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Surface Water Data at Los Alamos National Laboratory, Water Year 2010



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 56 stream gage stations that cover most of LANL's property. 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, and activities directed by the Water Canyon/Cañon de Valle investigation report.

The majority of the stream 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. The remainder of the stream gage stations are located in either intermittent or perennial streams.

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 mean discharge is computed by applying daily mean 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 mean 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.

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.

Meteorological Tower Data

Precipitation data from LANL's meteorological towers located throughout the laboratory's property collect 15-min data using heated tipping buckets. Monthly data is totaled from each meteorological tower to show monthly precipitation amounts. Further documentation and precipitation information data can be found at <http://weather.lanl.gov>.

Accuracy of Records

The following two factors determine the accuracy of stream flow 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 mean discharges is based solely on the magnitude of the discharge value:

| 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, 2009, to September 30, 2010).

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.

The station manuscript provides data under various headings: station location, drainage area, revised records, period of record, gage, average discharge, record accuracy, 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 global positioning system (GPS) technology, provide location information. The location of the gage with respect to the vicinity's cultural and physical features is given as well as a name that refers to place. For a few stations, the U.S. Army Corps of Engineers or the Water Resources Council (River Mileage Measurement, Bulletin 14, Revised October 1968) provided the method used for river mileage measurement. Left and right banks are defined from the perspective of facing downstream.

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 Discharge: The average discharge is the average of the discharge of the period of record. Once published, it continues as a moving average. Peak discharges estimated from high-water mark surveys are not included in the average discharge calculations.

Maximum 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 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-gage stations gives the mean discharge for each day of the water year. In the monthly summary for the table, the row titled "Total (ft³/s)" contains the sum of the daily figures for each month in cubic feet per second; the row titled "Total (acre-ft)" contains the sum of the daily figures for each month in acre feet; the row titled "Max Daily Mean" contains the maximum average daily flow for the month in cubic feet per second; the row titled "Min Daily Mean" contains the minimum average daily flow for the month in cubic feet per second; the row titled "Instantaneous Max" contains the maximum flow for the month in a 5-min interval; the row titled "Instantaneous Min" contains the minimum flow for the month in a 5-min interval; and the row titled "Missing Days" contains the number of days missing for each month.

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. The qualifier "M" denotes data are missing for an unknown or unexplainable reason. The qualifier "I" denotes ice was present. The qualifier "E" denotes an equipment malfunction. This malfunction may be the result of a bad data logger, faulty stage monitoring instrument, or a dead battery. The qualifier "IA" denotes the station was inactive because of an event that damaged the station beyond immediate repair such as a flood or fire or the station was temporarily rendered inactive. The qualifier "PE" denotes the station was not installed and operating before the beginning of the water year. The qualifier "D" denotes the station was decommissioned and no longer operating. The qualifier "T" denotes testing. Field crews were present on-site and testing the equipment.

Summary of Discharges from Stream Monitoring Stations for Water Year 2010

| Canyon Sites | Estimated Days with Flow | Total Volume (acre-ft) | Instantaneous Maximum Discharge (ft³/s) |
|--|-------------------------------------|-----------------------------------|---|
| E026 Los Alamos Canyon below Ice Rink | 93 | 382 | 6.3 |
| E030 Los Alamos Canyon above DP Canyon | 109 | 314 | 30 |
| E038 DP Canyon above TA-21 | 70 | 734 | 209 |
| E039 DP Canyon below Meadow near TA-21 | 7 | 7.6 | 76 |
| E039.1 DP Canyon below Grade Control Structure | 40 | 70 | 315 |
| E040 DP Canyon above Los Alamos Canyon | 178 | 75 | 263 |
| E042 Los Alamos Canyon above SR 4 | 30 | 20 | 35 |
| E042.1 Los Alamos above Low Head Weir | 37 | 61 | 99 |
| E050 Los Alamos Canyon below Los Alamos Weir | 60 | 206 | 78 |
| E050.1 Los Alamos Canyon below Low Head Weir | 3 | 12 | 76 |
| E055 Pueblo Canyon above Acid Canyon | 150 | 114 | 41 |
| E055.5 South Fork of Acid Canyon | 22 | 9.3 | 69 |
| E056 Acid Canyon above Pueblo Canyon | 15 | 43 | 255 |
| E059 Pueblo Canyon above WWTP | 3 | 51 | 250 |
| E060 Pueblo Canyon above SR 502 | 102 | 121 | 0.69 |
| E060.1 Pueblo Canyon below Grade Control Structure | 3 | 18 | 132 |
| E070 Bayo Canyon at Pueblo Canyon | 0 | 0 | 0 |
| E109.9 Los Alamos above Rio Grande | 76 | 133 | 439 |
| E110 Los Alamos Canyon near Otowi Bridge | 35 | 450 | 14 |
| E121 Sandia Canyon Right Fork at Power Plant | 145* | 170 | 28 |
| E121.9 Sandia Canyon East of Power Plant | 38 | 1.5 | 5.2 |
| E122 Sandia Canyon near Roads and Grounds at TA-3 | 144* | 21 | 11 |
| E123 Sandia Canyon below Wetlands | 102* | 84 | 85 |
| E125 Sandia Canyon above SR 4 | 1 | 0.02 | 2 |
| E200.5 Mortandad Canyon Tributary Batch Plant at Sigma | 12 | 1.4 | 0.66 |
| E201 Mortandad Canyon above Ten Site Canyon | 1 | 0.3 | 4.91 |
| E201.5 Ten Site Canyon above Mortandad Canyon | 0 | 0 | 0 |
| E203 Mortandad Canyon below Sediment Traps | 4 | 0.14 | 0.29 |
| E204 Mortandad Canyon at LANL Boundary | 0 | 0 | 0 |
| E230 Cañada del Buey above SR 4 | 5 | 2.7 | 72 |
| E240 Pajarito Canyon below SR 501 | 71 | 78 | 4.4 |
| E243 Pajarito Canyon above Two Mile Canyon | 212 | 526 | 71 |
| E244 Two Mile Canyon above Pajarito Canyon | 104 | 21 | 43 |
| E245.5 Pajarito Canyon above Three Mile Canyon | 15 | 4.2 | 36 |
| E246 Three Mile Canyon above Pajarito Canyon | 105 | 10 | 0.37 |
| E249.5 MDA G-7 | 55 | 3.7 | 5 |

Summary of Discharges from Stream Monitoring Stations for Water Year 2010 (continued)

| Canyon Sites | Estimated Days with Flow | Total Volume (acre-ft) | Instantaneous Maximum Discharge (ft³/s) |
|--|---------------------------------|-------------------------------|---|
| E250 Pajarito Canyon above SR 4 | 0 | 0 | 0 |
| E252 Water Canyon above SR 501 | 292* | 80 | 6.1 |
| E252.5 Water Canyon above S Site Canyon | 186 | 52 | 2.3 |
| E252.8 S Site Canyon above Water Canyon | 0 | 0 | 0 |
| E253 Cañon del Valle above SR 501 | 0 | 0 | 0 |
| E256 Cañon del Valle below MDA P | 271 | 25 | 1.6 |
| E257 Cañon del Valle Tributary at TA-16 Burn Grounds | 56 | 2.5 | 2 |
| E262 Cañon del Valle above Water Canyon | 0 | 0 | 0 |
| E262.4 Phermex | 38 | 2.5 | 1.3 |
| E265 Water Canyon below SR 4 | 0 | 0 | 0 |
| E267 Potrillo Canyon above SR 4 | 1 | 0.02 | 0.63 |
| E267.4 TA-36 Minie Site | 6 | 0.06 | 0.28 |
| E275 Ancho Canyon below SR 4 | 4 | 0.2 | 2.4 |
| E338 Chaquehui at TA-33 | 0 | 0 | 0 |
| E350 Rio de los Frijoles at Bandelier | 335 | 1140 | 46 |
| S001 SWSC Line Spring at TA-16 | 255 | 231 | 1.6 |
| S002 Burn Ground Spring at TA-16 | 279* | 407 | 2.4 |
| S003 Martin Spring at TA-16 | 26 | 1.7 | 0.05 |

*Station in operation for portion of water year.

Data Omitted for Water Year 2010

For existing stations that were omitted from this publication, information was extracted from existing raw or partially reduced data using the following procedure. The raw stage height was evaluated for relative change to the previously recorded stage. The highest relative change was assumed to be the peak for the current water year. Documented missing data or gaps in a station's record were tallied to estimate the days without available data. Discharge cannot be computed from stage data without a rating curve. The gage stations below do not have a rating curve; therefore, they have been omitted from the remainder of this report.

| Station | Estimated Days with Flow | Estimated Date of Peak Flow | Gap in Record (days) | Comments |
|---------------------------------|---------------------------------|------------------------------------|-----------------------------|-----------------------------|
| E099 Guaje Canyon at SR 502 | 44 | 8/23/2010 | 0 | Rating curve in development |
| E340 Chaquehui Canyon Main Site | 1 | 7/31/2010 | 17 | Rating curve in development |

Monthly Precipitation Data (in.) from LANL Meteorological Stations for Water Year 2010

| Month | TA-6 | TA-49 | TA-53 | TA-54 | NCOM ^a | PJMT ^b |
|--------------|-------|-------|-------|-------|-------------------|-------------------|
| October | 1.87 | 1.86 | 2.16 | 1.34 | 2.2 | 0.42 |
| November | 0.26 | 0.28 | 0.19 | 0.39 | 0.25 | 0.13 |
| December | 1.25 | 1.38 | 1.19 | 0.5 | 1.62 | NR ^c |
| January | 1.32 | 1.38 | 1.18 | 1.15 | 1.78 | NR |
| February | 1.34 | 1.32 | 1.23 | 1.18 | 1.58 | NR |
| March | 1 | 1.12 | 1.25 | 1.32 | 0.93 | NR |
| April | 1.44 | 0.99 | 0.67 | 0.64 | 1.46 | NR |
| May | 1.1 | 0.76 | 0.86 | 0.25 | 0.68 | NR |
| June | 0.59 | 0.43 | 0.01 | 0.22 | 0.93 | NR |
| July | 4 | 3.4 | 2.79 | 3.35 | 3.31 | NR |
| August | 3.41 | 1.65 | 2.87 | 2.88 | 4.54 | NR |
| September | 1.32 | 1.63 | 1.12 | 0.78 | 0.64 | NR |
| Total | 18.90 | 16.20 | 15.52 | 14.00 | 19.92 | 0.55 |

^a NCOM = North Community.^b PJMT= Pajarito Mountain.^c NR = Not reliable data.**ACKNOWLEDGEMENTS**

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Previous Los Alamos National Laboratory reports in this series: "Surface Water Data at Los Alamos National Laboratory" for Water Years 1995 to 2001 are available in pdf format and Water Years 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=.

E026 LOS ALAMOS CANYON BELOW ICE RINK

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

Drainage Area. 7.07 mi².

Period of Record. February 26, 2001, to September 30, 2010.

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

Gage. Data logger with cellular telemetry. Elevation of gage is 7183 ft above NGVD.

Average Discharge. 9 yr, 0.29 ft³/s, 210 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 185 ft³/s, August 9, 2001, gage height 1.5 ft.

Maximum for Current Water Year. Maximum discharge, 6.3 ft³/s, April 14, 2010, gage height 0.7 ft.



Equipment. The station is equipped with a Sutron 8210 (5-min interval) and shaft encoder float system with a cellular phone. 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. The station was visited 22 times to conduct discharge measurements and service the instrumentation.

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.

Six discharge measurements (Nos. 75–80) and 14 inspections of no flow were made during the 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).

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

Daily Mean Discharge (ft³/s) for E026

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-----|----------------|----------------|-----|----------------|------|------|-------------------|------|------|------|----------------|
| 1 | 0 | 0 | 0 ^a | 0 | 0 | 0 | 3.49 | 2.76 | 0.25 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 ^a | 0 | 0 | 0 | 3.75 | 2.45 | 0.2 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2.96 | 1.92 | 0.17 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2.41 | 1.54 | 0.13 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2.4 | 1.34 | 0.09 | 0 | 0.17 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 3.31 | 1.13 | 0.08 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 3.48 | 1.12 | 0.06 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 3.06 | 1.18 | 0.04 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 2.8 | 1.25 | 0.03 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 3.17 | 1.19 | 0.02 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 3.62 | 1.15 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0.31 | 4.31 | 1.16 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0.87 | 4.89 | 1.18 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 | 1.31 | 5.11 | 1.24 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 0 | 1.61 | 4.88 | 1.41 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 1.26 | 4.78 | 1.37 | 0 | 0 | 0.28 | 0 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0.89 | 5.18 | 1.56 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 1.28 | 5.49 | 1.67 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 0 | 1.96 | 5.12 | 1.65 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 0 | 1.9 | 4.98 | 1.55 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 0 | 1.53 | 4.86 | 1.47 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 0 | 1.3 | 4.75 | 1.34 | 0 | 0.01 | 0 | 0 |
| 23 | 0 | 0 ^a | 0 | 0 | 0 | 1.49 | 4.97 | 1.18 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 ^a | 0 | 0 | 0 | 1.59 | 5.28 | 1.05 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 ^a | 0 | 0 | 0 | 1.3 | 5.18 | 0.96 | 0 | 0.02 | 0 | 0 |
| 26 | 0 | 0 ^a | 0 | 0 | 0 | 1.25 | 4.82 | 0.83 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 ^a | 0 | 0 | 0 | 1.19 | 4.51 | 0.71 ^a | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 ^a | 0 | 0 | 0 | 1.13 | 4.15 | 0.59 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 ^a | 0 | 0 | — ^b | 1.12 | 3.59 | 0.52 | 0 | 0 | 0 | 0 ^a |
| 30 | 0 | 0 ^a | 0 | 0 | — | 1.66 | 3.18 | 0.44 | 0 | 0 | 0 | 0 |
| 31 | 0 | — | 0 | 0 | — | 2.52 | — | 0.32 | — | 0 | 0 | — |

Daily Mean Discharge (ft³/s) for E026 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|----------------|----------------|-----|-----|-------|-------|-------------------|------|------|------|----------------|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 27.47 | 124.6 | 39.17 | 1.08 | 0.03 | 0.45 | 0 |
| Total (acre-ft) | 0 | 0 | 0 | 0 | 0 | 54 | 247 | 78 | 2.1 | 0.06 | .89 | 0 |
| Max Daily Mean | 0 | 0 ^a | 0 ^a | 0 | 0 | 2.52 | 5.49 | 2.76 ^a | 0.25 | 0.02 | 0.28 | 0 ^a |
| Min Daily Mean | 0 | 0 ^a | 0 ^a | 0 | 0 | 0 | 2.4 | 0.32 ^a | 0 | 0 | 0 | 0 ^a |
| Instantaneous Max | 0 | 0 ^a | 0 ^a | 0 | 0 | 2.95 | 6.34 | 2.95 ^a | 0.33 | 1.02 | 5.87 | 0 ^a |
| Instantaneous Min | 0 | 0 ^a | 0 ^a | 0 | 0 | 0 | 2.31 | 0.28 ^a | 0 | 0 | 0 | 0 ^a |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a Reliable estimate.

^b — = Not applicable.

Daily Mean Discharge (ft³/s) for E026 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|--------|-------------|------|------------|-----|------------|---|--------------------------|-----|----------------|-----|
| WY2010 | Total | 192.80 | Mean | 0.53 | Max | 5.5 | Min | 0 | Instantaneous Max | 6.3 | Acre-ft | 382 |
| CY2009 | Total | 34.13 | Mean | 0.11 | Max | 3.2 | Min | 0 | Instantaneous Max | 11 | Acre-ft | 68 |

E030 LOS ALAMOS CANYON ABOVE DP CANYON

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

Drainage Area. 8.57 mi².

Period of Record. July 1994 to September 30, 2010.

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

Gage. Data logger with concrete control. Elevation of gage is 6621 ft above NGVD from GPS survey.

Average Discharge. 16 yr, 0.17 ft³/s, 122 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 125 ft³/s, June 22, 2002, gage height 2.9 ft from peak-flow computation.

Maximum for Current Water Year. Maximum discharge, 30 ft³/s, August 16, 2010, gage height 2 ft.



Equipment. The station is equipped with a Sutron 8210 (5-min interval) with a shaft encoder float system (5-min interval). 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 stage.

Fieldwork. The station was visited 21 times to measure discharge and service the instrumentation.

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 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. The vegetation on the bank is sparse grass.

Four discharge measurements (Nos. 57–60) and 21 inspections were made during the year.

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

Discharge. Discharge was computed using Rating No. 2.

Daily Mean Discharge (ft³/s) for E030

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-----|-----|-----|----------------|----------------|------|------|------|------|------|-------------------|-------------------|
| 1 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 3.55 | 3.24 | 0.3 | 0 | 0 | 0.01 |
| 2 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 3.9 | 2.84 | 0.21 | 0 | 0 | 0.01 |
| 3 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 2.87 | 2.23 | 0.14 | 0 | 0 | 0.01 |
| 4 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 2.02 | 1.77 | 0.03 | 0 | 0 | 0.01 |
| 5 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 1.74 | 1.31 | 0.01 | 0 | 0.65 | 0.01 |
| 6 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 2.39 | 1.15 | 0 | 0 | 0 | 0.01 |
| 7 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 2.97 | 1.09 | 0 | 0 | 0 | 0.01 |
| 8 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 2.76 | 1.11 | 0 | 0 | 0 | 0.01 |
| 9 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 2.5 | 1.09 | 0 | 0 | 0.01 | 0.01 |
| 10 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 2.71 | 1.06 | 0.01 | 0 | 0.01 | 0 |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 3.22 | 1.02 | 0.01 | 0 | 0.01 | 0 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 3.62 | 1 | 0.01 | 0 | 0.01 | 0 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 3.87 | 1 | 0.01 | 0 | 0.01 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 4.12 | 1.24 | 0 | 0 | 0.01 | 0 |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 | 4.16 | 1.59 | 0 | 0 | 0.7 | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 4.29 | 1.1 | 0 | 0 | 1.69 ^a | 0 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 4.67 | 1.09 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 4.76 | 1.17 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 | 4.97 | 1.15 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | 4.69 | 1.1 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 0 | 0.02 | 4.56 | 1.05 | 0 | 0 | 0 | 0 ^a |
| 22 | 0 | 0 | 0 | 0 | 0 | 0.02 | 4.62 | 0.98 | 0 | 0.45 | 0 | 0.10 ^a |
| 23 | 0 | 0 | 0 | 0 | 0 | 0.06 | 4.6 | 0.89 | 0 | 0.04 | 0.33 | 0 |
| 24 | 0 | 0 | 0 | 0 ^a | 0 | 0.12 | 4.48 | 0.82 | 0 | 0 | 0.01 | 0 |
| 25 | 0 | 0 | 0 | 0 ^a | 0 | 0.16 | 4.4 | 0.77 | 0 | 0.61 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 ^a | 0 | 0.23 | 4.26 | 0.7 | 0 | 0.01 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 ^a | 0 | 0.3 | 4.15 | 0.73 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 ^a | 0 | 0.36 | 4.01 | 0.64 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 ^a | — ^b | 0.49 | 3.75 | 0.55 | 0 | 0 | 0 | 0.01 ^a |
| 30 | 0 | 0 | 0 | 0 ^a | — | 0.84 | 3.53 | 0.47 | 0 | 0 | 0 | 0.01 ^a |
| 31 | 0 | — | 0 | 0 ^a | — | 1.78 | — | 0.38 | — | 0 | 0.01 | — |

Daily Mean Discharge (ft³/s) for E030 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|----------------|----------------|------|-------|-------|------|------|--------------------|-------------------|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 4.40 | 112.4 | 36.23 | 0.73 | 1.11 | 3.46 | 0.19 |
| Total (acre-ft) | 0 | 0 | 0 | 0 | 0 | 8.7 | 223 | 72 | 1.4 | 2.2 | 6.9 | 0.38 |
| Max Daily Mean | 0 | 0 | 0 | 0 ^a | 0 ^a | 1.78 | 4.97 | 3.24 | 0.3 | 0.61 | 1.69 ^a | 0.10 ^a |
| Min Daily Mean | 0 | 0 | 0 | 0 ^a | 0 ^a | 0 | 1.74 | 0.38 | 0 | 0 | 0 ^a | 0 ^a |
| Instantaneous Max | 0 | 0 | 0 | 0 ^a | 0 ^a | 2.67 | 7.77 | 5.14 | 0.4 | 8.24 | 30.21 ^a | 3.07 ^a |
| Instantaneous Min | 0 | 0 | 0 | 0 ^a | 0 ^a | 0 | 1.57 | 0.28 | 0 | 0 | 0 ^a | 0 ^a |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a Reliable estimate.

^b — = Not applicable.

Daily Mean Discharge (ft³/s) for E030 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|--------|-------------|------|------------|------|------------|---|--------------------------|----|----------------|-----|
| WY2010 | Total | 156.98 | Mean | 0.43 | Max | 5 | Min | 0 | Instantaneous Max | 30 | Acre-ft | 314 |
| CY2009 | Total | 3.65 | Mean | 0.01 | Max | 0.92 | Min | 0 | Instantaneous Max | 11 | Acre-ft | 7.2 |

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 mi².

Period of Record. April 26, 2000, to September 30, 2010.

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

Gage. Data logger with cellular telemetry. Elevation of gage is 7087 ft above NGVD.

Average Discharge. 9 yr, 0.65 ft³/s, 470 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 295 ft³/s, July 24, 2004, gage height 4.4 ft from rating curve extended above 10 ft³/s on basis of peak-flow computations.

Maximum for Current Water Year. Maximum discharge, 209 ft³/s, March 20, 2010, gage height 3.6 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval), with a Sutron Accububble self-contained bubbler system and cellular telemetry with speech modem. 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 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 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. The station was visited 25 times to measure discharge and service the instrumentation.

Datum Correction. Levels run in July 2005 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 for the year, except for the period from November 27 to December 7, 2009, because of equipment malfunction and ice.

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

No discharge measurements were made, and 25 inspections were made this year. All inspections of no flow were used to develop a “V” diagram shift needed to adjust for PZF.

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

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

Daily Mean Discharge (ft³/s) for E038

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-------------------|----------------|----------------|----------------|----------------|--------------------|-------------------|----------------|----------------|-------------------|-------------------|----------------|
| 1 | 0.01 | 0 | E ^a | 0 ^b | 0 ^b | 0 ^b | 0.03 | 0 | 0 | 0 | 0.05 | 0 |
| 2 | 0 | 0 | E | 0 | 0 ^b | 0 ^b | 0 | 0 | 0 | 0.2 | 0 ^b | 0 |
| 3 | 0 | 0 | E | 0 | 0 ^b | 0 ^b | 0 | 0 ^b | 0 | 0.63 | 0 | 0 |
| 4 | 0 | 0 | E | 0 | 0 ^b | 0 ^b | 0 | 0 | 0 | 0 | 0.35 | 0 |
| 5 | 0 | 0 ^b | E | 0 | 0 ^b | 0 ^b | 0.01 | 0 | 0 | 0 | 4.02 | 0 |
| 6 | 0 | 0 | E | 0 | 0 ^b | 0 ^b | 0 | 0.07 | 0 | 0 ^b | 0.07 | 0 |
| 7 | 0.3 | 0 | E | 0 | 0 ^b | 0 ^b | 0 | 0 | 0 ^b | 0 | 0.01 | 0.02 |
| 8 | 0.08 | 0 | 0 | 0 | 0 ^b | 0 ^b | 0 | 0 | 0 | 0 ^b | 0 | 0.48 |
| 9 | 0 | 0 | 0 | 0 | 0 ^b | 0 ^b | 0 | 0 | 0 | 0.53 | 0.70 ^b | 0 ^b |
| 10 | 0 | 0 | 0 | 0 | 0 ^b | 0 ^b | 0 | 0 | 0 | 0 | 0.00 ^b | 0 |
| 11 | 0 | 0 | 0 ^b | 0 | 0 ^b | 13.89 ^b | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 ^b | 0 | 0 ^b | 11.42 ^b | 0 | 0 | 0 | 0 ^b | 0.06 | 0 |
| 13 | 2.18 | 0 | 0 ^b | 0 | 0 ^b | 3.89 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0.02 | 0 | 0 ^b | 0 | 0 ^b | 13.93 | 0 | 2.02 | 0 ^b | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 ^b | 0 | 0 ^b | 85.18 | 0 | 0.5 | 0 | 0 | 4.21 | 0 |
| 16 | 0 | 0 | 0 ^b | 0 | 0 ^b | 32.59 | 0.42 | 0 | 0 | 0 | 5.86 ^b | 0 |
| 17 | 0 | 0 ^b | 0 | 0 | 0 ^b | 27.21 | 0.55 | 0 ^b | 0 | 0 | 0.09 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 ^b | 47.89 ^b | 0.02 | 0 | 0 | 0 | 0.00 ^b | 0 |
| 19 | 0 | 0 | 0 | 0 ^b | 0 ^b | 53.15 ^b | 0.44 ^b | 0 | 0 | 0 ^b | 0 | 0 |
| 20 | 0.38 | 0 | 0 ^b | 0 ^b | 0 ^b | 21.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 1.85 ^b | 0 | 0 ^b | 0 ^b | 0 ^b | 3.82 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0.01 | 0 | 0 ^b | 0 ^b | 0 ^b | 1.86 | 0 | 0 | 0 | 2.44 ^b | 0 | 3.3 |
| 23 | 0 | 0 | 0 ^b | 0 ^b | 0 ^b | 0.74 | 0 | 0 | 0 | 0.05 | 2.37 ^b | 0 ^b |
| 24 | 0 | 0 | 0 ^b | 0 ^b | 0 ^b | 10.36 | 0 | 0 | 0.45 | 0.29 | 0.02 ^b | 0 |
| 25 | 0 | 0 | 0 ^b | 0 ^b | 0 ^b | 1.58 | 0 | 0 | 0 ^b | 1.46 | 0 | 0 |
| 26 | 0.04 | 0 | 0 ^b | 0 ^b | 0 ^b | 2 | 0 ^b | 0 | 0 | 0.09 ^b | 0 | 0 |
| 27 | 0 | E | 0 ^b | 0 ^b | 0 ^b | 0.44 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0.03 | E | 0 ^b | 0 ^b | 0 ^b | 0.57 | 0 | 0 | 0 ^b | 0 | 0.02 | 0 |
| 29 | 0.07 | E | 0 ^b | 0 ^b | — ^c | 0.47 | 0 | 0 | 0 ^b | 0 | 0 | 0 |
| 30 | 0.01 | E | 0 ^b | 0 ^b | — | 0.16 | 0 | 0 | 0 | 1.3 | 0 | 0 ^b |
| 31 | 0 | — | 0 ^b | 0 ^b | — | 0.07 | — | 0 | — | 0.29 | 0 | — |

Daily Mean Discharge (ft³/s) for E038 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|---------------------|----------------|----------------|----------------|----------------|----------------|--------------------|--------------------|--------------------|---------------------|---------------------|--------------------|
| Total (ft³/s) | 5.06 | 0 | 0 | 0 | 0 | 331.65 | 1.47 | 2.57 | 0.45 | 7.29 | 17.88 | 3.8 |
| Total (acre-ft) | 10 | 0 | 0 | 0 | 0 | 658 | 2.9 | 5.1 | 0.89 | 14 | 35 | 7.5 |
| Max Daily Mean | 2.18 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 85.18 | 0.55 ^b | 2.02 ^b | 0.45 ^b | 2.44 ^b | 5.86 ^b | 3.30 ^b |
| Min Daily Mean | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0.00 | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b |
| Instantaneous Max | 104.67 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 209.24 | 17.40 ^b | 73.53 ^b | 38.33 ^b | 112.07 ^b | 201.79 ^b | 86.17 ^b |
| Instantaneous Min | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b |
| Missing Days | 0 | 4 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a E = Estimate. No data recorded.

^b Reliable estimate.

^c — = Not applicable.

Daily Mean Discharge (ft³/s) for E038 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|--------|-------------|------|------------|----|------------|---|--------------------------|-----|----------------|-----|
| WY2010 | Total | 370.17 | Mean | 1.05 | Max | 85 | Min | 0 | Instantaneous Max | 209 | Acre-ft | 734 |
| CY2009 | Total | 148.71 | Mean | 0.42 | Max | 24 | Min | 0 | Instantaneous Max | 202 | Acre-ft | 295 |

E039 DP CANYON BELOW MEADOW NEAR TA-21

Location. Lat 35° 52' 41", long 106° 15' 28", SE ¼, Sec. 14, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 0.315 mi².

Period of Record. October 1, 1999, to September 30, 2010.

Revised Record. Section, Township, Range (2007).

Gage. Data logger with cellular telemetry. Elevation of gage is 7010 ft above NGVD from topographic map.

Average Discharge. 10 yr, 0.49 ft³/s, 353 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 201 ft³/s, July 24, 2004, gage height 2.6 ft.

Maximum for Current Water Year. Maximum discharge, 76 ft³/s, October 13, 2010, gage height 1.6 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval). 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 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 discharge measurements above the wading stage. All high-flow measurements will be by slope-area or peak-flow computation methods.

Fieldwork. The station was visited eight times to service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data are satisfactory, except for the period from November 18, 2009 to September 30, 2010 when the gage was decommissioned.

Rating. The channel has rock outcrop in bed with pockets of sand mostly from deposition below riffles. The channel is straight for 5 ft above and below the gage. A slight left bend 50 ft below the gage also has a 2-ft drop and could act as a broad-crested weir at high flow. Banks and canyon bottom are thickly vegetated with grass.

No discharge measurements were made. Four inspections of water flow were made.

Rating No. 2 was used for the water year.

Discharge. Discharge was computed using Rating No. 2.

Daily Mean Discharge (ft³/s) for E039

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|------|------|----------------|-----|----------------|-----|-----|-----|-----|-----|-----|-----|
| 1 | 0 | 0 | D ^a | D | D | D | D | D | D | D | D | D |
| 2 | 0 | 0 | D | D | D | D | D | D | D | D | D | D |
| 3 | 0 | 0 | D | D | D | D | D | D | D | D | D | D |
| 4 | 0 | 0 | D | D | D | D | D | D | D | D | D | D |
| 5 | 0 | 0 | D | D | D | D | D | D | D | D | D | D |
| 6 | 0 | 0 | D | D | D | D | D | D | D | D | D | D |
| 7 | 0.07 | 0 | D | D | D | D | D | D | D | D | D | D |
| 8 | 0.03 | 0 | D | D | D | D | D | D | D | D | D | D |
| 9 | 0 | 0 | D | D | D | D | D | D | D | D | D | D |
| 10 | 0 | 0 | D | D | D | D | D | D | D | D | D | D |
| 11 | 0 | 0 | D | D | D | D | D | D | D | D | D | D |
| 12 | 0 | 0 | D | D | D | D | D | D | D | D | D | D |
| 13 | 1.9 | 0 | D | D | D | D | D | D | D | D | D | D |
| 14 | 0 | 0 | D | D | D | D | D | D | D | D | D | D |
| 15 | 0 | 0 | D | D | D | D | D | D | D | D | D | D |
| 16 | 0 | 0.01 | D | D | D | D | D | D | D | D | D | D |
| 17 | 0 | 0.04 | D | D | D | D | D | D | D | D | D | D |
| 18 | 0 | D | D | D | D | D | D | D | D | D | D | D |
| 19 | 0 | D | D | D | D | D | D | D | D | D | D | D |
| 20 | 0.1 | D | D | D | D | D | D | D | D | D | D | D |
| 21 | 1.7 | D | D | D | D | D | D | D | D | D | D | D |
| 22 | 0 | D | D | D | D | D | D | D | D | D | D | D |
| 23 | 0 | D | D | D | D | D | D | D | D | D | D | D |
| 24 | 0 | D | D | D | D | D | D | D | D | D | D | D |
| 25 | 0 | D | D | D | D | D | D | D | D | D | D | D |
| 26 | 0 | D | D | D | D | D | D | D | D | D | D | D |
| 27 | 0 | D | D | D | D | D | D | D | D | D | D | D |
| 28 | 0 | D | D | D | D | D | D | D | D | D | D | D |
| 29 | 0 | D | D | D | — ^b | D | D | D | D | D | D | D |
| 30 | 0 | D | D | D | — | D | D | D | D | D | D | D |
| 31 | 0 | — | D | D | — | D | — | D | — | D | D | — |

Daily Mean Discharge (ft³/s) for E039 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Total (ft³/s) | 3.8 | 0.05 | D | D | D | D | D | D | D | D | D | D |
| Total (acre-ft) | 7.5 | 0.1 | D | D | D | D | D | D | D | D | D | D |
| Max Daily Mean | 1.87 | 0.04 | D | D | D | D | D | D | D | D | D | D |
| Min Daily Mean | 0 | 0 | D | D | D | D | D | D | D | D | D | D |
| Instantaneous Max | 76.41 | 0.11 | D | D | D | D | D | D | D | D | D | D |
| Instantaneous Min | 0 | 0 | D | D | D | D | D | D | D | D | D | D |
| Missing Days | 0 | 13 | 31 | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 30 |

^a D = Decommissioned.

^b — = Not applicable.

Daily Mean Discharge (ft³/s) for E039 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|------|------------|-----|------------|---|--------------------------|-----|----------------|-----|
| WY2010 | Total | 3.85 | Mean | 0.08 | Max | 1.9 | Min | 0 | Instantaneous Max | 76 | Acre-ft | 7.6 |
| CY2009 | Total | 34.48 | Mean | 0.11 | Max | 3.3 | Min | 0 | Instantaneous Max | 124 | Acre-ft | 68 |

E039.1 DP CANYON BELOW GRADE CONTROL STRUCTURE

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

Drainage Area. 0.40 mi².

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

Average Discharge. <1 yr, 0.21 ft³/s, 152 acre-ft/yr.

Gage. Data logger. Elevation of gage is 7045 ft above NGVD.

Maximum for Period of Record. Maximum discharge, 315 ft³/s, August 18, 2010, gage height 3.6 ft.

Maximum for Current Water Year. Maximum discharge, 315 ft³/s, August 18, 2010, gage height 3.6 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with 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 ISCO samplers are housed in a 3- × 4-ft steel storage box, separate from the other instrumentation. The samplers are triggered by stage through the data logger. All high flow measurements will be by slope-area or peak-flow computation methods.

Fieldwork. The site was visited 13 times.

Datum Correction. None

Gage-Height Record. The data logger referenced to the outside gage gave a complete and satisfactory record for the period from May 10, 2010, to September 30, 2010. Data recording for the site was activated on May 10, 2010.

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.

One discharge measurement was taken (No. 1). Eleven inspections of flowing water and two inspections of no flow were made.

Discharge. Discharge was computed using Rating No. 1.

Daily Mean Discharge (ft³/s) for E039.1

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-----------------|-----|-----|-----|----------------|-----|------|------|------|------|------|------|
| 1 | PE ^a | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0.05 | 0 |
| 2 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0.01 | 0 | 0 |
| 3 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0.16 | 0 | 0 |
| 4 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 5 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 5.4 | 0 |
| 6 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 7 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 8 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0.04 |
| 9 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0.15 | 0.38 | 0 |
| 10 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 11 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 12 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0.01 | 0 |
| 13 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0.02 | 0 |
| 14 | PE | PE | PE | PE | PE | PE | PE | 0.92 | 0 | 0 | 0.05 | 0 |
| 15 | PE | PE | PE | PE | PE | PE | 0 | 1.1 | 0 | 0 | 6.6 | 0 |
| 16 | PE | PE | PE | PE | PE | PE | 0.1 | 0 | 0 | 0 | 8.9 | 0 |
| 17 | PE | PE | PE | PE | PE | PE | 0.29 | 0 | 0 | 0 | 0.42 | 0 |
| 18 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0.19 | 0 |
| 19 | PE | PE | PE | PE | PE | PE | 0.24 | 0 | 0 | 0 | 0.14 | 0 |
| 20 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0.07 | 0 |
| 21 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0.07 | 0 |
| 22 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 1.6 | 0.08 | 2.6 |
| 23 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0.03 | 2.3 | 0 |
| 24 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0.04 | 0.05 | 0.36 | 0 |
| 25 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0.7 | 0.22 | 0 |
| 26 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0.01 | 0.19 | 0 |
| 27 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0.17 | 0 |
| 28 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0.18 | 0 |
| 29 | PE | PE | PE | PE | — ^b | PE | 0 | 0 | 0 | 0 | 0.18 | 0 |
| 30 | PE | PE | PE | PE | — | PE | 0 | 0 | 0 | 1.1 | 0.18 | 0 |
| 31 | PE | — | PE | PE | — | PE | — | 0 | — | 0.11 | 0.12 | — |

Daily Mean Discharge (ft³/s) for E039.1 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|-----|-----|-----|------|------|------|-------|--------|--------|
| Total (ft³/s) | PE | PE | PE | PE | PE | PE | 0.63 | 2.02 | 0.04 | 3.92 | 26.28 | 2.64 |
| Total (acre-ft) | PE | PE | PE | PE | PE | PE | 1.2 | 4 | 0.08 | 7.8 | 52 | 5.2 |
| Max Daily Mean | PE | PE | PE | PE | PE | PE | 0.29 | 1.12 | 0.04 | 1.64 | 8.94 | 2.62 |
| Min Daily Mean | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Max | PE | PE | PE | PE | PE | PE | 7.52 | 41.2 | 2.08 | 53.74 | 314.91 | 107.24 |
| Instantaneous Min | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 | 0 |
| Missing Days | 31 | 30 | 31 | 31 | 28 | 31 | 14 | 0 | 0 | 0 | 0 | 0 |

^a PE = Pre-existence.

^b — = Not applicable.

Daily Mean Discharge (ft³/s) for E039.1 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|------|------------|-----|------------|----|--------------------------|-----|----------------|----|
| WY2010 | Total | 35.53 | Mean | 0.21 | Max | 8.9 | Min | 0 | Instantaneous Max | 315 | Acre-ft | 70 |
| CY2009 | Total | PE | Mean | PE | Max | PE | Min | PE | Instantaneous Max | PE | Acre-ft | PE |

E040 DP CANYON ABOVE LOS ALAMOS CANYON

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

Drainage Area. 0.60 mi².

Period of Record. May 1999 to September 30, 2010.

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

Gage. Data logger and concrete control. Elevation of gage is 6620 ft above NGVD from GPS survey.

Average Discharge. 10 yr, 0.04 ft³/s, 29 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 452 ft³/s, August 8, 2006, gage height 5.7 ft (from slope-area measurement).

Maximum for Current Water Year. Maximum discharge, 263 ft³/s, August 16, 2010, gage height 4.7 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with 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. The station was visited 23 times to measure discharge and service the instrumentation.

Datum Correction. None from levels.

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

Rating. The channel is about 15 ft wide and bends to the right above the gage and is 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.

Twenty inspections of no flow were made during the year. Six discharge measurements (Nos. 24–29) were made during the year.

Rating No. 3 is good up to 30 ft³/s and fair above that.

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.

Daily Mean Discharge (ft³/s) for E040

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|------------------|----------------|-------------------|-------------------|-------------------|-------------------|------|------|------|------|------|------|
| 1 | 0 | 0 | 0 | 0.37 | 0.07 | 0.01 | 0 | 0.03 | 0.02 | 0 | 0.1 | 0.02 |
| 2 | 0 | 0 | 0 | 0.39 | 0.05 | 0.02 | 0 | 0.03 | 0.02 | 0 | 0 | 0.01 |
| 3 | 0 | 0 | 0 | 0.35 | 0.17 ^a | 0.01 | 0 | 0.02 | 0.02 | 0 | 0 | 0.01 |
| 4 | 0 | 0 | 0 | 0.32 | 0.24 ^a | 0.01 | 0 | 0.02 | 0.02 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0.01 | 0.3 | 0.14 | 0 | 0 | 0.03 | 0.02 | 0 | 4.2 | 0 |
| 6 | 0 | 0 ^a | 0.01 | 0.17 | 0.09 | 0 | 0 | 0.03 | 0.02 | 0 | 0.03 | 0 |
| 7 | 0 | 0 | 0.05 ^a | 0 | 0.06 | 0 | 0 | 0.02 | 0.02 | 0 | 0.03 | 0 |
| 8 | 0 | 0 | 0.40 ^a | 0.01 | 0.04 ^a | 0.18 | 0 | 0.03 | 0.02 | 0 | 0.03 | 0 |
| 9 | 0 | 0 | 0.31 | 0 | 0.05 ^a | 0 | 0 | 0.03 | 0.02 | 0 | 0.42 | 0 |
| 10 | 0 | 0 | 0.26 | 0 | 0.06 ^a | 0 | 0 | 0.02 | 0.02 | 0 | 0.02 | 0 |
| 11 | 0 | 0 | 0.24 | 0 | 0.1 | 0 | 0 | 0.03 | 0.02 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0.18 | 0 | 0.15 | 0 | 0 | 0.03 | 0.01 | 0 | 0.01 | 0 |
| 13 | 2.4 | 0 | 0.19 | 0 | 0.14 | 0.01 | 0 | 0.03 | 0.01 | 0 | 0.01 | 0 |
| 14 | 0 | 0 | 0.07 | 0 | 0.19 | 0.02 ^a | 0 | 0.71 | 0 | 0 | 0.01 | 0 |
| 15 | 0 | 0 | 0.14 | 0 | 0.14 | 0.22 ^a | 0 | 1.5 | 0 | 0 | 3.1 | 0 |
| 16 | 0 | 0 | 0.15 | 0 | 0.07 | 0.02 | 0 | 0 | 0 | 0 | 5.8 | 0 |
| 17 | 0 | 0 | 0.12 | 0.01 | 0.05 | 0.01 | 0.26 | 0 | 0 | 0 | 0.02 | 0 |
| 18 | 0 | 0 | 0.15 | 0.01 | 0.03 | 0.02 | 0.02 | 0 | 0 | 0 | 0.02 | 0 |
| 19 | 0 | 0 | 0.16 | 0.02 ^a | 0.01 | 0.02 | 0.26 | 0 | 0 | 0 | 0.03 | 0 |
| 20 | 0 | 0 | 0.17 | 0.04 ^a | 0.02 | 0 ^a | 0.03 | 0 | 0 | 0 | 0.01 | 0 |
| 21 | 2.3 ^a | 0 | 0.17 | 0.06 ^a | 0.02 | 0 | 0.02 | 0 | 0 | 0 | 0.01 | 0 |
| 22 | 0 ^a | 0 | 0.14 ^a | 0.04 | 0.06 ^a | 0 | 0.02 | 0 | 0 | 1.2 | 0.01 | 0.03 |
| 23 | 0 | 0 | 0.67 ^a | 0.04 | 0.14 ^a | 0.01 | 0.02 | 0 | 0 | 0.09 | 0.63 | 0 |
| 24 | 0 | 0 | 0.25 | 0.04 | 0.09 | 0.01 | 0.02 | 0 | 0 | 0.02 | 0.01 | 0 |
| 25 | 0 | 0 | 0.35 | 0.02 | 0.07 | 0 | 0.02 | 0.01 | 0 | 0.25 | 0 | 0 |
| 26 | 0 ^a | 0 | 0.3 | 0.02 | 0.05 | 0.01 | 0.02 | 0.02 | 0 | 0.03 | 0.01 | 0 |
| 27 | 0 | 0 | 0.2 | 0.03 | 0.06 | 0 | 0.02 | 0.02 | 0 | 0.02 | 0.01 | 0 |
| 28 | 0 | 0 | 0.36 | 0.05 ^a | 0.01 | 0 | 0.03 | 0.02 | 0 | 0 | 0.01 | 0 |
| 29 | 0 | 0 | 0.4 | 0.12 ^a | — ^b | 0 | 0.03 | 0.02 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0.43 | 0.10 ^a | — | 0.01 | 0.03 | 0.02 | 0 | 0.82 | 0.02 | 0 |
| 31 | 0 | — | 0.39 | 0.09 | — | 0 | — | 0.02 | — | 0.56 | 0.01 | — |

Daily Mean Discharge (ft³/s) for E040 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------|-------|-------|-------|--------|-------------------|
| Total (ft³/s) | 4.7 | 0 | 6.27 | 2.6 | 2.37 | 0.59 | 0.8 | 2.69 | 0.24 | 2.99 | 14.56 | 0.07 |
| Total (acre-ft) | 9.3 | 0 | 12 | 5.2 | 4.7 | 1.2 | 1.6 | 5.3 | 0.48 | 5.9 | 29 | 0.14 |
| Max Daily Mean | 0.15 | 0 | 0.2 | 0.084 | 0.085 | 0.019 | 0.027 | 0.087 | 0.008 | 0.096 | 0.47 | 0.002 |
| Min Daily Mean | 2.4 | 0 | 0.67 | 0.39 | 0.24 | 0.22 | 0.26 | 1.5 | 0.02 | 1.2 | 5.8 | 0.03 |
| Instantaneous Max | 65.12 ^a | 0.05 ^a | 7.33 ^a | 1.15 ^a | 0.89 ^a | 1.49 ^a | 5.02 | 32.94 | 0.63 | 36.75 | 262.75 | 3.69 ^a |
| Instantaneous Min | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a Reliable Estimate.

^b — = Not applicable.

Daily Mean Discharge (ft³/s) for E040 (continued)

| | | | | | | | | | | | | | | |
|---------------|--------------|-------|--------|-------------|-------|------|------------|-----|------------|---|--------------------------|-----|----------------|----|
| WY2010 | Total | 37.88 | 192.80 | Mean | 0.1 | 0.53 | Max | 5.8 | Min | 0 | Instantaneous Max | 263 | Acre-ft | 75 |
| CY2009 | Total | 32.61 | 34.13 | Mean | 0.089 | 0.11 | Max | 5 | Min | 0 | Instantaneous Max | 153 | Acre-ft | 65 |

E042 LOS ALAMOS CANYON ABOVE SR 4

Location. Lat 35° 52' 01", long 106° 13' 25", NW ¼, Sec. 20, T. 19 N., R. 7 E., Santa Fe County.

Drainage Area. 10.11 mi².

Period of Record. November 1970 to June 1971; October 1991 to September 30, 2010.

Revised Record. Drainage area (2006); Quarter (2007); Peak discharges for 2006 (2007).

Gage. Data logger with cellular telemetry and concrete control. Elevation of gage is 6300 ft above NGVD from GPS survey.

Remarks. Flow partially regulated by Los Alamos Reservoir about 7.8 mi upstream.

Average Discharge. 16 yr, 0.09 ft³/s, 67 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 240 ft³/s, August 08, 2006, gage height 3.8 ft (from flood marks).

Maximum for Current Water Year. Maximum discharge, 35 ft³/s, August 16, 2010, gage height 2.6 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with a quadrature encoder driven by float tape in a stilling well and cellular telemetry with speech modem. 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 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. The control is a broad-crested weir that has deteriorated somewhat over the years but is still fairly stable. A footbridge is available to measure high-flow discharges.

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. This station was visited 38 times to measure discharge and service the instrumentation.

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 the period from June 7 to June 9, 2010, because the equipment malfunctioned.

Rating. Streambed is sand and gravel, and the channel is straight for over 150 ft above and below the broad-crested weir. Fill and scour, mostly fill, result in pooling at the gage during most flow events.

Twenty-nine inspections of no flow were made. Nine inspections of flow were made. Six discharge measurements (Nos. 66–71) were made.

Rating No. 5 was developed from measurements made in previous years.

Discharge. Discharge was computed from Rating No. 5 using “V” diagrams with no shifts on high flows. Those days estimated were based on precipitation and were verified using nearby gage stations.

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

Daily Mean Discharge (ft³/s) for E042

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-------------------|----------------|-----|-----|----------------|----------------|-------------------|----------------|----------------|----------------|----------------|-----|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.28 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 ^a | 0 | 0 | 0 | 0 | 0.81 ^a | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0.87 ^a | 0 ^a | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 ^a | 0 | 0 | 0 | 0 | 0.46 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0.39 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0 | 0 | 0 ^a | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 ^a | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0 |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0.03 | 0 | 0 | 0 | 0 ^a | 0 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 1.76 | 0 | 0 | 0 ^a | 0 | 0 |
| 13 | 0.63 | 0 | 0 | 0 | 0 | 0 | 1.55 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0.19 | 0 | 0 ^a | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0.05 | 0 | 0 | 0 | 0.05 | 0 |
| 16 | 0 | 0 ^a | 0 | 0 | 0 | 0 ^a | 0.02 | 0 | 0 | 0 | 0.85 | 0 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0.04 | 0 ^a | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0.04 | 0 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0.06 | 0 | 0 | 0 ^a | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0.04 | 0 | 0 | 0 | 0 | 0 |
| 21 | 0.32 ^a | 0 | 0 | 0 | 0 | 0 ^a | 0.04 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0.04 | 0 | 0 | 0 ^a | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0.03 | 0 | 0 | 0 | 0.02 | 0 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0.04 | 0 | 0 | 0 | 0 | 0 ^a | 0 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0.06 | 0 | 0 | 0 | 0 ^a | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 0 | 0.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0.16 | 0 | 0 | 0 ^a | 0 | 0 ^a | 0 |
| 29 | 0 | 0 | 0 | 0 | — ^b | 0.24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | — | 0.3 | 0 | 0 | 0 | 0 | 0 ^a | 0 |
| 31 | 0 | — | 0 | 0 | — | 0.32 | — | 0 | — | 0 | 0 | — |

Daily Mean Discharge (ft³/s) for E042 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|--------------------|-----|-----|-----|-----|------|-------------------|-------------------|----------------|----------------|--------------------|------|
| Total (ft³/s) | 0.95 | 0 | 0 | 0 | 0 | 1.22 | 7.09 | 0 | 0 | 0 | 0.92 | 0 |
| Total (acre-ft) | 1.9 | 0 | 0 | 0 | 0 | 2.4 | 14 | 0 | 0 | 0 | 1.8 | 0 |
| Max Daily Mean | 0.63 ^a | 0 | 0 | 0 | 0 | 0.32 | 1.76 ^a | 0 ^a | 0 ^a | 0 ^a | 0.85 ^a | 0 |
| Min Daily Mean | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 |
| Instantaneous Max | 19.60 ^a | 0 | 0 | 0 | 0 | 0.36 | 3.60 ^a | 0.18 ^a | 0 ^a | 0 ^a | 34.64 ^a | 0.39 |
| Instantaneous Min | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |

^a Reliable estimate.

^b — = Not applicable.

Daily Mean Discharge (ft³/s) for E042 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|-------|------------|-----|------------|---|--------------------------|----|----------------|----|
| WY2010 | Total | 10.18 | Mean | 0.028 | Max | 1.8 | Min | 0 | Instantaneous Max | 35 | Acre-ft | 20 |
| CY2009 | Total | 8.83 | Mean | 0.024 | Max | 3.8 | Min | 0 | Instantaneous Max | 65 | Acre-ft | 18 |

E042.1 LOS ALAMOS ABOVE LOW HEAD WEIR

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

Drainage Area. 10.13 mi².

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

Gage. Elevation of gage is 6395 ft above NGVD.

Average Discharge. <1 yr, 0.2 ft³/s, 145 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 99 ft³/s, August 16, 2010, gage height 1.9 ft.

Maximum for Current Water Year. Maximum discharge, 99 ft³/s, August 16, 2010, gage height 1.9 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with 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 CMP 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. 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. This station was visited 28 times to conduct discharge measurements and service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record for the period of May 4, 2010, to September 30, 2010. Data recording for the site was activated on May 4, 2010.

Rating. Rating No. 1 is based on precalibrated data for the flume used (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.

Twenty-three inspections of no flow were made. Three discharge measurements (Nos. 1–3) were made.

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.

Daily Mean Discharge (ft³/s) for E042.1

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-----------------|-----|-----|-----|----------------|-----|-----|------|-----|------|------|------|
| 1 | PE ^a | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 |
| 2 | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 |
| 3 | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 |
| 4 | PE | PE | PE | PE | PE | PE | PE | 0.57 | 0 | 0 | 0 | 0 |
| 5 | PE | PE | PE | PE | PE | PE | PE | 1.1 | 0 | 0 | 2.2 | 0 |
| 6 | PE | PE | PE | PE | PE | PE | PE | 0.86 | 0 | 0 | 0 | 0 |
| 7 | PE | PE | PE | PE | PE | PE | PE | 0.84 | 0 | 0 | 0 | 0 |
| 8 | PE | PE | PE | PE | PE | PE | PE | 0.73 | 0 | 0 | 0 | 0 |
| 9 | PE | PE | PE | PE | PE | PE | PE | 0.68 | 0 | 0 | 0 | 0 |
| 10 | PE | PE | PE | PE | PE | PE | PE | 0.65 | 0 | 0 | 0 | 0 |
| 11 | PE | PE | PE | PE | PE | PE | PE | 0.64 | 0 | 0 | 0 | 0 |
| 12 | PE | PE | PE | PE | PE | PE | PE | 0.6 | 0 | 0 | 0 | 0 |
| 13 | PE | PE | PE | PE | PE | PE | PE | 0.53 | 0 | 0 | 0 | 0 |
| 14 | PE | PE | PE | PE | PE | PE | PE | 1.4 | 0 | 0 | 0 | 0 |
| 15 | PE | PE | PE | PE | PE | PE | PE | 2.4 | 0 | 0 | 3.3 | 0 |
| 16 | PE | PE | PE | PE | PE | PE | PE | 0.61 | 0 | 0 | 5.3 | 0 |
| 17 | PE | PE | PE | PE | PE | PE | PE | 0.48 | 0 | 0 | 0.03 | 0 |
| 18 | PE | PE | PE | PE | PE | PE | PE | 0.75 | 0 | 0 | 0 | 0 |
| 19 | PE | PE | PE | PE | PE | PE | PE | 0.7 | 0 | 0 | 0 | 0 |
| 20 | PE | PE | PE | PE | PE | PE | PE | 0.58 | 0 | 0 | 0 | 0 |
| 21 | PE | PE | PE | PE | PE | PE | PE | 0.53 | 0 | 0 | 0 | 0 |
| 22 | PE | PE | PE | PE | PE | PE | PE | 0.53 | 0 | 0.72 | 0 | 0.53 |
| 23 | PE | PE | PE | PE | PE | PE | PE | 0.43 | 0 | 0.25 | 0.5 | 0.01 |
| 24 | PE | PE | PE | PE | PE | PE | PE | 0.36 | 0 | 0 | 0 | 0 |
| 25 | PE | PE | PE | PE | PE | PE | PE | 0.29 | 0 | 0.67 | 0 | 0 |
| 26 | PE | PE | PE | PE | PE | PE | PE | 0.18 | 0 | 0 | 0 | 0 |
| 27 | PE | PE | PE | PE | PE | PE | PE | 0.19 | 0 | 0 | 0 | 0 |
| 28 | PE | PE | PE | PE | PE | PE | PE | 0.23 | 0 | 0 | 0 | 0 |
| 29 | PE | PE | PE | PE | — ^b | PE | PE | 0.13 | 0 | 0 | 0 | 0 |
| 30 | PE | PE | PE | PE | — | PE | PE | 0.04 | 0 | 0 | 0 | 0 |
| 31 | PE | — | PE | PE | — | PE | — | 0 | — | 0.22 | 0 | — |

Daily Mean Discharge (ft³/s) for E042.1 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|--------------------|----------------|--------------------|--------------------|--------------------|
| Total (ft³/s) | PE | PE | PE | PE | PE | PE | PE | 17.03 | 0 | 1.86 | 11.33 | 0.54 |
| Total (acre-ft) | PE | PE | PE | PE | PE | PE | PE | 34 | 0 | 3.7 | 22 | 1.1 |
| Max Daily Mean | PE | PE | PE | PE | PE | PE | PE | 2.36 ^c | 0 ^c | 0.72 ^c | 5.25 ^c | 0.53 ^c |
| Min Daily Mean | PE | PE | PE | PE | PE | PE | PE | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c |
| Instantaneous Max | PE | PE | PE | PE | PE | PE | PE | 14.30 ^c | 0 ^c | 13.19 ^c | 98.84 ^c | 18.40 ^c |
| Instantaneous Min | PE | PE | PE | PE | PE | PE | PE | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c |
| Missing Days | 31 | 30 | 31 | 31 | 28 | 31 | 30 | 3 | 0 | 0 | 0 | 0 |

Daily Mean Discharge (ft³/s) for E042.1 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|------|------------|-----|------------|----|--------------------------|----|----------------|----|
| WY2010 | Total | 30.76 | Mean | 0.21 | Max | 5.3 | Min | 0 | Instantaneous Max | 99 | Acre-ft | 61 |
| CY2009 | Total | PE | Mean | PE | Max | PE | Min | PE | Instantaneous Max | PE | Acre-ft | PE |

^a PE = Pre-existence.

^b — = Not applicable.

^c Reliable estimate.

E050 LOS ALAMOS CANYON BELOW LA WEIR

Location. Lat 35° 52' 71", long 106° 13' 0.03", NE ¼, sec. 20, T. 19 N., R. 7E., Los Alamos County.

Drainage Area. 10.42 mi².

Period of Record. May 16, 2001, to September 30, 2010.

Revised Record. Drainage area (2006).

Gage. Data logger. Elevation of gage is 6345 ft above NGVD from GPS survey.

Average Discharge. 9 yr, 0.03 ft³/s, 20 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 252 ft³/s, August 08, 2006, gage height 3.2 ft (from slope-area measurement).

Maximum for Current Water Year. Maximum discharge, 78 ft³/s, August 16, 2010, gage height 2.0 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) and a Sutron Accubar bubble sensor and shaft encoder float system. No provision has been made for discharge measurements above the wading stage.

Fieldwork. The station was visited 25 times to measure discharge and service the instrumentation.

Datum Correction. The levels of May 31, 2001, found the gage within limits; no correction was needed.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except for December 12, 17 to 20, and 23, 2009; January 16, 21 to 23, and 29 to 30, 2010; and February 4, 2010 because of ice formation.

Rating. The channel is straight for 100 ft upstream and downstream. The bed is large gravel and well-armored and should not be subject to much movement. The channel is trapezoidal with little or no vegetation. Flow is regulated somewhat by the detention weir just upstream.

Water samples were collected four times during site visits. Two discharge measurements (Nos. 38 and 39) were taken during this time period. Twenty-one inspections of no flow were made.

Rating No. 2 was developed based on all measurements made during the period of record. The shifts are small and variable. Flows are very flashy and less than an hour; the daily mean discharges are very small in relation to the instantaneous peak.

Discharge. Discharge was computed from Rating No. 2 with shifts applied by the stage diagram.

Daily Mean Discharge (ft³/s) for E050

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-----|-----|-----|-----|----------------|-----|------|------|-----|-------------------|-------------------|------|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.16 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.82 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.43 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 1 ^a | 0 | 0 | 1.13 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.86 | 0 | 0 | 0.18 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.68 | 0 | 0 | 0.03 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.57 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0.41 | 0.56 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 0.56 | 0 | 0 | 0 ^b | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0.83 | 0.46 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 1.47 | 0.44 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 1 | 0 | 0 | 0 | 1.69 | 0.37 | 0 | 0 | 0 ^b | 0 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 2.14 | 0.3 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 2.87 | 0.53 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 | 3.15 | 1.92 | 0 | 0 | 4.21 | 0 |
| 16 | 0 | 0 | 0 | 1 | 0 | 0 | 3.44 | 0.62 | 0 | 0 | 5.44 ^b | 0 |
| 17 | 0 | 0 | 1 | 0 | 0 | 0 | 4.21 | 0.53 | 0 | 0 | 0.10 ^b | 0 |
| 18 | 0 | 0 | 1 | 0 | 0 | 0 | 4.18 | 0.58 | 0 | 0 | 0.01 ^b | 0 |
| 19 | 0 | 0 | 1 | 0 | 0 | 0 | 5.4 | 0.59 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 1 | 0 | 0 | 0 | 4.68 | 0.5 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 1 | 1 | 0 | 0 | 4.73 | 0.41 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 1 | 0 | 0 | 5.01 | 0.28 | 0 | 0 | 0 | 0.02 |
| 23 | 0 | 0 | 1 | 0 | 0 | 0 | 5.05 | 0.11 | 0 | 0 | 0.16 | 0.04 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 4.86 | 0.04 | 0 | 0 ^b | 0.3 | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 4.59 | 0.01 | 0 | 0 ^b | 0.01 | 0 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 4.13 | 0 | 0 | 0.02 ^b | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 0 | 0 | 3.74 | 0 | 0 | 0 ^b | 0 | 0 |
| 28 | 0 | 0 | 0 | 1 | 0 | 0 | 3.37 | 0 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 1 | — ^c | 0 | 2.81 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 1 | — | 0 | 2.49 | 0 | 0 | 0 ^b | 0 | 0 |
| 31 | 0 | — | 0 | 0 | — | 0 | — | 0 | — | 0.01 ^b | 0 | — |

Daily Mean Discharge (ft³/s) for E050 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|------|-----|------|------|------|------|-------|-------|-----|-------------------|-------|------|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 75.94 | 17.4 | 0 | 0.03 | 10.39 | 0.06 |
| Total (acre-ft) | 0 | 0 | 0 | 0 | 0 | 0 | 151 | 35 | 0 | 0.06 | 21 | 0.12 |
| Max Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 | 5.4 | 2.16 | 0 | 0.02 ^b | 5.44 | 0.04 |
| Min Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^b | 0 | 0 |
| Instantaneous Max | 0.06 | 0 | 0.01 | 0.03 | 0.04 | 0.04 | 11.86 | 16.34 | 0 | 0.09 ^b | 77.97 | 2.53 |
| Instantaneous Min | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^b | 0 | 0 |
| Missing Days | 0 | 0 | 7 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a I = Ice present.

^b Reliable estimate.

^c — = Not applicable.

Daily Mean Discharge (ft³/s) for E050 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|--------|-------------|-------|------------|-----|------------|---|--------------------------|----|----------------|-----|
| WY2010 | Total | 103.82 | Mean | 0.3 | Max | 5.4 | Min | 0 | Instantaneous Max | 78 | Acre-ft | 206 |
| CY2009 | Total | 2.41 | Mean | 0.007 | Max | 2.3 | Min | 0 | Instantaneous Max | 34 | Acre-ft | 4.8 |

E050.1 LOS ALAMOS CANYON BELOW LOW HEAD WEIR

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

Drainage Area. 10.44 mi².

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

Gage. Data logger. Elevation of gage is 6350 ft above NGVD from GPS survey.

Average Discharge. <1 yr, 0.19 ft³/s, 138 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 76 ft³/s, August 16, 2010, gage height 1.7 ft.

Maximum for Current Water Year. Maximum discharge, 76 ft³/s, August 16, 2010, gage height 1.7 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) and with a quadrature encoder driven by float tape in a stilling well 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 the gage reach. No provision has been made for discharge measurements above the wading stage. An outside staff gage is available for reference. The station is equipped with two ISCO pump samplers (one 12-count 1-L glass 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. A line-of-sight radio transceiver provides 5-min stage data from the bubble sensor and the encoder.

Fieldwork. The station was visited 14 times to measure discharge and service the instrumentation.

Datum Correction. Levels of May 31, 2001, found the gage within limits; no corrections were needed.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record for the time period of July 22, 2010, to September 30, 2010. Data recording for the site was activated on July 22, 2010.

Rating. Rating No. 1 is based on precalibrated data for the flume used (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.

Twelve inspections of no flow were made. No discharge measurements were made.

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

Daily Mean Discharge (ft³/s) for E050.1

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-----------------|-----|-----|-----|----------------|-----|-----|-----|-----|-----|------|-----|
| 1 | PE ^a | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 2 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 3 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 4 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 5 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0.59 | 0 |
| 6 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 7 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 8 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 9 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 10 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 11 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 12 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 13 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 14 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 15 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 1.8 | 0 |
| 16 | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 3.5 | 0 |
| 17 | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 |
| 18 | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 |
| 19 | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 |
| 20 | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 |
| 21 | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 |
| 22 | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 |
| 23 | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 |
| 24 | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 |
| 25 | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 |
| 26 | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 |
| 27 | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 |
| 28 | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 |
| 29 | PE | PE | PE | PE | — ^b | PE | PE | PE | PE | 0 | 0 | 0 |
| 30 | PE | PE | PE | PE | — | PE | PE | PE | PE | 0 | 0 | 0 |
| 31 | PE | — | PE | PE | — | PE | — | PE | — | 0 | 0 | — |

Daily Mean Discharge (ft³/s) for E050.1 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-----|
| Total (ft³/s) | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 5.89 | 0 |
| Total (acre-ft) | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 12 | 0 |
| Max Daily Mean | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 3.55 | 0 |
| Min Daily Mean | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 |
| Instantaneous Max | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 75.55 | 0 |
| Instantaneous Min | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 |
| Missing Days | 31 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 30 | 15 | 0 | 0 |

Daily Mean Discharge (ft³/s) for E050.1 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|------|-------------|-------|------------|-----|------------|----|--------------------------|----|----------------|----|
| WY2010 | Total | 5.89 | Mean | 0.076 | Max | 3.5 | Min | 0 | Instantaneous Max | 76 | Acre-ft | 12 |
| CY2009 | Total | PE | Mean | PE | Max | PE | Min | PE | Instantaneous Max | PE | Acre-ft | PE |

^a PE = Pre-existence.

^b — = Not applicable.

E055 PUEBLO CANYON ABOVE ACID CANYON

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

Drainage Area. 3.42 mi².

Period of Record. October 1, 2002, to September 30, 2010.

Revised Record. Average discharge (2007, 2008).

Gage. Data logger. Elevation of gage is 6945 ft above NGVD from topographic map.

Average Discharge. 8 yr, 0.09 ft³/s, 65 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 1780 ft³/s, August 8, 2006, gage height 7.5 ft (from critical depth computation).

Maximum for Current Water Year. Maximum discharge, 41 ft³/s, August 16, 2010, gage height 3.4 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) and 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 the wading stage.

Fieldwork. The station was visited 18 times to measure discharge and service the instrumentation.

Datum Correction. None.

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

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 here will be unstable. 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, not in accordance with recorded gage heights. This jump-out occurred at approximately 500 ft³/s. This channel problem was corrected in March 2007.

One discharge measurement (No. 51) and 8 inspections of no flow were made during the year.

Rating No. 2 was developed using the current year measurements and one critical depth measurement of 850 ft³/s and various low-flow measurements from previous years. The definition of low water 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.

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

Daily Mean Discharge (ft³/s) for E055

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|------|-----|-----|----------------|----------------|------|------|----------------|-----|------|-------------------|------|
| 1 | 0 | 0 | 0 | 0 | 0.02 | 0.16 | 0.98 | 0.08 | 0 | 0 | 0.01 | 0.17 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0.16 | 0.77 | 0.08 | 0 | 0 | 0 | 0.15 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0.31 | 0.59 | 0.06 | 0 | 0 | 0 | 0.09 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0.43 | 0.5 | 0.05 | 0 | 0 | 0 | 0.07 |
| 5 | 0 | 0 | 0 | 0 | 0.06 | 0.4 | 0.55 | 0.04 | 0 | 0 | 2 | 0.05 |
| 6 | 0 | 0 | 0 | 0 | 0.05 | 0.42 | 0.52 | 0.03 | 0 | 0 | 0.48 | 0.02 |
| 7 | 0 | 0 | 0 | 0 | 0.03 | 0.6 | 0.48 | 0.02 | 0 | 0 | 0.27 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0.02 | 0.67 | 0.43 | 0.01 | 0 | 0 | 0.17 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0.02 | 0.57 | 0.37 | 0.01 | 0 | 0 | 0.41 | 0 |
| 10 | 0 | 0 | 0 | 0 | 0.05 | 0.53 | 0.33 | 0 | 0 | 0 | 0.25 | 0 |
| 11 | 0 | 0 | 0 | 0 | 0.06 | 0.42 | 0.3 | 0 | 0 | 0 | 0.13 | 0 |
| 12 | 0 | 0 | 0 | 0 | 0.02 | 0.37 | 0.29 | 0 | 0 | 0 | 0.63 ^a | 0 |
| 13 | 0.38 | 0 | 0 | 0 | 0.01 | 0.41 | 0.27 | 0 | 0 | 0 | 0.76 | 0 |
| 14 | 0.04 | 0 | 0 | 0 | 0 | 0.52 | 0.24 | 0.23 | 0 | 0 | 0.42 | 0 |
| 15 | 0.01 | 0 | 0 | 0 | 0 | 0.71 | 0.22 | 0.45 | 0 | 0 | 1.9 | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0.59 | 0.58 | 0.03 | 0 | 0 | 4.24 | 0 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0.73 | 1.01 | 0.01 | 0 | 0 | 1.69 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0.99 | 0.54 | 0 | 0 | 0 | 0.55 | 0 |
| 19 | 0 | 0 | 0 | 0 | 0 | 1.11 | 1.26 | 0 | 0 | 0 | 0.33 | 0 |
| 20 | 0.28 | 0 | 0 | 0 | 0 | 0.89 | 0.71 | 0 | 0 | 0 | 0.18 | 0 |
| 21 | 1.07 | 0 | 0 | 0 | 0.01 | 0.65 | 0.53 | 0 | 0 | 0 | 0.13 | 0 |
| 22 | 0.2 | 0 | 0 | 0 | 0.05 | 0.58 | 0.46 | 0 | 0 | 0.72 | 0.1 | 0.14 |
| 23 | 0.06 | 0 | 0 | I ^b | 0.11 | 0.6 | 0.34 | 0 | 0 | 0.01 | 2.05 | 0.14 |
| 24 | 0.02 | 0 | 0 | I | 0.09 | 0.56 | 0.29 | 0 | 0 | 0.07 | 0.86 | 0.06 |
| 25 | 0.01 | 0 | 0 | I | 0.06 | 0.53 | 0.23 | 0 ^a | 0 | 0.93 | 0.2 | 0.03 |
| 26 | 0 | 0 | 0 | I | 0.05 | 0.56 | 0.19 | 0 | 0 | 0.12 | 0.09 | 0.01 |
| 27 | 0 | 0 | 0 | I | 0.05 | 0.49 | 0.16 | 0 | 0 | 0 | 0.06 | 0 |
| 28 | 0 | 0 | 0 | I | 0.1 | 0.49 | 0.14 | 0 | 0 | 0 | 0.05 | 0 |
| 29 | 0.01 | 0 | 0 | I | — ^c | 0.58 | 0.12 | 0 | 0 | 0 | 0.21 | 0 |
| 30 | 0.01 | 0 | 0 | 0.07 | — | 0.78 | 0.1 | 0 | 0 | 0.01 | 0.64 | 0 |
| 31 | 0 | — | 0 | 0.03 | — | 0.96 | — | 0 | — | 0.04 | 0.42 | — |

Daily Mean Discharge (ft³/s) for E055 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|------|-----|-----|------|------|-------|-------|-------------------|-----|-------|--------------------|------|
| Total (ft³/s) | 2.12 | 0 | 0 | 0.1 | 0.87 | 17.76 | 13.53 | 1.1 | 0 | 1.9 | 19.15 | 0.94 |
| Total (acre-ft) | 4.2 | 0 | 0 | 0.2 | 1.7 | 35 | 27 | 2.2 | 0 | 3.8 | 38 | 1.9 |
| Max Daily Mean | 1.07 | 0 | 0 | 0.07 | 0.11 | 1.11 | 1.26 | 0.45 ^a | 0 | 0.93 | 4.24 ^a | 0.17 |
| Min Daily Mean | 0 | 0 | 0 | 0 | 0 | 0.16 | 0.1 | 0 ^a | 0 | 0 | 0 ^a | 0 |
| Instantaneous Max | 4.21 | 0 | 0 | 0.11 | 0.34 | 1.35 | 10.37 | 5.17 ^a | 0 | 15.03 | 40.82 ^a | 3.35 |
| Instantaneous Min | 0 | 0 | 0 | 0 | 0 | 0.11 | 0.07 | 0.00 ^a | 0 | 0 | 0 ^a | 0 |
| Missing Days | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a Reliable estimate.

^b I = Ice present.

^c — = Not applicable.

Daily Mean Discharge (ft³/s) for E055 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|-------|------------|-----|------------|---|--------------------------|----|----------------|-----|
| WY2010 | Total | 57.47 | Mean | 0.16 | Max | 4.2 | Min | 0 | Instantaneous Max | 41 | Acre-ft | 114 |
| CY2009 | Total | 34.13 | Mean | 0.079 | Max | 3 | Min | 0 | Instantaneous Max | 34 | Acre-ft | 57 |

E055.5 SOUTH FORK OF ACID CANYON

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

Drainage Area. 0.08 mi².

Period of Record. August 18, 2004, to September 30, 2010.

Revised Record. Period of record (this report).

Gage. Data logger with cellular telemetry. Elevation of gage is 7100 ft above NGVD from GPS survey.

Average Discharge. 6 yr, 0.04 ft³/s, 27 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 91 ft³/s, August 8, 2006, gage height 6.2 ft.

Maximum for Current Water Year. Maximum discharge, 69 ft³/s, August 16, 2010, gage height 6 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with a Sutron Accubar bubble sensor and cellular telemetry with speech modem 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. 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. The station was visited 21 times to measure discharge and service the instrumentation.

Datum Correction. None. 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.

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 much movement.

Eighteen inspections of no flow and three inspections of observed flow were made this year. No discharge measurements were made.

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.

Discharge. Discharge was computed by applying Rating No. 1. Shift was applied with a "V" diagram for the entire year. Days estimated were based on field notes.

Daily Mean Discharge (ft³/s) for E055.5

| 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 | 0.01 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.68 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0.03 ^a | 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 | 0.05 | 0.04 | 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 | 0.06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.06 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 | 0 | 0.53 | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.67 | 0 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.03 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 0.01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 17.43 ^a | 0 | 0 | 0 | 0 | 0 | 0.39 | 0 | 0.37 |
| 23 | 0 | 0 | 0 | 2.19 | 0 | 0 | 0 | 0 | 0 | 0 | 0.48 | 0 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.03 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.16 | 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 | — ^b | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0.02 | 0 | 0 |
| 31 | 0 | — | 0 | 0 | — | 0 | — | 0 | — | 0 | 0 ^a | — |

**Daily Mean Discharge (ft³/s) for E055.5
(continued)**

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|------|-----|-----|----------------|-----|-------------------|------|------|------|-------|--------------------|------|
| Total (ft³/s) | 0.07 | 0 | 0 | 0 | 0 | 0.03 | 0.01 | 0.07 | 0.03 | 0.63 | 3.47 | 0.37 |
| Total (acre-ft) | 0.14 | 0 | 0 | 0 | 0 | 0.06 | 0.02 | 0.14 | 0.06 | 1.2 | 6.9 | 0.73 |
| Max Daily Mean | 0.06 | 0 | 0 | 0 | 0 | 0.03 ^a | 0.01 | 0.06 | 0.03 | 0.39 | 1.67 ^a | 0.37 |
| Min Daily Mean | 0 | 0 | 0 | 0 ^a | 0 | 0 ^a | 0 | 0 | 0 | 0 | 0 ^a | 0 |
| Instantaneous Max | 6.85 | 0 | 0 | 0 | 0 | 0.58 ^a | 0.48 | 3.32 | 4.09 | 30.69 | 69.08 ^a | 12.3 |
| Instantaneous Min | 0 | 0 | 0 | 0 ^a | 0 | 0 ^a | 0 | 0 | 0 | 0 | 0 ^a | 0 |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a Reliable estimate.

^b — = Not applicable.

**Daily Mean Discharge (ft³/s) for E055.5
(continued)**

| | | | | | | | | | | | | |
|---------------|--------------|------|-------------|-------|------------|------|------------|---|--------------------------|----|----------------|-----|
| WY2010 | Total | 4.68 | Mean | 0.13 | Max | 1.7 | Min | 0 | Instantaneous Max | 69 | Acre-ft | 9.3 |
| CY2009 | Total | 0.9 | Mean | 0.003 | Max | 0.59 | Min | 0 | Instantaneous Max | 31 | Acre-ft | 1.8 |

E056 ACID CANYON ABOVE PUEBLO CANYON

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

Drainage Area. 0.452 mi².

Period of Record. October 1, 2006, to September 30, 2010.

Revised Record. Period of record (2008).

Gage. Data logger. Elevation of gage is 6944 ft above NGVD.

Average Discharge. 4 yr, 0.05 ft³/s, 33 acre-ft/yr

Maximum for Period of Record. Maximum discharge, 263 ft³/s, July 5, 2009, gage height 3.6 ft.

Maximum for Current Water Year. Maximum discharge, 255 ft³/s, August 16, 2010, gage height 3.3 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with 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. 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. The station was visited 18 times to measure discharge and service the instrumentation.

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.

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° sharp-crested weir. At high flow, the channel becomes the control.

One discharge measurement (No. 26) and six visits of no flow were made. All inspections of no flow were used to develop a “V” diagram shift needed to adjust for PZF.

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.

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

Daily Mean Discharge (ft³/s) for E056

| 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 | 4.42 | 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 | 0.01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 | 0 | 0.02 | 0 |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.02 | 0 | 0 | 0.5 | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13.82 ^a | 0 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.43 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0.04 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 0.03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.61 | 0 | 0.11 |
| 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.96 | 0 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.29 | 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 | — ^b | 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 | — |

Daily Mean Discharge (ft³/s) for E056 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|------|-----|-----|-----|-----|-----|------|------|-----|-------|---------------------|------|
| Total (ft³/s) | 0.04 | 0 | 0 | 0 | 0 | 0 | 0.04 | 0.03 | 0 | 0.91 | 20.32 | 0.11 |
| Total (acre-ft) | 0.08 | 0 | 0 | 0 | 0 | 0 | 0.08 | 0.06 | 0 | 1.8 | 40 | 0.22 |
| Max Daily Mean | 0.03 | 0 | 0 | 0 | 0 | 0 | 0.04 | 0.02 | 0 | 0.61 | 13.82 ^a | 0.11 |
| Min Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0 |
| Instantaneous Max | 0.78 | 0 | 0 | 0 | 0 | 0 | 1.99 | 0.87 | 0 | 25.52 | 254.65 ^a | 5.84 |
| Instantaneous Min | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0 |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a Reliable estimate.

^b — = Not applicable.

Daily Mean Discharge (ft³/s) for E056 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|-------|------------|-----|------------|---|--------------------------|-----|----------------|----|
| WY2010 | Total | 21.45 | Mean | 0.059 | Max | 14 | Min | 0 | Instantaneous Max | 255 | Acre-ft | 43 |
| CY2009 | Total | 9.16 | Mean | 0.025 | Max | 5.1 | Min | 0 | Instantaneous Max | 263 | Acre-ft | 18 |

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 mi².

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

Gage. Elevation of gage is 6560 ft above NGVD.

Average Discharge. <1 yr, 0.52 ft³/s, 374 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 250 ft³/s, August 16, 2010, gage height, 2.6 ft.

Maximum for Current Water Year. Maximum discharge, 250 ft³/s, August 16, 2010, gage height, 2.6 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with a shaft encoder float system, housed in a NEMA shelter. The shelter is secured atop a stilling well, a vertical 2-ft diameter CMP culvert pipe. Two ISCO pump 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 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. 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. The station was visited nine times to conduct discharge measurements and service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record for the period from August 12, 2010, to September 30, 2010. Data recording for site was activated on August 12, 2010.

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

No discharge measurements were made. Nine inspections of no flow were made between July 29, 2010, and September 30, 2010.

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

Daily Mean Discharge (ft³/s) for E059

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-----------------|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|-----|
| 1 | PE ^a | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 |
| 2 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 |
| 3 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 |
| 4 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 |
| 5 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 |
| 6 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 |
| 7 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 |
| 8 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 |
| 9 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 |
| 10 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 |
| 11 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 |
| 12 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 13 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 14 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 15 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 4.1 | 0 |
| 16 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 19 | 0 |
| 17 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 18 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 19 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 20 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 21 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 22 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 23 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 2.5 | 0 |
| 24 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 25 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 26 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 27 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 28 | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 | 0 |
| 29 | PE | PE | PE | PE | — ^b | PE | PE | PE | PE | PE | 0 | 0 |
| 30 | PE | PE | PE | PE | — | PE | PE | PE | PE | PE | 0 | 0 |
| 31 | PE | — | PE | PE | — | PE | — | PE | — | PE | 0 | — |

Daily Mean Discharge (ft³/s) for E059 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------------|----------------|
| Total (ft³/s) | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 25.6 | 0 |
| Total (acre-ft) | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 51 | 0 |
| Max Daily Mean | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 18.71 ^c | 0 ^c |
| Min Daily Mean | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 ^c | 0 ^c |
| Instantaneous Max | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 250.10 ^c | 0 ^c |
| Instantaneous Min | PE | PE | PE | PE | PE | PE | PE | PE | PE | PE | 0 ^c | 0 ^c |
| Missing Days | 31 | 30 | 31 | 31 | 28 | 31 | 30 | 31 | 30 | 31 | 11 | 0 |

Daily Mean Discharge (ft³/s) for E059 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|------|-------------|------|------------|----|------------|----|--------------------------|-----|----------------|----|
| WY2010 | Total | 25.6 | Mean | 0.51 | Max | 19 | Min | 0 | Instantaneous Max | 250 | Acre-ft | 51 |
| CY2009 | Total | PE | Mean | PE | Max | PE | Min | PE | Instantaneous Max | PE | Acre-ft | PE |

^a PE = Pre-existence.

^b — = Not applicable.

^c Reliable estimate.

E060 PUEBLO CANYON ABOVE SR 502

Location. Lat 35° 52' 15", long 106° 13' 1", NE ¼, Sec. 20, T. 19 N., R. 7 E., Santa Fe County.

Drainage Area. 8.21 mi².

Period of Record. January 1992 to March 3, 2010.

Revised Record. Drainage area (2006).

Gage. Data logger with cellular telemetry. Elevation of gage is 6341 ft above NGVD from GPS survey.

Remarks. Perennial flow is primarily from effluent.

Average Discharge. 14 yr, 0.83 ft³/s, 604 acre-ft/yr, 1996–2010.

Maximum for Period of Record. Maximum discharge, 1924 ft³/s, August 8, 2006, gage height 11.8 ft (from slope-area measurement). Rating curve extended above 130 ft³/s on basis of slope-area measurement.

Maximum for Current Water Year. Maximum discharge, 0.69 ft³/s, December 30, 2009, gage height 7.3 ft.



Equipment. The station is equipped with a Sutron 8210 (5-min interval) with a Sutron Accubar bubble sensor housed in a NEMA shelter on the right bank. The station is also equipped with a pair of ISCO samplers 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.

An auxiliary 6-in. Parshall flume is located downstream from E060 and is used to verify the low-flow record.

Fieldwork. This station was visited 11 times to measure discharge and service the instrumentation.

Datum Correction. None. The May 7, 2007, levels found the gage to be correct.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record from October 1, 2009, to March 3, 2010, when the site was dismantled and replaced by gage E060.1.

Rating. The channel consists of sand gravel with a hard pan bed. Sand degrades easily and will change with flow events. The channel is straight at high flow but incised in sand and meandering at low flow. Channel bottom elevation or PZF may change many times throughout the year and is critical in determining shift values. Grasses become 4–5 ft tall and cause considerable backwater at most stages. These grasses are usually flattened at high flow.

No discharge measurements were made. Four inspections of no flow were made this year.

Rating No. 8 was developed based on measurements of previous years. The upper end of the rating is based on the slope-area measurement from the previous year.

Measuring conditions at this site are poor. Generally, low flows are shallow and characterized by high velocities and uneven measuring sections. Peak flows are flashy and change quickly; mean gage heights for measurements are difficult to determine.

Discharge. Discharge was computed by applying gage height to Rating No. 8 using a “V” diagram.

Daily Mean Discharge (ft³/s) for E060

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|------|------|------|----------------|----------------|------|----------------|-----|-----|-----|-----|-----|
| 1 | 0 | 0.63 | 0.63 | I ^a | 0.6 | 0.61 | D ^b | D | D | D | D | D |
| 2 | 0 | 0.63 | 0.62 | I | 0.61 | D | D | D | D | D | D | D |
| 3 | 0 | 0.64 | 0.63 | I | 0.61 | D | D | D | D | D | D | D |
| 4 | 0 | 0.64 | 0.63 | I | 0.61 | D | D | D | D | D | D | D |
| 5 | 0 | 0.64 | 0.63 | I | 0.61 | D | D | D | D | D | D | D |
| 6 | 0 | 0.64 | 0.62 | I | 0.61 | D | D | D | D | D | D | D |
| 7 | 0 | 0.64 | 0.62 | I | 0.61 | D | D | D | D | D | D | D |
| 8 | 0 | 0.64 | 0.63 | I | 0.61 | D | D | D | D | D | D | D |
| 9 | 0 | 0.63 | 0.62 | 0.63 | 0.62 | D | D | D | D | D | D | D |
| 10 | 0 | 0.64 | 0.63 | 0.62 | 0.62 | D | D | D | D | D | D | D |
| 11 | 0 | 0.64 | 0.63 | 0.61 | 0.62 | D | D | D | D | D | D | D |
| 12 | 0 | 0.61 | 0.64 | 0.61 | 0.63 | D | D | D | D | D | D | D |
| 13 | 0 | 0.02 | 0.63 | 0.61 | 0.64 | D | D | D | D | D | D | D |
| 14 | 0 | 0.34 | 0.63 | 0.61 | 0.63 | D | D | D | D | D | D | D |
| 15 | 0 | 0.59 | I | 0.62 | 0.59 | D | D | D | D | D | D | D |
| 16 | 0 | 0.5 | I | 0.62 | 0.63 | D | D | D | D | D | D | D |
| 17 | 0 | 0 | I | 0.63 | 0.63 | D | D | D | D | D | D | D |
| 18 | 0 | 0.5 | I | 0.62 | 0.63 | D | D | D | D | D | D | D |
| 19 | 0 | 0.62 | I | 0.6 | 0.63 | D | D | D | D | D | D | D |
| 20 | 0 | 0.61 | I | 0.61 | 0.63 | D | D | D | D | D | D | D |
| 21 | 0.61 | 0.63 | I | 0.61 | 0.63 | D | D | D | D | D | D | D |
| 22 | 0.64 | 0.63 | I | 0.59 | 0.62 | D | D | D | D | D | D | D |
| 23 | 0.03 | 0.63 | I | 0.59 | 0.62 | D | D | D | D | D | D | D |
| 24 | 0 | 0.63 | I | 0.6 | 0.62 | D | D | D | D | D | D | D |
| 25 | 0 | 0.63 | I | 0.6 | 0.62 | D | D | D | D | D | D | D |
| 26 | 0.24 | 0.63 | I | 0.6 | 0.62 | D | D | D | D | D | D | D |
| 27 | 0 | 0.58 | I | 0.61 | 0.63 | D | D | D | D | D | D | D |
| 28 | 0.12 | 0.55 | I | 0.6 | 0.61 | D | D | D | D | D | D | D |
| 29 | 0.59 | 0.63 | I | 0.6 | — ^c | D | D | D | D | D | D | D |
| 30 | 0.64 | 0.63 | I | 0.61 | — | D | D | D | D | D | D | D |
| 31 | 0.54 | — | I | 0.6 | — | D | — | D | — | D | D | — |

Daily Mean Discharge (ft³/s) for E060 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|------|-------|------|------|-------|------|-----|-----|-----|-----|-----|-----|
| Total (ft³/s) | 3.41 | 16.97 | 8.79 | 14 | 17.34 | 0.61 | D | D | D | D | D | D |
| Total (acre-ft) | 6.8 | 34 | 17 | 28 | 34 | 1.2 | D | D | D | D | D | D |
| Max Daily Mean | 0.64 | 0.64 | 0.64 | 0.63 | 0.64 | 0.61 | D | D | D | D | D | D |
| Min Daily Mean | 0 | 0 | 0.62 | 0.59 | 0.59 | 0.61 | D | D | D | D | D | D |
| Instantaneous Max | 0.67 | 0.67 | 0.67 | 0.69 | 0.67 | 0.65 | D | D | D | D | D | D |
| Instantaneous Min | 0 | 0 | 0.58 | 0.56 | 0 | 0.58 | D | D | D | D | D | D |
| Missing Days | 0 | 0 | 17 | 8 | 0 | 30 | 30 | 31 | 30 | 31 | 31 | 30 |

^a I = Ice present.

^b D = Decommissioned.

^c — = Not applicable.

Daily Mean Discharge (ft³/s) for E060 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|------|------------|------|------------|---|--------------------------|------|----------------|-----|
| WY2010 | Total | 61.12 | Mean | 0.48 | Max | 0.64 | Min | 0 | Instantaneous Max | 0.69 | Acre-ft | 121 |
| CY2009 | Total | 55.87 | Mean | 0.16 | Max | 0.64 | Min | 0 | Instantaneous Max | 5.7 | Acre-ft | 111 |

E060.1 PUEBLO CANYON BELOW GRADE CONTROL STRUCTURE

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

Drainage Area. 8.30 mi².

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

Gage. Data logger with radio telemetry. Elevation of gage is 6340 ft above NGVD from GPS survey.

Average Discharge. <1 yr. 0.05 ft³/s, 38 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 132 ft³/s, August 16, 2010, gage height, 2.3 ft.

Maximum for Current Water Year. Maximum discharge, 132 ft³/s, August 16, 2010, gage height 2.3 ft.



Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval) with 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 CMP 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 was 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 line-of-sight radio transceiver provides 5-min stage data from the encoder and bubbler.

Fieldwork. This station was visited 21 times to measure discharge and service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record for the period from April 15 to September 30, 2010. Data recording for the site was activated on April 15, 2010.

Rating. Rating No. 1 is based on precalibrated data for the flume used (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 and 18 inspections of no flow were made this year.

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

Daily Mean Discharge (ft³/s) for E060.1

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-----------------|-----|-----|-----|----------------|-----|-----|-----|-----|-----|------|-----|
| 1 | PE ^a | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 2 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 3 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 4 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 5 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 6 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 7 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 8 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 9 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 10 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 11 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 12 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 13 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0.01 | 0 |
| 14 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 |
| 15 | PE | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0.03 | 0 |
| 16 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 9 | 0 |
| 17 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0.23 | 0 |
| 18 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | PE | PE | PE | PE | — ^b | PE | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | PE | PE | PE | PE | — | PE | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | PE | — | PE | PE | — | PE | — | 0 | — | 0 | 0 | — |

**Daily Mean Discharge (ft³/s) for E060.1
(continued)**

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|------|----------------|-----|---------------------|----------------|
| Total (ft³/s) | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 9.27 | 0 |
| Total (acre-ft) | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 | 0 | 18 | 0 |
| Max Daily Mean | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 ^c | 0 | 8.95 ^c | 0 ^c |
| Min Daily Mean | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 ^c | 0 | 0 ^c | 0 ^c |
| Instantaneous Max | PE | PE | PE | PE | PE | PE | 0 | 0.18 | 0 ^c | 0 | 131.58 ^c | 0 ^c |
| Instantaneous Min | PE | PE | PE | PE | PE | PE | 0 | 0 | 0 ^c | 0 | 0 ^c | 0 ^c |
| Missing Days | 31 | 30 | 31 | 31 | 28 | 31 | 15 | 0 | 0 | 0 | 0 | 0 |

**Daily Mean Discharge (ft³/s) for E060.1
(continued)**

| | | | | | | | | | | | | |
|---------------|--------------|------|-------------|-------|------------|----|------------|----|--------------------------|-----|----------------|----|
| WY2010 | Total | 9.27 | Mean | 0.056 | Max | 9 | Min | 0 | Instantaneous Max | 132 | Acre-ft | 18 |
| CY2009 | Total | PE | Mean | PE | Max | PE | Min | PE | Instantaneous Max | PE | Acre-ft | PE |

^a PE = Pre-existence.

^b — = Not applicable.

^c Reliable estimate.

E070 BAYO CANYON AT PUEBLO CANYON

Location. Lat 35° 53' 14", long 106° 14' 37", SW ¼, Sec. 7, T. 19 N., R. 7 E., Santa Fe County.

Drainage Area. Not available.

Period of Record. March 27, 2002, to February 23, 2006; April 1, 2008, to September 30, 2010.

Revised Record. None.

Average Discharge. Not available.

Gage. Data logger. Elevation of gage is 6625 ft above NGVD.

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

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



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) 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 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 shelter, a 3- × 4-ft steel storage 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. The station was visited 15 times to conduct inspections and to service the instrumentation.

Datum Correction. None.

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

Rating. The stream is an open channel.

No rating curve is available for this station.

Discharge. No flow.

Daily Mean Discharge (ft³/s) for E070

| 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 |
| 30 | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 0 | — | 0 | 0 | — | 0 | — | 0 | — | 0 | 0 | — |

Daily Mean Discharge (ft³/s) for E070 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total (acre-ft) | 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 |
| Min Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Min | 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 |

* — = Not applicable.

Daily Mean Discharge (ft³/s) for E070 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|---|-------------|---|------------|---|------------|---|--------------------------|---|----------------|---|
| WY2010 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0 | Acre-ft | 0 |
| CY2009 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0 | Acre-ft | 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.

Drainage Area. 58.99 mi².

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

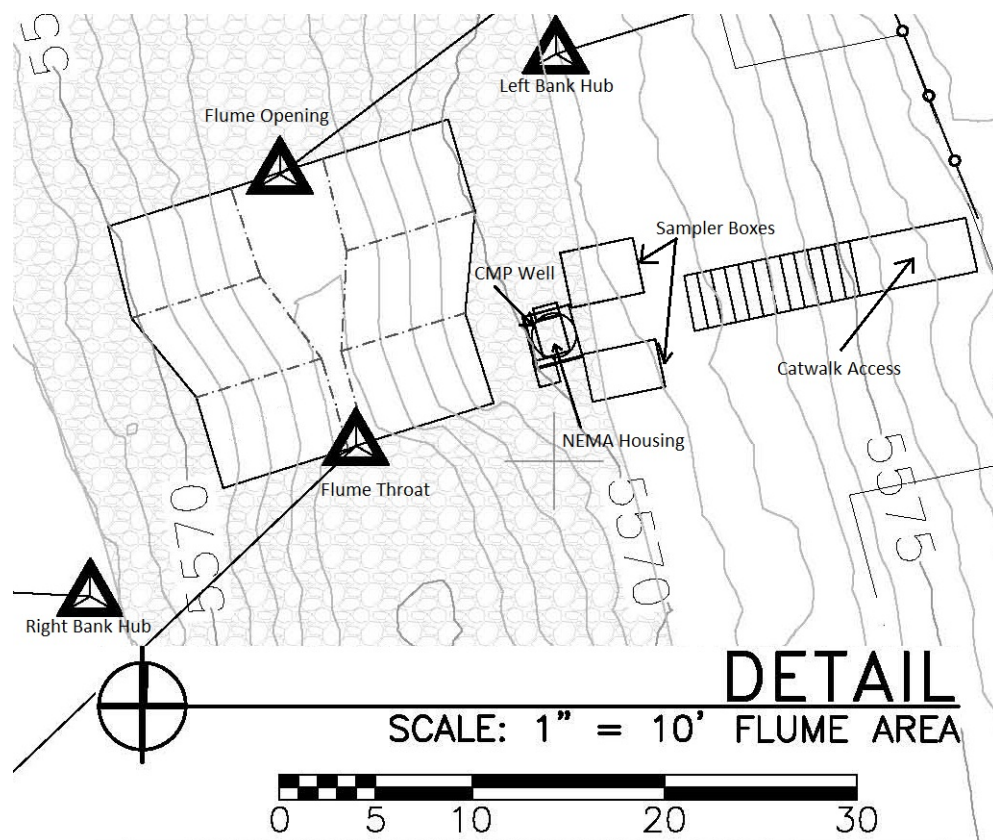
Revised Record. None.

Average Discharge. <1 yr, 0.40 ft³/s, 285 acre-ft/yr.

Gage. Data logger and radio telemetry. Elevation of gage is 5590 ft above NGVD.

Maximum for Period of Record. Maximum discharge, 439 ft³/s, August 15, 2010, gage height 4.3 ft.

Maximum for Current Water Year. Maximum discharge, 439 ft³/s, August 15, 2010, gage height 4.3 ft.



Equipment. The station is equipped with a Sutron 9210 data logger (5-min interval) with 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 CMP culvert pipe. A Milltronics ultrasonic probe was installed as a third stage-record device on June 26, 2012. An outside staff gage is available for reference. A trapezoidal supercritical flume with 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; 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. The site was visited 29 times to measure discharge and to service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record beginning on April 12, 2010, except for the period from September 27 to September 30, 2010, due to equipment malfunction. Data recording was activated for this site on April 12, 2010.

Rating. Rating No. 1 is based on precalibrated data for the flume used (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.

Four discharge measurements (Nos. 1–4) were made, and 12 inspections of no flow were made.

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

Daily Mean Discharge (ft³/s) for E109.9

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-----------------|-----|-----|-----|----------------|-----|------|------|------|-----|------|-------------------|
| 1 | PE ^a | PE | PE | PE | PE | PE | PE | 0.46 | 0.07 | 0 | 0 | 0 |
| 2 | PE | PE | PE | PE | PE | PE | PE | 0.43 | 0.07 | 0 | 0 | 0 |
| 3 | PE | PE | PE | PE | PE | PE | PE | 0.4 | 0.07 | 0 | 0 | 0 |
| 4 | PE | PE | PE | PE | PE | PE | PE | 0.37 | 0.07 | 0 | 0 | 0 |
| 5 | PE | PE | PE | PE | PE | PE | PE | 0.35 | 0.07 | 0 | 0 | 0 |
| 6 | PE | PE | PE | PE | PE | PE | PE | 0.33 | 0.08 | 0 | 0 | 0 |
| 7 | PE | PE | PE | PE | PE | PE | PE | 0.32 | 0.09 | 0 | 0 | 0 |
| 8 | PE | PE | PE | PE | PE | PE | PE | 0.31 | 0.09 | 0 | 0 | 0 |
| 9 | PE | PE | PE | PE | PE | PE | PE | 0.29 | 0.14 | 0 | 0 | 0 |
| 10 | PE | PE | PE | PE | PE | PE | PE | 0.28 | 0.1 | 0 | 0 | 0 |
| 11 | PE | PE | PE | PE | PE | PE | PE | 0.26 | 0.07 | 0 | 0 | 0 |
| 12 | PE | PE | PE | PE | PE | PE | PE | 0.25 | 0.07 | 0 | 0 | 0 |
| 13 | PE | PE | PE | PE | PE | PE | 0.66 | 0.23 | 0.07 | 0 | 0 | 0 |
| 14 | PE | PE | PE | PE | PE | PE | 0.73 | 0.22 | 0.1 | 0 | 0 | 0 |
| 15 | PE | PE | PE | PE | PE | PE | 0.76 | 0.21 | 0.07 | 0 | 20 | 0 |
| 16 | PE | PE | PE | PE | PE | PE | 0.77 | 0.19 | 0.07 | 0 | 25 | 0 |
| 17 | PE | PE | PE | PE | PE | PE | 0.85 | 0.18 | 0.07 | 0 | 0.17 | 0 |
| 18 | PE | PE | PE | PE | PE | PE | 0.78 | 0.16 | 0.08 | 0 | 0 | 0 |
| 19 | PE | PE | PE | PE | PE | PE | 0.75 | 0.15 | 0.09 | 0 | 0 | 0 |
| 20 | PE | PE | PE | PE | PE | PE | 0.77 | 0.13 | 0.09 | 0 | 0 | 0 |
| 21 | PE | PE | PE | PE | PE | PE | 0.82 | 0.12 | 0.08 | 0 | 0 | 0 |
| 22 | PE | PE | PE | PE | PE | PE | 0.78 | 0.1 | 0.07 | 0 | 0 | 1.3 |
| 23 | PE | PE | PE | PE | PE | PE | 0.74 | 0.09 | 0 | 0 | 0.02 | 0 |
| 24 | PE | PE | PE | PE | PE | PE | 0.7 | 0.07 | 0 | 0 | 0 | 0 |
| 25 | PE | PE | PE | PE | PE | PE | 0.67 | 0.08 | 0 | 0 | 0.01 | 0 |
| 26 | PE | PE | PE | PE | PE | PE | 0.63 | 0.07 | 0 | 0 | 0 | 0 |
| 27 | PE | PE | PE | PE | PE | PE | 0.59 | 0.07 | 0 | 0 | 0 | 0.00 ^b |
| 28 | PE | PE | PE | PE | PE | PE | 0.56 | 0.07 | 0 | 0 | 0 | 0.00 ^b |
| 29 | PE | PE | PE | PE | — ^c | PE | 0.53 | 0.07 | 0 | 0 | 0 | 0.00 ^b |
| 30 | PE | PE | PE | PE | — | PE | 0.49 | 0.07 | 0 | 0 | 0 | 0.00 ^b |
| 31 | PE | — | PE | PE | — | PE | — | 0.07 | — | 0 | 0 | — |

**Daily Mean Discharge (ft³/s) for E109.9
(continued)**

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|-----|-----|-----|-------------------|-------------------|-------------------|-----|---------------------|--------------------|
| Total (ft³/s) | PE | PE | PE | PE | PE | PE | 12.58 | 6.4 | 1.78 | 0 | 45.2 | 1.3 |
| Total (acre-ft) | PE | PE | PE | PE | PE | PE | 25 | 13 | 3.5 | 0 | 90 | 2.6 |
| Max Daily Mean | PE | PE | PE | PE | PE | PE | 0.85 ^c | 0.46 ^c | 0.14 ^c | 0 | 24.90 ^c | 1.29 ^c |
| Min Daily Mean | PE | PE | PE | PE | PE | PE | 0.49 ^c | 0.07 ^c | 0.00 ^c | 0 | 0.00 ^c | 0.00 ^c |
| Instantaneous Max | PE | PE | PE | PE | PE | PE | 1.07 ^c | 0.48 ^c | 0.24 ^c | 0 | 438.98 ^c | 48.42 ^c |
| Instantaneous Min | PE | PE | PE | PE | PE | PE | 0.48 ^c | 0.07 ^c | 0.00 ^c | 0 | 0.00 ^c | 0.00 ^c |
| Missing Days | 31 | 30 | 31 | 31 | 28 | 31 | 12 | 0 | 0 | 0 | 0 | 0 |

**Daily Mean Discharge (ft³/s) for E109.9
(continued)**

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|-----|------------|----|------------|---|--------------------------|-----|----------------|-----|
| WY2010 | Total | 67.26 | Mean | 0.4 | Max | 25 | Min | 0 | Instantaneous Max | 439 | Acre-ft | 133 |
| CY2009 | Total | PE | Mean | PE | Max | PE | Min | 0 | Instantaneous Max | PE | Acre-ft | PE |

^a PE = Pre-existence.

^b Reliable estimate.

^c — = Not applicable.

E110 LOS ALAMOS CANYON NEAR OTOWI BRIDGE

Location. Lat 35° 52' 58", long 106° 9' 0", NE ¼, Sec. 13, T.19 N., R. 7 E., Santa Fe County, 0.25 mi above Otowi Bridge.

Drainage Area. 50.99 mi².

Period of Record. October 1, 2006, to May 10, 2010.

Gage. Data logger with cellular telemetry. Elevation of gage is 5582 ft above NGVD.

Average Discharge. 4 yr, 0.45 ft³/s, 322 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 1547 ft³/s August 8, 2006, gage height 5.9 ft based on slope-area measurement.

Maximum for Current Water Year. Maximum discharge, 13.6 ft³/s, April 1, 2010, gage height 1.6 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with a Sutron self-contained bubbler gage as stage sensor. The data logger is equipped with cellular speech modem telemetry. 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 discharge measurements above the wading stage.

Fieldwork. This station was visited 20 times to measure discharge and or service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record except for the period from April 8 to 9, 2010, because data logging was turned off for site maintenance and from May 10 to September 30, 2010, when the site was decommissioned.

Rating. The control for this station is a bedrock riffle downstream from the gage and channel control above the station. The bottom width of the channel is 20 ft. The channel is straight above and below the gage, and the right bank is grassy with some trees and outcrops affecting roughness at higher flow.

Rating No. 6 is based on five discharge measurements and one critical depth computation.

One discharge measurement (No. 55) and six inspections of no flow were made during the year.

Discharge. Discharge was computed from rating curve No. 6 using "V" diagrams with no shifts on high flows even above 3.0 ft³/s.

Daily Mean Discharge (ft³/s) for E110

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-------------------|----------------|----------------|------|----------------|----------------|--------------------|------|----------------|-----|-----|-----|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 10.8 | 9.57 | D ^a | D | D | D |
| 2 | 0 | 0 ^c | 0 | 0 | 0 | 0 | 11.94 | 6.85 | D | D | D | D |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 12.01 | 3.97 | D | D | D | D |
| 4 | 0 | 0 ^c | 0 | 0 | 0 | 0 | 12.01 | 2.66 | D | D | D | D |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 12.01 | 2.49 | D | D | D | D |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 12.03 | 2.11 | D | D | D | D |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 11.96 | 1.79 | D | D | D | D |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | M ^b | 1.34 | D | D | D | D |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | M | 1.07 | D | D | D | D |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | D | D | D | D | D |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | D | D | D | D | D |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 ^c | 0 ^c | D | D | D | D | D |
| 13 | 0.16 | 0 | 0 | 0 | 0 | 0 | 0 | D | D | D | D | D |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | D | D | D | D | D |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | D | D | D | D | D |
| 16 | 0 | 0 | 0 ^c | 0 | 0 | 0 | 0 | D | D | D | D | D |
| 17 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 | D | D | D | D | D |
| 18 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 | D | D | D | D | D |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 | 1.72 ^c | D | D | D | D | D |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | 4.44 | D | D | D | D | D |
| 21 | 0.01 ^c | 0 | 0 | 0 | 0 | 0 | 5.08 | D | D | D | D | D |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | 8.77 | D | D | D | D | D |
| 23 | 0 | 0 | 0 | 0 | 0 | 0 | 9.79 | D | D | D | D | D |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 10.51 | D | D | D | D | D |
| 25 | 0 | 0 | 0 | 0.01 | 0 | 0 | 10.71 | D | D | D | D | D |
| 26 | 0 | 0 | 0 | 0.01 | 0 | 0 | 11.21 ^c | D | D | D | D | D |
| 27 | 0 | 0 | 0 | 0.01 | 0 | 0 | 11.94 | D | D | D | D | D |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 13.07 | D | D | D | D | D |
| 29 | 0 | 0 | 0 | 0 | — ^d | 0 | 12.65 | D | D | D | D | D |
| 30 | 0 | 0 | 0 | 0 | — | 0 | 11.48 | D | D | D | D | D |
| 31 | 0 | — | 0 | 0 | — | 0.01 | — | D | — | D | D | — |

Daily Mean Discharge (ft³/s) for E110 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-------------------|-------------------|-------------------|------|------|-------------------|--------------------|-------|-----|-----|-----|-----|
| Total (ft³/s) | 0.17 | 0 | 0 | 0.03 | 0 | 0.03 | 194.8 | 31.9 | D | D | D | D |
| Total (acre-ft) | 0.34 | 0 | 0 | 0.06 | 0 | 0.06 | 386 | 63 | D | D | D | D |
| Max Daily Mean | 0.16 ^c | 0 ^c | 0 ^c | 0.01 | 0 | 0.01 ^c | 13.07 ^c | 9.57 | D | D | D | D |
| Min Daily Mean | 0 ^c | 0 ^c | 0 ^c | 0 | 0 | 0 ^c | 0 ^c | 1.07 | D | D | D | D |
| Instantaneous Max | 5.31 ^c | 0.01 ^c | 0.01 ^c | 0.01 | 0.01 | 0.01 ^c | 13.57 ^c | 10.65 | D | D | D | D |
| Instantaneous Min | 0 ^c | 0 ^c | 0 ^c | 0 | 0 | 0 ^c | 0 ^c | 0.99 | D | D | D | D |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 22 | 30 | 31 | 31 | 30 |

^a D = Decommissioned.

^b M = Missing data.

^c Reliable estimate.

^d — = Not applicable.

Daily Mean Discharge (ft³/s) for E110 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|--------|-------------|-------|------------|------|------------|---|--------------------------|-----|----------------|-----|
| WY2010 | Total | 226.93 | Mean | 1.04 | Max | 13 | Min | 0 | Instantaneous Max | 14 | Acre-ft | 450 |
| CY2009 | Total | 3.06 | Mean | 0.008 | Max | 0.16 | Min | 0 | Instantaneous Max | 5.5 | Acre-ft | 61 |

E121 SANDIA CANYON RIGHT FORK AT POWER PLANT

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

Drainage Area. 0.08 mi².

Period of Record. October 1, 2006, to September 30, 2010.

Revised Record. Period of record (2008).

Gage. Data logger. Elevation of gage is 7283 ft above NGVD from GPS survey.

Average Discharge. 4 yr, 0.55 ft³/s, 399 acre-ft/yr.

Extremes for Period of Record. Maximum discharge, 191 ft³/s, June 21, 2002, from peak-flow computation, gage height 8.1 ft. Minimum discharge 0.05 ft³/s, August 12, 2008.

Extremes for Current Water Year. Maximum discharge, 28 ft³/s, October 13, 2010, gage height 6.3 ft. Minimum discharge, 0.08 ft³/s, November 10, 2010, gage height 5.0 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with 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. The station was visited eight times to conduct discharge measurements and service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger reference to the outside staff gage gave a complete and satisfactory record, except for period from May 25 to September 30, 2010, when the gage was rendered inactive.

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, more so below the gage. The low-water control is a bedrock riffle below the gage.

One discharge measurement (No. 86) was made during the year. Discharge measurements were used to define a “V” diagram. The range in stage is fairly limited because most flow is effluent.

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

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.

Daily Mean Discharge (ft³/s) for E121

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|------|------|------|------|----------------|------|------|-----------------|-----|-----|-----|-----|
| 1 | 0.33 | 0.42 | 0.3 | 0.31 | 0.29 | 0.27 | 0.25 | 0.47 | IA | IA | IA | IA |
| 2 | 0.31 | 0.38 | 0.31 | 0.28 | 0.33 | 0.27 | 0.23 | 0.43 | IA | IA | IA | IA |
| 3 | 0.38 | 0.41 | 0.36 | 0.26 | 0.29 | 0.36 | 0.24 | 0.44 | IA | IA | IA | IA |
| 4 | 0.38 | 0.29 | 0.37 | 0.41 | 0.3 | 0.36 | 0.20 | 0.41 | IA | IA | IA | IA |
| 5 | 0.38 | 0.34 | 0.46 | 0.29 | 0.35 | 0.44 | 0.25 | 0.40 | IA | IA | IA | IA |
| 6 | 0.34 | 0.29 | 0.47 | 0.30 | 0.33 | 0.40 | 0.25 | 0.41 | IA | IA | IA | IA |
| 7 | 0.42 | 0.40 | 0.43 | 0.23 | 0.34 | 0.48 | 0.30 | 0.41 | IA | IA | IA | IA |
| 8 | 0.35 | 0.39 | 0.36 | 0.37 | 0.35 | 0.40 | 0.29 | 0.42 | IA | IA | IA | IA |
| 9 | 0.36 | 0.38 | 0.36 | 0.37 | 0.30 | 0.30 | 0.27 | 0.41 | IA | IA | IA | IA |
| 10 | 0.39 | 0.34 | 0.29 | 0.40 | 0.32 | 0.32 | 0.28 | 0.40 | IA | IA | IA | IA |
| 11 | 0.35 | 0.27 | 0.31 | 0.29 | 0.30 | 0.26 | 0.27 | 0.38 | IA | IA | IA | IA |
| 12 | 0.35 | 0.41 | 0.38 | 0.25 | 0.30 | 0.33 | 0.26 | 0.40 | IA | IA | IA | IA |
| 13 | 0.78 | 0.34 | 0.36 | 0.34 | 0.27 | 0.33 | 0.29 | 0.44 | IA | IA | IA | IA |
| 14 | 0.38 | 0.35 | 0.34 | 0.32 | 0.31 | 0.30 | 0.26 | 0.90 | IA | IA | IA | IA |
| 15 | 0.33 | 0.39 | 0.41 | 0.35 | 0.31 | 0.37 | 0.29 | 0.77 | IA | IA | IA | IA |
| 16 | 0.35 | 0.44 | 0.18 | 0.38 | 0.32 | 0.33 | 0.62 | 0.60 | IA | IA | IA | IA |
| 17 | 0.42 | 0.38 | 0.38 | 0.31 | 0.29 | 0.29 | 0.62 | 0.54 | IA | IA | IA | IA |
| 18 | 0.33 | 0.27 | 0.36 | 0.29 | 0.28 | 0.28 | 0.39 | 0.51 | IA | IA | IA | IA |
| 19 | 0.39 | 0.32 | 0.35 | 0.34 | 0.28 | 0.30 | 1.16 | 0.51 | IA | IA | IA | IA |
| 20 | 0.50 | 0.33 | 0.37 | 0.31 | 0.28 | 0.35 | 0.48 | 0.57 | IA | IA | IA | IA |
| 21 | 0.67 | 0.30 | 0.37 | 0.33 | 0.33 | 0.30 | 0.52 | 0.65 | IA | IA | IA | IA |
| 22 | 0.39 | 0.31 | 0.26 | 0.41 | 0.35 | 0.27 | 0.50 | 0.54 | IA | IA | IA | IA |
| 23 | 0.44 | 0.34 | 0.25 | 0.35 | 0.33 | 0.25 | 0.46 | 0.54 | IA | IA | IA | IA |
| 24 | 0.39 | 0.31 | 0.31 | 0.34 | 0.28 | 0.26 | 0.45 | 0.46 | IA | IA | IA | IA |
| 25 | 0.48 | 0.31 | 0.31 | 0.33 | 0.25 | 0.26 | 0.48 | IA ^a | IA | IA | IA | IA |
| 26 | 0.40 | 0.31 | 0.29 | 0.34 | 0.28 | 0.29 | 0.50 | IA | IA | IA | IA | IA |
| 27 | 0.47 | 0.34 | 0.35 | 0.27 | 0.32 | 0.29 | 0.43 | IA | IA | IA | IA | IA |
| 28 | 0.42 | 0.33 | 0.27 | 0.33 | 0.26 | 0.30 | 0.43 | IA | IA | IA | IA | IA |
| 29 | 0.36 | 0.30 | 0.29 | 0.29 | — ^b | 0.29 | 0.43 | IA | IA | IA | IA | IA |
| 30 | 0.54 | 0.34 | 0.28 | 0.28 | — | 0.28 | 0.42 | IA | IA | IA | IA | IA |
| 31 | 0.48 | — | 0.29 | 0.32 | — | 0.26 | — | IA | — | IA | IA | — |

Daily Mean Discharge (ft³/s) for E121 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-------|-------|-------|------|------|------|-------|-------|-----|-----|-----|-----|
| Total (ft³/s) | 12.86 | 10.33 | 10.42 | 9.99 | 8.54 | 9.79 | 11.86 | 12.01 | IA | IA | IA | IA |
| Total (acre-ft) | 26 | 20 | 21 | 20 | 17 | 19 | 24 | 24 | IA | IA | IA | IA |
| Max Daily Mean | 0.78 | 0.44 | 0.47 | 0.41 | 0.35 | 0.48 | 1.16 | 0.90 | IA | IA | IA | IA |
| Min Daily Mean | 0.31 | 0.27 | 0.18 | 0.23 | 0.25 | 0.25 | 0.20 | 0.38 | IA | IA | IA | IA |
| Instantaneous Max | 28.15 | 1.15 | 1.22 | 1.08 | 0.77 | 1.03 | 22.17 | 15.49 | IA | IA | IA | IA |
| Instantaneous Min | 0.12 | 0.08 | 0.10 | 0.10 | 0.08 | 0.10 | 0.08 | 0.16 | IA | IA | IA | IA |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 30 | 31 | 31 | 30 |

^a IA = Inactive.^b — = Not applicable.Daily Mean Discharge (ft³/s) for E121 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|--------|-------------|------|------------|------|------------|------|--------------------------|----|----------------|-----|
| WY2010 | Total | 85.80 | Mean | 0.36 | Max | 1.20 | Min | 0.18 | Instantaneous Max | 28 | Acre-ft | 170 |
| CY2009 | Total | 162.43 | Mean | 0.45 | Max | 1.20 | Min | 0.11 | Instantaneous Max | 41 | Acre-ft | 322 |

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.

Drainage Area. 0.002 mi².

Period of Record. March 3, 2006, to September 30, 2010.

Gage. Data logger, 9-in. Parshall flume, rain gage with cellular telemetry. Elevation of gage is 7337 ft above NGVD from land survey.

Average Discharge. 4 yr, 0.005 ft³/s, 4 acre-ft/yr.

Maximum for Period of Record. 4 yr. Maximum discharge, 5.2 ft³/s, August 16, 2010, gage height 1.4 ft.

Maximum for Current Year. Maximum discharge, 5.2 ft³/s, August 16, 2010, gage height 1.4 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) and a Milltronics sonic probe mounted on a 9-in. Parshall flume and cellular telemetry with speech modem. 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 system 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. The station was visited 38 times to service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record for the water year, except for the periods from November 25 to December 1, 2009, and December 7, 2009, to March 3, 2010, when the gage height was affected by ice.

Rating. The channel is straight above and below the gage and is confined to the main channel by cutbanks on both sides. The bottom is a 4 ft wide channel prone to some shifting with vegetation on each bank. Low water control is the 9-in. Parshall flume.

Thirty-seven inspections of no flow were made during the year.

Rating No. 1 was developed based on the computation of 9-in. Parshall flume. The point of zero flow is 0.00 gage height.

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

Daily Mean Discharge (ft³/s) for E121.9

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-------------------|----------------|----------------|----------------|----------------|----------------|-------------------|----------------|-------------------|-------------------|-------------------|----------------|
| 1 | 0 | 0 | E ^a | I ^b | I | I | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | I | I | I | 0 | 0 | 0 | M | 0 ^c | 0 |
| 3 | 0 | 0 | 0 | I | I | I | 0 | 0 ^c | 0 | M | 0 | 0 |
| 4 | 0 | 0 | 0.01 | I | I | 0.01 | 0 | 0 | 0 | M | 0.02 | 0 |
| 5 | 0 | 0 ^c | 0 | I | I | 0 | 0 ^c | 0 | 0 | M | 0.04 | 0 |
| 6 | 0 | 0 | 0 | I | I | 0.01 | 0 | 0 | 0 | M | 0 | 0 |
| 7 | 0.01 ^c | 0 | I | I | I | 0.01 | 0 | 0 | 0 ^c | 0 ^c | 0 | 0 ^c |
| 8 | 0 ^c | 0 | I | I | I | 0.01 | 0 | 0 | 0 | 0 ^c | 0 | 0 |
| 9 | 0 ^c | 0 | I | I | I | 0 | 0 | 0 | 0 | 0.01 ^c | 0.01 ^c | 0 |
| 10 | 0 | 0 | I | I | I | 0.01 | 0 | 0 | 0 | 0 ^c | 0 ^c | 0 |
| 11 | 0 | 0 | I | I | I | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | I | I | I | 0 | 0 | 0 | 0 | 0 ^c | 0 | 0 |
| 13 | 0.02 ^c | 0 ^c | I | I | I | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^c |
| 14 | 0 | 0 ^c | I | I | I | 0.01 | 0 | 0.03 | 0 ^c | 0 | 0 | 0 |
| 15 | 0 | 0 ^c | I | I | I | 0.01 | 0 | 0 | 0 | 0 | 0.02 | 0 |
| 16 | 0 | 0 ^c | I | I | I | 0.01 | 0.02 | 0 | 0 | 0 | 0.06 ^c | 0 |
| 17 | 0 | 0 ^c | I | I | I | 0 ^c | 0.01 | 0 ^c | 0 | 0 | 0 ^c | 0 |
| 18 | 0 | 0 | I | I | I | 0 | 0 | 0 | 0 | 0 | 0 ^c | 0 |
| 19 | 0 | 0 | I | I | I | 0.01 | 0.02 ^c | 0 | 0 | 0 ^c | 0 | 0 |
| 20 | 0.01 | 0 | I | I | I | 0.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 0.04 | 0 | I | I | I | 0.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0.00 ^c | 0 ^c | I | I | I | 0 ^c | 0 | 0 | 0 | 0.09 ^c | 0 | 0.05 |
| 23 | 0 | 0 ^c | I | I | I | 0 | 0 | 0 | 0 | 0 ^c | 0.02 ^c | 0 ^c |
| 24 | 0 | E | I | I | I | 0.01 | 0 | 0 | 0.01 | 0.02 ^c | 0 ^c | 0 |
| 25 | 0 | E | I | I | I | 0 | 0 | 0 | 0 ^c | 0.06 ^c | 0 | 0 |
| 26 | 0 ^c | E | I | I | I | 0 | 0 ^c | 0 | 0 | 0 ^c | 0 | 0 |
| 27 | 0 ^c | E | I | I | I | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 ^c | E | I | I | I | 0 | 0 | 0 | 0.01 ^c | 0 | 0.01 | 0 |
| 29 | 0 ^c | E | I | I | — ^d | 0 | 0 | 0 | 0 ^c | 0 | 0.01 | 0 |
| 30 | 0 ^c | E | I | I | — | 0 | 0 | 0 | 0 | 0.01 | 0 ^c | 0 |
| 31 | 0 ^c | — | I | I | — | 0 | — | 0 | — | 0 ^c | 0 | — |

Daily Mean Discharge (ft³/s) for E121.9 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-------------------|-------------------|------|-----|-----|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Total (ft³/s) | 0.08 | 0 | 0.01 | I | I | 0.12 | 0.05 | 0.03 | 0.02 | 0.19 | 0.19 | 0.05 |
| Total (acre-ft) | 0.16 | 0 | 0.02 | I | I | 0.24 | 0.1 | 0.06 | 0.04 | 0.38 | 0.38 | 0.1 |
| Max Daily Mean | 0.04 ^c | 0 ^c | 0.01 | I | I | 0.01 ^c | 0.02 ^c | 0.03 ^c | 0.01 ^c | 0.09 ^c | 0.06 ^c | 0.05 ^c |
| Min Daily Mean | 0 ^c | 0 ^c | 0 | I | I | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c |
| Instantaneous Max | 1.45 ^c | 0.05 ^c | 0.02 | I | I | 0.12 ^c | 0.70 ^c | 0.87 ^c | 1.13 ^c | 3.23 ^c | 5.20 ^c | 1.52 ^c |
| Instantaneous Min | 0 ^c | 0 ^c | 0 | I | I | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c |
| Missing Days | 0 | 7 | 26 | 31 | 28 | 3 | 0 | 0 | 0 | 5 | 0 | 0 |

^a E = Estimate.^b I = Ice Present.^c Reliable estimate.^d — = Not applicable.Daily Mean Discharge (ft³/s) for E121.9 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|-------|------------|------|------------|---|--------------------------|-----|----------------|-----|
| WY2010 | Total | 0.74 | Mean | 0.003 | Max | 0.09 | Min | 0 | Instantaneous Max | 5.2 | Acre-ft | 1.5 |
| CY2009 | Total | 10.22 | Mean | 0.031 | Max | 1 | Min | 0 | Instantaneous Max | 5.7 | Acre-ft | 20 |

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 mi².

Period of Record. October 1, 2006, to September 30, 2010.

Gage. Data logger. Elevation of gage is 7290 ft above NGVD.

Average Discharge. 4 yr, 0.08 ft³/s, 55 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 88 ft³/s August 23, 2003, gage height 4.2 ft.
Minimum daily discharge 0 ft³/s, March 17, 2009.

Maximum for Current Year. Maximum discharge, 11 ft³/s, October 13, 2010, gage height 2.5 ft.
Minimum daily discharge 0 ft³/s, October 1, 2010.



Equipment. The station is equipped with a Sutron 8210 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 also equipped with an ISCO pump sampler 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 provision has been made for discharge measurements above the wading stage.

Fieldwork. The station was visited 10 times to conduct discharge measurements and service the instrumentation.

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 for the following exempt periods. From November 28 and 29, 2009; December 1 to 12, 2009; December 14 to 19, 2009; December 23, 2009, to January 11, 2010; January 15 and 16, 2010; January 18 to 25, 2010; January 27 to 30, 2010; February 2 to 18, 2010; February 20 to 25, 2010; February 28, 2010; March 1 and 2, 2010; March 7 to 11, 2010; March 14 to 16, 2010; March 19 to 21, 2010; and March 26, 2010, the gage height was affected by ice. From May 25 to September 30, 2010, the gage was rendered inactive.

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.

One discharge measurement (No. 52) and nine observations of flow were made this year.

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.

Discharge. Discharge computed from Rating No.2 with shifts applied by "V" diagrams.

Daily Mean Discharge (ft³/s) for E122

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-------------------|------|----------------|------|----------------|------|------|------|-----------------|-----|-----|-----|
| 1 | 0.18 ^a | 0.02 | I ^b | I | 0.08 | I | 0.06 | 0.03 | IA ^c | IA | IA | IA |
| 2 | 0.03 | 0.02 | I | I | I | I | 0.05 | 0.05 | IA | IA | IA | IA |
| 3 | 0.05 | 0.02 | I | I | I | 0.35 | 0.05 | 0.05 | IA | IA | IA | IA |
| 4 | 0.05 | 0.02 | I | I | I | 0.37 | 0.07 | 0.05 | IA | IA | IA | IA |
| 5 | 0.03 ^a | 0.03 | I | I | I | 0.29 | 0.05 | 0.04 | IA | IA | IA | IA |
| 6 | 0.03 | 0.02 | I | I | I | 0.24 | 0.05 | 0.02 | IA | IA | IA | IA |
| 7 | 0.12 | 0.02 | I | I | I | I | 0.04 | 0.04 | IA | IA | IA | IA |
| 8 | 0.04 | 0.01 | I | I | I | I | 0.05 | 0.05 | IA | IA | IA | IA |
| 9 | 0.02 | 0.03 | I | I | I | I | 0.05 | 0.06 | IA | IA | IA | IA |
| 10 | 0.02 | 0.03 | I | I | I | I | 0.06 | 0.06 | IA | IA | IA | IA |
| 11 | 0.02 | 0.03 | I | I | I | I | 0.05 | 0.06 | IA | IA | IA | IA |
| 12 | 0.02 | 0.03 | I | 0.06 | I | 0.09 | 0.04 | 0.04 | IA | IA | IA | IA |
| 13 | 0.34 | 0.07 | 0.07 | 0.06 | I | 0.09 | 0.04 | 0.02 | IA | IA | IA | IA |
| 14 | 0.02 | 0.08 | I | 0.07 | I | I | 0.04 | 0.40 | IA | IA | IA | IA |
| 15 | 0.02 | 0.08 | I | I | I | I | 0.04 | 0.07 | IA | IA | IA | IA |
| 16 | 0.02 | 0.09 | I | I | I | I | 0.40 | 0.02 | IA | IA | IA | IA |
| 17 | 0.02 | 0.09 | I | 0.06 | I | 0.12 | 0.33 | 0.04 | IA | IA | IA | IA |
| 18 | 0.03 | 0.04 | I | I | I | 0.12 | 0.12 | 0.05 | IA | IA | IA | IA |
| 19 | 0.02 | 0.06 | I | I | 0.15 | I | 0.40 | 0.04 | IA | IA | IA | IA |
| 20 | 0.26 | 0.08 | 0.05 | I | I | I | 0.06 | 0.04 | IA | IA | IA | IA |
| 21 | 0.44 | 0.07 | 0.05 | I | I | I | 0.04 | 0.04 | IA | IA | IA | IA |
| 22 | 0.03 | 0.05 | 0.04 | I | I | 0.07 | 0.06 | 0.04 | IA | IA | IA | IA |
| 23 | 0.02 | 0.08 | I | I | I | 0.09 | 0.05 | 0.04 | IA | IA | IA | IA |
| 24 | 0.02 | 0.07 | I | I | I | 0.10 | 0.04 | 0.04 | IA | IA | IA | IA |
| 25 | 0.03 | 0.05 | I | I | I | 0.08 | 0.04 | IA | IA | IA | IA | IA |
| 26 | 0.04 | 0.05 | I | 0.06 | 0.15 | I | 0.03 | IA | IA | IA | IA | IA |
| 27 | 0.02 | 0.06 | I | I | 0.13 | 0.06 | 0.03 | IA | IA | IA | IA | IA |
| 28 | 0.05 | I | I | I | I | 0.06 | 0.04 | IA | IA | IA | IA | IA |
| 29 | 0.04 | I | I | I | — ^d | 0.06 | 0.03 | IA | IA | IA | IA | IA |
| 30 | 0.02 | 0.07 | I | I | — | 0.08 | 0.03 | IA | IA | IA | IA | IA |
| 31 | 0.02 | — | I | 0.10 | — | 0.08 | — | IA | — | IA | IA | — |

Daily Mean Discharge (ft³/s) for E122 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|--------------------|------|------|------|------|------|------|------|-----|-----|-----|-----|
| Total (ft³/s) | 2.07 | 1.37 | 0.22 | 0.42 | 0.51 | 2.37 | 2.45 | 1.39 | IA | IA | IA | IA |
| Total (acre-ft) | 4.10 | 2.70 | 0.44 | 0.83 | 1.00 | 4.70 | 4.90 | 2.80 | IA | IA | IA | IA |
| Max Daily Mean | 0.44 ^a | 0.09 | 0.07 | 0.10 | 0.15 | 0.37 | 0.40 | 0.40 | IA | IA | IA | IA |
| Min Daily Mean | 0.02 ^a | 0.01 | 0.04 | 0.06 | 0.08 | 0.06 | 0.03 | 0.02 | IA | IA | IA | IA |
| Instantaneous Max | 11.00 ^a | 0.49 | 0.33 | 0.37 | 0.42 | 0.98 | 9.75 | 8.75 | IA | IA | IA | IA |
| Instantaneous Min | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | IA | IA | IA | IA |
| Missing Days | 0 | 2 | 27 | 25 | 24 | 14 | 0 | 7 | 30 | 31 | 31 | 30 |

^a Reliable estimate.

^b I = Ice present.

^c IA = Inactive.

^d — = Not applicable.

Daily Mean Discharge (ft³/s) for E122 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|-------|------------|------|------------|------|--------------------------|----|----------------|----|
| WY2010 | Total | 10.80 | Mean | 0.075 | Max | 0.44 | Min | 0.01 | Instantaneous Max | 11 | Acre-ft | 21 |
| CY2009 | Total | 27.20 | Mean | 0.081 | Max | 0.68 | Min | 0 | Instantaneous Max | 15 | Acre-ft | 54 |

E123 SANDIA CANYON BELOW WETLANDS

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

Drainage Area. 0.29 mi².

Period of Record. August 1, 1999, to September 30, 2010.

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

Gage. Data logger with cellular telemetry. Elevation of gage is 7204 ft above NGVD from GPS survey.

Average Discharge. 10 yr, 0.70 ft³/s, 507 acre-ft/yr.

Extremes for Period of Record. Maximum discharge, 88 ft³/s, August 23, 2003, gage height 4.23 ft. Minimum discharge, 0.0 ft³/s, during water year 2012.

Extremes for Current Water Year. Maximum discharge, 85 ft³/s. July 22, 2010, gage height 4.2 ft. Minimum discharge, 0.0 ft³/s, multiple dates.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with a Sutron Accubar bubble sensor. The data logger is equipped with cellular speech modem telemetry. 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. The station was visited 17 times to measure discharge and service the instrumentation.

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

Gage-Height Record. The data logger referenced to the inside gage height gave a complete and satisfactory record for the year, except during the periods from October 7, 8, 13, 20, and 21, 2009; December 4, 5, 9 to 11, 16, 25 to 28, 2009; January 1, 2 to 9, 19 to 25, 2010; January 28 to February 6, 2010; February 8 to 13, 15 to 17, 2010; February 20 to March 1, 2010, when the gage sensor was affected by ice; and March 2 to July 8, 2010, because the equipment malfunctioned.

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.

Two discharge measurements (Nos. 133–134) were made this year.

Rating No. 4 was developed based on measurements made in previous years. 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 to the peak flows.

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

Daily Mean Discharge (ft³/s) for E123

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|------|------|------|----------------|----------------|-----|----------------|-----|-----|-------------------|-------------------|-------------------|
| 1 | 0.37 | 0.52 | 0.23 | I ^a | I | I | E ^b | E | E | E | 0 | 0 |
| 2 | 0.18 | 0.4 | 0.28 | 0.27 | I | E | E | E | E | E | 0 | 0 |
| 3 | 0.29 | 0.5 | 0.38 | I | I | E | E | E | E | E | 0 | 0 |
| 4 | 0.2 | 0.1 | I | I | I | E | E | E | E | E | 0.14 ^c | 0 |
| 5 | 0.5 | 0.24 | I | I | I | E | E | E | E | E | E | 0 |
| 6 | 0.37 | 0.16 | 0.72 | I | I | E | E | E | E | E | 0 | 0 |
| 7 | I | 0.42 | 0.57 | I | 0.33 | E | E | E | E | E | 0 | 0 |
| 8 | I | 0.66 | 0.67 | I | I | E | E | E | E | E | 0 | 0 |
| 9 | 0.15 | 0.39 | I | I | I | E | E | E | E | 0.31 | 0 | 0 |
| 10 | 0.45 | 0.25 | I | 0.98 | I | E | E | E | E | 0 | 0 | 0 |
| 11 | 0.13 | 0.05 | I | 0.43 | I | E | E | E | E | 0 | 0 | 0 |
| 12 | 0.23 | 0.4 | 0.69 | 0.21 | I | E | E | E | E | 0.00 ^c | 0 | 0 |
| 13 | I | 0.21 | 0.65 | 0.76 | I | E | E | E | E | 0.00 ^c | 0 | 0 |
| 14 | 0.27 | 0.2 | 0.35 | 0.48 | 0.29 | E | E | E | E | 0.00 ^c | 0 | 0 |
| 15 | 0.27 | 0.51 | 0.89 | 0.45 | I | E | E | E | E | 0.00 ^c | 0.27 | 0 |
| 16 | 0.3 | 0.43 | I | 0.4 | I | E | E | E | E | 0.00 ^c | 3.11 ^c | 0 |
| 17 | 0.44 | 0.33 | 0.61 | 0.26 | I | E | E | E | E | 0.00 ^c | 0 | 0 |
| 18 | 0.21 | 0.09 | 0.5 | 0.24 | 0.31 | E | E | E | E | 0.00 ^c | 0 | 0 |
| 19 | 0.41 | 0.22 | 0.38 | I | 0.29 | E | E | E | E | 0.00 ^c | 0 | 0 |
| 20 | I | 0.15 | 0.46 | I | I | E | E | E | E | 0.00 ^c | 0 | 0 |
| 21 | I | 0.29 | 0.74 | I | I | E | E | E | E | 0 | 0 | 0 |
| 22 | 0.3 | 0.24 | 0.13 | I | I | E | E | E | E | M ^d | 0 | 0.48 |
| 23 | 0.37 | 0.37 | 0.1 | I | I | E | E | E | E | 0 | 0.38 | 0 |
| 24 | 0.3 | 0.26 | 0.32 | I | I | E | E | E | E | 0.4 | 0 | 0 |
| 25 | 0.49 | 0.34 | I | I | I | E | E | E | E | 2.8 | 0 | 0 |
| 26 | 0.47 | 0.18 | I | 0.54 | I | E | E | E | E | 0 | 0 | 0 |
| 27 | 0.61 | 0.41 | I | 0.25 | I | E | E | E | E | 0 | 0 | 0 |
| 28 | 0.4 | 0.31 | I | I | I | E | E | E | E | 0 | 0 | 0 |
| 29 | 0.17 | 0.45 | 0.19 | I | — ^e | E | E | E | E | 0 | 0 | 0 |
| 30 | 0.81 | 0.38 | 0.18 | I | — | E | E | E | E | 0 | 0 | 0.00 ^c |
| 31 | 0.64 | — | 0.21 | I | — | E | — | E | — | 0 | 0 | — |

Daily Mean Discharge (ft³/s) for E123 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|------|------|------|------|------|-----|-----|-----|-----|--------------------|--------------------|--------------------|
| Total (ft³/s) | 9.33 | 9.46 | 9.25 | 5.27 | 1.22 | E | E | E | E | 3.51 | 3.89 | 0.48 |
| Total (acre-ft) | 19 | 19 | 18 | 10 | 2.4 | E | E | E | E | 7 | 7.7 | 0.95 |
| Max Daily Mean | 0.81 | 0.66 | 0.89 | 0.98 | 0.33 | E | E | E | E | 2.80 ^a | 3.11 ^a | 0.48 ^a |
| Min Daily Mean | 0.13 | 0.05 | 0.1 | 0.21 | 0.29 | E | E | E | E | 0.00 ^a | 0.00 ^a | 0.00 ^a |
| Instantaneous Max | 4.42 | 4.23 | 4.82 | 4.03 | 1.98 | E | E | E | E | 79.26 ^a | 84.77 ^a | 27.50 ^a |
| Instantaneous Min | 0 | 0 | 0 | 0 | 0.04 | E | E | E | E | 0.00 ^a | 0.00 ^a | 0.00 ^a |
| Missing Days | 5 | 0 | 10 | 19 | 24 | 31 | 30 | 31 | 30 | 9 | 1 | 0 |

^a I = Ice present.^b E = Equipment malfunction.^c Reliable estimate.^d M = Missing data.^e — = Not applicable.Daily Mean Discharge (ft³/s) for E123 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|--------|-------------|------|------------|-----|------------|------|--------------------------|----|----------------|-----|
| WY2010 | Total | 42.41 | Mean | 0.24 | Max | 3.1 | Min | 0 | Instantaneous Max | 85 | Acre-ft | 84 |
| CY2009 | Total | 208.31 | Mean | 0.6 | Max | 5.9 | Min | 0.02 | Instantaneous Max | 78 | Acre-ft | 413 |

E125 SANDIA CANYON ABOVE SR 4

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

Drainage Area. 2.05 mi².

Period of Record. October 1, 1994, to September 30, 2010.

Revised Record. Drainage area (2006).

Gage. Data logger and concrete control. Elevation of gage is 6495 ft above NGVD from GPS survey.

Average Discharge. 16 yr, 0.11 ft³/s, 80 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 59 ft³/s, August 25, 2006, gage height 3.6 ft (from slope-area measurement).

Maximum for Current Water Year. Maximum discharge, 3 ft³/s, August 15, 2010, gage height 2.3 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) 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. CMP well. The station is equipped with an ISCO pump sampler 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. The control is a concrete broad-crested weir. No provision has been made for measurements above the wading stage.

Fieldwork. The station was visited 14 times to service the instrumentation.

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 banks, and the bottom is well supported.

Fourteen inspections of no flow were made this year.

Rating No. 2 was developed and applied beginning on October 1, 2009, to account for 1.0 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 2 ft PZF to the top of weir walls at 3.20 ft. Greater flow will require extending Rating No. 2 with a more detailed channel survey.

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

Daily Mean Discharge (ft³/s) for E125

| 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 | 0.02 | 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 |
| 30 | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 0 | — | 0 | 0 | — | 0 | — | 0 | — | 0 | 0 | — |

Daily Mean Discharge (ft³/s) for E125 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.02 | 0 |
| Total (acre-ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.04 | 0 |
| Max Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.02 | 0 |
| Min Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.04 | 0.05 |
| Instantaneous Min | 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 |

* — = Not applicable.

Daily Mean Discharge (ft³/s) for E125 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|------|-------------|---|------------|------|------------|---|--------------------------|-----|----------------|------|
| WY2010 | Total | 0.02 | Mean | 0 | Max | 0.02 | Min | 0 | Instantaneous Max | 3.0 | Acre-ft | 0.04 |
| CY2009 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0 | Acre-ft | 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.

Drainage Area. 7.69 mi².

Period of Record. July 24, 2007, to September 30, 2010.

Gage. Data logger and 24-in. Parshall flume. Elevation of gage is 7215 ft above NGVD.

Average Discharge. 3 yr, 0.27 ft³/s, 195 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 3.2 ft³/s, July 26, 2008, gage height 0.55 ft.

Maximum for Current Water Year. Maximum discharge, 0.66 ft³/s on August 16, 2010, gage height 0.2 ft. No peak discharge above base of 5.0 ft³/s.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) and a Milltronics sonic probe mounted on a 24-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 24-in. Parshall flume is the reference gage. No provision has been made for discharge measurements above the wading stage.

Fieldwork. This station was visited 35 times to service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gave a complete and satisfactory record. Except for the periods from July 12 to 15, 2010, and September 9 to 13, 2010 when the data logger malfunctioned.

Rating. The site has an upstream catchment pond. The channel is straight for 25 ft below the gage.

Thirty-four inspections of no flow were made this year.

Rating No. 1 was developed based on the computation of the 24-in. Parshall flume. PZF is 0.00 gage height.

Discharge. Discharge was computed by directly applying Rating No 1. Those days estimated at zero flow were based on precipitation and nearby gage stations.

Daily Mean Discharge (ft³/s) for E200.5

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-------------------|-----|-----|----------------|----------------|------|----------------|----------------|----------------|----------------|-------------------|-------------------|
| 1 | 0 | 0 | 0 | 1 ^a | 1 | 1 | 0 | 0 ^b | 0 | 0 | 0 | 0 ^b |
| 2 | 0 | 0 | 0 | 1 | 1 | 0.03 | 0 | 0 ^b | 0 | 0 | 0 ^b | 0 |
| 3 | 0 | 0 | 1 | 1 | 1 | 0.07 | 0 ^b | 0 ^b | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 1 | 1 | 1 | 0.07 | 0 | 0 ^b | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 1 | 1 | 1 | 0.03 | 0 ^b | 0 ^b | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 ^b | 0 | 0 ^b | 0 | 0 |
| 7 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 ^b | 0 ^b | 0 | 0 | 0 |
| 8 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 ^b | 0 | 0 ^b | 0 | 0 |
| 9 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 ^b | 0 | 0 ^b | 0.01 ^b | E ^c |
| 10 | 0 | 0 | 1 | 1 | 1 | 0.01 | 0 | 0 ^b | 0 | 0 ^b | 0 ^b | E |
| 11 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 ^b | 0 | E |
| 12 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | E | 0 | E |
| 13 | 0.09 ^b | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | E | 0 | E |
| 14 | 0 ^b | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 ^b | E | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | E | 0.09 | 0 |
| 16 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 ^b | 0.11 ^b | 0 |
| 17 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 ^b | 0 | 0 ^b | 0 ^b | 0 |
| 18 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 ^b | 0 ^b | 0 |
| 19 | 0 | 0 | 0 | 1 | 1 | 1 | 0 ^b | 0 | 0 | 0 ^b | 0 | 0 |
| 20 | 0 | 0 | 1 | 1 | 1 | 1 | 0 ^b | 0 | 0 | 0 ^b | 0 | 0 |
| 21 | 0.16 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0.05 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 ^b | 0 | 0.01 ^b |
| 23 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 ^b | 0 ^b |
| 24 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 ^b | 0 |
| 25 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 ^b | 0 | 0 | 0 |
| 26 | 0 | 0 | 1 | 1 | 1 | 0 | 0 ^b | 0 | 0 | 0 ^b | 0 | 0 |
| 27 | 0 | 0 | 1 | 1 | 1 | 0 | 0 ^b | 0 | 0 | 0 | 0 | 0 ^b |
| 28 | 0 | 0 | 1 | 1 | 1 | 0 | 0 ^b | 0 | 0 ^b | 0 | 0 | 0 |
| 29 | 0 | 0 | 1 | 1 | — ^d | 0 | 0 ^b | 0 | 0 ^b | 0 | 0 | 0 |
| 30 | 0 | 0 | 1 | 1 | — | 0 | 0 ^b | 0 | 0 | 0 | 0 ^b | 0 |
| 31 | 0 | — | 1 | 1 | — | 0 | — | 0 | — | 0 | 0 | — |

Daily Mean Discharge (ft³/s) for E200.5 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-------------------|------|------|------|-----|------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Total (ft³/s) | 0.3 | 0 | 0 | 0 | I | 0.21 | 0 | 0 | 0 | 0 | 0.21 | 0.01 |
| Total (acre-ft) | 0.6 | 0 | 0 | 0 | I | 0.42 | 0 | 0 | 0 | 0 | 0.42 | 0.02 |
| Max Daily Mean | 0.16 ^a | 0 | 0 | 0 | I | 0.07 | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0.11 ^b | 0.01 ^b |
| Min Daily Mean | 0 ^b | 0 | 0 | 0 | I | 0 | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b |
| Instantaneous Max | 0.40 ^b | 0.03 | 0.03 | 0.03 | I | 0.17 | 0.03 ^b | 0.03 ^b | 0.03 ^b | 0.03 ^b | 0.66 ^b | 0.17 ^b |
| Instantaneous Min | 0 ^b | 0 | 0 | 0 | I | 0 | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 ^b |
| Missing Days | 0 | 0 | 21 | 25 | 28 | 9 | 0 | 0 | 0 | 4 | 0 | 5 |

^a I = Ice present.^b Reliable estimate.^c E = Equipment Malfunction.^d — = Not applicable.Daily Mean Discharge (ft³/s) for E2005 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|------|-------------|-------|------------|------|------------|---|--------------------------|------|----------------|-----|
| WY2010 | Total | 0.73 | Mean | 0.003 | Max | 0.16 | Min | 0 | Instantaneous Max | 0.66 | Acre-ft | 1.4 |
| CY2009 | Total | 5.63 | Mean | 0.016 | Max | 1.5 | Min | 0 | Instantaneous Max | 4 | Acre-ft | 11 |

E201 MORTANDAD CANYON ABOVE TEN SITE CANYON

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

Drainage Area. 0.25 mi².

Period of Record. October 1, 2006, to September 30, 2010.

Revised Record. Period of Record (2008).

Gage. Data logger with steel fabricated nonstandard flume. Elevation of gage is 6864 ft above NGVD.

Average Discharge. 4 yr, 0.03 ft³/s, 20 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 78 ft³/s, August 10, 2008, gage height 2.4 ft.

Maximum for Current Water Year. Maximum discharge, 4.9 ft³/s, August 16, 2010, gage height 1.0 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) 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. The station was visited 15 times to service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except for the periods of December 7, 2009, to January 12, 2010; January 19, 29, 30, 31, 2010; February 1, 2010; February 3 to 16, 2010; and February 22 to 26, 2010, when gage height was affected by ice.

Rating. The channel is straight above and below the modified flume. Flow is confined to cut anks. 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.

Fifteen inspections of no flow were made this year.

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

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

Daily Mean Discharge (ft³/s) for E201

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-----|-----|-----|----------------|----------------|-----|-----|-----|-----|-----|------|-----|
| 1 | 0 | 0 | 0 | 1 ^a | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0.15 | 0 |
| 17 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 1 | 0 ^b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 1 | 1 | — ^c | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 1 | 1 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 0 | — | 1 | 1 | — | 0 | — | 0 | — | — | 0 | — |

Daily Mean Discharge (ft³/s) for E201 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|----------------|-----|-----|-----|-----|-----|-----|------|-----|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.15 | 0 |
| Total (acre-ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.30 | 0 |
| Max Daily Mean | 0 | 0 | 0 | 0 ^b | 0 | 0 | 0 | 0 | 0 | 0 | 0.15 | 0 |
| Min Daily Mean | 0 | 0 | 0 | 0 ^b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Max | 0 | 0 | 0 | 0 ^b | 0 | 0 | 0 | 0 | 0 | 0 | 4.91 | 0 |
| Instantaneous Min | 0 | 0 | 0 | 0 ^b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Missing Days | 0 | 0 | 25 | 16 | 20 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

^a | = Ice present .^b Reliable estimate.^c — = Not applicable.Daily Mean Discharge (ft³/s) for E201 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|------|-------------|-------|------------|------|------------|---|--------------------------|------|----------------|------|
| WY2010 | Total | 0.15 | Mean | 0 | Max | 0.15 | Min | 0 | Instantaneous Max | 4.91 | Acre-ft | 0.30 |
| CY2009 | Total | 9.80 | Mean | 0.029 | Max | 1.90 | Min | 0 | Instantaneous Max | 2.70 | Acre-ft | 19 |

E201.5 TEN SITE CANYON ABOVE MORTANDAD CANYON

Location. Lat. 35° 51' 3", long. 106° 16' 30", SE ¼, Sec. 23, T. 19 N., R. 6 E., Los Alamos County.

Drainage Area. 0.32 mi².

Period of Record. October 2000 to September 30, 2010.

Revised Record. Drainage area (2006).

Gage. Data logger with 90° sharp-crested weir. Elevation of gage is 6858 ft above NGVD from GPS survey.

Average Discharge. 9 yr, 0.01 ft³/s, 9.4 acre-ft/yr.

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

Maximum for Current Water Year. No flow for the year. No peak discharge above base of 10 ft³/s.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) 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 measurement above the wading stage.

Fieldwork. The station was visited 15 times to service the instrumentation.

Datum Correction. The gage was destroyed by flooding on August 25, 2006. On May 24, 2007, the replacement gage was set to the correct datum. The bubbler outlet was reset to the 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 for periods of January 30 to February 14, 2010, and February 17 to 20, 2010, 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.

Fifteen inspections of no flow were made this year.

Rating No. 2 is based on a theoretical computation for a 90-degree sharp-crested weir and one critical depth computation.

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

Daily Mean Discharge (ft³/s) for E201.5

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

Daily Mean Discharge (ft³/s) for E201.5 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|-----|-----|----------------|----------------|-----|-----|-----|-----|-----|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total (acre-ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 ^b | 0 ^b | 0 | 0 | 0 | 0 | 0 |
| Min Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 ^b | 0 ^b | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Max | 0 | 0 | 0 | 0 | 0 | 0 ^b | 0 ^b | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Min | 0 | 0 | 0 | 0 | 0 | 0 ^b | 0 ^b | 0 | 0 | 0 | 0 | 0 |
| Missing Days | 0 | 0 | 0 | 2 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a I = Ice present.^b Reliable estimate.^c — = Not applicable.Daily Mean Discharge (ft³/s) for E201.5 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|------|-------------|---|------------|------|------------|---|--------------------------|------|----------------|------|
| WY2010 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0 | Acre-ft | 0 |
| CY2009 | Total | 0.04 | Mean | 0 | Max | 0.04 | Min | 0 | Instantaneous Max | 2.40 | Acre-ft | 0.08 |

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.

Drainage Area. 1.17 mi².

Period of Record. October 1, 1996, to August 25, 2006 (destroyed by flood), September 2006 to September 30, 2010.

Revised Record. Drainage area (2006).

Gage. Data logger and 6-in. Parshall flume, rain gage with cellular telemetry. Elevation of gage is 6817 ft above NGVD from land survey.

Average Discharge. 14 yr, 0.016 ft³/s, 11.55 acre ft/yr.

Maximum for Period of Record. Maximum discharge, 220 ft³/s, August 25, 2006 (from critical-depth computation), gage height unknown.

Maximum for Current Water Year. Maximum discharge, 0.29 ft³/s, October 5, 2010, gage height 0.29 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) and a Milltronics sonic probe mounted on a 6-in. Parshall flume and cellular telemetry with speech modem. 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 in the 6-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 rain gage, Rain Collection II. All equipment is powered with a solar panel battery charging system.

Fieldwork. This station was visited 31 times to service the instrumentation.

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 7, 2009, to January 12, 2010; January 18 to February 16, 2010; February 22 to March 2, 14 to 16, and 20, 2010, when the gage was affected by ice. Also, from April 26 to May 5, 2010, the gage malfunctioned.

Rating. The approach and escape sections are spread out because the channel is somewhat undefined.

Thirty-one inspections of no flow were made this year.

Rating No. 1 was developed based on the computation of the 6-in. Parshall flume. The PZF is 0.00 gage height.

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

Daily Mean Discharge (ft³/s) for E203

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

Daily Mean Discharge (ft³/s) for E203 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-------------------|-------------------|-------------------|------|------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Total (ft³/s) | 0 | 0 | 0.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total (acre-ft) | 0 | 0 | 0.14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Daily Mean | 0 ^c | 0 ^c | 0.03 ^c | 0 | 0 | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c |
| Min Daily Mean | 0 ^c | 0 ^c | 0 ^c | 0 | 0 | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c |
| Instantaneous Max | 0.29 ^c | 0.01 ^c | 0.05 ^c | 0.01 | 0.01 | 0.02 ^c | 0.01 ^c | 0.01 ^c | 0.01 ^c | 0.01 ^c | 0.01 ^c | 0.01 ^c |
| Instantaneous Min | 0 ^c | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Missing Days | 0 | 0 | 25 | 26 | 23 | 9 | 0 | 5 | 0 | 0 | 0 | 0 |

^a I = Ice present.^b E = Equipment malfunction.^c Reliable estimate.^d — = Not applicable.Daily Mean Discharge (ft³/s) for E203 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|-------|------------|------|------------|---|--------------------------|-----|----------------|------|
| WY2010 | Total | 0.07 | Mean | 0 | Max | 0.03 | Min | 0 | Instantaneous Max | .29 | Acre-ft | 0.14 |
| CY2009 | Total | 10.93 | Mean | 0.032 | Max | 1.90 | Min | 0 | Instantaneous Max | 4.0 | Acre-ft | 22 |

E204 MORTANDAD CANYON AT LANL BOUNDARY

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

Drainage Area. 1.61 mi².

Period of Record. October 1, 1993, to September 30, 2010.

Revised Record. Drainage area (2006).

Gage. Data logger with cellular telemetry and concrete control. Elevation of gage is 6651 ft above NGVD from survey.

Average Discharge. 17 yr, zero.

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

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



Equipment. The station is equipped with a Sutron 8210 (5-min interval) 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 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. This station was visited 16 times to service the instrumentation.

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.

Sixteen inspections of no flow were made.

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

Discharge. All recorded values were below the PZF.

Daily Mean Discharge (ft³/s) for E204

| 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 |
| 30 | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 0 | — | 0 | 0 | — | 0 | — | 0 | — | 0 | 0 | — |

Daily Mean Discharge (ft³/s) for E204 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total (acre-ft) | 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 |
| Min Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Min | 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 |

* — = Not applicable.

Daily Mean Discharge (ft³/s) for E204 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|---|-------------|---|------------|---|------------|---|--------------------------|---|----------------|---|
| WY2010 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0 | Acre-ft | 0 |
| CY2009 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0 | Acre-ft | 0 |

E230 CAÑADA DEL BUEY ABOVE SR 4

Location. Lat 35° 49' 38", long 106° 12' 43", Sec. 33, T. 19 N., R. 7 E., Ramon Vigil Grant, Los Alamos County.

Drainage Area. 2.15 mi².

Period of Record. October 1993 to September 30, 2010.

Revised Record. Drainage area (2006).

Gage. Data logger with cellular telemetry and concrete control. Elevation of gage is 6395 ft above NGVD from GPS survey.

Average Discharge. 17 yr, 0.01 ft³/s, 5.80 acre-ft/yr.

Maximum for Period of Record. Maximum discharge 210 ft³/s, June 17, 1999, gage height 3.3 ft.

Maximum for Current Water Year. Maximum discharge 72 ft³/s, August 15, 2010, gage height 1.9 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) 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 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. A second auxiliary shelter will accommodate two additional ISCO samplers. No provision has been made for discharge measurements above the wading stage.

Fieldwork. This station was visited 17 times to service the instrumentation.

Datum Correction. None.

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

Rating. The channel has a fairly sharp right bend 50 ft above the gage where the two channels converge. The channel is straight for 100 ft below the gage where it enters a rectangular double-box culvert under NM 4. The control is a tapered (low end on left) broad-crested weir.

Seventeen inspections of no flow were made during the year.

Rating No. 1 is based on discharge measurements Nos. 1–8 that were made in previous years.

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

Daily Mean Discharge (ft³/s) for E230

| 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 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | E ^b | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | E |
| 9 | 0 | 0 | E | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | E | 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 | 1.22 | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 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 | 0.08 |
| 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.07 | 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 | — ^c | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0.01 | 0 | 0 |
| 31 | 0 | — | 0 | 0 | — | 0 | — | 0 | — | 0 | 0 | — |

Daily Mean Discharge (ft³/s) for E230 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|----------------|-----|-----|-----|-----|-----|-----|------|------|------|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 1.29 | 0.08 |
| Total (acre-ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.02 | 2.6 | 0.16 |
| Max Daily Mean | 0 | 0 | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 1.22 | 0.08 |
| Min Daily Mean | 0 | 0 | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Max | 0 | 0 | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0.98 | 71.6 | 4.56 |
| Instantaneous Min | 0 | 0 | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Missing Days | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

^a Reliable estimate.^b E = Equipment malfunction.^c — = Not applicable.Daily Mean Discharge (ft³/s) for E230 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|------|-------------|-------|------------|------|------------|---|--------------------------|----|----------------|-----|
| WY2010 | Total | 1.38 | Mean | 0.004 | Max | 1.2 | Min | 0 | Instantaneous Max | 72 | Acre-ft | 2.7 |
| CY2009 | Total | 0.53 | Mean | 0.002 | Max | 0.28 | Min | 0 | Instantaneous Max | 11 | Acre-ft | 1.1 |

E240 PAJARITO CANYON BELOW SR 501

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

Drainage Area. 1.90 mi².

Period of Record. October 1993, to June 28, 2000 (destroyed by flood); April 2001 to September 30, 2010.

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 cellular telemetry. Elevation of gage is 7719 ft above NGVD from GPS survey. Formerly published as "Pajarito Canyon above Highway 501 near Los Alamos, NM" at different datum.

Average Discharge. 15 yr, 0.09 ft³/s, 65 acre-ft/yr.

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

Maximum for Current Water Year. Maximum discharge, 4.4 ft³/s, April 17, 2010, gage height 1.2 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) and a shaft encoder float system with cellular phone and speech modem. 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. This station was visited 33 times to measure discharge and to service the instrumentation

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

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except for the periods of April 21, 22, 24, 25, 2010; June 8 to 14, 2010; July 26 to August 2, 2010; August 4, 5, 2010; and September 1 to 3, and 24 to 27, 2010, because the data logger malfunctioned.

Rating. 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. Grass and brush are fairly thick in overbank areas. The banks are not high (about 1 to 2 ft 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.

Twenty-six inspections of no flow were made this year. Three discharge measurements (Nos. 28, 30, and 31) were made.

Rating No. 3 was developed based on the six measurements and slope area from previous years.

Discharge. Discharge was computed by applying the gage height to Rating No. 3 using variable shift diagrams.

Daily Mean Discharge (ft³/s) for E240

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|----------------|----------------|-----|-----|----------------|------|-------------------|-------------------|----------------|----------------|-------------------|----------------|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.25 | 0.94 | 0.16 | 0 | E ^a | E |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0.04 | 0.88 | 0.14 | 0 | E | E |
| 3 | 0 | 0 ^b | 0 | 0 | 0 | 0 | 0.03 | 0.74 ^b | 0.09 | 0 | 0 | E |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0.05 | 0.58 | 0.08 | 0 | E | 0 |
| 5 | 0 | 0 ^b | 0 | 0 | 0 | 0 | 0.30 | 0.47 | 0.06 | 0 | E | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0.42 | 0.41 | 0.04 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0.15 | 0.33 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0.06 | 0.25 | E | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0.11 | 0.22 | E | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0.21 | 0.20 | E | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0.29 | 0.17 | E | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0.38 | 0.17 | E | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0.81 | 0.15 | E | 0 | 0 | 0 ^b |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 1.12 | 0.23 | E | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 | 1.14 | 0.29 | 0 | 0 | 0.01 | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 1.26 | 0.31 | 0 | 0 | 0.02 ^b | 0 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 3.22 | 0.36 ^b | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 3.10 | 0.4 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 | 2.71 ^b | 0.4 | 0 | 0 ^b | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | 2.62 | 0.39 | 0 | 0 | 0 | 0 ^b |
| 21 | 0 ^b | 0 | 0 | 0 | 0 | 0 | E | 0.37 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0.38 | 0 | 0 ^b | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 0 | 0 | 2.69 | 0.37 | 0 | 0 | 0 | 0 ^b |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0.35 | 0 | 0 | 0 | E |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0.33 | 0 ^b | 0 | 0 | E |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 1.39 ^b | 0.3 | 0 | E | 0 | E |
| 27 | 0 | 0 | 0 | 0 | 0 | 0 | 1.31 | 0.27 | 0 | E | 0 | E |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 1.30 | 0.26 | 0 ^b | E | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | — ^c | 0 | 1.20 | 0.22 | 0 ^b | E | 0 | 0 |
| 30 | 0 | 0 ^b | 0 | 0 | — | 0.03 | 1.00 | 0.19 | 0 | E | 0 | 0 |
| 31 | 0 | — | 0 | 0 | — | 0.45 | — | 0.17 | — | E | 0 | — |

Daily Mean Discharge (ft³/s) for E240 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-------------------|----------------|-----|-----|-----|-------|-------------------|-------------------|-------|------|-------|------|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0.015 | 1.04 | 0.36 | 0.025 | 0 | 0.001 | 0 |
| Total (acre-ft) | 0 ^b | 0 ^b | 0 | 0 | 0 | 0.45 | 3.22 ^b | 0.94 ^b | 0.16 | 0 | 0.02 | 0 |
| Max Daily Mean | 0 ^b | 0 ^b | 0 | 0 | 0 | 0 | 0.03 ^b | 0.15 ^b | 0 | 0 | 0 | 0 |
| Min Daily Mean | 0.10 ^b | 0 ^b | 0 | 0 | 0 | 0.71 | 4.42 ^b | 0.94 ^b | 0.19 | 0.08 | 1.42 | 0.06 |
| Instantaneous Max | 0 ^b | 0 ^b | 0 | 0 | 0 | 0 | 0.03 ^b | 0 ^b | 0 | 0 | 0 | 0 |
| Instantaneous Min | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 7 | 6 | 4 | 7 |

^a E = Equipment malfunction.^b Reliable estimate.^c — = Not applicable.Daily Mean Discharge (ft³/s) for E240 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|------|------------|------|------------|---|--------------------------|------|----------------|------|
| WY2010 | Total | 39.28 | Mean | 0.12 | Max | 3.20 | Min | 0 | Instantaneous Max | 4.40 | Acre-ft | 78 |
| CY2009 | Total | 0.02 | Mean | 0 | Max | 0.02 | Min | 0 | Instantaneous Max | 2.60 | Acre-ft | 0.04 |

E243 PAJARITO CANYON ABOVE TWO MILE CANYON

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

Drainage Area. 4.24 mi².

Period of Record. February 2002 to September 30, 2010.

Revised Record. Drainage area (2006).

Gage. Data logger with cellular telemetry. Elevation of gage 6941 ft above NGVD from GPS survey.

Average Discharge. 8 yr, 0.50 ft³/s, 359 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 272 ft³/s August 24, 2005, gage height 4.4 ft.

Maximum for Current Water Year. Maximum discharge, 12 ft³/s, August 16, 2010, gage height 1.7 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with Sutron Accubar bubble sensor with cellular telemetry and speech modem. 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. No provision has been made for direct measurement above the wading stage.

Fieldwork. The station was visited 15 times to measure discharge and service the instrumentation.

Datum Correction. None. Levels run on April 7, 2006, found the gage was within limits, and no corrections were necessary.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except during the periods of November 17 to 30, 2009; December 8 and 9, 2009; January 21 and 22, 2010; and March 3, 4, and 7 to 10, 2010, when the gage height was affected by ice.

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

Three discharge measurements (Nos. 38–40) were made this year.

Rating No. 4 continued to be used.

Discharge. Discharge was computed by applying the gage height to Rating No. 4 with shifts at low flow applied by “V” diagrams. The PZF shows some estimated zero flow in winter from icing over the orifice, during which time the stream was frozen dry.

Daily Mean Discharge (ft³/s) for E243

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|------|-----|------|------|----------------|-------------------|------|------|------|------|------|-----|
| 1 | 0 | 0 | 0 | 0.01 | 0 | 0 | 3.94 | 3.04 | 0.90 | 0.11 | 0.09 | 0 |
| 2 | 0 | 0 | 0 | 0.01 | 0 | 0 | 4.34 | 2.83 | 0.89 | 0.11 | 0.08 | 0 |
| 3 | 0 | 0 | 0 | 0.01 | 0 | I ^a | 4.55 | 2.57 | 0.84 | 0.18 | 0.08 | 0 |
| 4 | 0 | 0 | 0.01 | 0.01 | 0 | I | 4.17 | 2.37 | 0.79 | 0.11 | 0.07 | 0 |
| 5 | 0 | 0 | 0.01 | 0.01 | 0 | 0.24 ^b | 3.62 | 2.20 | 0.72 | 0.10 | 0.83 | 0 |
| 6 | 0 | 0 | 0.01 | 0.01 | 0 | 0.35 ^b | 3.23 | 1.95 | 0.69 | 0.09 | 0.25 | 0 |
| 7 | 0 | 0 | 0.01 | 0.01 | 0 | I | 3.45 | 1.79 | 0.68 | 0.10 | 0.17 | 0 |
| 8 | 0 | 0 | I | 0.01 | 0 | I | 3.87 | 1.68 | 0.62 | 0.09 | 0.13 | 0 |
| 9 | 0 | 0 | I | 0.01 | 0 | I | 3.83 | 1.58 | 0.54 | 0.09 | 0.28 | 0 |
| 10 | 0 | 0 | 0.01 | 0.01 | 0 | I | 3.59 | 1.48 | 0.48 | 0.10 | 0.11 | 0 |
| 11 | 0 | 0 | 0.01 | 0.01 | 0 | 1.04 | 3.41 | 1.43 | 0.44 | 0.09 | 0.06 | 0 |
| 12 | 0 | 0 | 0.01 | 0.01 | 0 | 0.9 | 3.47 | 1.39 | 0.41 | 0.08 | 0.04 | 0 |
| 13 | 0 | 0 | 0.01 | 0 | 0 | 1.14 | 3.6 | 1.37 | 0.39 | 0.08 | 0.04 | 0 |
| 14 | 0 | 0 | 0.01 | 0 | 0 | 1.45 | 3.84 | 1.50 | 0.36 | 0.08 | 0.03 | 0 |
| 15 | 0 | 0 | 0.01 | 0 | 0 | 1.19 | 4.26 | 1.66 | 0.34 | 0.07 | 0.13 | 0 |
| 16 | 0 | 0 | 0.01 | 0 | 0 | 1.38 | 4.97 | 1.32 | 0.32 | 0.06 | 0.98 | 0 |
| 17 | 0 | I | 0.01 | 0 | 0 | 2.1 | 5.82 | 1.16 | 0.27 | 0.06 | 0.29 | 0 |
| 18 | 0 | I | 0.01 | 0 | 0 | 2.75 | 7.00 | 1.20 | 0.25 | 0.05 | 0.15 | 0 |
| 19 | 0 | I | 0.01 | 0 | 0 | 3.18 | 8.11 | 1.27 | 0.21 | 0.04 | 0.11 | 0 |
| 20 | 0 | I | 0.01 | 0 | 0 | 3.17 | 7.8 | 1.31 | 0.18 | 0.03 | 0.06 | 0 |
| 21 | 0 | I | 0.01 | I | 0 | 3.24 | 7.13 | 1.31 | 0.17 | 0.02 | 0.04 | 0 |
| 22 | 0 | I | 0 | I | 0 | 3.22 | 6.79 | 1.28 | 0.16 | 0.28 | 0.02 | 0 |
| 23 | 0 | I | 0 | 0 | 0.01 | 3.36 | 6.36 | 1.24 | 0.14 | 0.34 | 0.02 | 0 |
| 24 | 0 | I | 0.01 | 0 | 0.01 | 3.14 | 5.98 | 1.21 | 0.14 | 0.17 | 0.02 | 0 |
| 25 | 0 | I | 0.01 | 0.01 | 0 | 3.14 | 5.55 | 1.21 | 0.13 | 0.51 | 0.01 | 0 |
| 26 | 0 | I | 0.01 | 0.01 | 0 | 3.29 | 4.99 | 1.17 | 0.13 | 0.64 | 0.01 | 0 |
| 27 | 0 | I | 0.01 | 0.02 | 0 | 3.16 | 4.42 | 1.13 | 0.12 | 0.27 | 0 | 0 |
| 28 | 0 | I | 0.01 | 0 | 0 | 2.99 | 3.79 | 1.10 | 0.17 | 0.19 | 0 | 0 |
| 29 | 0.01 | I | 0.01 | 0 | — ^c | 3.08 | 3.41 | 1.02 | 0.14 | 0.15 | 0 | 0 |
| 30 | 0 | I | 0.01 | 0 | — | 3.28 | 3.20 | 0.98 | 0.12 | 0.12 | 0 | 0 |
| 31 | 0 | — | 0.01 | 0 | — | 3.63 | — | 0.69 | — | 0.11 | 0 | — |

Daily Mean Discharge (ft³/s) for E243 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|------|-----|------|------|------|-------------------|-------|-------|-------|------|-------|------|
| Total (ft³/s) | 0.01 | 0 | 0.24 | 0.16 | 0.02 | 54.39 | 142.3 | 47.84 | 11.74 | 4.53 | 4.11 | 0 |
| Total (acre-ft) | 0.02 | 0 | 0.48 | 0.32 | 0.04 | 108 | 282 | 95 | 23 | 9.0 | 8.2 | 0 |
| Max Daily Mean | 0.01 | 0 | 0.01 | 0.02 | 0.01 | 3.63 ^b | 8.11 | 3.04 | 0.90 | 0.64 | 0.98 | 0 |
| Min Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 ^b | 3.20 | 0.96 | 0.12 | 0.02 | 0 | 0 |
| Instantaneous Max | 0.02 | 71 | 0.03 | 0.11 | 0.02 | 4.56 ^b | 11.39 | 3.67 | 1.27 | 2.76 | 12.30 | 0.01 |
| Instantaneous Min | 0 | 0 | 0 | 0 | 0 | 0 ^b | 2.76 | 0.79 | 0.07 | 0.01 | 0 | 0 |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a I = Ice present.^b Reliable estimate.^c — = Not applicable.Daily Mean Discharge (ft³/s) for E243 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|--------|-------------|------|------------|------|------------|---|--------------------------|-----|----------------|-----|
| WY2010 | Total | 265.34 | Mean | 0.78 | Max | 8.10 | Min | 0 | Instantaneous Max | 71 | Acre-ft | 526 |
| CY2009 | Total | 331.62 | Mean | 0.95 | Max | 55 | Min | 0 | Instantaneous Max | 268 | Acre-ft | 658 |

E244 TWO MILE CANYON ABOVE PAJARITO CANYON

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

Drainage Area. 3.15 mi².

Period of Record. October 1, 2002, to September 30, 2010.

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

Gage. Data logger with cellular telemetry. Elevation of gage is 6940 ft above NGVD from GPS survey.

Average Discharge. 8 yr, 0.38 ft³/s, 275 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 628 ft³/s, August 25, 2006, gage height 6 ft (from flood marks).

Maximum for Current Water Year. Maximum discharge, 43 ft³/s, August 16, 2010, gage height 2.3 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) and a Milltronics sonic probe with cellular phone and speech modem. 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. Wading measurements can be in the vicinity of the gage. No provision has been made for measurement above the wading stage.

Fieldwork. The station was visited 15 times to measure discharge and service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except for the periods of December 7, 2009, to January 6, 2010; January 19 to February 10, 2010; and February 22 to March 21, 2010, when the gage height was affected by ice.

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

Three discharge measurements (Nos. 25–27) and 10 inspections of no flow were made this year.

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

Discharge. Discharge was computed by directly applying the gage height to Rating No. 2. Some periods have large shifts on the lower end because of dry condition affecting the PZF.

Daily Mean Discharge (ft³/s) for E244

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|------|------|----------------|----------------|----------------|------|------|------|----------------|----------------|------|-------------------|
| 1 | 0 | 0.01 | 0 | I ^a | I | I | 0.01 | 0.13 | 0.02 | 0 ^b | 0.09 | 0 |
| 2 | 0 | 0.01 | 0 | I | I | I | 0 | 0.13 | 0.02 | 0 ^b | 0.09 | 0 |
| 3 | 0 | 0.01 | 0 ^a | I | I | I | 0 | 0.11 | 0.02 | 0 ^b | 0.08 | 0 |
| 4 | 0 | 0.01 | 0 | I | I | I | 0 | 0.1 | 0.02 | 0 | 0.08 | 0 |
| 5 | 0 | 0.01 | 0 | I | I | I | 0 | 0.11 | 0.02 | 0 | 1.22 | 0 |
| 6 | 0 | 0.01 | 0 | I | I | I | 0 | 0.09 | 0 | 0 | 0.03 | 0 |
| 7 | 0 | 0.01 | I | 0 | I | I | 0 | 0.08 | 0 | 0 ^b | 0 | 0 |
| 8 | 0 | 0.01 | I | 0 | I | I | 0.01 | 0.09 | 0 ^b | 0 ^b | 0 | 0 |
| 9 | 0 | 0.01 | I | 0 | I | I | 0.01 | 0.09 | 0 ^b | 0 ^b | 0.24 | 0 |
| 10 | 0 | 0.01 | I | 0 | I | I | 0.01 | 0.07 | 0 | 0 ^b | 0.01 | 0 |
| 11 | 0 | 0.01 | I | 0 | 0 | I | 0 | 0.08 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0.01 | I | 0 | 0 | I | 0.01 | 0.07 | 0 | 0 | 0 | 0 |
| 13 | 0.08 | 0.01 | I | 0 | 0 | I | 0 | 0.08 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0.01 | I | 0 | 0 | I | 0 | 0.1 | 0 | 0 | 0 | 0 ^b |
| 15 | 0 | 0 | I | 0 | 0 | I | 0 | 0.12 | 0 ^b | 0 | 0.19 | 0 ^b |
| 16 | 0 | 0.01 | I | 0 | 0 | I | 0 | 0.07 | 0 | 0 | 1.46 | 0 |
| 17 | 0 | 0 | I | 0 | 0 | I | 0 | 0.07 | 0 ^b | 0 | 0.12 | 0 ^b |
| 18 | 0 | 0 | I | 0 | 0 | I | 0 | 0.07 | 0 | 0 | 0.05 | 0 ^b |
| 19 | 0 | 0 | I | I | 0 | I | 0.44 | 0.06 | 0 | 0 | 0.03 | 0 |
| 20 | 0 | 0 | I | I | 0 | I | 0.18 | 0.05 | 0 ^b | 0 ^b | 0.02 | 0 ^b |
| 21 | 0.08 | 0 | I | I | 0 | I | 0.16 | 0.06 | 0 ^b | 0 ^b | 0.02 | 0 ^b |
| 22 | 0.01 | 0 | I | I | I | 0.01 | 0.15 | 0.05 | 0 ^b | 0.75 | 0.03 | 0.13 ^b |
| 23 | 0 | 0 | I | I | I | 0 | 0.15 | 0.05 | 0 ^b | 0.02 | 0.05 | 0 |
| 24 | 0 | 0 | I | I | I | 0 | 0.15 | 0.04 | 0 | 0.01 | 0.04 | 0 |
| 25 | 0 | 0 | I | I | I | 0 | 0.15 | 0.05 | 0 ^b | 0.54 | 0.02 | 0 |
| 26 | 0 | 0 | I | I | I | 0.03 | 0.14 | 0.05 | 0 ^b | 0.12 | 0.01 | 0 |
| 27 | 0 | 0 | I | I | I | 0 | 0.14 | 0.05 | 0 ^b | 0.08 | 0.01 | 0 |
| 28 | 0 | 0 | I | I | I | 0 | 0.14 | 0.05 | 0 | 0.06 | 0.01 | 0 |
| 29 | 0 | 0 | I | I | — ^c | 0 | 0.13 | 0.04 | 0 | 0.06 | 0.01 | 0 ^b |
| 30 | 0 | 0 | I | I | — | 0 | 0.12 | 0.03 | 0 | 0.08 | 0 | 0 |

Daily Mean Discharge (ft³/s) for E244 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|------|------|----------------|-----|-----|------|------|------|-------------------|--------------------|-------|-------------------|
| Total (ft³/s) | 0.18 | 0.15 | 0 | 0 | 0 | 0.04 | 2.10 | 2.28 | 0.10 | 1.82 | 3.95 | 0.13 |
| Total (acre-ft) | 0.36 | 0.30 | 0 | 0 | 0 | 0.08 | 4.20 | 4.50 | 0.20 | 3.60 | 7.80 | 0.26 |
| Max Daily Mean | 0.08 | 0.01 | 0 ^b | 0 | 0 | 0.03 | 0.44 | 0.13 | 0.02 ^b | 0.75 ^b | 1.46 | 0.13 |
| Min Daily Mean | 0 | 0 | 0 ^b | 0 | 0 | 0 | 0 | 0.03 | 0 ^b | 0 ^b | 0 | 0 ^b |
| Instantaneous Max | 1.90 | 0.14 | 0 ^b | 0 | 0 | 0.14 | 4.07 | 0.44 | 0.32 ^b | 20.21 ^b | 42.62 | 1.53 ^b |
| Instantaneous Min | 0 | 0 | 0 ^b | 0 | 0 | 0 | 0 | 0 | 0 ^b | 0 ^b | 0 | 0 ^b |
| Missing Days | 0 | 25 | 19 | 17 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a I = Ice present.^b Reliable estimate.^c — = Not applicable.Daily Mean Discharge (ft³/s) for E244 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|-------|------------|------|------------|---|--------------------------|-----|----------------|-----|
| WY2010 | Total | 10.75 | Mean | 0.038 | Max | 1.50 | Min | 0 | Instantaneous Max | 43 | Acre-ft | 21 |
| CY2009 | Total | 52.34 | Mean | 0.15 | Max | 8.20 | Min | 0 | Instantaneous Max | 393 | Acre-ft | 104 |

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 mi².

Period of Record. October 1, 2002, to September 30, 2010.

Revised Record. Drainage area (2008).

Gage. Data logger and cellular telemetry and rain gage. Elevation of gage is 6796 ft from LiDAR DEM.

Average Discharge. 8 yr, 0.18 ft³/s, 131 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 228 ft³/s, August 24, 2005, gage height 2.9 ft.

Maximum for Current Water Year. Maximum discharge, 37 ft³/s, August 16, 2010, gage height 1.8 ft.



Equipment. The station is equipped with a Sutron 8210 (5-min interval) and a Milltronics sonic probe and cellular telemetry with speech modem. 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. The station was visited 38 times to measure discharge and service the instrumentation.

Datum Correction. Levels run on May 12, 2008, show the gage is 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 28, 2009, when the data logger malfunctioned. Also from December 7, 2009 to February 18, 2010, and February 22 and 23, 2010, the gage height was affected by ice.

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

Thirty-four inspections of no flow were made this year. One discharge measurement (No. 15) was made.

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

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

Daily Mean Discharge (ft³/s) for E245.5

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|----------------|----------------|----------------|----------------|----------------|----------------|-------------------|----------------|----------------|-------------------|-------------------|----------------|
| 1 | 0 | 0 | 0 ^a | 1 ^b | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0 |
| 3 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 ^a | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 1 | 1 | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 ^a | 0 | 1 | 1 | 0 | 0 ^a | 0 | 0 | 0 | 0.61 | 0 |
| 6 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 0 |
| 7 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 ^a | 0 | 0 | 0 ^a |
| 8 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 0 |
| 9 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0.02 ^a | 0 |
| 10 | 0 | 0 | 1 | 1 | 1 | 0 ^a | 0 | 0 | 0 | 0 | 0 ^a | 0 |
| 11 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 0 |
| 13 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^a |
| 14 | 0 | 0 | 1 | 1 | 1 | 0 ^a | 0 | 0 | 0 ^a | 0 ^a | 0 | 0 |
| 15 | 0 | 0 | 1 | 1 | 1 | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0.83 ^a | 0 |
| 17 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 ^a | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 1 | 1 | 1 | 0 | 0.03 | 0 | 0 | 0 | 0 ^a | 0 |
| 19 | 0 | 0 | 1 | 1 | 0 | 0 | 0.30 ^a | 0 | 0 | 0 ^a | 0 | 0 |
| 20 | 0 | 0 | 1 | 1 | 0 | 0 | 0.09 | 0 | 0 | 0 | 0 | 0 |
| 21 | 0 ^a | 0 | 1 | 1 | 0 | 0 | 0.04 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 1 | 1 | 1 | 0 | 0.03 | 0 | 0 | 0.07 ^a | 0 | 0 |
| 23 | 0 | 0 | 1 | 1 | 1 | 0 | 0.03 | 0 | 0 | 0 | 0 ^a | 0 ^a |
| 24 | 0 | 0 | 1 | 1 | 0 ^a | 0 | 0.01 | 0 | 0 | 0 | 0 ^a | 0 |
| 25 | 0 | 0 | 1 | 1 | 0 | 0 | 0.01 | 0 | 0 | 0.05 | 0 | 0 |
| 26 | E ^c | 0 | 1 | 1 | 0 | 0 | 0 ^a | 0 | 0 | 0 ^a | 0 | 0 |
| 27 | E | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | E | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 0 | 0 |
| 29 | 0 | 0 | 1 | 1 | — ^d | 0 | 0 | 0 | 0 ^a | 0 | 0 | 0 |
| 30 | 0 | 0 | 1 | 1 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 0 | — | 1 | 1 | — | 0 ^a | — | 0 | — | 0 | 0 | — |

Daily Mean Discharge (ft³/s) for E245.5 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|----------------|----------------|----------------|-----|----------------|----------------|-------------------|----------------|----------------|-------------------|--------------------|-------------------|
| Total (ft³/s) | 0 | 0 | 0 | I | 0 | 0 | 0.54 | 0 | 0 | 0.12 | 1.46 | 0 |
| Total (acre-ft) | 0 | 0 | 0 | I | 0 | 0 | 1.10 | 0 | 0 | 0.24 | 2.90 | 0 |
| Max Daily Mean | 0 ^a | 0 ^a | 0 ^a | I | 0 ^a | 0 ^a | 0.30 ^a | 0 ^a | 0 ^a | 0.07 ^a | 0.83 ^a | 0 ^a |
| Min Daily Mean | 0 ^a | 0 ^a | 0 ^a | I | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a |
| Instantaneous Max | 0 ^a | 0 ^a | 0 ^a | I | 0 ^a | 0 ^a | 4.37 ^a | 0 ^a | 0 ^a | 1.60 ^a | 36.23 ^a | 0.07 ^a |
| Instantaneous Min | 0 ^a | 0 ^a | 0 ^a | I | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a |
| Missing Days | 3 | 0 | 25 | 31 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a Reliable estimate.^b I = Ice present.^c E = Equipment malfunction.^d — = Not applicable.Daily Mean Discharge (ft³/s) for E245.5 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|------|-------------|-------|------------|------|------------|---|--------------------------|------|----------------|------|
| WY2010 | Total | 2.12 | Mean | 0.007 | Max | 0.83 | Min | 0 | Instantaneous Max | 36 | Acre-ft | 4.20 |
| CY2009 | Total | 2.33 | Mean | 0.007 | Max | 0.58 | Min | 0 | Instantaneous Max | 0.96 | Acre-ft | 4.60 |

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 mi².

Period of Record. October 1998 to September 30, 2010.

Revised Record. Drainage area (2006).

Gage. Data logger and 9-in. Parshall flume with cellular telemetry. Elevation of gage is 6755 ft above NGVD.

Average Discharge. 12 yr, 0.03 ft³/s, 24 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 536 ft³/s, August 25, 2006, gage height 3.5 ft from critical depth computation of peak flow.

Maximum for Current Water Year. Maximum discharge, 0.37 ft³/s, April 17, 2010, gage height 0.25 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) and a Milltronics sonic probe mounted on a 9-in. Parshall flume and cellular telemetry with speech modem. The system is powered by a solar panel battery system housed in a NEMA shelter on 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 in the 9-in. Parshall flume is the reference gage. No provision has been made for direct discharge measurements above the wading stage.

Fieldwork. The station was visited 18 times to service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except during the periods from December 7 to December 23, 2009, and January 20 to March 4, 2010, 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, and the channel is prone to some shifting with vegetation on each bank. The low-water control is the 9-in. Parshall flume.

Seventeen inspections of no flow were made this year. No discharge measurements were made.

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. PZF is 0.00 gage height.

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

Daily Mean Discharge (ft³/s) for E246

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-----|------|------|-----|----------------|------|------|------|------|------|-----|-----|
| 1 | 0 | 0 | 0 | 0 | I ^a | I | 0.01 | 0.1 | 0.06 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | I | I | 0.01 | 0.17 | 0.06 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | I | I | 0.01 | 0.15 | 0.05 | 0.01 | 0 | 0 |
| 4 | 0 | 0 | 0.02 | 0 | I | I | 0.01 | 0.17 | 0.05 | 0.01 | 0 | 0 |
| 5 | 0 | 0 | 0.01 | 0 | I | 0 | 0.03 | 0.15 | 0.04 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | I | 0 | 0.02 | 0.09 | 0.04 | 0 | 0 | 0 |
| 7 | 0 | 0 | I | 0 | I | 0 | 0.04 | 0.07 | 0.05 | 0 | 0 | 0 |
| 8 | 0 | 0 | I | 0 | I | 0 | 0.03 | 0.07 | 0.04 | 0 | 0 | 0 |
| 9 | 0 | 0 | I | 0 | I | 0 | 0.02 | 0.07 | 0.03 | 0 | 0 | 0 |
| 10 | 0 | 0.01 | I | 0 | I | 0.01 | 0.02 | 0.07 | 0.03 | 0 | 0 | 0 |
| 11 | 0 | 0.01 | I | 0 | I | 0 | 0.02 | 0.07 | 0.03 | 0 | 0 | 0 |
| 12 | 0 | 0 | I | 0 | I | 0 | 0.02 | 0.07 | 0.02 | 0 | 0 | 0 |
| 13 | 0 | 0 | I | 0 | I | 0 | 0.02 | 0.07 | 0.02 | 0 | 0 | 0 |
| 14 | 0 | 0 | I | 0 | I | 0 | 0.02 | 0.10 | 0.02 | 0 | 0 | 0 |
| 15 | 0 | 0 | I | 0 | I | 0.01 | 0.01 | 0.11 | 0.02 | 0 | 0 | 0 |
| 16 | 0 | 0 | I | 0 | I | 0 | 0.03 | 0.09 | 0.02 | 0 | 0 | 0 |
| 17 | 0 | 0 | I | 0 | I | 0 | 0.17 | 0.09 | 0.01 | 0 | 0 | 0 |
| 18 | 0 | 0 | I | 0 | I | 0 | 0.12 | 0.08 | 0.01 | 0 | 0 | 0 |
| 19 | 0 | 0 | I | 0 | I | 0.01 | 0.03 | 0.08 | 0.01 | 0 | 0 | 0 |
| 20 | 0 | 0 | I | I | I | 0.01 | 0.01 | 0.08 | 0.01 | 0 | 0 | 0 |
| 21 | 0 | 0 | I | I | I | 0.01 | 0.01 | 0.08 | 0.01 | 0 | 0 | 0 |
| 22 | 0 | 0 | I | I | I | 0.01 | 0.07 | 0.07 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | I | I | I | 0.01 | 0.09 | 0.07 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | I | I | 0.02 | 0.09 | 0.06 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | I | I | 0.03 | 0.09 | 0.07 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | I | I | 0.05 | 0.09 | 0.07 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | I | I | 0.05 | 0.09 | 0.07 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0.01 | I | I | 0.04 | 0.10 | 0.07 | 0.01 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | I | — ^b | 0.05 | 0.10 | 0.07 | 0.01 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | I | — | 0.05 | 0.09 | 0.06 | 0 | 0 | 0 | 0 |
| 31 | 0 | — | 0 | I | — | 0.01 | — | 0.06 | — | 0 | 0 | — |

Daily Mean Discharge (ft³/s) for E246 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|------|------|------|------|-----|------|------|------|------|------|------|------|
| Total (ft³/s) | 0 | 0.02 | 0.04 | 0 | I | 0.37 | 1.47 | 2.70 | 0.65 | 0.02 | 0 | 0 |
| Total (acre-ft) | 0 | 0.04 | 0.08 | 0 | I | 0.73 | 2.90 | 5.40 | 1.30 | 0.04 | 0 | 0 |
| Max Daily Mean | 0 | 0.01 | 0.02 | 0 | I | 0.05 | 0.17 | 0.17 | 0.06 | 0.01 | 0 | 0 |
| Min Daily Mean | 0 | 0 | 0 | 0 | I | 0 | 0.01 | 0.06 | 0 | 0 | 0 | 0 |
| Instantaneous Max | 0.02 | 0.08 | 0.05 | 0.05 | I | 0.12 | 0.37 | 0.26 | 0.11 | 0.03 | 0.01 | 0.02 |
| Instantaneous Min | 0 | 0 | 0 | 0 | I | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Missing Days | 0 | 0 | 17 | 12 | 28 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |

^a I = Ice present.^b — = Not applicable.Daily Mean Discharge (ft³/s) for E246 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|-------|------------|------|------------|---|--------------------------|------|----------------|----|
| WY2010 | Total | 5.27 | Mean | 0.017 | Max | 0.17 | Min | 0 | Instantaneous Max | 0.37 | Acre-ft | 10 |
| CY2009 | Total | 10.93 | Mean | 0.031 | Max | 1.00 | Min | 0 | Instantaneous Max | 1.20 | Acre-ft | 22 |

E249.5 MDA G-7 FOR 2010 WATER YEAR

Location. Lat 35° 49' 47", long 106° 14' 05", Sec. 31, T. 19 N., R. 7 E., Ramon Vigil Grant, Los Alamos County, on left bank.

Drainage Area. 0.01 mi².

Period of Record. October 1, 2005, to September 30, 2010.

Gage. Data logger and 9-in. Parshall flume, rain gage with cellular telemetry. Elevation of gage is 6633 ft above NGVD.

Average Discharge. 5 yr, 0.004 ft³/s, 2.9 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 5.7 ft³/s ft³/s, August 7, 2006, gage height 1.5 ft. No flow most of the time.

Maximum for Current Year. Maximum discharge, 5 ft³/s, August 15, 2010, gage height 1.4 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) and a Milltronics sonic probe mounted on a 9-in. Parshall flume with cellular phone and speech modem. 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 rain gage, Rain Collection II. All equipment is powered with a solar panel battery charging system.

Fieldwork. The station was visited 30 times to service the instrumentation.

Datum Correction. None.

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. It is confined to the main channel by cutbanks on both sides. The bottom of the channel is 4 ft wide, and both banks should be very stable. The low water control is the 9-in. Parshall flume.

Thirty visits of no flow were made this year.

Rating No. 1 was developed based on the computation of a 9-in. Parshall flume. PZF is 0.00 gage height.

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

Daily Mean Discharge (ft³/s) for E249.5

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-------------------|----------------|----------------|------|----------------|----------------|-------------------|----------------|----------------|-------------------|-------------------|----------------|
| 1 | 0 | 0 | 0 | 0 | 0.08 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0.08 | 0 | 0 | 0 | 0 | 0.04 | 0 ^a | 0 |
| 3 | 0 | 0 | 0 | 0 | 0.08 | 0 | 0 | 0 ^a | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0.05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0.01 | 0 | 0 | 0 | 0 | 0 | 0.02 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 0 |
| 7 | 0.01 | 0 | 0 | 0 | 0 | 0.07 | 0 | 0 | 0 ^a | 0 | 0 | 0 ^a |
| 8 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 | 0 | 0 | 0 ^a | 0 | 0 |
| 9 | 0 | 0 | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 ^a | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 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 ^a | 0 | 0 |
| 13 | 0.02 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 ^a | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 0 | 0.02 | 0 | 0 | 0 | 0 | 0.21 | 0 |
| 16 | 0 | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.06 ^a | 0 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0.01 | 0 ^a | 0 | 0 | 0.01 | 0 |
| 18 | 0 | 0 | 0.01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0 |
| 19 | 0 | 0 | 0.01 | 0 | 0 | 0 | 0.01 ^a | 0 | 0 | 0 ^a | 0 | 0 |
| 20 | 0.01 | 0 | 0.01 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 0.05 ^a | 0 | 0.01 | 0.02 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 | 0 |
| 22 | 0 ^a | 0 | 0.01 | 0.07 | 0 | 0 | 0.01 | 0 | 0 | 0.01 ^a | 0 | 0.06 |
| 23 | 0 | 0 | 0.01 | 0.01 | 0.01 | 0 | 0 | 0 | 0 | 0.03 | 0.05 ^a | 0 ^a |
| 24 | 0 | 0 | 0 | 0.03 | 0 | 0 | 0 | 0 | 0 | 0.06 | 0 ^a | 0 |
| 25 | 0 | 0 | 0 | 0.03 | 0 | 0 | 0 | 0 | 0 | 0.04 | 0 | 0 |
| 26 | 0.01 | 0 | 0 | 0.03 | 0 | 0 | 0.00 ^a | 0 | 0 | 0 ^a | 0 | 0 |
| 27 | 0 | 0 | 0 | 0.03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0.01 | 0 | 0.03 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 0 | 0 |
| 29 | 0 | 0.01 | 0 | 0.07 | — ^b | 0 | 0 | 0 | 0 ^a | 0.03 | 0.03 | 0 |
| 30 | 0 | 0 | 0 | 0.08 | — | 0 | 0 | 0 | 0 | 0.06 | 0 ^a | 0 |
| 31 | 0 | — | 0.08 | 0.08 | — | 0 | — | 0 | — | 0.03 | 0 | — |

Daily Mean Discharge (ft³/s) for E249.5 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-------------------|-------------------|-------------------|------|----------------|-------------------|-------------------|-------------------|----------------|-------------------|-------------------|-------------------|
| Total (ft³/s) | 0 | 0.02 | 0.04 | 0 | I ^c | 0.37 | 1.47 | 2.70 | 0.65 | 0.02 | 0 | 0 |
| Total (acre-ft) | 0 | 0.04 | 0.08 | 0 | I | 0.73 | 2.90 | 5.40 | 1.30 | 0.04 | 0 | 0 |
| Max Daily Mean | 0.05 ^a | 0.01 ^a | 0.01 ^a | 0.08 | 0.08 | 0.07 ^a | 0.01 ^a | 0.01 ^a | 0 ^a | 0.06 ^a | 0.21 ^a | 0.06 ^a |
| Min Daily Mean | 0 ^a | 0 ^a | 0 ^a | 0 | 0 | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a |
| Instantaneous Max | 1.03 ^a | 0.49 ^a | 0.04 ^a | 0.59 | 0.15 | 1.33 ^a | 0.46 ^a | 0.54 ^a | 0 ^a | 1.63 ^a | 4.97 ^a | 1.10 ^a |
| Instantaneous Min | 0 ^a | 0 ^a | 0 ^a | 0 | 0 | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a Reliable estimate.^b — = Not applicable.^c I = Ice present.Daily Mean Discharge (ft³/s) for E249.5 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|------|-------------|-------|------------|------|------------|---|--------------------------|------|----------------|------|
| WY2010 | Total | 1.87 | Mean | 0.005 | Max | 0.21 | Min | 0 | Instantaneous Max | 5.0 | Acre-ft | 3.70 |
| CY2009 | Total | 0.90 | Mean | 0.003 | Max | 0.10 | Min | 0 | Instantaneous Max | 1.50 | Acre-ft | 1.80 |

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 mi².

Period of Record. November 1993 to August 25, 2006 (destroyed by flood); September 2006 to September 30, 2010.

Revised Record. Drainage area (2006).

Gage. Data logger with cellular telemetry and concrete control. Elevation of gage is 6528 ft. above NGVD from GPS survey.

Average Discharge. 16 yr, 0.11 ft³/s, 77 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 206 ft³/s, August 25, 2006, gage height 4.6 ft (from peak-flow computations).

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



Equipment. The station is equipped with a Sutron 8210 (5-min interval) with a shaft encoder float system (5-min interval) and cellular phone with speech modem. 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. The station was visited 17 times to inspect and service the instrumentation.

Datum Correction. None. Most recent levels run on November 17, 2004, found the gage within acceptable limits.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except for the period from March 9 to April 20, 2010, when the data logger malfunctioned.

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.

Seventeen inspections of no flow were made this year.

Rating No. 1 was developed from 90-degree weir plate formula and broad-crested weir computation above the notch. Rating No. 1 continued to be used and is considered good.

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

Daily Mean Discharge (ft³/s) for E250

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

Daily Mean Discharge (ft³/s) for E250 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total (acre-ft) | 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 |
| Min Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Min | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 23 | 20 | 0 | 0 | 0 | 0 | 0 |

^a E = Equipment malfunction.^b — = Not applicable.Daily Mean Discharge (ft³/s) for E250 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|---|-------------|---|------------|---|------------|---|--------------------------|---|----------------|---|
| WY2010 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0 | Acre-ft | 0 |
| CY2009 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0 | Acre-ft | 0 |

E252 WATER CANYON ABOVE SR 501

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

Drainage Area. 3.25 mi².

Period of Record. October 1994 to June 2000 (destroyed by flood); April 2001 to September 2010.

Revised Record. Drainage area (2006).

Gage. Data logger with cellular telemetry. Elevation of gage is 7553 ft above NGVD from GPS survey.

Average Discharge. 15 yr, 0.14 ft³/s, 101 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 840 ft³/s on June 28, 2000, from peak-flow computation. Gage height 7.9 ft.

Maximum for Current Water Year. Maximum discharge, 6 ft³/s April 19, 2010, gage height 2.9 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with a shaft encoder float system (5-min interval) and cellular phone with speech modem. 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. The station was visited eight times to conduct discharge measurements and service the instrumentation.

Datum Correction. None. Levels were run when the gage was established on April 16, 2001. The new gage is at 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 for the period from June 4 to July 31, 2010, when the data were not recorded.

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 rock riffle 5 ft below the gage. The channel has been scoured and filled significantly by high flows resulting from the Cerro Grande fire.

One discharge measurement (No. 59) was made this year. Small shifts were applied based on the PZF.

Rating No. 3 should be considered good except for the extreme lower end (less than $0.5 \text{ ft}^3/\text{s}$), which will continue to change back and forth in response to high flows. Steep slopes in the gage reach and throughout the region cause considerable movement of material, either scours or fills.

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

Daily Mean Discharge (ft³/s) for E252

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|------|-------------------|-------------------|------|----------------|------|------|------|------|----------------|------|------|
| 1 | 0.02 | 0.02 | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.4 | 0.33 | 0.09 | M ^b | 0.04 | 0.02 |
| 2 | 0.02 | 0.02 ^a | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.33 | 0.33 | 0.09 | M | 0.04 | 0.02 |
| 3 | 0.01 | 0.02 ^a | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.26 | 0.33 | 0.09 | M | 0.04 | 0.02 |
| 4 | 0.01 | 0.02 ^a | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.27 | 0.3 | M | M | 0.04 | 0.02 |
| 5 | 0.01 | 0.02 ^a | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.36 | 0.29 | M | M | 0.04 | 0.02 |
| 6 | 0.01 | 0.02 ^a | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.52 | 0.26 | M | M | 0.04 | 0.02 |
| 7 | 0.01 | 0.02 ^a | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.48 | 0.25 | M | M | 0.03 | 0.02 |
| 8 | 0.01 | 0.02 ^a | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.44 | 0.25 | M | M | 0.03 | 0.02 |
| 9 | 0.01 | 0.02 ^a | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.45 | 0.25 | M | M | 0.03 | 0.02 |
| 10 | 0.01 | 0.02 ^a | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.47 | 0.23 | M | M | 0.03 | 0.01 |
| 11 | 0.01 | 0.02 ^a | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.53 | 0.21 | M | M | 0.03 | 0.01 |
| 12 | 0.01 | 0.02 ^a | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.45 | 0.21 | M | M | 0.03 | 0.01 |
| 13 | 0.01 | 0.02 ^a | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.34 | 0.2 | M | M | 0.03 | 0.01 |
| 14 | 0.01 | 0.02 ^a | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.56 | 0.2 | M | M | 0.03 | 0.01 |
| 15 | 0.01 | 0.02 ^a | 0.02 | 0.02 | 0.02 | 0.03 | 0.54 | 0.19 | M | M | 0.03 | 0 |
| 16 | 0.01 | 0.02 ^a | 0.02 | 0.02 | 0.02 | 0.04 | 0.5 | 0.16 | M | M | 0.03 | 0 |
| 17 | 0.01 | 0.02 ^a | 0.02 | 0.02 | 0.02 | 0.04 | 1.78 | 0.16 | M | M | 0.03 | 0 |
| 18 | 0.01 | 0.02 ^a | 0.02 | 0.02 | 0.02 | 0.04 | 2.2 | 0.17 | M | M | 0.03 | 0 |
| 19 | 0.01 | 0.02 ^a | 0.02 | 0.02 | 0.02 | 0.04 | 3.23 | 0.15 | M | M | 0.03 | 0 |
| 20 | 0.01 | 0.02 ^a | 0.02 | 0.02 | 0.02 | 0.04 | 4.17 | 0.14 | M | M | 0.04 | 0 |
| 21 | 0.01 | 0.02 ^a | 0.02 | 0.02 | 0.02 | 0.07 | 2.97 | 0.13 | M | M | 0.04 | 0 |
| 22 | 0.01 | 0.02 ^a | 0.02 | 0.02 | 0.02 | 0.09 | 1.98 | 0.11 | M | M | 0.04 | 0.01 |
| 23 | 0.01 | 0.02 ^a | 0.02 | 0.02 | 0.02 | 0.13 | 1.27 | 0.1 | M | M | 0.04 | 0 |
| 24 | 0.01 | 0.02 ^a | 0.02 | 0.02 | 0.02 | 0.12 | 0.9 | 0.1 | M | M | 0.04 | 0 |
| 25 | 0.01 | 0.02 ^a | 0.02 | 0.02 | 0.02 | 0.11 | 0.61 | 0.09 | M | M | 0.04 | 0 |
| 26 | 0.01 | 0.02 ^a | 0.02 | 0.02 | 0.02 | 0.15 | 0.47 | 0.09 | M | M | 0.03 | 0 |
| 27 | 0.01 | 0.02 ^a | 0.02 | 0.02 | 0.02 | 0.16 | 0.44 | 0.09 | M | M | 0.03 | 0 |
| 28 | 0.01 | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.15 | 0.4 | 0.09 | M | M | 0.03 | 0 |
| 29 | 0.01 | 0.02 ^a | 0.02 | 0.02 | — ^c | 0.15 | 0.39 | 0.09 | M | M | 0.03 | 0 |
| 30 | 0.01 | 0.02 ^a | 0.02 | 0.02 | — | 0.24 | 0.36 | 0.09 | M | M | 0.03 | 0 |
| 31 | 0.01 | — | 0.02 | 0.02 | — | 0.34 | — | 0.09 | — | 0.04 | 0.02 | — |

Daily Mean Discharge (ft³/s) for E252 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|------|-------------------|-------------------|------|------|------|-------|------|------|------|------|------|
| Total (ft³/s) | 0.33 | 0.6 | 0.62 | 0.62 | 0.57 | 2.36 | 28.17 | 5.68 | 0.27 | 0.04 | 1.04 | 0.25 |
| Total (acre-ft) | 0.65 | 1.2 | 1.2 | 1.2 | 1.1 | 4.7 | 56 | 11 | 0.54 | 0.08 | 2.1 | 0.5 |
| Max Daily Mean | 0.02 | 0.02 ^a | 0.02 ^a | 0.02 | 0.03 | 0.34 | 4.17 | 0.33 | 0.09 | 0.04 | 0.04 | 0.02 |
| Min Daily Mean | 0.01 | 0.02 ^a | 0.02 ^a | 0.02 | 0.02 | 0.03 | 0.26 | 0.09 | 0.09 | 0.04 | 0.02 | 0 |
| Instantaneous Max | 0.02 | 0.02 ^a | 0.02 ^a | 0.02 | 0.03 | 0.44 | 6.05 | 0.33 | 0.09 | 0.04 | 0.04 | 0.02 |
| Instantaneous Min | 0.01 | 0.01 ^a | 0.02 ^a | 0.02 | 0.02 | 0.02 | 0.25 | 0.09 | 0.09 | 0.02 | 0.02 | 0 |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 30 | 0 | 0 |

^a Reliable estimate.^b M = Missing data.^c — = Not applicable.Daily Mean Discharge (ft³/s) for E252 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|-------|------------|------|------------|---|--------------------------|------|----------------|----|
| WY2010 | Total | 40.55 | Mean | 0.13 | Max | 4.2 | Min | 0 | Instantaneous Max | 6.1 | Acre-ft | 80 |
| CY2009 | Total | 12.75 | Mean | 0.035 | Max | 0.14 | Min | 0 | Instantaneous Max | 0.17 | Acre-ft | 25 |

E252.5 WATER CANYON ABOVE S SITE CANYON

Location. Lat 35° 49' 50", long -106° 18' 26", Sec. 33, T. 19 N., R. 6 E., Ramon Vigil Grant, Los Alamos County.

Drainage Area. 5.64 mi².

Period of Record. October 1, 2008, to September 30, 2010.

Revised Record. Period of record (2009).

Gage. Data logger and 90° sharp-crested weir. Elevation of gage is 6980 ft above NGVD from GPS survey.

Average Discharge. 2 yr, 1.2 ft³/s, 866 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 0.96 ft³/s, October 29, 2009, gage height 1.5 ft.

Maximum for Current Water Year. Maximum discharge, 0.96 ft³/s, October 29, 2009, gage height 1.5 ft. No peak discharge above base of 1.0 ft³/s.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with 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 discharge measurements above the wading stage.

Fieldwork. The station was visited 15 times to measure discharge and service the instrumentation.

Datum Correction. None. The level run on February 27 2006, shows the gage to be within allowable limits.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except for the periods of November 22 to December 8, 2009; December 12 to 24, 2009; December 27, 2009, to February 17, 2010; February 20, 21, 26, 27, 28, 2010, and March 3 to 8, 2010, when the gage height was affected by ice.

Rating. The channel is straight 50 ft above and 30 ft below the gage then forks to the right. The streambed consists of rock and cobble. The banks are stable with vegetation.

Seven discharge measurements (Nos. 41–47) and three inspections of no flow were made this year.

Rating No. 2 was developed using the current year measurements and one critical depth computation.

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

Daily Mean Discharge (ft³/s) for E252.5

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|------|------|----------------|-----|----------------|------|------|------|------|------|------|-----|
| 1 | 0 | 0.04 | I ^a | I | I | 0.07 | 0.19 | 0.36 | 0.19 | 0.02 | 0.08 | 0 |
| 2 | 0 | 0.03 | I | I | I | 0.08 | 0.15 | 0.35 | 0.19 | 0.03 | 0.07 | 0 |
| 3 | 0 | 0.03 | I | I | I | I | 0.18 | 0.32 | 0.18 | 0.09 | 0.03 | 0 |
| 4 | 0 | 0.02 | I | I | I | I | 0.13 | 0.30 | 0.17 | 0.04 | 0.01 | 0 |
| 5 | 0 | 0.02 | I | I | I | I | 0.11 | 0.29 | 0.15 | 0.02 | 0.05 | 0 |
| 6 | 0 | 0.02 | I | I | I | I | 0.14 | 0.28 | 0.17 | 0.01 | 0.13 | 0 |
| 7 | 0 | 0.02 | I | I | I | I | 0.17 | 0.27 | 0.16 | 0.01 | 0.12 | 0 |
| 8 | 0 | 0.01 | I | I | I | I | 0.13 | 0.28 | 0.16 | 0.02 | 0.08 | 0 |
| 9 | 0 | 0 | 0 | I | I | 0.17 | 0.08 | 0.27 | 0.15 | 0.02 | 0.08 | 0 |
| 10 | 0 | 0 | 0 | I | I | 0.19 | 0.08 | 0.26 | 0.11 | 0.06 | 0.06 | 0 |
| 11 | 0 | 0 | 0.01 | I | I | 0.15 | 0.06 | 0.25 | 0.10 | 0.02 | 0.05 | 0 |
| 12 | 0 | 0.02 | I | I | I | 0.15 | 0.04 | 0.25 | 0.10 | 0.01 | 0.04 | 0 |
| 13 | 0.12 | 0.03 | I | I | I | 0.17 | 0.02 | 0.25 | 0.11 | 0 | 0.04 | 0 |
| 14 | 0.10 | 0.04 | I | I | I | 0.14 | 0.02 | 0.26 | 0.10 | 0 | 0.02 | 0 |
| 15 | 0.06 | 0.05 | I | I | I | 0.14 | 0.02 | 0.32 | 0.10 | 0 | 0.07 | 0 |
| 16 | 0.01 | 0.04 | I | I | I | 0.20 | 0.07 | 0.26 | 0.08 | 0 | 0.10 | 0 |
| 17 | 0 | 0.03 | I | I | I | 0.18 | 0.38 | 0.24 | 0.06 | 0 | 0.07 | 0 |
| 18 | 0 | 0.01 | I | I | 0 | 0.29 | 0.43 | 0.24 | 0.05 | 0 | 0.03 | 0 |
| 19 | 0 | 0.01 | I | I | 0 | 0.32 | 0.51 | 0.24 | 0.04 | 0 | 0.01 | 0 |
| 20 | 0 | 0.01 | I | I | I | 0.29 | 0.58 | 0.24 | 0.04 | 0 | 0.01 | 0 |
| 21 | 0.12 | 0.01 | I | I | I | 0.22 | 0.49 | 0.24 | 0.03 | 0 | 0 | 0 |
| 22 | 0.11 | I | I | I | 0.02 | 0.26 | 0.44 | 0.23 | 0.03 | 0.01 | 0 | 0 |
| 23 | 0.09 | I | I | I | I | 0.27 | 0.41 | 0.22 | 0.02 | 0.06 | 0.03 | 0 |
| 24 | 0.09 | I | I | I | I | 0.30 | 0.38 | 0.23 | 0.02 | 0.05 | 0.04 | 0 |
| 25 | 0.06 | I | 0 | I | 0.02 | 0.19 | 0.33 | 0.23 | 0.01 | 0.13 | 0.02 | 0 |
| 26 | 0.07 | I | 0 | I | I | 0.14 | 0.30 | 0.23 | 0.01 | 0.20 | 0.01 | 0 |
| 27 | 0.06 | I | I | I | I | 0.14 | 0.28 | 0.22 | 0.01 | 0.13 | 0 | 0 |
| 28 | 0.06 | I | I | I | I | 0.15 | 0.27 | 0.21 | 0.06 | 0.09 | 0 | 0 |
| 29 | 0.11 | I | I | I | — ^b | 0.14 | 0.27 | 0.21 | 0.05 | 0.07 | 0 | 0 |
| 30 | 0.05 | I | I | I | — | 0.14 | 0.33 | 0.21 | 0.03 | 0.07 | 0 | 0 |
| 31 | 0.05 | — | I | I | — | 0.16 | — | 0.21 | — | 0.07 | 0 | — |

Daily Mean Discharge (ft³/s) for E252.5 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|------|------|------|-----|------|------|------|------|------|------|------|------|
| Total (ft³/s) | 1.16 | 0.46 | 0.01 | I | 0.04 | 4.65 | 6.99 | 7.97 | 2.68 | 1.22 | 1.26 | 0 |
| Total (acre-ft) | 2.30 | 0.91 | 0.02 | I | 0.08 | 9.20 | 14 | 16 | 5.30 | 2.40 | 2.50 | 0 |
| Max Daily Mean | 0.12 | 0.05 | 0.01 | I | 0.02 | 0.32 | 0.58 | 0.36 | 0.19 | 0.20 | 0.13 | 0 |
| Min Daily Mean | 0 | 0 | 0 | I | 0 | 0.07 | 0.02 | 0.21 | 0.01 | 0 | 0 | 0 |
| Instantaneous Max | 0.96 | 0.05 | 0.13 | I | 2.30 | 0.50 | 0.68 | 0.48 | 0.33 | 0.41 | 0.44 | 0.09 |
| Instantaneous Min | 0 | 0 | 0 | I | 0 | 0 | 0 | 0.17 | 0 | 0 | 0 | 0 |
| Missing Days | 0 | 9 | 26 | 31 | 24 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |

^a I = Ice present.^b — = Not applicable.Daily Mean Discharge (ft³/s) for E2525 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|--------|-------------|-------|------------|------|------------|---|--------------------------|------|----------------|-----|
| WY2010 | Total | 26.44 | Mean | 0.098 | Max | 0.58 | Min | 0 | Instantaneous Max | 2.30 | Acre-ft | 52 |
| CY2009 | Total | 220.32 | Mean | 0.67 | Max | 24 | Min | 0 | Instantaneous Max | 120 | Acre-ft | 437 |

E252.8 S SITE CANYON ABOVE WATER CANYON

Location. Lat 35° 49' 51", long 106° 18' 27", Sec. 33, T. 19 N., R. 6 E., Ramon Vigil Grant, Los Alamos County.

Drainage Area. 0.76 mi².

Period of Record. April 1999 to September 30, 2010.

Revised Record. Drainage area (2006).

Gage. Data logger and 90° sharp-crested weir. Elevation of gage is 6840 ft above NGVD from GPS survey.

Average Discharge. 11 yr, 0.02 ft³/s, 17 acre-ft/yr.

Maximum for Period of Record. Maximum discharge 162 ft³/s, August 20, 2004, gage height 4.0 ft.

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



Equipment. The station is equipped with a Sutron 8210 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 on the left 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. An outside staff gage is available for reference. No provision has been made for discharge measurements above the wading stage.

Field Work. The station was visited 13 times to measure discharge and service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except for the periods from December 3 to 5, 2009; December 7 to 15, 2009; December 17, 23, 24, 30, 2009; January 3 to 30, 2010; February 2 to 25, 2010; and March 13, 14, 15, 27, and 29, 2010, when the gage height was affected by ice. On July 23, 2010, and from July 27 to August 18, 2010, the data logger malfunctioned.

Rating. The control is a 90-degree weir with a 2-ft-deep notch. The canyon is very steep directly above the station but does not flatten out enough to allow the weir to be effective.

Rating No. 1 was developed using the weir formula and one critical-depth computation. Rating No. 1 is considered fair. Large shifts were applied to the low end (PZF) because of filling in the pool. These are most likely to change over time when fill conditions occur.

Discharge. Discharge was computed by applying the gage height to Rating No. 1 with "V" diagrams adjusting the PZF. Those periods estimated at zero flow were based on precipitation and the adjoining stations E2525 and E262.

Daily Mean Discharge (ft³/s) for E252.8

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|----------------|----------------|----------------|-----|----------------|----------------|-----|----------------|----------------|----------------|----------------|----------------|
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^a | E ^b | 0 |
| 2 | 0 | 0 | 0 | 0 | I | 0 | 0 | 0 | 0 | 0 | E | 0 ^a |
| 3 | 0 | 0 | I ^c | I | I | 0 | 0 | 0 | 0 | 0 | E | 0 |
| 4 | 0 | 0 | I | 0 | I | 0 | 0 | 0 | 0 | 0 | E | 0 |
| 5 | 0 | 0 | I | I | I | 0 | 0 | 0 | 0 | 0* | E | 0 |
| 6 | 0 | 0 | 0 | I | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 |
| 7 | 0 | 0 ^a | I | I | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 |
| 8 | 0 | 0 | I | I | I | 0 | 0 | 0 | 0 | 0 | E | 0 |
| 9 | 0 | 0 | I | I | I | 0 | 0 | 0 | 0 | 0 | E | 0 |
| 10 | 0 | 0 | I | 0 | I | 0 | 0 | 0 | 0 | 0 | E | 0 |
| 11 | 0 | 0 | I | 0 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 |
| 12 | 0 | 0 | I | 0 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 |
| 13 | 0 | 0 | I | I | 0 | I | 0 | 0 | 0 | 0 | E | 0 |
| 14 | 0 | 0 | I | I | 0 | I | 0 | 0 | 0 | 0 | E | 0 |
| 15 | 0 | 0 | I | I | 0 | I | 0 | 0 | 0 | 0 | E | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 |
| 17 | 0 | 0 | I | 0 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | E | 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 | I | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | I | I | I | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | I | I | I | 0 | 0 | 0 | 0 | E | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | I | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | I | 0 | 0 | 0 ^a | 0 ^a | 0 | 0 | 0 |
| 26 | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 0 ^a | 0 |
| 27 | 0 ^a | 0 | 0 | 0 | 0 | I | 0 | 0 ^a | 0 | E | 0 | 0 ^a |
| 28 | 0 | 0 | 0 | I | 0 | 0 | 0 | 0 | 0 | E | 0 ^a | 0 |
| 29 | 0 | 0 | 0 | I | — ^d | I | 0 | 0 ^a | 0 | E | 0 | 0 |
| 30 | 0 | 0 | I | I | — | 0 | 0 | 0* | 0 | E | 0 | 0 |
| 31 | 0 | — | 0 | 0 | — | 0 | — | 0 | — | E | 0 ^a | — |

Daily Mean Discharge (ft³/s) for E252.8 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|----------------|----------------|-----|-----|-----|-----|-----|----------------|----------------|----------------|----------------|----------------|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total (acre-ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Daily Mean | 0 ^a | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a |
| Min Daily Mean | 0 ^a | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a |
| Instantaneous Max | 0 ^a | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a |
| Instantaneous Min | 0 ^a | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a |
| Missing Days | 0 | 0 | 16 | 17 | 12 | 5 | 0 | 0 | 0 | 6 | 18 | 0 |

^a Reliable Estimate.^b E = Equipment malfunction.^c I = Ice present.^b — = Not applicable.Daily Mean Discharge (ft³/s) for E2528 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|------|------------|----|------------|---|--------------------------|----|----------------|----|
| WY2010 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0 | Acre-ft | 0 |
| CY2009 | Total | 37.60 | Mean | 0.11 | Max | 14 | Min | 0 | Instantaneous Max | 19 | Acre-ft | 75 |

E253 CAÑON DE VALLE ABOVE SR 501

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

Drainage Area. 2.27 mi².

Period of Record. October 1994 to June 2000 (gage destroyed by flood); January 31, 2001, to September 30, 2010.

Gage. Data logger and 120-degree weir plate, rain gage with cellular telemetry. Elevation of gage is 7701 ft above NGVD from GPS survey.

Average Discharge. 9 yr, 0.02 ft³/s, 16 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 740 ft³/s, June 28, 2000, from peak-flow computation, gage height 8.4 ft. No flow most of the time.

Maximum for Current Water Year. No peak discharge above base of 5.0 ft³/s. No flow for 2010 water year.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with a shaft encoder float system (5-min interval) and cellular phone with speech modem. 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. The station was visited 37 times to service the instrumentation.

Datum Correction. None. 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 for the period from April 20 to 26, 2010, because the equipment 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-ft sharp-crested weir. The channel becomes the control at high flow.

Thirty-seven inspections of no flow were made this year.

Rating No. 2 is based on four discharge measurements and one critical-depth computation, and theoretical computation for a 120-degree sharp-crested weir to a gage height of 2.30 ft. A broad-crested weir computation is used above that stage.

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

Daily Mean Discharge (ft³/s) for E253

| 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 | 0.00 ^a | 0 |
| 3 | 0 | 0.00 ^a | 0 | 0 | 0 | 0 | 0 | 0.00 ^a | 0 | 0 | 0 | 0 |
| 4 | 0 | 0.00 ^a | 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 | 0.00 ^a | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 ^a | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 ^a | 0 | 0 |
| 9 | 0 | 0.00 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 ^a | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 ^a | 0 |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 ^a | 0 | 0 | 0.00 ^a | 0 | 0 |
| 13 | 0.00 ^a | 0 | 0 | 0 | 0 | 0 | 0.00 ^a | 0 | 0 | 0 | 0 | 0.00 ^a |
| 14 | 0 | 0 | 0.00 ^a | 0 | 0 | 0 | 0.00 ^a | 0 | 0.00 ^a | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 0 | 0.00 ^a | 0.00 ^a | 0 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 ^a | 0 | 0 | 0 | 0.00 ^a | 0 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 ^a | 0.00 ^a | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 ^a | 0 | 0 | 0 | 0.00 ^a | 0 |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 ^a | 0 | 0 | 0.00 ^a | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | E ^b | 0 | 0 | 0 | 0 | 0.00 ^a |
| 21 | 0.00 ^a | 0 | 0 | 0 | 0 | 0 | E | 0 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 | 0 | 0.00 ^a | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 | 0 | 0 | 0.00 ^a | 0.00 ^a |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 | 0 | 0 | 0.00 ^a | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 | 0 | 0.00 ^a | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 ^a | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | — ^c | 0 | 0 | 0 | 0.00 ^a | 0 | 0 | 0 |
| 30 | 0 | 0.00 ^a | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 0.00 ^a | 0 |
| 31 | 0 | — | 0 | 0 | — | 0 | — | 0 | — | 0 | 0 | — |

Daily Mean Discharge (ft³/s) for E253 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-------------------|-------------------|-------------------|-----|-----|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total (acre-ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Daily Mean | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0 | 0 | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a |
| Min Daily Mean | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0 | 0 | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a |
| Instantaneous Max | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0 | 0 | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a |
| Instantaneous Min | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0 | 0 | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |

^a Reliable estimate.^b E = Equipment failure.^c — = Not applicable.Daily Mean Discharge (ft³/s) for E253 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|---|-------------|---|------------|---|------------|---|--------------------------|---|----------------|---|
| WY2010 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0 | Acre-ft | 0 |
| CY2009 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0 | Acre-ft | 0 |

E256 CAÑON DE VALLE BELOW MDA P

Location. Lat 35° 51' 01", long 106° 19' 57", Sec. 29, T.19 N., R. 6 E., Ramon Vigil Grant, Los Alamos County.

Drainage Area. 3.13 mi².

Period of Record. January 24, 2002, to September 30, 2010.

Revised Record. Drainage area (2006).

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

Average Discharge. 8 yr, 0.45 ft³/s, 328 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 19 ft³/s, August 24, 2005, gage height 1.7 ft.

Maximum for Current Water Year. Maximum discharge, 1.6 ft³/s, December, 16, 2010, gage height 0.37 ft. No peak discharge above base of 10 ft³/s.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with a Sutron Accubar bubble sensor within a 24-in. Parshall flume. The system is powered by a solar panel battery system housed in a NEMA shelter on the left bank. The station is 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. An outside staff gage is available for reference. No provision has been made for discharge measurement above the wading stage.

Fieldwork. The station was visited 16 times to service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the inside staff gage gave a complete and satisfactory record, excepts for the periods of October 30, 2009; November 16 to 18, 2009; November 30 to December 12, 2009; December 16, 2009; December 25, 2009, to January 17, 2010; January 22, 2010; and February 20 to March 4 and March 12, 13, and 21, 2010, when the gage height was affected by ice.

Rating. The channel is straight for 50 ft upstream and 20 ft downstream from the gage. The streambed consists of sand with gravel subject to fill behind the flume from flow events and gage silting problems. The banks are covered with vegetation.

Fifteen observations of flow were made this year.

Rating No. 1 is based on the 24-in. Parshall flume.

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

Daily Mean Discharge (ft³/s) for E256

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|------|------|----------------|------|----------------|------|------|------|------|------|------|-------------------|
| 1 | 0.04 | 0.03 | I ^a | I | 0 | I | 0.07 | 0.13 | 0.07 | 0.03 | 0.03 | 0.03 |
| 2 | 0.03 | 0.03 | I | I | 0 | I | 0.06 | 0.13 | 0.07 | 0.03 | 0.03 | 0.03 |
| 3 | 0.03 | 0.03 | I | I | 0 | I | 0.06 | 0.12 | 0.07 | 0.03 | 0.03 | 0.03 |
| 4 | 0.03 | 0.03 | I | I | 0 | I | 0.06 | 0.12 | 0.07 | 0.03 | 0.03 | 0.03 |
| 5 | 0.03 | 0.03 | I | I | 0 | 0.03 | 0.07 | 0.12 | 0.07 | 0.03 | 0.05 | 0.03 |
| 6 | 0.03 | 0.03 | I | I | 0 | 0.03 | 0.06 | 0.11 | 0.07 | 0.03 | 0.04 | 0.03 |
| 7 | 0.03 | 0.03 | I | I | 0 | 0.03 | 0.06 | 0.11 | 0.06 | 0.03 | 0.03 | 0.03 |
| 8 | 0.03 | 0.03 | I | I | 0 | 0.03 | 0.05 | 0.11 | 0.05 | 0.03 | 0.03 | 0.03 |
| 9 | 0.03 | 0.03 | I | I | 0 | 0.03 | 0.06 | 0.11 | 0.05 | 0.03 | 0.03 | 0.03 |
| 10 | 0.03 | 0.03 | I | I | 0 | 0.03 | 0.06 | 0.11 | 0.04 | 0.03 | 0.03 | 0.03 |
| 11 | 0.03 | 0.03 | I | I | 0 | 0.03 | 0.06 | 0.1 | 0.04 | 0.03 | 0.03 | 0.03 |
| 12 | 0.03 | 0.03 | I | I | 0 | I | 0.06 | 0.11 | 0.04 | 0.03 | 0.03 | 0.03 |
| 13 | 0.04 | 0.03 | 0.03 | I | 0 | I | 0.06 | 0.1 | 0.04 | 0.03 | 0.03 | 0.03 |
| 14 | 0.03 | 0.03 | 0.03 | I | 0 | 0.03 | 0.06 | 0.12 | 0.04 | 0.03 | 0.03 | 0.03 ^b |
| 15 | 0.03 | 0.03 | 0.03 | I | 0 | 0.03 | 0.06 | 0.11 | 0.03 | 0.03 | 0.04 | 0.03 ^b |
| 16 | 0.03 | I | I | I | 0 | 0.04 | 0.07 | 0.08 | 0.03 | 0.03 | 0.03 | 0.02 |
| 17 | 0.03 | I | 0.03 | I | 0 | 0.05 | 0.08 | 0.08 | 0.03 | 0.03 | 0.03 | 0.04 |
| 18 | 0.03 | I | 0.03 | 0.04 | 0 | 0.06 | 0.07 | 0.09 | 0.03 | 0.03 | 0.03 | 0.04 |
| 19 | 0.03 | 0.03 | 0.03 | 0 | 0 | 0.05 | 0.08 | 0.08 | 0.03 | 0.03 | 0.03 | 0.04 |
| 20 | 0.03 | I | 0.03 | 0 | I | 0.05 | 0.08 | 0.08 | 0.03 | 0.03 | 0.03 | 0.04 |
| 21 | 0.04 | I | 0.03 | 0 | I | I | 0.08 | 0.08 | 0.03 | 0.03 | 0.03 | 0.02 |
| 22 | 0.03 | I | 0.02 | I | I | 0.06 | 0.09 | 0.08 | 0.03 | 0.06 | 0.03 | 0.03 |
| 23 | 0.03 | I | 0.03 | 0.06 | I | 0.05 | 0.1 | 0.08 | 0.03 | 0.03 | 0.03 | 0.01 |
| 24 | 0.03 | I | 0.03 | 0.03 | I | 0.05 | 0.11 | 0.08 | 0.03 | 0.03 | 0.03 | 0.01 |
| 25 | 0.03 | I | I | 0 | I | 0.05 | 0.11 | 0.08 | 0.03 | 0.09 | 0.03 | 0.02 |
| 26 | 0.03 | I | I | 0 | I | 0.06 | 0.12 | 0.08 | 0.03 | 0.04 | 0.03 | 0.02 |
| 27 | 0.03 | I | I | 0 | I | 0.06 | 0.13 | 0.07 | 0.03 | 0.03 | 0.03 | 0.02 |
| 28 | 0.03 | 0.09 | I | 0 | I | 0.06 | 0.13 | 0.07 | 0.03 | 0.03 | 0.03 | 0.02 |
| 29 | 0.03 | 0.03 | I | 0 | — ^c | 0.07 | 0.13 | 0.07 | 0.03 | 0.03 | 0.03 | 0.02 |
| 30 | I | I | I | 0 | — | 0.09 | 0.13 | 0.07 | 0.03 | 0.03 | 0.03 | 0.02 |
| 31 | 0.03 | — | I | 0 | — | 0.09 | — | 0.07 | — | 0.03 | 0.03 | — |

Daily Mean Discharge (ft³/s) for E256 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|------|------|------|------|-----|------|------|------|------|------|------|-------------------|
| Total (ft³/s) | 0.93 | 0.61 | 0.33 | 0.13 | 0 | 1.16 | 2.42 | 2.95 | 1.26 | 1.05 | 0.97 | 0.84 |
| Total (acre-ft) | 1.80 | 1.20 | 0.65 | 0.26 | 0 | 2.30 | 4.80 | 5.90 | 2.50 | 2.10 | 1.90 | 1.70 |
| Max Daily Mean | 0.04 | 0.09 | 0.03 | 0.06 | 0 | 0.09 | 0.13 | 0.13 | 0.07 | 0.09 | 0.05 | 0.04 ^b |
| Min Daily Mean | 0.03 | 0.03 | 0.02 | 0 | 0 | 0.03 | 0.05 | 0.07 | 0.03 | 0.03 | 0.03 | 0.01 ^b |
| Instantaneous Max | 0.26 | 0.51 | 0.03 | 0.93 | 0 | 0.16 | 0.13 | 0.26 | 0.08 | 1.37 | 0.46 | 0.71 ^b |
| Instantaneous Min | 0.03 | 0.03 | 0.02 | 0 | 0 | 0.03 | 0.05 | 0.05 | 0.02 | 0.02 | 0.02 | 0 ^b |
| Missing Days | 1 | 12 | 20 | 18 | 9 | 7 | 0 | 0 | 0 | 0 | 0 | 0 |

^a I = Ice present.^b Reliable estimate.^c — = Not applicable.Daily Mean Discharge (ft³/s) for E256 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|--------|-------------|-------|------------|------|------------|------|--------------------------|------|----------------|-----|
| WY2010 | Total | 12.61 | Mean | 0.043 | Max | 0.13 | Min | 0 | Instantaneous Max | 1.60 | Acre-ft | 25 |
| CY2009 | Total | 382.36 | Mean | 1.15 | Max | 20 | Min | 0.02 | Instantaneous Max | 33 | Acre-ft | 758 |

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.

Drainage Area. 0.040 mi².

Period of Record. October 1, 2002, to September 30, 2010.

Gage. Data logger and 12-in. Parshall flume, rain gage with cellular telemetry. Elevation of gage is 7359 ft above NGVD.

Average Discharge. 8 yr, 0.06 ft³/s, 43 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 9.5 ft³/s, August 29, 2007, gage height 1.8 ft.

Maximum for Current Water Year. Maximum discharge, 2.0 ft³/s, July 25, 2010, gage height 0.64 ft. No peak discharges above base of 3.0 ft³/s.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) and a Milltronics sonic probe mounted on a 12-in. Parshall flume and cellular phone with speech modem. 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 12-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. This station was visited 31 times to service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except for the periods of December 7, 2009, to January 11, 2010; January 19 to February 12, 2010; and February 22 to March 12, 2010, 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 12-in. Parshall flume.

Twenty-eight inspections of no flow and three inspections of observed flow were made this year.

Rating No. 1 was developed based on the computation of the 12-in. Parshall flume. The PZF is 0.00 gage height.

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

Daily Mean Discharge (ft³/s) for E257

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

Daily Mean Discharge (ft³/s) for E257 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-------------------|-------------------|-------------------|------|------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Total (ft³/s) | 0.02 | 0 | 0.16 | 0.06 | 0.25 | 0.50 | 0.04 | 0 | 0 | 0.13 | 0.02 | 0.06 |
| Total (acre-ft) | 0.04 | 0 | 0.32 | 0.12 | 0.50 | 0.99 | 0.08 | 0 | 0 | 0.26 | 0.04 | 0.12 |
| Max Daily Mean | 0.02 ^a | 0 ^a | 0.06 ^a | 0.01 | 0.05 | 0.06 ^a | 0.02 ^a | 0 ^a | 0 ^a | 0.08 ^a | 0.01 ^a | 0.04 ^a |
| Min Daily Mean | 0 ^a | 0 ^a | 0 ^a | 0 | 0 | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a |
| Instantaneous Max | 0.64 ^a | 0.05 ^a | 0.16 ^a | 0.06 | 0.08 | 0.14 ^a | 0.06 ^a | 0.12 ^a | 0.03 ^a | 1.96 ^a | 0.13 ^a | 1.23 ^a |
| Instantaneous Min | 0 ^a | 0 ^a | 0 ^a | 0 | 0 | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a | 0 ^a |
| Missing Days | 0 | 0 | 25 | 24 | 19 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

^a Reliable estimate.^b I = Ice present.^c — = Not applicable.Daily Mean Discharge (ft³/s) for E257 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|-------|------------|------|------------|---|--------------------------|------|----------------|------|
| WY2010 | Total | 1.24 | Mean | 0.004 | Max | 0.08 | Min | 0 | Instantaneous Max | 2.00 | Acre-ft | 2.50 |
| CY2009 | Total | 20.40 | Mean | 0.06 | Max | 5.50 | Min | 0 | Instantaneous Max | 15 | Acre-ft | 40 |

E262 CAÑON DE VALLE ABOVE WATER CANYON

Location. Lat 35° 49' 51", long 106° 18' 14", Sec. 33, T. 19 N., R. 6 E., Ramon Vigil Grant, Los Alamos County.

Drainage Area. 4.32 mi².

Period of Record. October 1, 1998, to September 30, 2010.

Revised Record. Drainage area (2006).

Gage. Data logger and 90-degree weir plate. Elevation of gage is 6840 ft above NGVD.

Average Discharge. 12 yr, 0.04 ft³/s, 30 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 63 ft³/s, August 20, 2004, gage height 4.1 ft.

Maximum for Current Water Year. No peak discharge above base of 5 ft³/s.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) and a Milltronics sonic probe mounted on a cantilevered 6-in. staff gage spanning over stream. 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 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. The station was visited 13 times to service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except for the periods of December 7 to 14, 2009; February 3 to 5, 2010; February 21 to March 4, 2010; and March 9 to 11, 13 to 15, 17, 19, 20, 2010, when the gage height was affected by ice. In addition, from July 12 to 19, 2010, the data logger malfunctioned.

Rating. The channel is about 10 ft wide and straight for about 50 ft upstream and straight for about 30 ft downstream. The streambed through this reach is primarily rock with gravel, sand, and cobbles.

Twelve no flow inspections and one flow inspection were made this year.

Rating No. 1 is based on a theoretical computation for a 90-degree sharp-crested weir up to a gage height of 2.95 ft. A broad-crested weir computation is used above that stage.

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

Daily Mean Discharge (ft³/s) for E262

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

Daily Mean Discharge (ft³/s) for E262 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|----------------|-----|-------------------|----------------|-------------------|----------------|-----|-----|-----|-----|----------------|----------------|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total (acre-ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Daily Mean | 0 ^b | 0 | 0 ^b | 0 ^b | 0.00 ^b | 0 ^b | 0 | 0 | 0 | 0 | 0 ^b | 0 ^b |
| Min Daily Mean | 0 ^b | 0 | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 | 0 | 0 | 0 | 0 ^b | 0 ^b |
| Instantaneous Max | 0 ^b | 0 | 0.01 ^b | 0 ^b | 0.0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 ^b | 0 ^b |
| Instantaneous Min | 0 ^b | 0 | 0 ^b | 0 ^b | 0 ^b | 0 ^b | 0 | 0 | 0 | 0 | 0 ^b | 0 ^b |
| Missing Days | 0 | 0 | 8 | 0 | 11 | 13 | 2 | 0 | 0 | 8 | 0 | 0 |

^a I = Ice present.

^b Reliable estimate.

^c E = Equipment malfunction.

^d — = Not applicable.

Daily Mean Discharge (ft³/s) for E262 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|------|------------|----|------------|---|--------------------------|------|----------------|----|
| WY2010 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0.01 | Acre-ft | 0 |
| CY2009 | Total | 40.34 | Mean | 0.11 | Max | 12 | Min | 0 | Instantaneous Max | 70 | Acre-ft | 80 |

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.

Drainage Area. 0.008 mi².

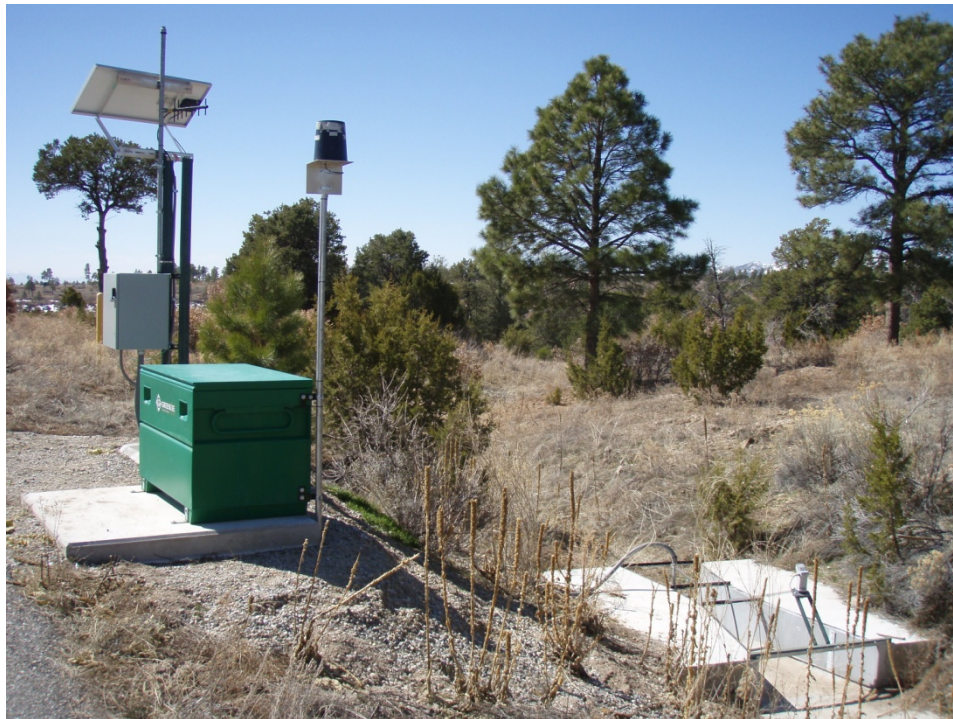
Period of Record. October 1, 2008, to September 30, 2010.

Gage. Data logger and 24-in. Parshall flume, rain gage with cellular telemetry. Elevation of gage is 6998 ft above NGVD.

Average Discharge. 2 yr, 0.22 ft³/s, 161 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 1.3 ft³/s, May 8, 2010, gage height 0.31 ft.

Maximum for Current Year. Maximum discharge, 1.3 ft³/s, May 8, 2010, gage height 0.31 ft. No peak discharges above base of 1.0 ft³/s.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) and a Milltronics sonic probe mounted on a 24-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. 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. The staff gage in the 24-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. This station was visited 33 times to service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except for the period from December 4, 2009, to March 3, 2010, because of snow and ice.

Rating. The channel is straight above and below the gage. The streambed consists of mostly sand, and the flume is subject to silting after storm events.

Thirty-three inspections of no flow were made this year.

Rating No. 1 was developed based on the computation of 24-in. Parshall flume. The PZF is 0.00 gage height.

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

Daily Mean Discharge (ft³/s) for E262.4

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-------------------|-------------------|-------------------|----------------|----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 1 | 0 | 0.00 ^a | 0.00 ^a | 1 ^b | 1 | 1 | 0.00 ^a | 0 | 0 | 0 | 0.00 ^a | 0 |
| 2 | 0 | 0.00 ^a | 0.00 ^a | 1 | 1 | 1 | 0 | 0 | 0 | 0.01 | 0.00 ^a | 0 |
| 3 | 0 | 0.00 ^a | 0.00 ^a | 1 | 1 | 1 | 0 | 0.00 ^a | 0 | 0.00 ^a | 0 | 0 |
| 4 | 0 | 0.00 ^a | 1 | 1 | 1 | 0.06 | 0 | 0 | 0 | 0.00 ^a | 0 | 0 |
| 5 | 0 | 0 | 1 | 1 | 1 | 0.06 | 0 | 0.00 ^a | 0 | 0 | 0.02 ^a | 0 |
| 6 | 0 | 0 | 1 | 1 | 1 | 0.05 | 0 | 0.00 ^a | 0 | 0.00 ^a | 0.01 ^a | 0 |
| 7 | 0.03 ^a | 0 | 1 | 1 | 1 | 0.08 | 0 | 0.00 ^a | 0.00 ^a | 0 | 0.00 ^a | 0 |
| 8 | 0.00 ^a | 0 | 1 | 1 | 1 | 0.06 | 0 | 0.06 ^a | 0 | 0.00 ^a | 0.00 ^a | 0 |
| 9 | 0.00 ^a | 0 | 1 | 1 | 1 | 0.05 | 0 | 0 | 0 | 0.00 ^a | 0.00 ^a | 0 |
| 10 | 0.00 ^a | 0 | 1 | 1 | 1 | 0.04 | 0 | 0 | 0 | 0.00 ^a | 0.00 ^a | 0 |
| 11 | 0 | 0 | 1 | 1 | 1 | 0.05 | 0 | 0 | 0 | 0 | 0.00 ^a | 0 |
| 12 | 0 | 0 | 1 | 1 | 1 | 0.05 | 0 | 0 | 0 | 0.00 ^a | 0.00 ^a | 0 |
| 13 | 0.03 ^a | 0.00 ^a | 1 | 1 | 1 | 0.04 | 0 | 0 | 0 | 0 | 0.00 ^a | 0.00 ^a |
| 14 | 0.00 ^a | 0.00 ^a | 1 | 1 | 1 | 0.03 | 0 | 0.02 | 0.00 ^a | 0 | 0.00 ^a | 0 |
| 15 | 0.00 ^a | 0.00 ^a | 1 | 1 | 1 | 0.04 | 0 | 0.00 ^a | 0 | 0 | 0.00 ^a | 0 |
| 16 | 0.00 ^a | 0.00 ^a | 1 | 1 | 1 | 0.04 ^a | 0.01 | 0.00 ^a | 0 | 0 | 0.00 ^a | 0 |
| 17 | 0 | 0.00 ^a | 1 | 1 | 1 | 0 | 0.01 | 0.00 ^a | 0 | 0 | 0.00 ^a | 0 |
| 18 | 0 | 0.00 ^a | 1 | 1 | 1 | 0 | 0.01 | 0 | 0 | 0 | 0.00 ^a | 0 |
| 19 | 0 | 0.00 ^a | 1 | 1 | 1 | 0.03 | 0.02 ^a | 0 | 0 | 0.00 ^a | 0.00 ^a | 0 |
| 20 | 0.03 ^a | 0.00 ^a | 1 | 1 | 1 | 0.04 | 0.00 ^a | 0 | 0 | 0 | 0 | 0 |
| 21 | 0.04 ^a | 0.00 ^a | 1 | 1 | 1 | 0.05 | 0.00 ^a | 0 | 0 | 0.00 ^a | 0 | 0.01 ^a |
| 22 | 0.00 ^a | 0.00 ^a | 1 | 1 | 1 | 0.03 | 0.00 ^a | 0.00 ^a | 0 | 0.00 ^a | 0 | 0.04 ^a |
| 23 | 0.00 ^a | 0.00 ^a | 1 | 1 | 1 | 0.01 | 0.00 ^a | 0.00 ^a | 0 | 0.00 ^a | 0.00 ^a | 0.00 ^a |
| 24 | 0.00 ^a | 0.00 ^a | 1 | 1 | 1 | 0.03 | 0 | 0.00 ^a | 0 | 0.00 ^a | 0.00 ^a | 0.00 ^a |
| 25 | 0.00 ^a | 0.00 ^a | 1 | 1 | 1 | 0.01 | 0 | 0.00 ^a | 0.00 ^a | 0.01 ^a | 0.00 ^a | 0.00 ^a |
| 26 | 0.02 ^a | 0.00 ^a | 1 | 1 | 1 | 0 | 0.00 ^a | 0.00 ^a | E ^c | 0.00 ^a | 0 | 0 |
| 27 | 0.00 ^a | 0.00 ^a | 1 | 1 | 1 | 0 | 0 | 0.00 ^a | E | 0.00 ^a | 0 | 0 |
| 28 | 0.00 ^a | 0.00 ^a | 1 | 1 | 1 | 0.00 ^a | 0 | 0.00 ^a | E | 0.00 ^a | 0.01 | 0 |
| 29 | 0.00 ^a | 0.00 ^a | 1 | 1 | — ^d | 0 | 0 | 0.00 ^a | 0.00 ^a | 0 | 0.01 | 0 |
| 30 | 0.00 ^a | 0.00 ^a | 1 | 1 | — | 0 | 0 | 0 | 0 | 0.00 ^a | 0.00 ^a | 0 |
| 31 | 0.00 ^a | — | 1 | 1 | — | 0 | — | 0 | — | 0.00 ^a | 0 | — |

Daily Mean Discharge (ft³/s) for E262.4 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-------------------|-------------------|-------------------|-----|-----|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Total (ft³/s) | 0.15 | 0 | 0 | I | I | 0.85 | 0.05 | 0.08 | 0 | 0.03 | 0.05 | 0.05 |
| Total (acre-ft) | 0.3 | 0 | 0 | I | I | 1.7 | 0.1 | 0.16 | 0 | 0.06 | 0.1 | 0.1 |
| Max Daily Mean | 0.04 ^a | 0.00 ^a | 0.00 ^a | I | I | 0.08 ^a | 0.02 ^a | 0.06 ^a | 0.00 ^a | 0.01 ^a | 0.02 ^a | 0.04 ^a |
| Min Daily Mean | 0.00 ^a | 0.00 ^a | 0.00 ^a | I | I | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a |
| Instantaneous Max | 0.59 ^a | 0.07 ^a | 0.00 ^a | I | I | 0.30 ^a | 0.23 ^a | 1.30 ^a | 0.07 ^a | 0.59 ^a | 1.24 ^a | 0.59 ^a |
| Instantaneous Min | 0.00 ^a | 0.00 ^a | 0.00 ^a | I | I | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a | 0.00 ^a |
| Missing Days | 0 | 0 | 28 | 31 | 28 | 3 | 0 | 0 | 3 | 0 | 0 | 0 |

^a Reliable estimate.^b I = Ice present.^c E = Equipment malfunction.^d — = Not applicable.Daily Mean Discharge (ft³/s) for E262.4 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|-------|------------|------|------------|---|--------------------------|-----|----------------|-----|
| WY2010 | Total | 1.26 | Mean | 0.005 | Max | 0.08 | Min | 0 | Instantaneous Max | 1.3 | Acre-ft | 2.5 |
| CY2009 | Total | 46.45 | Mean | 0.14 | Max | 6.6 | Min | 0 | Instantaneous Max | 9 | Acre-ft | 92 |

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 mi².

Period of Record. October 1993 to September 30, 2010.

Revised Record. Drainage area (2006).

Gage. Data logger with cellular telemetry, rain gage and stabilized natural rock control. Elevation of gage is 6309 ft above NGVD from GPS survey.

Average Discharge. 17 yr, 0.02 ft³/s, 15 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 271 ft³/s, June 28, 2000, gage height 5 ft (from flood mark).

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



Equipment. The station is equipped with a Sutron 8210 (5-min interval) with a shaft encoder float system (5-min interval) and cellular phone with speech modem. 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 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. The station was visited 37 times to service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record except for the period from July 19 to 22, 2010, because the equipment malfunctioned.

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.

Thirty-seven inspections of no flow were made this year.

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

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

Daily Mean Discharge (ft³/s) for E265

| 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 | E ^a | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | E | 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 | — ^b | 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 | — |

Daily Mean Discharge (ft³/s) for E265 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total (acre-ft) | 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 |
| Min Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Min | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |

^a E = Equipment malfunction.^b — = Not applicable.Daily Mean Discharge (ft³/s) for E265 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|---|-------------|---|------------|---|------------|---|--------------------------|---|----------------|---|
| WY2010 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0 | Acre-ft | 0 |
| CY2009 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0 | Acre-ft | 0 |

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 mi².

Period of Record. October 1, 1994, to September 30, 2010.

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

Gage. Data logger with cellular telemetry and concrete control. Elevation of gage is 6454 ft above NGVD from GPS survey.

Average Discharge. 15 yr, 0.001 ft³/s, 0.51 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 63 ft³/s, August 29, 1995, gage height 2.7 ft (from slope-area determination).

Maximum for Current Water Year. Maximum discharge, 0.63 ft³/s, July 2, 2010, gage height 0.81 ft.



Equipment. The station is equipped with a Sutron 8210 (5-min interval) with a shaft encoder float system (5-min interval) and cellular phone with speech modem. 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- \times 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. The station was visited 17 times to service the instrumentation

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 and 150 ft below the gage. The streambed is mostly sand. Brush along the stream bank is fairly thick. The control is a concrete broad-crested weir.

Seventeen inspections of no flow were made this year.

Rating No. 1 is considered good.

The original shape and definition of rating were by computation using weir geometry with slope area used to define peak discharge and slope of the upper end.

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

Daily Mean Discharge (ft³/s) for E267

| 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 | 0.01 | 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 ^a |
| 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 | — ^b | 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 | — |

Daily Mean Discharge (ft³/s) for E267 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|----------------|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 | 0 |
| Total (acre-ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.02 | 0 | 0 |
| Max Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 | 0 ^a |
| Min Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^a |
| Instantaneous Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.63 | 0.56 | 0 ^a |
| Instantaneous Min | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^a |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a Reliable estimate.^b — = Not applicable.Daily Mean Discharge (ft³/s) for E267 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|------|-------------|---|------------|------|------------|---|--------------------------|------|----------------|------|
| WY2010 | Total | 0.01 | Mean | 0 | Max | 0.01 | Min | 0 | Instantaneous Max | 0.63 | Acre-ft | 0.02 |
| CY2009 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0.03 | Acre-ft | 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 mi².

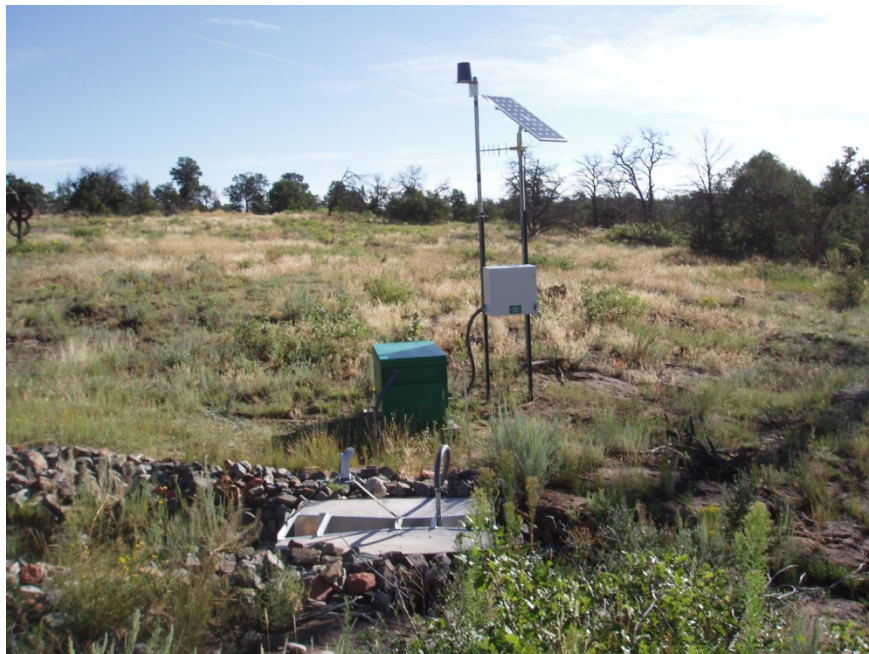
Period of Record. October 1, 2006, to September 30, 2010.

Gage. Data logger and 9-in. Parshall flume, rain gage with cellular telemetry. Elevation of gage is 6858 ft above NGVD.

Average Discharge. 4 yr 0.04 ft³/s, 28 acre-ft/yr.

Maximum for Period of Record. Maximum discharge, 0.9 ft³/s, March 27, 2009, gage height 0.5 ft.

Maximum for Current Year. Maximum discharge, 0.3 ft³/s, March 20, 2010, gage height 0.2 ft.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) and a Milltronics sonic probe mounted on a 9-in. Parshall flume and cellular phone with speech modem. 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 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. This station was visited 34 times to service the instrumentation.

Datum Correction. None.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record, except for the periods from December 3, 2009, to January 11, 2010; January 18 to February 10, 2010; and February 22 to March 4, 2010, because of ice. Also, from July 8 to July 19, 2010, the equipment malfunctioned.

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.

Thirty-four inspections of no flow were made this year.

Rating No. 1 was developed based on the computation of 9-in. Parshall flume. PZF is 0.00 gage height.

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

Daily Mean Discharge (ft³/s) for E267.4

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 1 | 0 | 0 | 0 | I ^a | I | I | 0 | 0 | 0 | 0 | E ^b | 0 |
| 2 | 0 | 0 | 0 ^c | I | I | I | 0 | 0 | 0 | 0 | E | 0 |
| 3 | 0 | 0 ^c | I | I | I | I | 0 | 0 ^c | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 ^c | I | I | I | I | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | I | I | I | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | I | I | I | 0 | 0 | 0 | 0 | 0 ^c | 0 | 0 |
| 7 | 0 | 0 | I | I | I | 0 | 0 | 0 | 0 ^c | 0 | 0 | 0 ^c |
| 8 | 0 | 0 ^c | I | I | I | 0 | 0 | 0 | 0 | E | 0 | 0 |
| 9 | 0 | 0 ^c | I | I | I | 0 | 0 | 0 | 0 | E | 0 ^c | 0 |
| 10 | 0 | 0 | I | I | 0 | 0 | 0 | 0 ^c | 0 | E | 0 ^c | 0 |
| 11 | 0 | 0 | I | I | 0 | 0 | 0 | 0 | 0 | E | 0 | 0 |
| 12 | 0 | 0 | I | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 | 0 |
| 13 | 0 ^c | 0 | I | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 | 0 ^c |
| 14 | 0 ^c | 0 | I | 0 | 0 | 0 | 0 | 0 | 0 ^c | E | 0 | 0 |
| 15 | 0 ^c | 0 | I | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 | 0 |
| 16 | 0 ^c | 0 | I | 0 | 0 | 0 | 0 | 0 | 0 | E | 0 ^c | 0 |
| 17 | 0 ^c | 0 | I | 0 | 0 | 0 | 0 | 0 ^c | 0 | E | 0 | 0 |
| 18 | 0 ^c | 0 | I | I | 0 | 0 ^c | 0 | 0 | 0 | E | 0 ^c | 0 |
| 19 | 0 ^c | 0 | I | I | 0 | 0 | 0 ^c | 0 | 0 | E | 0 | 0 |
| 20 | 0 ^c | 0 | I | I | 0 | 0.03 | 0 | 0 | 0 | 0 | 0 | 0 ^c |
| 21 | 0 | 0 | I | I | 0 | 0 | 0 | 0 | 0 ^c | 0 | 0 | 0 |
| 22 | 0 | 0 | I | I | I | 0 | 0 | 0 | 0 | 0 ^c | 0 | 0 |
| 23 | 0 | 0 | I | I | I | 0 | 0 | 0 | 0 | 0 | 0 ^c | 0 ^c |
| 24 | 0 | 0 | I | I | I | 0 | 0 | 0 ^c | 0 | 0 | 0 ^c | 0 |
| 25 | 0 | 0 | I | I | I | 0 | 0 | 0 | 0 ^c | 0 | 0 | 0 |
| 26 | 0 | 0 | I | I | I | 0 | 0 ^c | 0 | 0 | E | 0 | 0 |
| 27 | 0 | 0 | I | I | I | 0 | 0 | 0 | 0 | E | 0 | 0 |
| 28 | 0 | 0 | I | I | I | 0 | 0 | 0 | 0 ^c | E | 0 | 0 |
| 29 | 0 | 0 | I | I | — ^d | 0 | 0 | 0 | 0 ^c | E | 0 | 0 |
| 30 | 0 | 0 | I | I | — | 0 | 0 | 0 | 0 | E | 0 ^c | 0 |
| 31 | 0 | — | I | I | — | 0 | — | 0 | — | E | 0 | — |

Daily Mean Discharge (ft³/s) for E267.4 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-------------------|----------------|----------------|------|------|-------------------|----------------|----------------|----------------|-------------------|----------------|-------------------|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total (acre-ft) | 0 | 0 | 0 | 0 | 0 | 0.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Daily Mean | 0 ^c | 0 ^c | 0 ^c | 0 | 0 | 0.03 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c |
| Min Daily Mean | 0 ^c | 0 ^c | 0 ^c | 0 | 0 | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c |
| Instantaneous Max | 0.19 ^c | 0 ^c | 0 ^c | 0.01 | 0.02 | 0.28 ^c | 0 ^c | 0 ^c | 0 ^c | 0.07 ^c | 0 ^c | 0.11 ^c |
| Instantaneous Min | 0 ^c | 0 ^c | 0 ^c | 0 | 0 | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c | 0 ^c |
| Missing Days | 0 | 0 | 29 | 25 | 16 | 4 | 0 | 0 | 0 | 18 | 2 | 0 |

^a I = Ice present.^b E = Equipment malfunction.^c Reliable estimate.^d — = Not applicable.Daily Mean Discharge (ft³/s) for E267.4 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|-------|-------------|-------|------------|------|------------|---|--------------------------|------|----------------|------|
| WY2010 | Total | 0.03 | Mean | 0 | Max | 0.03 | Min | 0 | Instantaneous Max | 0.28 | Acre-ft | 0.06 |
| CY2009 | Total | 14.17 | Mean | 0.042 | Max | 3.0 | Min | 0 | Instantaneous Max | 5.2 | Acre-ft | 28 |

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 mi².

Period of Record. December 1993 to September 30, 2010.

Revised Record. Drainage area (2006).

Gage. Data logger with cellular telemetry and concrete stabilized natural control. Elevation of gage is 6190 ft above NGVD from GPS survey.

Average Discharge. 17 yr, 0.01 ft³/s, 10 acre-ft/yr.

Extremes for Period of Record. Maximum discharge, 536 ft³/s, gage height 3 ft, August 4, 2008 (from flood marks).

Extremes for Current Water Year. Maximum discharge, 2.4 ft³/s, gage height 1.3 ft, July 30, 2010.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with a shaft encoder float system (5-min interval) and cellular telemetry with speech modem. 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. The station was visited 21 times to service the instrumentation.

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 goes into supercritical flow 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.

Twenty-one inspections of no flow were made this year.

Rating No. 1 was developed from PZF and previous measurement and slope area. Rating No. 1 was extended from 2.75 ft to 4.28 ft from logarithmic plotting.

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

Daily Mean Discharge (ft³/s) for E275

| 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 ^a | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 |
| 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 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 ^a | 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 | — ^b | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0.06 | 0 | 0 |
| 31 | 0 | — | 0 | 0 | — | 0 | — | 0 | — | 0.02 | 0 | — |

Daily Mean Discharge (ft³/s) for E275 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|------|------|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.09 | 0 | 0.01 |
| Total (acre-ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.18 | 0 | 0.02 |
| Max Daily Mean | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.06 ^a | 0 | 0.01 |
| Min Daily Mean | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 0 |
| Instantaneous Max | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.37 ^a | 0.07 | 0.92 |
| Instantaneous Min | 0 ^a | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ^a | 0 | 0 |
| Missing Days | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a Reliable estimate.^b — = Not applicable.Daily Mean Discharge (ft³/s) for E275 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|------|-------------|------|------------|------|------------|---|--------------------------|-----|----------------|------|
| WY2010 | Total | 0.10 | Mean | 0 | Max | 0.06 | Min | 0 | Instantaneous Max | 2.4 | Acre-ft | 0.20 |
| CY2009 | Total | 7.49 | Mean | 0.21 | Max | 5.4 | Min | 0 | Instantaneous Max | 414 | Acre-ft | 15 |

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 mi².

Period of Record. October 1, 1999, to January 8, 2001; October 4, 2001, to September 30, 2010.

Revised Record. None.

Gage. Data logger. Elevation of gage is 6265 ft above NGVD.

Average Discharge. Not available.

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

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



Equipment. The station is equipped with a Sutron 8210 (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. 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. The station was visited 20 times to conduct inspections and to service the instrumentation.

Datum Correction. None.

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

Rating. The channel makes a 30-degree turn approximately 20 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 open channel.

No rating curve is available for this station.

Discharge. No flow.

Daily Mean Discharge (ft³/s) for E338

| 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 |
| 30 | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 0 | — | 0 | 0 | — | 0 | — | 0 | — | 0 | 0 | — |

Daily Mean Discharge (ft³/s) for E338 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total (acre-ft) | 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 |
| Min Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Min | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

* — = Not applicable.

Daily Mean Discharge (ft³/s) for E338 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|---|-------------|---|------------|---|------------|---|--------------------------|---|----------------|---|
| WY2010 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0 | Acre-ft | 0 |
| CY2009 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0 | Acre-ft | 0 |

E350 RITO DE LOS FRIJOLES AT BANDELIER

Location. Lat 35° 46' 37", long 106° 16' 09", Sec. 23, T. 18 N., R. 6 E., Ramon Vigil Grant, Sandoval County, in Bandelier National Monument.

Drainage Area. 18.35 mi².

Period of Record. July 1963 to September 1969; July 1977 to September 1982; May 1993 to September 1996; and October 1998 to September 30, 2010.

Revised Record. Drainage area (2006).

Gage. Data logger and concrete control. Elevation of gage is 6046 ft above NGVD from GPS survey.

Average Discharge. 12 yr (1999–2010) 1.3 ft³/s, 956 acre-ft/yr.

Extremes for Period of Record. Maximum discharge, 3030 ft³/s, July 21, 1978, gage height 6 ft, site and datum then in use. Minimum discharge, 0 ft³/s, July 16–19 and 26, 2003.

Extremes for Current Water Year. Maximum discharge, 46 ft³/s, April 17, 2010, gage height 2.8 ft, site and datum then in use. Minimum discharge, 0.27 ft³/s, December 8, 2009.



Equipment. The station is equipped with a Sutron 8210 data logger (5-min interval) with a shaft encoder float system (5-min interval) housed in a 3- \times 4-ft metal shelter over a 24-in. CMP stilling well on the right bank. An outside staff gage is available for reference. Wading measurements are made 30 to 40 ft upstream from the gage. A high-flow measurement can be made from the bridge upstream 200 ft above the gage.

Fieldwork. The station was visited 20 times to perform inspections and 6 times to conduct discharge measurements.

Datum Correction. None from levels.

Gage-Height Record. The data logger referenced to the outside staff gage gave a complete and satisfactory record for the year except for the periods from October 1 to 7, 2009, and October 16 to 22, 2009, because the equipment malfunctioned, and from November 13 to 24, 2009, December 3 to 6, 9 to 16 and December 26, 2009, to January 3, 2010, when ice was present.

Rating. The channel is about 10 ft wide and straight for about 150 ft upstream and downstream of the gage. The low-water control is a concrete tapered notch with its low point on the right bank. The channel bed through this reach consists of gravel and cobbles and should be stable. Vegetation is grasses and fairly sparse.

Six measurements of discharge (Nos. 211–216) and 14 inspections of observed flow were made this year.

Rating No. 5 was developed based on the measurements and the slope conveyance measurement. The shifts were distributed based on time. Rating No. 5 is considered good.

Discharge. Discharge was computed by applying gage height to Rating No. 5 through a shift based on time.

Daily Mean Discharge (ft³/s) for E350

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|----------------|------|------|----------------|----------------|-------------------|-------------------|------|------|------|------|------|
| 1 | E ^a | 0.93 | 0.93 | I ^b | 1.05 | 1.23 | 1.84 ^c | 3.81 | 1.08 | 0.47 | 1.14 | 0.5 |
| 2 | E | 0.93 | 0.94 | I | 0.97 | 1.2 | 2.00 ^c | 3.75 | 1.07 | 0.57 | 0.83 | 0.47 |
| 3 | E | 0.92 | I | I | 1.12 | 1.19 ^c | 1.94 ^c | 3.55 | 1.03 | 1.19 | 0.71 | 0.47 |
| 4 | E | 0.9 | I | 1.11 | 1.13 | 1.19 ^c | 1.95 ^c | 3.23 | 0.96 | 0.8 | 0.66 | 0.47 |
| 5 | E | 0.86 | I | 1.06 | 1.06 | 1.23 ^c | 2.05 | 2.99 | 0.9 | 0.59 | 0.82 | 0.44 |
| 6 | E | 0.95 | I | 1.06 | 1.07 | 1.23 ^c | 2.19 | 2.7 | 0.92 | 0.54 | 1.68 | 0.42 |
| 7 | E | 0.98 | 0.67 | 1.07 | 1.09 | 1.31 ^c | 2.36 | 2.54 | 1.09 | 0.54 | 1.63 | 0.42 |
| 8 | 0.74 | 0.97 | 0.55 | 1.06 | 1.07 | 1.39 ^c | 2.4 | 2.46 | 0.94 | 0.64 | 1.19 | 0.44 |
| 9 | 0.73 | 0.96 | I | 0.99 | 1.07 | 1.35 ^c | 2.58 | 2.36 | 0.82 | 0.58 | 1.00 | 0.48 |
| 10 | 0.71 | 0.95 | I | 0.95 | 1.06 | 1.36 ^c | 2.79 | 2.27 | 0.77 | 0.78 | 0.92 | 0.43 |
| 11 | 0.71 | 0.95 | I | 0.9 | 1.06 | 1.31 ^c | 3.05 | 2.15 | 0.75 | 0.64 | 0.8 | 0.41 |
| 12 | 0.7 | 0.93 | I | 0.87 | 1.00 | 1.26 ^c | 3.46 | 2.07 | 0.72 | 0.68 | 0.77 | 0.41 |
| 13 | 0.95 | I | I | 0.85 | 1.01 | 1.28 ^c | 5.4 | 2.04 | 0.71 | 0.53 | 0.8 | 0.41 |
| 14 | 0.77 | I | I | 0.83 | 1.1 | 1.36 ^c | 7.15 | 2.1 | 0.7 | 0.53 | 0.69 | 0.42 |
| 15 | 0.75 | I | I | 0.81 | 1.06 | 1.38 ^c | 6.85 | 2.45 | 0.69 | 0.42 | 0.66 | 0.39 |
| 16 | E | I | I | 0.8 | 1.07 | 1.38 ^c | 6.83 | 1.92 | 0.66 | 0.37 | 0.77 | 0.37 |
| 17 | E | I | 0.85 | 0.77 | 1.05 | 1.43 ^c | 28.72 | 1.78 | 0.62 | 0.36 | 0.79 | 0.37 |
| 18 | E | I | 1.04 | 0.76 | 1.1 | 1.50 ^c | 35.24 | 1.69 | 0.59 | 0.33 | 0.66 | 0.37 |
| 19 | E | I | 1.06 | 0.76 | 1.1 | 1.66 ^c | 29.27 | 1.67 | 0.57 | 0.34 | 0.62 | 0.37 |
| 20 | E | I | 1 | 0.72 | 1.12 | 1.59 ^c | 26.97 | 1.62 | 0.55 | 0.42 | 0.58 | 0.37 |
| 21 | E | I | 1.02 | 0.7 | 1.16 | 1.48 ^c | 23.02 | 1.58 | 0.52 | 0.39 | 0.56 | 0.47 |
| 22 | E | I | 1.06 | 0.7 | 1.17 | 1.45 ^c | 20.18 | 1.53 | 0.5 | 0.45 | 0.55 | 0.81 |
| 23 | E | I | 1.1 | 0.7 | 0.85 | 1.50 ^c | 16.78 | 1.49 | 0.49 | 0.82 | 0.69 | 1.02 |
| 24 | 0.89 | I | 1.1 | 0.66 | 1.19 | 1.50 ^c | 13.45 | 1.43 | 0.48 | 0.89 | 0.76 | 0.62 |
| 25 | 0.86 | 0.8 | 1 | 0.68 | 1.28 | 1.47 ^c | 10.94 | 1.4 | 0.47 | 0.97 | 0.64 | 0.56 |
| 26 | 0.92 | 0.93 | I | 1.07 | 1.18 | 1.48 ^c | 9.01 | 1.35 | 0.5 | 1.42 | 0.58 | 0.54 |
| 27 | 0.93 | 0.92 | I | 1.2 | 1.14 | 1.47 ^c | 6.95 | 1.32 | 0.49 | 0.94 | 0.54 | 0.52 |
| 28 | 0.94 | 0.94 | I | 1.2 | 1.17 | 1.44 ^c | 5.77 | 1.34 | 0.54 | 0.7 | 0.55 | 0.51 |
| 29 | 0.95 | 1.01 | I | 1.15 | — ^d | 1.44 ^c | 4.76 | 1.27 | 0.59 | 0.63 | 0.64 | 0.5 |
| 30 | 0.94 | 0.94 | I | 1.07 | — | 1.51 ^c | 4.12 | 1.2 | 0.49 | 0.66 | 0.58 | 0.49 |
| 31 | 0.93 | — | I | 1.06 | — | 1.70 ^c | — | 1.16 | — | 0.98 | 0.53 | — |

Daily Mean Discharge (ft³/s) for E350 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-------|-------|-------|-------|-------|-------------------|--------------------|------|-------|-------|------|-------|
| Total (ft³/s) | 13.42 | 16.76 | 12.34 | 25.75 | 30.92 | 43.5 | 289.7 | 64.4 | 21.24 | 20.16 | 24.3 | 14.45 |
| Total (acre-ft) | 27 | 33 | 24 | 51 | 61 | 86 | 575 | 128 | 42 | 40 | 48 | 29 |
| Max Daily Mean | 0.95 | 1.01 | 1.1 | 1.2 | 1.28 | 1.70 ^c | 35.24 ^c | 3.81 | 1.09 | 1.42 | 1.68 | 1.02 |
| Min Daily Mean | 0.7 | 0.8 | 0.55 | 0.66 | 0.85 | 1.19 ^c | 1.84 ^c | 1.16 | 0.47 | 0.33 | 0.53 | 0.37 |
| Instantaneous Max | 1.13 | 1.13 | 1.38 | 1.6 | 2.24 | 1.80 ^c | 46.20 ^c | 3.92 | 1.38 | 2.36 | 9 | 2.12 |
| Instantaneous Min | 0.67 | 0.54 | 0.27 | 0.62 | 0.54 | 1.13 ^c | 1.70 ^c | 1.06 | 0.43 | 0.29 | 0.47 | 0.35 |
| Missing Days | 15 | 12 | 18 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

^a E = Equipment failure.^b I = Ice present.^c Reliable estimate.^d — = Not applicable.Daily Mean Discharge (ft³/s) for E350 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|--------|-------------|------|------------|-----|------------|------|--------------------------|----|----------------|------|
| WY2010 | Total | 576.94 | Mean | 1.82 | Max | 35 | Min | 0.33 | Instantaneous Max | 46 | Acre-ft | 1140 |
| CY2009 | Total | 259.52 | Mean | 0.81 | Max | 1.7 | Min | 0.24 | Instantaneous Max | 5 | Acre-ft | 515 |

S001 SWSC LINE SPRING AT TA-16

Location. Lat 35° 51' 1", long 106° 20' 23", 30 ft upstream from the SWSC line crossing of Cañon de Valle in LANL TA-16.

Gage. Data logger with 90° weir. Elevation of gage is 7437 ft. above NGVD from survey.

Period of Record. October 1, 1996, to September 30, 2010.

Remarks. This spring is in the Cañon de Valle drainage.



Daily Mean Discharge (ft³/s) for S001

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 0 | 0 | 0.02 | 0.68 | 0.46 | 0.62 | 0.01 | 0.02 | 0.01 | 0.62 | 0.71 | 0.96 |
| 2 | 0 | 0 | 0.02 | 0.86 | 0.57 | 0.63 | 0 | 0.02 | 0.09 | 0.41 | 0.55 | 0.71 |
| 3 | 0 | 0 | 0.04 | 0.7 | 1.04 | 0.55 | 0 | 0.02 | 0.32 | 0.38 | 0.89 | 0.31 |
| 4 | 0 | 0 | 0.05 | 0.3 | 1.25 | 0.39 | 0 | 0.02 | 0.6 | 0.13 | 0.57 | 0 |
| 5 | 0 | 0 | 0.03 | 0.69 | 0.95 | 0.32 | 0 | 0.02 | 0.38 | 0.52 | 0.67 | 0 |
| 6 | 0 | 0 | 0.03 | 0.67 | 1.19 | 0.34 | 0 | 0.02 | 0.01 | 0.35 | 0.91 | 0 |
| 7 | 0 | 0 | 0.25 | 0.59 | 1.32 | 0.33 | 0 | 0.03 | 0.01 | 0.33 | 0.87 | 0 |
| 8 | 0 | 0 | 0.96 | 0.51 | 1.17 | 0.34 | 0 | 0.03 | 0.01 | 0.46 | 0.77 | 0 |
| 9 | 0 | 0 | 0.39 | 0.7 | 1.12 | 0.15 | 0 | 0.08 | 0 | 0.46 | 0.69 | 0 |
| 10 | 0 | 0 | 0.38 | 0.41 | 1.23 | 0 | 0 | 0.09 | 0.01 | 0.45 | 0.73 | 0 |
| 11 | 0 | 0 | 0.66 | 0.38 | 1.01 | 0 | 0 | 0.03 | 0.03 | 0.15 | 0.72 | 0 |
| 12 | 0 | 0 | 1.2 | 0.16 | 0.84 | 0 | 0.01 | 0.01 | 0.04 | 0.23 | 0.28 | 0 |
| 13 | 0 | 0 | 1.26 | 0.57 | 1.03 | 0 | 0.01 | 0.01 | 0.11 | 0.54 | 0.62 | 0 |
| 14 | 0 | 0 | 0.67 | 0.76 | 0.98 | 0 | 0.01 | 0.01 | 0.09 | 0.87 | 0.57 | 0 |
| 15 | 0 | 0 | 0.63 | 0.61 | 1.34 | 0 | 0.01 | 0.01 | 0.14 | 0.57 | 0.52 | 0 |
| 16 | 0 | 0 | 0.94 | 0.7 | 1.54 | 0 | 0.01 | 0.01 | 0.07 | 0.12 | 0.17 | 0 |
| 17 | 0 | 0.01 | 1.04 | 0.9 | 0.76 | 0 | 0.01 | 0.01 | 0.02 | 0.72 | 0.25 | 0 |
| 18 | 0 | 0.01 | 1.08 | 0.96 | 0.31 | 0 | 0.01 | 0.01 | 0 | 1.02 | 0.13 | 0 |
| 19 | 0 | 0.01 | 1.32 | 0.72 | 0.29 | 0 | 0.01 | 0.01 | 0.08 | 0.69 | 0.39 | 0 |
| 20 | 0 | 0.01 | 0.97 | 0.12 | 0.24 | 0 | 0.01 | 0.01 | 0.03 | 0.95 | 0.6 | 0 |
| 21 | 0 | 0.01 | 1.19 | 0.33 | 0.28 | 0 | 0.01 | 0.01 | 0.03 | 0.58 | 0.79 | 0 |
| 22 | 0 | 0.02 | 1.54 | 0.39 | 0.93 | 0 | 0.01 | 0.01 | 0.44 | 0.95 | 0.51 | 0 |
| 23 | 0 | 0.02 | 1.26 | 0.61 | 0.53 | 0 | 0.01 | 0.01 | 1.17 | 0.85 | 0.65 | 0 |
| 24 | 0 | 0.02 | 0.68 | 0.54 | 0.41 | 0 | 0.01 | 0.01 | 1.2 | 1.03 | 0.59 | 0 |
| 25 | 0 | 0.02 | 0.43 | 0.56 | 0.4 | 0 | 0.02 | 0.01 | 0.72 | 0.96 | 0.46 | 0 |
| 26 | 0 | 0.02 | 0.28 | 0.63 | 0.56 | 0 | 0.02 | 0.01 | 0 | 1.07 | 0.85 | 0 |
| 27 | 0 | 0.01 | 0.48 | 0.75 | 0.36 | 0 | 0.02 | 0.01 | 0 | 0.92 | 1.2 | 0 |
| 28 | 0 | 0.02 | 0.9 | 0.75 | 0.57 | 0 | 0.02 | 0.01 | 0.01 | 0.96 | 1.1 | 0 |
| 29 | 0 | 0.02 | 1.24 | 0.99 | —* | 0 | 0.04 | 0.01 | 0.06 | 1.1 | 0.41 | 0 |
| 30 | 0 | 0.02 | 1.36 | 0.48 | — | 0 | 0.02 | 0.17 | 0.06 | 0.96 | 0.82 | 0 |
| 31 | 0 | — | 1.12 | 0.58 | — | 0 | — | 0.22 | — | 0.96 | 0.7 | — |

Daily Mean Discharge (ft³/s) for S001 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|------|------|-------|------|-------|------|------|------|------|-------|-------|------|
| Total (ft³/s) | 0 | 0.22 | 22.41 | 18.6 | 22.44 | 3.67 | 0.29 | 0.95 | 5.77 | 20.29 | 19.69 | 1.98 |
| Total (acre-ft) | 0 | 0.44 | 44 | 37 | 45 | 7.3 | 0.58 | 1.9 | 11 | 40 | 39 | 3.9 |
| Max Daily Mean | 0 | 0.02 | 1.54 | 0.99 | 1.54 | 0.63 | 0.04 | 0.22 | 1.2 | 1.1 | 1.2 | 0.96 |
| Min Daily Mean | 0 | 0 | 0.02 | 0.12 | 0.24 | 0 | 0 | 0.01 | 0 | 0.12 | 0.13 | 0 |
| Instantaneous Max | 0.02 | 0.05 | 1.57 | 1.57 | 1.57 | 1.57 | 0.29 | 1.1 | 1.57 | 1.57 | 1.57 | 1.57 |
| Instantaneous Min | 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 |

*— = Not applicable.

Daily Mean Discharge (ft³/s) for S001 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|--------|-------------|-------|------------|-----|------------|---|--------------------------|-----|----------------|-----|
| WY2010 | Total | 116.31 | Mean | 0.32 | Max | 1.5 | Min | 0 | Instantaneous Max | 1.6 | Acre-ft | 231 |
| CY2009 | Total | 24.91 | Mean | 0.068 | Max | 1.5 | Min | 0 | Instantaneous Max | 1.6 | Acre-ft | 49 |

S002 BURN GROUND SPRING AT TA-16

Location. Lat 35° 50' 58", long 106° 20' 17", 450 ft downstream from the SWSC line crossing of Cañon de Valle in LANL TA-16.

Gage. Data logger with 90° weir. Elevation of gage is 7420 ft. above NGVD from survey.

Period of Record. October 1, 1996, to September 30, 2010.

Remarks. This spring is in the Cañon de Valle drainage.



Daily Mean Discharge (ft³/s) for S002

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-----|------|------|----------------|----------------|----------------|------|------|------|------|----------------|-----|------|
| 1 | 1.05 | 1.09 | 1.44 | I ^a | I | I | 1.18 | 1.41 | 1.22 | E ^b | E | E |
| 2 | 1.05 | 1.08 | 1.45 | I | I | I | 1.17 | 1.42 | E | E | E | E |
| 3 | 1.06 | 1.08 | 1.6 | I | I | I | 1.17 | 1.4 | E | E | E | E |
| 4 | 1.06 | 1.06 | M ^c | I | I | I | 1.16 | 1.4 | E | E | E | 1 |
| 5 | 1.04 | 1.07 | 1.52 | I | I | I | 1.17 | 1.4 | E | E | E | 0.99 |
| 6 | 1.06 | 1.05 | 1.52 | I | I | I | 1.16 | 1.4 | 1.19 | E | E | 0.97 |
| 7 | 1.06 | 1.04 | I | I | I | I | 1.16 | M | 1.19 | E | E | 0.93 |
| 8 | 1.05 | 1.03 | I | I | I | I | 1.17 | M | 1.18 | E | E | 0.92 |
| 9 | 1.04 | 1.02 | I | I | I | M | 1.16 | E | 1.16 | E | E | 0.89 |
| 10 | 1.03 | 1.02 | I | I | I | 0.87 | 1.15 | E | 1.16 | E | E | 0.86 |
| 11 | 1.03 | 1.01 | I | I | I | 0.92 | 1.16 | M | E | E | E | 0.85 |
| 12 | 1.03 | 1.02 | I | I | I | 0.98 | 1.19 | 1.34 | 1.49 | E | E | 0.83 |
| 13 | 1.04 | 1.01 | I | I | I | 1.02 | 1.18 | 1.31 | E | E | E | 0.82 |
| 14 | 1.04 | 1 | I | I | I | 1.05 | 1.17 | 1.32 | 1.93 | E | E | 0.87 |
| 15 | 1.04 | 0.99 | I | I | I | 1.04 | 1.17 | 1.3 | E | E | E | 0.82 |
| 16 | 1.03 | 1.11 | I | I | I | 1.05 | 1.19 | 1.28 | E | E | E | 0.89 |
| 17 | 1.04 | 1.21 | I | I | I | 1.06 | 1.19 | 1.28 | 1.29 | E | E | 0.93 |
| 18 | 1.04 | 1.24 | I | I | I | 1.08 | 1.2 | 1.28 | 1.13 | E | E | 0.86 |
| 19 | 1.04 | 1.27 | I | I | I | 1.09 | 1.23 | 1.26 | E | E | E | 0.88 |
| 20 | 1.05 | 1.27 | I | I | I | 1.09 | 1.24 | 1.24 | E | E | E | 0.86 |
| 21 | 1.07 | 1.31 | I | I | I | 1.1 | 1.24 | 1.25 | E | E | E | 0.85 |
| 22 | 1.08 | 1.4 | I | I | I | 1.11 | 1.29 | 1.23 | E | E | E | 0.95 |
| 23 | 1.08 | 1.45 | I | I | I | 1.12 | 1.34 | 1.23 | E | E | E | 0.99 |
| 24 | 1.07 | 1.48 | I | I | I | 1.13 | 1.36 | 1.22 | E | E | E | 0.93 |
| 25 | 1.09 | 1.48 | I | I | I | 1.13 | 1.38 | 1.22 | E | E | E | 0.98 |
| 26 | 1.09 | 1.48 | I | I | I | 1.15 | 1.4 | 1.22 | 1.12 | E | E | 1 |
| 27 | 1.1 | 1.07 | I | I | I | 1.15 | 1.41 | 1.22 | 1.12 | E | E | 0.97 |
| 28 | 1.1 | 1.26 | I | I | I | 1.14 | M | 1.22 | E | E | E | 1.01 |
| 29 | 1.08 | 1.44 | I | I | — ^d | 1.15 | M | 1.24 | E | E | E | 1.01 |
| 30 | 1.09 | 1.42 | I | I | — | 1.16 | 1.42 | E | E | E | E | 1.02 |
| 31 | 1.07 | — | I | I | — | 1.16 | — | E | — | E | E | — |

Daily Mean Discharge (ft³/s) for S002 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|------|-------|------|-----|-----|-------|------|------|------|-----|-----|-------|
| Total (ft³/s) | 32.8 | 35.59 | 7.5 | I | I | 23.77 | 34.8 | 30.8 | 15.2 | E | E | 24.84 |
| Total (acre-ft) | 65 | 71 | 15 | I | I | 47 | 69 | 61 | 30 | E | E | 49 |
| Max Daily Mean | 1.1 | 1.48 | 1.6 | I | I | 1.16 | 1.42 | 1.42 | 1.93 | E | E | 1.02 |
| Min Daily Mean | 1.03 | 0.99 | 1.44 | I | I | 0.87 | 1.15 | 1.22 | 1.12 | E | E | 0.82 |
| Instantaneous Max | 1.47 | 1.71 | 2.36 | I | I | 1.26 | 1.47 | 2.07 | 2.3 | E | E | 1.1 |
| Instantaneous Min | 0.56 | 0.51 | 0.51 | I | I | 0.76 | 1.06 | 1.14 | 1.02 | E | E | 0.76 |
| Missing Days | 0 | 0 | 26 | 31 | 28 | 9 | 2 | 7 | 18 | 31 | 31 | 3 |

^a I = Ice present.^b E = Equipment failure.^c M = Missing data.^d — = Not applicable.Daily Mean Discharge (ft³/s) for S002 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|--------|-------------|------|------------|-----|------------|------|--------------------------|-----|----------------|-----|
| WY2010 | Total | 205.3 | Mean | 1.15 | Max | 1.9 | Min | 0.82 | Instantaneous Max | 2.4 | Acre-ft | 407 |
| CY2009 | Total | 360.64 | Mean | 1.08 | Max | 1.9 | Min | 0.93 | Instantaneous Max | 2.4 | Acre-ft | 715 |

S003 MARTIN SPRING AT TA-16

Location. Lat 35°50' 32", long 106°20'11", 0.25 mi south of building 344 in TA-16.

Gage. Data logger with 90° weir. Elevation of gage is 7429 ft above NGVD from survey.

Period of Record. October 1, 1996, to September 30, 2010.

Remarks. This spring is in the Water Canyon drainage.



Daily Mean Discharge (ft³/s) for S003

| 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 | 0.01 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 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 | 0.01 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0.01 |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.05 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.05 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.04 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.03 |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.03 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.03 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.03 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.03 |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.04 |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.04 |
| 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.05 |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.05 |
| 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.05 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.04 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.04 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.04 |
| 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.04 |
| 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 | 0.04 |
| 30 | 0 | 0 | 0 | 0 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0.04 |
| 31 | 0 | — | 0 | 0 | — | 0 | — | 0 | — | 0 | 0 | — |

Daily Mean Discharge (ft³/s) for S003 (continued)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------------------|-----|-----|------|------|-----|------|-----|-----|-----|------|------|------|
| Total (ft³/s) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.04 | 0.82 |
| Total (acre-ft) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.08 | 1.6 |
| Max Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0.05 |
| Min Daily Mean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Instantaneous Max | 0 | 0 | 0.05 | 0.01 | 0 | 0.01 | 0 | 0 | 0 | 0.02 | 0.05 | 0.05 |
| Instantaneous Min | 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 |

*— = Not applicable.

Daily Mean Discharge (ft³/s) for S003 (continued)

| | | | | | | | | | | | | |
|---------------|--------------|------|-------------|-------|------------|------|------------|---|--------------------------|------|----------------|-----|
| WY2010 | Total | 0.86 | Mean | 0.002 | Max | 0.05 | Min | 0 | Instantaneous Max | 0.05 | Acre-ft | 1.7 |
| CY2009 | Total | 0 | Mean | 0 | Max | 0 | Min | 0 | Instantaneous Max | 0.05 | Acre-ft | 0 |

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 1,233.49 cubic meters.

CMP is corrugated metal pipe.

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 (ft³/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.

Calendar year (CY) refers to the period from January 1 to December 31.

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.

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.

GPS is an abbreviation for global positioning system.

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.

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

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

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada. It was formerly called Sea Level Datum of 1929, or “mean sea level,” in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific coasts, it does not necessarily represent the local mean sea level at any particular place.

NEMA is an abbreviation for National Electrical Manufacturers 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.

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.

SR means “State Road” and is the old name 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.