metal pipe.

Consent Order is the 2016 Compliance Order on Consent, as revised in 2024.

Construction General Permit is a permit from the U.S. EPA that allows for stormwater discharges from construction activities.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross-section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal used to regulate the flow or stage of the stream.

Cubic feet per second (ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second; it is equivalent to 7.48 gallons per second, 448.8 gallons per minute, or 0.02832 cubic meters per second.

DEM is digital elevation model; representation of the bare ground (bare earth) topographic surface of the Earth excluding trees, buildings, and any other surface objects.

DOE is the U.S. Department of Energy.

Discharge is the volume of water (or more broadly, the volume of fluid, including suspended sediment) that passes a given point within a given period.

Drainage area of a stream at a specified location is that area measured in a horizontal plane and enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage areas provided herein include all closed basins, or noncontributing areas, within the area, unless otherwise noted.

E is a table data qualifier signifying, “Equipment failure occurred, or equipment was rendered inoperable by high-flow event.”

EPA (U.S. Environmental Protection Agency) is the federal agency that enforces regulations to protect the environment and human health.

Extended precipitation network is the LANL precipitation monitoring gage network from which precipitation data are obtained.

ft is an abbreviation for foot or feet.

Gage height is the water-surface elevation referred to in some arbitrary gage data. GH is often used interchangeably with the more general term “stage,” although GH is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir in which systematic observations of hydrologic data are obtained.

GPS is global positioning system.

HEC-RAS is the Hydrologic Engineering Center’s River Analysis System of the U.S. Army Corps of Engineer.

I is a table data qualifier signifying, “Discharge could not be determined because ice or snow was present in the channel.”

Individual Permit is a National Pollutant Discharge Elimination System individual permit issued by the EPA that authorizes the discharge of stormwater associated with industrial activities at Los Alamos National Laboratory.

in. indicates inch or inches.

Instantaneous discharge is the discharge at a particular instance of time.

ISCO is a reference to Teledyne ISCO, Inc., which is an automated sampler manufacturer.

L indicates liter or liters.

LANL is Los Alamos National Laboratory.

Lat indicates latitude.

LiDAR DEM is light detection and ranging digital elevation model.

Long indicates longitude.

M is a table data qualifier signifying, “Data were missing for an unknown or inexplicable reason.”

MDA is material disposal area.

Mean discharge (mean) is the arithmetic mean of individual daily mean discharges during a specific period.

Meteorological observation network is a network of towers that provides year-round meteorological data.

min indicates minute or minutes.

Multi-Sector General Permit is a National Pollutant Discharge Elimination System permit issued by the EPA that authorizes the discharge of stormwater associated with industrial activities.

N3B is Newport News Nuclear BWXT-Los Alamos, LLC.

NAD 83 is North American Datum of 1983.

National Geodetic Vertical Datum of 1929 (NGVD 29) is the national standard reference datum for elevations.

ND is “no data recorded.”

NEMA is the National Electrical Manufacturers Association.

NF is no flow.

NM means New Mexico State Road.

North American Datum of 1983 (NAD 83) is the official horizontal datum for use in the North and Central American geodetic networks. Based on the Geodetic Reference System 1980 ellipsoid, it was developed using satellite and remote sensing imagery and is the default datum used at LANL and most GPS units today.

NPDES is National Pollutant Discharge Elimination System.

NR is a table qualifier signifying “No data recorded” because the gaging station was inactive during the winter seasonal shutdown.

Point of zero flow (PZF) is the gage height at which no flow occurs.

PZF is point of zero flow.

Reference point is a permanent gage height reference used to calibrate stage measurements.

RLS is radar level sensor.

Site Discharge Pollution Prevention Plan is a LANL report updated annually that provides information on each of the seven major watersheds of the Pajarito Plateau and related stormwater monitoring activities within the watersheds.

SOP means “standard operating procedure.”

SR means “State Road” and is the former designation for NM 4, NM 501, and NM 502. It appears in gaging station names.

Stage see **gage height**.

Stage-discharge relationship is the relation between the water-surface elevation, termed “gage height,” and the volume of water flowing in a channel per unit of time.

Stream flow is the discharge that occurs in a natural channel.

TA is technical area.

USGS is U.S. Geological Survey.

Wastewater treatment facility (WWTF) is the Los Alamos County wastewater treatment facility located in TA-74 in Pueblo Canyon. It was previously called the Waste Water Treatment Plant.

Water data report is the USGS report that provides the methodology used for data collection.

Water year (WY) in reports dealing with surface water supply is the 12-mo period, October 1 through September 30. The water year is designated by the calendar year in which it ends and that includes 9 of the 12 mo. Thus, the year ending September 30, 1980, is called the “1980 water year” or WY 1980.

yr indicates year or years.