LA-UR-13-21951
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Title:	Surface Water Data at Los Alamos National Laboratory,Water Year 2012
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Intended for:	NMED Environmental Programs
Issued:	2013-07-01 (Rev.1)

LA-UR-13-21951
April 2013
EP2013-0028

Surface Water Data at Los Alamos National Laboratory, Water Year 2012

Prepared by the Environmental Programs Directorate

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INTRODUCTION

The annual water data report from Los Alamos National Laboratory (LANL) contains flow data from 50 stream gage stations and precipitation data from the LANL extended network, meteorological observation stations, and precipitation emergency notification stations that cover most of LANL's property (see figures 1 and 2). Data are collected from LANL's upper boundary, approximated by NM 501, to the lower boundary, approximated by NM 4. Gage station data are used to support the monitoring of Los Alamos/Pueblo Canyons under the March 2005 Compliance Order on Consent, the Buckman Direct Diversion Emergency Notification System, monitoring of Sandia Canyon for wetlands stabilization, LANL's Environmental Surveillance Program, activities directed by the Water Canyon/Cañon de Valle investigation report, and post–Las Conchas fire monitoring. Precipitation gage station data support all the programs that the stream discharge gage stations support as well as the Multi-Sector General Permit (MSGP).

Los Alamos, New Mexico, has a semiarid climate with an average rainfall of about 19 in. per year. Over 30% of the area is dominated by ponderosa pine stands at higher elevations that transition to piñon-juniper woodlands as elevation decreases. The Pajarito Plateau is separated into finger mesas by west-to-east-oriented canyons. The majority of the stream discharge gage stations are located within ephemeral streams. These streams flow briefly in response to precipitation that occurs in the surrounding area or snowmelt runoff from higher elevations. The remainder of the year the streams are dry with no flow. 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 is insufficient to maintain surface flows across the facility mostly because of losses in stream channel transmission. The remainder of the stream gage stations is located in either intermittent or perennial streams.

Qualifiers

Raw data are qualified using a standard set of numbers to better determine the quality of the data. Qualifiers are noted within the daily mean discharge table with a symbol or letter. Unless otherwise noted, the data are qualified as good continuous records. Some of the data were reliably estimated. Data are reliably estimated during short periods of time using precipitation data to verify no precipitation and/or, when applicable, upstream or downstream stream-gage data.

Qualifier Description	Qualifier	Comments
Missing data	M	Data were missing for an unknown or inexplicable reason.
Ice	I	Ice was present.
Testing	T	Testing was performed.
Equipment malfunction	E	Field crews were present on-site and tested the equipment.
Reliable estimate	RE	Data were reliably estimated.
Silting and scouring	SS	A datum shift was applied because of silting or scouring.
Datum shift	DS	A datum shift was applied to the data.
Above rating curve	RC	The data were above the rating curve.
Inactive	IA	The gage was inactive because of an event that damaged the station beyond immediate repair.
Snow	S	Snow as precipitation.
Datum shifted based on high-water mark	H	A datum shift was applied based on a high-water mark.

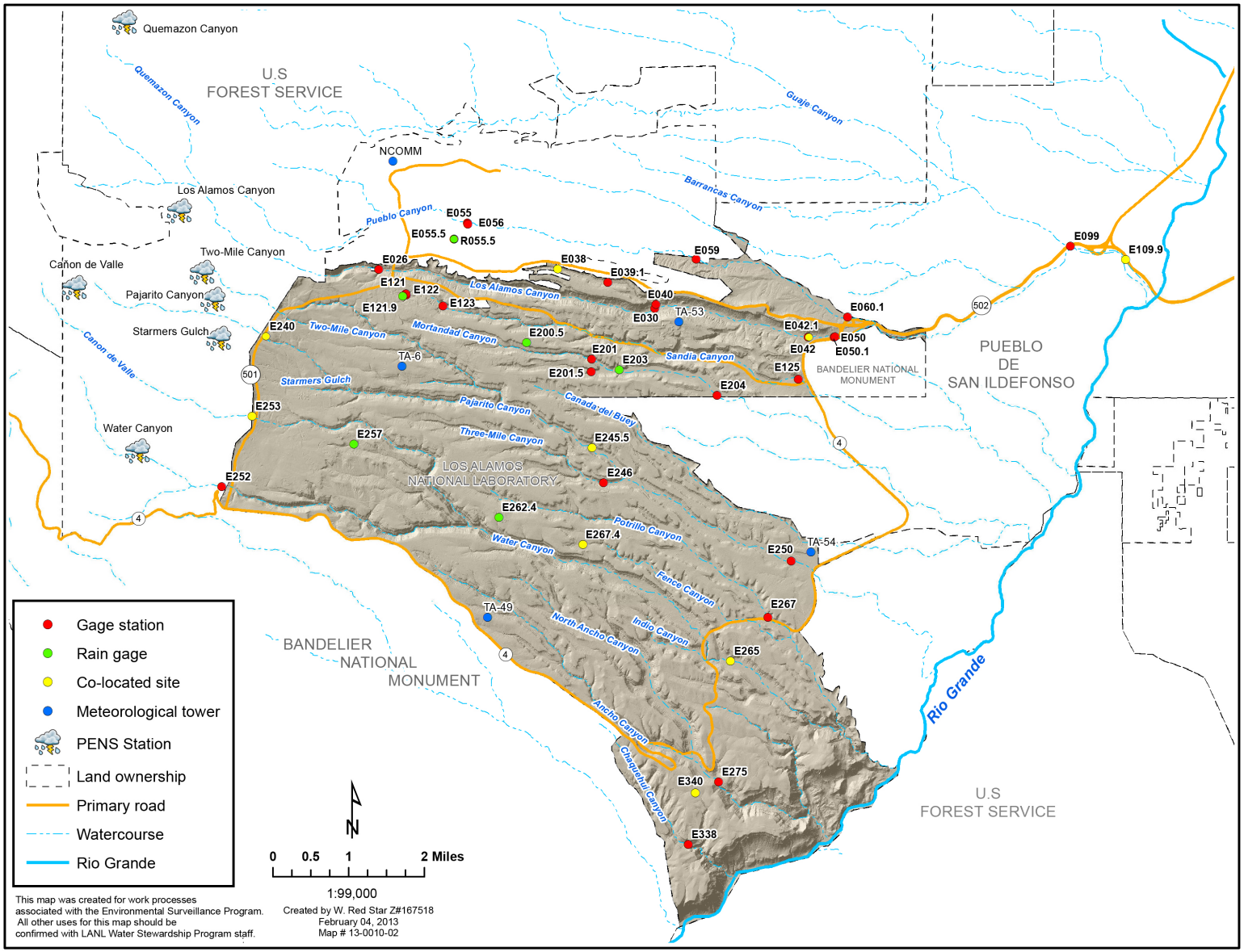

Figure 1 Location of gage stations, rain gages, co-located discharge and rain gages, and meteorological towers

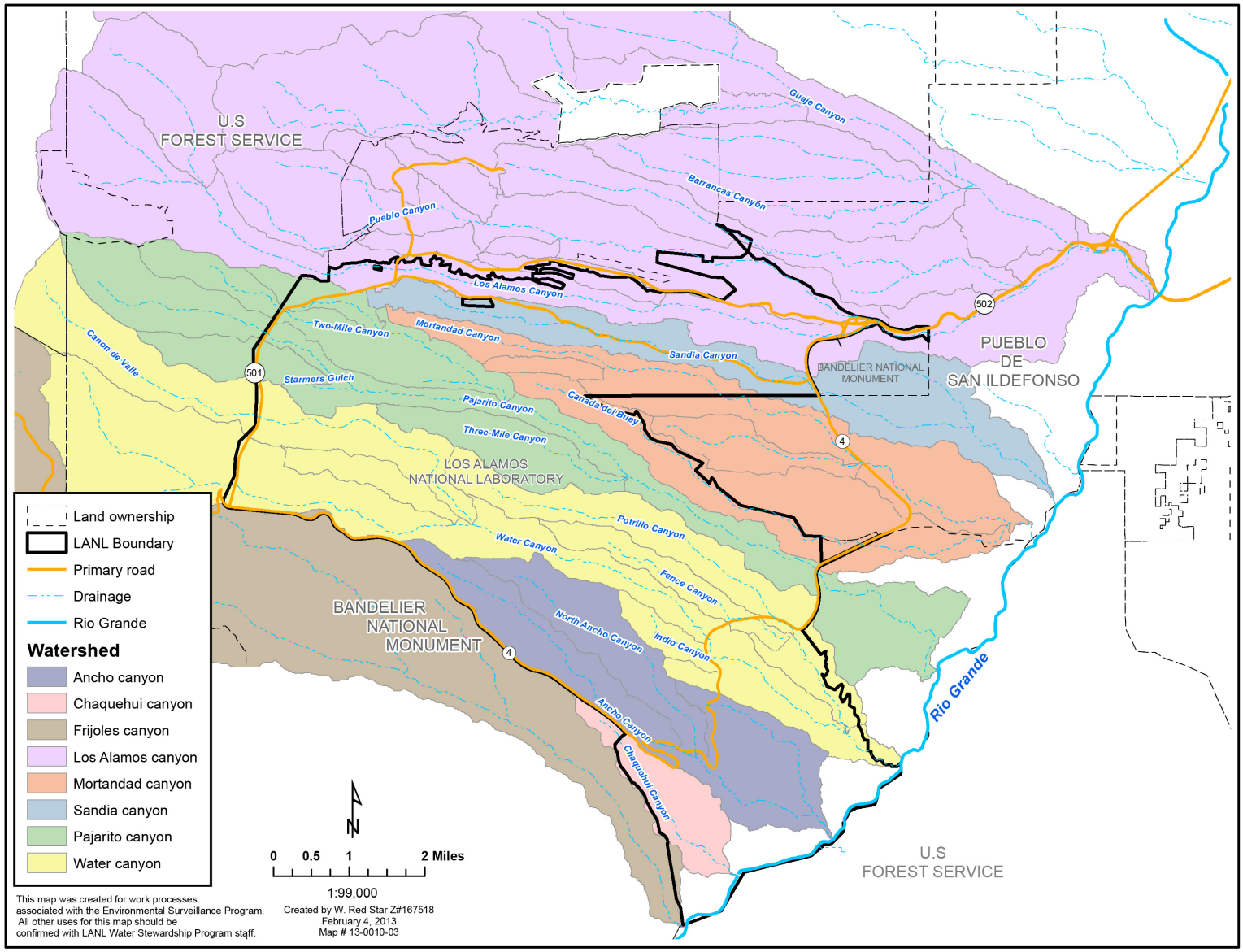

Figure 2 Location of watersheds, canyons, and streams on LANL property

ACKNOWLEDGEMENTS

The author would like to thank all those who helped contribute data, time, or expertise to the compilation of this report. Winters Red Star and David Frank provided map data and GIS assistance. Elizabeth Birkos (Portage, Inc.); Darren Hughes (TerranearPMC, Inc.); Jacqueline Janosko (Portage, Inc.); Ed Pulliam (TerranearPMC, Inc.); and Sophia Winward (Portage, Inc.) provided field support, gage data retrieval, and ongoing maintenance of the entire gage network. Amanda White provided stream discharge gage and precipitation validation and assistance with report compilation. Darren Hughes (TerranearPMC, Inc.) provided stream discharge gage validation and validation technical expertise. Jacqueline Carr and Daria Cuthbertson provided data collection, gage data validation, and data and report compilation. Reyes Duran and Marina Meneakis provided assistance with data collection. Anita Lavadie provided assistance with report compilation. Armand Groffman and Amanda White provided technical expertise and guidance to field teams and data stewards. Paul Mark (Adelante Consultants) and Shannon Smith (Adelante Consultants) provided database assistance. Jacob Edkin and Martel Shorter assisted with the radio repeater that enabled data transmission. Julie Marquez, Saundra Martinez, and Meena Sachdeva provided editing and composition assistance and prepared the final report.

The author would also like to thank the Pueblo of San Ildefonso for access to the surface water monitoring site throughout the year, the U.S. Forest Service for permission to install and maintain precipitation equipment and the Pajarito Ski Hill for providing lift access and access to the LANL tower.

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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 Water Years (WY) 1995 to 2001 and 2010 are available in pdf format and WY 2002 to 2009 are available in hard copy format through the LANL Research Library. The reports can be accessed at the following: http://lasearch.lanl.gov/oppie/service?url_ver=Z39.88-2004&rft_id=info:lanl-repo/oppie&svc_val_fmt=http://oppie.lanl.gov/openurl/oppie.html&svc_id=info:lanl-repo/svc/oppie/solr-bib-search&svc.oparam2=0&svc.oparam3=25&svc.oparam4=score%20desc&svc.oparam1=surface%20water%20data%20at%20los%20alamos%20national%20laboratory&svc.oparam5=&svc.oparam6=.

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.

CMP is corrugated metal pipe.

Construction General Permit (CGP) is a permit from the U.S. Environmental Protection Agency that allows for construction storm water discharges.

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 or to prevent the intrusion of saltwater.

Cubic feet per second (ft^3/s, cfs) 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.

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 of time.

Drainage area (DA) 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 DA given herein include all closed basins, or noncontributing areas, within the area, unless otherwise noted.

Environmental Protection Agency (EPA) is the federal agency that enforces regulations to protect the environment and human health.

Extended Precipitation Gage Network is the LANL precipitation monitoring gage network from which precipitation data are obtained.

Gage height (GH) 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.

Gage station is a particular site on a stream, canal, lake, or reservoir in which systematic observations of hydrologic data are obtained.

HWM is an abbreviation for high-water mark.

Instantaneous discharge (Inst) is the discharge at a particular instant of time.

ISCO is a reference to Teledyne ISCO, Inc., automated sampler manufacture.

LANL is the acronym for Los Alamos National Laboratory.

LiDAR DEM is an abbreviation for Light Detection and Ranging Digital Elevation Model.

Individual Permit (IP) is a National Pollutant Discharge Elimination System Individual Permit issued by the EPA that authorizes the discharge of storm water associated with industrial activities at Los Alamos National Laboratory.

Mean discharge (Mean) is the arithmetic mean of individual daily mean discharges during a specific period.

Meteorological Observing Stations (MET) is a network of towers that provide year round meteorological data.

Multi-Sector General Permit (MSGP) is a National Pollutant Discharge Elimination System Permit issued by the EPA that authorizes the discharge of storm water associated with industrial activities.

NCOM is the northern community meteorological tower located in Los Alamos.

NEMA is the abbreviation for National Electrical Manufactures Association.

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 the abbreviation for National Pollution Discharge Elimination System.

Precipitation Emergency Notification Station (PENS) is a precipitation notification system for LANL to provide emergency notification during monsoon rain events.

PJMT is Pajarito Mountain meteorological tower located in Los Alamos County.

Point of Zero Flow (PZF) is the gage height at which no flow occurs.

Reference Point (RP) is a permanent gage height reference used to calibrate stage measurements.

Site Discharge Pollution Prevention Plan (SDPPP) is a LANL report updated annually that provides information on each of the seven major watersheds of the Pajarito Plateau and related storm water monitoring activities within the watersheds.

SR means “State Road” and is the former designation for NM 4, NM 501, and NM 502. It appears in gage 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.

SWSC is an abbreviation for sanitary wastewater systems consolidation.

TA is the abbreviation for technical area.

USGS is the abbreviation for U.S. Geological Survey.

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 which includes 9 of the 12 months. Thus, the year ending September 30, 1980, is called the “1980 water year.”

Water data report (WDR) is the USGS report that provides the methodology used for data collection.

Waste Water Treatment Plant (WWTP) is the acronym used for the Los Alamos County Wastewater Treatment Plant located in TA-74 in Pueblo Canyon.

STREAM DISCHARGE GAGE STATIONS

Station Identification Numbers

The U.S. Geological Survey (USGS), Water Resources Division, assigns a unique identification number to each stream gage station it establishes. All sites numbered since 1950 are part of the downstream order system. In this report, the station numbers increase from upstream to downstream.

This report adheres to the USGS convention of 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.

Data Collection and Computation

A complete record at a gage station includes stage and discharge measurements from a stream or channel, directly observed factors that affect the stage/discharge relationship, and weather records. Integrated 5-min records of stage were provided from a data logger or direct readings were collected and verified on-site. Discharge is measured using meters and methods adopted by the USGS. The methods can be found in the U.S. Geological Survey Technique of Water Resources Investigations, Book 3 (Carter and Davidian 1968), Chapter A6, and the U.S. Geological Survey Water Supply Paper 2175 (Rantz 1982).

Rating curves were developed using the stage-discharge relationship curve determined from measured stage and the corresponding discharge. When it is necessary to define the discharge extremes outside of 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 by 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 gage 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 sediment accumulation on the control. At some canyon bottom, northern, and perennial stream gage 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 gage 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 on the basis of 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 measurements of stage, accuracy of discharge measurements, and interpretations of records.

The number of significant figures used to report daily peak discharge is based solely on the magnitude of the discharge value. The same method is applied to the monthly summary table in acre-ft per year:

If the value (ft^3/s) 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

Data Presentation

The records published in this report consist of three parts for each gage station:

- Station analysis summary,
- Station manuscript description with photo, and
- Data table for the water year (October 1, 2011, to September 30, 2012).

The station analysis supplements each daily values table and 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: The monitoring equipment description.

Fieldwork: A table of the field work completed for each stream gage. Inspections site visits and maintenance site visits are tabulated for the stream gage and for the ISCO samplers present at the site.

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.

The station manuscript provides data under various headings: station location, drainage area, revised records, period of record, gage, average volume, and other points pertinent to station operation and regulation. Each continuous record of discharge includes the following categories of descriptions.

Location: The most accurate and available maps, coupled with LiDAR DEM using 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 records from it can be reasonably 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 (NGVD) of 1929 (see 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 discharged volume beginning in WY2010. The average volume has been modified to begin in WY2010 to account for differences in the validation and verification methodology. Once published, it continues as a moving average.

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 high-water mark surveys. 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 prior to WY2010 should be considered estimated due to differences in the current validation and verification methodology.

Maximum Discharge for Current Water Year: Maximums given are similar to those for the period of record. The time for occurrence of peaks is expressed in 24-h local standard 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.

The daily table of discharge records for stream discharge gage stations gives the daily peak discharge for each day of the water year. In the monthly summary for the table the row titled “Total Volume (acre-ft)” contains the sum of the daily figures of volume for each month in acre-feet; the row titled “Max Daily Peak (acre-ft)” contains the maximum daily volume for the month in acre-feet; the row titled “Min Daily Peak (acre-ft)” contains the minimum daily volume for the month in acre-feet; and the row titled “Missing Days” contains the number of days missing for each month.

Summary of Discharges from Stream Monitoring Stations for WY2012

Canyon Sites	Estimated Days with Flow	Total Volume (acre-ft)	Instantaneous Maximum Discharge (ft^3/s)
E026 Los Alamos Canyon below Ice Rink	110	68	128
E030 Los Alamos Canyon above DP Canyon	60	40	135
E038 DP Canyon above TA-21	31	8.3	35
E039.1 DP Canyon below Grade Control Structure	200	45	5.2
E040 DP Canyon above Los Alamos Canyon	4	0.32	1
E042.1 Los Alamos above Low Head Weir	44	65	290
E050.1 Los Alamos Canyon below Low Head Weir	46	43	168
E055 Pueblo Canyon above Acid Canyon	26	23	8.6
E055.5 South Fork of Acid Canyon	0	0	0
E056 Acid Canyon above Pueblo Canyon	2	0.06	0.51
E059 Pueblo Canyon above WWTP	0	0	0
E060.1 Pueblo Canyon below Grade Control Structure	9	3.5	1.1
E099 Guaje at SR-502	28	317	277
E109.9 Los Alamos above Rio Grande	170	369	678
E121 Sandia Canyon Right Fork at Power Plant	357	353	28
E122 Sandia Canyon near Roads and Grounds at TA-3	345	25	19
E123 Sandia Canyon below Wetlands	334	922	23
E125 Sandia Canyon above SR 4	0	0	0
E201 Mortandad Canyon above Ten Site Canyon	48	0.04	0.22
E201.5 Ten Site Canyon above Mortandad Canyon	0	0	0
E204 Mortandad Canyon at LANL Boundary	0	0	0
E240 Pajarito Canyon below SR 501	14	11	93
E245.5 Pajarito Canyon above Three Mile Canyon	9	26	407
E246 Three Mile Canyon above Pajarito Canyon	0	0	0
E250 Pajarito Canyon above SR 4	1	0.38	1.2
E252 Water Canyon above SR 501	17	38	133
E253 Cañon del Valle above SR 501	8	82	135
E265 Water Canyon below SR 4	2	4.2	250
E267 Potrillo Canyon above SR 4	0	0	0
E267.4 TA-36 Minie Site	0	0	0
E275 Ancho Canyon below SR 4	0	0	0
E338 Chaquehui at TA-33	0	0	0
E340 Chaquehui Tributary at TA-33	0	0	0

Los Alamos/Pueblo Watershed

The Los Alamos Canyon/Pueblo watershed is located at the northern end of Los Alamos County and LANL. The watershed heads on U.S. Forest Service (USFS) land in the Sierra de los Valles to the west and northwest of LANL. The highest point in the watershed is at the summit of Pajarito Mountain at an elevation of 3182 m (10,441 ft). The watershed extends eastward from the headwaters across the Pajarito Plateau for about 30.4 km (18.9 mi) to its confluence with the Rio Grande at an elevation of 1678 m (5504 ft). The Los Alamos Canyon/Pueblo watershed encompasses approximately 57 mi^2. The watershed includes Los Alamos, Pueblo, and DP Canyons. Bayo, Guaje, Rendija, and Barrancas Canyons are tributary canyons in the watershed. The watershed contains numerous springs, perennial and ephemeral stream segments, and alluvial groundwater. Portions of Santa Fe National Forest, U.S. Department of Energy– (DOE-) managed property, Los Alamos County (including the Los Alamos townsite), Santa Fe County, and San Ildefonso Pueblo tribal lands are located within the Los Alamos Canyon/Pueblo watershed.

Pueblo Canyon is located on the north side of the Los Alamos town site 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 southern-most canyon in the watershed. The Los Alamos/Pueblo watershed contains, or may influence, five wetland areas totaling approximately 12.16 acres (SDPPP, Vol. 1).

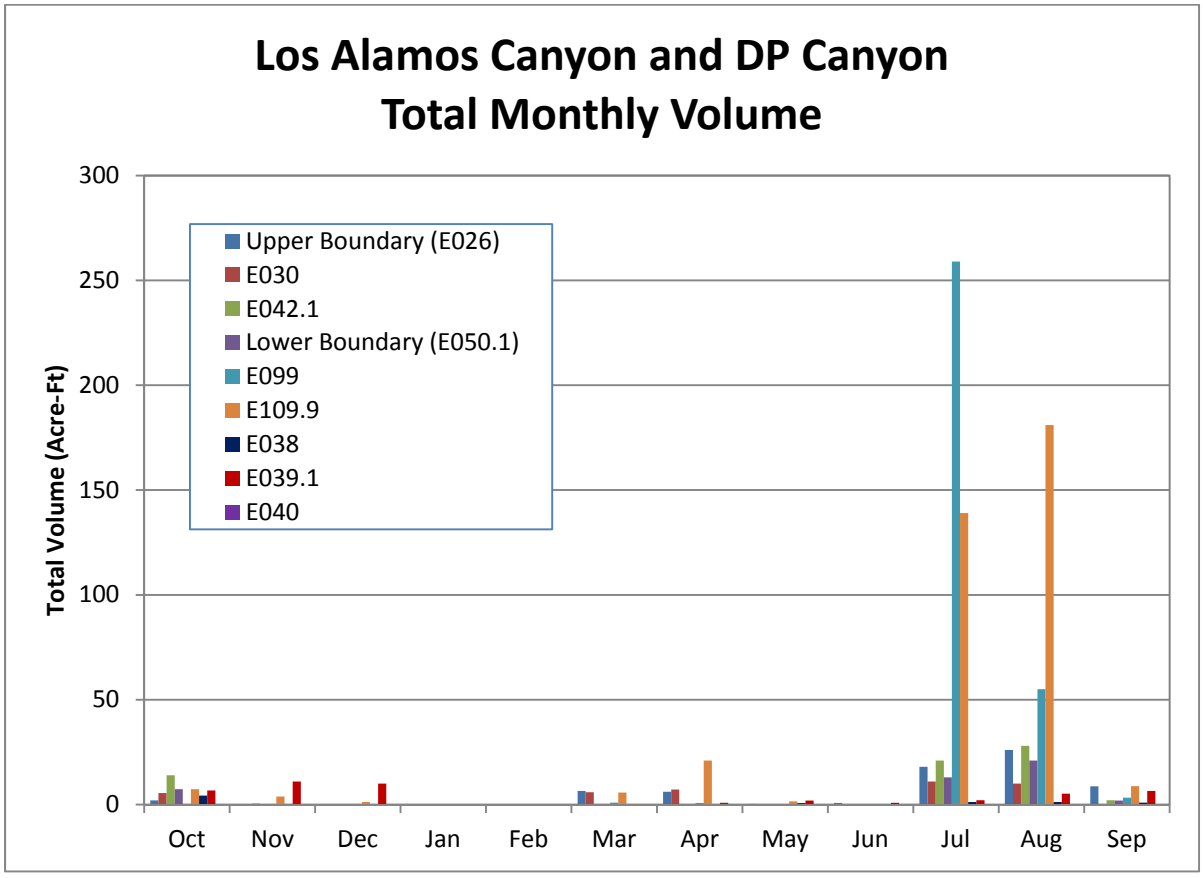


Figure 3 The total monthly volume (acre-ft) for WY2012 for Los Alamos Canyon and DP Canyon

The figure shows the discharge in total volume of discharge per month from the upper boundary station in Los Alamos Canyon to the lower boundary stations. 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. For example, during July 2012 and August 2012, most of the discharge occurred at the downstream sites such as E099 and E109.9. The summer monsoon storms were highly localized to the lower stream gage discharge stations.

The figure shows the total monthly volume of discharge from the stream gage discharge stations within Acid and Pueblo Canyons, located within the Los Alamos and Pueblo watershed. The station, E055 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. The remainder of the sites within Acid Canyon did not have any discharge. Gage E060.1 is located downstream of the Los Alamos County WWTP and the Pueblo grade-control structure. The treatment facility releases water daily; however, during the winter months, when little pumping occurs, the aquifer fills, resulting in discharge at the stream gage.

To show the discharge from all of the stream gage discharge stations with the Los Alamos and Pueblo watershed, the graphics were divided into two figures for display purposes.

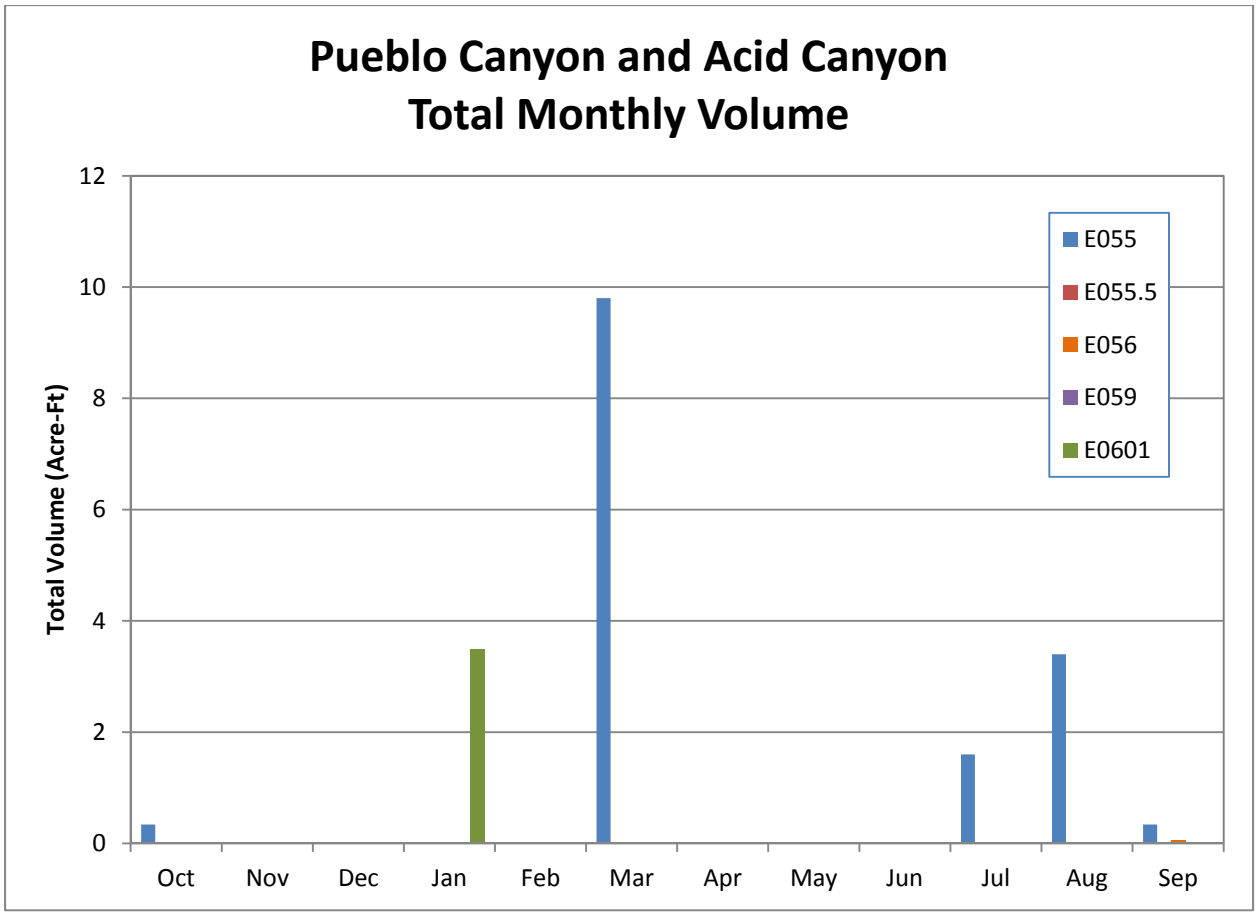


Figure 4 The total monthly volume (acre-ft) for WY2012 for Acid Canyon and Pueblo Canyon

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 mi^2.

Period of Record. February 26, 2001, to September 30, 2012.

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

Gage. Data logger with radio telemetry. Elevation of gage is 7177 ft using LANL LiDAR DEM with NAD83.

Average Volume. 3 yr, 154 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 188 ft^3/s, August 9, 2001, gage height 1.5 ft.

Maximum Discharge for Current Water Year. Maximum discharge, 120 ft^3/s, August 3, 2012, gage height 2.14 ft.

Equipment. The station 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 top of a 24-in.CMP well. The station is equipped with two ISCO samplers (one 12-count 1-L glass and polyethylene bottle sampler and one 24-count 1-L polyethylene bottle sampler) to collect water-quality samples. The ISCO samplers are housed in a separate 3- × 4-ft metal box. The samplers are 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 will be by slope-area or critical depth computation methods.

Fieldwork

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
29	11	25	5	25	6	2

Datum Correction. Levels run on November 21, 2001, found the gage to be within limits.

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

Rating. The channel at the gage 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 gage. The channel is the control for medium and high stages. The buildup and scour of this control leads to shift changes during the water year.

Rating No. 3 was developed based on measurements made during the period of record.

Flow is partially regulated by Los Alamos Reservoir about 1.5 mi upstream of the gage and the draining of this reservoir. The gage of reference at this station is the inside reference point (the RP measure). At low and medium flows, the staff plate stage reading will be lower than the stilling well stage reading.

Five discharge measurements were taken during the year.

Discharge. Discharges were computed from Rating No. 3 using variable shifts.

E026 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0.12	0	0	0	0	0.34	0.02	0	0.04	0	0
2	14	0	0	0	0	0	0.22	0.01	0	0	0.66	0
3	0	0	0	0	0	0	0.41	0.01	0	0	120[RC]	0
4	3.7	0	0	0	0	0	0.22	0.01	0	0	2.3[SS]	0
5	0.01	0	0	0	0	0	0.22	0	0	0	0[SS]	0.66
6	0.01	0	0	0	0	0	0.16	0	1.9	0	0[SS]	0.22
7	0	0	0	0	0	0	0.16	0	0	0	0[SS]	0.41
8	0	0	0	0	0	0	0.16	0.05	0	0	3.3[SS]	0
9	0	0	0	0	0	0	0.16	0.12	0	0	3.1	0
10	0	0	0	0	0	0	0.16	0.05	0	0	2.3	1.6
11	0	0	0	0	0	0	0.16	0.04	0	105[H]	0	0
12	0	0	0	0	0	0	0.16	0	0	0[SS]	0	2.3
13	0	0	0	0	0	0	0.16	0.06	1.0	0[SS]	2.3	0.84
14	0	0	0	0	0	0	0.22	0.01	1.0	0	1.0	0.75
15	0.01	0	0	0	0	0	0.16	0	0	0	0	0.75
16	0.02	0	0	0	0	0	0.12	0	0	0.48	2.3	0
17	0.02[SS]	0	0	0	0	0	0.09	0	0.09	0.41	2.6	0
18	0[SS]	0	0	0	0	0.28	0.07	0	0	0.01	0	0
19	0[SS]	0	0	0	0	0.84	0.06	0	0	0.66	5.0	0
20	0	0	0	0	0	0.34	0.06	0	0	0	3.8	0
21	0	0	0	0	0	0.28	0.05	0	0	0	3.3	0
22	0	0	0	0	0	0.28	0.02	0	0	0.66	3.1[SS]	0
23	0	0	0	0	0	0.34	0.02	0	0	0.16	9.6	0
24	0	0	0	0	0	0.28	0.01	0	0	14	0	0
25	0	0	0	0	0	0.28	0.05	0	0	1.0	0	0
26	1.7[DS]	0	0	0	0	0.34	0.05	0.12	0	1.0[SS]	0	0
27	0.29[DS]	0	0	0	0	0.28	0.04	0	0	0	4.0[SS]	0
28	0	0	0	0	0	0.34	0.02	0	0	0	2.8	30[SS]
29	0	0	0	0	0	0.28	0.02	0	0	0	0	1.6[SS]
30	0	0	0	0	—	0.22	0.02	0	0	0.5	0	0[SS]
31	0	—	0	0	—	0.22	—	0	—	0.9	0.06	—

E026 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	2.0	0.03	0	0	0	6.5	6.1	0.35	0.74	18	26	8.7	68
Max Daily Peak (acre-ft)	0.84	0.03	0	0	0	0.92	0.44	0.09	0.47	11	13	5.7	13
Min Daily Peak (acre-ft)	0	0	0	0	0	0	0.01	0	0	0	0	0	0
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0	0

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 mi^2.

Period of Record. July 1994 to September 30, 2012.

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 NAD83.

Average Volume. 3 yr, 125 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 135 ft^3/s, July 11, 2012, gage height 2.9 ft from peak-flow computation.

Maximum Discharge for Current Water Year. Maximum discharge, 135 ft^3/s, July 11, 2012, gage height 2.9 ft.

Equipment. The station 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 on the left bank. The station is equipped with an ISCO pump sampler (12-count 1-L glass or polyethylene bottles) to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-ft metal box. 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.

Fieldwork

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
28	9	24	9	n/a	n/a	4

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 July 25 to 26, 2012, when the data were missing, and September 28 to 30, 2012, when the equipment malfunctioned.

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

Rating No. 2 was used for the entire water year.

No discharge measurements were taken during the year.

Discharge. Discharge was computed using Rating No. 2.

E030 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0.35	0	0	0	0	0[SS]
2	13	0	0	0	0	0	0.49	0	0	0	0	0[SS]
3	0.4	0	0	0	0	0	1.4	0	0	0	116	0[SS]
4	8.2	0	0	0	0	0	0.6	0	0	0	0.07	0[SS]
5	2.7	0	0	0	0	0	0.35	0	0	0	0.05	0[SS]
6	0.07	0	0	0	0	0	0.22	0	0	0	1.7	0[SS]
7	1.8	0	0	0	0	0	0.2	0	0	0	8.2	0[SS]
8	1.8	0	0	0	0	0	0.2	0	0	0	0.11	0[SS]
9	0.02	0	0	0	0	0	0.17	0	0	0	0	0[SS]
10	0	0	0	0	0	0	0.2	0	0	0	0	0[SS]
11	0	0	0	0	0	0	0.15	0	0	135	0	0
12	0	0	0	0	0	0	0.2	0	0	2.3	0	0.24
13	0	0	0	0	0	0	0.22	0	0	0.02	0	0.1
14	0	0	0	0	0	0	0.2	0	0	0.01	0	0
15	0	0	0	0	0	0	0.22	0	0	0	0	0
16	0	0	0	0.01	0	0	0.1	0	0	0	0	0
17	0	0	0	0	0	0	0.07	0	0	0	0	0
18	0	0	0	0	0	0	0.04	0	0	0	0	0
19	0	0	0	0.01	0	0	0.02	0	0	0	0.35	0
20	0	0	0	0.01	0	0	0	0	0	0	1.9	0
21	0	0	0	0.01	0	0	0	0	0	0	0.35	0
22	0	0	0	0	0	0	0	0	0	0	0.02	0
23	0	0	0	0	0	0	0	0	0	0	8.0[SS]	0
24	0	0	0	0	0	0	0	0	0	16	0.02[SS]	0
25	0	0	0	0	0	0	0	0	0	M	0[SS]	0
26	0.05	0	0	0	0	0.76	0	0	0	M	0[SS]	0
27	0.14	0	0	0	0	0.85	0	0	0	0.1	0.05[SS]	0
28	0	0	0	0	0	0.72	0	0	0	0	0[SS]	E
29	0	0	0	0	0	0.64	0	0	0	0	0[SS]	E
30	0	0	0	0	—	0.49	0	0	0	0	0[SS]	E
31	0	—	0	0	—	0.4	—	0	—	0	0[SS]	—

E030 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	5.5	0	0	0	0	5.9	7.2	0	0	11	10	0.03	40
Max Daily Peak (acre-ft)	2.4	0	0	0	0	1.4	1.5	0	0	7.6	6.6	0.02	7.6
Min Daily Peak (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	0	0	0	0	0	0	0	0	2	0	3	5

E038 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.

Drainage Area. 0.22 mi^2.

Period of Record. April 26, 2000, to September 30, 2012.

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

Average Volume. 3 yr, 266 acre-ft/yr.

Gage. Data logger with radio telemetry. Elevation of gage is 7087 ft using LANL LiDAR DEM with NAD83.

Maximum Discharge for Period of Record. Maximum discharge, 295 ft^3/s, July 24, 2004, gage height 4.4 ft from rating curve extended above 10 ft^3/s on basis of peak-flow computations.

Maximum Discharge for Current Water Year. Maximum discharge, 57 ft^3/s, July 7, 2012, gage height 2.19 ft.

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a Sutron Accububble self-contained bubbler system. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is equipped with two ISCO pump samplers (12-count glass or polyethylene bottles and one 24-count polyethylene bottles) to collect water-quality samples. The ISCO samplers are housed in a separate shelter, a 3- × 4-ft metal box. 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 station is also equipped with a tipping bucket rain gage, Rain Collection II. All equipment is powered with a solar-panel battery-charging system.

Fieldwork

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
26	8	21	3	21	3	3

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

Gage-Height Record. The data logger referenced to the outside gage gave a complete and satisfactory record for the year, except from November 8 to 11, 17 to 19, 22 to 28, and 30, 2011, from December 3 to January 1, 2012, and from January 11 to April 7, 2012, because of ice; the period from January 2 to 10, 2012, because the equipment malfunctioned; and from May 30 to 31, 2012, because the data were missing.

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 gage about 5 ft away. The channel is the control for medium and high stages.

Rating No. 3 was developed using past discharge measurements and verified with current measurements.

No discharge measurements were taken during the year.

Discharge. Rating No. 3 was used with “V” diagrams to compute this record.

E038 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	I	I	I	I	0	0	0	0	0
2	0	0	0	E	I	I	I	0	0	0	35	0
3	0	0	I	E	I	I	I	0.29	0	0	1.2	0
4	8.6	0	I	E	I	I	I	0	0	2.6	0	0
5	2.1	0	I	E	I	I	I	0	0	0	0.28	0
6	0	0	I	E	I	I	I	0	0	0	3.0	0
7	7.5	0	I	E	I	I	I	0	0	57	0	0.33
8	0.55	I	I	E	I	I	0	9.2	0	0	0	0
9	0.04	I	I	E	I	I	0	0	0	0	0	0
10	0	I	I	E	I	I	0	0	0	0	0	4.4
11	0	I	I	I	I	I	0	0	0	1.2	0	0
12	1.2	0	I	I	I	I	0	0	0	0	0.67	7.3
13	0.07	0	I	I	I	I	0	4	0	0	0	0.55
14	0	0	I	I	I	I	0	0	0	0	0	0
15	0	0	I	I	I	I	0	0	0	0	0	0
16	0	0	I	I	I	I	0	0	0	0	2.5	0
17	0	I	I	I	I	I	0	0	0	0	0	0
18	0	I	I	I	I	I	0	0	0	0	0	0
19	0	I	I	I	I	I	0	0	0	0	0.26	0
20	0	0	I	I	I	I	0	0	0	0	3.6	0
21	0	0	I	I	I	I	0	0	0	0	0	0
22	0	I	I	I	I	I	0	0	0	0	0.26	0
23	0	I	I	I	I	I	0	0	0	0	0	0
24	0	I	I	I	I	I	0	0	0	0	5.6	0
25	0	I	I	I	I	I	0	0	0	11	0	0
26	10	I	I	I	I	I	0	0	0	0	0	0
27	2.2	I	I	I	I	I	0	0	0	0	0	0
28	0	I	I	I	I	I	0	0	0	0	0	3.0
29	0	0	I	I	I	I	0	0	0	0	0	0
30	0	I	I	I		I	0	M	0	0	0	0
31	0		I			I		M		0	0	

E038 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	4.3	0	0	E	I	I	0	0.66^{RE}	0	1.2	1.2^{RE}	0.89	8.3^{RE}
Max Daily Peak (acre-ft)	1.6	0	0	E	I	I	0	0.54^{RE}	0	0.9	0.71^{RE}	0.61	1.6^{RE}
Min Daily Peak (acre-ft)	0	0	0	E	I	I	0	0*	0	0	0^{RE}	0	0.00^{RE}
Missing Days	0	15	29	31	29	31	7	2	0	0	0	0	144

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 mi^2.

Period of Record. April 4, 2010, to September 30, 2012.

Average Volume. 2 yr, 46 acre-ft/yr.

Gage. Data logger with radio telemetry. Elevation of gage is 7016 ft using LANL LiDAR DEM with NAD83.

Maximum Discharge for Period of Record. Maximum discharge, 315 ft^3/s, August 18, 2010, gage height 3.6 ft.

Maximum Discharge for Current Water Year. Maximum discharge, 5.2 ft^3/s, September 12, 2012, gage height 0.41 ft.

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, a shaft encoder float system, and a Sutron Accubar bubble sensor. 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 gage 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 glass or polyethylene bottles and one 24-count polyethylene bottles) to collect water-quality samples. The ISCOs are housed in a 3- × 4-ft steel storage box, separate from the other instrumentation. Samplers are triggered by stage through the data logger. All high-flow measurements will be by slope-area or peak-flow computation methods.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
27	14	22	7	24	5	0

Datum Correction. None

Gage-Height Record. The data logger referenced to the outside gage gave a complete and satisfactory record for the year, except from May 9 to 22, 2012, when the equipment malfunctioned.

Rating. Rating No. 1 is based on precalibrated data for a 1.0 trapezoidal supercritical flume (U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A14, 1983, Use of Flumes in Measuring Discharge) and was used throughout the period.

No discharge measurements were taken during the year.

Discharge. Discharge was computed using Rating No. 1.

E039.1 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.18[DS]	0.11[DS]	0.25	0[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	0.07	0	0	0.11
2	0.04[DS]	0.11[DS]	0.25	0[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	0.07	0	3.7	0.11
3	0.04[DS]	0.07[DS]	0.21	0[DS]	0[DS]	0[DS]	0.21[DS]	0.04[DS]	0.07	0	2.1	0.11
4	0.04[DS]	0.07[DS]	0.21	0[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	0.07	0	0.07	0.11
5	0.32[DS]	0.07[DS]	0.21	0[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	0.07	0	0.07	0.11
6	0.14[DS]	0.07[DS]	0.14	0[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	0.04	0	0.21	0.11
7	3.1[DS]	0.11[DS]	0.18	0[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	0.04	0.21	0.11	0.11
8	2.1[DS]	0.21[DS]	0.18	0[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	0.04	0.07	0.07	0.11
9	0.11[DS]	0.18	0.21	0[DS]	0[DS]	0[DS]	0[DS]	E	0.04	0.07	0.11	0.11
10	0.07[DS]	0.18	0.21	0[DS]	0[DS]	0[DS]	0[DS]	E	0	0.07	0.07	0.11
11	0.07[DS]	0.21	0.21	0[DS]	0[DS]	0[DS]	0[DS]	E	0	0.07	0.11	0.11
12	0.07[DS]	0.21	0.21	0[DS]	0[DS]	0[DS]	0[DS]	E	0	0.07	0.11	5.2
13	0.07[DS]	0.21	0.18	0[DS]	0[DS]	0[DS]	0[DS]	E	0	0.07	0.11	1.8
14	0.07[DS]	0.21	3.1	0[DS]	0[DS]	0[DS]	0[DS]	E	0	0.07	0.11	0.11
15	0.04[DS]	0.21	3.3	0[DS]	0[DS]	0[DS]	0[DS]	E	0	0.07	0.07	0.11
16	0.04[DS]	0.21	0.28	0[DS]	0[DS]	0[DS]	0[DS]	E	0	0.07	0.07	0.11
17	0.04[DS]	0.21	0.25	0[DS]	0[DS]	0[DS]	0[DS]	E	0	0.07	0.07	0.11
18	0.07[DS]	0.21	0.21	0[DS]	0[DS]	0[DS]	0[DS]	E	0	0.07	0.07	0.11
19	0.07[DS]	0.21	0.21	0[DS]	0[DS]	0[DS]	0.07[DS]	E	0	0.07	0.07	0.07
20	0.07[DS]	0.21	0.21	0[DS]	0[DS]	0[DS]	0.04[DS]	E	0	0.07	0.07	0.07
21	0.07[DS]	0.21	0.21[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	E	0	0.07	0.07	0.07
22	0.07[DS]	0.21	0[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	E	0	0.07	0.11	0.07
23	0.07[DS]	0.21	0[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	0.07	0	0.04	0.11	0.07
24	0.07[DS]	0.21	0[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	0.07	0	0.04	0.11	0.07
25	0.11[DS]	0.21	0[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	0.07	0	0.04	0.11	0.11
26	2.1[DS]	0.21	0[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	0.07	0	0.04	0.11	0.11
27	1.9[DS]	0.25	0[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	0.07	0	0	0.11	0.14
28	0.18[DS]	0.28	0[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	0.07	0	0	0.11	0.11
29	0.11[DS]	0.25	0[DS]	0[DS]	0[DS]	0[DS]	0.04[DS]	0.07	0	0	0.11	0.11
30	0.11[DS]	0.25	0[DS]	0[DS]	—	0[DS]	0.04[DS]	0.07	0	0	0.11	0.07
31	0.11[DS]	—	0[DS]	0[DS]	—	0[DS]	—	0.07	—	0	0.11	—

E039.1 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	6.7	11	10	0	0	0	0.83	1.9	0.83	2.1	5.2	6.5	45
Max Daily Peak (acre-ft)	0.81	0.52	1.7	0	0	0	0.07	0.15	0.14	0.14	0.37	1	1.7
Min Daily Peak (acre-ft)	0.07	0.14	0	0	0	0	0	0.07	0	0	0	0.14	0
Missing Days	0	0	0	0	0	0	0	14	0	0	0	0	14

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 mi^2.

Period of Record. May 1999 to September 30, 2012.

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 NAD83.

Average Volume. 3 yr, 38 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 452 ft^3/s, August 8, 2006, gage height 5.7 ft. (from slope-area measurement).

Maximum Discharge for Current Water Year. Maximum discharge, 1.0 ft^3/s, October 7, 2011, gage height 2.2 ft.

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a Milltronics sonic probe. The system is powered by a solar-panel battery system. All equipment is housed in a NEMA shelter. The station is equipped with an ISCO pump sampler (12-count 1-L glass or polyethylene bottles) to collect water-quality samples in a 3- × 4-ft metal box. The sampler 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 gage.

Fieldwork

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
27	13	24	10	n/a	n/a	0

Datum Correction. None from levels.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except from December 2 to 6, 12 to 14, 19, and 22, 2011, and February 3 to 5, 2012, when the age was affect by ice, and July 15 to 16 and September 18 to 24, 2012, when the equipment malfunctioned.

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

Rating No. 3 is good up to 30 ft^3/s and fair above that.

No discharge measurements were taken during the year.

Discharge. Discharge was computed using Rating No. 3. Those days estimated at zero flow were based on comparison with nearby gage stations and precipitation records. No flow occurred most of the time.

E040 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0[RE]	0	0	0	0	0	0	0	0	0	0	0
2	0	0	I	0	0	0	0	0	0	0	0	0
3	0	0	I	0	I	0	0	0	0	0	0	0
4	0	0	I	0	I	0	0	0	0	0	0	0
5	0	0	I	0	I	0	0	0	0	0	0	0
6	0	0	I	0	0	0	0	0	0	0	0	0
7	1.0[RE]	0	0	0	0	0	0	0	0	0	0	0
8	0.84[SS]	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	I	0	0	0	0	0	0	0	0	0
13	0	0	I	0	0	0	0	0	0	0	0	0
14	0	0	I	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	E	0	0
16	0	0	0	0	0	0	0	0	0	E	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	E
19	0	0	I	0	0	0	0	0	0	0	0	E
20	0	0	0	0	0	0	0	0	0	0	0	E
21	0	0	0	0	0	0	0	0	0	0	0	E
22	0	0	I	0	0	0	0	0	0	0	0	E
23	0	0	0	0	0	0	0	0	0	0	0	E
24	0	0	0	0	0	0	0	0	0	0	0	E
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0.84[DS]	0	0	0	0	0	0	0	0	0	0	0
27	0.89[DS]	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	—

E040 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0.32	0	0	0	0	0	0[RE]	0[RE]	0[RE]	0[RE]	0	0	0.32
Max Daily Peak (acre-ft)	0.16	0	0	0	0	0	0[RE]	0[RE]	0[RE]	0[RE]	0	0	0.16
Min Daily Peak (acre-ft)	0	0	0	0	0	0	0[RE]	0[RE]	0[RE]	0[RE]	0	0	0
Missing Days	0	0	14	0	3	0	0	0	0	2	0	7	26

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 mi^2.

Period of Record. May 4, 2010, to September 30, 2012.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 6377 ft using LANL LiDAR DEM with NAD83.

Average Volume. 2 yr, 71 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 290 ft^3/s, July 11, 2012, gage height 3.4 ft.

Maximum Discharge for Current Water Year. Maximum discharge, 290 ft^3/s at, July 11, 2012, gage height 3.4 ft.

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, a shaft encoder float system, and a Sutron Accubar air-purge bubble sensor, housed in a NEMA shelter. The shelter is secured atop a stilling well, a vertical 2-ft-diameter corrugated metal culvert pipe. 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 polyethylene bottles and one 24-count 1-L polyethylene bottles) to collect water-quality samples 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- × 4-ft steel storage box, separate from the other instrumentation. A tipping bucket rain gage with 0.01-in. resolution is mounted about 30 ft from the station. Cellular telemetry with a speech modem provides remote data retrieval.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
37	14	29	9	28	8	6

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record except for the following period on August 6, 2012 when equipment malfunctioned.

Rating. Rating No. 1 is based on precalibrated data for the flume used (U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, A14, 1983, Use of Flumes in Measuring Discharge) and was used throughout the period.

No discharge measurements were taken during the year.

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

Those days estimated were based on precipitation and nearby gage stations for verification.

Flow is partially regulated by Los Alamos Reservoir, located about 7.8 mi upstream.

E042.1 Daily Mean Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.0[SS]	0.14	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0
2	36[SS]	0.11	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0
3	2.5[SS]	0.07	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	216	0
4	9.0[SS]	0.04	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	2.7	0
5	3.7[SS]	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0.64	0
6	0.02[SS]	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	E	0
7	0[SS]	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	11.7[SS]	0
8	5.1[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	1	0
9	0.07[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0
10	0.03[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0
11	0.03[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0[RE]	290[H]	0	0
12	0.03[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0[RE]	1.6[SS]	0	0
13	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0[RE]	0.21[SS]	0	0.35[DS]
14	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0[RE]	0.07[SS]	0	0[DS]
15	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0[RE]	0[SS]	0	0[DS]
16	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0	0[DS]
17	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0	0[DS]
18	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
19	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0[RE]	0	0	0
20	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	4.5	0
21	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0.32	0.93	0
22	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0.04	0.11	0
23	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	17	0
24	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	61[DS]	1.6[SS]	0
25	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	2.5[SS]	0.07	0
26	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	1.5[DS]	0	0
27	6[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	1.1	0.21	0
28	0.25	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0.11	0.14	39
29	0.21	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
30	0.21	0	0[DS]	0[DS]	—	0[DS]	0	0	0	0	0	0
31	0.14	—	0[DS]	0[DS]	—	0[DS]	—	0	—	0	0	—

E042.1 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	14	0.55	0	0	0	0	0	0	0.00[RE]	21	28	2.1	65
Max Daily Peak (acre-ft)	5.8	0.23	0	0	0	0	0	0	0.00[RE]	11	17	2	17
Min Daily Peak (acre-ft)	0	0	0	0	0	0	0	0	0.00[RE]	0	0	0	0
Missing Days	0	0	0	0	0	0	0	0	0	0	1	0	1

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 mi^2.

Period of Record. July 22, 2010, to September 30, 2012.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 6340 ft using LANL LiDAR DEM with NAD83.

Average Volume. 2 yr, 58 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 188 ft^3/s, September 4, 2011, gage height 2.7 ft.

Maximum Discharge for Current Water Year. Maximum discharge, 168 ft^3/s, August 3, 2012, gage height 2.6 ft.

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, a shaft encoder float system, and a Sutron Accubar air-purge bubble sensor, housed in a NEMA shelter. The shelter is secured atop a stilling well, a vertical 2.0-ft-diameter corrugated metal culvert pipe. 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.

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

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
54	9	33	5	33	6	6

Datum Correction. Levels on May 31, 2001, found the gage to be within limits; no correction was needed.

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 precalibrated data for the flume used (U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, A14, 1983, Use of Flumes in Measuring Discharge) and 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.

E050.1 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.01	0	0	0	0[DS]	0[DS]	0	0	0	0	0	0
2	11[SS]	0	0	0	0[DS]	0[DS]	0	0	0	0	0.04	0
3	1.1[SS]	0	0	0	0[DS]	0[DS]	0	0	0	0	168	0
4	6.4[SS]	0	0	0	0[DS]	0[DS]	0	0	0	0	4	0
5	6.7[SS]	0	0	0	0[DS]	0[DS]	0	0	0	0	0.25	0
6	0.11[SS]	0	0[DS]	0	0[DS]	0[DS]	0	0	0	0	2.5	0
7	0.04[SS]	0	0[DS]	0	0[DS]	0[DS]	0	0	0	0	4.24	0
8	1.4[SS]	0	0[DS]	0	0[DS]	0[DS]	0	0	0	0	1.31	0
9	0.07[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0.18[RE]	0
10	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0.11	0
11	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	133	0.04	0
12	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0.96	0	0
13	0[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0.18[RE]	0	0
14	0.15[SS]	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0.04	0	0
15	0.15	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
16	0.15	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0.15	0	0
17	0.11	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0.15	0	0
18	0.07	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
19	0.04	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0[RE]	0	0	0
20	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0.18	0
21	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0[RE]	0	0.22	0.18	0
22	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0[RE]	0	0	0.15	0
23	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0[RE]	0[RE]	0	4.9	0
24	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	10	0.96	0
25	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0[RE]	0	1.1	0.18	0
26	0	0	0	0[DS]	0[DS]	0[DS]	0	0[RE]	0	1.2	0.18	0
27	0	0	0	0[DS]	0[DS]	0[DS]	0	0	0	0.18	0	0
28	0	0	0	0[DS]	0[DS]	0[DS]	0	0[RE]	0	0.11	0	6.7
29	0	0	0	0[DS]	0[DS]	0[DS]	0	0[RE]	0	0	0	0.58
30	0	0	0	0[DS]	—	0	0	0	0	0	0	0
31	0	—	0	0[DS]	—	0	—	0	—	0	0	—

E050.1 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	7.3	0	0	0	0	0	0	0.00[RE]	0.00[RE]	13[RE]	21[RE]	1.9	43
Max Daily Peak (acre-ft)	3	0	0	0	0	0	0	0.00[RE]	0.00[RE]	8[RE]	13[RE]	1.7	13
Min Daily Peak (acre-ft)	0	0	0	0	0	0	0	0.00[RE]	0.00[RE]	0.00[RE]	0.00[RE]	0	0
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0	0

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 mi^2.

Period of Record. October 1, 2002, to September 30, 2012.

Revised Record. Average discharge (2007, 2008).

Gage. Data logger with radio telemetry. Elevation of gage is 6943 ft using LANL LiDAR DEM with NAD83.

Average Volume. 3 yr, 56 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 1780 ft^3/s, August 8, 2006, gage height 7.5 ft (from critical-depth computation).

Maximum Discharge for Current Water Year. Maximum discharge, 8.6 ft^3/s, August 3, 2012, gage height 1.4 ft.

Equipment. The station 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 equipped with an ISCO pump sampler (12-count 1-L glass or polyethylene bottles) to collect water-quality samples. The ISCO sampler is housed in separate shelter, a 3- × 4-ft metal box. 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 wading stage.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
26	7	22	4	n/a	n/a	0

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except from November 29 to December 4, 2011, December 15 to 23, 2011, February 23 to 24, 26 to 29, 2012, and March 7 to 20, 2012, when the gage was affected by ice and July 24, 2012, when data were missing.

Rating. The channel comes into the gage from a left-to-right bend and bends hard left at about 100 ft below the gage. The bed consists of unstable sand and gravel with some boulders. The left bank downstream from the gage is heavily wooded, and that tends to hold the flow to the right, away from the reach of the gage. The lower end of any stage-discharge relation will be unstable here. The upper end could be stable, but floods and construction have allowed the flow to jump the channel at the bend above the gage. As a result, significant flow ran down the road that is not consistent with recorded gage heights. This jump-out occurred at approximately 500 ft^3/s. This channel problem was corrected in March 2007.

Rating No. 2 was developed using the current year's measurements and one critical-depth measurement of 850 ft^3/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.

One discharge measurement was taken during the year.

Discharge. Discharge was computed using Rating No. 2 and a series of "V" diagrams.

E055 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0 RE	0.21	I	0	0	0	0	0	0	0	0	0
2	0 RE	0.09	I	0	0	0	0	0	0	0	0	0
3	0 RE	0	I	0	0	0	5.2	0	0	0	8.6	0
4	0 RE	0	I	0	0	0	1.5	0	0	0	0	0
5	0 RE	0	0	0	0	0	1.1	0	0	0	0	0
6	0 RE	0	0	0	0	0	0.68	0	0	0	0	0
7	0 RE	0	0	0	0	I	0.51	0	0	0	0	0
8	1.3 RE	0	0	0	0	I	0.42	0	0	0	0	0
9	0.51	0	0	0	0	I	0.34	0	0	0	0	0
10	0.30	0	0	0	0	I	0.27	0	0	0	0	0
11	0.24	0	0	0	0	I	0.13	0	0	0	0	0
12	0.11	0	0	0	0	I	0	0	0	0	0	0
13	0	0	0	0	0	I	0	0	0	0	0	2.6
14	0	0	0	0	0	I	0	0	0	0	0	0.56
15	0	0	I	0	0	I	0	0	0	0	0	0.36
16	0	0	I	0	0	I	0	0	0	0	0	0
17	0	0	I	0	0	I	0	0	0	0	0	0
18	0	0	I	0	0	I	0	0	0	0	0	0
19	0	0	I	0	0	I	0	0	0	0	0	0
20	0	0	I	0	0	I	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	I	0	I	0	0	0	0	0	0	0
24	0	0	0	0	I	0	0	0	0	M	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0
26	0.62	0	0	0	I	0	0	0	0	0	0	0
27	1.1	0	0	0	I	0	0	0	0	0	0	0
28	0.80	0	0	0	I	0	0	0	0	0	0	0
29	0.56	I	0	0	I	0	0	0	0	0	0	0
30	0.42	I	0	0	—	0	0	0	0	0	0	0
31	0.30	—	0	0	—	0	—	0	—	0	0	—

E055 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0.34	0	0	0	0	9.8	0	0	0	1.6	3.4	0.34	23
Max Daily Peak (acre-ft)	0.32	0	0	0	0	2.1	0	0	0	1.6	2.2	0.32	2.2
Min Daily Peak (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	2	13	0	6	14	0	0	0	1	0	0	2	36

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 mi^2.

Period of Record. August 18, 2004, to September 30, 2012.

Revised Record. Period of record (2009).

Gage. Data logger with radio telemetry. Elevation of gage is 7101 ft using LANL LiDAR DEM with NAD83.

Average Volume. 3 yr, 3.5 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge 91 ft^3/s, August 8, 2006, gage height 6.2 ft.

Maximum Discharge for Current Water Year. No flow for the year.

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

The station is also equipped with a tipping bucket rain gage, Rain Collection II. All equipment is powered with a solar-panel battery-charging system.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
26	5	21	3	n/a	n/a	0

Datum Correction. None. The levels from November 8, 2005, found the gage to be within limits. No corrections were needed.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except on January 22, 2012, when the gage was affected by ice, and on September 30, 2012, when the equipment malfunctioned.

Rating. The channel is straight for about 75 ft upstream and 100 ft downstream. The channel is trapezoidal with little vegetation. The bed is rock with gravel and should not be subject to very much movement.

Rating No. 1 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, based on a critical-depth computation.

No discharge measurements were made during the year.

Discharge. Discharge was computed by applying Rating No. 1. A shift was applied with a “V” diagram for the entire year.

E055.5 Daily Peak Discharge (ft^3/s)

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

E055.5 Monthly Summary Table

	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 RE	0 RE	0 RE	0. RE	0
Max Daily Peak (acre-ft)	0	0	0	0	0	0	0	0	0 RE	0 RE	0 RE	0 RE	0
Min Daily Peak (acre-ft)	0	0	0	0	0	0	0	0	0 RE	0 RE	0 RE	0 RE	0
Missing Days	0	0	0	1	0	0	0	0	0	0	0	1	2

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 mi^2.

Period of Record. October 1, 2006, to September 30, 2012.

Revised Record. Period of record (2008).

Average Volume. 3 yr, 18 acre-ft/yr

Gage. Data logger with radio telemetry. Elevation of gage is 6944 ft using LANL LiDAR DEM with NAD83.

Maximum Discharge for Period of Record. Maximum discharge, 263 ft^3/s, July 5, 2009, gage height 3.6 ft.

Maximum Discharge for Current Water Year. Maximum discharge, 0.51 ft^3/s, September 10, 2012, gage height 1.3 ft.

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a Sutron Accubar bubble sensor mounted on a 6-in. channel cantilevered over the streambed. 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 or polyethylene bottles) to collect water-quality samples. An ISCO sampler is housed in a separate shelter, a 3- × 4-ft metal box. 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.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
26	8	21	5	n/a	n/a	0

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 for the year, except from August 29 to September 4, 2012, when the equipment malfunctioned.

Rating. The channel is about 20 ft wide and straight for about 15 ft upstream and 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-degree 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. Shifts were applied to low flow using “V” diagrams.

No discharge measurements were taken during the year.

Discharge. Discharge was computed by applying the gage height to Rating No.3 through a shift adjustment based on “V” diagrams. Estimated daily discharges were based on the precipitation records, field notes, and comparison with gage E055.5.

E056 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	E
2	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	E
3	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	E
4	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	E
5	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
6	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
7	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
8	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
9	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
10	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0.51 DS
11	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
12	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0.11 DS
13	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
14	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
15	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
16	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
17	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
18	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
19	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
20	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
21	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
22	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
23	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
24	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
25	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
26	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
27	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
28	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS
29	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	0 DS	E	0 DS
30	0 DS	0 DS	0 DS	0 DS	—	0 DS	0 DS	0 DS	0 DS	0 DS	E	0 DS
31	0 DS	—	0 DS	0 DS	—	0 DS	—	0 DS	—	0 DS	E	—

E056 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0.06	0.06
Max Daily Peak (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0.05	0.05
Min Daily Peak (acre-ft)	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	3	4	7

E059 Pueblo Canyon above WWTP

Location. Lat. 35° 52’ 57”, long –106° 15’ 1”, SE ¼, Sec. 13, T 19 N., R 6 E., Los Alamos County.

Drainage Area. 6.73 mi^2.

Period of Record. August, 12, 2010, to September 30, 2012.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 6533 ft using LANL LiDAR DEM with NAD83.

Average Volume. 2 yr, 6.5 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 250 ft^3/s, August 16, 2010, Gage height, 2.6 ft.

Maximum Discharge for Current Water Year. No flow for the year.

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a shaft encoder float system, housed in a NEMA shelter. The shelter is secured atop a stilling well, a vertical 2-ft-diameter corrugated metal culvert pipe. Two ISCO pump samplers (one 12-count 1-L glass and polyethylene bottles and one 24-count 1-L polyethylene bottles) to collect water-quality samples 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- × 4-ft steel storage 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.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
28	5	24	3	24	3	0

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 taken during the year.

Discharge. Discharge was computed using Rating No. 1.

E059 Daily Peak Discharge (ft^3/s)

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

E059 Monthly Summary Table

	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	0.00[RE]	0.00[RE]	0	0
Max Daily Peak (acre-ft)	0	0	0	0	0	0	0	0	0	0.00[RE]	0.00[RE]	0	0
Min Daily Peak (acre-ft)	0	0	0	0	0	0	0	0	0	0.00[RE]	0.00[RE]	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 mi^2.

Period of Record. April 15, 2010, to September 30, 2012.

Gage. Data logger with radio telemetry. Elevation of gage is 6329 ft using LANL LiDAR DEM with NAD83.

Average Volume. 2 yr. 40 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 132 ft^3/s, August 16, 2010, gage height, 2.3 ft.

Maximum Discharge for Current Water Year. Maximum discharge, 1.1 ft^3/s, January 09, 2012, gage height 0.22 ft.

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, a shaft encoder float system, and a Sutron Accubar air-purge bubble sensor, housed in a NEMA shelter. The shelter is secured atop a stilling well, a vertical 2.5-ft-diameter corrugated metal culvert pipe. 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 polyethylene bottles and one 24-count 1-L polyethylene bottles) to collect water-quality samples 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- × 4-ft steel storage box, separate from the other instrumentation. A line-of-sight radio transceiver provides 5-min stage data from the encoder and bubbler.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
50	14	30	3	30	3	0

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 precalibrated data for the flume used (U.S. Geological Survey Techniques of Water-Resources Investigations, Vol. 3, A14, 1983, Use of Flumes in Measuring Discharge) and 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 (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0[DS]	0[DS]	0	0	0	0	0	0
2	0	0	0	0	0[DS]	0[DS]	0	0	0	0	0	0
3	0	0	0	0[RE]	0[DS]	0[DS]	0	0	0	0	0	0
4	0	0	0[RE]	0	0[DS]	0[DS]	0	0	0	0	0	0
5	0	0	0[RE]	0[RE]	0[DS]	0[DS]	0	0	0	0	0	0
6	0	0	0[DS]	0	0[DS]	0[DS]	0	0	0	0	0	0
7	0	0	0[DS]	0.08	0[DS]	0[DS]	0	0	0	0	0	0
8	0	0	0[DS]	0.22	0[DS]	0[DS]	0	0	0	0	0	0
9	0	0[RE]	0[DS]	1.1	0[DS]	0[DS]	0	0	0	0	0	0
10	0	0	0[DS]	I	0[DS]	0[DS]	0	0	0	0	0	0
11	0	0	0[DS]	I	0[DS]	0[DS]	0	0	0[RE]	0	0	0
12	0	0	0[DS]	0.66[RE]	0[DS]	0[DS]	0[RE]	0	0	0	0	0
13	0	0	0.01[DS]	I	0[DS]	0[DS]	0	0	0	0	0	0
14	0	0	I	0.42[RE]	0[DS]	0[DS]	0	0[RE]	0	0	0	0
15	0	0	I	0.08[RE]	0[DS]	0[DS]	0	0[RE]	0	0	0	0
16	0	0	I	0.11	0[DS]	0[DS]	0	0[RE]	0	0	0	0
17	0	0	I	0.5[DS]	0[DS]	0[DS]	0	0[RE]	0	0	0	0
18	0	0	I	0[DS]	0[DS]	0[DS]	0	0[RE]	0	0	0	0
19	0	0	I	0[DS]	0[DS]	0[DS]	0	0[RE]	0	0	0	0
20	0	0	I	0[DS]	0[DS]	0[DS]	0	0[RE]	0	0	0	0
21	0	0	I	0[DS]	0[DS]	0[DS]	0	0[RE]	0	0	0	0
22	0	0	I	0[DS]	0[DS]	0[DS]	0	0[RE]	0	0	0	0
23	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0[RE]	0	0	0	0
24	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
25	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0[RE]	0	0	0	0
26	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0[RE]	0	0	0	0
27	0	0[RE]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
28	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0[RE]	0	0	0	0
29	0	0	0	0[DS]	0[DS]	0[DS]	0	0[RE]	0	0	0	0
30	0	0	0	0[DS]	—	0	0	0	0	0	0	0
31	0	—	0	0[DS]	—	0	—	0[RE]	—	0	0	—

E060.1 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0.00[RE]	0	3.5	0	0	0.00[RE]	0.00[RE]	0.00[RE]	0	0	0	3.5
Max Daily Peak (acre-ft)	0	0.00[RE]	0	1.3	0	0	0.00[RE]	0.00[RE]	0.00[RE]	0	0	0	1.3
Min Daily Peak (acre-ft)	0	0.00[RE]	0	0	0	0	0.00[RE]	0.00[RE]	0.00[RE]	0	0	0	0
Missing Days	0	0	9	3	0	0	0	0	0	0	0	0	12

E099 Guaje 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. 32.8 mi^2.

Period of Record. January 8, 2002 to September 30, 2012.

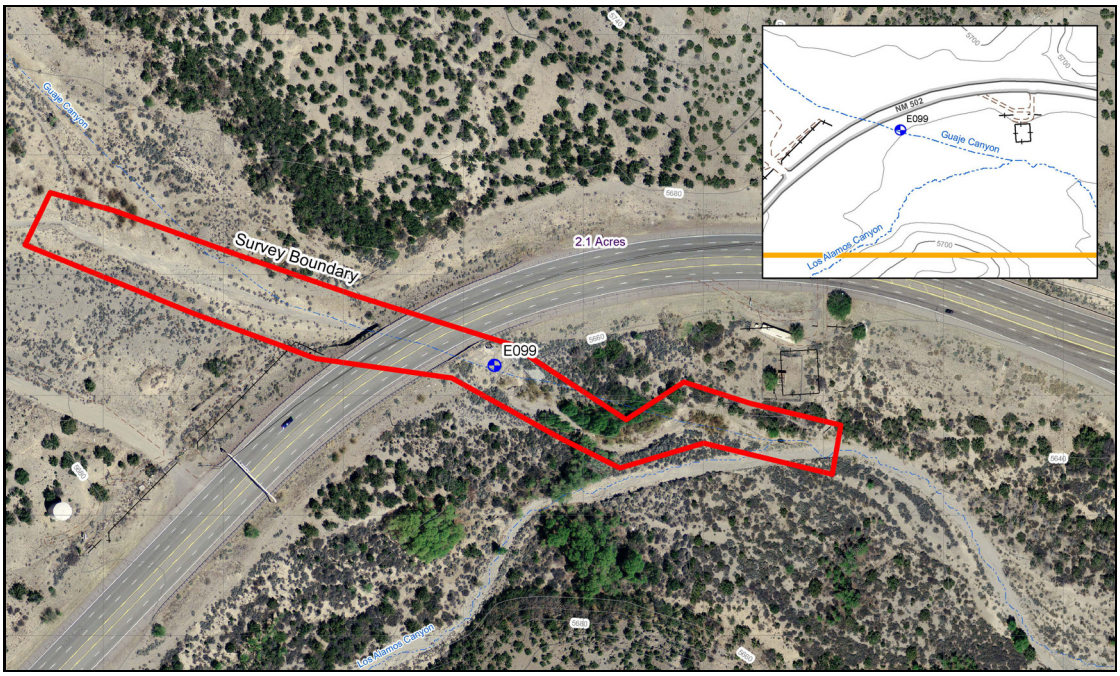
Revised Record. Rating table (2011).

Annual Volume. 1yr, 86 acre-ft/yr.

Gage. Data logger with radio telemetry. Elevation of gage is 5656 ft using LANL LiDAR DEM with NAD83.

Maximum Discharge for Period of Record. Maximum discharge, 277 ft^3/s, July 16, 2012, gage height 1.53 ft. Period of record for calculated discharge begins October 1, 2011.

Maximum Discharge for Current Water Year. Maximum discharge, 277 ft^3/s, July 16, 2012, gage height 1.53 ft.



Equipment. This station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a shaft encoder float system, housed in a NEMA shelter. Two ISCO pump samplers (one 12-count 1-L glass and polyethylene bottles and one 24-count 1-L polyethylene bottles) to collect water-quality samples 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- × 4-ft steel storage box, separate from the other instrumentation. A line-of-sight radio transceiver provides 5-min stage data from the encoder and bubbler.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
20	12	15	7	15	6	4

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record except from October 1 to 2 and 4 to 14, 2011, when the equipment malfunctioned, and from July 16 to 30, 2012, when the data were missing.

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 3.5% slope and 175 ft long, resulting in 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 survey performed March 28, 2012, and step-back water analysis.

No discharge measurements were taken during the year.

Discharge. Discharge was computed directly from Rating No.2 for the entire water year.

E099 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	E	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0[SS]
2	E	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0.83	0	0	0	0	0[SS]
3	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0.83	0	0	0	167[SS]	0[SS]
4	E	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0.5[SS]	0[SS]
5	E	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	3.7[SS]	0.4[SS]	0[SS]
6	E	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0.41[SS]	0[SS]
7	E	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	221[SS]	0
8	E	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	1.5[SS]	0
9	E	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0[SS]	0
10	E	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0[SS]	0
11	E	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	153[SS]	0[SS]	0
12	E	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	2.6[SS]	2.2[SS]	6
13	E	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	2.2[SS]	4.8[SS]	3.3
14	E	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	2.2[SS]	1.1[SS]	0
15	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	1.8[SS]	0	0
16	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	277[M]	4.4	0
17	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	M	4.1	0
18	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	M	11[SS]	0
19	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	M	0.89[SS]	0
20	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	M	0[SS]	0
21	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	M	0[SS]	0
22	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	M	0[SS]	0
23	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	M	85[SS]	0
24	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	M	7[SS]	0
25	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	M	0[SS]	0
26	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	M	0[SS]	0
27	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	M	0[SS]	0
28	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0.83	0	0	0	M	0[SS]	0
29	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0.83	0	0	0	M	0[SS]	0
30	0[DS]	0[DS]	0[DS]	0[DS]	—	0	0	0	0	M	0[SS]	0
31	0[DS]	—	0[DS]	0[DS]	—	0	—	0	—	0	0[SS]	—

E099 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0	0	0	0	0.92	0.74	0	0	259	55	3.3	317
Max Daily Peak (acre-ft)	0	0	0	0	0	0.66	0.7	0	0	233	18	1.8	233
Min Daily Peak (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	13	0	0	0	0	0	0	0	0	15	0	0	28

E109.9 Los Alamos above Rio Grande

Location. Lat 35° 52' 55" long –106° 08' 56", NW ¼, Sec. 13, T. 19 N., R. 7 E., Santa Fe County.

Drainage Area. 58.99 mi^2.

Period of Record. April 12, 2010, to September 30, 2012.

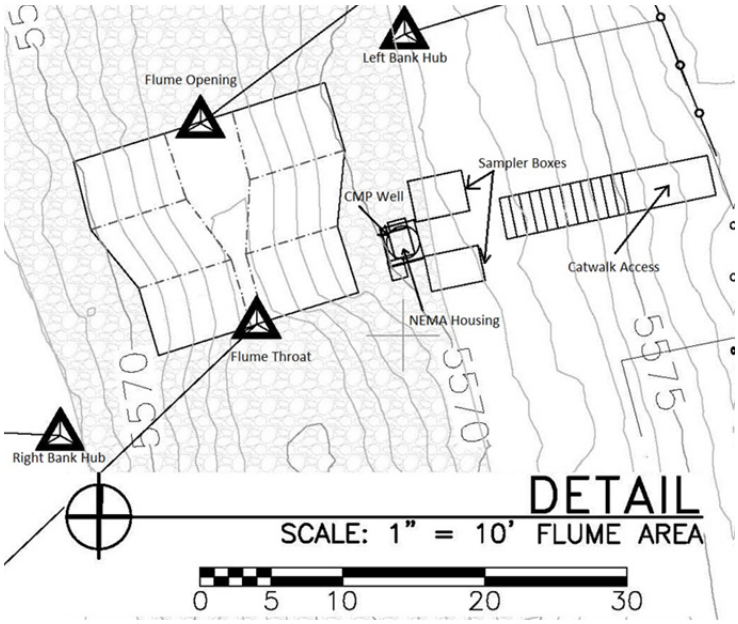
Revised Record. None.

Average Volume. 2 yr, 221 acre-ft/yr.

Gage. Data logger and radio telemetry. Elevation of gage is 5570 ft using LANL LiDAR DEM with NAD83.

Maximum Discharge for Period of Record. Maximum discharge 678 ft^3/s on July11, 2012, gage height 5.6 ft.

Maximum Discharge for Current Water Year. Maximum discharge 678 ft^3/s on July 11, 2012, gage height 5.6 ft.



Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, a shaft encoder float system, a Sutron Accubar air-purge bubble sensor, and a Milltronics probe, housed in a NEMA shelter. The shelter is secured atop a stilling well, a vertical 2.5-ft-diameter corrugated metal culvert pipe. An outside staff gage is available for reference. A trapezoidal supercritical flume with a 1.0-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 polyethylene bottles and one 24-count 1-L polyethylene bottles) to collect water-quality samples are triggered by stage through the data logger. The station is powered by a solar-panel battery system. Samplers and batteries are in a 3- × 4-ft steel storage box, separate from the other instrumentation. A tipping bucket rain gage with 0.01-in. resolution is mounted about 30 ft from the station. A line-of-sight radio transceiver provides 5-min stage data from the encoder, bubbler, and probe.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
57	31	34	11	34	9	7

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 precalibrated data for the flume used (U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, A14, 1983, Use of Flumes in Measuring Discharge) and was used throughout the period.

No discharge measurements were taken during the year.

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

E109.9 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0.14	0[DS]	0[DS]	0[DS]	1.2	0.11	0	0	0	0.11
2	0	0	0.11	0[DS]	0[DS]	0[DS]	2.2	0.07	0	0	0	0.11
3	0	0.07	0.14	0[DS]	0[DS]	0[DS]	3[DS]	0.04	0	0	204	0.11
4	13[SS]	0.07[RE]	0.11	0[DS]	0[DS]	0[DS]	2.5[DS]	0.04	0	0	13[SS]	0.11
5	1.2	0.11[RE]	0.86[DS]	0[DS]	0[DS]	0[DS]	1.6	0.07	0	47	0.04[SS]	0.11
6	0	0.14	0.76[DS]	0[DS]	0[DS]	0[DS]	0.83[DS]	0.07	0	2[RE]	86[DS]	0.07
7	14	0.18	0[DS]	0[DS]	0[DS]	0[DS]	0.51	0.04	0	0.5	481[DS]	0.07
8	15[SS]	0.07	0ds	0[DS]	0[DS]	0[DS]	0.2[DS]	0.11	0	0.42	8.4	0.11
9	0	0.07	0[DS]	0[DS]	0[DS]	0[DS]	0.08[DS]	0.04	0	0.21	0.07	0.11
10	0[SS]	0.07	0[DS]	0[DS]	0[DS]	0[DS]	0.07[RE]	0.04	0	0	0.07	0.14
11	0[SS]	0.07	0[DS]	0[DS]	0[DS]	0[DS]	0.07	0.07	0	678	0.07	0.14
12	0[SS]	0.11	0[DS]	0[DS]	0[DS]	0[DS]	0.07	4.9[SS]	0	28	0.07	12
13	0	0.11	0[DS]	0[DS]	0[DS]	0[DS]	0.07	0.14[SS]	0	0.86	18	3
14	0	0.11	0[DS]	0[DS]	0[DS]	0[DS]	0.11	0.04[SS]	0	1.3	14[DS]	0.11
15	0	0.07	0[DS]	0[DS]	0[DS]	0[DS]	0.07	0.04	0	0.76	0.04[SS]	0.11
16	0	0.07	0[DS]	0[DS]	0[DS]	0[DS]	0.11	0.04	0	269	3.6	0.11
17	0	0.07	0[DS]	0[DS]	0[DS]	0[DS]	0.11	0.04	0	0.25[SS]	4.5[SS]	0.14
18	0	0.07	0[DS]	0[DS]	0[DS]	0[DS]	0.07	0	0	1.1	171[SS]	0.14
19	0	0.07	0[DS]	0[DS]	0[DS]	0[DS]	0.07	0[RE]	0[RE]	0	8.1	0.14
20	0	0.07	0[DS]	0[DS]	0[DS]	0[DS]	0.07	0[RE]	0[RE]	0	0.28	0.07
21	0.04	0.07	0[DS]	0[DS]	0[DS]	0[DS]	0.07	0[RE]	0[RE]	0	0.21	0.07
22	0.04	0.07	0[DS]	0[DS]	0[DS]	0[DS]	0.11	0[RE]	0[RE]	0	3.8	0.07
23	0.07	0.11	0[DS]	0[DS]	0[DS]	0[DS]	0.07	0[RE]	0[RE]	0	217	0.11
24	0.14	0.11	0[DS]	0[DS]	0[DS]	0[DS]	0.07	0	0	25	157[SS]	0.14
25	0.07	0.07	0[DS]	0[DS]	0[DS]	0[DS]	0.07	0[RE]	0[RE]	2.2[DS]	0.08[SS]	0.11
26	0.07[RE]	0.11	0[DS]	0[DS]	0[DS]	0.04[DS]	0.11	0[RE]	0	0[DS]	0.08[SS]	0.11
27	0	0.32	0[DS]	0[DS]	0[DS]	3.8[DS]	0.07	0	0	0	0.09[SS]	0.11
28	0	0.21	0[DS]	0[DS]	0[DS]	1.3[DS]	0.11	0	0	0	0.07[RE]	5.9[RE]
29	0	0.07	0[DS]	0[DS]	0[DS]	0.35[DS]	0.07	0	0	0	0.07[RE]	2[SS]
30	0	0.14	0[DS]	0[DS]	—	0.37[DS]	0.11	0	0	0	0.11[RE]	0.07[SS]
31	0	—	0[DS]	0[DS]	—	0.58[DS]	—	0	—	0	0.11	—

E109.9 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	7.3	3.8*	1.2	0	0	5.7	21	1.5	0.00*	139	181	8.8	369
Max Daily Peak (acre-ft)	3	0.25*	0.38	0	0	3.3	5.2	0.44	0.00*	73	52	1.9	73
Min Daily Peak (acre-ft)	0	0.00*	0	0	0	0	0.08	0	0.00*	0	0	0.11	0
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0	0

Sandia Watershed

The Sandia and Mortandad 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 San Ildefonso Pueblo. Sandia Canyon empties into the Rio Grande in White Rock Canyon at an elevation of 5450 ft. The area of Sandia Canyon watershed is approximately 5.5 mi^2. There are no significant tributaries to the Sandia watershed. Perennial stream flow occurs in the upper and middle portions of the canyon system as a result of 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 (SDPPP, Vol. 2).

The figure shows the total monthly volume of discharge for the four stream gage discharge stations within Sandia watershed. Station E123 is located downstream of the Sandia wetlands and receives a similar amount of discharge to the discharge into the wetlands from E121 and E122. Station E121 is directly downstream from the power plant and receives a constant or nearly constant base flow from the power plant. Variations within the discharge are the result of the precipitation events throughout the monsoon season or an increase in the use of air conditioners.

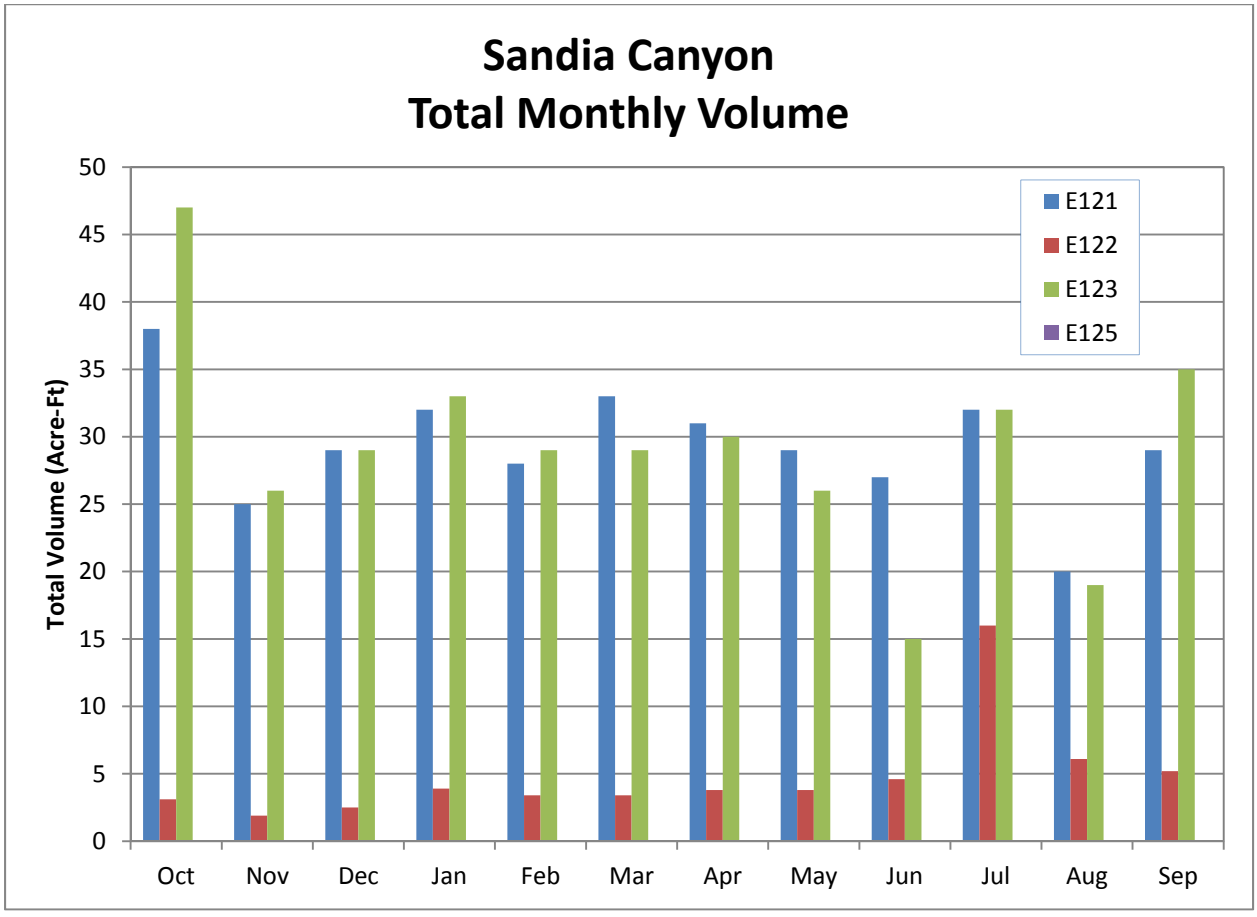


Figure 5 The total monthly volume (acre-ft) for WY2012 for Sandia Canyon

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 mi^2.

Period of Record. October 1, 2006, to September 30, 2012.

Revised Record. Period of record (2008).

Gage. Data logger with radio telemetry. Elevation of gage is 7280 ft using LANL LiDAR DEM with NAD83.

Average Volume. 3 yr, 406 acre-ft/yr.

Extremes for Period of Record. Maximum discharge, 191 ft^3/s, June 21, 2002, from peak-flow computation, gage height 8.1 ft. Minimum discharge 0 ft^3/s, multiple days.

Extremes for Current Water Year. Maximum discharge, 28 ft^3/s, July 11, 2012, gage height 6.5 ft. Minimum discharge, 0.04 ft^3/s, July 25, 2012.

Equipment. The station 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 equipped with an ISCO pump sampler to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-ft metal box. 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 measurements above the wading stage.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
15	12	9	1	n/a	n/a	4

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except for period from August 22 to 29, 2012, when the equipment 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 downstream. The streambed through this reach consists primarily of sand, gravel, and cobbles, moreso below the gage. The low-water control is a bedrock riffle below the gage.

Rating No. 4 was developed based on previous measurements verified with the current year's measurements.

Twelve discharge measurements were made during the year

Discharge. Discharge was computed by applying Rating No. 4 with variable shifts defined by measurements and applied by "V" diagram. No shifts were applied to high flows.

E121 Daily Mean Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.2 DS	0.73 DS	1.6	0.90	1.1	0.90	1.1	1.5	0.95	1.1	0.86	0.72
2	1.2 DS	1.3 DS	1.3	1.1	0.95	1.0	1.8	0.90	0.81	1.5	1.7	0.23
3	1.4 DS	1.0 DS	1.1	0.90	1.3	0.86	2.6	0.90	0.95	1.5	1.3	0.86
4	2.8 DS	1.2 DS	0.90	1.2	1.2	0.86	2.1	0.68	1.0	2.2	1.2	0.72
5	1.7 DS	1.2 DS	1.1	1.0	1.0	1.1	1.6	0.90	0.90	1.0	0.18	0.64
6	1.2 DS	0.99 DS	0.95	1.1	0.77	0.95	0.86	0.90	0.90	1.1	1.2	0.72
7	2.8 DS	0.98 DS	1.0	0.90	0.86	1.0	1.1	1.1	1.7	2.2	1.1	0.68
8	1.4 DS	0.97 DS	0.81	1.3	1.1	1.2	0.95	3.1	1.0	1.1	0.81	0.68
9	1.2 DS	1.2 DS	1.1	0.90	0.86	1.2	1.3	1.0	1.1	0.64	6.9	0.23
10	1.2 DS	0.80 DS	0.86	0.90	1.1	1.1	1.0	0.72	1.1	1.0	1.4	14
11	1.5 DS	0.71 DS	1.1	1.1	0.95	1.6	1.5	0.95	1.3	28	1.2	1.2
12	1.2 DS	0.97 DS	0.86	1.1	0.90	1.2	1.1	0.90	1.6	2.3	1.6	4.0
13	1.3 DS	1.3 DS	1.3	0.95	0.95	1.1	1.1	3.0	0.86	2.0	1.1	0.95
14	1.5 DS	1.1 DS	1.3	1.0	0.95	1.2	0.90	1.2	0.81	2.3	1.1	0.86
15	1.3 DS	0.89 DS	1.2	0.95	0.86	0.81	0.81	0.77	1.2	1.5	0.68	0.86
16	1.1 DS	0.92 DS	0.81	1.7	1.2	1.1	0.95	1.1	1.1	2.2	3.8	0.27
17	1.2 DS	0.91 DS	1.1	0.86	1.0	0.90	1.3	1.7	0.86	1.3	0.81	0.81
18	1.0 DS	1.0 DS	1.1	0.95	1.0	1.1	1.1	0.86	1.4	1.7	0.81	1.1
19	1.4 DS	0.76 DS	1.2	1.3	1.3	1.3	1.1	0.21	0.95	2.8	2.5	0.77
20	1.1 DS	0.74 DS	0.81	1.2	0.81	1.5	0.95	0.86	0.81	1.5	4.5	0.77
21	1.3 DS	1.1	1.0	1.0	0.86	1.2	1.0	0.90	0.86	0.32	1.1	0.81
22	1.2 DS	0.81	0.86	0.95	0.86	1.3	1.1	1.4	0.81	1.3	E	0.77
23	1.4 DS	0.77	1.1	1.1	1.1	1.1	0.95	1.3	0.90	2.1	E	0.27
24	0.95 DS	0.72	0.95	1.1	1.1	1.1	0.77	1.6	0.90	1.8	E	1.2
25	0.94 DS	1.1	0.95	0.90	0.95	1.1	1.5	1.1	0.77	10	E	1.0
26	3.1 DS	0.77	1.1	1.1	1.0	1.2	1.1	1.2	0.86	1.5	E	1.0
27	1.5 DS	1.2	1.4	0.90	1.1	1.1	1.1	1.2	0.72	1.5	E	1.1
28	1.1 DS	0.95	0.90	1.1	0.86	1.2	1.3	1.0	2.2	0.90	E	9.2
29	1.4 DS	1.2	0.86	0.95	0.90	1.3	1.0	0.90	0.61	0.20	E	1.1
30	1.1 DS	0.90	1.0	1.1	—	1.5	0.86	1.1	0.57	1.3	0.72	0.41
31	0.83 DS	—	0.86	0.81	—	1.2	—	1.3	—	1.1	0.68	—

E121 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	38	25	29	32	28	33	31	29	27	32	20	29	353
Max Daily Peak (acre-ft)	1.9	1.5	1.3	1.3	1.2	1.5	1.6	1.6	1.2	2.0	1.3	1.9	2.0
Min Daily Peak (acre-ft)	0.74	0.32	0.64	0.84	0.70	0.75	0.59	0.41	0.56	0.37	0.32	0.41	0.32
Missing Days	0	0	0	0	0	0	0	0	0	0	8	0	8

E122 Sandia Canyon near Roads and Grounds at TA-3

Location. Lat 35° 52' 31", long –106° 9' 6", SW ¼, Sec. 16, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 0.08 mi^2.

Period of Record. October 1, 2006, to September 30, 2012.

Gage. Data logger with radio telemetry. Elevation of gage is 7288 ft using LANL LiDAR DEM with NAD83.

Average Volume. 3 y.,32 acre-ft/yr.

Extremes for Period of Record. Maximum discharge, 88 ft^3/s, August 23, 2003, gage height 4.2 ft. Minimum daily discharge 0 ft^3/s, multiple days.

Extremes for Current Water Year. Maximum discharge, 19 ft^3/s, July 7, 2012, gage height 3.13 ft. Minimum daily discharge 0 ft^3/s, October 1, 2011.

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a Milltronics sonic probe. 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 separate shelter, a 3- × 4-ft metal box. The sampler 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.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
16	10	8	4	n/a	n/a	0

Datum Correction. None; the levels of July 25, 2005, found 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 from October 26 to 27, 2011, on November 1 and 5, 2011, on January 16, 2012, on February 19, 22, and 23, 2012,from March 8 to 11 and on March 18, 2012, from April 2 to 3, 2012, when the gage was affected by ice, and on September 6, 21, 2012, when the data were missing.

Rating. The channel is straight for about 20 ft above 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 gage. The low-water control is a bedrock riffle below the gage.

Rating No. 2 was developed based on the measurements made the previous year and verified with measurements made this year. The shifts are small and mostly negative, caused by small amounts of deposition near the gage or some bank slough during high flows. They have been distributed using variable diagrams with no shifts applied on the peak flows.

Fifteen discharge measurements were made during the year.

Discharge. Discharge was computed from Rating No.2 with shifts applied by “V” diagrams.

E122 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0.18	I	0.08	0.11	0.15	0.11	0.15	0.13	0.19	0.30	0.29	0.69
2	0.17	0.09[DS]	0.05	0.11	0.14	0.12	I	0.11	0.18	4.6	1.5	0.18
3	0.18	0.11[DS]	0.22	0.11	0.13	0.11	I	0.12	0.19	1.5	1.0	0.19
4	1.2	0.11[DS]	0.06	0.13	0.23	0.14	0.54	0.12	0.18[RE]	1.4	0.18	0.17
5	0.78	I	0.05	0.12	0.15	0.13	0.14	0.11	0.18	0.23	0.29	0.17
6	0.11	0.12[DS]	0.10	0.11	0.15	0.16	0.12	0.11	0.18	4.8	0.34	M
7	1.3	0.13[DS]	0.09	0.13	0.14	0.12	0.12	0.09	0.22	19[RC]	0.29	0.20
8	0.20	0.11[DS]	0.07[DS]	0.11	0.12	I	0.13	2.1	0.17	16.9	0.26	0.16
9	0.11	0.12[DS]	0.07[DS]	0.11	0.14	I	0.13	0.09	0.17	14.1	0.32	0.19
10	0.12	0.13[DS]	0.07[DS]	0.12	0.13	I	0.14	0.10	0.15	12.7	0.30	3.9
11	0.12	0.12[DS]	0.06[DS]	0.14	0.15	I	0.13	0.22	0.17	9.1	0.29	0.15
12	0.12	0.13[DS]	0.16[DS]	0.09	0.12	0.13	0.13	0.11	0.17	0.49	1.1	2.1
13	0.14	0.53[DS]	0.33[DS]	0.11	0.27	0.15	0.11	1.6	0.17	0.27	0.29	0.60
14	0.14	0.13[DS]	0.25[DS]	0.11	0.14	0.14	0.11	0.10	0.25	0.25	0.29	0.15
15	0.14	0.13[DS]	0.05[DS]	0.11	0.12	0.16	0.10	0.10	0.20	0.17	0.18	0.16
16	0.13	0.11[DS]	0.07[DS]	I	0.14	0.15	0.11	0.11	0.21	0.29	2.7	0.16
17	0.12	0.11[DS]	0.04[DS]	0.13	0.16	0.16	0.13	0.10	0.33[RE]	0.25	0.25	0.17
18	0.11	0.12[DS]	0.06[DS]	0.10	0.14	I	0.11	0.11	0.36	0.25	0.16	0.17
19	0.11	0.11[DS]	0.07[DS]	0.11	I	0.11	0.11	0.09	0.20	0.21	2.0	0.19
20	0.15[DS]	0.15[DS]	0.14[DS]	0.17	0.17	0.12	0.12	0.11	0.36	0.26	2.6	0.17
21	0.11[DS]	0.10[DS]	0.09[DS]	0.18	0.11	0.15	0.13	0.09	0.19	0.27	0.19	M
22	0.11[DS]	0.11[DS]	0.09[DS]	0.12	I	0.13	0.13	0.13	0.21	0.27	0.53	0.21
23	0.13[DS]	0.08	0.09	0.11	I	0.13	0.11	0.10	0.16	0.30	0.18	0.20
24	0.11[DS]	0.08	0.15	0.12	0.11	0.18	0.12	0.08	0.24	0.33	0.16	0.21
25	0.10[DS]	0.67	0.11	0.14	0.13	0.17	0.12	0.10	0.30	3.5	0.19	0.20
26	I	0.07	0.09	0.15	0.14	0.16	0.12	0.11	0.17	0.27	0.18	0.21
27	I	0.07	0.10	0.15	0.12	0.15	0.09	0.10	0.30	0.25	0.17	0.22
28	0.11[DS]	0.09	0.11	0.13	0.11	0.15	0.11	0.11	0.19	0.25	0.18	3.8
29	0.11[DS]	0.06	0.11	0.16	0.11	0.14	0.12	0.11	0.21	0.17	0.19	0.17
30	0.11[DS]	0.08	0.14	0.15	—	0.16	0.12	0.11	0.25	0.24	0.18	0.20
31	0.10[DS]	—	0.13	0.16	—	0.21	—	0.19	—	0.26	0.18	—

E122 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	3.1	1.9	2.5	3.9	3.4	3.4	3.8	3.8	4.6[RE]	16	6.1	5.2	3.1
Max Daily Peak (acre-ft)	0.34	0.18	0.27	0.17	0.2	0.16	0.28	0.34	0.22[RE]	6.4	0.33	0.63	0.34
Min Daily Peak (acre-ft)	0.05	0.03	0.02	0.1	0.11	0.1	0.11	0.07	0.13[RE]	0.15	0.14	0.05	0.05
Missing Days	2	2	0	1	3	5	2	0	0	0	0	2	17

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 mi^2.

Period of Record. August 1, 1999, to September 30, 2012.

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

Gage. Data logger with radio telemetry. Elevation of gage is 7201 ft using LANL LiDAR DEM with NAD83.

Average Volume. 3 yr., 726 acre-ft/yr.

Extremes for Period of Record. Maximum discharge, 88 ft^3/s, August 23, 2003, gage height 4.2 ft. Minimum discharge 0 ft^3/s during water year 2011.

Extremes for Current Water Year. Maximum discharge, 18 ft^3/s, July 11, 2012, gage height 2.5 ft. Minimum discharge 0 ft^3/s multiple days.

Equipment. The station 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 to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-ft steel storage box. The sampler 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.

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

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
16	8	6	4	n/a	n/a	0

Datum Correction. None; the levels run June on 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 for the year, except on November 25, 2011, and from December 6 to 7 and 24 to 26, 2011, when the gage was affected by ice, from June 20 to 29, 2012, when the equipment malfunctioned, and from August 9 to 23, 2012, when the data were missing.

Rating. The channel is trapezoidal with a rock outcrop and small depositional bars within pools. The banks have some grass, not very tall or thick. The channel is straight for about 100 ft above and below the gage.

Rating No. 4 was determined to be used after temporary flume was installed downstream. Flume has since been removed. 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.

Fourteen discharge measurements were made during the year.

Discharge. Discharge was computed from Rating No. 4 with shifts applied by “V” diagrams.

E123 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	1.9 DS	0.84 DS	1.8	0.98	1.0	0.92	0.61	1.2	0.81	1.1	1.1	1.1
2	1.9 DS	1.6 DS	1.5	0.98	1.0	1.0	2.00	0.81	0.71	2.5	2.2	0.41
3	1.9 DS	0.93 DS	1.7	0.98	1.3	0.81	4.5	0.81	0.87	0.98	2.0	1.1
4	5.1 DS	1.0 DS	1.2	1.1	1.6	0.81	3.5	0.71	0.92	2.3	1.4	1.0
5	3.2 DS	1.5 DS	1.5	1.2	1.2	0.98	1.5	0.92	0.81	0.92	0.41	1.0
6	1.9 DS	0.88 DS	I	1.2	0.87	0.98	0.76	0.92	0.81	1.2	1.4	1.0
7	5.4 DS	0.92 DS	I	1.1	0.92	0.98	0.92	1.0	1.1	3.0	1.3	0.98
8	2.9 DS	1.1 DS	1.1	1.3	1.1	1.2	0.87	6.5	0.92	1.3	1.2	0.92
9	1.7 DS	1.7 DS	1.1	0.98	0.92	1.2	1.2	0.92	0.98	0.81	M	0.27
10	1.8 DS	0.93 DS	1.1	0.98	1.1	1.1	0.92	0.71	0.98	0.66	M	10.5
11	2.2 DS	0.92 DS	1.2	1.0	1.0	1.6	1.2	0.87	0.92	18	M	1.2
12	1.7 DS	1.2 DS	1.0	1.1	1.0	1.0	0.98	0.87	1.3	1.7	M	6.6
13	1.9 DS	3.0 DS	2.2	0.92	1.3	1.0	0.87	5.8	0.81	1.5	M	2.4
14	2.1 DS	1.2 DS	3.2	1.0	0.98	0.98	0.92	1.2	0.76	1.6	M	0.92
15	1.9 DS	0.97 DS	1.5	1.1	0.92	0.71	0.81	0.76	1.1	1.2	M	0.92
16	1.4 DS	1.1 DS	0.98	1.9	1.2	0.87	0.92	0.98	0.98	1.7	M	0.24
17	1.5 DS	1.1 DS	1.3	0.87	1.1	0.81	1.3	1.6	0.81	0.98	M	0.92
18	1.2 DS	1.2 DS	1.3	0.98	1.1	0.98	1.0	0.71	1.1	1.3	M	1.1
19	1.7 DS	0.86 DS	1.3	1.4	1.3	1.0	1.0	0.17	0.92	2.2	M	0.92
20	1.3 DS	0.89 DS	1.1	1.4	0.92	1.2	0.92	0.76	E	1.2	M	0.92
21	1.4 DS	1.2 DS	1.2	1.2	0.98	1.0	0.98	0.87	E	0.76	M	0.98
22	1.4 DS	1.2 DS	1.0	1.0	1.0	1.2	1.0	0.98	E	1.1	M	0.92
23	1.7 DS	1.2	1.2	1.2	1.2	0.92	0.92	1.0	E	1.6	M	0.24
24	1.1 DS	1.1	I	1.2	1.2	1.0	0.81	0.98	E	1.3	1.0	1.3
25	1.0 DS	I	I	1.1	0.87	0.92	1.3	0.92	E	4.8	1.3	1.2
26	6.2 DS	1.1	I	1.5	1.0	1.0	1.1	0.92	E	1.5	0.53	1.1
27	2.1 DS	1.3	1.3	1.1	1.2	0.92	0.98	0.92	E	1.6	1.0	1.0
28	1.4 DS	1.2	1.1	1.2	0.76	1.1	1.0	0.76	E	0.76	1.2	8.4
29	1.8 DS	1.4	1.0	1.1	0.98	1.1	0.98	0.76	E	0.37	1.0	0.81
30	1.4 DS	1.2	1.2	1.2	—	1.2	0.81	0.76	0.81	1.4	0.98	0.24
31	0.97 DS	—	1.0	0.98	—	0.98	—	0.92	—	0.98	0.98	—

E123 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	47	26	29	33	29	29	30	26	15	32	19	35	350
Max Daily Peak (acre-ft)	3.0	1.5	2.1	1.5	1.2	1.2	2.1	1.9	1.0	1.9	1.6	2.6	3.0
Min Daily (acre-ft)	0.59	0.18	0.67	0.80	0.70	0.64	0.46	0.27	0.52	0.39	0.50	0.44	0.59
Missing Days	0	1	5	0	0	0	0	0	10	0	15	0	31

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 mi^2.

Period of Record. October 1, 1994, to September 30, 2012.

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 NAD83.

Average Volume. 3 yr, 0 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 59 ft^3/s, August 25, 2006, gage height 3.6 ft (from slope-area measurement).

Maximum Discharge for Current Water Year. No flow for the year.

Equipment. The station 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. All equipment is housed in a NEMA shelter on an 18-in. corrugated metal pipe well. The station is equipped with an ISCO pump sampler to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-ft metal box. The sampler 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.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
16	5	10	4	10	4	0

Datum Correction. None.

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

Rating. The channel is straight for 150 ft above and 100 ft below the gage. 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 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 (ft^3/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	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	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	—

E125 Monthly Summary Table

	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	0.00[RE]	0	0	0	0
Max Daily Peak (acre-ft)	0	0	0	0	0	0	0	0	0.00[RE]	0	0	0	0
Min Daily Peak (acre-ft)	0	0	0	0	0	0	0	0	0.00[RE]	0	0	0	0
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0	0

Mortandad Watershed

The Mortandad watershed is located within the central part of LANL. The Mortandad watershed is located in the central portion of LANL and covers approximately 10 mi^2. The watershed contains a stream that is entirely ephemeral; neither perennial springs nor natural perennial reaches occur. The Mortandad watershed trends east-to-southeast and heads on the Pajarito Plateau near the main Laboratory 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 San Ildefonso Pueblo 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 storm water runoff from seasonal snow and rain storms flow for a limited distance in the upper canyon and occasionally as far as the sediment traps. Ten Site Canyon lies south of and extends parallel to Mortandad Canyon for about 1.5 mi. Ten Site Canyon 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, San Ildefonso Pueblo land, and Los Alamos County and ends at its confluence with Mortandad Canyon at an elevation of 5620 ft approximately 0.5 mile upstream of the Rio Grande (SDPPP, Vol. 2).

The figure shows the total monthly volume of discharge at three stream gage discharge stations within the Mortandad and Cañada del Buey watershed. The upstream stream gage discharge station, E201, was the only site to record discharge within the watershed. This could be the result of transmission loss as the discharge travels downstream within the canyons.

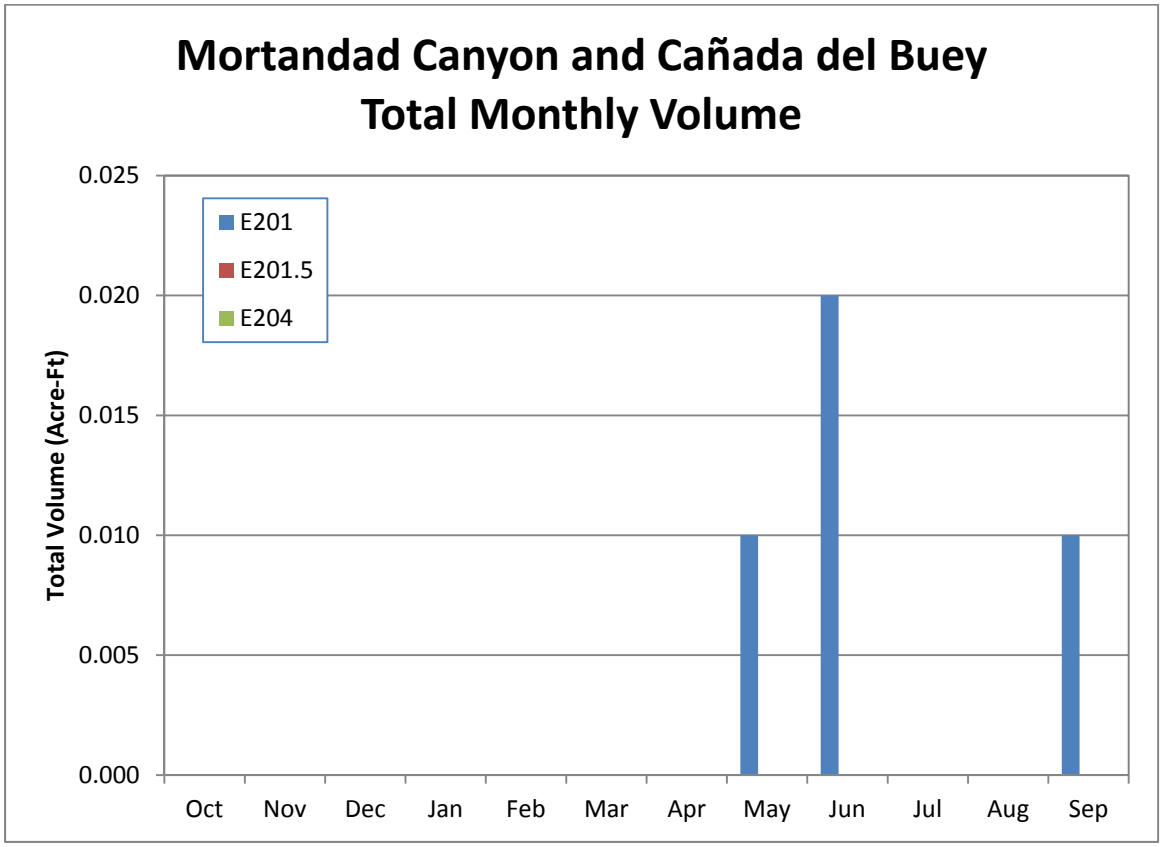


Figure 6 Total monthly volume (acre-ft) for WY2012 in Mortandad Canyon and Cañada del Buey

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 mi^2.

Period of Record. October 1, 2006, to September 30, 2012.

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 NAD83.

Average Volume. 3 yr, 0.1 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 78 ft^3/s, August 10, 2008, gage height 2.4 ft.

Maximum Discharge for Current Water Year. Maximum discharge, 0.22 ft^3/s, July 10, 2012, gage height 0.7 ft.

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a Milltronics sonic probe mounted on a 10-ft flume. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is equipped with an ISCO pump sampler to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-ft metal box. The sampler 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.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
18	9	11	6	n/a	n/a	0

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except for periods from December 4, 2011, to January 30, 2012, and February 17 to February 29, 2012, when the gage height was affected by ice. Also, from March 17 to April 16, 2012, the equipment malfunctioned.

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 (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	I	0	0	E	0	0.03	0	0	0
2	0	0	0	I	0	0	E	0	0.03	0	0	0
3	0	0	0	I	0	0	E	0	0	0	0	0.06
4	0	0	I	I	0	0	E	0.03	0.06	0	0	0
5	0	0	I	I	0	0	E	0	0.03	0	0	0
6	0	0	I	I	0	0	E	0.03	0.03	0	0	0.03
7	0	0	I	I	0	0	E	0	0.06	0.03	0.03	0.03
8	0	0	I	I	0	0	E	0	0.03	0	0.06	0
9	0	0	I	I	0	0	E	0	0.03	0	0	0
10	0	0	I	I	0	0	E	0	0	0.22	0	0
11	0	0	I	I	0	0	E	0	0.06	0	0.03	0
12	0	0	I	I	0	0	E	0	0	0	0.06	0
13	0	0	I	I	0	0	E	0	0	0	0	0
14	0	0	I	I	0	0	E	0	0.06	0	0	0
15	0	0	I	I	0	0	E	0.06	0.03	0	0	0
16	0	0	I	I	0	0	E	0.03	0	0	0	0.06
17	0	0	I	I	I	E	0	0	0.03	0	0	0
18	0	0	I	I	I	E	0	0.03	0.06	0	0	0
19	0	0	I	I	I	E	0	0	0[RE]	0	0	0.03
20	0	0	I	I	I	E	0	0	0	0	0	0.03
21	0	0	I	I	I	E	0.03	0	0	0	0	0.06
22	0	0	I	I	I	E	0	0	0	0	0	0
23	0	0	I	I	I	E	0	0	0.03	0	0	0
24	0	0	I	I	I	E	0	0	0	0	0	0.03
25	0	0	I	I	I	E	0	0.03	0	0	0	0
26	0	0	I	I	I	E	0	0.03	0.06	0	0	0.03
27	0	0	I	I	I	E	0	0.03	0.03	0	0	0
28	0	0[RE]	I	I	I	E	0	0.1	0	0	0.03	0.03
29	0	0	I	I	I	E	0	0.1	0.03	0	0	0
30	0	0	I	I	—	E	0	0.06	0	0.03	0	0
31	0	—	I	0	—	E	—	0.03	—	0	0	—

E201 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0	0.00 [RE]	0	0	0	0	0	0.01	0.02[RE]	0	0	0.01	0.04
Max Daily Peak (acre-ft)	0	0.00 [RE]	0	0	0	0	0	0	0.00 [RE]	0	0	0	0
Min Daily Peak (acre-ft)	0	0.00 [RE]	0	0	0	0	0	0	0.00 [RE]	0	0	0	0
Missing Days	0	0	28	30	12	15	16	0	0	0	0	0	101

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 mi^2.

Period of Record. October 2000 to September 30, 2012.

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 NAD83.

Average Volume. 3 yr, 0 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 303 ft^3/s, August 25, 2006, gage height 4.6 ft (from slope-area measurement of peak flow).

Maximum Discharge for Current Water Year. No flow for the year.

Equipment. The station 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 to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-ft metal box. 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.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
16	4	10	3	n/a	n/a	0

Datum Correction. On May 24, 2007, the gage was set to correct the datum. The gage was destroyed by flood on August 25, 2006. The bubbler outlet was reset to a gage datum of 1.33 ft.

Gage-Height Record. The data logger reference to the outside staff gage gave a complete and satisfactory record, except from January 4 to January 11, 2012, and January 14 to February 5, 2012, when the gage height was affected by ice.

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-degree sharp-crested weir and one critical-depth computation.

No discharge measurements were made during the year.

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

E201.5 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	I	0	0	0	0	0	0	0
2	0	0	0	0	I	0	0	0	0	0	0	0
3	0	0	0	0	I	0	0	0	0	0	0	0
4	0	0	0	I	I	0	0	0	0	0	0	0
5	0	0	0	I	I	0	0	0	0	0	0	0
6	0	0	0	I	0	0	0	0	0	0	0	0
7	0	0	0	I	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	0	0
10	0	0	0	I	0	0	0	0	0	0	0	0
11	0	0	0	I	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	I	0	0	0	0	0	0	0	0
15	0	0	0	I	0	0	0	0	0	0	0	0
16	0	0	0	I	0	0	0	0	0	0	0	0
17	0	0	0	I	0	0	0	0	0	0	0	0
18	0	0	0	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	I	0	0	0	0	0	0	0	0
22	0	0	0	I	0	0	0	0	0	0	0	0
23	0	0	0	I	0	0	0	0	0	0	0	0
24	0	0	0	I	0	0	0	0	0	0	0	0
25	0	0	0	I	0	0	0	0	0	0	0	0
26	0	0	0	I	0	0	0	0	0	0	0	0
27	0	0	0	I	0	0	0	0	0	0	0	0
28	0	0	0	I	0	0	0	0	0	0	0	0
29	0	0	0	I	0	0	0	0	0	0	0	0
30	0	0	0	I	—	0	0	0	0	0	0	0
31	0	—	0	I	—	0	—	0	—	0	0	—

E201.5 Monthly Summary Table

	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 (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Daily Peak (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	0	0	26	5	0	0	0	0	0	0	0	31

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 mi^2.

Period of Record. October 1, 1993, to September 30, 2012.

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 NAD83.

Average Volume. 3 yr, zero.

Maximum Discharge for Period of Record. No flow for the period.

Maximum Discharge for Current Water Year. No flow for the year.

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and shaft encoder float system. 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 an ISCO pump sampler to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-ft metal box. Samplers are 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 will be by slope-area or critical-depth computation methods.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
15	5	10	3	10	3	0

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 gage 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 gage.

No rating has been developed; the PZF is well defined for the concrete broad-crested weir.

No discharge measurements were made during the year.

Discharge. All recorded values were below PZF. No flow occurs most of the time. Days with rain did not produce enough flow to pass over the control.

E204 Daily Peak Discharge (ft^3/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	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	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	—

E204 Monthly Summary Table

	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 (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Daily Peak (acre-ft)	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 mi^2 in area. The head of the watershed is located in the Sierra de los Valles at an elevation of 10,441 ft at Pajarito Mountain. 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 the western boundary of LANL. 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 has a length of approximately 5 mi and a drainage area of 3.1 mi^2, 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/or 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 (SDPPP, Vol. 3).

The figure shows the total monthly volume of discharge for the four stream discharge gage stations within the Pajarito watershed. The upper boundary stream gage discharge station E240 had minimal monthly discharge during the monsoon seasons. This could have been the result of the summer storm paths tracking towards the eastern and higher elevation sections of LANL. Station E245.5 received a significantly higher amount of discharge in July than the other stations within the watershed. This could have been the result of increased urban runoff into the canyon bottom than the upper boundary station and localized precipitation storm events. As the discharge travels downstream it only makes it to the lower boundary station within the month of July. For the remaining months, no downstream discharge occurs because of stream transmission losses.

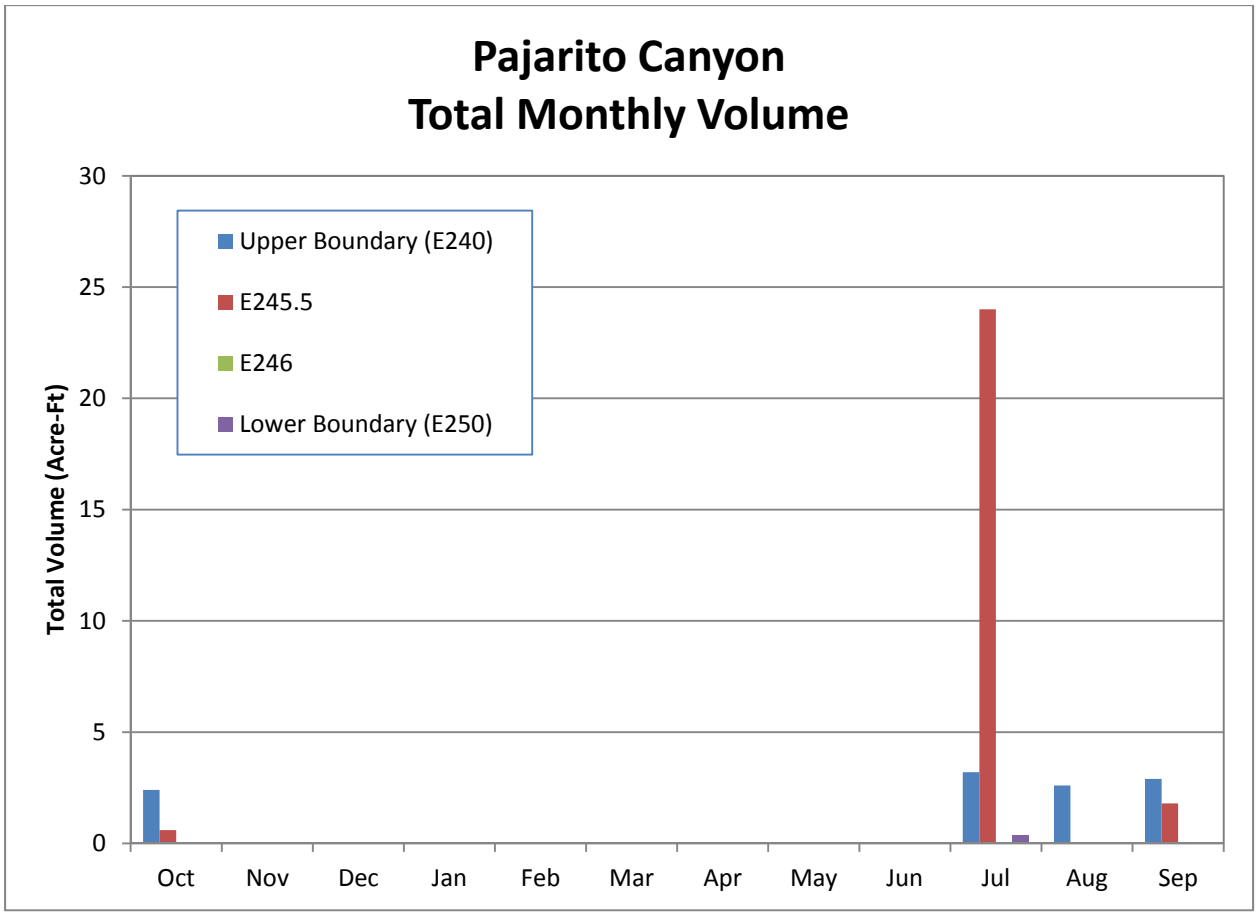


Figure 7 Total monthly volume (acre-ft) for WY2012 for Pajarito Canyon

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 mi^2.

Period of Record. October 1993 to June 28, 2000 (destroyed by flood); April 2001 to September 30, 2012.

Revised Record. WDR 1997: Gage height "Extremes for Period of Record." Drainage area (2006). Levels date published as 2004, correction December 2001 (2008).

Gage. Data logger with radio telemetry. Elevation of gage is 7719 ft using LANL LiDAR DEM with NAD83. Formerly published as "Pajarito Canyon above Highway 501 near Los Alamos, NM" at different datum.

Average Volume. 3 yr, 31 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 1020 ft^3/s, June 28, 2000, from peak-flow computation; gage height not determined.

Maximum Discharge for Current Water Year. Maximum discharge, 93 ft^3/s, July 11, 2012, gage height 2.1 ft.

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and shaft encoder float system. 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 an ISCO pump sampler to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-ft metal box. The sampler 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 station is also equipped with a rain gage, Rain Collection II. All equipment is powered with a solar-panel battery-charging system.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
32	9	15	8	6	6	5

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.

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

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. 3 using variable shift diagrams.

E240 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0
2	23	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0
3	0	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	8.2[SS]	0
4	9.7[SS]	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0.29	0[SS]	0
5	0[SS]	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
6	0	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
7	0.01	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
8	0	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
9	0	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
10	0	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	3.50
11	0	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	93[SS]	0[SS]	0
12	0	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0[SS]	0[SS]	12
13	0	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0[SS]	0[SS]	0[SS]
14	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0[SS]	0[SS]	0
15	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0[SS]	0[SS]	0
16	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0[SS]	21[SS]	0
17	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0[SS]	0[SS]	0
18	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
19	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
20	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	16[SS]	0
21	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
22	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
23	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0.10	0	0
24	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
25	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0.06	0	0
26	0.03	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
27	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
28	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	46[SS]
29	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0[SS]
30	0	0	0[DS]	0[DS]	—	0[DS]	0	0	0	0	0	0[SS]
31	0	—	0[DS]	0[DS]	—	0[DS]	—	0	—	0	0	—

E240 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	2.4	0	0	0	0	0	0	0	0	3.2	2.6	2.9	11
Max Daily Peak (acre-ft)	1.8	0	0	0	0	0	0	0	0	3.2	0.87	2	3.2
Min Daily Peak (acre-ft)	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

E245.5 Pajarito Canyon above Three Mile Canyon

Location. Lat 35° 50’ 45.3”, long -106° 16’ 29”, Sec. 16, T. 19 N., R. 6 E., Ramon Vigil Grant, Los Alamos County.

Drainage Area. 7.81 mi^2.

Period of Record. October 1, 2002, to September 30, 2012.

Revised Record. Drainage area (2008).

Gage. Data logger and radio telemetry. Elevation of gage is 6796 ft using LANL LiDAR DEM with NAD83.

Average Volume. 3 yr, 40 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 479 ft^3/s, August 21, 2011, gage height 3.8 ft.

Maximum Discharge for Current Water Year. Maximum discharge, 407 ft^3/s, July 11, 2012, gage height 3.5 ft.

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a Milltronics sonic probe. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is equipped with an ISCO pump sampler to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-ft metal box. 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 stage.

The station is also equipped with a tipping bucket rain gage, Rain Collection II. All equipment is powered with a solar-panel battery-charging system.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
18	5	7	4	n/a	n/a	1

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 for periods from March 4 to April 11, 2012, and May 21 to May 24, 2012, when the equipment malfunctioned, and from December 5 to December 8, 2011, and February 9 to March 3, 2012, when the gage height was affected by ice. Also, from December 9, 2011, to February 8, 2012, on June 15, 2012, and on August 6, 2012, data were missing.

Rating. The channel is straight for 80 ft above and below the gage. 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.

One discharge measurement was made during the year.

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

Daily Peak Discharge (ft^3/s) for E245.5

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	M	M	I	E	0	0	0	0	0
2	0.87	0	0	M	M	I	E	0	0	0	0	0
3	0	0	0[RE]	M	M	I	E	0	0	0	0	0
4	6.3	0	0	M	M	E	E	0	0	0	0	0
5	0.3	0	I	M	M	E	E	0	0	0	0	0
6	0	0	I	M	M	E	E	0	0	0	M	0
7	0	0	I	M	M	E	E	0	0	0	0	0
8	0	0	I	M	M	E	E	0	0	0	0	0
9	0	0	M	M	I	E	E	0	0	0	0	0
10	0	0	M	M	I	E	E	0	0	0	0	0
11	0	0	M	M	I	E	E	0	0	407	0	0
12	0	0	M	M	I	E	0	0	0	0.18	0	0
13	0	0	M	M	I	E	0	0	0	0	0	0.39
14	0	0	M	M	I	E	0	0	0	0	0	0
15	0	0	M	M	I	E	0	0	M	0	0	0
16	0	0	M	M	I	E	0[RE]	0	0	0[RE]	0.13	0
17	0	0	M	M	I	E	0	0	0	0[RE]	0.09	0
18	0	0	M	M	I	E	0	0	0	0[RE]	0	0
19	0	0	M	M	I	E	0	0	0	0	0	0
20	0	0	M	M	I	E	0	0	0	0	0	0
21	0	0	M	M	I	E	0	E	0	0	0	0
22	0	0	M	M	I	E	0	E	0	0	0	0
23	0	0	M	M	I	E	0	E	0	0	0	0
24	0	0	M	M	I	E	0	E	0	0	0	0
25	0	0	M	M	I	E	0	0	0	0	0	0
26	0	0	M	M	I	E	0	0	0	0	0	0
27	0	0	M	M	I	E	0	0	0	0	0	0
28	0	0	M	M	I	E	0	0	0	0	0	21
29	0	0	M	M	I	E	0	0	0	0	0	0
30	0	0	M	M	—	E		0	0	0	0	0
31	0	—	M	M	—	E	—	0	—	0	0	—

E245.5 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	0.60	0	0.00[RE]	M	I	E	0.00[RE]	0	0.00[RE]	24[RE]	0.01	1.8	26
Max Daily Peak (acre-ft)	0.47	0	0.00[RE]	M	I	E	0.00[RE]	0	0.00[RE]	24[RE]	0.01	1.8	24
Min Daily (acre-ft)	0	0	0.00[RE]	M	I	E	0.00[RE]	0	0.00[RE]	0.00[RE]	0	0	0
Missing Days	0	0	27	31	29	31	12	4	1	0	1	0	136

E246 Three Mile Canyon above Pajarito Canyon

Location. Lat 35° 50’ 20”, long –106° 16’ 17”, Sec. 35, T. 19 N., R. 6 E., Ramon Vigil Grant, Los Alamos County.

Drainage Area. 1.62 mi^2.

Period of Record. October 1998 to September 30, 2012.

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 NAD83.

Average Volume. 3 yr, 3 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 536 ft^3/s, August 25, 2006, gage height 3.5 ft from critical-depth computation of peak flow.

Maximum Discharge for Current Water Year. No flow for the year.

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a Milltronics sonic probe 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 equipped with an ISCO pump sampler to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-ft metal box. The sampler 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.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
18	5	7	4	n/a	n/a	1

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except from December 4 to 31, 2011, when the gage height was affected by ice.

Rating. The channel is straight above and below the gage. It is confined to the main channel by cutbanks on both sides. The bottom is 10 ft wide; 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 on the basis of two critical-depth computations. The PZF flow 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 (ft^3/s)

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

E246 Monthly Summary Table

	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 (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Daily Peak (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	0	28	0	0	0	0	0	0	0	0	0	28

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 Grant, Los Alamos County.

Drainage Area. 10.6 mi^2.

Period of Record. November 1993 to August 25, 2006 (destroyed by flood); September 2006 to September 30, 2012.

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 NAD83.

Average Volume. 3 yr, 10.3 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 206 ft^3 /s, August 25, 2006, gage height 4.6 ft (from peak-flow computations).

Maximum Discharge for Current Water Year. Maximum discharge, 1.2 ft^3/s, July 12, 2012, gage height 2.2 ft.

Equipment. The station 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 equipped with an ISCO pump sampler to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-ft metal box. 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 stage.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
16	6	10	3	n/a	n/a	0

Datum Correction. None. The most recent levels run on 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.

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

Rating No. 1 was developed from a 90-degree weir plate formula and broad-crested weir computation above the notch. Rating No. 1 continued to be 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 (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0
2	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0
3	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0
4	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0
5	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0
6	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0
7	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0
8	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0
9	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0
10	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
11	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
12	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	1.2	0	0
13	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
14	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
15	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
16	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
17	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
18	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
19	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
20	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
21	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
22	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
23	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
24	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
25	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
26	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
27	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
28	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
29	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0	0
30	0	0	0[DS]	0[DS]	—	0[DS]	0	0	0	0	0	0
31	0	—	0[DS]	0[DS]	—	0[DS]	—	0	—	0	0	—

E250 Monthly Summary Table

	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	0.38	0	0	0.38
Max Daily Peak (acre-ft)	0	0	0	0	0	0	0	0	0	0.38	0	0	0.38
Min Daily (acre-ft)	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

Water/Cañon de Valle watershed

The Water/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. The drainage extends east/southeast 9.7 mi across the entire LANL property before it crosses into the community of White Rock. The drainage passes through White Rock for 0.5 mi before joining the Rio Grande at an elevation of 5427 ft. The drainage extends 13.8 mi from its headwaters to its confluence with the Rio Grande, draining an area of 19 mi^2. Primary canyons within this watershed are Cañon de Valle, the primary tributary to Water, Potrillo, and Fence Canyons.

The Water/Cañon de Valle watershed consists mainly of occasional perennial reaches arising from springs that occur in the upper reaches of the watershed; however, streams in Potrillo and Fence Canyons are entirely ephemeral in nature. Springs on the flanks of the Jemez Mountain, west of LANL's western boundary, supply flow to the upper reaches of Water/Cañon de Valle watershed. Perennial water exists from NM 501 to the eastern edge of TA-28 in Upper Water 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. Flow in Water Canyon from the southwest LANL boundary to the confluence with Cañon de Valle sometimes results from surface water flow from Water Canyon, located in Water Canyon west of LANL. Sections of the upper portion of the Water/Cañon de Valle watershed burned during the Las Conchas fire in June and July 2011. The Water/Cañon de Valle watershed contains, or may influence, three wetland areas totaling approximately 0.23 acres.

Water Canyon originates west of LANL on the eastern slopes of the Sierra de Los Valles in the Santa Fe National Forest at an elevation of 9943 ft. The canyon extends east-southeast 2.6 mi across the Santa Fe National Forest before crossing into LANL at the western boundary of TA-16. The canyon extends east-southeast across the entire Laboratory and is joined by Cañon de Valle and Potrillo Canyon just before it crosses into the community of White Rock. The canyon extends through White Rock for 0.5 mi before reaching the Rio Grande at an elevation of 5427 ft. Water Canyon has a channel length of 13.8 mi and a drainage area of 8.8 mi^2. On a regional scale, Water Canyon is an interrupted stream. Several perennial springs are located in the upper reaches of Water Canyon and Cañon de Valle (the major subdrainage to Water Canyon). Stream flow is ephemeral over most of the canyon passing through LANL property. Several perennial springs are located in upper Water Canyon in the Santa Fe National Forest, including 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 LANL boundary. Some anthropogenic flow occurs in Water Canyon from near the southwest boundary of LANL to the confluence with Cañon de Valle.

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 square miles. 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 (SDPPP, Vol. 4).

The figure shows the total monthly volume of discharge for the five stream gage discharge stations within the Water Canyon and Cañon de Valle watershed. The upper boundary stations for Water Canyon (E252) and Cañon de Valle (E253) had discharge in July and August resulting from monsoon precipitation events

in the upper elevations that produced runoff. The downstream and lower boundary stations did not receive discharge other than in July 2012. All of the stream gage stations within the watershed are not located near urban areas and therefore do not receive urban runoff. The discharge at E265 could have been the result of a localized precipitation event.

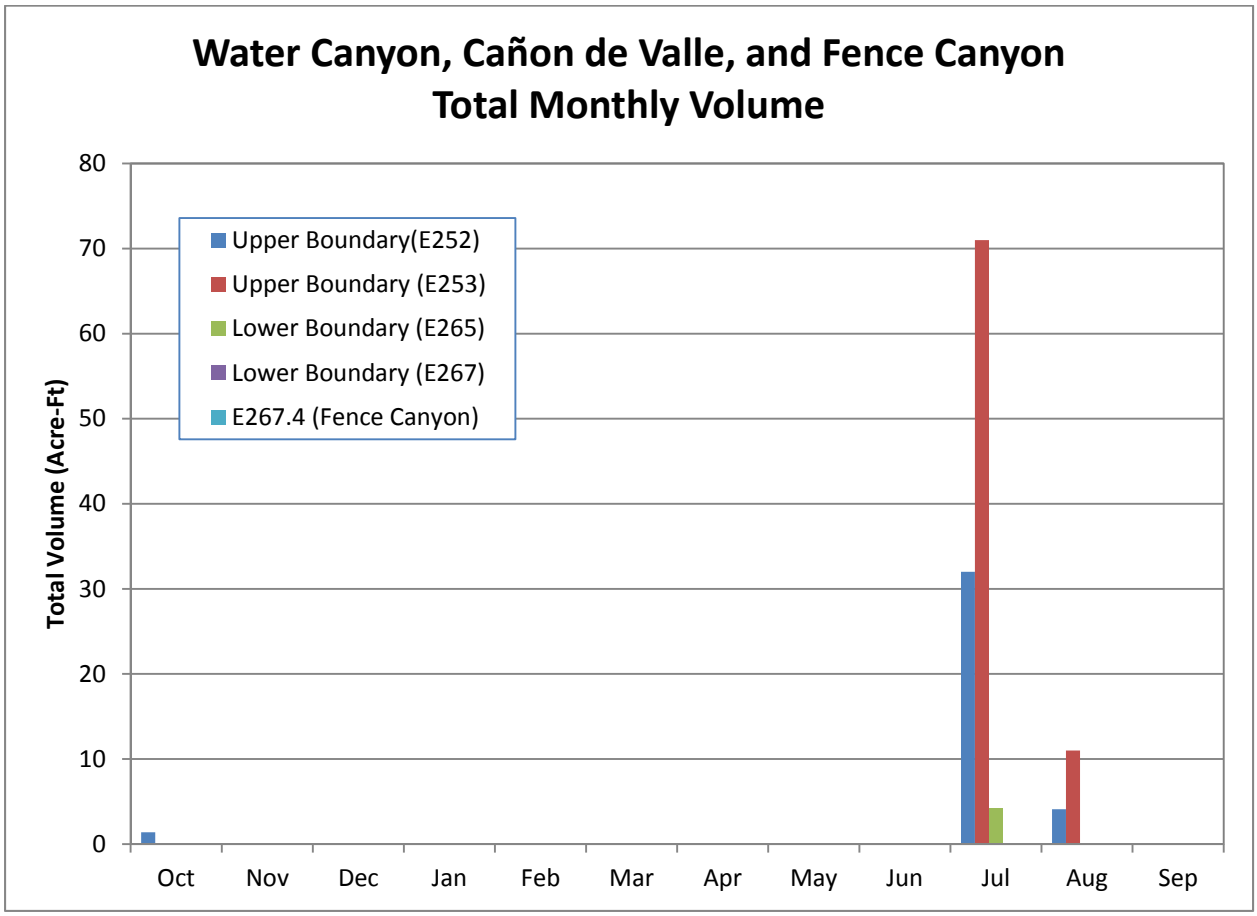


Figure 8 Total monthly volume (acre-ft) for WY2012 in Water Canyon, Cañon de Valle, and Fence Canyon

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 mi^2.

Period of Record. October 1994 to June 2000 (destroyed by flood); April 2001 to September 2012.

Revised Record. Drainage area (2006).

Gage. Data logger with radio telemetry. Elevation of gage is 7556 ft using LANL LiDAR DEM with NAD83.

Average Volume. 3 yr.,91 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 1577 ft^3/s, August 21, 2011, estimated with high water mark survey.

Maximum Discharge for Current Water Year. Maximum discharge, 133 ft^3/s, July 23, 2012, gage height 6.2 ft.

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 radio transceiver, and a shaft encoder float system (5-min interval). The system is powered by a solar-panel battery system housed in a NEMA shelter on a 24-in CMP well. The station is equipped with an ISCO pump sampler to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-ft steel storage box. The sampler 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.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
16	13	14	6	9	6	3

Datum Correction. None. Levels were run when gage was established April 16, 2001. The new gage is at the same datum as the old and is about 20 ft upstream.

Gage-Height Record. The data logger referenced to the inside staff gage and reference point gave a complete and satisfactory record for the year, except from March 14 to June 4, 2012, when the equipment was damaged and inoperable, and from August 17 to 21, 2012, when the data were missing.

Rating. The channel at the gage is 30 ft wide and straight for about 40 ft upstream, then bends to the left; downstream the gage 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 gage. The channel has been scoured and filled significantly by high flows resulting from the Cerro Grande and Las Conchas fires.

Rating No. 4 was based on step-backwater survey conducted on November 18, 2011, following major channel aggradation during an August 21, 2011, runoff event. Steep slopes in the gage reach and throughout the region cause considerable movement of material as either scours or fills.

One discharge measurement was made during the year.

Discharge. Discharge was computed by directly applying inside the gage height to Rating No. 3.

E252 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0	0
2	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0	0
3	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0	0
4	23[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0	0
5	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	0[DS]	0[DS]	0	0
6	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	0[DS]	0[DS]	7.5	0
7	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	0[DS]	0[DS]	0	0
8	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	0[DS]	0[DS]	0	0
9	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	0[DS]	0[DS]	0	0
10	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	0[DS]	0[DS]	0	0.01
11	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	0[DS]	118[H]	0	0
12	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	0[DS]	0[SS]	0	0.03
13	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	0[DS]	0[SS]	0	0[RE]
14	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0[RE]	0	0
15	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0[RE]	0	0
16	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0[RE]	73[RE]	0
17	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0	0.04[M]	0
18	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0	M	0
19	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0	M	0
20	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0	M	0
21	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0	0.32[M]	0
22	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0	0	0
23	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	133[H]	0	0
24	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	88[H]	0	0
25	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	3.9[SS]	0	0
26	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0.06	0	0
27	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0.06	0	0
28	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0.06	0	0
29	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	E	E	E	0[DS]	0.04	0	0.06
30	0[DS]	0[DS]	0[DS]	0[DS]	—	E	E	E	0[DS]	0.01	0	0
31	0[DS]	—	0[DS]	0[DS]	—	E	—	E	—	0	0	—

E252 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total Volume (acre-ft)	1.4	0	0	0	0	0	0	0	0	32	4.1	0.01[RE]	38
Max Daily Peak (acre-ft)	1.4	0	0	0	0	0	E	E	0	18	3.4	0	18
Min Daily Peak (acre-ft)	0	0	0	0	0	0	E	E	0	0	0	0[RE]	0
Missing Days	0	0	0	0	0	13	30	31	4	0	5	0	83

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 mi^2.

Period of Record. October 1994 to June 2000 (gage destroyed by flood); January 31, 2001, to September 30, 2012.

Revised Record. Period of record (2012).

Gage. Data logger and 120-degree weir plate, rain gage with radio telemetry. Elevation of gage is 7707 ft using LANL LiDAR DEM with NAD83.

Average Volume. 3 yr.,67 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 1450 ft^3/s, August 21, 2011, gage height 10 ft.

Maximum Discharge for Current Water Year. Maximum discharge, 135 ft^3/s, July 11, 2012, gage height 4.66 ft.

Equipment. The station 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 a 24-in. CMP well, 16 ft long attached to a 60-ft metal walkway. The station is equipped with an ISCO pump sampler to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-ft steel storage box. 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 stage.

The station is also equipped with a rain gage, Rain Collection II. All equipment is powered with a solar-panel battery-charging system.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
19	14	13	2	7	1	1

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

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record for the year, except from April 11 to June 21, 2012, and July 15 to 19, 2012, when the data logger malfunctioned.

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

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

Two discharge measurements were made during the year.

Discharge. Discharge was computed by directly applying the gage height to Rating No. 2 with one variable shift applied. Those days estimated at zero flow were based on precipitation and nearby stations.

E253 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0[SS]	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0	0	0
2	0.01[SS]	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0	0	0
3	0[SS]	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0	0[RE]	0
4	0.28[SS]	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0	0[RE]	0
5	0[SS]	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0	0[RE]	0
6	0	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0	0[RE]	0
7	0	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0	0	0
8	0	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0	0	0
9	0	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0	0	0
10	0	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0	0	0
11	0	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	135	0	0
12	0	0	0	0[DS]	0[DS]	I	I	0	0	37[SS]	0	0
13	0	0	0[DS]	0[DS]	0[DS]	I	I	0	0	0[SS]	0	0
14	0	0	0[DS]	0[DS]	0[DS]	I	I	0	0	0[SS]	0	0
15	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0	0[SS]	0	0
16	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0[RE]	0[SS]	56[H]	0
17	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0[RE]	0[SS]	2.5	0
18	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0[RE]	0[SS]	0	0
19	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0[RE]	0[DS]	0	0
20	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0[RE]	0[DS]	0	0
21	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0[RE]	0[DS]	0	0
22	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0[RE]	0[DS]	0	0
23	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0[RE]	0[DS]	0	0
24	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0[RE]	26	0	0
25	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0	1.2[DS]	0	0
26	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0	0[DS]	0	0
27	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0	0[DS]	0	0
28	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	0	0[DS]	0	0
29	0	0	0[DS]	0[DS]	0[DS]	I	0[DS]	0	E	0[DS]	0	0
30	0	0	0[DS]	0[DS]	—	I	0[DS]	0	E	0[DS]	0	0
31	0	—	0[DS]	0[DS]	—	I	—	0	—	0	0	—

E253 Monthly Summary Table

	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	71	11	0	82
Max Daily Peak (acre-ft)	0	0	0	0	0	0	0	0	0	49	10	0	50
Min Daily Peak(acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	0	0	0	0	19	14	0	2	0	0	0	35

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 Grant, Los Alamos County.

Drainage Area. 13.11 mi^2.

Period of Record. October 1993 to September 30, 2012.

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 NAD83.

Average Volume. 3 yr, 1.3 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 2429 ft^3/s, August 21, 2011, estimated from high water mark survey.

Maximum Discharge for Current Water Year. Maximum discharge, 250 ft^3/s, July 11, 2012, gage height 4.56 ft.

Equipment. The station is equipped with a Sutron 9210 (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 a 24-in. CMP well. The station is equipped with an ISCO pump sampler to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-in. metal box. The sampler 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.

The station is also equipped with a tipping bucket rain gage, Rain Collection II. All equipment is powered with a solar-panel battery-charging system.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
22	11	12	3	12	3	1

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave complete and satisfactory records, except from June 25 to 27 and July 11 to12, 2012, when the gage height was affected by equipment malfunction.

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

Rating No. 4 was used for the entire water year.

One discharge measurement was made during the year.

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

E265 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
2	0	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
3	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
4	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
5	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
6	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
7	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
8	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
9	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0
10	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0	0[SS]	0
11	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	250[H]	0[SS]	0
12	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0.01[E]	0[SS]	0
13	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0[SS]	0
14	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0[SS]	0
15	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0	0
16	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0	0
17	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0	0
18	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0	0
19	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0	0
20	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0	0
21	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0	0
22	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0	0
23	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0	0
24	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0	0
25	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	E	0[SS]	0	0
26	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	E	0[SS]	0	0
27	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	E	0[SS]	0	0
28	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0[RE]	0[SS]	0	0
29	0	0	0[DS]	0[DS]	0[DS]	0[DS]	0	0	0	0[SS]	0	0
30	0	0	0[DS]	0[DS]	—	0[DS]	0	0	0	0[SS]	0	0
31	0	—	0[DS]	0[DS]	—	0[DS]	—	0	—	0[SS]	0	—

E265 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total (acre-ft)	0	0	0	0	0	0	0	0	0[RE]	4.2	0	0	4.2
Max Daily Mean(acre-ft)	0	0	0	0	0	0	0	0	0[RE]	4.2	0	0	4.2
Min Daily Mean(acre-ft)	0	0	0	0	0	0	0	0	0[RE]	0	0	0	0
Missing Days	0	0	0	0	0	0	0	0	3	2	0	0	5

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 Grant, Los Alamos County.

Drainage Area. 2.26 mi^2.

Period of Record. October 1, 1995, to September 30, 2012.

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 NAD83.

Average Volume. 3 yr, 0.4 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 20 ft^3/s, September 7, 2011, gage height 2.0 ft.

Maximum Discharge for Current Water Year. No flow for the year

Equipment. The station is equipped with a Sutron 9210 (5-min interval), an MDS 4710 radio transceiver, and a shaft encoder float system. The system is powered by a solar-panel batter system housed in a NEMA shelter on an 18-in. CMP well. The station is equipped with an ISCO pump sampler to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3-× 4-ft metal box. 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 stage.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
15	4	10	2	10	2	0

Datum Correction. None.

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

Rating. The channel is fairly straight for 300 ft above the gage and 150 ft below. The streambed is mostly sand. The brush is fairly thick along the stream bank. The control is a concrete broad-crested weir.

Rating No. 1 is considered good.

The original shape and definition of the rating was derived by computation using weir geometry with slope area used 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. 1.

E267 Daily Peak Discharge (ft^3/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	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	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	—

E267 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Daily Mean (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Daily Mean (acre-ft)	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

E267.4 TA-36 Minie Site

Location. Lat 35° 49’ 38”, long –106° 16’ 36”, Sec. 35, T. 19 N., R. 6 E., Ramon Vigil Grant, Santa Fe National Forest.

Drainage Area. 0.061 mi^2.

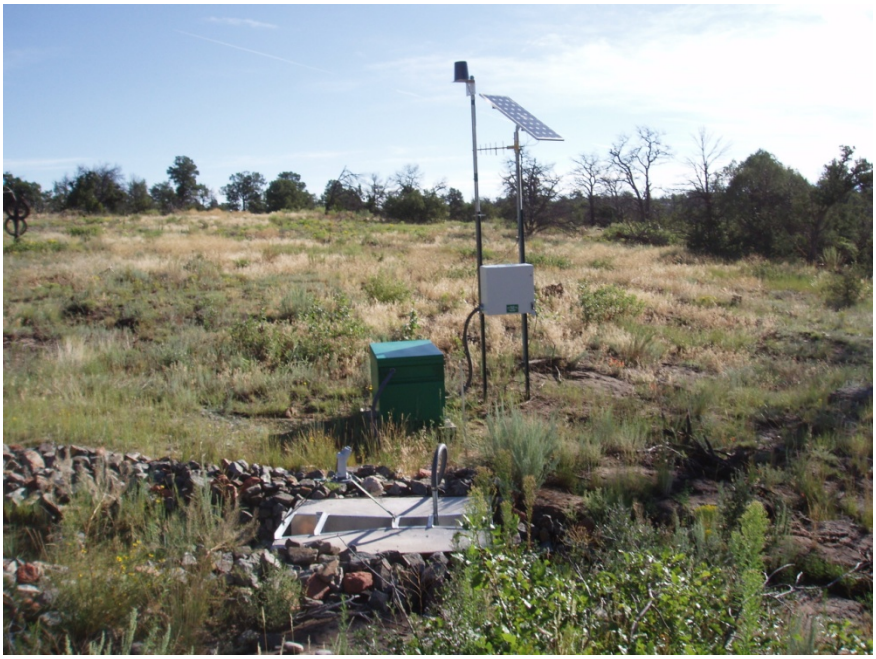
Period of Record. October 1, 2006, to September 30, 2012.

Gage. Data logger and 9-in. Parshall flume with radio telemetry. Elevation of gage is 6859 ft using LANL LiDAR DEM with NAD83.

Average Volume. 3 yr, 0 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 0.28 ft^3/s, March 20, 2010, gage height 0.21 ft.

Maximum Discharge for Current Water Year. No flow for the year.



Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval), an MDS 4710 transceiver, and a Milltronics sonic probe mounted on a 9-in. Parshall flume. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is equipped with an ISCO pump sampler to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-ft metal box. The sampler is triggered by stage through the data logger. The staff gage in the 9-in. Parshall flume is the reference gage. No provision has been made for discharge measurements above the wading stage.

The station is also equipped with a tipping bucket rain gage, Rain Collection II. All equipment is powered with a solar-panel battery-charging system.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
4	2	n/a	n/a	n/a	n/a	n/a

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except from October 1, 2011, to April 23, 2012, and on July 4, 2012, when the equipment malfunctioned, and from June 18 to July 21, 2012 when the data were missing.

Rating. The channel is straight above and below the gage for 100 ft. The channel near the gage is lined with angular rock. The streambed is mostly sand.

Rating No. 1 was developed based on the computation of the 9-in. Parshall flume. 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. Those days estimated at zero flow were based on precipitation and nearby gage stations for verification.

E267.4 Daily Peak Discharge (ft^3/s)

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

E267.4 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total (acre-ft)	E	E	E	E	E	E	0	0	0	0	0	0	0
Max Daily Mean (acre-ft)	E	E	E	E	E	E	0	0	0	0	0	0	0
Min Daily Mean (acre-ft)	E	E	E	E	E	E	0	0	0	0	0	0	0
Missing Days	31	30	31	31	29	31	23	0	4	1	0	0	211

Ancho/Chaquehui 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 area of Ancho watershed is approximately 6.8 mi^2 and it has a channel length of 7.3 mi. 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 where 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, extending 0.4 mi before entering LANL property at the northwestern corner of TA-33 and trends southeast. 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 mi^2. Stream flow in Chaquehui canyon is ephemeral over most of the canyon length, until about 0.5 mi upstream of the confluence with the Rio Grande, where Doe Spring is located. This spring supports perennial flow over a short distance. Two other perennial springs, Spring 9 and Spring 9A, are located approximately 0.25 mi above the confluence with the Rio Grande. These springs support perennial flow in the short remainder of the canyon to the confluence with the Rio Grande (SDPPP, Vol. 5).

The total monthly volume for all three stream gage stations in Ancho and Chaquhui Canyons for WY2012 is zero.

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 Grant, Los Alamos County.

Drainage Area. 4.75 mi^2.

Period of Record. December 1993 to September 30, 2012.

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 NAD83.

Average Volume. 3 yr, 0.13 acre-ft/yr.

Maximum Discharge for Period of Record. Maximum discharge, 536 ft^3/s, August 4, 2008, estimated from high water mark survey.

Maximum Discharge for Current Water Year. No flow for the year.

Equipment. The station 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. The station is equipped with an ISCO pump sampler to collect water-quality samples. The ISCO sampler is housed in a separate shelter, a 3- × 4-ft metal box. The sampler 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.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
15	4	10	2	10	4	0

Datum Correction. None.

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

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 gage becomes supercritical as the fall increases radically below the station. A channel a quarter-mile upstream has very low banks and may spread out to large widths. It contracts markedly from there to the gage. The control is a natural rock outcrop stabilized by concrete.

Rating No. 1 was developed from the PZF and 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.

E275 Daily Peak Discharge (ft^3/s)

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

E275 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Daily Mean (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Daily Mean (acre-ft)	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

E338 Chaquehui at TA-33

Location. Lat 35° 46’ 11”, long –106° 15’ 7”, Sec. 19, T. 18 N., R. 7 E., Ramon Vigil Grant, Los Alamos County.

Drainage Area. 12.18 mi^2 .

Period of Record. October 1, 1999, to January 8, 2001; October 4, 2001, to September 30, 2012.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 6227 ft using LANL LiDAR DEM with NAD83.

Average Volume. 3 yr, 0 acre-ft/yr

Maximum Discharge for Period of Record. October 5, 2005. Gage height 1.4 ft.

Maximum Discharge for Current Water Year. No flow for the year.

No image available

Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval) and a Milltronics sonic probe. The system is powered by a solar-panel battery system housed in a NEMA shelter. The station is equipped with two ISCO samplers (one 12-count 1-L glass and polyethylene bottle sampler and one 24-count 1-L polyethylene bottle sampler) to collect water-quality samples. The ISCO samplers are housed in a separate 3- × 4-ft metal box. The samplers are 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 will be by slope-area or critical-depth computation methods.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
15	2	10	2	10	2	0

Datum Correction. None.

Gage-Height Record. The data logger referenced to the inside staff gage gave a complete and satisfactory record, except from December 3 to 13, 2011, and December 19, 2011, to January 6, 2012 when the gage height was affected by ice.

Rating. The channel makes a 30-degree 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 made up of fine sand and pumice cobble. The control is the open channel.

No rating curve is available for this station.

No discharge measurements were made during the year.

Discharge. No flow.

E338 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	I	0	0	0	0	0	0	0	0
2	0	0	0	I	0	0	0	0	0	0	0	0
3	0	0	I	I	0	0	0	0	0	0	0	0
4	0	0	I	I	0	0	0	0	0	0	0	0
5	0	0	I	I	0	0	0	0	0	0	0	0
6	0	0	I	I	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	0	0	0	0	0	0
9	0	0	I	0	0	0	0	0	0	0	0	0
10	0	0	I	0	0	0	0	0	0	0	0	0
11	0	0	I	0	0	0	0	0	0	0	0	0
12	0	0	I	0	0	0	0	0	0	0	0	0
13	0	0	I	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	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	I	0	0	0	0	0	0	0	0	0
24	0	0	I	0	0	0	0	0	0	0	0	0
25	0	0	I	0	0	0	0	0	0	0	0	0
26	0	0	I	0	0	0	0	0	0	0	0	0
27	0	0	I	0	0	0	0	0	0	0	0	0
28	0	0	I	0	0	0	0	0	0	0	0	0
29	0	0	I	0	0	0	0	0	0	0	0	0
30	0	0	I	0	—	0	0	0	0	0	0	0
31	0	—	I	0	—	0	—	0	—	0	0	—

E338 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total (acre-ft)	0	0	I	I	0	0	0	0	0	0	0	0	0
Max Daily Mean (acre-ft)	0	0	I	I	0	0	0	0	0	0	0	0	0
Min Daily Mean (acre-ft)	0	0	I	I	0	0	0	0	0	0	0	0	0
Missing Days	0	0	24	6	0	0	0	0	0	0	0	0	30

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 Grant, Los Alamos County.

Drainage Area. 1.33 mi^2.

Period of Record. February 7, 2001, to October 14, 2003, and May 14, 2004, to September 30, 2012.

Revised Record. None.

Gage. Data logger with radio telemetry. Elevation of gage is 6423 ft using LANL LiDAR DEM with NAD83.

Average Volume. 3 yr, 0 acre-ft/yr.

Maximum Discharge for Period of Record. August 19, 2006. Gage height 1.1 ft.

Maximum Discharge for Current Water Year. No flow for the year.

No image available

Equipment. The station 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 equipped with two ISCO samplers (one 12-count 1-L glass and polyethylene bottle sampler and one 24-count 1-L polyethylene bottle sampler) to collect water-quality samples. The ISCO samplers are housed in a separate 3- × 4-ft metal box. The samplers are 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 will be by slope-area or critical-depth computation methods.

Fieldwork.

Stream Gage Inspection	Stream Gage Maintenance	ISCO 12-Count Sampler Inspection	ISCO 12-Count Sampler Maintenance	ISCO 24-Count Sampler Inspection	ISCO 24-Count Sampler Maintenance	Number of Samples Collected
19	5	10	2	10	2	0

Datum Correction. None.

Gage-Height Record. The data logger referenced to the inside staff gage gave a complete and satisfactory record, except from June 11 to 13, 2012, when the equipment malfunctioned, and June 18 to 19, 2012, when testing occurred.

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

No rating curve is available for this station.

No discharge measurements were made during the year.

Discharge. No flow.

E340 Daily Peak Discharge (ft^3/s)

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0[RE]	0	0	0	0	0	0	0	0	0
2	0	0	0[RE]	0	0	0	0	0	0	0	0	0
3	0	0	0[RE]	0	0	0	0	0	0	0	0	0
4	0	0	0[RE]	0	0	0	0	0	0	0	0	0
5	0	0	0[RE]	0	0	0	0	0	0	0	0	0
6	0	0	0[RE]	0	0	0	0	0	0	0	0	0
7	0	0	0[RE]	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	E	0	0	0
13	0	0	0	0	0	0	0	0	E	0	0	0
14	0	0	0	0	0	0	0	0	E	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	T	0	0	0
20	0	0	0	0	0	0	0	0	T	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[RE]	0	0	0	0	0	0	0	0	0	0
30	0	0[RE]	0	0	—	0	0	0	0	0	0	0
31	0	—	0	0	—	0	—	0	—	0	0	—

E340 Monthly Summary Table

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	WY
Total (acre-ft)	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Daily Mean	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Daily Mean	0	0	0	0	0	0	0	0	0	0	0	0	0
Missing Days	0	0	0	0	0	0	0	0	5	0	0	0	5

PRECIPITATION GAGE STATIONS

Data collection and Computation

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

Accuracy of Records

The number of significant figures used to report daily precipitation is based solely on measured precipitation to the nearest hundredth.

Factors that affect the accuracy of 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 gage station:

- Station analysis summary with photo when available
- Data table for the water year (October 1, 2011, to September 30, 2012)

The station analysis supplements each daily values table and includes a description of gage location, the period of record, gage information, a description of monitoring equipment, fieldwork visits, the maximum daily total precipitation for the period of record and 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. An equivalent station is one that was in operation when the present station was not in operation and was located so that records from it can be reasonably considered equivalent to records from the present station.

Gage: This section describes the datum of the current gage referred to in the North American Datum of 1983.

Equipment: Describes the equipment located at each site.

Field work: A list of totals for rain gage inspections and rain gage maintenance performed by field crews during the water year.

Maximum Daily Total Precipitation for Period of Record: The record includes the maximum daily precipitation. Unless otherwise qualified, the maximum precipitation is the total daily maximum.

Maximum Daily Total Precipitation for Current Monsoon Season: Maximums given are similar to those for the period of record. The time for daily totals are expressed in 24-h local standard time.

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

The monthly total precipitation table records the total monthly precipitation from October 2011 to October 2012. The row titled “Total (in.)” contains the sum of the daily precipitation for each month in inches; the row titled “Mean Total for Period of Record (in.)” contains the mean total for each month in inches; the row titled “Max Daily Total (in.)” contains the maximum daily total precipitation for each month in inches; the row titled “Missing Days” contains the number of days missing for each month.

The Precipitation Summary for Monsoon Season shows the total precipitation for June 1 to October 31, 2012. Most of the annual precipitation occurs during the monsoon season. The column titled “Days with Rain” show the total number of days precipitation occurred during the monsoon season for each rain gage. The column titled “Total Precipitation” contians the sum of the daily precipitation for this period for each precipitation gage.

Precipitation Summary for Monsoon Season June 1, 2012–October 31, 2012

Rain Gage	Days with Rain	Total Precipitation (in.)	Maximum Daily Total Precipitation (in.)	Elevation (ft)
E038	39	4.27	1.15	7094
E042.1	36	3.96	0.38	6378
R055.5	37	5.26	1.09	7102
E109.9	39	2.94	0.64	5570
E121.9	44	5.41	1.07	7336
E200.5	45	3.97	0.74	7209
E203	45	3.92	0.55	6823
E240	47	7.92	1.04	7719
E245.5	45	3.53	0.45	6796
E253	49	9.31	1.89	7719
E257	44	6.02	0.81	7361
E262.4	38	4.60	0.43	7143
E265	46	4.29	0.80	6311
E267.4	39	4.82	0.58	6865
E340	36	3.84	0.96	6423
TA-6	36	5.79	1.02	7423
TA-49	31	5.58	1.12	7045
TA-53	32	4.69	0.65	6992
TA-54	27	4.40	0.88	6553
North Community	35	5.32	1.03	7414
Cañon de Valle	57	18.62	2.48	9873
Los Alamos Canyon	55	21.99	2.29	8801
Pajarito Canyon	47	21.44	2.40	8361
Quemazon Canyon	53	27.71	2.65	9833
Starmer's Gulch	47	18.88	2.64	8233
Twomile Canyon	52	21.97	2.82	8552
Water Canyon	47	18.84	1.85	8249

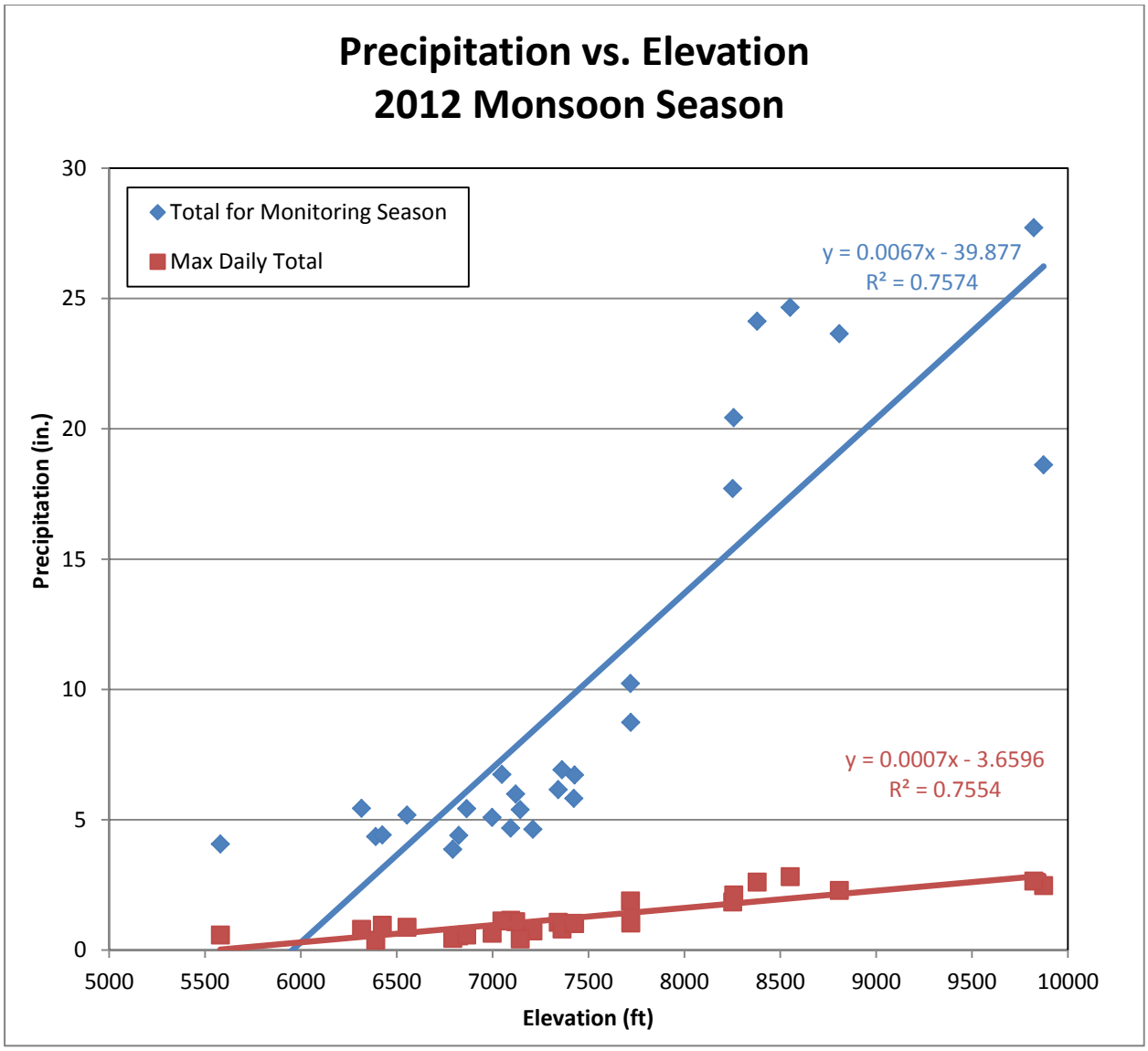


Figure 9 **Total annual precipitation and maximum daily total precipitation in relation to rain gage elevation for 2012 monsoon season, June 1 to October 31, 2012**

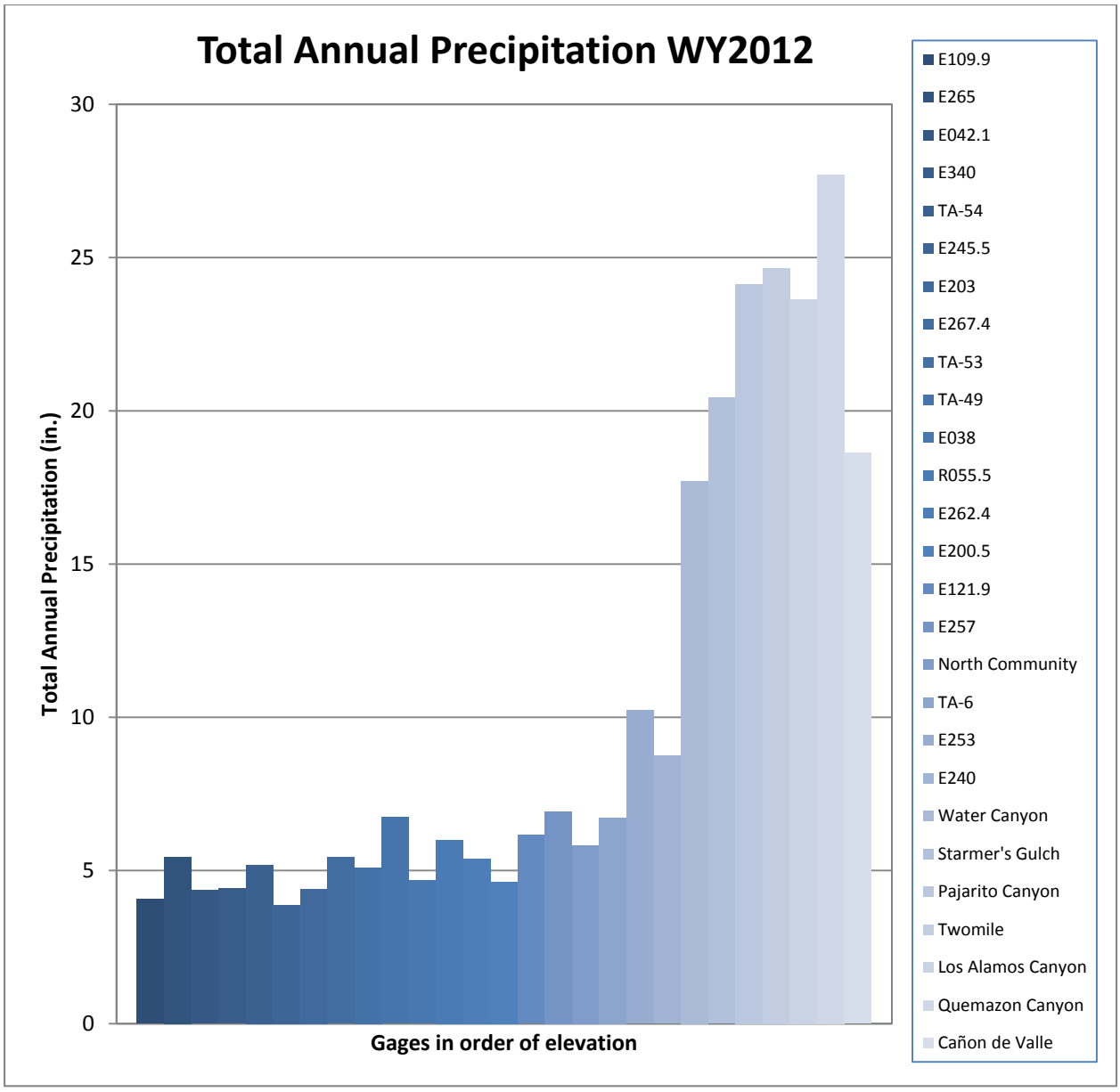


Figure 10 Total annual precipitation at all precipitation gages, in ascending order by elevation

Extended Precipitation Network

Introduction/Purpose/Station ID Numbers

Measurement, collection, and management of precipitation data and calculated results are required by LANL's National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit (MSGP NMR05GB21), Construction General Permit (CGP), and the NPDES Individual Permit (IP) 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 Compliance Order on Consent and environmental surveillance storm water projects to guide field activities such as monitoring station inspections and sample retrieval. The use of the extended rain gage network allows the storm water projects to optimize field team response to only those areas where precipitation likely resulted in runoff or exceeded a pre-established trigger amount.

The extended precipitation network consists of 15 precipitation gage stations located throughout LANL boundary. The gages collect 5-min precipitation data in tipping buckets. The network is active from April to November when precipitation is most likely to occur on the Pajarito Plateau. Each precipitation gage station is named after its collocated or formerly collocated stream gage station as per the U.S. Geological Survey, Water Resources Division's naming convention previously described in the stream discharge gage station section of this report.

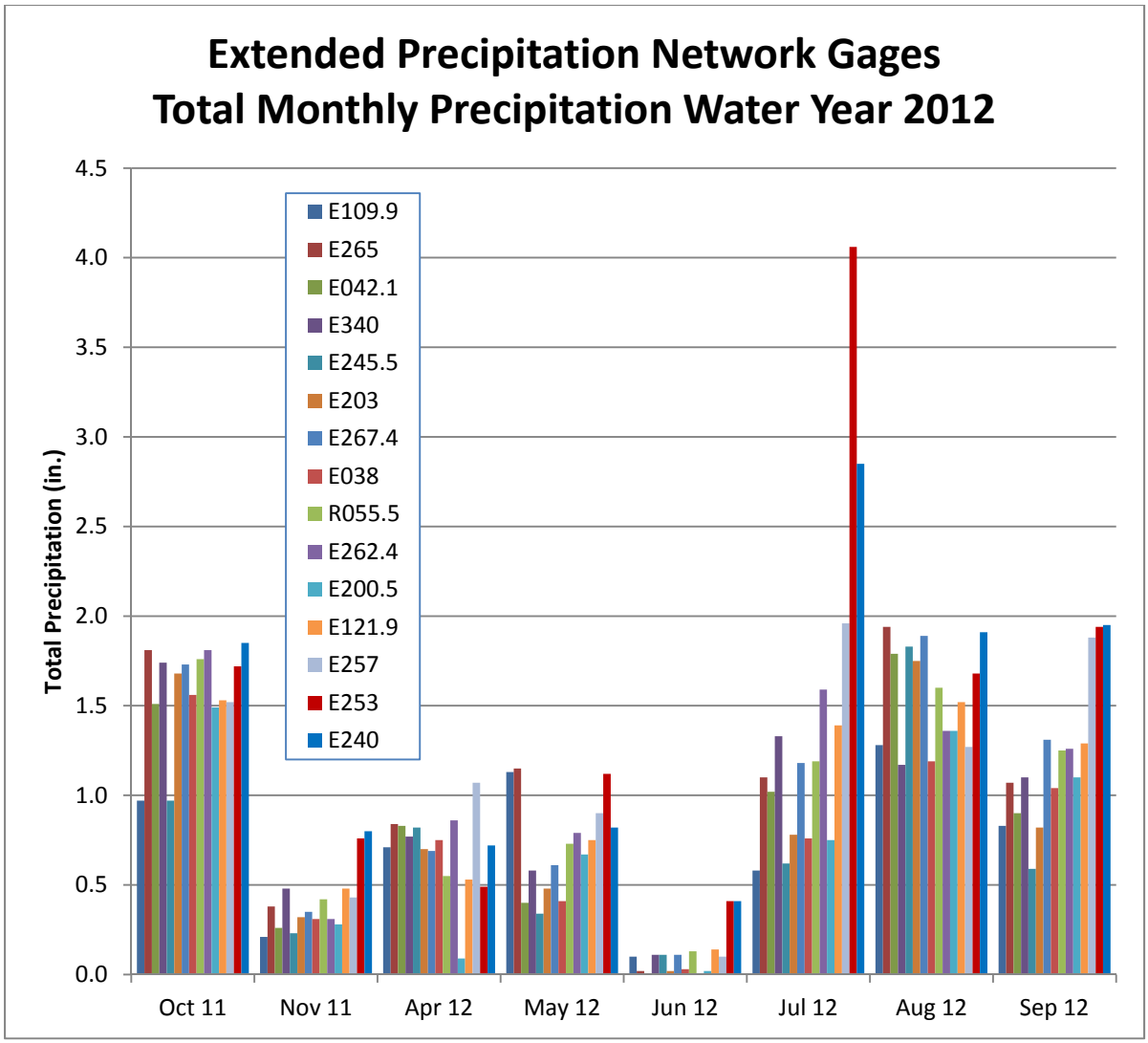


Figure 11 **Total monthly precipitation for the Extended Precipitation Network Gages for WY2012, excluding December 2011 to March 2012, when the gages were shut down for winter. The gages are listed in ascending order from lowest elevation (E109.9 at 5580 ft) to highest elevation (E240 at 7720 ft).**

E038 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 October 31, 2012.

Gage. Elevation of gage is 6378 ft using LANL LiDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 1.21 in. on August 15 and September 22, 2010.

Maximum Daily Total Precipitation for Monsoon Season. 1.15 in. on October 12, 2012.

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

Fieldwork. The station was visited 17 times to perform inspections and 11 times to conduct maintenance.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except for May 30 and 31, 2012, when the equipment malfunctioned and from December 9, 2011, to March 12, 2012, when the gage was shut down for winter.

Daily Total Precipitation (in.) for E038

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	IA	IA	IA	0	0	0	0	0	0
2	0	0	0	IA	IA	IA	0.02	0	0	0.03	0.33	0
3	0.07	0	0.08	IA	IA	IA	0.63[S]	0	0	0.14	0.01	0
4	0.34	0	0.02	IA	IA	IA	0.01	0	0	0.02	0	0
5	0.08	0.03	0	IA	IA	IA	0	0	0	0	0.07	0
6	0.01	0	0	IA	IA	IA	0	0	0	0	0.15	0
7	0.42	0	0.03	IA	IA	IA	0	0	0	0.27	0.01	0.04
8	0.01	0.08	0	IA	IA	IA	0	0.23	0	0	0	0
9	0	0	IA	IA	IA	IA	0	0	0	0	0	0
10	0	0	IA	IA	IA	IA	0	0.01	0	0.01	0.04	0.07
11	0	0	IA	IA	IA	IA	0	0.05	0	0.08	0	0.02
12	0	0	IA	IA	IA	IA	0	0.01	0	0	0.08	0.52
13	0	0.06	IA	IA	IA	0	0	0.11	0	0	0	0.07
14	0	0.01	IA	IA	IA	0	0	0	0	0	0	0
15	0	0	IA	IA	IA	0	0	0	0	0	0	0
16	0	0	IA	IA	IA	0	0	0	0	0.02	0.11	0
17	0	0	IA	IA	IA	0	0	0	0	0	0.03	0
18	0	0	IA	IA	IA	0	0	0	0	0	0.01	0
19	0	0	IA	IA	IA	0	0	0	0	0	0.01	0
20	0	0	IA	IA	IA	0	0	0	0	0	0.09	0
21	0	0	IA	IA	IA	0	0	0	0	0.05	0.01	0
22	0	0	IA	IA	IA	0	0	0	0	0.01	0.07	0
23	0	0	IA	IA	IA	0	0.07	0	0	0	0.02	0
24	0	0	IA	IA	IA	0	0.01	0	0	0	0.15	0
25	0	0.13	IA	IA	IA	0	0.01	0	0	0.12	0	0.02
26	0.56	0	IA	IA	IA	0	0	0	0.02	0.01	0	0.01
27	0.06	0	IA	IA	IA	0	0	0	0	0	0	0.14
28	0.01	0	IA	IA	IA	0	0	0	0.01	0	0	0.08
29	0	0	IA	IA	IA	0	0	0	0	0	0	0.07
30	0	0	IA	IA	—	0	0	E	0	0	0	0
31	0	—	IA	IA	—	0	—	E	—	0	0	—

Monthly Total Precipitation (in.) for E038, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.56	0.31	0.13	IA	IA	0	0.75	0.41	0.03	0.76	1.19	1.04	1.16
Mean Total for Period of Record (in.)	1.47	0.11	0.13	IA	IA	0.54	0.64	0.88	0.39	1.77	3.12	0.95	1.41
Max Daily Total (in.)	0.56	0.13	0.08	IA	IA	0	0.63[S]	0.23	0.02	0.27	0.33	0.52	1.15
Missing Days	0	0	23	31	29	12	0	2	0	0	0	0	0

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.

Period of Record. July 27, 2010, to October 31, 2012.

Gage. Elevation of gage is 6379 ft using LANL LiDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 1.83 in. on August 15, 2010.

Maximum Daily Total Precipitation for Monsoon Season. 0.53 in. on October 26, 2012.

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

Fieldwork. The station was visited 20 times to perform inspections and 13 times to conduct maintenance.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except from May 9 to 11, 2012, when the data were missing, on June 12, 2012, when equipment testing was performed, and from December 9, 2011, to March 19, 2012, when the gage was shut down for winter.

Daily Total Precipitation (in.) for E042.1

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	IA	IA	IA	0	0	0	0	0	0
2	0	0	0	IA	IA	IA	0.04	0	0	0.17	0.34	0
3	0.02	0	0.13	IA	IA	IA	0.65[s]	0	0	0.18	0	0.01
4	0.44	0	0	IA	IA	IA	0	0	0	0.16	0	0
5	0.09	0.03	0	IA	IA	IA	0	0	0	0.01	0.03	0.04
6	0.01	0	0.10	IA	IA	IA	0	0	0	0	0.11	0
7	0.38	0.01	0.02	IA	IA	IA	0	0	0	0.01	0	0.03
8	0.01	0.11	0	IA	IA	IA	0	0.19	0	0	0	0
9	0	0	IA	IA	IA	IA	0	M	0	0	0	0
10	0	0	IA	IA	IA	IA	0	M	0	0	0	0.02
11	0	0	IA	IA	IA	IA	0.13	M	0	0	0	0.01
12	0	0	IA	IA	IA	IA	0	0.06	T	0	0.05	0.27
13	0	0	IA	IA	IA	IA	0	0.15	0 [RE]	0	0.02	0.14
14	0	0	IA	IA	IA	IA	0	0	0 [RE]	0	0	0
15	0	0.01	IA	IA	IA	IA	0	0	0 [RE]	0	0	0
16	0	0	IA	IA	IA	IA	0	0	0	0.02	0.09	0
17	0	0	IA	IA	IA	IA	0	0	0	0	0.03	0
18	0	0	IA	IA	IA	IA	0	0	0	0	0.01	0
19	0	0	IA	IA	IA	IA	0	0	0	0	0	0
20	0	0	IA	IA	IA	0	0	0	0	0	0.12	0
21	0	0	IA	IA	IA	0	0	0	0	0.30	0.01	0
22	0	0	IA	IA	IA	0	0	0	0	0	0.37	0
23	0	0	IA	IA	IA	0	0	0	0	0	0.02	0
24	0	0	IA	IA	IA	0	0	0	0	0	0.38	0.01
25	0	0.10	IA	IA	IA	0	0	0	0	0.17	0	0.06
26	0.53	0	IA	IA	IA	0	0.01	0	0	0	0.21	0.02
27	0.01	0	IA	IA	IA	0	0	0	0	0	0	0.12
28	0.01	0	IA	IA	IA	0	0	0	0	0	0	0.14
29	0.01	0	IA	IA	IA	0	0	0	0	0	0	0.03
30	0	0	IA	IA	—	0	0	0	0	0	0	0
31	0	—	IA	IA	—	0	—	0	—	0	0	—

Monthly Total Precipitation (in.) for E042.1, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.51	0.26	0.25	IA	IA	0	0.83	0.4	0	1.02	1.79	0.9	0.25
Mean Total for Period of Record (in.)	1.05	0.15	0.24	IA	IA	0	0.53	0.21	0.01	0.86	2.67	1.70	0.78
Max Daily Total (in.)	0.53	0.11	0.13	IA	IA	0	0.65[S]	0.19	0[RE]	0.30	0.38	0.27	0.24
Missing Days	0	0	23	31	29	19	0	3	0	0	0	0	0

R055.5 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 October 31, 2012.

Gage. Elevation of gage is 7102 ft using LANL LIDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 1.57 in. on August 16, 2010.

Maximum Daily Total Precipitation for Monsoon Season. 1.09 in. on October 12, 2012.

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

Fieldwork. The station was visited 16 times to perform inspections and 13 times to conduct maintenance.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except on May 17 and18, 2012 when the data were missing and from December 9, 2011, to March 14, 2012, when the gage was shut down for winter.

Daily Total Precipitation (in.) for R055.5

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	IA	IA	IA	0	0	0	0	0	0
2	0	0	0	IA	IA	IA	0.02	0	0	0.13	0.38	0
3	0.04	0	0.15	IA	IA	IA	0.46[S]	0	0	0.21	0.16	0
4	0.35	0	0.06	IA	IA	IA	0	0	0	0.06	0	0
5	0.1	0.08	0	IA	IA	IA	0	0	0	0.04	0.04	0
6	0.01	0	E	IA	IA	IA	0	0	0	0	0.17	0
7	0.44	0	0.16	IA	IA	IA	0	0	0.01	0.27	0	0.07
8	0	0.02	0	IA	IA	IA	0	0.37	0	0	0	0
9	0	0	IA	IA	IA	IA	0	0	0	0	0	0
10	0	0	IA	IA	IA	IA	0	0	0	0.01	0	0.18
11	0	0	IA	IA	IA	IA	0	0.07	0	0.13	0	0.01
12	0	0	IA	IA	IA	IA	0	0.03	0.02	0	0	0.68
13	0	0.1	IA	IA	IA	IA	0	0.26	0	0.01	0.05	0.04
14	0	0.01	IA	IA	IA	IA	0	0	0	0	0	0
15	0	0	IA	IA	IA	0	0	0	0	0	0	0
16	0	0	IA	IA	IA	0	0	0	0	0.18	0.18	0
17	0	0	IA	IA	IA	0	0	M	0	0	0.04	0
18	0	0	IA	IA	IA	0	0	M	0	0	0	0
19	0	0	IA	IA	IA	0	0	0	0	0	0.17	0
20	0	0	IA	IA	IA	0	0	0	0	0	0.12	0
21	0	0	IA	IA	IA	0	0	0	0	0.07	0.08	0
22	0	0	IA	IA	IA	0	0	0	0	0.02	0.08	0
23	0	0	IA	IA	IA	0	0.07	0	0	0	0.06	0
24	0	0	IA	IA	IA	0	0	0	0	0.03	0.07	0
25	0.01	0.21	IA	IA	IA	0	0	0	0	0.03	0	0.04
26	0.72	0	IA	IA	IA	0	0	0	0	0	0	0.05
27	0.08	0	IA	IA	IA	0	0	0	0	0	0	0.02
28	0.01	0	IA	IA	IA	0	0	0	0.1	0	0	0.16
29	0	0	IA	IA	IA	0	0	0	0	0	0	0
30	0	0	IA	IA	—	0	0	0	0	0	0	0
31	0	—	IA	IA	—	0	—	0	—	0	0	—

Monthly Total Precipitation (in.) for R055.5, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.76	0.42	0.37	IA	IA	0	0.55	0.73	0.13	1.19	1.60	1.25	1.09
Mean Total for Period of Record (in.)	1.45	0.20	0.45	IA	IA	0.46	0.77	0.96	0.87	2.35	3.36	1.66	1.38
Max Daily Total (in.)	0.72	0.21	0.16	IA	IA	0	0.46[S]	0.37	0.10	0.27	0.38	0.68	1.09
Missing Days	0	0	23	31	29	14	0	2	0	0	0	0	0

E109.9 Los Alamos above Rio Grande

Location. Lat 35° 52’ 55” long –106° 08’ 56”, NW ¼, Sec. 13, T. 19 N., R. 7 E., Santa Fe County.

Period of Record. April 12, 2010, to October 31, 2012.

Gage. Elevation of gage is 5570 ft using LANL LiDAR DEM with NAD83.

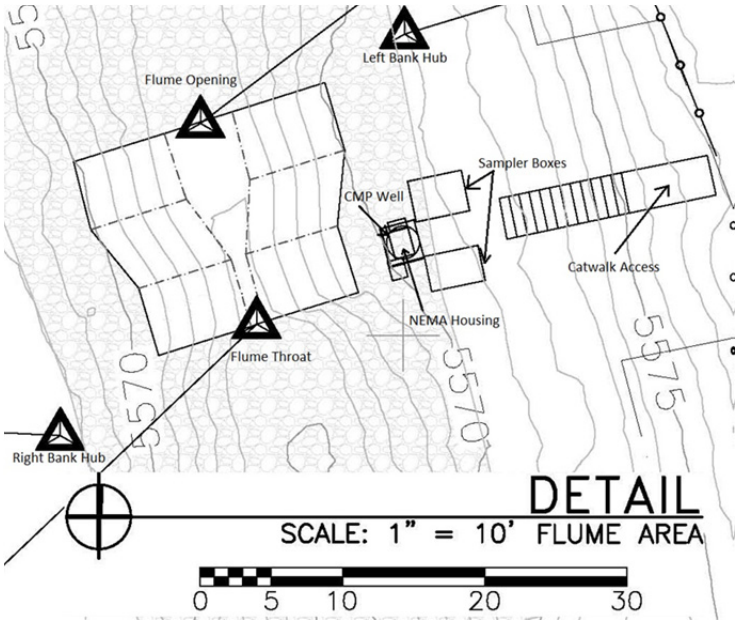
Maximum Daily Total Precipitation for Period of Record. 0.85 in. on September 22, 2010.

Maximum Daily Total Precipitation for Monsoon Season. 0.58 in. on September 12, 2012.

Equipment. A tipping bucket rain gage with 0.01-in. resolution is mounted about 30 ft from the station.

Fieldwork. The station was visited 20 times to perform inspections and 13 times to conduct maintenance.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except on October 26, 2011, when the data were missing and from December 8, 2011, to March 14, 2012, when the gage was shut down for winter.



Daily Total Precipitation (in.) for E109.9

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	IA	IA	IA	0	0	0	0	0.1	0
2	0	0	0	IA	IA	IA	0.29S	0	0	0	0.3	0
3	0	0	0.11	IA	IA	IA	0.39S	0	0	0.04	0.02	0
4	0.39	0	0	IA	IA	IA	0.01	0	0	0.05	0	0
5	0.11	0.01	0.01	IA	IA	IA	0	0	0	0	0.02	0.03
6	0.01	0	0.12	IA	IA	IA	0	0	0	0.16	0.08	0
7	0.42	0.1	0.04	IA	IA	IA	0	0.01	0	0.01	0	0
8	0.02	0.01	IA	IA	IA	IA	0	0.53	0	0.08	0	0
9	0	0	IA	IA	IA	IA	0.01	0.01	0	0.06	0	0
10	0	0	IA	IA	IA	IA	0	0	0	0.02	0	0.01
11	0	0	IA	IA	IA	IA	0	0.03	0	0	0	0
12	0	0	IA	IA	IA	IA	0	0.48	0.06	0	0.04	0.58
13	0	0	IA	IA	IA	IA	0	0.07	0	0	0.2	0.06
14	0	0.01	IA	IA	IA	IA	0	0	0	0	0.05	0
15	0	0	IA	IA	IA	0	0	0	0	0	0	0
16	0	0	IA	IA	IA	0	0	0	0	0	0.06	0
17	0	0	IA	IA	IA	0	0	0	0	0	0.09	0
18	0	0	IA	IA	IA	0	0	0	0	0	0.02	0
19	0	0	IA	IA	IA	0	0	0	0	0	0	0
20	0	0	IA	IA	IA	0	0	0	0	0	0	0
21	0	0.01	IA	IA	IA	0	0	0	0	0.04	0.01	0
22	0	0	IA	IA	IA	0	0	0	0	0	0.2	0
23	0	0	IA	IA	IA	0	0	0	0	0	0.03	0
24	0	0	IA	IA	IA	0	0	0	0	0.03	0.06	0.03
25	0	0.06	IA	IA	IA	0	0	0	0	0	0	0.04
26	M	0	IA	IA	IA	0	0.01	0	0.02	0.09	0	0.01
27	0.01	0	IA	IA	IA	0	0	0	0	0	0	0
28	0.01	0	IA	IA	IA	0	0	0	0.02	0	0	0.06
29	0	0.01	IA	IA	IA	0	0	0	0	0	0	0.01
30	0	0	IA	IA	—	0	0	0	0	0	0	0
31	0	—	IA	IA	—	0	—	0	—	0	0	—

Monthly Total Precipitation (in.) for E109.9, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	0.97	0.21	0.28	IA	IA	0	0.71	1.13	0.1	0.58	1.28	0.83	0.15
Mean Total for Period of Record (in.)	0.38	0.12	0.23	IA	IA	0	0.43	0.48	0.06	0.46	0.88	1.15	0.38
Max Daily Total (in.)	0.42	0.10	0.12	IA	IA	0	0.39 S	0.53	0.06	0.16	0.30	0.58	0.13
Missing Days	1	0	24	31	29	14	0	0	0	0	0	0	0

E121.9 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 02, 2007, to October 31, 2012.

Gage. Elevation of gage is 7336 ft using LANL LiDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 1.73 in. on July 22, 2007.

Maximum Daily Total Precipitation for Monsoon Season. 1.07 in. on October 12, 2012.

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

Fieldwork. The station was visited 18 times to perform inspections and 15 times to conduct maintenance.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except the period from December 9, 2011, to March 14, 2012, when the gage was shut down for winter.

Daily Total Precipitation (in.) for E121.9

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	IA	IA	IA	0	0	0	0	0	0
2	0	0	0	IA	IA	IA	0.01	0	0	0.18	0.23	0
3	0.04	0	0.1	IA	IA	IA	0.46[S]	0	0	0.13	0.09	0
4	0.34	0	0.04	IA	IA	IA	0	0	0	0.11	0	0
5	0.1	0.1	0	IA	IA	IA	0	0	0	0	0.03	0
6	0	0	0.03	IA	IA	IA	0	0	0	0	0.09	0
7	0.38	0	0.06	IA	IA	IA	0	0	0	0.16	0.02	0.04
8	0.01	0.03	0.06	IA	IA	IA	0	0.34	0	0	0	0
9	0	0	IA	IA	IA	IA	0	0	0	0	0	0
10	0	0	IA	IA	IA	IA	0	0	0	0.01	0.01	0.27
11	0	0	IA	IA	IA	IA	0	0.09	0	0.44	0	0
12	0	0	IA	IA	IA	IA	0	0.06	0	0	0.13	0.63
13	0	0.17	IA	IA	IA	IA	0	0.26	0	0.01	0.01	0.04
14	0	0.01	IA	IA	IA	IA	0.01	0	0	0	0	0
15	0	0	IA	IA	IA	0	0	0	0	0	0	0
16	0	0	IA	IA	IA	0	0	0	0	0.09	0.22	0
17	0	0	IA	IA	IA	0	0	0	0	0	0.05	0
18	0	0	IA	IA	IA	0	0	0	0	0	0.01	0
19	0	0	IA	IA	IA	0	0.01	0	0	0	0.19	0
20	0	0	IA	IA	IA	0	0	0	0	0	0.23	0
21	0	0	IA	IA	IA	0	0	0	0	0.07	0.03	0
22	0	0	IA	IA	IA	0	0	0	0	0.02	0.08	0
23	0	0	IA	IA	IA	0	0.03	0	0	0	0.03	0
24	0	0	IA	IA	IA	0	0	0	0	0.05	0.03	0
25	0.01	0.17	IA	IA	IA	0	0	0	0	0.11	0	0.04
26	0.59	0	IA	IA	IA	0	0.01	0	0	0.01	0	0.02
27	0.05	0	IA	IA	IA	0	0	0	0	0	0	0.03
28	0.01	0	IA	IA	IA	0	0	0	0.14	0	0	0.22
29	0	0	IA	IA	IA	0	0	0	0	0	0.04	0
30	0	0	IA	IA	—	0	0	0	0	0	0	0
31	0	—	IA	IA	—	0	—	0	—	0	0	—

Monthly Total Precipitation (in.) for E121.9, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.53	0.48	0.29	IA	IA	0	0.53	0.75	0.14	1.39	1.52	1.29	1.07
Mean Total for Period of Record (in.)	1.29	0.14	0.08	IA	IA	0.15	0.84	1.15	0.92	2.25	3.23	2.02	1.25
Max Daily Total (in.)	0.59	0.17	0.10	IA	IA	0	0.46S	0.34	0.14	0.44	0.23	0.63	1.07
Missing Days	0	0	23	31	29	14	0	0	0	0	0	0	0

E200.5 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 October 31, 2012.

Gage. Elevation of gage is 7214 ft using LANL LiDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 1.35 in. on August 29, 2007.

Maximum Daily Total Precipitation for Monsoon Season. 0.74 in. on October 12, 2012.

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

Fieldwork. The station was visited 18 times to perform inspections and 11 times to conduct maintenance.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except from May 2 to 7, 2012, when the data were missing and from December 8, 2011, to March 19, 2012, when the gage was shut down for winter.

Daily Total Precipitation (in.) for E200.5

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	IA	IA	IA	0	0	0	0	0	0
2	0	0	0	IA	IA	IA	0.01	M	0	0.03	0.32	0
3	0.09	0	0.1	IA	IA	IA	0.02	M	0	0.11	0.01	0
4	0.33	0	0.02	IA	IA	IA	0	M	0	0.11	0	0
5	0.08	0.03	0	IA	IA	IA	0	M	0	0	0.08	0
6	0.01	0	0.03	IA	IA	IA	0	M	0	0	0.09	0
7	0.38	0	0.06	IA	IA	IA	0	M	0	0.26	0	0.02
8	0	0.06	IA	IA	IA	IA	0	0.32	0	0	0	0
9	0	0	IA	IA	IA	IA	0	0	0	0	0	0
10	0	0	IA	IA	IA	IA	0	0	0	0.01	0.02	0.19
11	0	0	IA	IA	IA	IA	0	0.06	0	0.05	0	0.01
12	0	0	IA	IA	IA	IA	0	0.06	0	0	0.09	0.49
13	0	0.05	IA	IA	IA	IA	0	0.23	0	0	0	0.04
14	0	0.01	IA	IA	IA	IA	0	0	0	0	0	0
15	0	0	IA	IA	IA	IA	0	0	0	0	0	0
16	0	0	IA	IA	IA	IA	0	0	0	0.01	0.17	0
17	0	0	IA	IA	IA	IA	0	0	0	0	0.05	0
18	0	0	IA	IA	IA	IA	0	0	0	0	0.01	0
19	0	0	IA	IA	IA	IA	0	0	0	0	0.04	0
20	0	0	IA	IA	IA	0	0	0	0	0	0.19	0
21	0	0	IA	IA	IA	0	0	0	0	0.01	0.03	0
22	0	0	IA	IA	IA	0	0	0	0	0	0.06	0
23	0	0	IA	IA	IA	0	0.06	0	0	0	0.01	0
24	0	0	IA	IA	IA	0	0	0	0	0.01	0.04	0.03
25	0	0.13	IA	IA	IA	0	0	0	0	0.15	0	0.03
26	0.57	0	IA	IA	IA	0	0	0	0	0	0.15	0.01
27	0.03	0	IA	IA	IA	0	0	0	0	0	0	0.17
28	0	0	IA	IA	IA	0	0	0	0.01	0	0	0.09
29	0	0	IA	IA	IA	0	0	0	0.01	0	0	0.01
30	0	0	IA	IA	—	0	0	0	0	0	0	0.01
31	0	—	IA	IA	—	0	—	0	—	0	0	—

Monthly Total Precipitation (in.) for E200.5, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.49	0.28	0.21	IA	IA	0	0.09	0.67	0.02	0.75	1.36	1.1	0.74
Mean Total for Period of record (in.)	1.03	0.09	0.11	IA	IA	0	0.51	0.69	0.14	1.20	2.96	1.77	0.97
Max Daily total (in.)	0.57	0.13	0.10	IA	IA	0	0.02	0.32	0.01	0.26	0.32	0.49	0.74
Missing Days	0	0	24	31	29	19	0	6	0	0	0	0	0

E203 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 October 31, 2012.

Gage. Elevation of gage is 6817 ft using LANL LiDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 0.99 in. on August 15, 2010.

Maximum Daily Total Precipitation for Monsoon Season. 0.74 in. on October 12, 2012.

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

Fieldwork. The station was visited 18 times to perform inspections and 15 times to conduct maintenance.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except from November 29, 2011, to December 6, 2011, when the data were missing, from April 26 to 29, 2012, when the equipment malfunctioned, and from December 7, 2011, to March 13, 2012, when the gage was shut down for winter.

Daily Total Precipitation (in.) for E203

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	M	IA	IA	IA	0	0	0	0	0	0
2	0	0	M	IA	IA	IA	0.02	0	0	0.04	0.29	0
3	0.05	0	M	IA	IA	IA	0.62[S]	0	0	0.09	0.01	0.01
4	0.42	0	M	IA	IA	IA	0	0	0	0.08	0	0
5	0.09	0.04	M	IA	IA	IA	0	0	0	0	0.1	0
6	0.02	0	M	IA	IA	IA	0	0	0.01	0	0.34	0
7	0.43	0.01	IA	IA	IA	IA	0	0	0	0.27	0	0.04
8	0.01	0.09	IA	IA	IA	IA	0	0.12	0	0	0	0
9	0	0	IA	IA	IA	IA	0	0.01	0	0	0	0
10	0	0.01	IA	IA	IA	IA	0	0	0	0.01	0.02	0.09
11	0	0	IA	IA	IA	IA	0.03	0.06	0	0.01	0	0.05
12	0	0	IA	IA	IA	IA	0	0.03	0.01	0	0.09	0.01
13	0	0.03	IA	IA	IA	IA	0	0.26	0	0	0	0.02
14	0	0	IA	IA	IA	0	0	0	0	0	0	0
15	0	0.01	IA	IA	IA	0	0	0	0	0	0	0
16	0	0	IA	IA	IA	0	0	0	0	0	0.15	0
17	0	0	IA	IA	IA	0	0	0	0	0	0.05	0
18	0	0	IA	IA	IA	0	0	0	0	0	0	0
19	0	0	IA	IA	IA	0	0	0	0	0	0	0
20	0	0	IA	IA	IA	0	0	0	0	0	0.05	0
21	0	0	IA	IA	IA	0	0	0	0	0.04	0.05	0
22	0	0	IA	IA	IA	0	0	0	0	0.05	0.38	0
23	0	0	IA	IA	IA	0	0.03	0	0	0.01	0.02	0
24	0	0	IA	IA	IA	0	0	0	0	0	0.14	0
25	0	0.13	IA	IA	IA	0	0	0	0	0.18	0.01	0.04
26	0.61	0	IA	IA	IA	0	E	0	0	0	0.05	0.02
27	0.03	0	IA	IA	IA	0	E	0	0	0	0	0.26
28	0.01	0	IA	IA	IA	0	E	0	0	0	0	0.19
29	0.01	M	IA	IA	IA	0	E	0	0	0	0	0.08
30	0	M	IA	IA	—	0	0	0	0	0	0	0.01
31	0	—	IA	IA	—	0	—	0	—	0	0	—

Monthly Total Precipitation (in.) for E203, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.68	0.32	M	IA	IA	0	0.70	0.48	0.02	0.78	1.75	0.82	1.68
Mean Total for Period of Record (in.)	1.03	0.09	0.20	IA	IA	0.16	0.62	0.71	0.43	1.18	1.75	0.87	0.95
Max Daily Total (in.)	0.61	0.13	M	IA	IA	0	0.62[S]	0.26	0.01	0.27	0.38	0.26	0.55
Missing Days	0	0	24	31	29	19	0	6	0	0	0	0	0

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.

Period of Record. June 5, 2002, to October 31, 2012.

Gage. Elevation of gage is 7719 ft using LANL LIDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 2.01 in. on July 15, 2005.

Maximum Daily Total Precipitation for Monsoon Season. 1.04 in. on July 1, 2012.

Equipment. The station is equipped with a rain gage, Rain Collection II. All equipment is powered with a solar-panel battery-charging system.

Fieldwork. The station was visited 32 times to perform inspections and 9 times to conduct maintenance.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except from December 6, 2011, to March 16, 2012, when the gage was shut down for winter.

Daily Total Precipitation (in.) for E240

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	IA	IA	IA	0	0	0	0	0	0
2	0.06	0	0	IA	IA	IA	0.03s	0	0	0.24	0.1	0
3	0.01	0	0.14	IA	IA	IA	0.60s	0	0	0.04	0.09	0.01
4	0.52	0	0	IA	IA	IA	0.02s	0	0	0.54	0	0
5	0.09	0.09	0	IA	IA	IA	0	0	0	0	0.03	0
6	0	0.01	IA	IA	IA	IA	0	0	0	0	0.14	0
7	0.29	0	IA	IA	IA	IA	0	0.01	0	0.03	0.01	0.05
8	0.06	0.04	IA	IA	IA	IA	0	0.2	0	0	0	0
9	0.01	0	IA	IA	IA	IA	0	0	0	0	0	0
10	0	0	IA	IA	IA	IA	0	0	0	0.04	0	0.41
11	0	0	IA	IA	IA	IA	0	0.08	0	1.04	0	0
12	0	0	IA	IA	IA	IA	0	0.1	0	0	0.21	0.66
13	0	0.34	IA	IA	IA	IA	0	0.43	0	0.04	0	0.04
14	0	0	IA	IA	IA	IA	0.02	0	0	0	0	0
15	0	0.01	IA	IA	IA	IA	0.01	0	0	0	0.06	0
16	0	0	IA	IA	IA	IA	0	0	0	0.26	0.48	0
17	0	0	IA	IA	IA	0	0	0	0	0	0.04	0
18	0	0	IA	IA	IA	0	0	0	0	0	0	0
19	0	0	IA	IA	IA	0	0.01	0	T	0	0.23	0
20	0	0	IA	IA	IA	0	0	0	0	0	0.32	0
21	0	0	IA	IA	IA	0	0	0	0	0.12	0.04	0
22	0	0	IA	IA	IA	0	0	0	0	0	0.07	0
23	0	0	IA	IA	IA	0	0	0	0	0.2	0.06	0
24	0	0	IA	IA	IA	0	0	0	0	0.14	0.02	0
25	0.04	0.31	IA	IA	IA	0	0	0	0	0.15	0	0.1
26	0.61	0	IA	IA	IA	0	0.03	0	0	0	0	0.01
27	0.15	0	IA	IA	IA	0	0	0	0	0	0	0.01
28	0.01	0	IA	IA	IA	0	0	0	0.35	0	0	0.65
29	0	0	IA	IA	IA	0	0	0	0.06	0	0	0.01
30	0	0	IA	IA	—	0	0	0	0	0	0.01	0
31	0	—	IA	IA	—	0	—	0	—	0.01	0	—

Monthly Total Precipitation (in.) for E240. October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.85	0.8	0.14	IA	IA	0	0.72	0.82	0.41	2.85	1.91	1.95	0.08
Mean Total for Period of Record (in.)	1.08	0.28	0.04	IA	IA	0.35	0.82	1.00	0.81	1.51	2.35	1.69	1.08
Max Daily Total (in.)	0.61	0.34	0.14	IA	IA	0	0.60S	0.43	0.35	1.04	0.48	0.66	0.08
Missing Days	0	0	25	31	29	16	0	0	0	0	0	0	0

E245.5 Pajarito Canyon above Three Mile Canyon

Location. Lat 35° 50’ 45.3”, long –106° 16’ 29”, Sec. 16, T. 19 N., R. 6 E., Ramon Vigil Grant, Los Alamos County.

Period of Record. May 18, 2007, to October 31, 2012.

Gage. Elevation of gage is 6796 ft using LANL LiDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 1.08 in. on September 1, 2011.

Maximum Daily Total Precipitation for Monsoon Season. 0.55 in. on October 26, 2012.

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

Fieldwork. The station was visited 16 times to perform inspections and 15 times to conduct maintenance.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except from April 9 to 11, 2012, when the equipment failed, from November 21 to 29, 2011, on April 16, 2012, when the data were missing, and from December 9, 2011, to March 12, 2012, when the gage was shut down for winter.

Daily Total Precipitation (in.) for E245.5

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	IA	IA	IA	0	0	0	0	0	0
2	0	0	0	IA	IA	IA	0.02s	0	0	0.03	0.2	0
3	0.02	0	0.13	IA	IA	IA	0.64s	0	0	0.12	0	0
4	0.11	0	0.01	IA	IA	IA	0.01s	0	0	0.1	0	0
5	0.09	0.04	0	IA	IA	IA	0	0	0	0	0.09	0
6	0.01	0	0.06	IA	IA	IA	0	0	0	0	0.22	0
7	0	0	0.06	IA	IA	IA	0	0	0.07	0.19	0	0.02
8	0.03	0.13	0.03	IA	IA	IA	0	0.08	0	0	0	0
9	0	0.01	IA	IA	IA	IA	E	0.01	0	0	0	0
10	0.06	0	IA	IA	IA	IA	E	0	0	0	0	0.23
11	0.01	0	IA	IA	IA	IA	E	0.07	0	0.01	0	0.01
12	0.02	0	IA	IA	IA	IA	0	0.03	0	0	0.05	0
13	0.03	0.03	IA	IA	IA	0	0	0.12	0	0.01	0.01	0.04
14	0	0.01	IA	IA	IA	0	0	0	0	0	0	0
15	0	0.01	IA	IA	IA	0	0	0	0	0	0.01	0
16	0	0	IA	IA	IA	0	M	0	0	0.08	0.3	0
17	0	0	IA	IA	IA	0	0	0	0	0	0.06	0
18	0	0	IA	IA	IA	0	0	0	0	0	0	0
19	0	0	IA	IA	IA	0	0.02	0	0	0	0.01	0
20	0	0	IA	IA	IA	0	0	0	0.03	0	0.19	0
21	0	M	IA	IA	IA	0	0	0.03	0	0	0.03	0
22	0	M	IA	IA	IA	0	0	0	0	0	0.45	0
23	0	M	IA	IA	IA	0	0.02	0	0	0	0.02	0
24	0	M	IA	IA	IA	0	0	0	0	0	0.16	0.01
25	0	M	IA	IA	IA	0	0	0	0	0.08	0.01	0.04
26	0.55	M	IA	IA	IA	0	0.08	0	0	0	0.02	0.04
27	0.02	M	IA	IA	IA	0	0	0	0	0	0	0.02
28	0.01	M	IA	IA	IA	0	0	0	0.01	0	0	0.15
29	0.01	M	IA	IA	IA	0	0	0	0	0	0	0.03
30	0	0	IA	IA	—	0	0.03	0	0	0	0	0
31	0	—	IA	IA	—	0	—	0	—	0	0	—

Monthly Total Precipitation (in.) for E245.5, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	0.97	0.23	0.29	IA	IA	0	0.82	0.34	0.11	0.62	1.83	0.59	0.38
Mean Total for Period of Record (in.)	1.00	0.15	0.13	0.00	0.00	0.52	0.72	0.62	0.57	1.86	1.93	1.53	0.88
Max Daily Total (in.)	0.55	0.13	0.13	IA	IA	0	0.64[S]	0.12	0.07	0.19	0.45	0.15	0.38
Missing Days	0	9	23	31	29	12	4	0	0	0	0	0	0

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.

Period of Record. October 10. 2007, to October 31, 2012.

Gage. Elevation of gage is 7719 ft using LANL LiDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 2.53 in. on July 22, 2010.

Maximum Daily Total Precipitation for Monsoon Season. 1.89 in. on July 11, 2012.

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

Fieldwork. The station was visited 23 times to perform inspections and 18 times to conduct maintenance.

Precipitation record. The precipitation gage gave a complete and satisfactory record, except from June 29 to July 2, 2012, when the equipment malfunctioned, and from December 6, 2011, to March 13, 2012, when the gage was shut down for winter.

Daily Total Precipitation (in.) for E253

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	IA	IA	IA	0	0	0	E	0	0
2	0	0	0	IA	IA	IA	0.01	0	0	E	0.29	0
3	0.01	0	0.07	IA	IA	IA	0.41S	0	0	0.1	0.07	0.02
4	0.56	0	0.05	IA	IA	IA	0	0	0	0.41	0.01	0
5	0.11	0.07	0	IA	IA	IA	0	0	0	0.02	0.02	0
6	0	0.02	IA	IA	IA	IA	0	0	0	0	0.14	0
7	0.11	0	IA	IA	IA	IA	0	0	0	0.06	0.01	0.07
8	0.17	0.02	IA	IA	IA	IA	0	0.33	0	0	0	0.01
9	0.01	0	IA	IA	IA	IA	0	0	0	0	0	0
10	0	0	IA	IA	IA	IA	0	0	0	0.05	0	0.58
11	0	0	IA	IA	IA	IA	0	0.08	0	1.89	0	0.01
12	0	0.01	IA	IA	IA	IA	0	0.04	0	0	0.21	0.77
13	0	0.3	IA	IA	IA	IA	0	0.67	0	0.05	0	0.04
14	0	0	IA	IA	IA	0	0.02	0	0RE	0	0	0
15	0	0	IA	IA	IA	0	0.02	0	0RE	0	0.05	0
16	0	0	IA	IA	IA	0	0	0	0RE	0.3	0.44	0
17	0	0	IA	IA	IA	0	0	0	0RE	0.01	0.04	0
18	0	0	IA	IA	IA	0	0	0	0	0	0	0
19	0	0	IA	IA	IA	0	0.03	0	0.01	0	0.12	0
20	0	0	IA	IA	IA	0	0	0	0RE	0	0.09	0
21	0	0	IA	IA	IA	0	0	0	0RE	0.12	0.03	0
22	0	0.01	IA	IA	IA	0	0	0	0RE	0	0.09	0
23	0	0	IA	IA	IA	0	0	0	0	0.24	0.05	0
24	0	0	IA	IA	IA	0	0	0	0	0.55	0.01	0
25	0.02	0.33	IA	IA	IA	0	0	0	0	0.26	0	0.1
26	0.62	0	IA	IA	IA	0	0	0	0	0	0	0.02
27	0.1	0	IA	IA	IA	0	0	0	0	0	0	0.01
28	0.01	0	IA	IA	IA	0	0	0	0.4	0	0	0.27
29	0	0	IA	IA	IA	0	0	0	E	0	0	0.04
30	0	0	IA	IA	—	0	0	0	E	0	0.01	0
31	0	—	IA	IA	—	0	—	0	—	0	0	—

Monthly Total Precipitation (in.) for E253, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.72	0.76	0.12	IA	IA	0	0.49	1.12	0.41	4.06	1.68	1.94	1.02
Mean Total for Period of Record (in.)	2.43	0.28	0.09	IA	IA	0.18	1.32	1.63	1.32	4.89	5.63	1.68	2.15
Max Daily Total (in.)	0.62	0.33	0.07	IA	IA	0	0.41[S]	0.67	0.40	1.89	0.44	0.77	1.01
Missing Days	0	0	26	31	29	13	0	0	2	2	0	0	0

E257 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 Grant, Los Alamos County.

Period of Record. April 27, 2007, to October 31, 2012.

Gage. Gage. Elevation of gage is 7360 ft using LANL LiDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 2.56 in. on August 21, 2011.

Maximum Daily Total Precipitation for Monsoon Season. 0.81 in. on October 12, 2012.

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

Fieldwork. The station was visited 19 times to perform inspections and 6 times to conduct maintenance.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except on July 1, 2012, when the equipment malfunctioned, and from December 8, 2011, to March 15, 2012, when the gage was shut down for winter.

Daily Total Precipitation (in.) for E257

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	IA	IA	IA	0	0	0	E	0	0
2	0	0	0	IA	IA	IA	0.02	0	0	0.18	0.19	0
3	0.03	0	0.17	IA	IA	IA	0.97S	0	0	0.11	0.01	0
4	0.4	0	0.05	IA	IA	IA	0.01	0	0	0.42	0	0
5	0.09	0.06	0	IA	IA	IA	0	0	0	0	0.05	0
6	0.01	0	0.04	IA	IA	IA	0	0	0	0	0.08	0
7	0.31	0	0.15	IA	IA	IA	0	0	0	0.01	0	0.08
8	0	0.04	IA	IA	IA	IA	0	0.41	0	0	0	0
9	0.01	0	IA	IA	IA	IA	0.01	0	0	0	0	0
10	0	0	IA	IA	IA	IA	0	0.01	0	0.01	0	0.62
11	0	0	IA	IA	IA	IA	0	0.08	0	0.46	0	0.02
12	0	0	IA	IA	IA	IA	0	0.03	0	0	0.15	0.57
13	0	0.15	IA	IA	IA	IA	0	0.37	0	0.02	0	0.03
14	0	0	IA	IA	IA	IA	0	0	0RE	0	0	0
15	0	0	IA	IA	IA	IA	0.02	0	0	0	0.01	0
16	0	0	IA	IA	IA	0	0	0	0	0.17	0.32	0
17	0	0	IA	IA	IA	0	0	0	0	0	0.03	0
18	0	0	IA	IA	IA	0	0	0	0	0	0	0
19	0	0	IA	IA	IA	0	0.03	0	0	0	0.07	0
20	0.01	0	IA	IA	IA	0	0	0	0	0	0.08	0
21	0	0	IA	IA	IA	0	0	0	0	0.1	0.03	0
22	0	0	IA	IA	IA	0	0	0	0	0	0.07	0
23	0	0	IA	IA	IA	0	0	0	0	0.12	0.02	0
24	0	0	IA	IA	IA	0	0	0	0	0.21	0.16	0
25	0.01	0.18	IA	IA	IA	0	0	0	0	0.15	0	0.07
26	0.58	0	IA	IA	IA	0	0.01	0	0	0	0	0.04
27	0.06	0	IA	IA	IA	0	0	0	0	0	0	0
28	0.01	0	IA	IA	IA	0	0	0	0.06	0	0	0.42
29	0	0	IA	IA	IA	0	0	0	0.04	0	0	0.02
30	0	0	IA	IA	—	0	0	0	0	0	0	0.01
31	0	—	IA	IA	—	0	—	0	—	0	0	—

Monthly Total Precipitation (in.) for E257, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.52	0.43	0.41	IA	IA	0	1.07	0.9	0.1	1.96	1.27	1.88	0.81
Mean Total for Period of Record (in.)	1.78	0.21	0.20	IA	IA	0.20	0.75	1.37	0.76	2.72	3.64	1.98	1.59
Max Daily Total (in.)	0.58	0.18	0.17	IA	IA	0	0.97[S]	0.41	0.06	0.46	0.32	0.62	0.81
Missing Days	0	0	24	31	29	15	0	0	0	1	0	0	0

E262.4 PHERMEX

Location. Lat 35° 49’ 57”, long –106° 17’ 47”, Sec. 34, T. 19 N., R. 6 E., Ramon Vigil Grant, Los Alamos County.

Period of Record. August 8, 2004, to October 31, 2012.

Gage. Elevation of gage is 7124 ft using LANL LiDAR DEM with NAD83.

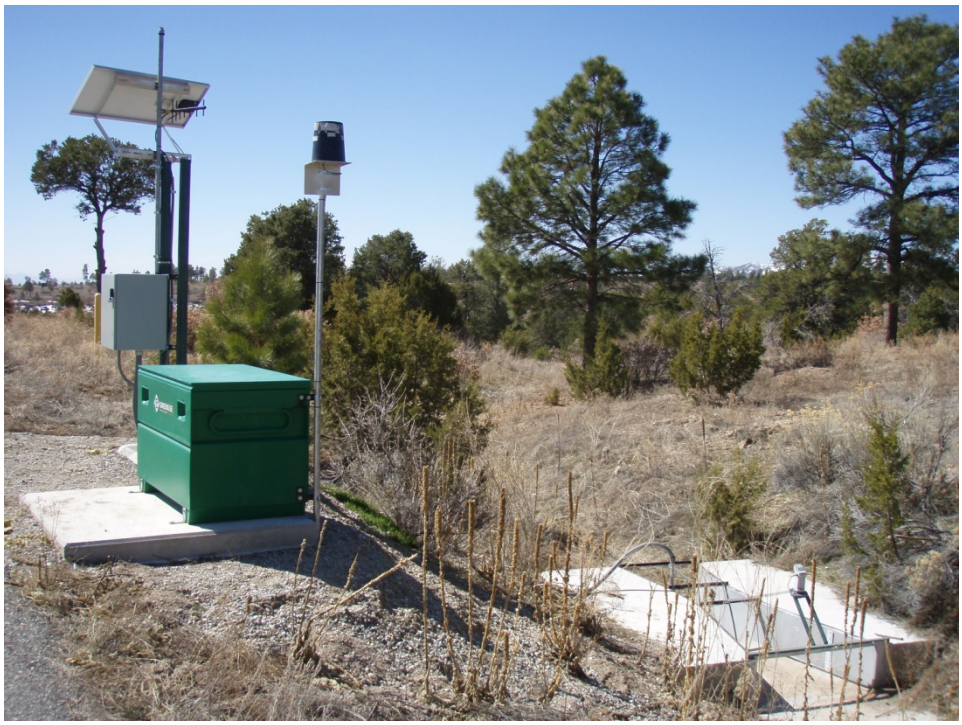
Maximum Daily Total Precipitation for Period of Record. 1.62 in. on August 4, 2008.

Maximum Daily Total Precipitation for Monsoon Season. 0.43 in. on September 12, 2012.

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

Fieldwork. The station was visited 18 times to perform inspections and 12 times to conduct maintenance.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except from December 7, 2011, to March 13, 2012, when the gage was shut down for winter.



Daily Total Precipitation (in.) for E262.4

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	IA	IA	IA	0	0	0	0	0	0
2	0	0	0	IA	IA	IA	0.01	0	0	E	0.22	0
3	0.08	0	0.14	IA	IA	IA	0.75S	0	0	0.12	0.01	0.02
4	0.43	0	0.02	IA	IA	IA	0	0	0	0.39	0	0
5	0.13	0.03	0	IA	IA	IA	0	0	0	0	0.06	0
6	0.01	0	0.16	IA	IA	IA	0	0	0	0	0.15	0
7	0.42	0	IA	IA	IA	IA	0	0	0	0.37	0	0.01
8	0	0.1	IA	IA	IA	IA	0	0.37	0	0	0	0
9	0	0.01	IA	IA	IA	IA	0.01	0	0	0	0	0
10	0	0	IA	IA	IA	IA	0	0	0	0	0	0.37
11	0	0	IA	IA	IA	IA	0	0.13	0	0.03	0	0.06
12	0	0	IA	IA	IA	IA	0	0.01	0	0	0.12	0.43
13	0	0.05	IA	IA	IA	IA	0	0.28	0	0.01	0	0.06
14	0	0.01	IA	IA	IA	0	0	0	0	0	0	0
15	0	0	IA	IA	IA	0	0	0	0	0	0	0
16	0	0	IA	IA	IA	0	0	0	0	0.22	0.08	0
17	0	0	IA	IA	IA	0	0	0	0	0	0.08	0
18	0	0	IA	IA	IA	0	0	0	0	0	0	0
19	0	0	IA	IA	IA	0	0.05	0	0	0	0	0
20	0	0	IA	IA	IA	0	0	0	0	0	0	0
21	0	0	IA	IA	IA	0	0	0	0	0	0	0
22	0	0	IA	IA	IA	0	0	0	0	0	0.21	0
23	0	0	IA	IA	IA	0	0.02	0	0	0	0.02	0
24	0	0	IA	IA	IA	0	0	0	0	0.04	0.29	0.02
25	0	0.11	IA	IA	IA	0	0	0	0RE	0.4	0	0.05
26	0.67	0	IA	IA	IA	0	0.01	0	0	0.01	0.12	0.04
27	0.07	0	IA	IA	IA	0	0	0	0	0	0	0
28	0	0	IA	IA	IA	0	0	0	0	0	0	0.16
29	0	0	IA	IA	IA	0	0.01	0	0	0	0	0.04
30	0	0	IA	IA	—	0	0	0	0	0	0	0
31	0	—	IA	IA	—	0	—	0	—	0	0	—

Monthly Total Precipitation (in.) for E262.4, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.81	0.31	0.32	IA	IA	0	0.86	0.79	0	1.59	1.36	1.26	0.39
Mean Total for Period of Record (in.)	1.65	0.17	0.08	IA	IA	0.16	0.92	0.85	0.41	2.50	2.47	1.75	1.40
Max Daily Total (in.)	0.67	0.11	0.16	IA	IA	0	0.75[S]	0.37	0	0.39	0.29	0.43	0.38
Missing Days	0	0	25	31	29	13	0	0	0	0	0	0	0

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 Grant, Los Alamos County.

Period of Record. May 15, 2007, to October 31, 2012.

Gage. Elevation of gage is 6311 ft using LANL LiDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 0.98 in. on July 30, 2011.

Maximum Daily Total Precipitation for Monsoon Season. 0.80 in. on May 8, 2012.

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

Fieldwork. The station was visited 20 times to perform inspections and 7 times to conduct maintenance.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except on July 11 and 12, 2012, when the equipment malfunctioned, and from December 7, 2011, to March 14, 2012, when the gage was shut down for winter.

Daily Total Precipitation (in.) for E265

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	IA	IA	IA	0	0	0	0	0.05	0
2	0	0	0	IA	IA	IA	0.09	0	0	0.19	0.4	0
3	0.05	0	0.14	IA	IA	IA	0.59[S]	0	0	0.24	0.01	0.1
4	0.49	0	0	IA	IA	IA	0.01	0	0.02	0.46	0	0.04
5	0.21	0.04	0	IA	IA	IA	0	0	0	0	0.07	0
6	0.01	0	0.23	IA	IA	IA	0	0	0	0.02	0.02	0
7	0.42	0	IA	IA	IA	IA	0	0	0	0	0	0.02
8	0	0.1	IA	IA	IA	IA	0	0.8	0	0.01	0	0
9	0	0.02	IA	IA	IA	IA	0	0.01	0	0	0	0
10	0	0	IA	IA	IA	IA	0	0	0	0.12	0.13	0.44
11	0	0	IA	IA	IA	IA	0.06	0.17	0	E	0	0
12	0	0	IA	IA	IA	IA	0	0	0	E	0.24	0.32
13	0	0	IA	IA	IA	IA	0	0.16	0	0.01	0.01	0.04
14	0	0.01	IA	IA	IA	IA	0	0.01	0	0	0.02	0
15	0	0	IA	IA	IA	0	0	0	0	0	0.01	0
16	0	0	IA	IA	IA	0	0	0	0	0	0.25	0
17	0	0	IA	IA	IA	0	0	0	0	0	0.03	0.01
18	0	0	IA	IA	IA	0	0	0	0	0	0.01	0
19	0	0	IA	IA	IA	0	0.06	0	0	0	0	0
20	0	0	IA	IA	IA	0	0	0	0	0	0.04	0
21	0	0	IA	IA	IA	0	0	0	0	0.01	0.02	0
22	0	0	IA	IA	IA	0	0	0	0	0	0.03	0
23	0	0	IA	IA	IA	0	0.01	0	0	0	0.01	0
24	0	0	IA	IA	IA	0	0	0	0	0	0.28	0.03
25	0	0.21	IA	IA	IA	0	0	0	0	0.04	0	0.05
26	0.58	0	IA	IA	IA	0	0.02	0	0	0	0.3	0
27	0.03	0	IA	IA	IA	0	0	0	0	0	0	0
28	0.01	0	IA	IA	IA	0	0	0	0	0	0.01	0
29	0.01	0	IA	IA	IA	0	0	0	0	0	0	0.02
30	0	0	IA	IA	—	0	0	0	0	0	0	0
31	0	—	IA	IA	—	0	—	0	—	0	0	—

Monthly Total Precipitation (in.) for E265, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.81	0.38	0.37	IA	IA	0	0.84	1.15	0.02	1.10	1.94	1.07	0.16
Mean Total for Period of Record (in.)	1.37	0.21	0.26	IA	IA	0.22	0.61	0.67	0.57	2.59	1.63	1.04	1.13
Max Daily Total (in.)	0.58	0.21	0.23	IA	IA	0	0.59[S]	0.80	0.02	0.46	0.30	0.44	0.16
Missing Days	0	0	25	31	29	14	0	0	0	2	0	0	0

E267.4 TA-36 Minie Site

Location. Lat 35° 49’ 38”, long –106° 16’ 36”, Sec. 35, T. 19 N., R. 6 E., Ramon Vigil Grant, Santa Fe National Forest.

Period of Record. July 13, 2007, to October 31, 2012.

Gage. Elevation of gage is 6865 ft using LANL LiDAR DEM with NAD83.

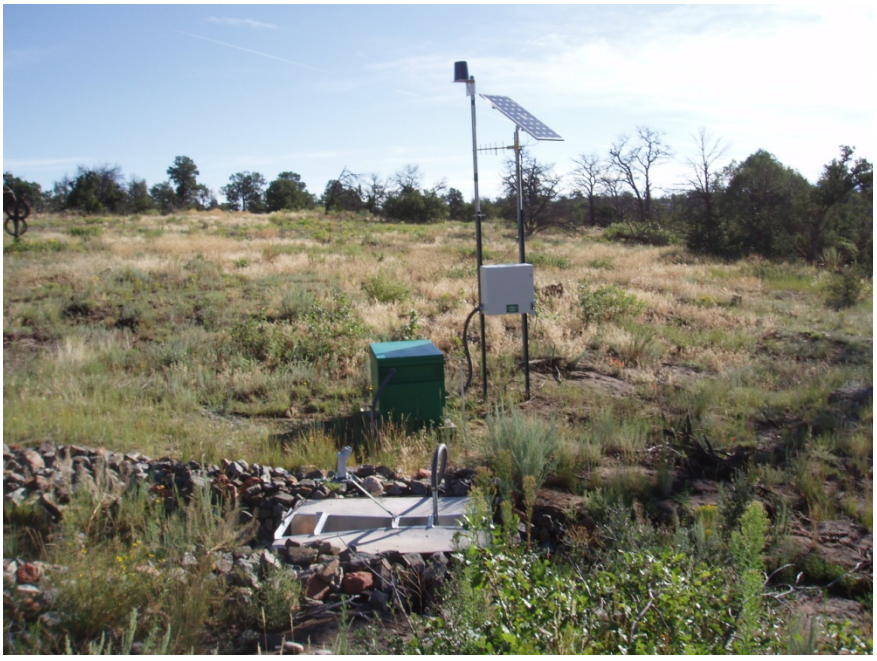
Maximum Daily Total Precipitation for Period of Record. 0.98 in. on July 30, 2011.

Maximum Daily Total Precipitation for Monsoon Season. 0.80 in. on May 8, 2012.

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

Fieldwork. The station was visited 17 times to perform inspections and 2 times to conduct maintenance.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except on July 11 and 12, 2012, when the equipment malfunctioned, and from December 7, 2011, to March 14, 2012, when the gage was shut down for winter.



Daily Total Precipitation (in.) for E267.4

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	IA	IA	IA	0	0	0	0	0.05	0
2	0	0	0	IA	IA	IA	0.09	0	0	0.19	0.4	0
3	0.05	0	0.14	IA	IA	IA	0.59[S]	0	0	0.24	0.01	0.1
4	0.49	0	0	IA	IA	IA	0.01	0	0.02	0.46	0	0.04
5	0.21	0.04	0	IA	IA	IA	0	0	0	0	0.07	0
6	0.01	0	0.23	IA	IA	IA	0	0	0	0.02	0.02	0
7	0.42	0	IA	IA	IA	IA	0	0	0	0	0	0.02
8	0	0.1	IA	IA	IA	IA	0	0.8	0	0.01	0	0
9	0	0.02	IA	IA	IA	IA	0	0.01	0	0	0	0
10	0	0	IA	IA	IA	IA	0	0	0	0.12	0.13	0.44
11	0	0	IA	IA	IA	IA	0.06	0.17	0	E	0	0
12	0	0	IA	IA	IA	IA	0	0	0	E	0.24	0.32
13	0	0	IA	IA	IA	IA	0	0.16	0	0.01	0.01	0.04
14	0	0.01	IA	IA	IA	IA	0	0.01	0	0	0.02	0
15	0	0	IA	IA	IA	0	0	0	0	0	0.01	0
16	0	0	IA	IA	IA	0	0	0	0	0	0.25	0
17	0	0	IA	IA	IA	0	0	0	0	0	0.03	0.01
18	0	0	IA	IA	IA	0	0	0	0	0	0.01	0
19	0	0	IA	IA	IA	0	0.06	0	0	0	0	0
20	0	0	IA	IA	IA	0	0	0	0	0	0.04	0
21	0	0	IA	IA	IA	0	0	0	0	0.01	0.02	0
22	0	0	IA	IA	IA	0	0	0	0	0	0.03	0
23	0	0	IA	IA	IA	0	0.01	0	0	0	0.01	0
24	0	0	IA	IA	IA	0	0	0	0	0	0.28	0.03
25	0	0.21	IA	IA	IA	0	0	0	0	0.04	0	0.05
26	0.58	0	IA	IA	IA	0	0.02	0	0	0	0.3	0
27	0.03	0	IA	IA	IA	0	0	0	0	0	0	0
28	0.01	0	IA	IA	IA	0	0	0	0	0	0.01	0
29	0.01	0	IA	IA	IA	0	0	0	0	0	0	0.02
30	0	0	IA	IA	—	0	0	0	0	0	0	0
31	0	—	IA	IA	—	0	—	0	—	0	0	—

Monthly Total Precipitation (in.) for E267.4, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.81	0.38	0.37	IA	IA	0	0.84	1.15	0.02	1.10	1.94	1.07	0.16
Mean Total for Period of Record (in.)	1.48	0.18	0.08	IA	IA	0.17	0.86	0.63	0.43	1.79	2.09	1.86	1.25
Max Daily Total (in.)	0.58	0.21	0.23	IA	IA	0	0.59[S]	0.80	0.02	0.46	0.30	0.44	0.16
Missing Days	0	0	25	31	29	14	0	0	0	2	0	0	0

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 Grant, Los Alamos County.

Period of Record. May 16, 2007, to October 31, 2012.

Gage. Elevation of gage is 6423 ft using LANL LiDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 1.19 in. on July 19, 2007.

Maximum Daily Total Precipitation for Monsoon Season. 0.96 in. on July 4, 2012.

Equipment. The station is equipped with a Rain Collection II tipping bucket rain gage. Equipment is powered with a solar-panel battery-charging system.

Fieldwork. The station was visited 19 times to perform inspections and 7 times to conduct maintenance.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except from June 11 to 13, 2012, and on June 19, 2012, when the equipment malfunctioned, and from December 8, 2011, to March 13, 2012, when the gage was shut down for winter.

No image available

Daily Total Precipitation (in.) for E340

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	IA	IA	IA	0	0	0	E	0	0
2	0	0	0	IA	IA	IA	0.08[S]	0	0	0.11	0.18	0
3	0.05	0	0	IA	IA	IA	0.58[S]	0	0	0.12	0.01	0.01
4	0.52	0	0	IA	IA	IA	0.01	0	0.11	0.96	0	0
5	0.18	0.02	0	IA	IA	IA	0	0	0	0	0.06	0
6	0.01	0	0	IA	IA	IA	0	0	0	0.02	0	0.01
7	0.41	0.01	0	IA	IA	IA	0	0	0	0	0	0
8	0.01	0.13	IA	IA	IA	IA	0	0.25	0	0	0	0
9	0	0.01	IA	IA	IA	IA	0.02	0	0	0	0	0
10	0	0	IA	IA	IA	IA	0	0	0	0.1	0.01	0.57
11	0	0	IA	IA	IA	IA	0.03	0.16	E	0	0.03	0
12	0	0	IA	IA	IA	IA	0	0	E	0	0.08	0.43
13	0	0.01	IA	IA	IA	IA	0	0.17	E	0.01	0	0.04
14	0	0	IA	IA	IA	0	0	0	0	0	0	0
15	0	0.01	IA	IA	IA	0	0	0	0	0	0.07	0
16	0	0	IA	IA	IA	0	0	0	0	0	0.47	0
17	0	0	IA	IA	IA	0	0	0	0	0	0.01	0
18	0	0	IA	IA	IA	0	0	0	0	0	0.01	0
19	0	0	IA	IA	IA	0	0.01	0	E	0	0	0
20	0	0	IA	IA	IA	0	0	0	0	0	0.05	0
21	0	0	IA	IA	IA	0	0	0	0	0	0.02	0
22	0	0.01	IA	IA	IA	0	0	0	0	0	0.02	0
23	0	0	IA	IA	IA	0	0.01	0	0	0	0.02	0
24	0	0	IA	IA	IA	0	0	0	0	0	0.09	0.02
25	0	0.28	IA	IA	IA	0	0	0	0	0.01	0	0.02
26	0.46	0	IA	IA	IA	0	0.02	0	0	0	0.04	0
27	0.08	0	IA	IA	IA	0	0	0	0	0	0	0
28	0.01	0	IA	IA	IA	0	0	0	0	0	0	0
29	0.01	0	IA	IA	IA	0	0	0	0	0	0	0
30	0	0	IA	IA	—	0	0.01	0	0	0	0	0
31	0	—	IA	IA	—	0	—	0	—	0	0	—

Monthly Total Precipitation (in.) for E340 October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.74	0.48	0	IA	IA	0	0.77	0.58	0.11	1.33	1.17	1.1	0.13
Mean Total for Period of Record (in.)	1.34	0.23	0.17	IA	IA	0.18	0.60	0.46	0.53	2.29	1.57	1.37	1.10
Max Daily Total (in.)	0.52	0.28	0	IA	IA	0	0.58[S]	0.25	0.11	0.96	0.47	0.57	0.12
Missing Days	0	0	23	31	29	13	0	0	4	0	0	0	0

Meteorological Tower Data

Introduction

The meteorological observation network, as noted in Chapter 13 of the LANL Environmental Monitoring Plan (EMP), is required by the U.S. Department of Energy (DOE) Order 450.1. The network is a comprehensive system that measures temperature, wind, humidity, pressure, precipitation, insolation, and other meteorological variables required for DOE facilities. The collected data play a critical role in emergency planning in the event of chemical or radiological release, demonstrating regulatory compliance in the areas of air quality, water quality, and waste management as well as supporting monitoring programs in biology, hydrology and health physics. Each station is named according to the station's location.

Precipitation data 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 totaled from each meteorological tower to show monthly precipitation amounts. Further documentation and precipitation information data can be found at http://weather.lanl.gov.

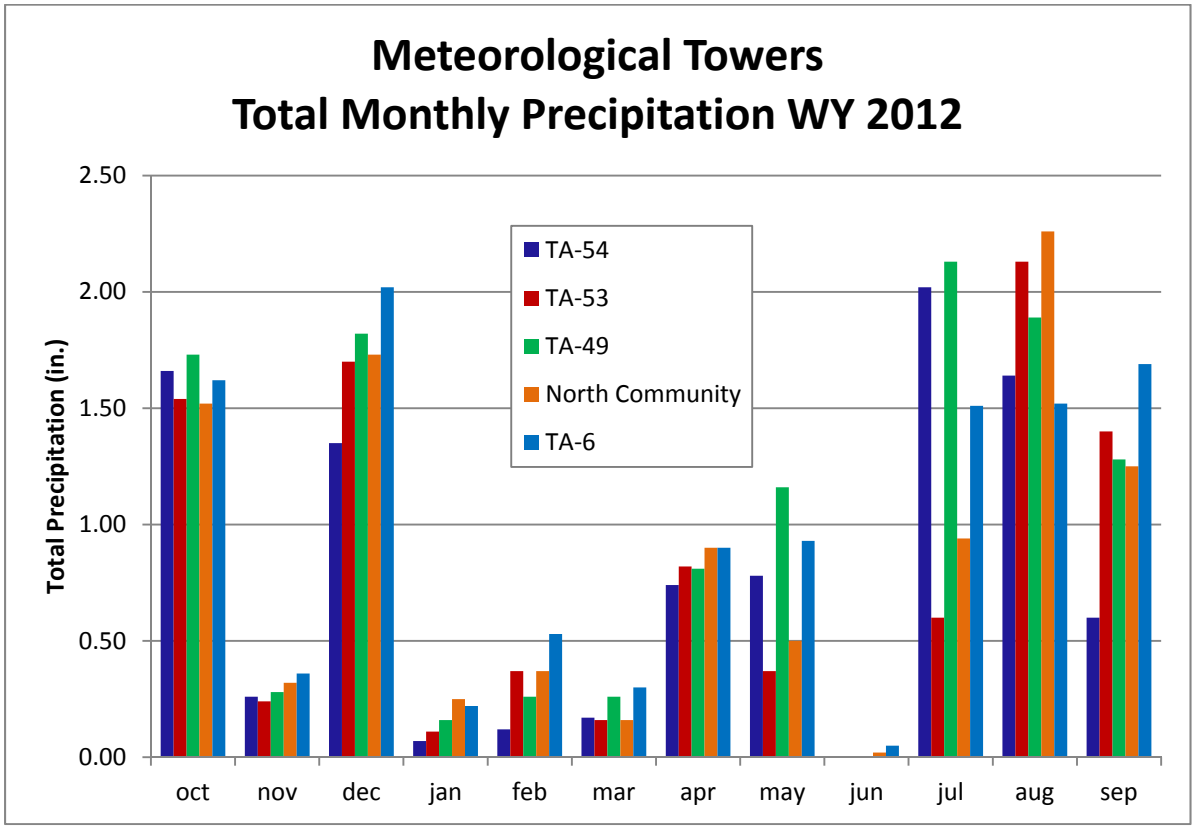


Figure 12 The total monthly precipitation for the Meteorological Towers for WY2012. The gages are listed in ascending order by elevation from TA-54 (6553 ft) to TA-06 (7427 ft).

TA-06 Meteorological Tower

Location. Lat. 35° 51’ 41”, long. –106.319503, NW ¼, Sec. 21, T. 19 N., R. 6 E, Los Alamos County.

Period of Record. February 1, 1990, to October 31, 2012.

Gage. Elevation of gage is 7423 ft using LANL LIDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 2.04 in. on August 26, 2006.

Maximum Daily Total Precipitation for Monsoon Season. 1.02 in. on October 12, 2012.

Equipment. The precipitation gage consists of a heated tipping bucket with wind screen.

Precipitation Record. The precipitation gage gave a complete and satisfactory record.

Daily Total Precipitation (in.) for TA-06

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	0.02	0	0.02	0.04	0.52	0	0	0.11	0.18	0
3	0.03	0	0.13	0	0.26	0	0.37	0	0	0.17	0.01	0
4	0.4	0	0.11	0	0	0	0	0	0	0.35	0	0
5	0.11	0.06	0.08	0	0	0	0	0	0	0	0.07	0
6	0	0	0	0	0.01	0	0	0	0	0	0.06	0
7	0.36	0.04	0	0	0	0	0	0	0	0.08	0.02	0.03
8	0	0	0	0	0	0.09	0	0.47	0	0	0	0
9	0	0	0	0	0	0.03	0	0	0	0	0	0
10	0	0	0	0	0	0.1	0	0	0	0	0	0.61
11	0	0	0	0	0	0	0	0.07	0	0.44	0	0
12	0	0	0.36	0	0.06	0	0	0.07	0	0	0.11	0.67
13	0	0.11	0.49	0	0.05	0	0	0.32	0	0.01	0	0.03
14	0	0	0	0	0.02	0	0.01	0	0	0	0	0
15	0	0	0	0.01	0	0	0	0	0	0	0.02	0
16	0	0	0	0.18	0	0	0	0	0	0.06	0.29	0
17	0	0	0	0	0	0	0	0	0	0	0.04	0
18	0	0	0	0	0	0.04	0	0	0	0	0	0
19	0	0	0.57	0	0.11	0	0	0	0	0	0.13	0
20	0	0	0	0	0	0	0	0	0	0	0.25	0
21	0	0	0	0.02	0	0	0	0	0	0.01	0.03	0
22	0	0	0.26	0.01	0	0	0	0	0	0	0.07	0
23	0	0	0	0	0	0	0	0	0	0.01	0.01	0
24	0	0	0	0	0	0	0	0	0	0.03	0.23	0
25	0	0.15	0	0	0	0	0	0	0	0.24	0	0.03
26	0.67	0	0	0	0	0	0	0	0	0	0	0.01
27	0.05	0	0	0	0	0	0	0	0	0	0	0.02
28	0	0	0	0	0	0	0	0	0.05	0	0	0.29
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	—

Monthly Total Precipitation (in.) for TA-06, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.62	0.36	2.02	0.22	0.53	0.30	0.90	0.93	0.05	1.51	1.52	1.69	1.02
Mean Total for Period of Record (in.)	1.54	0.98	0.98	0.99	0.83	1.02	1.01	1.25	1.22	2.53	3.56	1.90	1.52
Max Daily Total (in.)	0.67	0.15	0.57	0.18	0.26	0.09	0.52	0.47	0.05	0.44	0.29	0.67	1.02
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0	0

TA-49 Meteorological Tower

Location. Lat. 35° 48’ 48”, long. –106.299301, T. 18 N., R. 6 E., Ramon Vigil Land Grant.

Period of Record. June 24, 1987, to October 31, 2012.

Gage. Elevation of gage is 7045 ft using LANL LIDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 3.68 in. on February 27, 1988.

Maximum Daily Total Precipitation for Monsoon Season. 1.12 in. on July 4, 2012.

Equipment. The precipitation gage consists of a heated tipping bucket with wind screen.

Precipitation Record. The precipitation gage gave a complete and satisfactory record.

Daily Total Precipitation (in.) for TA-49

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	0.15	0	0	0.03	0.47	0	0	0.04	0.45	0
3	0.09	0	0	0	0.08	0	0.29	0	0	0.12	0	0.07
4	0.55	0	0.26	0	0	0	0	0	0	1.12	0	0
5	0.01	0.04	0.07	0	0	0	0	0	0	0	0.06	0
6	0.01	0	0	0	0	0	0	0	0	0.02	0.01	0
7	0.4	0	0	0	0	0	0	0	0	0.25	0	0.02
8	0	0.13	0	0.03	0	0.05	0	0.69	0	0	0	0
9	0	0	0	0	0	0.03	0	0	0	0	0	0
10	0	0	0	0	0	0.14	0	0	0	0	0	0.57
11	0	0	0	0	0	0	0.01	0.13	0	0.01	0	0.01
12	0	0	0.45	0	0.06	0	0	0	0	0	0.13	0.42
13	0	0.02	0.42	0	0.02	0	0	0.34	0	0.01	0	0.07
14	0	0	0	0	0.01	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0.12	0	0	0	0	0	0.11	0.27	0
17	0	0	0	0	0	0	0	0	0	0	0.01	0
18	0	0	0.3	0	0	0.01	0	0	0	0	0	0
19	0	0	0.17	0	0.09	0	0.03	0	0	0	0.01	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	0.03	0
22	0	0	0.23	0.01	0	0	0	0	0	0	0.56	0
23	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0.04	0	0	0	0	0	0	0	0.03	0.3	0.02
25	0	0.05	0[RE]	0	0	0	0	0	0	0.42	0	0.05
26	0.61	0	0[RE]	0	0	0	0	0	0	0	0.06	0
27	0.05	0	0	0	0	0	0	0	0	0	0	0
28	0.01	0	0	0	0	0	0	0	0	0	0	0.05
29	0	0	0	0	0	0	0.01	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	—

Monthly Total Precipitation (in.) for TA-49, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.73	0.28	1.82	0.16	0.26	0.26	0.81	1.16	0.00	2.13	1.89	1.28	0.28
Mean Total for Period of Record (in.)	1.53	0.92	0.90	0.96	0.96	0.96	0.93	1.14	1.03	2.44	3.28	1.81	1.48
Max Daily Total (in.)	0.61	0.13	0.45	0.12	0.09	0.14	0.47	0.69	0.00	1.12	0.56	0.57	0.28
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0	0

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 October 31, 2012.

Gage. Elevation of gage is 6992 ft using LANL LIDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 1.63 in. on October 14, 1994.

Maximum Daily Total Precipitation for Monsoon Season. 0.65 in. on August 24, 2012.

Equipment. The precipitation gage consists of a heated tipping bucket with wind screen.

Precipitation Record. The precipitation gage gave a complete and satisfactory record.

Daily Total Precipitation (in.) for TA-53

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	0.02	0	0	0.01	0.48	0	0	0.03	0.25	0.03
3	0.05	0	0.11	0	0.24	0	0.26	0	0	0.11	0	0.01
4	0.39	0	0.07	0	0	0	0	0	0	0.06	0	0
5	0.08	0.03	0.09	0	0	0	0	0	0	0	0.06	0
6	0.01	0	0	0	0	0	0	0	0	0	0.44	0
7	0.4	0	0	0	0	0	0	0	0	0.12	0	0.03
8	0	0.08	0	0	0	0.02	0	0.1	0	0	0	0
9	0	0	0	0	0	0.02	0	0	0	0	0	0
10	0	0	0	0	0	0.09	0	0	0	0	0	0.03
11	0	0	0	0	0	0.01	0.05	0.04	0	0	0	0.07
12	0	0	0.3	0	0.04	0	0	0.02	0	0	0.08	0.46
13	0	0.03	0.45	0	0.01	0	0	0.21	0	0	0	0.05
14	0	0	0	0	0.01	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0.1	0	0	0	0	0	0.01	0.16	0
17	0	0	0	0	0	0	0	0	0	0	0.02	0
18	0	0	0	0	0	0.01	0	0	0	0	0	0
19	0	0	0.48	0	0.07	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0.13	0
21	0	0	0	0	0	0	0	0	0	0.21	0	0
22	0	0	0.18	0.01	0	0	0	0	0	0	0.3	0
23	0	0	0	0	0	0	0.02	0	0	0	0.01	0
24	0	0	0	0	0	0	0	0	0	0	0.65	0
25	0	0.1	0	0	0	0	0	0	0	0.06	0	0.03
26	0.55	0	0	0	0	0	0.01	0	0	0	0.03	0.06
27	0.06	0	0	0	0	0	0	0	0	0	0	0.36
28	0	0	0	0	0	0	0	0	0	0	0	0.21
29	0	0	0	0	0	0	0	0	0	0	0	0.06
30	0	0	0	0	—	0	0	0	0	0	0	0
31	0	—	0	0	—	0	—	0	—	0	0	—

Monthly Total Precipitation (in.) for TA-53, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.54	0.24	1.70	0.11	0.37	0.16	0.82	0.37	0.00	0.60	2.13	1.40	0.14
Mean Total for Period of Record (in.)	1.44	0.68	0.70	0.86	0.74	0.92	0.91	1.14	0.96	1.85	2.68	1.31	1.40
Max Daily Total (in.)	0.55	0.10	0.48	0.10	0.24	0.09	0.48	0.04	0.00	0.21	0.65	0.46	0.14
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0	0

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 October 31, 2012.

Gage. Elevation of gage is 6553 ft using LANL LIDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 2.11 in. on June 17, 1999.

Maximum Daily Total Precipitation for Monsoon Season. 0.88 in. on July 2, 2012.

Equipment. The precipitation gage consists of a heated tipping bucket with wind screen.

Precipitation Record. The precipitation gage gave a complete and satisfactory record.

Daily Total Precipitation (in.) for TA-54

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	0	0	0	0	0	0	0	0.01	0.3	0
2	0	0	0.02	0	0	0.01	0.45	0	0	0.88	0.42	0
3	0.03	0	0.08	0	0.03	0	0.25	0	0	0.32	0	0
4	0.47	0	0.03	0	0	0	0	0	0	0.16	0	0
5	0.2	0.02	0.09	0	0	0	0	0	0	0	0.06	0
6	0.01	0	0	0	0	0	0	0	0	0	0.01	0
7	0.36	0.1	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0.01	0	0.01	0	0.52	0	0	0	0
9	0	0	0	0	0	0.02	0	0	0	0	0	0
10	0	0	0	0	0	0.1	0	0	0	0.22	0	0.16
11	0	0	0	0	0	0.02	0.01	0.1	0	0	0	0
12	0	0	0.23	0	0.03	0	0	0.02	0	0	0.06	0.31
13	0	0	0.36	0	0.01	0	0	0.14	0	0	0	0.04
14	0	0	0	0	0.01	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0.06	0	0	0	0	0	0	0.2	0
17	0	0	0	0	0	0	0	0	0	0	0.03	0
18	0	0	0	0	0	0.01	0	0	0	0	0	0
19	0	0	0.45	0	0.04	0	0.02	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0.16	0
21	0	0	0	0	0	0	0	0	0	0.23	0	0
22	0	0	0.09	0	0	0	0	0	0	0	0.12	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	0.13	0.03
25	0	0.14	0	0	0	0	0	0	0	0.12	0.01	0.02
26	0.59	0	0	0	0	0	0.01	0	0	0.08	0.14	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	0.04
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	—

Monthly Total Precipitation (in.) for TA-54, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.66	0.26	1.35	0.07	0.12	0.17	0.74	0.78	0.00	2.02	1.64	0.60	0.14
Mean Total for Period of Record (in.)	1.57	0.68	0.66	0.70	0.62	0.87	0.83	0.92	1.04	1.75	2.56	1.41	1.50
Max Daily Total (in.)	0.59	0.14	0.45	0.06	0.04	0.10	0.45	0.52	0.00	0.88	0.42	0.31	0.14
Missing days	0	0	0	0	0	0	0	0	0	0	0	0	0

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 October 31, 2012.

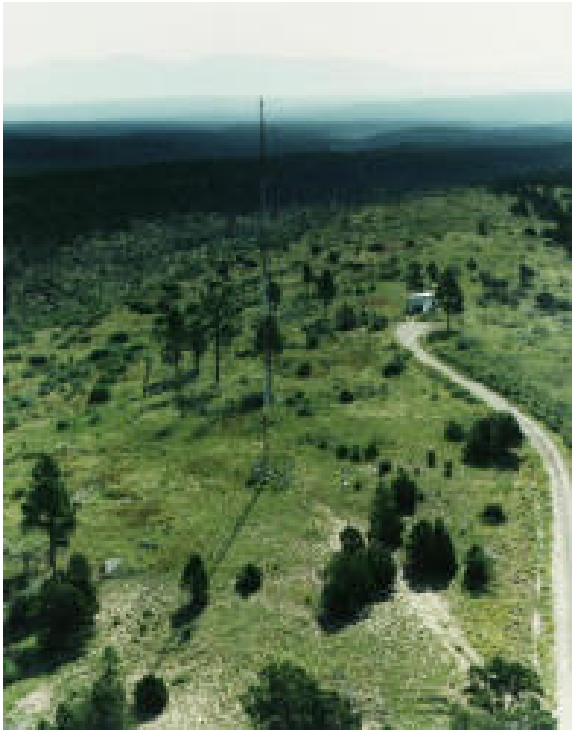
Gage. Elevation of gage is 7414 ft using LANL LIDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 2.20 in. on August 4, 1991.

Maximum Daily Total Precipitation for Monsoon Season. 1.03 in. on August 3, 2012.

Equipment. The precipitation gage consists of a heated tipping bucket with wind screen.

Precipitation Record. The precipitation gage gave a complete and satisfactory record.



Daily Total Precipitation (in.) for North Community

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	0.09	0	0	0	0	0.01	0.2	0	0	0.12	0.15	0
3	0.01	0	0.18	0	0.09	0	0.64	0	0	0.09	1.03	0
4	0.3	0	0.05	0	0.15	0	0	0	0	0.03	0.02	0
5	0.05	0.08	0.03	0	0	0	0	0	0	0.1	0	0
6	0	0	0	0	0	0	0	0	0	0	0.17	0
7	0.34	0	0.01	0	0	0	0	0	0	0.16	0.05	0.09
8	0	0	0	0	0	0.04	0	0.21	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0.06	0	0	0	0	0	0.11
11	0	0	0	0	0	0.05	0	0.05	0	0.17	0.01	0
12	0	0	0.31	0	0.01	0	0	0.02	0	0	0.19	0.68
13	0	0.09	0.43	0	0.06	0	0	0.22	0	0	0.05	0.07
14	0	0.01	0.04	0	0.01	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0.01	0
16	0	0	0	0.21	0	0	0	0	0	0.12	0.11	0
17	0	0	0	0	0	0	0	0	0	0	0.02	0
18	0	0	0	0	0	0	0	0	0	0	0.01	0
19	0	0	0.52	0	0.05	0	0	0	0	0	0.26	0
20	0	0	0.01	0	0	0	0	0	0	0	0.04	0
21	0	0	0	0.03	0	0	0	0	0	0.13	0.04	0
22	0	0	0.15	0.01	0	0	0	0	0	0	0.07	0
23	0	0	0	0	0	0	0.06	0	0	0	0.01	0
24	0	0	0	0	0	0	0	0	0	0.02	0.02	0
25	0.01	0.14	0	0	0	0	0	0	0	0	0	0.03
26	0.63	0	0	0	0	0	0	0	0	0	0	0
27	0.09	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0.02	0	0	0.27
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	—

Monthly Total Precipitation (in.) for North Community, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	1.52	0.32	1.73	0.25	0.37	0.16	0.90	0.50	0.02	0.94	2.26	1.25	0.85
Mean Total for Period of Record (in.)	1.68	1.09	0.95	1.03	0.97	1.06	1.17	1.39	1.62	2.96	3.95	1.83	1.65
Max Daily Total (in.)	0.63	0.14	0.52	0.21	0.15	0.06	0.64	0.22	0.02	0.17	1.03	0.68	0.85
Missing Days	0	0	0	0	0	0	0	0	0	0	0	0	0

Precipitation Emergency Notification Stations (PENS)

Introduction

The precipitation emergency notification station provides real-time precipitation data during rain events. Ample notification allows for a better response to possible flash flooding as a result of watershed degradation from the Las Conchas fire. The emergency notification network consists of seven stand-alone rain gage stations strategically placed in upper watershed locations within medium-to-high-severity burn areas. Each station is named based on the station's geographical location. To access real-time data visit http://sutronwin.com/lanl/tw/

The PENS network is active for a shorter season than the extended rain gage network. The PENS gages are used during the monsoon season. As field crews travel to the gages for winter shutdown and spring activation, some data overlap may occur outside the active dates. The overlapping data are included in the daily summary tables but are not used to calculate monthly totals.

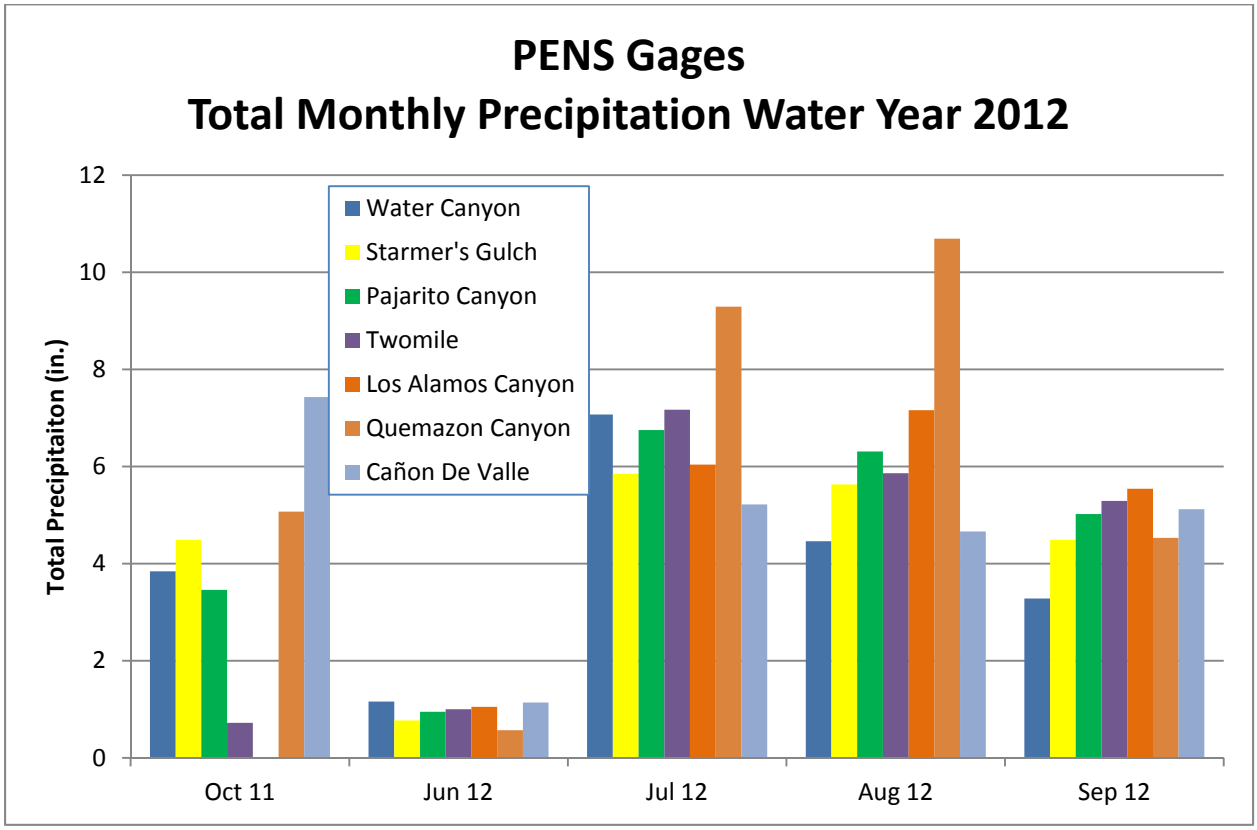


Figure 13 Total monthly precipitation at the PENS gages for WY2012, excluding November 2011 to May 2012, when the gages were shut down for winter. The rain gages are listed in ascending order by elevation.

Cañon de Valle PENS

Location. Lat. 35° 52’ 36”, long. –106° 23' 48", T. 19 N., R. 5 E., U.S. Forest Service.

Period of Record. August 31, 2011, to October 31, 2012.

Gage. Elevation of gage is 9899 ft using LANL LIDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 2.48 in. on September 12, 2012.

Maximum Daily Total Precipitation for Monsoon Season. 2.48 in. on September 12, 2012.

Equipment. Station is equipped with a 5600 Sutron tipping bucket rain gage, a 9210 Sutron data logger and a satellite modem, all enclosed in a NEMA shelter. All equipment is powered with a solar-panel battery-charging station.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except on August 16 and 17, 2012, when the data logger malfunctioned and from November 18, 2011, to May 17, 2012, when the gage was shut down for winter.

No image available.

Daily Total Precipitation (in.) for Cañon de Valle

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	IA	IA	IA	IA	IA	IA	0	0.05	0	0
2	2.28	0	IA	IA	IA	IA	IA	IA	0	0.43	0.04	0.38
3	0.04	0	IA	IA	IA	IA	IA	IA	0	0	1.03	0.02
4	1.68	0	IA	IA	IA	IA	IA	IA	0.01	0.27	0.05	0
5	0.36	0	IA	IA	IA	IA	IA	IA	0	0.1	0.09	0
6	0.01	0.1	IA	IA	IA	IA	IA	IA	0.01	0	1.1	0
7	0.06	0.02	IA	IA	IA	IA	IA	IA	0	0.2	0.45	0.62
8	0.78	0.16	IA	IA	IA	IA	IA	IA	0	0	0	0
9	0.11	0.01	IA	IA	IA	IA	IA	IA	0	0.09	0	0
10	0	0	IA	IA	IA	IA	IA	IA	0	0.13	0.17	0
11	0	0	IA	IA	IA	IA	IA	IA	0	0.72	0	0.04
12	0	0	IA	IA	IA	IA	IA	IA	0	0.01	0.09	2.48
13	0.02	0.04	IA	IA	IA	IA	IA	IA	0	0.21	0.05	0.1
14	0	0.45	IA	IA	IA	IA	IA	IA	0	0	0	0
15	0	0.2	IA	IA	IA	IA	IA	IA	0	0	0	0
16	0	0	IA	IA	IA	IA	IA	IA	0	0.25	E	0
17	0.03	0	IA	IA	IA	IA	IA	0	0	0.12	E	0
18	0	IA	IA	IA	IA	IA	IA	0	0	0.01	0.08	0
19	0	IA	IA	IA	IA	IA	IA	0	0	0	0.18	0
20	0	IA	IA	IA	IA	IA	IA	0	0	0	0.93	0
21	0	IA	IA	IA	IA	IA	IA	0	0	0.22	0.05	0
22	0	IA	IA	IA	IA	IA	IA	0	0	0.01	0.21	0
23	0	IA	IA	IA	IA	IA	IA	0	0	0.81	0.07	0
24	0	IA	IA	IA	IA	IA	IA	0	0	1.07	0.01	0
25	0.08	IA	IA	IA	IA	IA	IA	0	0	0.02	0	0.12
26	1.07	IA	IA	IA	IA	IA	IA	0	0	0.5	0.01	0.02
27	0.45	IA	IA	IA	IA	IA	IA	0	0	0	0.01	0.02
28	0.46	IA	IA	IA	IA	IA	IA	0	1.08	0	0	1.27
29	0	IA	IA	IA	IA	IA	IA	0	0.04	0	0.04	0.05
30	0	IA	IA	IA	—	IA	IA	0	0	0	0	0
31	0	—	IA	IA	—	IA	—	0	—	0	0	—

Monthly Total Precipitation (in.) for Cañon de Valle, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	7.43	0.98	IA	IA	IA	IA	IA	0	1.14	5.22	4.66	5.12	2.48
Mean Total for Period of Record (in.)	7.43	0.98	IA	IA	IA	IA	IA	0	1.14	5.22	4.66	5.68	4.96
Max Daily Total (in.)	2.28	0.45	IA	IA	IA	IA	IA	0	1.08	1.07	1.10	2.48	2.43
Missing Days	0	13	31	31	29	31	30	16	0	0	2	0	0

Los Alamos Canyon PENS

Location. Lat. 35° 53’ 29, long. -106° 22’ 19”, T. 19 N., R. 5 E., U.S. Forest Service.

Period of Record. August 31, 2011, to October 31, 2012.

Gage. Elevation of gage is 8801 ft using LANL LIDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 2.29 in. on September 28, 2012.

Maximum Daily Total Precipitation for Monsoon Season. 2.29 in. on September 28, 2012.

Equipment. Station is equipped with a 5600 Sutron tipping bucket rain gage, a 9210 Sutron data logger, and a satellite modem, all enclosed in a NEMA shelter. All equipment is powered with a solar-panel battery-charging station.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except from November 14, 2011, to May 8, 2012, when the gage was shut down for winter.

No image available.

Daily Total Precipitation (in.) for Los Alamos Canyon

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	IA	IA	IA	IA	IA	IA	0	0.08	0.01	0
2	0	0	IA	IA	IA	IA	IA	IA	0	0.38	0.03	0.08
3	0	0	IA	IA	IA	IA	IA	IA	0	0.01	1.76	0
4	0	0	IA	IA	IA	IA	IA	IA	0	0.71	0.08	0
5	0	0	IA	IA	IA	IA	IA	IA	0.01	0.26	0.05	0
6	0	0	IA	IA	IA	IA	IA	IA	0	0	0.9	0.01
7	0	0	IA	IA	IA	IA	IA	IA	0	0.07	0.25	0.68
8	0	0.04	IA	IA	IA	IA	IA	IA	0	0	0	0
9	0	0	IA	IA	IA	IA	IA	0.01	0	0.12	0	0
10	0	0	IA	IA	IA	IA	IA	0	0	0.07	0.01	0.03
11	0	0	IA	IA	IA	IA	IA	0.27	0	2.2	0.02	0.14
12	0.01	0	IA	IA	IA	IA	IA	0.09	0	0	0.79	1.89
13	0	0.10	IA	IA	IA	IA	IA	0.88	0	0.79	0.26	0.11
14	0	IA	IA	IA	IA	IA	IA	0	0	0	0	0
15	0	IA	IA	IA	IA	IA	IA	0	0	0	0	0
16	0	IA	IA	IA	IA	IA	IA	0	0	0.04	1.11	0
17	0	IA	IA	IA	IA	IA	IA	0	0	0	0.15	0
18	0	IA	IA	IA	IA	IA	IA	0	0	0.01	0.01	0
19	0	IA	IA	IA	IA	IA	IA	0	0	0	0.8	0
20	0	IA	IA	IA	IA	IA	IA	0	0	0	0.47	0
21	0	IA	IA	IA	IA	IA	IA	0	0	0.62	0.09	0
22	0	IA	IA	IA	IA	IA	IA	0	0	0	0.12	0
23	0	IA	IA	IA	IA	IA	IA	0	0	0.24	0.21	0
24	0	IA	IA	IA	IA	IA	IA	0	0	0.38	0.04	0
25	0	IA	IA	IA	IA	IA	IA	0	0	0.02	0	0.28
26	0	IA	IA	IA	IA	IA	IA	0	0	0.02	0	0
27	0	IA	IA	IA	IA	IA	IA	0	0	0	0	0
28	0	IA	IA	IA	IA	IA	IA	0	1.03	0	0	2.29
29	0	IA	IA	IA	IA	IA	IA	0.41	0.01	0	0	0.03
30	0	IA	IA	IA	—	IA	IA	0	0	0	0	0
31	0	—	IA	IA	—	IA	—	0.02	—	0	0	—

Monthly Total Precipitation (in.) for Los Alamos Canyon, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	0.01	0.14	IA	IA	IA	IA	IA	1.66	1.05	6.04	7.16	5.54	2.2
Mean Total for Period of Record (in.)	0.01	0.14	IA	IA	IA	IA	IA	1.66	1.05	6.04	7.16	2.80	1.11
Max Daily Total (in.)	0.01	0.10	IA	IA	IA	IA	IA	0.88	1.03	2.20	1.76	2.29	2.19
Missing Days	0	13	31	31	29	31	30	8	0	0	0	0	0

Pajarito Canyon PENS

Location. Lat. 35° 52’ 28”, long. –106° 21’ 50”, T. 19 N., R. 5 E., U.S. Forest Service.

Period of Record. August 31, 2011, to October 31, 2012.

Gage. Elevation of gage is 8361 ft using LANL LIDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 2.40 in. on October 12, 2012.

Maximum Daily Total Precipitation for Monsoon Season. 2.40 in. on October 12, 2012.

Equipment. Station is equipped with a 5600 Sutron tipping bucket rain gage, a 9210 Sutron data logger, and a satellite modem, all enclosed in a NEMA shelter. All equipment is powered with a solar-panel battery-charging station.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except from November 15, 2011, to April 30 2012, when the gage was shut down for winter.

No image available.

Daily Total Precipitation (in.) for Pajarito Canyon

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	IA	IA	IA	IA	IA	0	0	0	0	0
2	0	0	IA	IA	IA	IA	IA	0	0	0.63	0.07	0
3	0	0	IA	IA	IA	IA	IA	0	0	0	1.85	0.05
4	0	0	IA	IA	IA	IA	IA	0	0	1.12	0	0
5	0	0.03	IA	IA	IA	IA	IA	0	0.01	0.03	0	0
6	0	0.25	IA	IA	IA	IA	IA	0	0	0	0.04	0
7	0.61	0.01	IA	IA	IA	IA	IA	0.21	0	0.13	0.1	0.18
8	0.5	0.09	IA	IA	IA	IA	IA	0.67	0	0	0.02	0
9	0.04	0	IA	IA	IA	IA	IA	0.01	0	0.01	0	0
10	0	0	IA	IA	IA	IA	IA	0	0	0.07	0	0.26
11	0	0	IA	IA	IA	IA	IA	0.2	0	2.16	0	0
12	0	0	IA	IA	IA	IA	IA	0.09	0	0	0.54	2.04
13	0	1.06	IA	IA	IA	IA	IA	1.51	0	0.13	0.09	0.1
14	0	0.01	IA	IA	IA	IA	IA	0	0	0.01	0	0
15	0	IA	IA	IA	IA	IA	IA	0	0	0	0.07	0
16	0	IA	IA	IA	IA	IA	IA	0	0	0.76	1.21	0
17	0	IA	IA	IA	IA	IA	IA	0	0	0	0.12	0
18	0	IA	IA	IA	IA	IA	IA	0	0	0.02	0.04	0.01
19	0	IA	IA	IA	IA	IA	IA	0	0	0	0.89	0
20	0	IA	IA	IA	IA	IA	IA	0	0	0	0.85	0
21	0	IA	IA	IA	IA	IA	IA	0	0	0.47	0.08	0
22	0	IA	IA	IA	IA	IA	IA	0	0	0	0.24	0
23	0	IA	IA	IA	IA	IA	IA	0	0	0.45	0.09	0
24	0	IA	IA	IA	IA	IA	IA	0	0	0.42	0.01	0
25	0.15	IA	IA	IA	IA	IA	IA	0	0	0.3	0	0.31
26	1.6	IA	IA	IA	IA	IA	IA	0	0	0.02	0	0.01
27	0.55	IA	IA	IA	IA	IA	IA	0	0	0	0	0
28	0.01	IA	IA	IA	IA	IA	IA	0	0.91	0	0	2
29	0	IA	IA	IA	IA	IA	IA	0	0.03	0	0	0.06
30	0	IA	IA	IA	—	IA	IA	0	0	0	0	0
31	0	—	IA	IA	—	IA	—	0	—	0.02	—	—

Monthly Total Precipitation (in.) for Pajarito Canyon, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	3.46	1.45	IA	IA	IA	IA	IA	2.69	0.95	6.75	6.31	5.02	2.41
Mean Total for Period of Record (in.)	3.46	1.45	IA	IA	IA	IA	IA	2.69	0.95	6.75	6.31	2.52	2.94
Max Daily Total (in.)	1.60	1.06	IA	IA	IA	IA	IA	1.51	0.91	2.16	1.85	2.04	2.40
Missing Days	0	15	31	31	29	31	30	0	0	0	0	0	0

Quemazon Canyon PENS

Location. Lat. 35° 55’ 39”, long. –106° 23’ 5”, T. 20 N., R. 5 E., U.S. Forest Service.

Period of Record. August 31, 2011, to October 31, 2012.

Gage. Elevation of gage is 9833 ft using LANL LIDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 2.65 in. on September 12, 2012.

Maximum Daily Total Precipitation for Monsoon Season. 2.65 in. on September 12, 2012.

Equipment. Station is equipped with a 5600 Sutron tipping bucket rain gage, a 9210 Sutron data logger, and a satellite modem, all enclosed in a NEMA shelter. All equipment is powered with a solar-panel battery-charging station.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except from November 16, 2011, to May 15, 2012, when the gage was shut down for winter.

Daily Total Precipitation (in.) for Quemazon Canyon

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	IA	IA	IA	IA	IA	IA	0	0	0	0
2	0	0	IA	IA	IA	IA	IA	IA	0	0.4	0.03	0.22
3	0.04	0	IA	IA	IA	IA	IA	IA	0	0.01	0.84	0
4	1.47	0	IA	IA	IA	IA	IA	IA	0.02	0.48	0.58	0
5	0.31	0	IA	IA	IA	IA	IA	IA	0	1.61	0.23	0
6	0	0.1	IA	IA	IA	IA	IA	IA	0	0.2	1.34	0
7	0.1	0.02	IA	IA	IA	IA	IA	IA	0.01	0.13	2.22	0.29
8	0.73	0.08	IA	IA	IA	IA	IA	IA	0	0	0	0
9	0.06	0	IA	IA	IA	IA	IA	IA	0	0.25	0	0
10	0	0	IA	IA	IA	IA	IA	IA	0	0.05	0	0.01
11	0	0	IA	IA	IA	IA	IA	IA	0	1.41	0.12	0.05
12	0	0	IA	IA	IA	IA	IA	IA	0	0	0.54	2.65
13	0.01	0.03	IA	IA	IA	IA	IA	IA	0	0.37	0.8	0.29
14	0	0.3	IA	IA	IA	IA	IA	IA	0	0	0.01	0
15	0	0.03	IA	IA	IA	IA	IA	IA	0	0	0.01	0
16	0	IA	IA	IA	IA	IA	IA	0	0	0.42	0.87	0
17	0	IA	IA	IA	IA	IA	IA	0	0	0	0.15	0
18	0	IA	IA	IA	IA	IA	IA	0	0	0	0.33	0
19	0	IA	IA	IA	IA	IA	IA	0	0	0	0.14	0
20	0	IA	IA	IA	IA	IA	IA	0	0	0	0.3	0
21	0	IA	IA	IA	IA	IA	IA	0.01	0	1.29	0.11	0
22	0	IA	IA	IA	IA	IA	IA	0	0	0	0.41	0
23	0	IA	IA	IA	IA	IA	IA	0	0	0.13	1.5	0
24	0	IA	IA	IA	IA	IA	IA	0	0	2.14	0.16	0.01
25	0.16	IA	IA	IA	IA	IA	IA	0	0	0	0	0.12
26	1.21	IA	IA	IA	IA	IA	IA	0	0	0.4	0	0
27	0.08	IA	IA	IA	IA	IA	IA	0	0	0	0	0.01
28	0.74	IA	IA	IA	IA	IA	IA	0	0.39	0	0	0.88
29	0.15	IA	IA	IA	IA	IA	IA	0	0.15	0	0	0
30	0.01	IA	IA	IA	—	IA	IA	0	0	0	0	0
31	0	—	IA	IA	—	IA	—	0	—	0	0	—

Monthly Total Precipitation (in.) for Quemazon Canyon, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	5.07	0.56	IA	IA	IA	IA	IA	0.01	0.57	9.29	10.69	4.53	2.63
Mean Total for Period of Record (in.)	5.07	0.56	IA	IA	IA	IA	IA	0.01	0.57	9.29	10.69	5.75	3.85
Max Daily Total (in.)	1.47	0.30	IA	IA	IA	IA	IA	0.01	0.39	2.14	2.22	2.65	2.61
Missing Days	0	14	31	31	29	31	30	15	0	0	0	0	0

Starmer's Gulch PENS

Location. Lat. 35° 52' 1", long. –106° 21' 45", T. 19 N., R. 5 E., U.S. Forest Service.

Period of Record. August 31, 2011, to October 31, 2012.

Gage. Elevation of gage is 8233 ft using LANL LIDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 2.12 in. on October 12, 2012.

Maximum Daily Total Precipitation for Monsoon Season. 2.12 in. October 12, 2012.

Equipment. Station is equipped with a 5600 Sutron tipping bucket rain gage, a 9210 Sutron data logger, and a satellite modem, all enclosed in a NEMA shelter. All equipment is powered with a solar-panel battery-charging station.

Precipitation Record. The precipitation gage gave a complete and satisfactory record except, from November 18, 2011, to May 9, 2012, when the gage was shut down for winter.

No image available.

Daily Total Precipitation (in.) for Starmer's Gulch

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	IA	IA	IA	IA	IA	IA	0	0	0	0
2	0.35	0	IA	IA	IA	IA	IA	IA	0	0.57	0.18	0
3	0.04	0	IA	IA	IA	IA	IA	IA	0	0.02	0.96	0.04
4	1.42	0	IA	IA	IA	IA	IA	IA	0	0.94	0	0
5	0.19	0.01	IA	IA	IA	IA	IA	IA	0	0.02	0.06	0
6	0	0.01	IA	IA	IA	IA	IA	IA	0	0	0.6	0
7	0.37	0	IA	IA	IA	IA	IA	IA	0	0.05	0.02	0.11
8	0.24	0.03	IA	IA	IA	IA	IA	IA	0	0	0	0
9	0.03	0	IA	IA	IA	IA	IA	IA	0	0	0	0
10	0	0	IA	IA	IA	IA	IA	0	0	0.08	0	0.34
11	0	0	IA	IA	IA	IA	IA	0.18	0	1.81	0	0
12	0.01	0	IA	IA	IA	IA	IA	0.07	0	0.01	0.46	1.9
13	0	1.06	IA	IA	IA	IA	IA	1.30	0	0.08	0	0.08
14	0	0	IA	IA	IA	IA	IA	0	0	0.01	0	0
15	0	0	IA	IA	IA	IA	IA	0	0	0	0.06	0
16	0	0	IA	IA	IA	IA	IA	0	0	0.51	1.42	0
17	0	0	IA	IA	IA	IA	IA	0	0	0.07	0.09	0
18	0	IA	IA	IA	IA	IA	IA	0	0	0	0	0
19	0	IA	IA	IA	IA	IA	IA	0	0	0.01	0.57	0
20	0	IA	IA	IA	IA	IA	IA	0	0	0	0.78	0
21	0	IA	IA	IA	IA	IA	IA	0	0.01	0.23	0.06	0
22	0	IA	IA	IA	IA	IA	IA	0	0	0	0.24	0
23	0	IA	IA	IA	IA	IA	IA	0	0	0.53	0.12	0
24	0	IA	IA	IA	IA	IA	IA	0	0	0.47	0	0
25	0.12	IA	IA	IA	IA	IA	IA	0	0	0.4	0	0.28
26	1.35	IA	IA	IA	IA	IA	IA	0	0	0.04	0	0.01
27	0.37	IA	IA	IA	IA	IA	IA	0	0	0	0	0
28	0	IA	IA	IA	IA	IA	IA	0	0.67	0	0.01	1.69
29	0	IA	IA	IA	IA	IA	IA	0	0.09	0	0	0.04
30	0	IA	IA	IA	—	IA	IA	0	0	0	0	0
31	0	—	IA	IA	—	IA	IA	0	—	0	0	—

Monthly Total Precipitation (in.) for Starmer's Gulch, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	4.49	1.11	IA	IA	IA	IA	IA	1.55	0.77	5.85	5.63	4.49	2.14
Mean Total for Period of Record (in.)	4.49	1.11	IA	IA	IA	IA	IA	1.55	0.77	5.85	5.63	4.93	3.32
Max Daily Total (in.)	1.42	1.06	IA	IA	IA	IA	IA	1.30	0.67	1.81	1.42	1.90	2.12
Missing Days	0	12	31	31	29	31	30	8	0	0	0	0	0

Twomile Canyon PENS

Location. Lat. 35° 52’ 46”, long. –106° 21’ 59”, T. 19 N., R. 5 E., U.S. Forest Service.

Period of Record. August 31, 2011, to October 31, 2012.

Gage. Elevation of gage is 8549 ft using LANL LIDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 2.82 in. on July 11, 2012.

Maximum Daily Total Precipitation for Current Monitoring Season. 2.82 in. on July 11, 2012.

Equipment. Station is equipped with a 5600 Sutron tipping bucket rain gage, a 9210 Sutron data logger, and a satellite modem, all enclosed in a NEMA shelter. All equipment is powered with a solar-panel battery-charging station.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except for September 27, 2012, when the equipment malfunctioned and from November 15, 2011, to April 26, 2012, when the gage was shut down for winter.

No image available.

Daily Total Precipitation (in.) for Twomile Canyon

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	IA	IA	IA	IA	IA	0	0	0.06	0	0
2	0.02	0	IA	IA	IA	IA	IA	0	0	0.46	0.11	0.02
3	0	0	IA	IA	IA	IA	IA	0	0	0	1.55	0
4	0.02	0	IA	IA	IA	IA	IA	0	0	1.06	0.01	0
5	0	0	IA	IA	IA	IA	IA	0	0.01	0.06	0.05	0
6	0	0.12	IA	IA	IA	IA	IA	0	0	0.01	0.79	0
7	0.06	0	IA	IA	IA	IA	IA	0.3	0	0.1	0.14	0.24
8	0.55	0.02	IA	IA	IA	IA	IA	0.53	0	0	0.04	0
9	0.02	0	IA	IA	IA	IA	IA	0.01	0	0.02	0	0
10	0	0	IA	IA	IA	IA	IA	0	0	0.08	0	0.17
11	0	0	IA	IA	IA	IA	IA	0.27	0	2.82	0	0
12	0	0	IA	IA	IA	IA	IA	0.08	0	0	0.35	2.24
13	0	0	IA	IA	IA	IA	IA	1.32	0	0.13	0.12	0.1
14	0	0	IA	IA	IA	IA	IA	0	0	0	0	0
15	0	IA	IA	IA	IA	IA	IA	0	0	0	0.01	0
16	0	IA	IA	IA	IA	IA	IA	0	0	0.76	0.78	0
17	0	IA	IA	IA	IA	IA	IA	0	0	0.01	0.13	0
18	0	IA	IA	IA	IA	IA	IA	0	0	0.01	0.03	0.01
19	0	IA	IA	IA	IA	IA	IA	0	0	0	0.92	0
20	0	IA	IA	IA	IA	IA	IA	0	0	0	0.64	0
21	0	IA	IA	IA	IA	IA	IA	0	0	0.41	0.09	0
22	0	IA	IA	IA	IA	IA	IA	0	0	0.17	0	0
23	0	IA	IA	IA	IA	IA	IA	0	0	0.47	0.09	0
24	0	IA	IA	IA	IA	IA	IA	0	0	0.39	0.01	0
25	0.04	IA	IA	IA	IA	IA	IA	0	0	0.11	0	0.24
26	0.01	IA	IA	IA	IA	IA	IA	0	0	0.03	0	0
27	0	IA	IA	IA	IA	IA	0.01	0	0	0	0	E
28	0	IA	IA	IA	IA	IA	0	0	0.97	0	0	2.23
29	0	IA	IA	IA	IA	IA	0	0	0.02	0	0	0.04
30	0	IA	IA	IA	—	IA	0.17	0	0	0	0	0
31	0	—	IA	IA	—	IA	—	0	—	0.01	0	—

Monthly Total Precipitation (in.) for Twomile Canyon, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	0.72	0.14	IA	IA	IA	IA	0.18	2.51	1.00	7.17	5.86	5.29	2.65
Mean Total for Period of Record (in.)	0.72	0.14	IA	IA	IA	IA	0.18	2.51	1.00	7.17	5.86	2.88	1.69
Max Daily Total (in.)	0.55	0.12	IA	IA	IA	IA	0.17	1.32	0.97	2.82	1.55	2.24	2.64
Missing Days	0	16	31	31	29	31	26	0	0	0	0	1	0

Water Canyon PENS

Location. Lat. 35° 50’ 43”, long. -106° 22’ 54”, T. 19 N., R. 6 E., U.S. Forest Service.

Period of Record. August 31, 2011, to October 31, 2012.

Gage. Elevation of gage is 8247 ft using LANL LIDAR DEM with NAD83.

Maximum Daily Total Precipitation for Period of Record. 1.85 in. on September 12, 2012.

Maximum Daily Total Precipitation for Monsoon Season. 1.85 in. on September 12, 2012.

Equipment. Station is equipped with a 5600 Sutron tipping bucket rain gage, a 9210 Sutron data logger, and a satellite modem, all enclosed in a NEMA shelter. All equipment is powered with a solar-panel battery-charging station.

Precipitation Record. The precipitation gage gave a complete and satisfactory record, except from November 14, 2011, to May 9, 2012, when the gage was shut down for winter.

Daily Total Precipitation (in.) for Water Canyon

Day	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1	0	0	IA	IA	IA	IA	IA	IA	0	0.03	0	0
2	0.09	0	IA	IA	IA	IA	IA	IA	0	0.52	0.07	0.05
3	0.05	0	IA	IA	IA	IA	IA	IA	0	0	0.43	0.07
4	1.28	0	IA	IA	IA	IA	IA	IA	0	0.49	0.03	0
5	0.24	0.01	IA	IA	IA	IA	IA	IA	0.01	0	0.07	0
6	0	0.04	IA	IA	IA	IA	IA	IA	0	0.01	0.85	0
7	0.29	0	IA	IA	IA	IA	IA	IA	0	0.03	0.02	0.22
8	0.31	0.02	IA	IA	IA	IA	IA	IA	0	0	0	0
9	0.01	0.01	IA	IA	IA	IA	IA	IA	0	0.02	0	0
10	0	0	IA	IA	IA	IA	IA	0	0	0.16	0	0.01
11	0	0	IA	IA	IA	IA	IA	0	0	1.59	0	0
12	0	0	IA	IA	IA	IA	IA	0.16	0	0	0.56	1.85
13	0	0.76	IA	IA	IA	IA	IA	0.03	0	0.11	0	0.09
14	0	IA	IA	IA	IA	IA	IA	1.06	0	0	0	0
15	0	IA	IA	IA	IA	IA	IA	0	0	0	0.08	0
16	0	IA	IA	IA	IA	IA	IA	0	0	1.42	1.15	0
17	0	IA	IA	IA	IA	IA	IA	0	0	0.20	0.12	0
18	0	IA	IA	IA	IA	IA	IA	0	0	0	0.01	0
19	0	IA	IA	IA	IA	IA	IA	0	0	0	0.63	0
20	0	IA	IA	IA	IA	IA	IA	0	0	0	0.03	0
21	0	IA	IA	IA	IA	IA	IA	0	0	0.42	0.03	0
22	0	IA	IA	IA	IA	IA	IA	0	0	0	0.23	0
23	0	IA	IA	IA	IA	IA	IA	0	0	1.19	0.14	0
24	0	IA	IA	IA	IA	IA	IA	0	0	0.81	0.01	0.03
25	0.06	IA	IA	IA	IA	IA	IA	0	0	0.07	0	0.21
26	1.06	IA	IA	IA	IA	IA	IA	0	0	0	0	0.01
27	0.45	IA	IA	IA	IA	IA	IA	0	0	0	0	0
28	0	IA	IA	IA	IA	IA	IA	0	1.15	0	0	0.73
29	0	IA	IA	IA	IA	IA	IA	0	0	0	0	0.01
30	0	IA	IA	IA	—	IA	IA	0	0	0	0	0
31	0	—	IA	IA	—	IA	—	0	—	0	0	—

Monthly Total Precipitation (in.) for Water Canyon, October 2011–October 2012

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Total (in.)	3.84	0.84	IA	IA	IA	IA	IA	1.25	1.16	7.07	4.46	3.28	0.49
Mean Total for Period of Record (in.)	3.84	0.84	IA	IA	IA	IA	IA	1.25	1.16	7.07	4.46	3.98	2.17
Max Daily Total (in.)	1.28	0.76	IA	IA	IA	IA	IA	1.06	1.15	1.59	1.15	1.85	0.48
Missing Days	0	17	31	31	29	31	30	9	0	0	0	0	0