# DETERMINATION OF INFILTRATION AND PERCOLATION RATES ALONG A REACH OF THE SANTA FE RIVER NEAR LA BAJADA, NEW MEXICO

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

Water-Resources Investigations Report 00-4141

A contribution to the Ground-Water Resources Program

USGS
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ABOUT THE COVER:

Santa Fe River near La Bajada, New Mexico, looking west from highway bridge north of New Mexico Highway 16 (see figure 1). Photograph taken October 1996.

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Albuquerque, New Mexico
2000

U.S. DEPARTMENT OF THE INTERIOR
BRUCE BABBITT, Secretary

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## CONVERSION FACTORS AND VERTICAL DATUM

| Multiply | By | To obtain |
|---|---|---|
| millimeter | 0.03937 | inch |
| centimeter | 0.3937 | inch |
| meter | 3.281 | foot |
| kilometer | 0.6214 | mile |
| square meter | 10.76 | square foot |
| hectare | 2.471 | acre |
| square kilometer | 0.3861 | square mile |
| foot | 0.3048 | meter |
| mile | 1.609 | kilometer |
| acre | 4,047 | square meter |
| square mile | 2.590 | square kilometer |
| acre-foot | 1,233 | cubic meter |
| cubic foot per second | 0.0283 | cubic meter per second |
| cubic foot per second | 28.3 | liters per second |
| watt per meter per degree Celsius | 1.731 | British thermal units per hour per foot per degree Fahrenheit |
| joule per cubic meter per degree Celsius based on dry density | 4,187 | British thermal units per pound per degree Fahrenheit ( F) |

Temperature in degrees Fahrenheit (°F) or degrees Celsius (°C) may be converted as follows:

$$°C = (°F-32)/1.8$$

$$°F = 1.8 \times °C + 32$$

**Sea level:** In this report, "sea level" refers to the National Geodetic Vertical Datum of 1929--a geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada, formerly called Sea Level Datum of 1929.

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## ABSTRACT

Two methods, one a surface-water method and the second a ground-water method, were used to determine infiltration and percolation rates along a 2.5-kilometer reach of the Santa Fe River near La Bajada, New Mexico. The surface-water method uses streamflow measurements and their differences along a stream reach, streamflow-loss rates, stream surface area, and evaporation rates to determine infiltration rates. The ground-water method uses heat as a tracer to monitor percolation through shallow streambed sediments.

Data collection began in October 1996 and continued through December 1997. During that period the stream reach was instrumented with three streamflow gages, and temperature profiles were monitored from the stream-sediment interface to about 3 meters below the streambed at four sites along the reach.

Infiltration is the downward flow of water through the stream-sediment interface. Infiltration rates ranged from 92 to 267 millimeters per day for an intense measurement period during June 26-28, 1997, and from 69 to 256 millimeters per day during September 27-October 6, 1997. Investigators calculated infiltration rates from streamflow loss, stream surface-area measurements, and evaporation-rate estimates. Infiltration rates may be affected by unmeasured irrigation-return flow in the study reach. Although the amount of irrigation-return flow was none to very small, it may result in underestimation of infiltration rates. The infiltration portion of streamflow loss was much greater than the evaporation portion. Infiltration accounted for about 92 to 98 percent of streamflow loss. Evaporation-rate estimates ranged from 3.4 to 7.6 millimeters per day based on pan-evaporation data collected at Cochiti Dam, New Mexico, and accounted for about 2 to 8 percent of streamflow loss.

Percolation is the movement of water through saturated or unsaturated sediments below the stream-sediment interface. Percolation rates ranged from 40 to 109 millimeters per day during June 26-28, 1997. Percolation rates were not calculated for the September 27-October 6, 1997, period because a late summer flood removed the temperature sensors from the streambed. Investigators used a heat-and-water flow model, VS2DH (variably saturated, two-dimensional heat), to calculate near-surface streambed infiltration and percolation rates from temperatures measured in the stream and streambed.

Near the stream-sediment interface, infiltration and percolation rates are comparable. Comparison of infiltration and percolation rates showed that infiltration rates were greater than percolation rates. The method used to calculate infiltration rates accounted for net loss or gain over the entire stream reach, whereas the method used to calculate percolation was dependent on point measurements and, as applied in this study, neglected the nonvertical component of heat and water fluxes. In general, using the ground-water method was less labor intensive than making a series of streamflow measurements and relied on temperature, an easily measured property. The ground-water method also eliminated the difficulty of measuring or estimating evaporation

from the water surface and was therefore more direct. Both methods are difficult to use during periods of flood flow. The ground-water method has problems with the thermocouple-wire temperature sensors washing out during flood events. The surface-water method often cannot be used because of safety concerns for personnel making wading streamflow measurements.

## INTRODUCTION

Infiltration and percolation are important in the Middle Rio Grande Basin because they affect recharge to ground water. The amount of surface recharge to ground water largely depends on the quantity of water that infiltrates through porous sediment and percolates to the water table. Infiltration is the downward flow of water through the stream-sediment interface. Percolation is the movement of water through saturated or unsaturated sediments below the stream-sediment interface.

Near the stream-sediment interface, infiltration and percolation rates are comparable. At depth, the percolation rate varies from the infiltration rate because of divergence of flow, storage in the unsaturated zone, and capture by plant roots that move water to the air as transpiration.

Historically, surface-water methods have been used to determine infiltration, but they have several disadvantages, especially in semiarid environments. Stream gage installation and operation are expensive, the accuracy of using stream stage and a rating curve to calculate flow is not constant because of the unconsolidated channel typical of semiarid environments, and streamflow measurements used to develop a stream-stage relation and to determine gains and losses along a stream are labor intensive. Thus, alternative methods are needed, and a ground-water method of monitoring vertical temperature profiles under streambeds has promise as a direct and more economical alternative to traditional methods. An investigation of infiltration and percolation along the Santa Fe River was undertaken as part of a study of the Middle Rio Grande Basin by the U.S. Geological Survey (USGS).

### Purpose and Scope

This report presents infiltration and percolation rates determined from data collected along a 2.5-kilometer (km) reach of the Santa Fe River near La Bajada, New Mexico. The data, collected during 1996 and 1997, include streamflow, stream surface area, evaporation rate, and vertical streambed temperature. Streamflow gages installed at three sites along the reach recorded 15-minute stage data from October 1, 1996, through December 3, 1997. USGS personnel made current-meter measurements of streamflow along the reach during the data-collection period. Stream surface-area measurements were made and related to stage. To determine vertical streambed temperature profiles, thermocouple nests were installed in the streambed to a depth of 3 meters (m) and temperature data were collected at 10-minute intervals. Infiltration rates were calculated from streamflow-loss data, stream surface-area data, and evaporation-rate estimates. Percolation rates were calculated from vertical streambed temperature-profile data using the streambed temperature-profile method (Constantz and Thomas, 1996; 1997) and the variably saturated, two-dimensional, heat (VS2DH), computer-model method (Healy and Ronan, 1996).

### Acknowledgments

The authors acknowledge the people of the Pueblo of Cochiti and express our appreciation for their permission to conduct a major part of the study on Cochiti Pueblo land. The authors also acknowledge Warren Thompson and express our appreciation to him for granting permission to conduct part of the study on his land. The people of the Pueblo of Cochiti and Mr. Thompson allowed the installation of scientific equipment on their land and frequent access to the equipment for operation, maintenance, and data collection. Without this cooperation, the study could not have been conducted.

Special thanks are extended to Dave Gordon and Jacob Pecos of Cochiti Pueblo for their cooperation and support while working with the study team. Special thanks also are extended to Alonzo Gallegos for his cooperation in coordinating irrigation flows during critical parts of the study. The authors thank David A. Stonestrom, USGS, Menlo Park, California, and Fred Gebhardt, USGS, Albuquerque, New Mexico, for collaboration in the field.

## DESCRIPTION OF THE STUDY AREA

### Middle Rio Grande Basin

The Middle Rio Grande Basin (fig. 1) is one of several structural basins of the Rio Grande Rift that extend through New Mexico. Basin floor, land-surface altitudes range from about 1,460 m above sea level in the south to more than 1,980 m above sea level in the north (Thorn and others, 1993). Mountains form the basin margins along the northern and eastern borders, rising dramatically to more than 3,000 m above sea level. Bartolino (1997) defined the hydrologic basin as the area within the Rio Grande Valley extending from Cochiti Dam downstream to the community of San Acacia (fig. 1), approximately 7,770 square kilometers. Population in the basin increased from 314,900 to 563,600 between 1970 and 1990 (Thorn and others, 1993). The Albuquerque metropolitan area is the main population center in the basin, with about 89 percent of the basin's 1990 population (Thorn and others, 1993).

The New Mexico Office of the State Engineer has regulatory authority over water resources in this basin and has declared the Middle Rio Grande Basin a "critical basin." "Critical basin" declaration means that the ground-water basin is expected to experience rapid economic and population growth and that technical information regarding the available water supply is less than adequate (New Mexico Office of the State Engineer, written commun., 1995). Water supply in the Middle Rio Grande Basin is largely from ground-water sources delivered by domestic and public-supply wells. The Santa Fe Group aquifer system is the main geologic source of ground water. Thorn and others (1993) considered the aquifer system to be composed of Santa Fe Group and post-Santa Fe Group valley and basin-fill deposits. The most productive lithologies are the axial-channel deposits of the ancestral Rio Grande and, to a lesser extent, piedmont-slope and alluvial-fan deposits (Thorn and others, 1993). Thorn and others reported declining water levels of 43 m from 1960 to 1992 in the east Albuquerque area from pumping, fault barriers, and the limited extent of the axial-channel deposits. Surface water supplies most of the agricultural water-related needs in the basin and is stored in upstream reservoirs and then delivered by the Rio Grande to the associated system of canals, ditches, and laterals.

Recently, Hawley and Haase (1992), Thorn and others (1993), Hawley and others (1995), and Tiedeman and others (1998) have described the geology and hydrology of the basin. The following description of the depositional history, lithology, and thickness of the basin deposits is condensed from these authors. Rock units in the basin are primarily sedimentary and include pre-Santa Fe Group deposits, Santa Fe Group deposits, and post-Santa Fe Group deposits. The Santa Fe Group is the predominant basin deposit, reaching a thickness greater than 4,270 m in the center of the basin. The Santa Fe Group was deposited from Oligocene through early Pleistocene times, about 30 million years ago to 5 million years ago, and contains piedmont-slope, eolian, playa, and fluvial deposits. The post-Santa Fe Group was deposited from 1 million years ago to the present and contains channel and flood-plain alluvial deposits about 24 m thick and some volcanic flows in small areas.

Climate in the Middle Rio Grande Basin is characterized as semiarid. The basin has scant precipitation, abundant sunshine, low relative humidity, and a wide seasonal range of temperatures. At long-term weather stations within the basin, average annual precipitation is about 20 to 25 centimeters (cm). Average annual temperature in the basin ranges from about 54 to 58 °F. The mean daily low temperature in the basin is about 34 °F in January, and the mean daily high temperature is about 77 °F in July (U.S. Department of Commerce, 1997). The period of record is 1961-90.

### Santa Fe River Site

The Santa Fe River has certain characteristics that make it a desirable study site. Effluent from the Santa Fe Wastewater Treatment Plant causes this naturally ephemeral stream to be perennial for some distance downstream from the treatment plant, thus increasing the opportunity to collect flow data. The Santa Fe River passes through a deep canyon downstream from the treatment plant and onto a gently sloping alluvial fan before joining the Rio Grande. In the La Bajada area, the stream channel is of interest as an area of potential recharge to the ground-water system.

The reach of the Santa Fe River selected for this study starts at the USGS gaging station Santa Fe River above Cochiti Lake, New Mexico (08317200) (fig. 1).

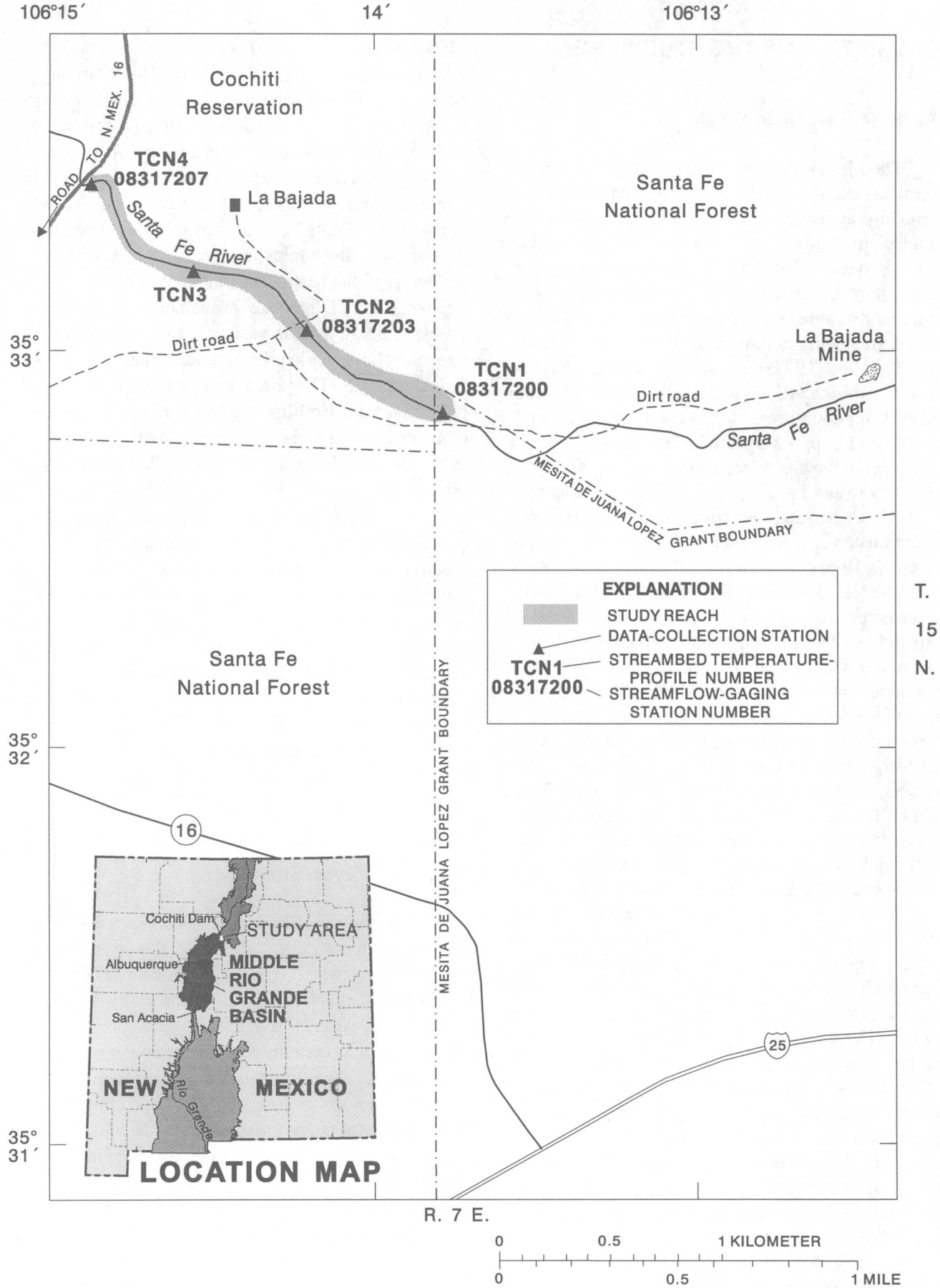


**Figure 1.** Location of the study area and data-collection sites near La Bajada, New Mexico.

Downstream from this gaging station, ground water discharges to the stream only in the first 100 to 500 m of the study reach, where bedrock is close to the ground surface. The thickness of alluvial sediments then increases rapidly and the stream loses water for the remaining 2 km of the study reach. Surface-water flow often ceases a short distance downstream from the study reach.

Streamflow data are available for the Santa Fe River above Cochiti Lake gaging station from March 1970 to the present (1998) (fig. 1). The daily mean flow at this station for water years 1970-97 is 11.7 cubic feet per second ($ft^3/s$) or 0.33 cubic meter per second ($m^3/s$). The daily mean flow for water year 1997 ranged from 2.8 to 140 $ft^3/s$ (0.08 to 3.96 $m^3/s$); 90 percent of daily mean flow values were less than or equal to 19 $ft^3/s$ (0.54 $m^3/s$). Flows greater than 19 $ft^3/s$ (0.54 $m^3/s$) generally are a response to storm events or to May-June releases from an upstream reservoir. Daily flow at this station is generally variable and has a pattern of a minimum in the late afternoon and a maximum during the night to early morning hours. This diurnal pattern in streamflow is due to several factors, including the release pattern from the sewage treatment plant; changes in water viscosity with temperature, which affect streambed hydraulic conductivity and consequently the infiltration rate (Constantz and others, 1994); and evapotranspiration losses.

The study reach extends downstream from the USGS gaging station for approximately 2.5 km to include two new streamflow gages installed in September 1996 to allow collection of streamflow data for two contiguous channel reaches. The new stations are Santa Fe River above La Bajada, New Mexico (08317203), and Santa Fe River below La Bajada, New Mexico (08317207) (fig. 1).

## DETERMINATION OF INFILTRATION RATES

Infiltration-rate estimates are based on streamflow loss, stream surface area, and estimated evaporation rates. Streamflow loss divided by stream surface area gives a streamflow-loss rate. The evaporation rate subtracted from the streamflow-loss rate gives an infiltration rate.

### Streamflow-Loss Rate

Streamflow loss is defined as the reduction in streamflow between an upstream and a downstream measuring point for a given time period. Streamflow differences must be greater than measurement errors to achieve accuracy. If the magnitude of the streamflow difference between any two measurement points is small, then errors in the streamflow measurements can mask any streamflow loss. Therefore, identifying a reach with no intervening inflows or outflows, and where the streamflow difference is large relative to potential measurement errors, is critical for maximizing accuracy.

In this study, an initial streamflow-measurement survey was made to locate losing stream reaches and to determine whether streamflow losses would be large enough to exceed measurement errors. Of the reaches surveyed, the Santa Fe River near La Bajada was chosen as the reach that best fit the criteria. Even so, this reach was less than ideal, and periods of record had to be carefully selected and analyzed. A favorable aspect of this reach was the perennial flow resulting from upstream wastewater treatment plant discharge. The numerous days of flow increased the likelihood that a suitable period of record could be chosen to calculate streamflow loss. An unfavorable aspect of the reach was unmeasured irrigation-return flow. A headgate located about 0.7 km upstream from the study reach allowed diversions for irrigation. A canal carried water to irrigate about 160 hectares of farmland at the village of La Bajada. Gates in the main canal allowed irrigation water to return to the Santa Fe River at two locations between streamflow-gaging stations 08317203 and 08317207 (fig. 2). This return flow was not measured and introduced an error in the calculation of streamflow losses between stations 08317203 and 08317207. The streamflow loss is underestimated by the amount of this unmeasured return flow.

Stream-stage data were collected at 15-minute intervals and current-meter streamflow measurements (approximately monthly) were made from October 1, 1996, through December 3, 1997, at the gaging stations. For each station, daily mean streamflow values were computed using stage-streamflow rating curves and shifts (Ortiz and others, 1998, p. 11-12). Tables 1-3 list daily mean streamflow values at the three stations from October 1, 1996, through December 3, 1997 (all tables are in the back of the report). An unsuccessful attempt was made to calculate streamflow-loss rates from the daily mean flow data in tables 1-3. The data are given for reference purposes only because they are not published elsewhere.

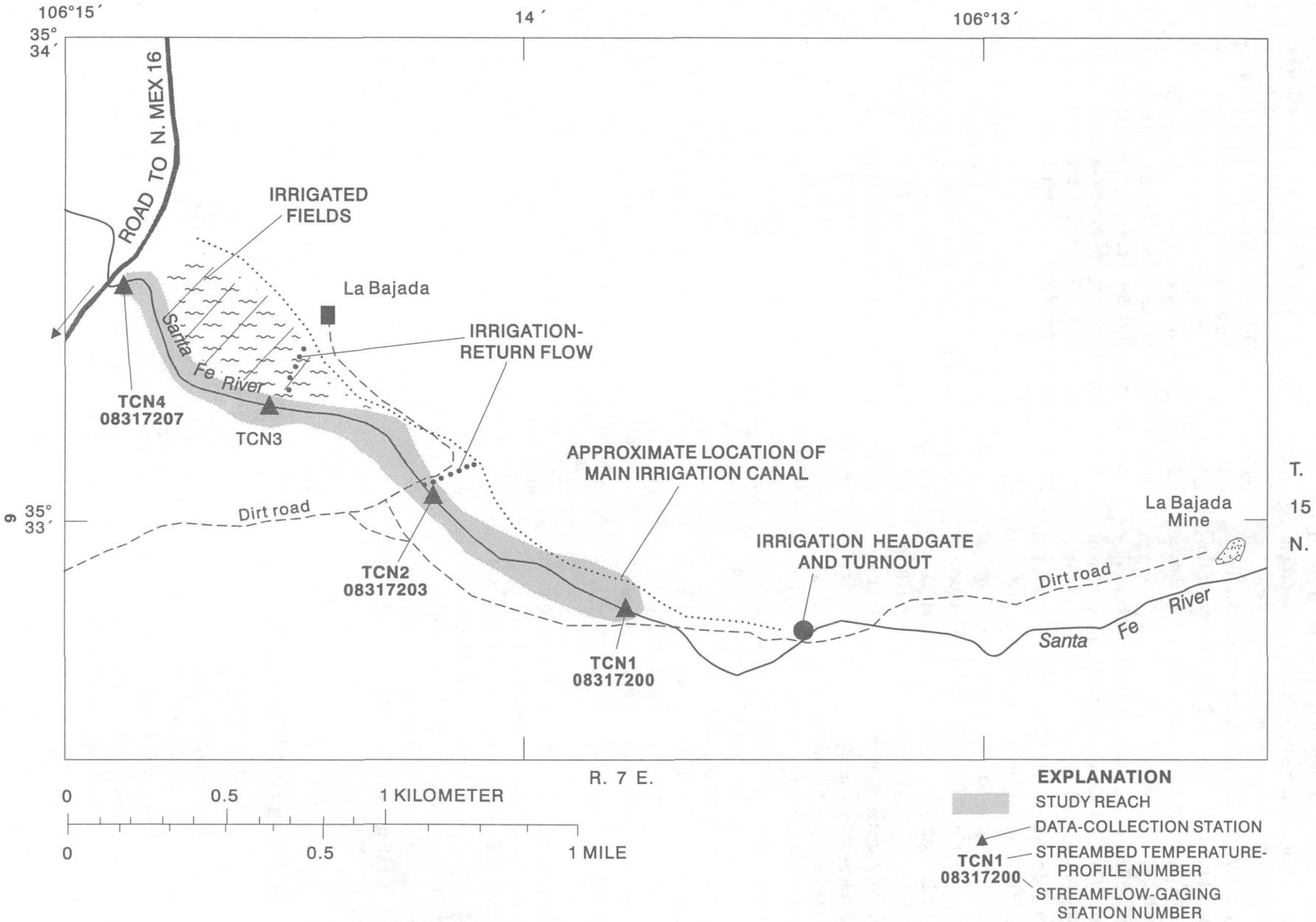


**Figure 2.** Relation of reaches to irrigation turnouts and returns.

To improve accuracy of the stage-streamflow relations, intensive current-meter streamflow measurements were made for several data-collection periods in 1997. Current-meter measurements were made from early morning until late afternoon at each of the three streamflow-gaging stations, 08317200, 08317203, and 08317207, on June 26, 1997, and again during September 30-October 2, 1997 (table 4). Because flow varies throughout the day at these stations, measuring from early morning until late afternoon allowed for a range of stage and streamflow. Stage-streamflow relations were then determined by regression for the June and September-October 1997 time periods.

Stage-streamflow relations for a sand and gravel channel, such as this one, change with channel morphology. Based on additional stage, streamflow, and precipitation data that indicate changes in channel morphology, the relation established for June 26 was used for data collected from June 26 through June 28, 1997, and the relation established for September 30 through October 2, 1997, was used for data collected from September 27 through October 6, 1997. The relation allows calculation of streamflow from 15-minute stage data recorded at the streamflow-gaging station. Fifteen-minute stage data input to the stage-streamflow regression equation determined streamflow. Stage data that were greater or less than that measured during the time period covered by the relation were not used because of the possible inaccuracies involved in extrapolation of the relation.

Streamflow at the gaging stations is variable. The pattern of a daily minimum in the late afternoon and a daily maximum during the night to early morning hours of a 24-hour cycle requires a travel-time adjustment when using instantaneous streamflow values. The travel time is the time water takes to travel from one gaging station to the next and is dependent on the velocity of the water and the distance between gaging stations. Water velocity changes with location in the cross section, longitudinally along the stream, and with time at a specific location. For example, table 4 shows that the mean, cross-sectional velocities for streamflow measurements made at stations 08317200, 08317203, and 08317207 ranged from 0.81 to 2.16 feet per second. The method used to determine the travel-time adjustment was curve matching. The time shift necessary to match the peaks and valleys of the hydrographs at successive, downstream gaging stations is the travel time. Figure 3 is an overlaid plot of streamflow data for June 26-July 3, 1997, showing the match in hydrographs that determined the time of travel from station 08317200 to 08317203, from station 08317203 to 08317207, and from station 08317200 to 08317207 to be 15, 30, and 45 minutes, respectively. Curve matching for other periods of record that were analyzed yielded similar results; therefore, the travel-time adjustment used for data analysis in this report was 15, 30, and 45 minutes from station 08317200 to 08317203, from 08317203 to 08317207, and from 08317200 to 08317207, respectively.

Streamflow loss between stations 08317200 and 08317203 was small to negligible; more streamflow loss appeared to occur between stations 08317203 and 08317207. Streamflow-loss estimates from station 08317200 to station 08317207 are shown in table 5. In table 5, for example, streamflow at the downstream station subtracted from streamflow at the upstream station determined the streamflow loss after adjustment for the appropriate travel time. Using station 08317200 as the upstream station and 08317207 as the downstream station, 45 minutes is the appropriate travel-time adjustment. For example, streamflow at station 08317200 at 11:00 on June 26, 1997 (8.32 $ft^3/s$), minus streamflow at station 08317207 at 11:45 on June 26, 1997 (6.36 $ft^3/s$), equals streamflow loss (1.96 $ft^3/s$) (table 5).

The average streamflow loss for the June 26-28, 1997, period was 1.03 $ft^3/s$ (0.029 $m^3/s$) with a standard deviation of 0.60 $ft^3/s$ (0.017 $m^3/s$), median of 1.15 $ft^3/s$ (0.033 $m^3/s$), mode of 1.14 $ft^3/s$ (0.032 $m^3/s$), and range of -0.23 to 2.75 $ft^3/s$ (-0.007 to 0.078 $m^3/s$). The average streamflow loss for the September 27-October 6, 1997, period was 0.84 $ft^3/s$ (0.024 $m^3/s$) with a standard deviation of 0.55 $ft^3/s$ (0.016 $m^3/s$), median of 0.90 $ft^3/s$ (0.025 $m^3/s$), mode of 1.25 $ft^3/s$ (0.035 $m^3/s$), and range of -0.42 to 2.17 $ft^3/s$ (-0.012 to 0.061 $m^3/s$).

## Stream Surface Area

The stream surface area is needed to compute infiltration rates from streamflow losses between measuring locations. To determine the surface area of the stream, stream width was measured at 100-m intervals along the 2,500-m study reach on June 26-27, 1997. Measurements were started at approximately 10:00, 12:00, 14:00, 16:00, and 18:00 hours on June 26, 1997, and at 08:00 on June 27, 1997. Width measurements were progressive from upstream to downstream, starting at the aforementioned times.

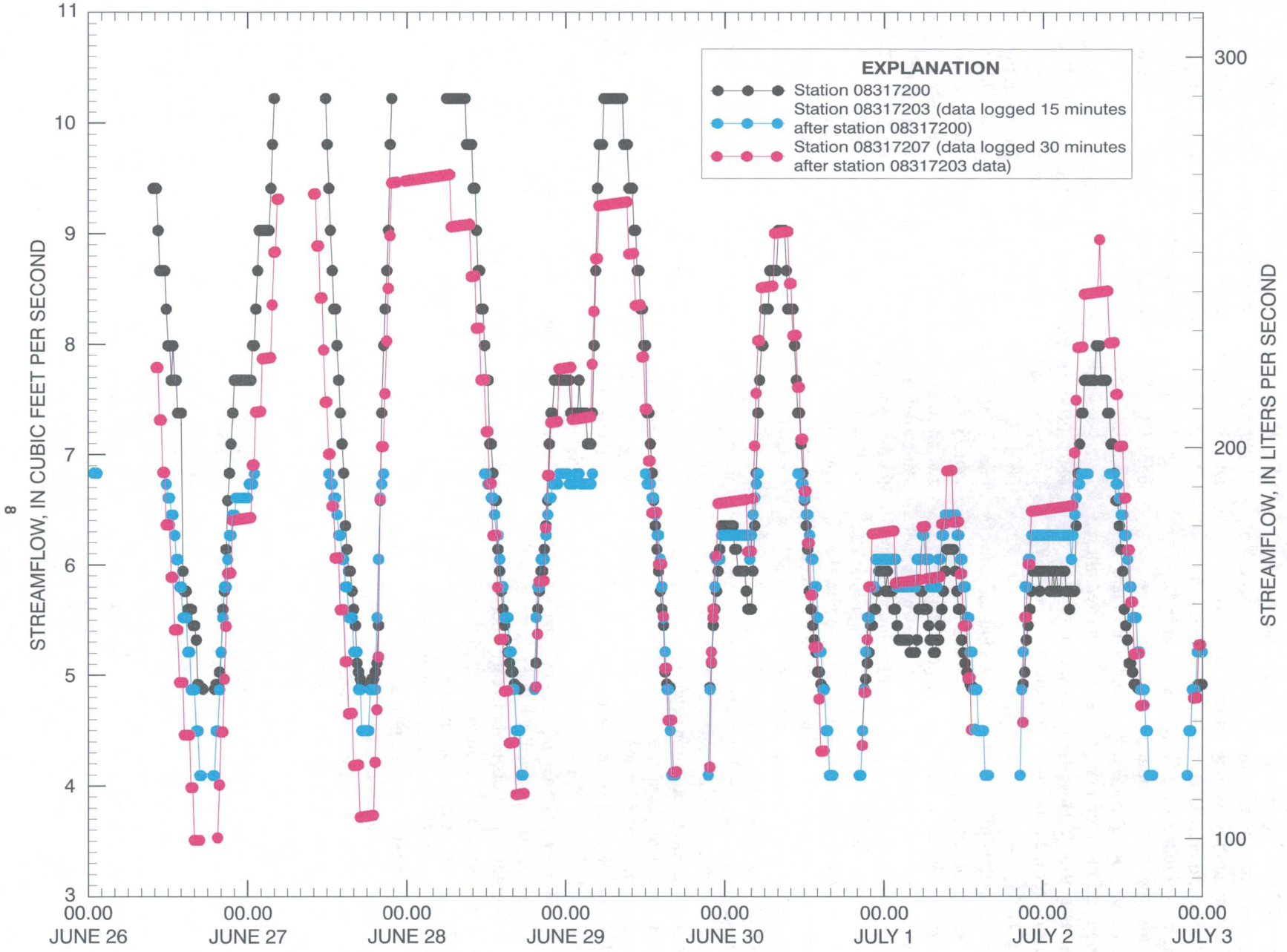


**Figure 3.** Streamflow data showing match in hydrographs that determine the time of travel between stations 08317200, 08317203, and 08317207, June 26 through July 3, 1997.

Width measurements multiplied by length (100 m) equaled rectangular surface areas along the studied stream reach. The sum of the 25 rectangular surface areas equaled the surface area of the stream reach (table 6).

## Evaporation Rate

The evaporation rate was estimated from the pan-evaporation rate at Cochiti Dam, located about 12 km northwest of the study area (U.S. Department of Commerce, 1997, p. 30-31). The pan-evaporation rate at Cochiti Dam, multiplied by a pan coefficient of 0.7 (Linsley and others, 1982, p. 152), was assumed to be a good estimate of the evaporation rate from the stream surface in the study reach (table 7).

## Infiltration Rate

Instantaneous streamflow-loss estimates, based on data collected once every 15 minutes (table 5), were divided by stream surface area adjusted every 15 minutes for the study reach. The 15-minute stream surface area was calculated using a regression equation established for stage and stream surface area. The stage used in the regression equation was the mean stage at station 08317203. Streamflow loss divided by stream surface area yields a streamflow-loss rate (table 5) per unit area that can be partitioned into infiltration and evaporation.

The average infiltration rate, per unit area per day, ranged from 92 to 267 millimeters per day (mm/day) for June 26-28, 1997, and from 69 to 256 mm/day for September 27-October 6, 1997 (table 8). Underestimation of streamflow loss by an amount equal to unmeasured irrigation-return flow in the study reach may result in underestimation of infiltration rates. Table 8 shows that the infiltration portion of streamflow loss was much greater than the evaporation portion. Infiltration accounted for about 92-98 percent of streamflow loss, whereas evaporation accounted for about 2-8 percent of streamflow loss (table 8).

# DETERMINATION OF PERCOLATION RATES

Heat was used as a tracer to monitor streambed percolation rates. The temporal distribution of streambed temperatures with depth was input to a USGS simulation model. The model, VS2DH (Healy and Ronan, 1996), was used to simulate heat and water transport in variably saturated sediments beneath the streambed.

The stress modeled in the system was the temperature difference with depth. The top thermal boundary condition varied in time (diurnally). The upper hydraulic boundary condition (river stage) was kept at a constant value. The upper thermal boundary condition, as simulated, was identical to data collected at 10-minute intervals at the sites for selected time periods.

Model-simulated temperatures were compared with measured temperatures until the best match with depth was obtained. For this match, the model percolation rate, the product of hydraulic conductivity and head gradient, is calculated to estimate the percolation rate at the selected site. The procedure is an application of the model to simulate a percolation rate, not a calibration or verification of the model for the Santa Fe River sites.

## Streambed Temperature-Profile Data

Four temperature-profile sites were selected along the 2.5-km study reach. Three sites were established at the streamflow-gaging stations and the fourth site was located halfway between the lower two streamflow-gaging stations (fig. 1). A Geoprobe soil-probing machine, Model 8-mu, which is a truck-mounted hydraulic ram/percussion hammer, was used to install thermocouple wires vertically into the streambed. The pickup truck was positioned in the stream, the drill rod was driven approximately 3 m into the streambed, and thermocouple wires were inserted down the drill rod before removal of the rod from the streambed. At each site, six thermocouple wires were installed at approximately 0, 0.4, 0.7, 1, 2, and 3 m below the streambed near the center of the stream. Temperature was recorded at 10-minute intervals by data loggers in shelters on the right streambank from September 1996 through October 1997. The temperature-profile data-collection sites are referred to as thermocouple nest (TCN) sites TCN1, TCN2, TCN3, and TCN4 (fig. 1)

Figure 4 depicts the streamflow and stream temperature pattern for most months of water year 1997. These types of annual patterns are common for locations that experience significant seasonal variations in precipitation and temperature.

Figure 5 depicts the streambed temperature profiles for October 18, 1996, through October 8, 1997, at approximately 0.4, 0.6, and 3 m (other depths are not shown in the figure for clarity of individual temperature curves). Note that the amplitude of the diurnal variation in the shallow streambed temperatures is noticeably greater in the spring than in other times of the year. With the assumption that sediments beneath the streambed are saturated, this suggests maximum water and heat flow into the streambed during the spring.

Figure 6 compares streamflow at each stream gage and stream temperature at site TCN2 for June 26-July 2, 1997 (the period when streambed infiltration and percolation rates were compared). The pattern of minimum streamflow and maximum stream temperature in early afternoon is common in small to moderately sized streams for several reasons. Solar warming causes maximum temperature in the afternoon hours, and the viscosity of water decreases with temperature, causing infiltration rates to be greatest in the afternoon hours (Constantz, 1998). For this reach of the Santa Fe River, however, the diurnal pattern of discharge from the wastewater treatment plant, about 18 km upstream from the upper streamflow gage, is a primary factor in the observed diurnal pattern of streamflow.

## Percolation Rate

Santa Fe River percolation rates were simulated using VS2DH, assuming vertically downward flow through homogeneous, saturated sediments beneath the streambed. The model simulated a 5-m vertical section in the channel that is 10 cm wide. A variable grid was developed, with node spacing ranging from 2 mm at the surface to half a meter at the bottom. Thermal conductivity and heat capacity were set at 2 watts per meter per degrees Celsius (°C) and 3 x $10^6$ joules per cubic meter per °C, respectively. The simulation was designed to match subsurface temperatures with vertical temperature profiles measured at several sites along the Santa Fe River study reach.

At each location, stream temperature and stage were used as the upper model boundary and supplied water and heat to the sediments below the stream. A 10-cm stage was assigned for sites TCN2 and TCN4, a representative stage for these sites. Site TCN3 had different channel morphology; therefore, a 20-cm stage was representative for this site. Site TCN1 was not simulated with deeper water because of problems in data collection. Initial thermal conditions for the simulation were taken from actual measurements, with a linear interpolation between data points. Hydraulic conductivities and the bottom head boundary condition (and therefore, the hydraulic gradient) were determined according to the best subsurface thermal matches.

As representative of the three locations, the measured stream temperature (0.0-m depth thermocouple) and streambed temperatures for June 26-July 2, 1997, are shown in figure 7 for site TCN2 (results for sites TCN3 and TCN4 are similar). Simulation results using VS2DH were matched to these measured results for all three sites to estimate streambed percolation rates.

The shallowest thermal data were matched to the corresponding depth in the model as well as matched to the next shallowest depths in separate simulations. Using the shallowest depth resulted in better temperature matches because of the multidimensionality of the flow at depth. A one-dimensional model can accurately describe percolation rates at depth only if ground-water flow moves only vertically. However, in many stream environments, ground-water flow deviates from vertical flow paths at depths. A solution for the percolation rate was obtained for the shallowest depths for a given set of conditions in the model. Figures 8, 9, and 10 show the simulated and measured streambed temperatures at shallow depths at sites TCN2, TCN3, and TCN4, respectively. Once a match was made, heat and water flux into the top node of the model were calculated for each location to determine a streambed percolation rate. Table 9 lists the calculated streambed percolation rates at each indicated depth for each site.

## COMPARISON OF INFILTRATION AND PERCOLATION RATES

The estimates of infiltration rates derived using the surface-water method ranged from 92 to 267 mm/day for June 26-28, 1997. For the same time period, the estimates of percolation rates derived using the ground-water method ranged from 40 to 109 mm/day.

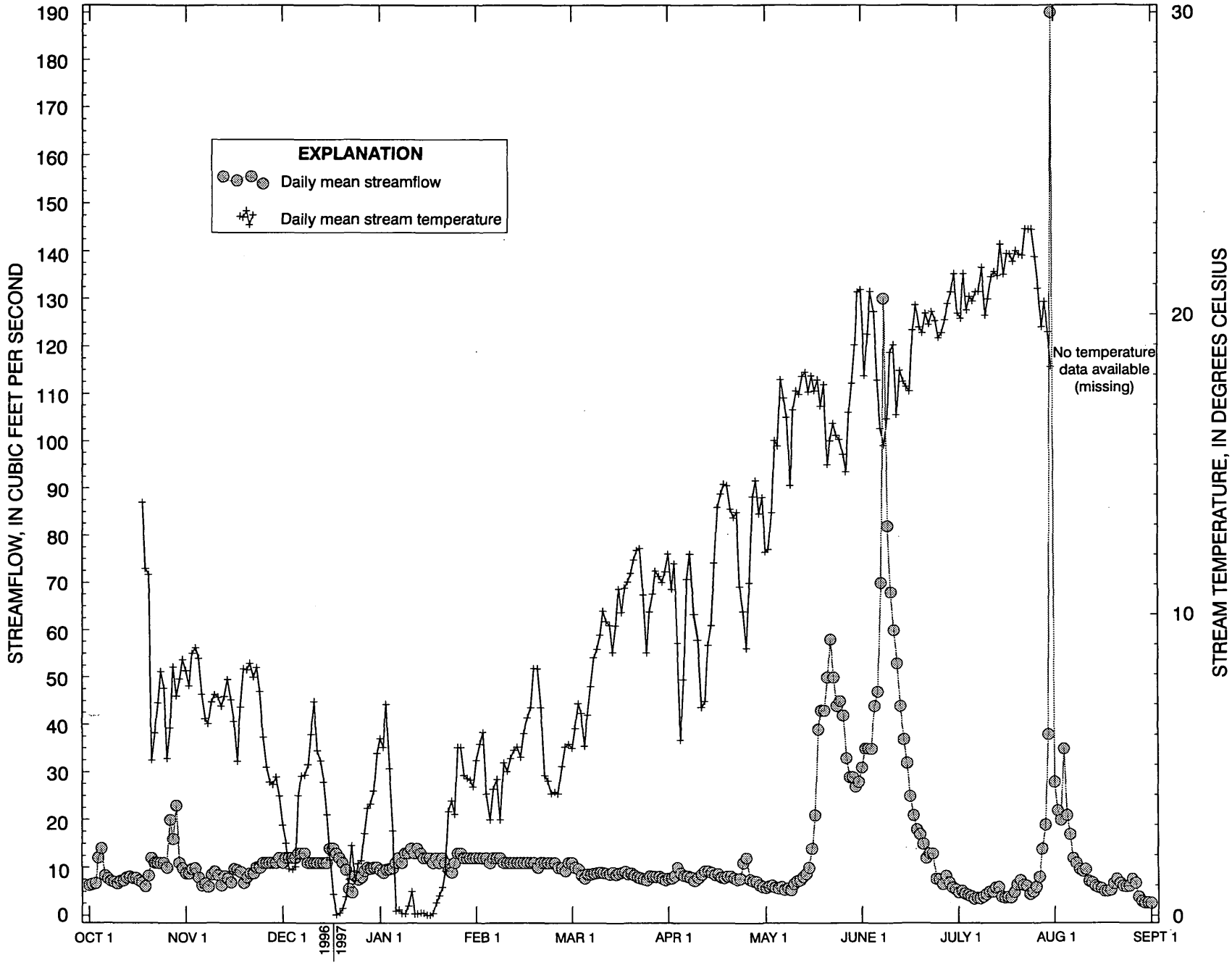


**Figure 4.** Daily mean streamflow and stream temperature for Santa Fe River near La Bajada (station 08317203), October 1, 1996, through September 1, 1997.

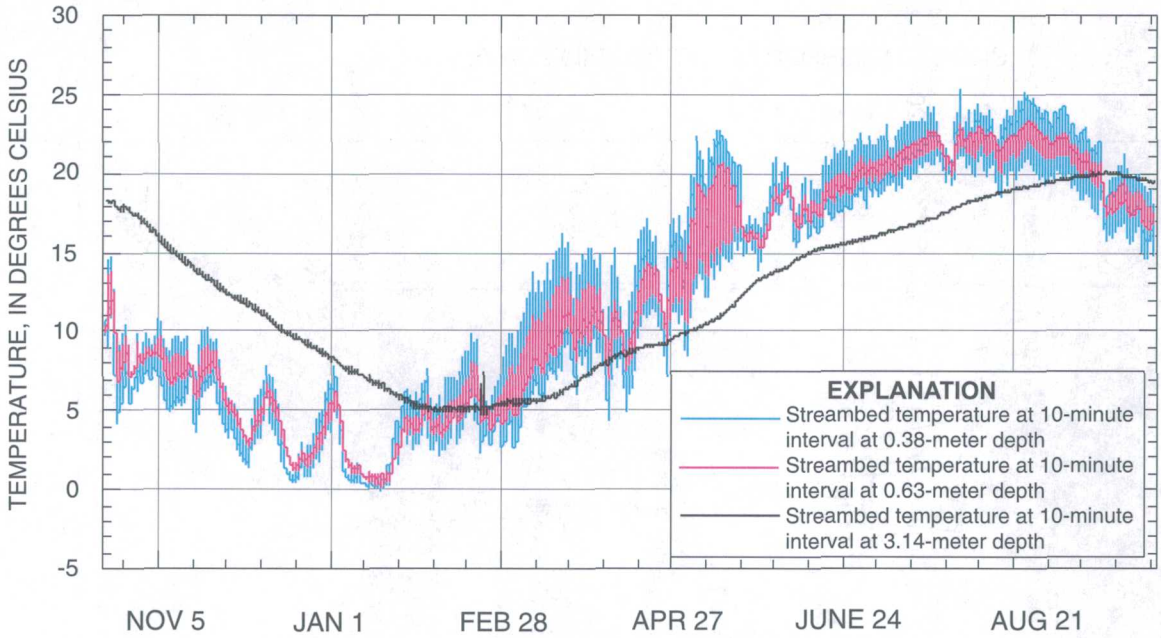


**Figure 5.** Streambed temperature profiles at depths of 0.38, 0.63, and 3.14 meters below the streambed at site TCN 3, October 18, 1996, through October 8, 1997.

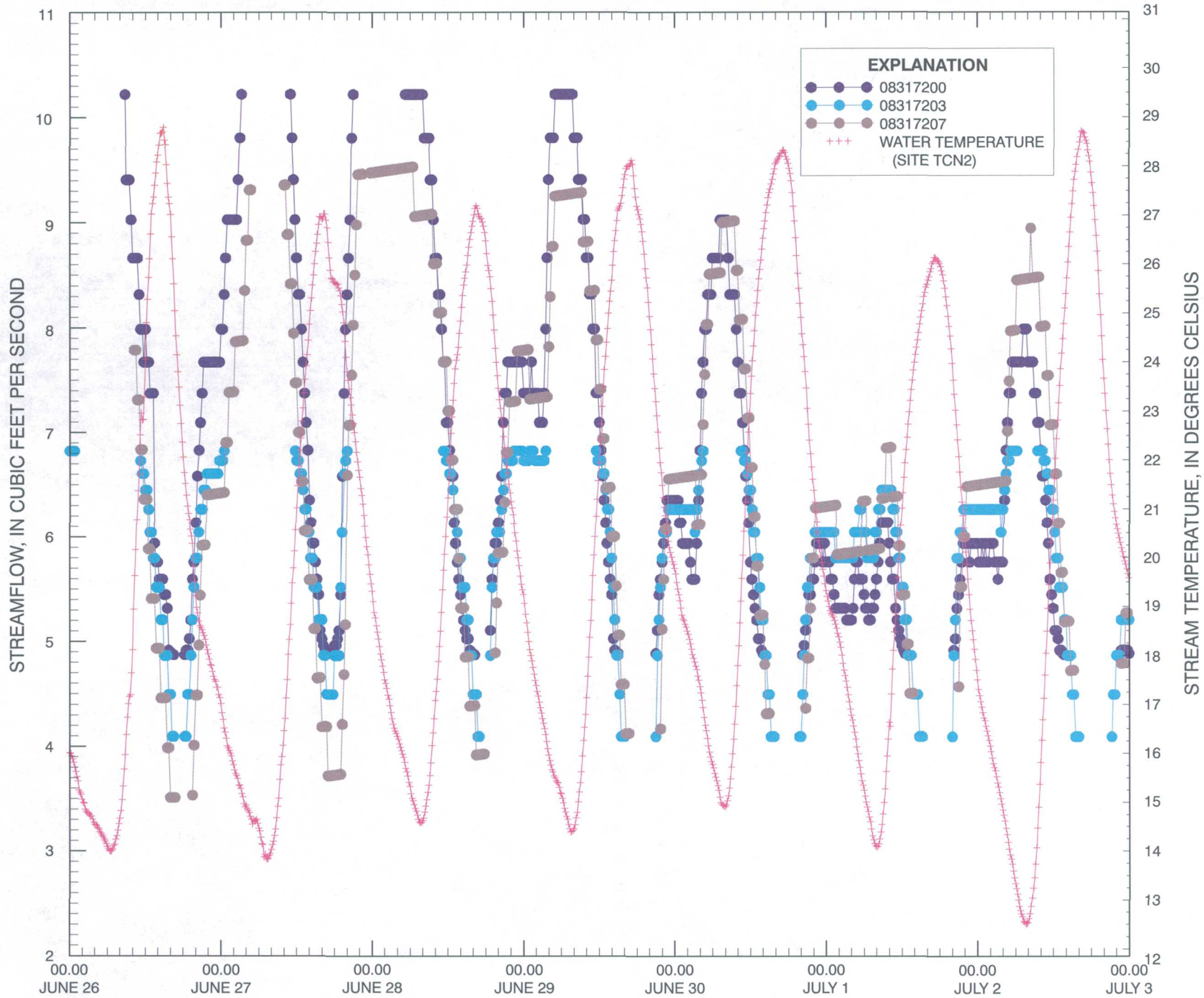


**Figure 6.** Streamflow and stream temperature over the study reach, June 26 through July 2, 1997.

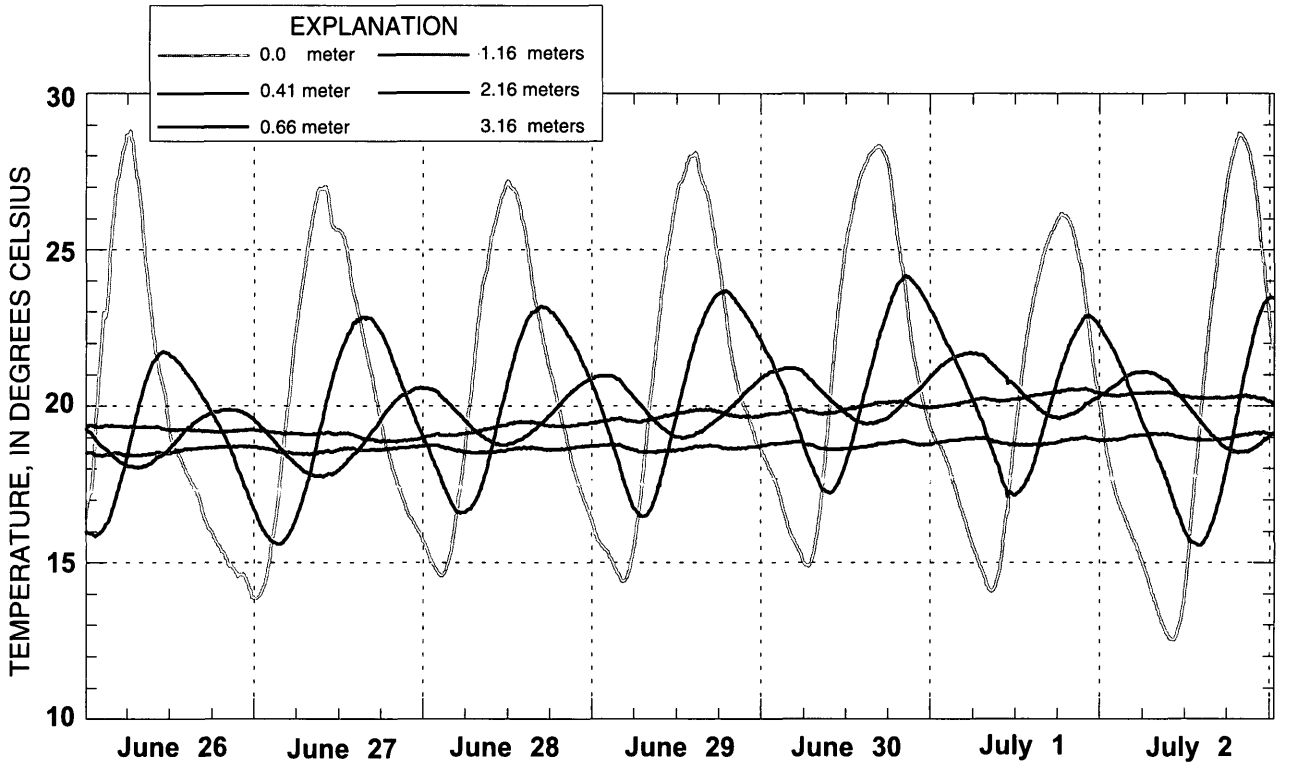


**Figure 7.** Stream temperature and streambed temerature at site TCN2, June 26 through July 2, 1997.

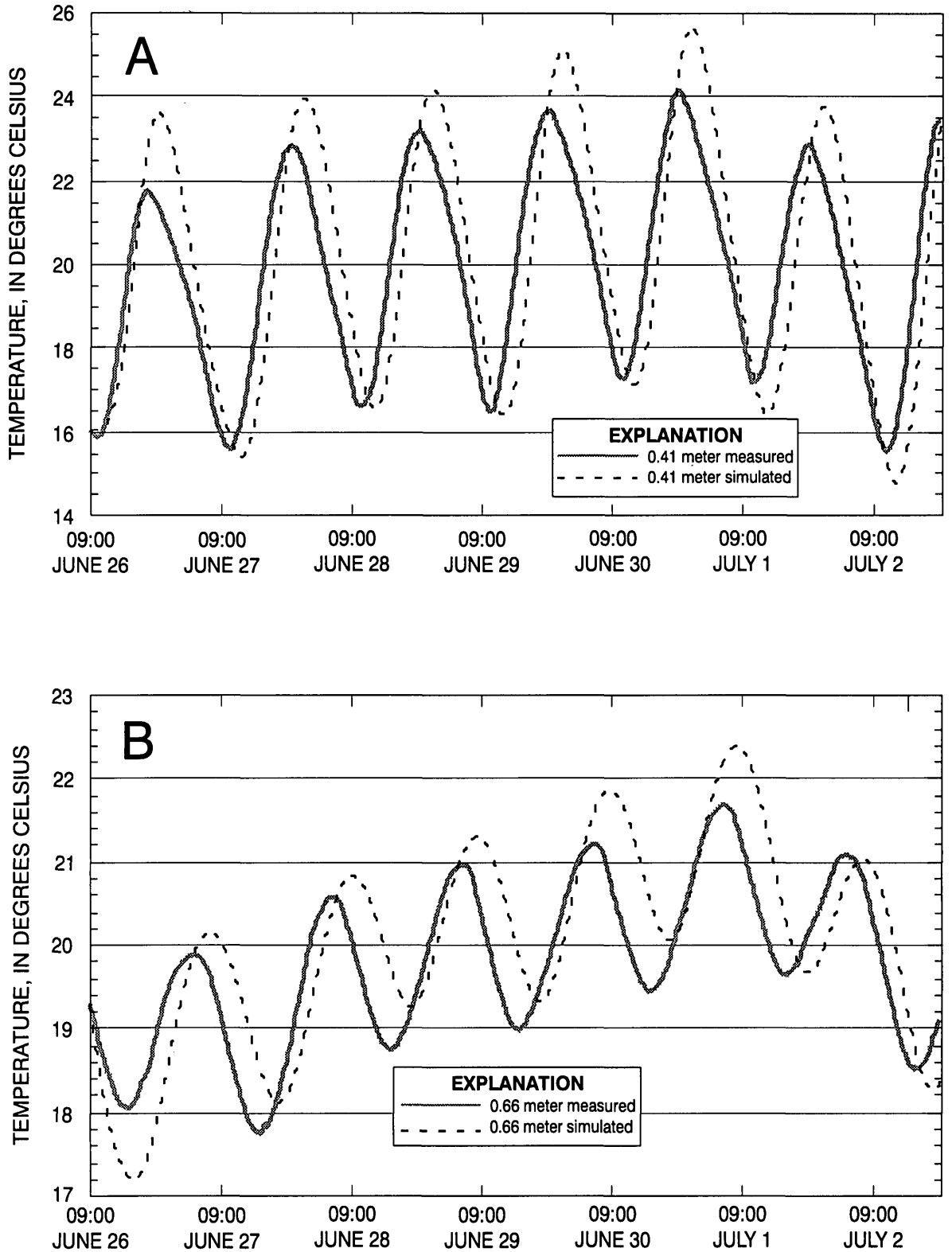


**Figure 8.** Simulated and measured streambed temperatures at site TCN2, June 26 through July 2, 1997.

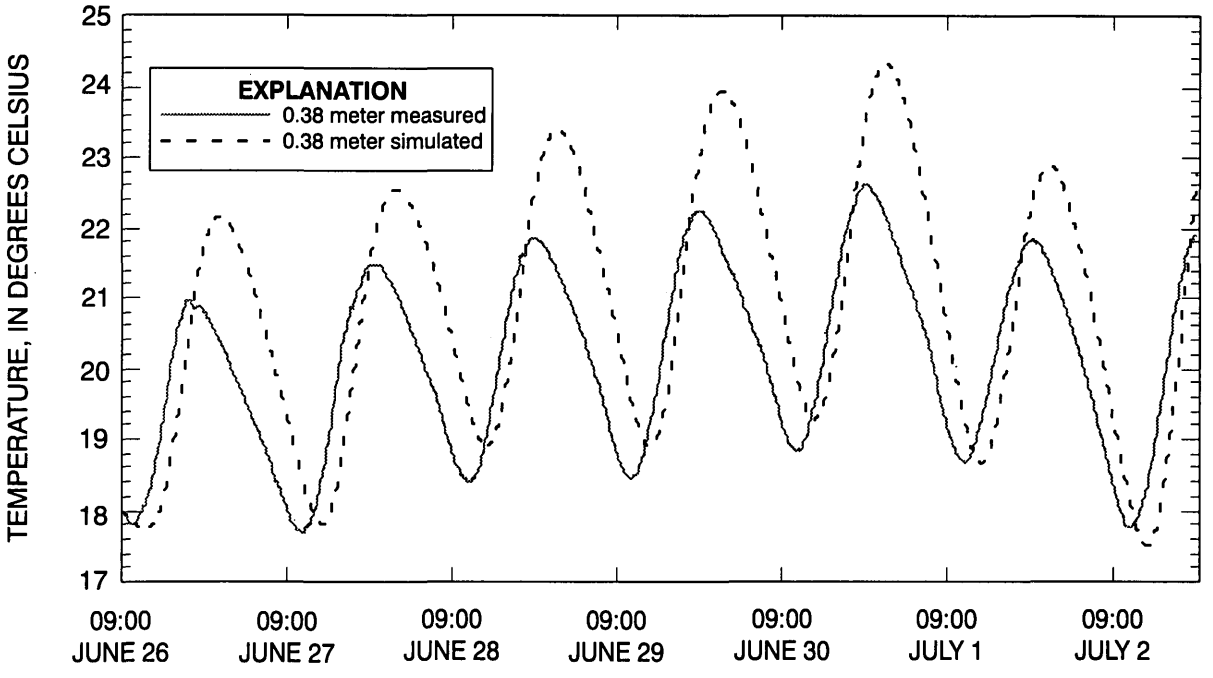


**Figure 9.** Simulated and measured streambed temperatures at site TCN3, June 26 through July 2, 1997.

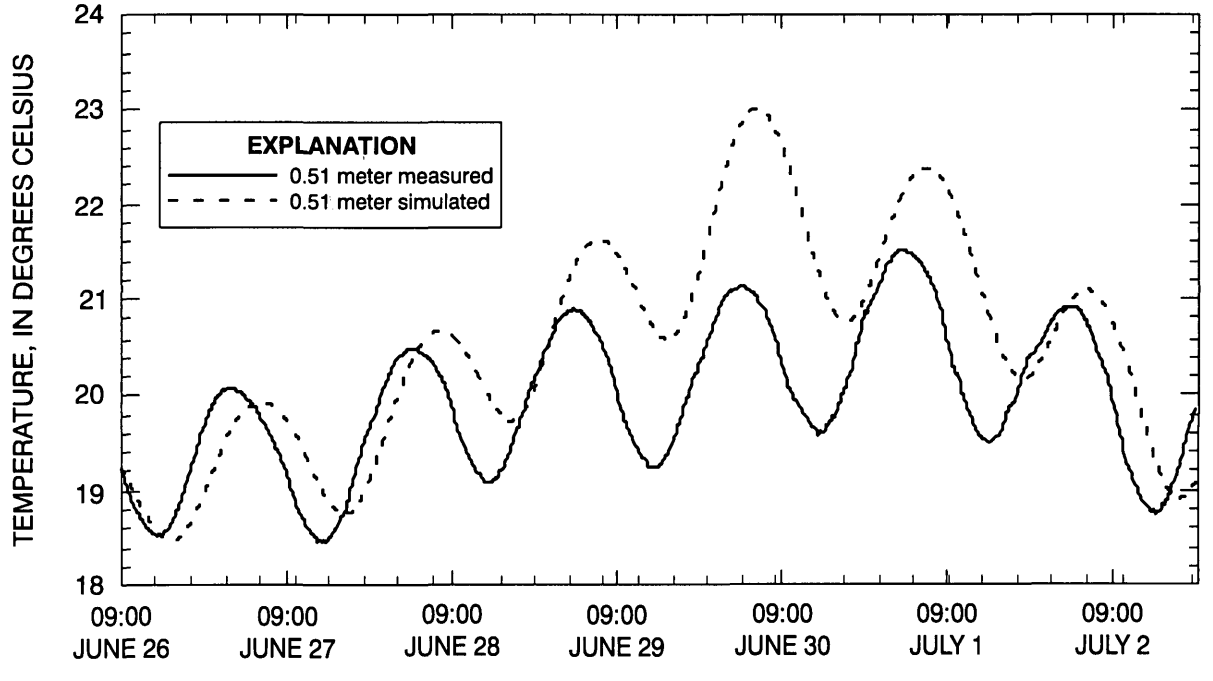


**Figure 10.** Simulated and measured streambed temperatures at site TCN4, June 26 through July 2, 1997.

Several issues needed to be considered before evaluating the degree of agreement between estimated infiltration and percolation rates. Estimates of percolation were based on only three locations along the 2.5-km stream reach, whereas estimates of infiltration were based on net infiltration rates averaged over the entire 2.5-km stream reach. Three measurement points may be insufficient to represent an average percolation rate for the entire reach. Of more significance, percolation rates from vertical temperature profiles do not measure the nonvertical component of heat and water fluxes that may occur along the edges of the stream. Nonvertical flow is measured by net streamflow loss, but not by vertical temperature profiles. Thus, measurements of streambed percolation are expected to be less than measurements of streambed infiltration for streams with a significant nonvertical component to streamflow loss. Streams that are hydraulically connected to the water table have a greater nonvertical component of flow than streams that are not hydraulically connected to the water table. The La Bajada reach of the Santa Fe River was hydraulically connected to the water table during June 1997, thus having a significant nonvertical component of streambed loss during the period of methods comparison. Therefore, estimates of streambed percolation beneath the center of the stream channel can be expected to be less than estimates of streambed infiltration averaged across the entire channel.

Infiltration-rate estimates are affected by inaccuracies related to the use of stage-streamflow relations and measurement errors; for this reason, the use of stage-streamflow relations proved to be too inaccurate to determine streamflow losses for the period of record. Extrapolation of a stage-streamflow relation much beyond the series of current-meter streamflow measurements used to develop the relation showed that the relation was changing, probably because of the sandy nature of the streambed. The difference in streamflow between stations was of the same magnitude as errors from the stage-streamflow relation. To use stage-streamflow relations, the streamflow loss between any two measurement points may need to be greater than 10-15 percent, which is the estimated error for records at gaging stations rated good to fair (Ortiz and others, 1998, p. 15).

Infiltration and percolation during flooding are of great interest because of the potential for recharge to be large. In this study reach, high-water marks show that the stream overflows its banks and the surficial area for infiltration increases greatly. If a secure method of anchoring temperature sensors within the streambed could be devised, then the ground-water method could be used to gather temperature data that could then be used, with modeling, to determine percolation rates. However, flood pulses washed out the thermocouple temperature sensors that were installed in the streambed during this study. Wading streamflow measurements are generally too dangerous to be made during flood events.

In general, the ground-water method may be preferred over the surface-water method when nonvertical flow components are negligible. The ground-water method has several advantages over the surface-water method. It is less labor intensive than streamflow measurements, relying on temperature data, an easily measured property. Temperature measurements can be collected frequently and automatically through the use of a data logger. The ground-water method also eliminates the difficulty of measuring or estimating evaporation from the water surface and is therefore a more direct method for estimating percolation below the streambed.

## SUMMARY AND CONCLUSIONS

A 2.5-km reach of the Santa Fe River near La Bajada, New Mexico, was intensively monitored during 1996 and 1997. Two methods, one a surface-water method and the second a ground-water method, were used to determine infiltration and percolation rates. Infiltration and percolation are important in the Middle Rio Grande Basin because they affect recharge to ground water. The amount of surface recharge to ground water largely depends on the quantity of water that infiltrates through porous sediment and percolates to the water table.

Infiltration rates were determined using a surface-water method that is based on streamflow measurements and their differences along a stream reach, streamflow-loss rates, stream surface area, and evaporation rates. The infiltration rate per unit area per day, determined from streamflow loss after adjustment for evaporation from the stream surface, ranged from 92 to 267 mm/day for June 26-28, 1997, and from 69 to 256 mm/day for September 27-October 6, 1997. Underestimation of streamflow loss by an amount equal to unmeasured irrigation-return flow in the study

reach may result in underestimation of infiltration rates.

The infiltration portion of streamflow loss was much greater than the evaporation portion. Infiltration accounted for 92-98 percent of streamflow loss; evaporation accounted for 2-8 percent of streamflow loss.

During June 26-28, 1997, near-surface percolation rates were calculated and compared to infiltration rates. Percolation rates were determined using a ground-water method that uses heat as a tracer to monitor percolation through shallow streambed sediments. Percolation rates ranged from 40 to 109 mm/day. The agreement between these percolation rates and the infiltration rates of 92 to 267 mm/day is good considering (1) percolation rates were based on only three locations along the entire stream reach and (2) percolation rates derived from vertical temperature profiles do not include the nonvertical component of heat and water fluxes.

In conclusion, the ground-water method has some advantages over the surface-water method when nonvertical flow components are negligible. It is less labor intensive than streamflow measurements, relying on temperature data, an easily measured property. The ground-water method also eliminates the difficulty of measuring or estimating evaporation from the water surface.

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# Table 1. Daily mean streamflow for Santa Fe River above Cochiti Lake, New Mexico, October 1, 1996, through December 3, 1997

08317200 SANTA FE RIVER ABOVE COCHITI LAKE, NM

LOCATION.--Lat 35°32'49", long 106°13'41", in NW¼ sec. 8, T. 15 N., R. 7 E., Santa Fe County, Hydrologic Unit 13020201 in Mesita de Juana Lopez Grant, on right bank at foot of La Bajada Hill, 5.0 miles upstream from Cochiti Dam, 6.3 miles east of Peña Blanca, and at mile 7.9.

DRAINAGE AREA.--231 square miles.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1970 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 5,505 feet above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Water-discharge records good except for estimated daily discharges, which are poor. Surface- and ground-water diversions and returns for municipal supply of City of Santa Fe in upper part of basin. Diversions for irrigation of about 400 acres upstream from station. See tabulation below for the results of discharge measurements made during year at point adjacent to gage of an unnamed ditch on right bank, which diverts water 0.4 mile upstream and bypasses gage; ditch flow not included in record. Lowest flow for period of record, no flow July 16-18, 1971.

DISCHARGE MEASUREMENTS, IN CUBIC FEET PER SECOND, OF DITCH, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

| Date | Discharge | Date | Discharge |
|---|---|---|---|
| 27/Mar/97 | 1.19 | 24/July/97 | 0.37 |
| 13/May/97 | 1.08 | 27/Aug/97 | .52 |
| 26/June/97 | .32 | | |

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.8 | 11 | 16 | 15 | 13 | 12 | 8.8 | 6.8 | 34 | 4.7 | 14 | 3.6 |
| 2 | 6.1 | 11 | 15 | 14 | 13 | 11 | 8.6 | 7.2 | 38 | 5.2 | 13 | 4.2 |
| 3 | 6.5 | 12 | 15 | 15 | 13 | 11 | 9.4 | 7.4 | 37 | 4.3 | 12 | 3.6 |
| 4 | 12 | 13 | 14 | 14 | 13 | 10 | 13 | 6.8 | 36 | 4.0 | 22 | 3.9 |
| 5 | 13 | 12 | 14 | 14 | 13 | 11 | 11 | 6.6 | 43 | 3.7 | 14 | 4.6 |
| 6 | 8.4 | 12 | 15 | 13 | 13 | 11 | 10 | 7.1 | 46 | 2.9 | 12 | 5.0 |
| 7 | 7.3 | 12 | 15 | 13 | 13 | 11 | 9.4 | 6.7 | 58 | 3.3 | 10 | 3.8 |
| 8 | 6.4 | 12 | 15 | 13 | 13 | 11 | 8.7 | 7.0 | 77 | 3.2 | e9.0 | 5.1 |
| 9 | 6.1 | 12 | 15 | 15 | 13 | 11 | 7.5 | 5.9 | 56 | 3.7 | e9.0 | 3.7 |
| 10 | 5.5 | 13 | 15 | 15 | 13 | 12 | 8.2 | 7.5 | 48 | 4.4 | e9.0 | 4.3 |
| 11 | 6.0 | 12 | 15 | 15 | 13 | 11 | 8.8 | 7.7 | 42 | 5.2 | e7.0 | 4.5 |
| 12 | 6.6 | 13 | 15 | 17 | 12 | 12 | 9.7 | 7.5 | 37 | 5.1 | e7.0 | 4.2 |
| 13 | 7.0 | 13 | 16 | e15 | 13 | 12 | 9.6 | 7.6 | 33 | 6.2 | e7.0 | 4.0 |
| 14 | 7.3 | 12 | 15 | e15 | 12 | 11 | 9.5 | 6.9 | 31 | 5.5 | e7.0 | 4.4 |
| 15 | 7.4 | 13 | 15 | e14 | 12 | 12 | 8.5 | 6.5 | 30 | 3.1 | e5.0 | 4.7 |
| 16 | 7.5 | 13 | 16 | 13 | 12 | 12 | 8.4 | 9.6 | 26 | 3.0 | e5.0 | 4.1 |
| 17 | 6.3 | 13 | 15 | 14 | 12 | 11 | 7.8 | 18 | 23 | 3.1 | e5.0 | 3.3 |
| 18 | 6.6 | 13 | 12 | 14 | 12 | 10 | 7.7 | 41 | 20 | 2.8 | e5.0 | 3.1 |
| 19 | 7.1 | 12 | 15 | 14 | 12 | 11 | 8.1 | 46 | 19 | 3.8 | e5.0 | 4.0 |
| 20 | 8.3 | 14 | 14 | 17 | 11 | 9.6 | 8.1 | 48 | 18 | 5.8 | e5.0 | 6.4 |
| 21 | 11 | 14 | 16 | 17 | 10 | 9.5 | 7.5 | 56 | 16 | 6.8 | e7.0 | e23 |
| 22 | 8.6 | 14 | 17 | 15 | 10 | 9.5 | 7.2 | 53 | 16 | 6.1 | e7.0 | e14 |
| 23 | 8.0 | 15 | 15 | 15 | 11 | 9.2 | 7.9 | 49 | 18 | 5.8 | e7.0 | 7.9 |
| 24 | 7.6 | 16 | 17 | 15 | 11 | 9.0 | 14 | 45 | 13 | 3.6 | e5.0 | 7.1 |
| 25 | 8.7 | 16 | 17 | 14 | 11 | 12 | 13 | 47 | 12 | 4.2 | e5.0 | 6.0 |
| 26 | 8.9 | 15 | 15 | 16 | 11 | 11 | 8.5 | 44 | 8.5 | 4.8 | e4.0 | 6.0 |
| 27 | 18 | 15 | 17 | 16 | 11 | 10 | 8.2 | 37 | 10 | 6.3 | e4.0 | 5.7 |
| 28 | 15 | 15 | 17 | 15 | 12 | 10 | 8.1 | 33 | 8.3 | 10 | 4.2 | 5.5 |
| 29 | 24 | 15 | 16 | 14 | --- | 10 | 7.4 | 32 | 7.0 | 14 | 4.0 | 6.5 |
| 30 | 12 | 16 | 16 | 13 | --- | 9.4 | 7.0 | 30 | 6.0 | 24 | 3.6 | 7.2 |
| 31 | 12 | --- | 16 | 13 | --- | 8.5 | --- | 30 | --- | 140 | 3.7 | --- |
| TOTAL | 281.0 | 399 | 476 | 452 | 338 | 330.7 | 269.6 | 723.8 | 866.8 | 308.6 | 236.5 | 173.4 |
| MEAN | 9.06 | 13.3 | 15.4 | 14.6 | 12.1 | 10.7 | 8.99 | 23.3 | 28.9 | 9.95 | 7.63 | 5.78 |
| MAX | 24 | 16 | 17 | 17 | 13 | 12 | 14 | 56 | 77 | 140 | 22 | 23 |
| MIN | 5.5 | 11 | 12 | 13 | 10 | 8.5 | 7.0 | 5.9 | 6.0 | 2.8 | 3.6 | 3.1 |
| AC-FT | 557 | 791 | 944 | 897 | 670 | 656 | 535 | 1440 | 1720 | 612 | 469 | 344 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970-97, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MEAN | 7.74 | 9.23 | 10.3 | 10.2 | 10.3 | 11.0 | 20.7 | 18.5 | 15.2 | 8.87 | 7.95 | 7.74 |
| MAX | 16.4 | 15.5 | 15.4 | 14.6 | 16.6 | 28.6 | 306 | 69.3 | 75.3 | 28.0 | 32.8 | 19.2 |
| (WY) | 1986 | 1995 | 1997 | 1997 | 1992 | 1992 | 1992 | 1973 | 1979 | 1971 | 1991 | 1990 |
| MIN | 3.98 | 5.53 | 6.84 | 6.51 | 7.18 | 6.15 | 3.64 | 1.60 | 1.19 | 2.29 | 2.14 | 2.61 |
| (WY) | 1980 | 1980 | 1971 | 1971 | 1971 | 1971 | 1971 | 1970 | 1971 | 1980 | 1971 | 1970 |

# **Table 1.** Daily mean streamflow for Santa Fe River above Cochiti Lake, New Mexico, October 1, 1996, through December 3, 1997--Concluded

08317200 SANTA FE RIVER ABOVE COCHITI LAKE, NM--Continued

| SUMMARY STATISTICS | FOR 1996 CALENDAR YEAR | | FOR 1997 WATER YEAR | | WATER YEARS 1970-97 | |
|---|---|---|---|---|---|---|
| ANNUAL TOTAL | 4727.0 | | 4841.4 | | | |
| ANNUAL MEAN | 12.9 | | 13.3 | | 11.7 | |
| HIGHEST ANNUAL MEAN | | | | | 40.1 | 1992 |
| LOWEST ANNUAL MEAN | | | | | 6.09 | 1972 |
| HIGHEST DAILY MEAN | 483 | Jul 10 | 140 | Jul 31 | 1000 | Apr 17 1992 |
| LOWEST DAILY MEAN | 2.9 | Jun 11 | 2.8 | Jul 18 | .00 | Jul 16 1971 |
| ANNUAL SEVEN-DAY MINIMUM | 3.4 | Jun 7 | 3.6 | Jul 3 | .01 | Jul 12 1971 |
| INSTANTANEOUS PEAK FLOW | | | 2130 | Jul 31 | 11400[a] | Jul 26 1971 |
| INSTANTANEOUS PEAK STAGE | | | 5.34 | Jul 31 | 9.58 | Jul 26 1971 |
| INSTANTANEOUS LOW FLOW | | | .87 | Jul 18 | .00 | Jul 16 1971 |
| ANNUAL RUNOFF (ACRE-FEET) | 9380 | | 9600 | | 8450 | |
| 10 PERCENT EXCEEDS | 16 | | 19 | | 16 | |
| 50 PERCENT EXCEEDS | 9.6 | | 11 | | 8.1 | |
| 90 PERCENT EXCEEDS | 4.5 | | 4.6 | | 3.0 | |

e Estimated.

a From rating curve extended above 160 cubic feet per second on basis of slope-area measurements at gage heights 5.69 feet and 9.58 feet.

STATION NUMBER 08317200 SANTA FE RIVER ABOVE COCHITI LAKE, NM
DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.0 | 8.2 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 | 5.9 | 8.9 | 12 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | 7.6 | 9.1 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4 | 5.8 | 8.7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | 5.7 | 7.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 5.2 | 7.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | 7.1 | 7.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7.6 | 8.6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 6.5 | 8.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 6.3 | 8.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11 | 7.0 | 9.1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 6.9 | 9.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13 | 7.6 | 8.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14 | 7.0 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | 6.1 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16 | 6.3 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17 | 6.8 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | 6.1 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 19 | 6.0 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 20 | 7.3 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | 6.7 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 22 | 6.9 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 23 | 7.2 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 24 | 7.5 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 25 | 8.9 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 26 | 9.1 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | 8.9 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 28 | 8.5 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 29 | 8.3 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 30 | 8.5 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31 | 8.1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| TOTAL | 219.4 | 290.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MEAN | 7.08 | 9.69 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MAX | 9.1 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MIN | 5.2 | 7.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| AC-FT | 435 | 577 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

# **Table 2.** Daily mean streamflow for Santa Fe River above La Bajada, New Mexico, October 1, 1996, through December 3, 1997

08317203 SANTA FE RIVER ABOVE LA BAJADA, NM

LOCATION.--Lat 35°33'02", long 106°14'12", in NE¼NW¼NE¼, sec. 7, T. 15 N., R. 7 E., in Santa Fe County, Hydrologic Unit 13020201, on right bank 1 mile above La Bajada, 5.0 miles upstream from Cochiti Dam, and 6.3 miles east of Peña Blanca.

DRAINAGE AREA.--234 square miles, approximately.

PERIOD OF RECORD.--October 1996 to September 1997 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage is 5,470 feet above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Surface- and ground-water diversions and returns for the municipal supply to the City of Santa Fe in the upper part of basin. Diversions for irrigation of about 400 acres upstream from station. An unnamed ditch on right bank, which diverts water 1.4 miles upstream and bypasses gage; ditch flow not included in record.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,850 cubic feet per second, July 31, 1997, gage height 4.61 feet; minimum daily, 2.6 cubic feet per second, Sept. 1, 18.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,850 cubic feet per second, July 31, 1997, gage height 4.61 feet; minimum daily, 2.6 cubic feet per second, Sept. 1, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.3 | 8.8 | 11 | 9.5 | 12 | 11 | 7.7 | 8.1 | 16 | 3.9 | 20 | 4.2 |
| 2 | 6.5 | 8.8 | e12 | 8.9 | 12 | 10 | 7.8 | 8.2 | 19 | 4.2 | 16 | 4.9 |
| 3 | 6.7 | 9.7 | e12 | 9.6 | 12 | 9.7 | 8.2 | 8.4 | 19 | 3.8 | 14 | 4.4 |
| 4 | 12 | 9.9 | 12 | 9.7 | 12 | 8.4 | 10 | 8.3 | 19 | 3.6 | 26 | 4.8 |
| 5 | 14 | 7.9 | e12 | 9.9 | 11 | 7.8 | 8.8 | 8.1 | 25 | 3.4 | 15 | 5.3 |
| 6 | 8.3 | 6.3 | e13 | e11 | 12 | 8.6 | 8.3 | 8.2 | 27 | 2.9 | 12 | 5.7 |
| 7 | 7.7 | 6.7 | e13 | e12 | 12 | 8.6 | 8.2 | 8.2 | 43 | 3.2 | 8.9 | 4.6 |
| 8 | 7.2 | 6.0 | e13 | e11 | 12 | e8.8 | 7.9 | 8.3 | 83 | 3.1 | 8.4 | 5.8 |
| 9 | 7.0 | 8.5 | 11 | e13 | 11 | e8.9 | 7.3 | 8.2 | 51 | 3.4 | 7.3 | 4.5 |
| 10 | 6.7 | 9.2 | 11 | e13 | 11 | e9.0 | 7.9 | 8.4 | 41 | 4.0 | 7.0 | 5.1 |
| 11 | 7.2 | 8.4 | 11 | e14 | 11 | e8.9 | 8.6 | 8.4 | 35 | 4.5 | 7.2 | 5.3 |
| 12 | 7.3 | 6.3 | 11 | e13 | 11 | e8.8 | 9.3 | 8.4 | 31 | 4.5 | 7.2 | 5.1 |
| 13 | 7.9 | 8.2 | 11 | e14 | 11 | e8.6 | 9.3 | 8.7 | 25 | 5.2 | 6.9 | 5.1 |
| 14 | 8.1 | 7.7 | 11 | e13 | 11 | e9.0 | 9.0 | 8.6 | 20 | 5.2 | 6.2 | 5.5 |
| 15 | 7.8 | 6.9 | 11 | 12 | 11 | e8.5 | 8.5 | 8.7 | 17 | 3.6 | 5.9 | 5.8 |
| 16 | 7.8 | 9.7 | e14 | 12 | 11 | e8.8 | 8.7 | 10 | 13 | 3.6 | 5.7 | 5.2 |
| 17 | 7.3 | 9.5 | e14 | 12 | 11 | e9.0 | 8.0 | 15 | 11 | 3.7 | 5.1 | 4.5 |
| 18 | 6.9 | 9.1 | e13 | e11 | 11 | e9.2 | 7.9 | 26 | 9.2 | 3.6 | 5.1 | 4.2 |
| 19 | 6.1 | 6.8 | e12 | e12 | 10 | e8.6 | 8.2 | 28 | 8.6 | 4.6 | 5.3 | 5.2 |
| 20 | 8.3 | 8.0 | e11 | e11 | 11 | e8.8 | 8.2 | 28 | 9.4 | 5.8 | 6.7 | 7.8 |
| 21 | 12 | 8.8 | e9.6 | 12 | 11 | e8.4 | 7.8 | 32 | 9.4 | 6.4 | 7.6 | 20 |
| 22 | 11 | 8.8 | 5.6 | 11 | 11 | e8.0 | 7.5 | 38 | e7.2 | 5.8 | 6.8 | 14 |
| 23 | 11 | 10 | 4.8 | 9.6 | 11 | e7.8 | 7.7 | 33 | e6.1 | 5.6 | 6.2 | 8.2 |
| 24 | 11 | e10 | 8.2 | 9.0 | 11 | e7.6 | 11 | 28 | 6.2 | 4.3 | 6.1 | 7.5 |
| 25 | 11 | e11 | 7.5 | 11 | 10 | e7.4 | 12 | 29 | 6.1 | 4.7 | 6.2 | 6.0 |
| 26 | 10 | e11 | 8.0 | 13 | 9.9 | e8.2 | 7.5 | 28 | 5.3 | 5.3 | 7.6 | 6.2 |
| 27 | 20 | e11 | 9.3 | 13 | 9.3 | e8.1 | 7.2 | 22 | 6.6 | 6.7 | 6.9 | 5.8 |
| 28 | 16 | 11 | 10 | 12 | 11 | 8.1 | 7.1 | 19 | 5.6 | 11 | 5.1 | 5.5 |
| 29 | 23 | 11 | 9.8 | 12 | --- | 8.1 | 6.4 | 19 | 4.9 | 14 | 4.8 | 6.1 |
| 30 | 11 | e12 | 10 | 12 | --- | 7.7 | 6.0 | 18 | 4.5 | 31 | 4.4 | 6.4 |
| 31 | 9.9 | --- | 10 | 12 | --- | 7.4 | --- | 14 | --- | 162 | 4.4 | --- |
| TOTAL | 303.0 | 267.0 | 331.8 | 358.2 | 310.2 | 265.8 | 248.0 | 512.2 | 584.1 | 336.6 | 262.0 | 188.7 |
| MEAN | 9.77 | 8.90 | 10.7 | 11.6 | 11.1 | 8.57 | 8.27 | 16.5 | 19.5 | 10.9 | 8.45 | 6.29 |
| MAX | 23 | 12 | 14 | 14 | 12 | 11 | 12 | 38 | 83 | 162 | 26 | 20 |
| MIN | 6.1 | 6.0 | 4.8 | 8.9 | 9.3 | 7.4 | 6.0 | 8.1 | 4.5 | 2.9 | 4.4 | 4.2 |
| AC-FT | 601 | 530 | 658 | 710 | 615 | 527 | 492 | 1020 | 1160 | 668 | 520 | 374 |

WTR YR 1997 TOTAL 3967.6 MEAN 10.9 MAX 162 MIN 2.9 AC-FT 7870

e Estimated.

# **Table 2.** Daily mean streamflow for Santa Fe River above La Bajada, New Mexico, October 1, 1996, through December 3, 1997--Concluded

08317203 SANTA FE RIVER ABOVE LA BAJADA, NM--Continued

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18 cubic feet per second, Nov.17, gage height 0.96 foot; minimum daily, 5.5 cubic feet per second, Oct. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.4 | 8.6 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 | 5.8 | 9.4 | 12 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | 7.3 | 9.9 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4 | 5.9 | 9.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | 5.8 | 8.1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 5.5 | 8.0 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | 7.0 | 7.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7.3 | 8.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 6.5 | 9.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 6.2 | 9.3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11 | 6.9 | 9.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 6.8 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13 | 7.4 | 8.6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14 | 6.9 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | 6.3 | 12 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16 | 6.5 | 15 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17 | 7.1 | 15 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | 6.4 | 12 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 19 | 6.3 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 20 | 7.3 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | 6.9 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 22 | 7.1 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 23 | 7.5 | 9.6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 24 | 7.7 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 25 | 9.2 | 9.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 26 | 9.5 | 9.7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | 9.5 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 28 | 9.1 | 9.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 29 | 9.0 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 30 | 9.2 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31 | 8.6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| TOTAL | 224.9 | 304.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MEAN | 7.25 | 10.1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MAX | 9.5 | 15 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MIN | 5.5 | 7.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| AC-FT | 446 | 604 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

# **Table 3.** Daily mean streamflow for Santa Fe River below La Bajada, New Mexico, October 1, 1996, through December 3, 1997

08317207 SANTA FE RIVER BELOW LA BAJADA, NM

LOCATION.--Lat 35°33'02", long 106°14'12", in SW¼NW¼SW¼, sec. 6, T. 15 N., R. 7 E., in Santa Fe County, Hydrologic Unit 13020201, on right bank 0.2 mile below La Bajada, 4.0 miles upstream from Cochiti Dam, and 5.3 miles east of Peña Blanca.

DRAINAGE AREA.--235 square miles, approximately.

PERIOD OF RECORD.--October 1996 to September 1997 (discontinued).

GAGE.--Water-stage recorder. Elevation of gage 5,470 feet above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Surface- and ground-water diversions and returns for the municipal supply to the City of Santa Fe in the upper part of basin. Diversions for irrigation of about 400 acres upstream from station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,990 cubic feet per second, July 31, 1997, gage height, 5.82 feet; minimum daily, 0.81 cubic foot per second, Oct. 2.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,990 cubic feet per second, July 31, 1997, gage height, 5.82 feet; minimum daily, 0.81 cubic foot per second, Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.86 | 9.0 | 8.0 | 6.3 | 12 | 11 | 7.0 | 8.1 | 33 | 3.0 | e22 | 1.7 |
| 2 | .81 | 9.2 | 7.9 | 4.7 | 12 | 11 | 7.1 | 8.3 | 36 | 3.5 | e18 | 2.7 |
| 3 | 1.1 | 9.8 | 8.3 | 5.0 | 12 | 10 | 7.5 | 8.0 | 37 | 2.8 | e17 | 2.2 |
| 4 | 6.1 | 10 | 8.0 | 4.8 | 12 | 9.8 | 9.5 | 8.2 | 35 | 2.8 | e25 | 2.8 |
| 5 | 11 | 8.7 | 8.0 | 6.0 | 11 | e10 | 9.6 | 8.6 | 41 | 2.9 | e20 | 3.7 |
| 6 | 7.2 | 8.5 | 6.0 | 9.6 | 12 | e10 | 8.5 | 8.3 | 48 | 2.5 | e18 | 4.7 |
| 7 | 6.6 | 8.3 | 5.6 | e9.0 | 12 | e9.8 | 8.1 | 5.7 | 70 | 2.7 | e15 | 2.9 |
| 8 | 5.5 | 8.0 | 5.4 | e10 | 11 | e9.8 | 7.6 | 6.3 | 91 | 2.7 | e12 | 5.1 |
| 9 | 5.4 | 8.1 | 5.1 | e10 | 11 | e10 | 6.2 | 5.1 | 59 | 2.9 | e11 | 2.6 |
| 10 | 4.7 | 8.2 | 5.3 | e9.6 | 11 | e9.7 | 6.3 | 6.4 | 53 | 3.9 | e10 | 3.1 |
| 11 | 5.2 | 7.8 | 5.5 | e9.0 | 11 | e9.8 | 7.8 | 7.9 | 44 | 4.7 | e9.6 | 3.7 |
| 12 | 5.2 | 7.5 | 5.2 | e9.8 | 11 | e9.7 | 8.8 | 7.2 | 38 | 4.7 | e7.1 | 3.1 |
| 13 | 5.7 | 8.2 | 5.9 | e11 | 11 | e9.7 | 9.2 | 7.0 | e34 | 5.8 | e7.0 | 3.0 |
| 14 | 5.6 | 8.8 | 5.9 | e9.1 | 11 | e9.2 | 9.5 | 6.7 | e30 | 5.5 | e6.4 | 3.0 |
| 15 | 5.3 | 7.5 | 5.8 | e9.8 | 11 | e9.7 | 9.0 | 6.2 | e28 | 2.6 | e6.1 | 2.9 |
| 16 | 5.2 | 7.9 | 7.8 | e9.8 | 11 | e9.7 | 8.3 | 9.4 | e27 | 2.2 | e5.9 | 2.3 |
| 17 | 4.3 | 7.5 | 6.9 | e9.0 | 11 | e9.6 | 7.9 | 17 | e24 | 2.7 | e5.3 | 1.9 |
| 18 | 4.7 | 7.1 | e5.0 | e8.4 | 11 | e8.7 | 7.6 | 33 | e20 | 2.5 | e5.3 | 1.5 |
| 19 | 5.4 | 6.1 | e6.2 | e9.5 | 11 | e9.0 | 7.7 | 37 | e19 | 3.8 | e5.4 | 2.3 |
| 20 | 6.4 | 8.0 | e3.2 | e8.6 | 11 | e8.2 | 8.5 | 38 | e18 | 6.9 | e6.8 | 4.8 |
| 21 | 9.4 | 10 | e2.2 | e9.2 | 11 | e8.0 | 8.9 | 47 | e16 | 7.9 | e7.7 | 20 |
| 22 | 8.3 | 9.9 | 1.6 | e10 | 11 | e8.0 | 9.0 | 56 | e14 | 6.4 | e7.0 | 12 |
| 23 | 7.9 | 10 | 1.2 | e9.6 | 11 | e7.8 | 9.9 | 59 | e12 | 5.9 | e6.3 | 6.8 |
| 24 | 7.8 | 10 | 3.3 | e10 | 11 | e7.2 | 16 | 56 | e10 | 3.3 | e6.5 | 6.2 |
| 25 | 7.6 | 7.9 | 3.4 | 10 | 11 | e8.0 | 18 | 54 | e9.2 | 3.8 | e6.4 | 4.8 |
| 26 | 7.0 | 7.7 | 1.8 | 12 | 11 | e7.6 | 12 | 43 | e8.3 | 4.5 | e7.8 | 5.0 |
| 27 | 16 | 7.0 | 2.3 | 14 | 11 | e7.6 | 11 | 35 | e7.6 | 6.6 | e7.0 | 4.5 |
| 28 | 11 | 7.7 | 4.5 | 13 | 12 | 7.5 | 11 | 31 | 6.1 | 11 | 4.0 | 4.3 |
| 29 | 17 | 7.5 | 7.2 | 13 | --- | 7.5 | 9.2 | 31 | 5.0 | 15 | 3.1 | 5.3 |
| 30 | 8.3 | 7.7 | 7.1 | 12 | --- | 7.3 | 8.6 | 31 | 4.3 | 28 | 2.6 | 6.4 |
| 31 | 9.0 | --- | 7.0 | 12 | --- | 6.3 | --- | 31 | --- | 166 | 2.1 | --- |
| TOTAL | 211.57 | 249.6 | 166.6 | 293.8 | 315 | 277.2 | 275.3 | 716.4 | 877.5 | 329.5 | 293.4 | 135.3 |
| MEAN | 6.82 | 8.32 | 5.37 | 9.48 | 11.2 | 8.94 | 9.18 | 23.1 | 29.2 | 10.6 | 9.46 | 4.51 |
| MAX | 17 | 10 | 8.3 | 14 | 12 | 11 | 18 | 59 | 91 | 166 | 25 | 20 |
| MIN | .81 | 6.1 | 1.2 | 4.7 | 11 | 6.3 | 6.2 | 5.1 | 4.3 | 2.2 | 2.1 | 1.5 |
| AC-FT | 420 | 495 | 330 | 583 | 625 | 550 | 546 | 1420 | 1740 | 654 | 582 | 268 |

WTR YR 1997 TOTAL 4141.17 MEAN 11.3 MAX 166 MIN .81 AC-FT 8210

e Estimated.

# **Table 3.** Daily mean streamflow for Santa Fe River below La Bajada, New Mexico, October 1, 1996, through December 3, 1997--Concluded

08317207 SANTA FE RIVER BELOW LA BAJADA, NM -- Continued

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20 cubic feet per second, Nov. 17, gage height, 0.54 foot; minimum daily, 4.7 cubic feet per second, Oct. 6, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.6 | 8.7 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2 | 5.1 | 9.8 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3 | 6.7 | 10 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4 | 5.3 | 9.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | 5.1 | 7.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 4.7 | 7.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | 6.4 | 7.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7.0 | 9.7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | 6.1 | e10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 5.7 | e9.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11 | 6.6 | e9.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12 | 6.4 | e11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 13 | 7.1 | e8.2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14 | 6.7 | e11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | 5.9 | 13 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16 | 6.2 | 15 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17 | 7.0 | 15 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 18 | 6.2 | 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 19 | 6.2 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 20 | 7.9 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | 6.7 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 22 | 6.9 | 9.7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 23 | 7.2 | 9.5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 24 | 7.4 | 9.8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 25 | 9.7 | 8.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 26 | 10 | 9.3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 27 | 9.9 | 9.7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 28 | 9.1 | 9.2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 29 | 8.8 | 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 30 | 8.9 | 9.9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31 | 8.7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| TOTAL | 217.2 | 299.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MEAN | 7.01 | 9.98 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MAX | 10 | 15 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| MIN | 4.7 | 7.4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| AC-FT | 431 | 594 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |

e Estimated.

**Table 4.** Streamflow measurements for the Santa Fe River study reach near La Bajada, New Mexico, September 1996-December 1997

[$ft^3/s$, cubic feet per second; L/s, liters per second; ft/s, feet per second; m/s, meters per second; --, no data]

| Streamflow-measurement site (fig. 1) | Date | Time at start of measurement | Time at finish of measurement | Streamflow | | Velocity | |
|---|---|---|---|---|---|---|---|
| | | | | ($ft^3/s$) | (L/s) | (ft/s) | (m/s) |
| Santa Fe River acequia at 08317200 | 27Mar97 | 10:58 | 11:08 | 1.2 | 34 | 1.19 | 0.36 |
| | 26June97 | 8:17 | -- | 0.67 | 19 | -- | -- |
| | 26June97 | 10:18 | -- | 0.58 | 16 | -- | -- |
| | 26June97 | 11:15 | -- | 0.54 | 15 | -- | -- |
| | 26June97 | 11:50 | -- | 0.52 | 15 | -- | -- |
| | 26June97 | 12:34 | -- | 0.48 | 14 | -- | -- |
| | 26June97 | 13:27 | -- | 0.41 | 12 | -- | -- |
| | 26June97 | 13:52 | -- | 0.41 | 12 | -- | -- |
| | 26June97 | 14:45 | -- | 0.38 | 11 | -- | -- |
| | 26June97 | 16:00 | -- | 0.36 | 10 | -- | -- |
| Santa Fe River above Cochiti Lake (08317200) | 23Sept96 | 10:06 | 10:50 | 8.2 | 231 | 1.59 | 0.48 |
| | 25Oct96 | 8:45 | 9:15 | 11 | 317 | 1.74 | 0.53 |
| | 30Oct96 | 12:20 | 12:46 | 8.3 | 236 | 0.81 | 0.25 |
| | [1]24Jan97 | 10:08 | 10:46 | 12 | 331 | 1.64 | 0.50 |
| | [1]24Jan97 | 10:11 | 10:54 | 12 | 346 | 1.70 | 0.52 |
| | [1]20Feb97 | 10:27 | 10:52 | 10 | 292 | 1.33 | 0.41 |
| | [1]20Feb97 | 10:39 | 11:20 | 11 | 312 | 1.30 | 0.40 |
| | 27Mar97 | 10:34 | 11:24 | 9.0 | 254 | 1.42 | 0.43 |
| | [1]26June97 | 8:48 | 9:14 | 9.0 | 256 | 1.53 | 0.47 |
| | [1]26June97 | 9:00 | 9:30 | 10 | 289 | 1.61 | 0.49 |
| | 26June97 | 9:06 | 9:41 | 10 | 289 | 1.63 | 0.50 |
| | 26June97 | 10:30 | 11:10 | 8.7 | 247 | 1.53 | 0.47 |
| | 26June97 | 11:53 | 12:28 | 7.7 | 217 | 1.49 | 0.45 |
| | 26June97 | 12:43 | 13:19 | 6.8 | 193 | 1.40 | 0.43 |
| | 26June97 | 13:55 | 14:36 | 6.1 | 173 | 1.34 | 0.41 |

**Table 4.** Streamflow measurements for the Santa Fe River study reach near La Bajada, New Mexico, September 1996-December 1997--Continued

| Streamflow-measurement site (fig. 1) | Date | Time at start of measurement | Time at finish of measurement | Streamflow | | Velocity | |
|---|---|---|---|---|---|---|---|
| | | | | ($ft^3/s$) | (L/s) | (ft/s) | (m/s) |
| Santa Fe River above Cochiti Lake (08317200)--Concluded | 26June97 | 14:53 | 15:27 | 5.2 | 148 | 1.24 | 0.38 |
| | 26June97 | 15:46 | 16:20 | 4.8 | 137 | 1.16 | 0.35 |
| | 24July97 | 10:37 | 11:08 | 6.4 | 182 | 1.45 | 0.44 |
| | 27Aug97 | 9:52 | 10:28 | 8.2 | 231 | 1.80 | 0.55 |
| | 02Oct97 | 8:44 | 9:34 | 7.5 | 214 | 1.52 | 0.46 |
| | 02Oct97 | 9:46 | 10:14 | 6.8 | 193 | 1.43 | 0.44 |
| | 02Oct97 | 10:33 | 11:00 | 6.3 | 180 | 1.36 | 0.41 |
| | 02Oct97 | 11:37 | 12:02 | 5.5 | 155 | 1.22 | 0.37 |
| | 02Oct97 | 12:38 | 13:05 | 4.7 | 133 | 1.11 | 0.34 |
| | 02Oct97 | 13:33 | 14:00 | 4.0 | 114 | 0.98 | 0.30 |
| | 02Oct97 | 14:33 | 14:59 | 3.5 | 100 | 0.90 | 0.27 |
| | 02Oct97 | 15:33 | 15:54 | 3.1 | 87 | 0.82 | 0.25 |
| | 21Nov97 | 9:22 | 9:57 | 11 | 303 | 1.70 | 0.52 |
| | 21Nov97 | 11:40 | 12:08 | 8.6 | 243 | 1.49 | 0.45 |
| | 21Nov97 | 13:24 | 13:47 | 7.4 | 209 | 1.36 | 0.41 |
| | 21Nov97 | 14:50 | 15:16 | 6.6 | 187 | 1.28 | 0.39 |
| | 21Nov97 | 16:20 | 16:45 | 6.3 | 178 | 1.27 | 0.39 |
| | 04Dec97 | 9:05 | 9:55 | 11 | 317 | 1.89 | 0.58 |
| Santa Fe River above La Bajada (08317203) | 23Sept96 | 12:46 | 13:13 | 5.6 | 157 | 1.26 | 0.38 |
| | 30Oct96 | 13:26 | 13:52 | 8.8 | 249 | 1.24 | 0.38 |
| | [1]24Jan97 | 12:10 | 12:31 | 10 | 286 | 1.33 | 0.41 |
| | [1]24Jan97 | 12:03 | 12:44 | 11 | 317 | 1.67 | 0.51 |
| | [1]20Feb97 | 11:36 | 11:59 | 9.9 | 282 | 1.26 | 0.38 |
| | [1]20Feb97 | 12:00 | 12:48 | 10 | 286 | 1.38 | 0.42 |
| | [1]27Mar97 | 12:04 | 12:33 | 9.6 | 272 | 1.71 | 0.52 |

**Table 4.** Streamflow measurements for the Santa Fe River study reach near La Bajada, New Mexico, September 1996-December 1997--Continued

| Streamflow-measurement site (fig. 1) | Date | Time at start of measurement | Time at finish of measurement | Streamflow | | Velocity | |
|---|---|---|---|---|---|---|---|
| | | | | ($ft^3/s$) | (L/s) | (ft/s) | (m/s) |
| Santa Fe River above La Bajada (08317203)--Continued | [1]27Mar97 | 12:08 | 12:29 | 8.2 | 231 | 1.43 | 0.44 |
| | 13May97 | 11:57 | 12:21 | 7.9 | 225 | 1.25 | 0.38 |
| | 26June97 | 11:36 | 12:11 | 6.6 | 187 | 1.32 | 0.40 |
| | 26June97 | 12:20 | 12:46 | 6.3 | 178 | 1.26 | 0.38 |
| | 26June97 | 13:09 | 13:33 | 5.7 | 161 | 1.20 | 0.37 |
| | 26June97 | 13:46 | 14:09 | 5.4 | 152 | 1.15 | 0.35 |
| | 26June97 | 14:33 | 14:58 | 4.9 | 138 | 1.08 | 0.33 |
| | 26June97 | 15:05 | 15:30 | 4.6 | 129 | 1.10 | 0.34 |
| | 26June97 | 15:37 | 16:00 | 4.4 | 124 | 1.06 | 0.32 |
| | 01July97 | 8:38 | 9:08 | 6.3 | 180 | 1.28 | 0.39 |
| | 01July97 | 9:20 | 9:51 | 6.5 | 184 | 1.20 | 0.37 |
| | 01July97 | 10:47 | 11:18 | 6.0 | 170 | 1.19 | 0.36 |
| | 24July97 | 12:16 | 12:50 | 5.1 | 145 | 1.13 | 0.34 |
| | 27Aug97 | 12:06 | 12:35 | 6.4 | 181 | 1.21 | 0.37 |
| | 29Sept97 | 13:58 | 14:20 | 4.5 | 126 | 1.10 | 0.34 |
| | 01Oct97 | 9:21 | 9:49 | 7.9 | 225 | 1.32 | 0.40 |
| | 01Oct97 | 10:05 | 10:32 | 7.4 | 211 | 1.27 | 0.39 |
| | 01Oct97 | 11:08 | 11:36 | 6.8 | 194 | 1.26 | 0.38 |
| | 01Oct97 | 12:10 | 12:34 | 5.9 | 168 | 1.17 | 0.36 |
| | 01Oct97 | 13:05 | 13:33 | 5.4 | 152 | 1.10 | 0.34 |
| | 01Oct97 | 14:04 | 14:32 | 4.6 | 132 | 1.04 | 0.32 |
| | 01Oct97 | 15:05 | 15:33 | 4.0 | 113 | 0.98 | 0.30 |
| | 01Oct97 | 16:03 | 16:27 | 3.5 | 99 | 0.93 | 0.28 |
| | 21Nov97 | 10:37 | 11:14 | 10 | 292 | 1.40 | 0.43 |
| | 21Nov97 | 12:29 | 12:55 | 8.9 | 251 | 1.31 | 0.40 |

**Table 4.** Streamflow measurements for the Santa Fe River study reach near La Bajada, New Mexico, September 1996-December 1997--Continued

| Streamflow-measurement site (fig. 1) | Date | Time at start of measurement | Time at finish of measurement | Streamflow | | Velocity | |
|---|---|---|---|---|---|---|---|
| | | | | ($ft^3/s$) | (L/s) | (ft/s) | (m/s) |
| Santa Fe River above La Bajada (08317203)--Concluded | 21Nov97 | 14:01 | 14:28 | 7.8 | 219 | 1.25 | 0.38 |
| | 21Nov97 | 15:34 | 16:00 | 6.8 | 194 | 1.16 | 0.35 |
| | 21Nov97 | 17:00 | 17:24 | 6.8 | 193 | 1.16 | 0.35 |
| | 04Dec97 | 10:00 | 10:30 | 11 | 314 | 1.51 | 0.46 |
| Santa Fe River at TCN3 | 24Jan97 | 15:13 | 15:45 | 10 | 292 | 2.16 | 0.66 |
| | 20Feb97 | 13:42 | 14:18 | 8.9 | 253 | 1.84 | 0.56 |
| | 27Mar97 | 15:16 | 15:45 | 6.9 | 197 | 1.76 | 0.54 |
| Santa Fe River below La Bajada (08317207) | 23Sept96 | 13:52 | 14:20 | 5.2 | 149 | 1.41 | 0.43 |
| | 30Oct96 | 14:25 | 14:49 | 8.1 | 230 | 1.55 | 0.47 |
| | [1]24Jan97 | 13:27 | 13:56 | 9.8 | 279 | 1.79 | 0.55 |
| | [1]24Jan97 | 13:38 | 14:09 | 11 | 309 | 1.85 | 0.56 |
| | 20Feb97 | 12:27 | 12:53 | 9.1 | 257 | 2.13 | 0.65 |
| | 20Feb97 | 14:56 | 15:30 | 7.6 | 215 | 1.47 | 0.45 |
| | 27Mar97 | 12:59 | 13:19 | 8.0 | 228 | 1.90 | 0.58 |
| | 27Mar97 | 13:24 | 14:10 | 8.3 | 234 | 1.66 | 0.51 |
| | 13May97 | 13:01 | 13:23 | 7.3 | 207 | 1.43 | 0.44 |
| | 26June97 | 11:00 | 11:25 | 7.9 | 224 | 1.44 | 0.44 |
| | 26June97 | 11:45 | 12:00 | 7.2 | 203 | 1.40 | 0.43 |
| | 26June97 | 12:15 | 12:35 | 6.8 | 193 | 1.36 | 0.41 |
| | 26June97 | 13:15 | 13:35 | 6.0 | 169 | 1.27 | 0.39 |
| | 26June97 | 13:55 | 14:20 | 5.3 | 151 | 1.19 | 0.36 |
| | 26June97 | 14:40 | 14:55 | 4.9 | 140 | 1.16 | 0.35 |
| | 26June97 | 15:00 | 15:20 | 4.9 | 139 | 1.14 | 0.35 |
| | 26June97 | 15:20 | 15:45 | 4.5 | 128 | 1.10 | 0.34 |
| | 02July97 | 8:42 | 9:13 | 7.2 | 203 | 1.17 | 0.36 |

**Table 4.** Streamflow measurements for the Santa Fe River study reach near La Bajada, New Mexico, September 1996-December 1997--Continued

| Streamflow-measurement site (fig. 1) | Date | Time at start of measurement | Time at finish of measurement | Streamflow | | Velocity | |
|---|---|---|---|---|---|---|---|
| | | | | ($ft^3/s$) | (L/s) | (ft/s) | (m/s) |
| Santa Fe River below La Bajada (08317207)-- | 02July97 | 9:24 | 10:07 | 6.6 | 186 | 1.11 | 0.34 |
| Concluded | 02July97 | 10:40 | 11:10 | 6.1 | 173 | 1.08 | 0.33 |
| | 24July97 | 13:40 | 14:20 | 3.7 | 106 | 1.02 | 0.31 |
| | 27Aug97 | 13:19 | 14:00 | 6.1 | 174 | 1.33 | 0.41 |
| | 29Sept97 | 14:55 | 15:14 | 3.7 | 105 | 1.20 | 0.37 |
| | 30Sept97 | 9:38 | 10:09 | 9.1 | 257 | 1.49 | 0.45 |
| | 30Sept97 | 10:17 | 10:47 | 8.3 | 234 | 1.40 | 0.43 |
| | 30Sept97 | 11:08 | 11:39 | 7.4 | 210 | 1.34 | 0.41 |
| | 30Sept97 | 12:12 | 12:54 | 6.4 | 181 | 1.19 | 0.36 |
| | 30Sept97 | 13:08 | 13:45 | 5.8 | 164 | 1.15 | 0.35 |
| | 30Sept97 | 14:07 | 14:41 | 5.0 | 143 | 1.06 | 0.32 |
| | 30Sept97 | 15:05 | 15:33 | 4.4 | 125 | 1.00 | 0.30 |
| | 30Sept97 | 16:00 | 16:25 | 3.8 | 109 | 0.94 | 0.29 |
| | 04Dec97 | 11:05 | 11:40 | 9.6 | 273 | 1.28 | 0.39 |

[1]Duplicate measurements at slightly different cross sections.

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997

[Time in column 1 is referenced to the times that stage data were collected at station 08317207. The second column for station 08317200 is streamflow based on stage data collected 45 minutes earlier than the times listed in column 1; $ft^3/s$, cubic feet per second; L/s, liters per second; ft/day, feet per day; mm/day, millimeters per day; --, no data]

| Date and time | Streamflow at 08317200 at time - 45 minutes | | Streamflow at 08317207 | | Streamflow loss between 08317200 and 08317207 | | Streamflow-loss rate | |
|---|---|---|---|---|---|---|---|---|
| | ($ft^3/s$) | (L/s) | ($ft^3/s$) | (L/s) | ($ft^3/s$) | (L/s) | (ft/day) | (mm/day) |
| 26June97:09:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 26June97:09:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 26June97:09:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 26June97:09:45 | 9.41 | 266.5 | -- | -- | -- | -- | -- | -- |
| 26June97:10:00 | 9.41 | 266.5 | -- | -- | -- | -- | -- | -- |
| 26June97:10:15 | 9.41 | 266.5 | 7.79 | 220.5 | 1.62 | 46.0 | 0.92 | 280 |
| 26June97:10:30 | 9.03 | 255.7 | 7.79 | 220.5 | 1.24 | 35.2 | 0.71 | 216 |
| 26June97:10:45 | 8.66 | 245.4 | 7.31 | 207.1 | 1.35 | 38.3 | 0.78 | 237 |
| 26June97:11:00 | 8.66 | 245.4 | 7.31 | 207.1 | 1.35 | 38.3 | 0.78 | 238 |
| 26June97:11:15 | 8.66 | 245.4 | 6.84 | 193.6 | 1.83 | 51.8 | 1.07 | 325 |
| 26June97:11:30 | 8.66 | 245.4 | 6.84 | 193.6 | 1.83 | 51.8 | 1.08 | 329 |
| 26June97:11:45 | 8.32 | 235.5 | 6.36 | 180.2 | 1.96 | 55.4 | 1.17 | 356 |
| 26June97:12:00 | 7.99 | 226.2 | 6.36 | 180.2 | 1.62 | 46.0 | 0.98 | 300 |
| 26June97:12:15 | 7.99 | 226.2 | 6.36 | 180.2 | 1.62 | 46.0 | 0.99 | 302 |
| 26June97:12:30 | 7.67 | 217.3 | 5.89 | 166.7 | 1.79 | 50.6 | 1.10 | 334 |
| 26June97:12:45 | 7.99 | 226.2 | 5.89 | 166.7 | 2.10 | 59.5 | 1.30 | 397 |
| 26June97:13:00 | 7.67 | 217.3 | 5.41 | 153.2 | 2.26 | 64.0 | 1.41 | 431 |
| 26June97:13:15 | 7.67 | 217.3 | 5.41 | 153.2 | 2.26 | 64.0 | 1.43 | 435 |
| 26June97:13:30 | 7.37 | 208.9 | 5.41 | 153.2 | 1.96 | 55.6 | 1.25 | 381 |
| 26June97:13:45 | 7.37 | 208.9 | 4.94 | 139.8 | 2.44 | 69.1 | 1.56 | 476 |
| 26June97:14:00 | 7.37 | 208.9 | 4.94 | 139.8 | 2.44 | 69.1 | 1.57 | 480 |
| 26June97:14:15 | 5.94 | 168.2 | 4.94 | 139.8 | 1.00 | 28.5 | 0.65 | 198 |
| 26June97:14:30 | 5.76 | 163.1 | 4.46 | 126.3 | 1.30 | 36.8 | 0.85 | 258 |
| 26June97:14:45 | 5.76 | 163.1 | 4.46 | 126.3 | 1.30 | 36.8 | 0.85 | 259 |
| 26June97:15:00 | 5.60 | 158.5 | 4.46 | 126.3 | 1.14 | 32.2 | 0.75 | 228 |
| 26June97:15:15 | 5.60 | 158.5 | 4.46 | 126.3 | 1.14 | 32.2 | 0.76 | 230 |
| 26June97:15:30 | 5.60 | 158.5 | 3.99 | 112.9 | 1.61 | 45.6 | 1.08 | 328 |
| 26June97:15:45 | 5.45 | 154.3 | 3.99 | 112.9 | 1.46 | 41.5 | 0.98 | 300 |
| 26June97:16:00 | 5.45 | 154.3 | 3.51 | 99.4 | 1.94 | 54.9 | 1.31 | 399 |
| 26June97:16:15 | 5.32 | 150.6 | 3.51 | 99.4 | 1.81 | 51.2 | 1.23 | 375 |
| 26June97:16:30 | 4.92 | 139.3 | 3.51 | 99.4 | 1.41 | 39.9 | 0.96 | 294 |
| 26June97:16:45 | 4.89 | 138.4 | 3.51 | 99.4 | 1.38 | 39.0 | 0.95 | 290 |
| 26June97:17:00 | 4.89 | 138.4 | -- | -- | -- | -- | -- | -- |
| 26June97:17:15 | 4.87 | 138.0 | -- | -- | -- | -- | -- | -- |
| 26June97:17:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 26June97:17:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 26June97:18:00 | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 26June97:18:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 26June97:18:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 26June97:18:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 26June97:19:00 | 4.87 | 138.0 | -- | -- | -- | -- | -- | -- |
| 26June97:19:15 | 4.92 | 139.3 | -- | -- | -- | -- | -- | -- |
| 26June97:19:30 | 4.92 | 139.3 | 3.53 | 100.0 | 1.39 | 39.3 | 0.93 | 284 |
| 26June97:19:45 | 5.03 | 142.4 | 4.01 | 113.5 | 1.02 | 28.9 | 0.68 | 207 |
| 26June97:20:00 | 5.21 | 147.4 | 4.49 | 127.1 | 0.72 | 20.4 | 0.47 | 144 |
| 26June97:20:15 | 5.60 | 158.5 | 4.49 | 127.1 | 1.11 | 31.4 | 0.72 | 219 |
| 26June97:20:30 | 5.76 | 163.1 | 4.97 | 140.6 | 0.79 | 22.5 | 0.51 | 155 |
| 26June97:20:45 | 6.14 | 173.8 | 5.44 | 154.2 | 0.69 | 19.7 | 0.44 | 134 |
| 26June97:21:00 | 6.58 | 186.4 | 5.92 | 167.7 | 0.66 | 18.7 | 0.42 | 127 |
| 26June97:21:15 | 6.83 | 193.4 | 5.92 | 167.7 | 0.91 | 25.7 | 0.56 | 172 |
| 26June97:21:30 | 7.09 | 200.9 | 5.93 | 167.8 | 1.17 | 33.1 | 0.72 | 220 |
| 26June97:21:45 | 7.37 | 208.9 | 6.40 | 181.3 | 0.97 | 27.5 | 0.60 | 182 |
| 26June97:22:00 | 7.67 | 217.3 | 6.40 | 181.4 | 1.27 | 35.9 | 0.77 | 236 |
| 26June97:22:15 | 7.67 | 217.3 | 6.41 | 181.4 | 1.27 | 35.8 | 0.77 | 234 |
| 26June97:22:30 | 7.67 | 217.3 | 6.41 | 181.5 | 1.26 | 35.8 | 0.76 | 233 |
| 26June97:22:45 | 7.67 | 217.3 | 6.41 | 181.6 | 1.26 | 35.7 | 0.76 | 233 |
| 26June97:23:00 | 7.67 | 217.3 | 6.41 | 181.6 | 1.26 | 35.7 | 0.76 | 232 |
| 26June97:23:15 | 7.67 | 217.3 | 6.42 | 181.7 | 1.26 | 35.6 | 0.76 | 232 |
| 26June97:23:30 | 7.67 | 217.3 | 6.42 | 181.7 | 1.25 | 35.5 | 0.76 | 232 |
| 26June97:23:45 | 7.67 | 217.3 | 6.42 | 181.8 | 1.25 | 35.5 | 0.76 | 230 |
| 27June97:00:00 | 7.67 | 217.3 | 6.42 | 181.9 | 1.25 | 35.4 | 0.75 | 229 |
| 27June97:00:15 | 7.67 | 217.3 | 6.42 | 181.9 | 1.25 | 35.4 | 0.75 | 228 |
| 27June97:00:30 | 7.67 | 217.3 | 6.43 | 182.0 | 1.25 | 35.3 | 0.74 | 226 |
| 27June97:00:45 | 7.99 | 226.2 | 6.90 | 195.5 | 1.08 | 30.7 | 0.64 | 195 |
| 27June97:01:00 | 7.99 | 226.2 | 6.91 | 195.6 | 1.08 | 30.6 | 0.63 | 193 |
| 27June97:01:15 | 8.32 | 235.5 | 7.38 | 209.1 | 0.93 | 26.5 | 0.54 | 166 |
| 27June97:01:30 | 8.66 | 245.4 | 7.38 | 209.1 | 1.28 | 36.2 | 0.74 | 225 |
| 27June97:01:45 | 9.03 | 255.7 | 7.39 | 209.2 | 1.64 | 46.5 | 0.95 | 288 |
| 27June97:02:00 | 9.03 | 255.7 | 7.39 | 209.3 | 1.64 | 46.4 | 0.94 | 287 |
| 27June97:02:15 | 9.03 | 255.7 | 7.87 | 222.8 | 1.16 | 32.9 | 0.67 | 203 |
| 27June97:02:30 | 9.03 | 255.7 | 7.87 | 222.8 | 1.16 | 32.9 | 0.67 | 203 |
| 27June97:02:45 | 9.03 | 255.7 | 7.87 | 222.9 | 1.16 | 32.8 | 0.66 | 202 |
| 27June97:03:00 | 9.03 | 255.7 | 7.87 | 223.0 | 1.16 | 32.7 | 0.66 | 201 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 27June97:03:15 | 9.03 | 255.7 | 7.88 | 223.0 | 1.15 | 32.7 | 0.65 | 199 |
| 27June97:03:30 | 9.41 | 266.5 | 7.88 | 223.1 | 1.53 | 43.4 | 0.86 | 262 |
| 27June97:03:45 | 9.81 | 277.8 | 8.35 | 236.6 | 1.45 | 41.2 | 0.81 | 246 |
| 27June97:04:00 | 10.20 | 289.0 | 8.83 | 250.1 | 1.39 | 39.4 | 0.77 | 233 |
| 27June97:04:15 | -- | -- | 8.83 | 250.2 | -- | -- | -- | -- |
| 27June97:04:30 | -- | -- | 9.31 | 263.7 | -- | -- | -- | -- |
| 27June97:04:45 | -- | -- | 9.31 | 263.8 | -- | -- | -- | -- |
| 27June97:05:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:05:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:05:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:05:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:06:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:06:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:06:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:06:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:07:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:07:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:07:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:07:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:08:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:08:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:08:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:08:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:09:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:09:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:09:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:09:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:10:00 | -- | -- | 9.36 | 265.0 | -- | -- | -- | -- |
| 27June97:10:15 | -- | -- | 9.36 | 265.1 | -- | -- | -- | -- |
| 27June97:10:30 | -- | -- | 8.89 | 251.7 | -- | -- | -- | -- |
| 27June97:10:45 | -- | -- | 8.89 | 251.8 | -- | -- | -- | -- |
| 27June97:11:00 | -- | -- | 8.42 | 238.4 | -- | -- | -- | -- |
| 27June97:11:15 | -- | -- | 8.42 | 238.4 | -- | -- | -- | -- |
| 27June97:11:30 | -- | -- | 7.95 | 225.0 | -- | -- | -- | -- |
| 27June97:11:45 | 10.20 | 289.0 | 7.47 | 211.6 | 2.75 | 77.9 | 1.60 | 487 |
| 27June97:12:00 | 9.81 | 277.8 | 7.47 | 211.7 | 2.33 | 66.1 | 1.37 | 418 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 27June97:12:15 | 9.41 | 266.5 | 7.00 | 198.3 | 2.41 | 68.2 | 1.42 | 434 |
| 27June97:12:30 | 9.03 | 255.7 | 7.00 | 198.3 | 2.03 | 57.4 | 1.21 | 369 |
| 27June97:12:45 | 8.66 | 245.4 | 6.53 | 184.9 | 2.13 | 60.4 | 1.28 | 391 |
| 27June97:13:00 | 8.32 | 235.5 | 6.53 | 185.0 | 1.78 | 50.5 | 1.08 | 329 |
| 27June97:13:15 | 8.32 | 235.5 | 6.06 | 171.6 | 2.26 | 63.9 | 1.38 | 421 |
| 27June97:13:30 | 7.99 | 226.2 | 6.06 | 171.7 | 1.92 | 54.5 | 1.19 | 361 |
| 27June97:13:45 | 7.67 | 217.3 | 6.06 | 171.7 | 1.61 | 45.5 | 1.00 | 305 |
| 27June97:14:00 | 7.37 | 208.9 | 5.59 | 158.3 | 1.78 | 50.5 | 1.12 | 341 |
| 27June97:14:15 | 7.09 | 200.9 | 5.59 | 158.4 | 1.50 | 42.5 | 0.95 | 289 |
| 27June97:14:30 | 6.83 | 193.4 | 5.60 | 158.5 | 1.23 | 35.0 | 0.79 | 239 |
| 27June97:14:45 | 6.35 | 179.9 | 5.12 | 145.1 | 1.23 | 34.8 | 0.79 | 240 |
| 27June97:15:00 | 6.14 | 173.8 | 5.12 | 145.1 | 1.01 | 28.7 | 0.65 | 199 |
| 27June97:15:15 | 5.94 | 168.2 | 4.65 | 131.7 | 1.29 | 36.5 | 0.84 | 255 |
| 27June97:15:30 | 5.94 | 168.2 | 4.65 | 131.8 | 1.29 | 36.5 | 0.84 | 256 |
| 27June97:15:45 | 5.76 | 163.1 | 4.66 | 131.8 | 1.10 | 31.3 | 0.72 | 221 |
| 27June97:16:00 | 5.60 | 158.5 | 4.18 | 118.4 | 1.41 | 40.1 | 0.93 | 283 |
| 27June97:16:15 | 5.45 | 154.3 | 4.18 | 118.5 | 1.27 | 35.8 | 0.84 | 255 |
| 27June97:16:30 | 5.11 | 144.7 | 4.19 | 118.6 | 0.92 | 26.1 | 0.61 | 187 |
| 27June97:16:45 | 5.03 | 142.4 | 4.19 | 118.6 | 0.84 | 23.8 | 0.56 | 171 |
| 27June97:17:00 | 4.96 | 140.6 | 3.72 | 105.2 | 1.25 | 35.4 | 0.84 | 257 |
| 27June97:17:15 | 4.92 | 139.3 | 3.72 | 105.3 | 1.20 | 34.0 | 0.81 | 248 |
| 27June97:17:30 | 4.92 | 139.3 | 3.72 | 105.3 | 1.20 | 33.9 | 0.81 | 248 |
| 27June97:17:45 | 4.89 | 138.4 | 3.72 | 105.4 | 1.17 | 33.0 | 0.79 | 242 |
| 27June97:18:00 | 4.89 | 138.4 | 3.72 | 105.5 | 1.16 | 32.9 | 0.79 | 240 |
| 27June97:18:15 | 4.89 | 138.4 | 3.73 | 105.5 | 1.16 | 32.9 | 0.78 | 239 |
| 27June97:18:30 | 4.92 | 139.3 | 3.73 | 105.6 | 1.19 | 33.7 | 0.80 | 244 |
| 27June97:18:45 | 4.96 | 140.6 | 3.73 | 105.6 | 1.23 | 34.9 | 0.83 | 252 |
| 27June97:19:00 | 4.96 | 140.6 | 3.73 | 105.7 | 1.23 | 34.9 | 0.82 | 250 |
| 27June97:19:15 | 5.03 | 142.4 | 4.21 | 119.2 | 0.82 | 23.2 | 0.54 | 163 |
| 27June97:19:30 | 5.11 | 144.7 | 4.69 | 132.7 | 0.42 | 11.9 | 0.27 | 82 |
| 27June97:19:45 | 5.45 | 154.3 | 5.16 | 146.3 | 0.28 | 8.1 | 0.18 | 54 |
| 27June97:20:00 | 6.58 | 186.4 | 6.59 | 186.7 | -0.01 | -0.3 | -0.01 | -2 |
| 27June97:20:15 | 7.37 | 208.9 | 7.07 | 200.2 | 0.30 | 8.6 | 0.18 | 55 |
| 27June97:20:30 | 7.99 | 226.2 | 7.07 | 200.3 | 0.91 | 25.9 | 0.53 | 163 |
| 27June97:20:45 | 8.32 | 235.5 | 7.55 | 213.8 | 0.77 | 21.7 | 0.44 | 135 |
| 27June97:21:00 | 8.66 | 245.4 | 8.03 | 227.3 | 0.64 | 18.1 | 0.36 | 110 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 27June97:21:15 | 9.03 | 255.7 | 8.50 | 240.8 | 0.52 | 14.9 | 0.29 | 89 |
| 27June97:21:30 | 9.81 | 277.8 | 8.98 | 254.4 | 0.83 | 23.4 | 0.45 | 139 |
| 27June97:21:45 | 10.20 | 289.0 | 9.46 | 267.9 | 0.76 | 21.6 | 0.42 | 127 |
| 27June97:22:00 | -- | -- | 9.46 | 267.9 | -- | -- | -- | -- |
| 27June97:22:15 | -- | -- | 9.46 | 268.0 | -- | -- | -- | -- |
| 27June97:22:30 | -- | -- | 9.47 | 268.1 | -- | -- | -- | -- |
| 27June97:22:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:23:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:23:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:23:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 27June97:23:45 | -- | -- | 9.48 | 268.4 | -- | -- | -- | -- |
| 28June97:00:00 | -- | -- | 9.48 | 268.4 | -- | -- | -- | -- |
| 28June97:00:15 | -- | -- | 9.48 | 268.5 | -- | -- | -- | -- |
| 28June97:00:30 | -- | -- | 9.48 | 268.6 | -- | -- | -- | -- |
| 28June97:00:45 | -- | -- | 9.48 | 268.6 | -- | -- | -- | -- |
| 28June97:01:00 | -- | -- | 9.49 | 268.7 | -- | -- | -- | -- |
| 28June97:01:15 | -- | -- | 9.49 | 268.7 | -- | -- | -- | -- |
| 28June97:01:30 | -- | -- | 9.49 | 268.8 | -- | -- | -- | -- |
| 28June97:01:45 | -- | -- | 9.49 | 268.9 | -- | -- | -- | -- |
| 28June97:02:00 | -- | -- | 9.50 | 268.9 | -- | -- | -- | -- |
| 28June97:02:15 | -- | -- | 9.50 | 269.0 | -- | -- | -- | -- |
| 28June97:02:30 | -- | -- | 9.50 | 269.0 | -- | -- | -- | -- |
| 28June97:02:45 | -- | -- | 9.50 | 269.1 | -- | -- | -- | -- |
| 28June97:03:00 | -- | -- | 9.50 | 269.2 | -- | -- | -- | -- |
| 28June97:03:15 | -- | -- | 9.51 | 269.2 | -- | -- | -- | -- |
| 28June97:03:30 | -- | -- | 9.51 | 269.3 | -- | -- | -- | -- |
| 28June97:03:45 | -- | -- | 9.51 | 269.3 | -- | -- | -- | -- |
| 28June97:04:00 | -- | -- | 9.51 | 269.4 | -- | -- | -- | -- |
| 28June97:04:15 | -- | -- | 9.51 | 269.5 | -- | -- | -- | -- |
| 28June97:04:30 | -- | -- | 9.52 | 269.5 | -- | -- | -- | -- |
| 28June97:04:45 | -- | -- | 9.52 | 269.6 | -- | -- | -- | -- |
| 28June97:05:00 | -- | -- | 9.52 | 269.6 | -- | -- | -- | -- |
| 28June97:05:15 | -- | -- | 9.52 | 269.7 | -- | -- | -- | -- |
| 28June97:05:30 | -- | -- | 9.53 | 269.8 | -- | -- | -- | -- |
| 28June97:05:45 | -- | -- | 9.53 | 269.8 | -- | -- | -- | -- |
| 28June97:06:00 | 10.20 | 289.0 | 9.53 | 269.9 | 0.69 | 19.6 | 0.38 | 117 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 28June97:06:15 | 10.20 | 289.0 | 9.53 | 269.9 | 0.69 | 19.6 | 0.38 | 116 |
| 28June97:06:30 | 10.20 | 289.0 | 9.53 | 270.0 | 0.69 | 19.5 | 0.38 | 116 |
| 28June97:06:45 | 10.20 | 289.0 | 9.06 | 256.6 | 1.16 | 32.9 | 0.64 | 195 |
| 28June97:07:00 | 10.20 | 289.0 | 9.06 | 256.7 | 1.16 | 32.8 | 0.64 | 195 |
| 28June97:07:15 | 10.20 | 289.0 | 9.07 | 256.7 | 1.16 | 32.8 | 0.64 | 195 |
| 28June97:07:30 | 10.20 | 289.0 | 9.07 | 256.8 | 1.16 | 32.7 | 0.64 | 194 |
| 28June97:07:45 | 10.20 | 289.0 | 9.07 | 256.8 | 1.15 | 32.6 | 0.64 | 194 |
| 28June97:08:00 | 10.20 | 289.0 | 9.07 | 256.9 | 1.15 | 32.6 | 0.64 | 194 |
| 28June97:08:15 | 10.20 | 289.0 | 9.07 | 257.0 | 1.15 | 32.5 | 0.64 | 194 |
| 28June97:08:30 | 10.20 | 289.0 | 9.08 | 257.0 | 1.15 | 32.5 | 0.63 | 194 |
| 28June97:08:45 | 10.20 | 289.0 | 9.08 | 257.1 | 1.14 | 32.4 | 0.64 | 194 |
| 28June97:09:00 | 9.81 | 277.8 | 9.08 | 257.2 | 0.73 | 20.6 | 0.41 | 124 |
| 28June97:09:15 | 9.81 | 277.8 | 9.08 | 257.2 | 0.73 | 20.5 | 0.40 | 123 |
| 28June97:09:30 | 9.81 | 277.8 | 9.08 | 257.3 | 0.72 | 20.5 | 0.41 | 124 |
| 28June97:09:45 | 9.81 | 277.8 | 8.61 | 243.9 | 1.20 | 33.9 | 0.67 | 205 |
| 28June97:10:00 | 9.41 | 266.5 | 8.61 | 243.9 | 0.80 | 22.6 | 0.45 | 137 |
| 28June97:10:15 | 9.41 | 266.5 | 8.62 | 244.0 | 0.79 | 22.5 | 0.45 | 138 |
| 28June97:10:30 | 9.03 | 255.7 | 8.14 | 230.6 | 0.89 | 25.1 | 0.51 | 154 |
| 28June97:10:45 | 8.66 | 245.4 | 8.14 | 230.7 | 0.52 | 14.7 | 0.30 | 91 |
| 28June97:11:00 | 8.66 | 245.4 | 8.15 | 230.7 | 0.52 | 14.7 | 0.30 | 91 |
| 28June97:11:15 | 8.32 | 235.5 | 7.67 | 217.3 | 0.64 | 18.2 | 0.37 | 114 |
| 28June97:11:30 | 8.32 | 235.5 | 7.68 | 217.4 | 0.64 | 18.2 | 0.38 | 114 |
| 28June97:11:45 | 7.99 | 226.2 | 7.68 | 217.4 | 0.31 | 8.7 | 0.18 | 55 |
| 28June97:12:00 | 7.67 | 217.3 | 7.20 | 204.0 | 0.47 | 13.2 | 0.28 | 84 |
| 28June97:12:15 | 7.67 | 217.3 | 7.21 | 204.1 | 0.47 | 13.2 | 0.28 | 85 |
| 28June97:12:30 | 7.09 | 200.9 | 6.73 | 190.7 | 0.36 | 10.2 | 0.22 | 66 |
| 28June97:12:45 | 7.09 | 200.9 | 6.74 | 190.8 | 0.36 | 10.1 | 0.22 | 66 |
| 28June97:13:00 | 6.83 | 193.4 | 6.26 | 177.4 | 0.57 | 16.1 | 0.35 | 106 |
| 28June97:13:15 | 6.58 | 186.4 | 6.27 | 177.4 | 0.32 | 9.0 | 0.20 | 60 |
| 28June97:13:30 | 6.58 | 186.4 | 6.27 | 177.5 | 0.32 | 8.9 | 0.20 | 60 |
| 28June97:13:45 | 6.14 | 173.8 | 5.79 | 164.1 | 0.34 | 9.7 | 0.22 | 66 |
| 28June97:14:00 | 5.94 | 168.2 | 5.32 | 150.7 | 0.62 | 17.6 | 0.39 | 120 |
| 28June97:14:15 | 5.76 | 163.1 | 5.32 | 150.7 | 0.44 | 12.4 | 0.28 | 85 |
| 28June97:14:30 | 5.60 | 158.5 | 5.33 | 150.8 | 0.27 | 7.7 | 0.18 | 53 |
| 28June97:14:45 | 5.45 | 154.3 | 4.85 | 137.4 | 0.60 | 16.9 | 0.39 | 118 |
| 28June97:15:00 | 5.32 | 150.6 | 4.85 | 137.5 | 0.46 | 13.2 | 0.30 | 92 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | Streamflow at 08317200 at time - 45 minutes (L/s) | Streamflow at 08317207 ($ft^3/s$) | Streamflow at 08317207 (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | Streamflow loss between 08317200 and 08317207 (L/s) | Streamflow-loss rate (ft/day) | Streamflow-loss rate (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 28June97:15:15 | 5.21 | 147.4 | 4.86 | 137.5 | 0.35 | 9.9 | 0.23 | 70 |
| 28June97:15:30 | 5.11 | 144.7 | 4.38 | 124.1 | 0.73 | 20.5 | 0.48 | 146 |
| 28June97:15:45 | 5.03 | 142.4 | 4.39 | 124.2 | 0.64 | 18.2 | 0.43 | 130 |
| 28June97:16:00 | 5.03 | 142.4 | 4.39 | 124.3 | 0.64 | 18.1 | 0.43 | 131 |
| 28June97:16:15 | 4.92 | 139.3 | 4.39 | 124.3 | 0.53 | 15.0 | 0.36 | 109 |
| 28June97:16:30 | 4.89 | 138.4 | 3.92 | 110.9 | 0.97 | 27.5 | 0.66 | 201 |
| 28June97:16:45 | 4.89 | 138.4 | 3.92 | 111.0 | 0.97 | 27.4 | 0.66 | 202 |
| 28June97:17:00 | 4.87 | 138.0 | 3.92 | 111.0 | 0.95 | 27.0 | 0.65 | 199 |
| 28June97:17:15 | -- | -- | 3.92 | 111.1 | -- | -- | -- | -- |
| 28June97:17:30 | -- | -- | 3.93 | 111.2 | -- | -- | -- | -- |
| 28June97:17:45 | -- | -- | 3.93 | 111.2 | -- | -- | -- | -- |
| 28June97:18:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28June97:18:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28June97:18:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28June97:18:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28June97:19:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28June97:19:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28June97:19:30 | 5.11 | 144.7 | 4.89 | 138.6 | 0.22 | 6.1 | 0.14 | 43 |
| 28June97:19:45 | 5.60 | 158.5 | 5.37 | 152.1 | 0.23 | 6.4 | 0.15 | 44 |
| 28June97:20:00 | 5.76 | 163.1 | 5.85 | 165.6 | -0.09 | -2.5 | -0.06 | -17 |
| 28June97:20:15 | 5.94 | 168.2 | 5.85 | 165.7 | 0.09 | 2.6 | 0.06 | 18 |
| 28June97:20:30 | 5.94 | 168.2 | 5.85 | 165.7 | 0.09 | 2.5 | 0.06 | 17 |
| 28June97:20:45 | 6.14 | 173.8 | 5.85 | 165.8 | 0.28 | 8.0 | 0.18 | 54 |
| 28June97:21:00 | 6.35 | 179.9 | 6.33 | 179.3 | 0.02 | 0.6 | 0.01 | 4 |
| 28June97:21:15 | 6.58 | 186.4 | 6.81 | 192.8 | -0.23 | -6.4 | -0.14 | -42 |
| 28June97:21:30 | 7.09 | 200.9 | 6.81 | 192.9 | 0.28 | 8.0 | 0.17 | 52 |
| 28June97:21:45 | 7.37 | 208.9 | 7.29 | 206.4 | 0.09 | 2.5 | 0.05 | 16 |
| 28June97:22:00 | 7.37 | 208.9 | 7.29 | 206.5 | 0.08 | 2.4 | 0.05 | 15 |
| 28June97:22:15 | 7.67 | 217.3 | 7.29 | 206.5 | 0.38 | 10.8 | 0.23 | 69 |
| 28June97:22:30 | 7.67 | 217.3 | 7.29 | 206.6 | 0.38 | 10.7 | 0.22 | 68 |
| 28June97:22:45 | 7.67 | 217.3 | 7.30 | 206.6 | 0.38 | 10.6 | 0.22 | 68 |
| 28June97:23:00 | 7.67 | 217.3 | 7.77 | 220.2 | -0.10 | -2.9 | -0.06 | -18 |
| 28June97:23:15 | 7.67 | 217.3 | 7.78 | 220.2 | -0.10 | -2.9 | -0.06 | -19 |
| 28June97:23:30 | 7.67 | 217.3 | 7.78 | 220.3 | -0.11 | -3.0 | -0.06 | -19 |
| 28June97:23:45 | 7.67 | 217.3 | 7.78 | 220.3 | -0.11 | -3.1 | -0.06 | -19 |
| 29June97:00:00 | 7.67 | 217.3 | -- | -- | -- | -- | -- | -- |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 27Sept97:00:00 | -- | -- | 4.24 | 120.2 | -- | -- | -- | -- |
| 27Sept97:00:15 | -- | -- | 4.24 | 120.2 | -- | -- | -- | -- |
| 27Sept97:00:30 | -- | -- | 4.24 | 120.2 | -- | -- | -- | -- |
| 27Sept97:00:45 | 5.44 | 154.1 | 4.24 | 120.2 | 1.20 | 33.9 | 0.78 | 237 |
| 27Sept97:01:00 | 5.67 | 160.6 | 4.24 | 120.2 | 1.43 | 40.4 | 0.93 | 283 |
| 27Sept97:01:15 | 5.67 | 160.6 | 4.24 | 120.2 | 1.43 | 40.4 | 0.93 | 283 |
| 27Sept97:01:30 | 5.44 | 154.1 | 4.24 | 120.2 | 1.20 | 33.9 | 0.78 | 237 |
| 27Sept97:01:45 | 5.44 | 154.1 | 4.24 | 120.2 | 1.20 | 33.9 | 0.78 | 237 |
| 27Sept97:02:00 | 5.44 | 154.1 | 4.24 | 120.2 | 1.20 | 33.9 | 0.78 | 237 |
| 27Sept97:02:15 | 5.44 | 154.1 | 4.24 | 120.2 | 1.20 | 33.9 | 0.78 | 238 |
| 27Sept97:02:30 | 5.44 | 154.1 | 4.24 | 120.2 | 1.20 | 33.9 | 0.78 | 239 |
| 27Sept97:02:45 | 5.44 | 154.1 | 4.24 | 120.2 | 1.20 | 33.9 | 0.78 | 239 |
| 27Sept97:03:00 | 5.44 | 154.1 | 4.24 | 120.2 | 1.20 | 33.9 | 0.78 | 238 |
| 27Sept97:03:15 | 5.67 | 160.6 | 4.24 | 120.2 | 1.43 | 40.4 | 0.92 | 281 |
| 27Sept97:03:30 | 5.91 | 167.4 | 4.24 | 120.2 | 1.67 | 47.2 | 1.06 | 324 |
| 27Sept97:03:45 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.95 | 289 |
| 27Sept97:04:00 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.94 | 287 |
| 27Sept97:04:15 | 6.42 | 181.7 | 4.66 | 131.9 | 1.76 | 49.8 | 1.10 | 335 |
| 27Sept97:04:30 | 6.16 | 174.4 | 5.17 | 146.4 | 0.99 | 28.0 | 0.62 | 187 |
| 27Sept97:04:45 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 236 |
| 27Sept97:05:00 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 236 |
| 27Sept97:05:15 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 236 |
| 27Sept97:05:30 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 236 |
| 27Sept97:05:45 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.77 | 235 |
| 27Sept97:06:00 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.77 | 235 |
| 27Sept97:06:15 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.77 | 234 |
| 27Sept97:06:30 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.76 | 233 |
| 27Sept97:06:45 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.76 | 233 |
| 27Sept97:07:00 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.76 | 233 |
| 27Sept97:07:15 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.76 | 233 |
| 27Sept97:07:30 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.92 | 282 |
| 27Sept97:07:45 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.92 | 281 |
| 27Sept97:08:00 | 6.96 | 197.0 | 5.17 | 146.4 | 1.79 | 50.6 | 1.08 | 330 |
| 27Sept97:08:15 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.71 | 216 |
| 27Sept97:08:30 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.71 | 215 |
| 27Sept97:08:45 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.87 | 266 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 27Sept97:09:00 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.87 | 266 |
| 27Sept97:09:15 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.87 | 266 |
| 27Sept97:09:30 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.70 | 215 |
| 27Sept97:09:45 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.87 | 266 |
| 27Sept97:10:00 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.88 | 267 |
| 27Sept97:10:15 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.71 | 216 |
| 27Sept97:10:30 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.71 | 217 |
| 27Sept97:10:45 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.55 | 167 |
| 27Sept97:11:00 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.55 | 168 |
| 27Sept97:11:15 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.39 | 119 |
| 27Sept97:11:30 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.77 | 235 |
| 27Sept97:11:45 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 236 |
| 27Sept97:12:00 | 6.16 | 174.4 | 5.17 | 146.4 | 0.99 | 28.0 | 0.62 | 189 |
| 27Sept97:12:15 | 5.91 | 167.4 | 5.17 | 146.4 | 0.74 | 21.0 | 0.47 | 143 |
| 27Sept97:12:30 | 5.91 | 167.4 | 4.66 | 131.9 | 1.25 | 35.4 | 0.80 | 244 |
| 27Sept97:12:45 | 5.67 | 160.6 | 4.66 | 131.9 | 1.01 | 28.7 | 0.66 | 200 |
| 27Sept97:13:00 | 5.44 | 154.1 | 4.66 | 131.9 | 0.78 | 22.1 | 0.51 | 156 |
| 27Sept97:13:15 | 5.44 | 154.1 | 4.24 | 120.2 | 1.20 | 33.9 | 0.79 | 242 |
| 27Sept97:13:30 | 5.22 | 147.8 | 4.24 | 120.2 | 0.98 | 27.6 | 0.65 | 199 |
| 27Sept97:13:45 | 5.01 | 141.8 | 3.92 | 111.1 | 1.08 | 30.7 | 0.73 | 224 |
| 27Sept97:14:00 | 4.80 | 136.0 | 3.92 | 111.1 | 0.88 | 24.9 | 0.60 | 183 |
| 27Sept97:14:15 | 4.61 | 130.5 | 3.92 | 111.1 | 0.68 | 19.4 | 0.47 | 144 |
| 27Sept97:14:30 | 4.61 | 130.5 | -- | -- | -- | -- | -- | -- |
| 27Sept97:14:45 | 4.42 | 125.3 | -- | -- | -- | -- | -- | -- |
| 27Sept97:15:00 | 4.25 | 120.3 | -- | -- | -- | -- | -- | -- |
| 27Sept97:15:15 | 4.25 | 120.3 | -- | -- | -- | -- | -- | -- |
| 27Sept97:15:30 | 4.08 | 115.6 | -- | -- | -- | -- | -- | -- |
| 27Sept97:15:45 | 4.08 | 115.6 | -- | -- | -- | -- | -- | -- |
| 27Sept97:16:00 | 3.92 | 111.1 | -- | -- | -- | -- | -- | -- |
| 27Sept97:16:15 | 3.92 | 111.1 | -- | -- | -- | -- | -- | -- |
| 27Sept97:16:30 | 3.92 | 111.1 | -- | -- | -- | -- | -- | -- |
| 27Sept97:16:45 | 3.92 | 111.1 | -- | -- | -- | -- | -- | -- |
| 27Sept97:17:00 | 3.77 | 106.8 | -- | -- | -- | -- | -- | -- |
| 27Sept97:17:15 | 3.63 | 102.9 | -- | -- | -- | -- | -- | -- |
| 27Sept97:17:30 | 3.50 | 99.1 | -- | -- | -- | -- | -- | -- |
| 27Sept97:17:45 | 3.50 | 99.1 | -- | -- | -- | -- | -- | -- |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 27Sept97:18:00 | 3.38 | 95.7 | -- | -- | -- | -- | -- | -- |
| 27Sept97:18:15 | 3.38 | 95.7 | -- | -- | -- | -- | -- | -- |
| 27Sept97:18:30 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 27Sept97:18:45 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 27Sept97:19:00 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 27Sept97:19:15 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 27Sept97:19:30 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 27Sept97:19:45 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 27Sept97:20:00 | 3.07 | 86.8 | -- | -- | -- | -- | -- | -- |
| 27Sept97:20:15 | 3.07 | 86.8 | -- | -- | -- | -- | -- | -- |
| 27Sept97:20:30 | 3.07 | 86.8 | -- | -- | -- | -- | -- | -- |
| 27Sept97:20:45 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 27Sept97:21:00 | 5.91 | 167.4 | -- | -- | -- | -- | -- | -- |
| 27Sept97:21:15 | 6.68 | 189.2 | 4.66 | 131.9 | 2.02 | 57.3 | 1.29 | 394 |
| 27Sept97:21:30 | 6.96 | 197.0 | 5.17 | 146.4 | 1.79 | 50.6 | 1.11 | 338 |
| 27Sept97:21:45 | 6.96 | 197.0 | 5.17 | 146.4 | 1.79 | 50.6 | 1.10 | 335 |
| 27Sept97:22:00 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 221 |
| 27Sept97:22:15 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 220 |
| 27Sept97:22:30 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 219 |
| 27Sept97:22:45 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.89 | 271 |
| 27Sept97:23:00 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.89 | 270 |
| 27Sept97:23:15 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.89 | 270 |
| 27Sept97:23:30 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 218 |
| 27Sept97:23:45 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 219 |
| 28Sept97:00:00 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 220 |
| 28Sept97:00:15 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 221 |
| 28Sept97:00:30 | 6.96 | 197.0 | 5.17 | 146.4 | 1.79 | 50.6 | 1.10 | 335 |
| 28Sept97:00:45 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.93 | 285 |
| 28Sept97:01:00 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.94 | 286 |
| 28Sept97:01:15 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.94 | 287 |
| 28Sept97:01:30 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.94 | 288 |
| 28Sept97:01:45 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 238 |
| 28Sept97:02:00 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.79 | 240 |
| 28Sept97:02:15 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.79 | 241 |
| 28Sept97:02:30 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.96 | 292 |
| 28Sept97:02:45 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.96 | 292 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 28Sept97:03:00 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.95 | 291 |
| 28Sept97:03:15 | 6.42 | 181.7 | 4.66 | 131.9 | 1.76 | 49.8 | 1.11 | 338 |
| 28Sept97:03:30 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.95 | 289 |
| 28Sept97:03:45 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.94 | 287 |
| 28Sept97:04:00 | 6.96 | 197.0 | 5.17 | 146.4 | 1.79 | 50.6 | 1.10 | 337 |
| 28Sept97:04:15 | 6.96 | 197.0 | 5.17 | 146.4 | 1.79 | 50.6 | 1.10 | 335 |
| 28Sept97:04:30 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 221 |
| 28Sept97:04:45 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 221 |
| 28Sept97:05:00 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 221 |
| 28Sept97:05:15 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 221 |
| 28Sept97:05:30 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 221 |
| 28Sept97:05:45 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 221 |
| 28Sept97:06:00 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 221 |
| 28Sept97:06:15 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 221 |
| 28Sept97:06:30 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.55 | 169 |
| 28Sept97:06:45 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 221 |
| 28Sept97:07:00 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.93 | 283 |
| 28Sept97:07:15 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.93 | 283 |
| 28Sept97:07:30 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.93 | 283 |
| 28Sept97:07:45 | 6.96 | 197.0 | 5.17 | 146.4 | 1.79 | 50.6 | 1.09 | 333 |
| 28Sept97:08:00 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.89 | 272 |
| 28Sept97:08:15 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.89 | 270 |
| 28Sept97:08:30 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.88 | 268 |
| 28Sept97:08:45 | 7.53 | 213.4 | 5.78 | 163.6 | 1.76 | 49.7 | 1.05 | 321 |
| 28Sept97:09:00 | 7.53 | 213.4 | 5.78 | 163.6 | 1.76 | 49.7 | 1.05 | 320 |
| 28Sept97:09:15 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.88 | 267 |
| 28Sept97:09:30 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.88 | 268 |
| 28Sept97:09:45 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.88 | 269 |
| 28Sept97:10:00 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.89 | 271 |
| 28Sept97:10:15 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 219 |
| 28Sept97:10:30 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 221 |
| 28Sept97:10:45 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.56 | 170 |
| 28Sept97:11:00 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.56 | 171 |
| 28Sept97:11:15 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 238 |
| 28Sept97:11:30 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.79 | 240 |
| 28Sept97:11:45 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.96 | 292 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 28Sept97:12:00 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.96 | 294 |
| 28Sept97:12:15 | 5.91 | 167.4 | 4.66 | 131.9 | 1.25 | 35.4 | 0.81 | 248 |
| 28Sept97:12:30 | 5.67 | 160.6 | 4.66 | 131.9 | 1.01 | 28.7 | 0.67 | 203 |
| 28Sept97:12:45 | 5.44 | 154.1 | 4.24 | 120.2 | 1.20 | 33.9 | 0.79 | 242 |
| 28Sept97:13:00 | 5.44 | 154.1 | 4.24 | 120.2 | 1.20 | 33.9 | 0.80 | 244 |
| 28Sept97:13:15 | 5.22 | 147.8 | 4.24 | 120.2 | 0.98 | 27.6 | 0.66 | 201 |
| 28Sept97:13:30 | 5.01 | 141.8 | 3.92 | 111.1 | 1.08 | 30.7 | 0.74 | 224 |
| 28Sept97:13:45 | 5.01 | 141.8 | 3.92 | 111.1 | 1.08 | 30.7 | 0.74 | 226 |
| 28Sept97:14:00 | 4.80 | 136.0 | 3.92 | 111.1 | 0.88 | 24.9 | 0.61 | 185 |
| 28Sept97:14:15 | 4.61 | 130.5 | 3.92 | 111.1 | 0.68 | 19.4 | 0.48 | 146 |
| 28Sept97:14:30 | 4.61 | 130.5 | -- | -- | -- | -- | -- | -- |
| 28Sept97:14:45 | 4.42 | 125.3 | -- | -- | -- | -- | -- | -- |
| 28Sept97:15:00 | 4.25 | 120.3 | -- | -- | -- | -- | -- | -- |
| 28Sept97:15:15 | 4.08 | 115.6 | -- | -- | -- | -- | -- | -- |
| 28Sept97:15:30 | 4.08 | 115.6 | -- | -- | -- | -- | -- | -- |
| 28Sept97:15:45 | 3.92 | 111.1 | -- | -- | -- | -- | -- | -- |
| 28Sept97:16:00 | 3.77 | 106.8 | -- | -- | -- | -- | -- | -- |
| 28Sept97:16:15 | 3.63 | 102.9 | -- | -- | -- | -- | -- | -- |
| 28Sept97:16:30 | 3.63 | 102.9 | -- | -- | -- | -- | -- | -- |
| 28Sept97:16:45 | 3.50 | 99.1 | -- | -- | -- | -- | -- | -- |
| 28Sept97:17:00 | 3.50 | 99.1 | -- | -- | -- | -- | -- | -- |
| 28Sept97:17:15 | 3.38 | 95.7 | -- | -- | -- | -- | -- | -- |
| 28Sept97:17:30 | 3.38 | 95.7 | -- | -- | -- | -- | -- | -- |
| 28Sept97:17:45 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 28Sept97:18:00 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 28Sept97:18:15 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 28Sept97:18:30 | 3.07 | 86.8 | -- | -- | -- | -- | -- | -- |
| 28Sept97:18:45 | 3.07 | 86.8 | -- | -- | -- | -- | -- | -- |
| 28Sept97:19:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28Sept97:19:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28Sept97:19:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28Sept97:19:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28Sept97:20:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28Sept97:20:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28Sept97:20:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28Sept97:20:45 | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 28Sept97:21:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28Sept97:21:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28Sept97:21:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 28Sept97:21:45 | 3.92 | 111.1 | -- | -- | -- | -- | -- | -- |
| 28Sept97:22:00 | 5.22 | 147.8 | -- | -- | -- | -- | -- | -- |
| 28Sept97:22:15 | 5.44 | 154.1 | -- | -- | -- | -- | -- | -- |
| 28Sept97:22:30 | 5.67 | 160.6 | 3.92 | 111.1 | 1.75 | 49.5 | 1.14 | 349 |
| 28Sept97:22:45 | 5.91 | 167.4 | 4.24 | 120.2 | 1.67 | 47.2 | 1.08 | 329 |
| 28Sept97:23:00 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.96 | 293 |
| 28Sept97:23:15 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.95 | 291 |
| 28Sept97:23:30 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.95 | 290 |
| 28Sept97:23:45 | 6.42 | 181.7 | 4.66 | 131.9 | 1.76 | 49.8 | 1.11 | 338 |
| 29Sept97:00:00 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.95 | 289 |
| 29Sept97:00:15 | 6.42 | 181.7 | 4.66 | 131.9 | 1.76 | 49.8 | 1.11 | 338 |
| 29Sept97:00:30 | 6.42 | 181.7 | 4.66 | 131.9 | 1.76 | 49.8 | 1.11 | 338 |
| 29Sept97:00:45 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.94 | 288 |
| 29Sept97:01:00 | 6.42 | 181.7 | 4.66 | 131.9 | 1.76 | 49.8 | 1.10 | 336 |
| 29Sept97:01:15 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.94 | 287 |
| 29Sept97:01:30 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.93 | 285 |
| 29Sept97:01:45 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.93 | 284 |
| 29Sept97:02:00 | 6.96 | 197.0 | 5.17 | 146.4 | 1.79 | 50.6 | 1.10 | 334 |
| 29Sept97:02:15 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.93 | 283 |
| 29Sept97:02:30 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.93 | 283 |
| 29Sept97:02:45 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.93 | 283 |
| 29Sept97:03:00 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.93 | 284 |
| 29Sept97:03:15 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.93 | 285 |
| 29Sept97:03:30 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.77 | 235 |
| 29Sept97:03:45 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 236 |
| 29Sept97:04:00 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 236 |
| 29Sept97:04:15 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 236 |
| 29Sept97:04:30 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 237 |
| 29Sept97:04:45 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 238 |
| 29Sept97:05:00 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 239 |
| 29Sept97:05:15 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.79 | 240 |
| 29Sept97:05:30 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.79 | 240 |
| 29Sept97:05:45 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.79 | 240 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 29Sept97:06:00 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.79 | 240 |
| 29Sept97:06:15 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.79 | 240 |
| 29Sept97:06:30 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.79 | 240 |
| 29Sept97:06:45 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.79 | 240 |
| 29Sept97:07:00 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 239 |
| 29Sept97:07:15 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 238 |
| 29Sept97:07:30 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 236 |
| 29Sept97:07:45 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.93 | 284 |
| 29Sept97:08:00 | 6.96 | 197.0 | 5.17 | 146.4 | 1.79 | 50.6 | 1.09 | 333 |
| 29Sept97:08:15 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.71 | 217 |
| 29Sept97:08:30 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.88 | 268 |
| 29Sept97:08:45 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.88 | 267 |
| 29Sept97:09:00 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.88 | 267 |
| 29Sept97:09:15 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.88 | 268 |
| 29Sept97:09:30 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.71 | 217 |
| 29Sept97:09:45 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 219 |
| 29Sept97:10:00 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.72 | 220 |
| 29Sept97:10:15 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.56 | 170 |
| 29Sept97:10:30 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.77 | 235 |
| 29Sept97:10:45 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.78 | 237 |
| 29Sept97:11:00 | 6.16 | 174.4 | 5.17 | 146.4 | 0.99 | 28.0 | 0.62 | 190 |
| 29Sept97:11:15 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.96 | 292 |
| 29Sept97:11:30 | 5.91 | 167.4 | 4.66 | 131.9 | 1.25 | 35.4 | 0.80 | 245 |
| 29Sept97:11:45 | 5.67 | 160.6 | 4.66 | 131.9 | 1.01 | 28.7 | 0.66 | 201 |
| 29Sept97:12:00 | 5.44 | 154.1 | 4.24 | 120.2 | 1.20 | 33.9 | 0.79 | 240 |
| 29Sept97:12:15 | 5.44 | 154.1 | 4.24 | 120.2 | 1.20 | 33.9 | 0.80 | 243 |
| 29Sept97:12:30 | 5.22 | 147.8 | 4.24 | 120.2 | 0.98 | 27.6 | 0.66 | 200 |
| 29Sept97:12:45 | 5.01 | 141.8 | 3.92 | 111.1 | 1.08 | 30.7 | 0.74 | 224 |
| 29Sept97:13:00 | 4.80 | 136.0 | 3.92 | 111.1 | 0.88 | 24.9 | 0.60 | 184 |
| 29Sept97:13:15 | 5.44 | 154.1 | 3.92 | 111.1 | 1.52 | 42.9 | 1.05 | 319 |
| 29Sept97:13:30 | 5.22 | 147.8 | -- | -- | -- | -- | -- | -- |
| 29Sept97:13:45 | 5.01 | 141.8 | -- | -- | -- | -- | -- | -- |
| 29Sept97:14:00 | 4.80 | 136.0 | -- | -- | -- | -- | -- | -- |
| 29Sept97:14:15 | 4.61 | 130.5 | -- | -- | -- | -- | -- | -- |
| 29Sept97:14:30 | 4.61 | 130.5 | -- | -- | -- | -- | -- | -- |
| 29Sept97:14:45 | 4.42 | 125.3 | 3.92 | 111.1 | 0.50 | 14.1 | 0.37 | 113 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 29Sept97:15:00 | 4.25 | 120.3 | 3.92 | 111.1 | 0.32 | 9.1 | 0.24 | 74 |
| 29Sept97:15:15 | 4.08 | 115.6 | 3.92 | 111.1 | 0.16 | 4.4 | 0.12 | 36 |
| 29Sept97:15:30 | 4.08 | 115.6 | 3.92 | 111.1 | 0.16 | 4.4 | 0.12 | 36 |
| 29Sept97:15:45 | 3.92 | 111.1 | -- | -- | -- | -- | -- | -- |
| 29Sept97:16:00 | 3.77 | 106.8 | -- | -- | -- | -- | -- | -- |
| 29Sept97:16:15 | 3.63 | 102.9 | -- | -- | -- | -- | -- | -- |
| 29Sept97:16:30 | 3.50 | 99.1 | -- | -- | -- | -- | -- | -- |
| 29Sept97:16:45 | 3.38 | 95.7 | -- | -- | -- | -- | -- | -- |
| 29Sept97:17:00 | 3.38 | 95.7 | -- | -- | -- | -- | -- | -- |
| 29Sept97:17:15 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 29Sept97:17:30 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 29Sept97:17:45 | 3.07 | 86.8 | -- | -- | -- | -- | -- | -- |
| 29Sept97:18:00 | 3.07 | 86.8 | -- | -- | -- | -- | -- | -- |
| 29Sept97:18:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:18:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:18:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:19:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:19:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:19:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:19:45 | 6.16 | 174.4 | -- | -- | -- | -- | -- | -- |
| 29Sept97:20:00 | -- | -- | 5.17 | 146.4 | -- | -- | -- | -- |
| 29Sept97:20:15 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 29Sept97:20:30 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 29Sept97:20:45 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 29Sept97:21:00 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 29Sept97:21:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:21:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:21:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:22:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:22:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:22:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:22:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:23:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:23:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:23:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 29Sept97:23:45 | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 30Sept97:00:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 30Sept97:00:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 30Sept97:00:30 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:00:45 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:01:00 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:01:15 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:01:30 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 30Sept97:01:45 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 30Sept97:02:00 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 30Sept97:02:15 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 30Sept97:02:30 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 30Sept97:02:45 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 30Sept97:03:00 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 30Sept97:03:15 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 30Sept97:03:30 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 30Sept97:03:45 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 30Sept97:04:00 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 30Sept97:04:15 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 30Sept97:04:30 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 30Sept97:04:45 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 30Sept97:05:00 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:05:15 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:05:30 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:05:45 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:06:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 30Sept97:06:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 30Sept97:06:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 30Sept97:06:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 30Sept97:07:00 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:07:15 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:07:30 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:07:45 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:08:00 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:08:15 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:08:30 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:08:45 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 30Sept97:09:00 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:09:15 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:09:30 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 30Sept97:09:45 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 30Sept97:10:00 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 30Sept97:10:15 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 30Sept97:10:30 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 30Sept97:10:45 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 30Sept97:11:00 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 30Sept97:11:15 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 30Sept97:11:30 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 30Sept97:11:45 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 200 |
| 30Sept97:12:00 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.48 | 145 |
| 30Sept97:12:15 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.75 | 228 |
| 30Sept97:12:30 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.58 | 176 |
| 30Sept97:12:45 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 126 |
| 30Sept97:13:00 | 6.16 | 174.4 | 5.17 | 146.4 | 0.99 | 28.0 | 0.65 | 197 |
| 30Sept97:13:15 | 6.16 | 174.4 | 5.17 | 146.4 | 0.99 | 28.0 | 0.65 | 199 |
| 30Sept97:13:30 | 5.91 | 167.4 | 5.17 | 146.4 | 0.74 | 21.0 | 0.50 | 151 |
| 30Sept97:13:45 | 5.67 | 160.6 | 4.66 | 131.9 | 1.01 | 28.7 | 0.69 | 209 |
| 30Sept97:14:00 | 5.44 | 154.1 | 4.66 | 131.9 | 0.78 | 22.1 | 0.53 | 163 |
| 30Sept97:14:15 | 5.22 | 147.8 | 4.66 | 131.9 | 0.56 | 15.9 | 0.39 | 118 |
| 30Sept97:14:30 | 5.01 | 141.8 | 4.24 | 120.2 | 0.76 | 21.6 | 0.53 | 163 |
| 30Sept97:14:45 | 4.80 | 136.0 | 4.24 | 120.2 | 0.56 | 15.9 | 0.39 | 120 |
| 30Sept97:15:00 | 4.61 | 130.5 | 4.24 | 120.2 | 0.37 | 10.4 | 0.26 | 80 |
| 30Sept97:15:15 | 4.61 | 130.5 | 4.24 | 120.2 | 0.37 | 10.4 | 0.26 | 80 |
| 30Sept97:15:30 | 4.42 | 125.3 | 3.92 | 111.1 | 0.50 | 14.1 | 0.36 | 110 |
| 30Sept97:15:45 | 4.25 | 120.3 | 3.92 | 111.1 | 0.32 | 9.1 | 0.24 | 72 |
| 30Sept97:16:00 | 4.08 | 115.6 | 3.92 | 111.1 | 0.16 | 4.4 | 0.12 | 35 |
| 30Sept97:16:15 | 4.08 | 115.6 | 3.92 | 111.1 | 0.16 | 4.4 | 0.12 | 35 |
| 30Sept97:16:30 | 3.92 | 111.1 | -- | -- | -- | -- | -- | -- |
| 30Sept97:16:45 | 3.77 | 106.8 | -- | -- | -- | -- | -- | -- |
| 30Sept97:17:00 | 3.77 | 106.8 | -- | -- | -- | -- | -- | -- |
| 30Sept97:17:15 | 3.63 | 102.9 | -- | -- | -- | -- | -- | -- |
| 30Sept97:17:30 | 3.50 | 99.1 | -- | -- | -- | -- | -- | -- |
| 30Sept97:17:45 | 3.50 | 99.1 | -- | -- | -- | -- | -- | -- |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 30Sept97:18:00 | 3.38 | 95.7 | -- | -- | -- | -- | -- | -- |
| 30Sept97:18:15 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 30Sept97:18:30 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 30Sept97:18:45 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 30Sept97:19:00 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 30Sept97:19:15 | 3.07 | 86.8 | -- | -- | -- | -- | -- | -- |
| 30Sept97:19:30 | 3.07 | 86.8 | -- | -- | -- | -- | -- | -- |
| 30Sept97:19:45 | 3.50 | 99.1 | -- | -- | -- | -- | -- | -- |
| 30Sept97:20:00 | 5.67 | 160.6 | -- | -- | -- | -- | -- | -- |
| 30Sept97:20:15 | 5.91 | 167.4 | 4.24 | 120.2 | 1.67 | 47.2 | 1.15 | 350 |
| 30Sept97:20:30 | 6.16 | 174.4 | 4.24 | 120.2 | 1.92 | 54.2 | 1.28 | 391 |
| 30Sept97:20:45 | 6.16 | 174.4 | 4.24 | 120.2 | 1.92 | 54.2 | 1.27 | 388 |
| 30Sept97:21:00 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.99 | 302 |
| 30Sept97:21:15 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.98 | 299 |
| 30Sept97:21:30 | 6.42 | 181.7 | 4.66 | 131.9 | 1.76 | 49.8 | 1.15 | 349 |
| 30Sept97:21:45 | 6.42 | 181.7 | 4.66 | 131.9 | 1.76 | 49.8 | 1.14 | 347 |
| 30Sept97:22:00 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.80 | 245 |
| 30Sept97:22:15 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.97 | 296 |
| 30Sept97:22:30 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.97 | 295 |
| 30Sept97:22:45 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.96 | 294 |
| 30Sept97:23:00 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.96 | 292 |
| 30Sept97:23:15 | 6.96 | 197.0 | 5.17 | 146.4 | 1.79 | 50.6 | 1.12 | 341 |
| 30Sept97:23:30 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.91 | 277 |
| 30Sept97:23:45 | 7.53 | 213.4 | 5.78 | 163.6 | 1.76 | 49.7 | 1.08 | 329 |
| 01Oct97:00:00 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:00:15 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:00:30 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:00:45 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:01:00 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:01:15 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:01:30 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:01:45 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 01Oct97:02:00 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 01Oct97:02:15 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 01Oct97:02:30 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 01Oct97:02:45 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 01Oct97:03:00 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 198 |
| 01Oct97:03:15 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 198 |
| 01Oct97:03:30 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 143 |
| 01Oct97:03:45 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.90 | 275 |
| 01Oct97:04:00 | 7.53 | 213.4 | 5.78 | 163.6 | 1.76 | 49.7 | 1.08 | 329 |
| 01Oct97:04:15 | 7.53 | 213.4 | 5.78 | 163.6 | 1.76 | 49.7 | 1.08 | 329 |
| 01Oct97:04:30 | 7.53 | 213.4 | 5.78 | 163.6 | 1.76 | 49.7 | 1.08 | 329 |
| 01Oct97:04:45 | 7.53 | 213.4 | 5.78 | 163.6 | 1.76 | 49.7 | 1.08 | 329 |
| 01Oct97:05:00 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 01Oct97:05:15 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 01Oct97:05:30 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.64 | 196 |
| 01Oct97:05:45 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.64 | 195 |
| 01Oct97:06:00 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:06:15 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:06:30 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:06:45 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:07:00 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:07:15 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:07:30 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:07:45 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:08:00 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:08:15 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:08:30 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 01Oct97:08:45 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 01Oct97:09:00 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 01Oct97:09:15 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 01Oct97:09:30 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 01Oct97:09:45 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 01Oct97:10:00 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 47 |
| 01Oct97:10:15 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.16 | 48 |
| 01Oct97:10:30 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.48 | 145 |
| 01Oct97:10:45 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 92 |
| 01Oct97:11:00 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.13 | 39 |
| 01Oct97:11:15 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.13 | 39 |
| 01Oct97:11:30 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.42 | 127 |
| 01Oct97:11:45 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.25 | 76 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 01Oct97:12:00 | 5.91 | 167.4 | 5.78 | 163.6 | 0.13 | 3.7 | 0.09 | 27 |
| 01Oct97:12:15 | 5.67 | 160.6 | 5.17 | 146.4 | 0.50 | 14.2 | 0.34 | 103 |
| 01Oct97:12:30 | 5.67 | 160.6 | 5.17 | 146.4 | 0.50 | 14.2 | 0.34 | 104 |
| 01Oct97:12:45 | 5.44 | 154.1 | 5.17 | 146.4 | 0.27 | 7.7 | 0.19 | 57 |
| 01Oct97:13:00 | 5.22 | 147.8 | 4.66 | 131.9 | 0.56 | 15.9 | 0.39 | 119 |
| 01Oct97:13:15 | 5.01 | 141.8 | 4.66 | 131.9 | 0.35 | 9.9 | 0.24 | 75 |
| 01Oct97:13:30 | 4.80 | 136.0 | 4.66 | 131.9 | 0.15 | 4.1 | 0.10 | 31 |
| 01Oct97:13:45 | 4.61 | 130.5 | 4.66 | 131.9 | -0.05 | -1.4 | -0.04 | -11 |
| 01Oct97:14:00 | 4.42 | 125.3 | 4.24 | 120.2 | 0.18 | 5.1 | 0.13 | 40 |
| 01Oct97:14:15 | 4.25 | 120.3 | 4.24 | 120.2 | 0.00 | 0.1 | 0.00 | 1 |
| 01Oct97:14:30 | 4.08 | 115.6 | 4.24 | 120.2 | -0.16 | -4.6 | -0.12 | -37 |
| 01Oct97:14:45 | 3.92 | 111.1 | 3.92 | 111.1 | 0.00 | -0.1 | 0.00 | -1 |
| 01Oct97:15:00 | 3.77 | 106.8 | 3.92 | 111.1 | -0.15 | -4.3 | -0.11 | -35 |
| 01Oct97:15:15 | 3.63 | 102.9 | 3.92 | 111.1 | -0.29 | -8.3 | -0.22 | -68 |
| 01Oct97:15:30 | 3.50 | 99.1 | 3.92 | 111.1 | -0.42 | -12.0 | -0.33 | -100 |
| 01Oct97:15:45 | 3.38 | 95.7 | -- | -- | -- | -- | -- | -- |
| 01Oct97:16:00 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 01Oct97:16:15 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 01Oct97:16:30 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 01Oct97:16:45 | 3.07 | 86.8 | -- | -- | -- | -- | -- | -- |
| 01Oct97:17:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 01Oct97:17:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 01Oct97:17:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 01Oct97:17:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 01Oct97:18:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 01Oct97:18:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 01Oct97:18:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 01Oct97:18:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 01Oct97:19:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 01Oct97:19:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 01Oct97:19:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 01Oct97:19:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 01Oct97:20:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 01Oct97:20:15 | 5.91 | 167.4 | -- | -- | -- | -- | -- | -- |
| 01Oct97:20:30 | 6.42 | 181.7 | 4.66 | 131.9 | 1.76 | 49.8 | 1.19 | 363 |
| 01Oct97:20:45 | 6.96 | 197.0 | 5.17 | 146.4 | 1.79 | 50.6 | 1.16 | 353 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 01Oct97:21:00 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.93 | 284 |
| 01Oct97:21:15 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.66 | 201 |
| 01Oct97:21:30 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:21:45 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 01Oct97:22:00 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 01Oct97:22:15 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 01Oct97:22:30 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 01Oct97:22:45 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 01Oct97:23:00 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 01Oct97:23:15 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 01Oct97:23:30 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 47 |
| 01Oct97:23:45 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 199 |
| 02Oct97:00:00 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.66 | 200 |
| 02Oct97:00:15 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.48 | 145 |
| 02Oct97:00:30 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.48 | 145 |
| 02Oct97:00:45 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 91 |
| 02Oct97:01:00 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 92 |
| 02Oct97:01:15 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.75 | 229 |
| 02Oct97:01:30 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.58 | 177 |
| 02Oct97:01:45 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 126 |
| 02Oct97:02:00 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.42 | 127 |
| 02Oct97:02:15 | 6.16 | 174.4 | 5.17 | 146.4 | 0.99 | 28.0 | 0.65 | 199 |
| 02Oct97:02:30 | 6.16 | 174.4 | 5.17 | 146.4 | 0.99 | 28.0 | 0.66 | 200 |
| 02Oct97:02:45 | 5.91 | 167.4 | 5.17 | 146.4 | 0.74 | 21.0 | 0.49 | 150 |
| 02Oct97:03:00 | 5.91 | 167.4 | 5.17 | 146.4 | 0.74 | 21.0 | 0.50 | 151 |
| 02Oct97:03:15 | 5.91 | 167.4 | 5.17 | 146.4 | 0.74 | 21.0 | 0.50 | 151 |
| 02Oct97:03:30 | 5.91 | 167.4 | 5.17 | 146.4 | 0.74 | 21.0 | 0.49 | 150 |
| 02Oct97:03:45 | 6.16 | 174.4 | 5.17 | 146.4 | 0.99 | 28.0 | 0.65 | 199 |
| 02Oct97:04:00 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.82 | 249 |
| 02Oct97:04:15 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.98 | 298 |
| 02Oct97:04:30 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.76 | 230 |
| 02Oct97:04:45 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.75 | 228 |
| 02Oct97:05:00 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.93 | 283 |
| 02Oct97:05:15 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.92 | 282 |
| 02Oct97:05:30 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.48 | 145 |
| 02Oct97:05:45 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.66 | 201 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 02Oct97:06:00 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.66 | 200 |
| 02Oct97:06:15 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 200 |
| 02Oct97:06:30 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 02Oct97:06:45 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 02Oct97:07:00 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 02Oct97:07:15 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 02Oct97:07:30 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 02Oct97:07:45 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 02Oct97:08:00 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 02Oct97:08:15 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 02Oct97:08:30 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 02Oct97:08:45 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 02Oct97:09:00 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 02Oct97:09:15 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 02Oct97:09:30 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 47 |
| 02Oct97:09:45 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 199 |
| 02Oct97:10:00 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 144 |
| 02Oct97:10:15 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.48 | 145 |
| 02Oct97:10:30 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 92 |
| 02Oct97:10:45 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.58 | 178 |
| 02Oct97:11:00 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.42 | 127 |
| 02Oct97:11:15 | 6.16 | 174.4 | 5.17 | 146.4 | 0.99 | 28.0 | 0.65 | 199 |
| 02Oct97:11:30 | 5.91 | 167.4 | 5.17 | 146.4 | 0.74 | 21.0 | 0.49 | 150 |
| 02Oct97:11:45 | 5.67 | 160.6 | 5.17 | 146.4 | 0.50 | 14.2 | 0.34 | 102 |
| 02Oct97:12:00 | 5.67 | 160.6 | 4.66 | 131.9 | 1.01 | 28.7 | 0.69 | 209 |
| 02Oct97:12:15 | 5.44 | 154.1 | 4.66 | 131.9 | 0.78 | 22.1 | 0.53 | 163 |
| 02Oct97:12:30 | 5.22 | 147.8 | 4.66 | 131.9 | 0.56 | 15.9 | 0.39 | 118 |
| 02Oct97:12:45 | 5.01 | 141.8 | 4.66 | 131.9 | 0.35 | 9.9 | 0.24 | 74 |
| 02Oct97:13:00 | 5.01 | 141.8 | 4.66 | 131.9 | 0.35 | 9.9 | 0.24 | 75 |
| 02Oct97:13:15 | 4.80 | 136.0 | 4.24 | 120.2 | 0.56 | 15.9 | 0.40 | 121 |
| 02Oct97:13:30 | 4.61 | 130.5 | 4.24 | 120.2 | 0.37 | 10.4 | 0.26 | 80 |
| 02Oct97:13:45 | 4.42 | 125.3 | 4.24 | 120.2 | 0.18 | 5.1 | 0.13 | 40 |
| 02Oct97:14:00 | 4.25 | 120.3 | 3.92 | 111.1 | 0.32 | 9.1 | 0.24 | 72 |
| 02Oct97:14:15 | 3.92 | 111.1 | 3.92 | 111.1 | 0.00 | -0.1 | 0.00 | -1 |
| 02Oct97:14:30 | 3.77 | 106.8 | 3.92 | 111.1 | -0.15 | -4.3 | -0.11 | -35 |
| 02Oct97:14:45 | 3.63 | 102.9 | 3.92 | 111.1 | -0.29 | -8.3 | -0.22 | -67 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 02Oct97:15:00 | 3.50 | 99.1 | -- | -- | -- | -- | -- | -- |
| 02Oct97:15:15 | 3.50 | 99.1 | -- | -- | -- | -- | -- | -- |
| 02Oct97:15:30 | 3.38 | 95.7 | -- | -- | -- | -- | -- | -- |
| 02Oct97:15:45 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 02Oct97:16:00 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 02Oct97:16:15 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 02Oct97:16:30 | 3.07 | 86.8 | -- | -- | -- | -- | -- | -- |
| 02Oct97:16:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 02Oct97:17:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 02Oct97:17:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 02Oct97:17:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 02Oct97:17:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 02Oct97:18:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 02Oct97:18:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 02Oct97:18:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 02Oct97:18:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 02Oct97:19:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 02Oct97:19:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 02Oct97:19:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 02Oct97:19:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 02Oct97:20:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 02Oct97:20:15 | 4.80 | 136.0 | -- | -- | -- | -- | -- | -- |
| 02Oct97:20:30 | 5.67 | 160.6 | -- | -- | -- | -- | -- | -- |
| 02Oct97:20:45 | 5.91 | 167.4 | 4.24 | 120.2 | 1.67 | 47.2 | 1.12 | 342 |
| 02Oct97:21:00 | 6.42 | 181.7 | 4.24 | 120.2 | 2.17 | 61.5 | 1.43 | 435 |
| 02Oct97:21:15 | 6.68 | 189.2 | 4.66 | 131.9 | 2.02 | 57.3 | 1.31 | 398 |
| 02Oct97:21:30 | 6.96 | 197.0 | 5.17 | 146.4 | 1.79 | 50.6 | 1.14 | 346 |
| 02Oct97:21:45 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.74 | 226 |
| 02Oct97:22:00 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.91 | 279 |
| 02Oct97:22:15 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 143 |
| 02Oct97:22:30 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 198 |
| 02Oct97:22:45 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 142 |
| 02Oct97:23:00 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 02Oct97:23:15 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 02Oct97:23:30 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 02Oct97:23:45 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 03Oct97:00:00 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 03Oct97:00:15 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 03Oct97:00:30 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 03Oct97:00:45 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 03Oct97:01:00 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 03Oct97:01:15 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 03Oct97:01:30 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 142 |
| 03Oct97:01:45 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 142 |
| 03Oct97:02:00 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 142 |
| 03Oct97:02:15 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 142 |
| 03Oct97:02:30 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 142 |
| 03Oct97:02:45 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 142 |
| 03Oct97:03:00 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 03Oct97:03:15 | -- | -- | 6.48 | 183.6 | -- | -- | -- | -- |
| 03Oct97:03:30 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 03Oct97:03:45 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 03Oct97:04:00 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 03Oct97:04:15 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:04:30 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:04:45 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:05:00 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:05:15 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:05:30 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:05:45 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:06:00 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 03Oct97:06:15 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 03Oct97:06:30 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 03Oct97:06:45 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 03Oct97:07:00 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 03Oct97:07:15 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 03Oct97:07:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 03Oct97:07:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 03Oct97:08:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 03Oct97:08:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 03Oct97:08:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 03Oct97:08:45 | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 03Oct97:09:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 03Oct97:09:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 03Oct97:09:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 03Oct97:09:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 03Oct97:10:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 03Oct97:10:15 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 03Oct97:10:30 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 03Oct97:10:45 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 03Oct97:11:00 | -- | -- | 9.18 | 259.9 | -- | -- | -- | -- |
| 03Oct97:11:15 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:11:30 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:11:45 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 46 |
| 03Oct97:12:00 | 7.24 | 205.1 | 7.28 | 206.3 | -0.04 | -1.2 | -0.03 | -8 |
| 03Oct97:12:15 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 03Oct97:12:30 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.13 | 38 |
| 03Oct97:12:45 | 6.42 | 181.7 | 6.48 | 183.6 | -0.07 | -1.9 | -0.04 | -13 |
| 03Oct97:13:00 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.25 | 75 |
| 03Oct97:13:15 | 5.91 | 167.4 | 5.78 | 163.6 | 0.13 | 3.7 | 0.09 | 26 |
| 03Oct97:13:30 | 5.67 | 160.6 | 5.17 | 146.4 | 0.50 | 14.2 | 0.33 | 101 |
| 03Oct97:13:45 | 5.67 | 160.6 | 5.17 | 146.4 | 0.50 | 14.2 | 0.33 | 102 |
| 03Oct97:14:00 | 5.44 | 154.1 | 5.17 | 146.4 | 0.27 | 7.7 | 0.18 | 56 |
| 03Oct97:14:15 | 5.22 | 147.8 | 4.66 | 131.9 | 0.56 | 15.9 | 0.38 | 117 |
| 03Oct97:14:30 | 5.01 | 141.8 | 4.66 | 131.9 | 0.35 | 9.9 | 0.24 | 73 |
| 03Oct97:14:45 | 4.80 | 136.0 | 4.66 | 131.9 | 0.15 | 4.1 | 0.10 | 31 |
| 03Oct97:15:00 | 4.80 | 136.0 | 4.24 | 120.2 | 0.56 | 15.9 | 0.39 | 120 |
| 03Oct97:15:15 | 4.61 | 130.5 | 4.24 | 120.2 | 0.37 | 10.4 | 0.26 | 79 |
| 03Oct97:15:30 | 4.42 | 125.3 | 4.24 | 120.2 | 0.18 | 5.1 | 0.13 | 39 |
| 03Oct97:15:45 | 4.25 | 120.3 | 4.24 | 120.2 | 0.00 | 0.1 | 0.00 | 1 |
| 03Oct97:16:00 | 4.08 | 115.6 | 3.92 | 111.1 | 0.16 | 4.4 | 0.11 | 35 |
| 03Oct97:16:15 | 3.92 | 111.1 | 3.92 | 111.1 | 0.00 | -0.1 | 0.00 | -1 |
| 03Oct97:16:30 | 3.92 | 111.1 | 3.92 | 111.1 | 0.00 | -0.1 | 0.00 | -1 |
| 03Oct97:16:45 | 3.77 | 106.8 | 3.92 | 111.1 | -0.15 | -4.3 | -0.11 | -35 |
| 03Oct97:17:00 | 3.63 | 102.9 | 3.92 | 111.1 | -0.29 | -8.3 | -0.22 | -67 |
| 03Oct97:17:15 | 3.63 | 102.9 | -- | -- | -- | -- | -- | -- |
| 03Oct97:17:30 | 3.50 | 99.1 | -- | -- | -- | -- | -- | -- |
| 03Oct97:17:45 | 3.38 | 95.7 | -- | -- | -- | -- | -- | -- |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 03Oct97:18:00 | 3.38 | 95.7 | -- | -- | -- | -- | -- | -- |
| 03Oct97:18:15 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 03Oct97:18:30 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 03Oct97:18:45 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 03Oct97:19:00 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 03Oct97:19:15 | 4.25 | 120.3 | -- | -- | -- | -- | -- | -- |
| 03Oct97:19:30 | 5.44 | 154.1 | -- | -- | -- | -- | -- | -- |
| 03Oct97:19:45 | 5.91 | 167.4 | 4.24 | 120.2 | 1.67 | 47.2 | 1.13 | 343 |
| 03Oct97:20:00 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.98 | 299 |
| 03Oct97:20:15 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.97 | 295 |
| 03Oct97:20:30 | 7.24 | 205.1 | 5.78 | 163.6 | 1.46 | 41.4 | 0.92 | 281 |
| 03Oct97:20:45 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 198 |
| 03Oct97:21:00 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 03Oct97:21:15 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 03Oct97:21:30 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 03Oct97:21:45 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 03Oct97:22:00 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:22:15 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:22:30 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:22:45 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:23:00 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:23:15 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:23:30 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 03Oct97:23:45 | -- | -- | 8.18 | 231.7 | -- | -- | -- | -- |
| 04Oct97:00:00 | -- | -- | 7.28 | 206.3 | -- | -- | -- | -- |
| 04Oct97:00:15 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 47 |
| 04Oct97:00:30 | 7.24 | 205.1 | 7.28 | 206.3 | -0.04 | -1.2 | -0.03 | -8 |
| 04Oct97:00:45 | 6.96 | 197.0 | 7.28 | 206.3 | -0.33 | -9.3 | -0.20 | -62 |
| 04Oct97:01:00 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 04Oct97:01:15 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 91 |
| 04Oct97:01:30 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.12 | 38 |
| 04Oct97:01:45 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.13 | 38 |
| 04Oct97:02:00 | 6.42 | 181.7 | 6.48 | 183.6 | -0.07 | -1.9 | -0.04 | -13 |
| 04Oct97:02:15 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 04Oct97:02:30 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 04Oct97:02:45 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 04Oct97:03:00 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 04Oct97:03:15 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 04Oct97:03:30 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.57 | 175 |
| 04Oct97:03:45 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 91 |
| 04Oct97:04:00 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 143 |
| 04Oct97:04:15 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 142 |
| 04Oct97:04:30 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 04Oct97:04:45 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 04Oct97:05:00 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.65 | 197 |
| 04Oct97:05:15 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 47 |
| 04Oct97:05:30 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 47 |
| 04Oct97:05:45 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 46 |
| 04Oct97:06:00 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 46 |
| 04Oct97:06:15 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 46 |
| 04Oct97:06:30 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 46 |
| 04Oct97:06:45 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 46 |
| 04Oct97:07:00 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 46 |
| 04Oct97:07:15 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 46 |
| 04Oct97:07:30 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 46 |
| 04Oct97:07:45 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 46 |
| 04Oct97:08:00 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 46 |
| 04Oct97:08:15 | 7.24 | 205.1 | 7.28 | 206.3 | -0.04 | -1.2 | -0.03 | -8 |
| 04Oct97:08:30 | 7.24 | 205.1 | 7.28 | 206.3 | -0.04 | -1.2 | -0.03 | -8 |
| 04Oct97:08:45 | 7.24 | 205.1 | 7.28 | 206.3 | -0.04 | -1.2 | -0.03 | -8 |
| 04Oct97:09:00 | 7.24 | 205.1 | 7.28 | 206.3 | -0.04 | -1.2 | -0.03 | -8 |
| 04Oct97:09:15 | 7.24 | 205.1 | 7.28 | 206.3 | -0.04 | -1.2 | -0.03 | -8 |
| 04Oct97:09:30 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.29 | 89 |
| 04Oct97:09:45 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 04Oct97:10:00 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.12 | 38 |
| 04Oct97:10:15 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.13 | 38 |
| 04Oct97:10:30 | 6.42 | 181.7 | 6.48 | 183.6 | -0.07 | -1.9 | -0.04 | -13 |
| 04Oct97:10:45 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 04Oct97:11:00 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.25 | 75 |
| 04Oct97:11:15 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.25 | 75 |
| 04Oct97:11:30 | 5.91 | 167.4 | 5.78 | 163.6 | 0.13 | 3.7 | 0.09 | 26 |
| 04Oct97:11:45 | 5.67 | 160.6 | 5.17 | 146.4 | 0.50 | 14.2 | 0.33 | 101 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 04Oct97:12:00 | 5.67 | 160.6 | 5.17 | 146.4 | 0.50 | 14.2 | 0.33 | 101 |
| 04Oct97:12:15 | 5.44 | 154.1 | 5.17 | 146.4 | 0.27 | 7.7 | 0.18 | 55 |
| 04Oct97:12:30 | 5.22 | 147.8 | 5.17 | 146.4 | 0.05 | 1.4 | 0.03 | 10 |
| 04Oct97:12:45 | 5.01 | 141.8 | 4.66 | 131.9 | 0.35 | 9.9 | 0.24 | 73 |
| 04Oct97:13:00 | 5.01 | 141.8 | 4.66 | 131.9 | 0.35 | 9.9 | 0.24 | 73 |
| 04Oct97:13:15 | 4.80 | 136.0 | 4.66 | 131.9 | 0.15 | 4.1 | 0.10 | 31 |
| 04Oct97:13:30 | 4.61 | 130.5 | 4.66 | 131.9 | -0.05 | -1.4 | -0.03 | -11 |
| 04Oct97:13:45 | 4.42 | 125.3 | 4.24 | 120.2 | 0.18 | 5.1 | 0.13 | 39 |
| 04Oct97:14:00 | 4.25 | 120.3 | 4.24 | 120.2 | 0.00 | 0.1 | 0.00 | 1 |
| 04Oct97:14:15 | 4.08 | 115.6 | 4.24 | 120.2 | -0.16 | -4.6 | -0.12 | -36 |
| 04Oct97:14:30 | 4.08 | 115.6 | 3.92 | 111.1 | 0.16 | 4.4 | 0.11 | 35 |
| 04Oct97:14:45 | 3.77 | 106.8 | 3.92 | 111.1 | -0.15 | -4.3 | -0.11 | -34 |
| 04Oct97:15:00 | 3.77 | 106.8 | 3.92 | 111.1 | -0.15 | -4.3 | -0.11 | -35 |
| 04Oct97:15:15 | 3.63 | 102.9 | 3.92 | 111.1 | -0.29 | -8.3 | -0.22 | -67 |
| 04Oct97:15:30 | 3.50 | 99.1 | -- | -- | -- | -- | -- | -- |
| 04Oct97:15:45 | 3.38 | 95.7 | -- | -- | -- | -- | -- | -- |
| 04Oct97:16:00 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 04Oct97:16:15 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 04Oct97:16:30 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 04Oct97:16:45 | 3.07 | 86.8 | -- | -- | -- | -- | -- | -- |
| 04Oct97:17:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:17:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:17:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:17:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:18:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:18:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:18:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:18:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:19:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:19:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:19:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:19:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:20:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:20:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:20:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:20:45 | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 04Oct97:21:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:21:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 04Oct97:21:30 | 5.91 | 167.4 | -- | -- | -- | -- | -- | -- |
| 04Oct97:21:45 | 6.42 | 181.7 | 4.66 | 131.9 | 1.76 | 49.8 | 1.18 | 359 |
| 04Oct97:22:00 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.81 | 246 |
| 04Oct97:22:15 | 6.68 | 189.2 | 5.17 | 146.4 | 1.51 | 42.8 | 0.97 | 295 |
| 04Oct97:22:30 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.57 | 175 |
| 04Oct97:22:45 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.74 | 227 |
| 04Oct97:23:00 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.74 | 225 |
| 04Oct97:23:15 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 04Oct97:23:30 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 144 |
| 04Oct97:23:45 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 144 |
| 05Oct97:00:00 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 144 |
| 05Oct97:00:15 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 144 |
| 05Oct97:00:30 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 144 |
| 05Oct97:00:45 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 05Oct97:01:00 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 05Oct97:01:15 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 05Oct97:01:30 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.12 | 38 |
| 05Oct97:01:45 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.57 | 173 |
| 05Oct97:02:00 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.57 | 175 |
| 05Oct97:02:15 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 05Oct97:02:30 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 05Oct97:02:45 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.25 | 75 |
| 05Oct97:03:00 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.25 | 75 |
| 05Oct97:03:15 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.25 | 75 |
| 05Oct97:03:30 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.24 | 74 |
| 05Oct97:03:45 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 05Oct97:04:00 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.57 | 174 |
| 05Oct97:04:15 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.74 | 225 |
| 05Oct97:04:30 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.12 | 38 |
| 05Oct97:04:45 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 05Oct97:05:00 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 05Oct97:05:15 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 05Oct97:05:30 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 05Oct97:05:45 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 05Oct97:06:00 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 05Oct97:06:15 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 05Oct97:06:30 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 05Oct97:06:45 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.12 | 38 |
| 05Oct97:07:00 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 05Oct97:07:15 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.12 | 38 |
| 05Oct97:07:30 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.12 | 38 |
| 05Oct97:07:45 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.29 | 90 |
| 05Oct97:08:00 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 143 |
| 05Oct97:08:15 | 7.24 | 205.1 | 6.48 | 183.6 | 0.76 | 21.5 | 0.47 | 142 |
| 05Oct97:08:30 | 7.53 | 213.4 | 6.48 | 183.6 | 1.05 | 29.8 | 0.64 | 195 |
| 05Oct97:08:45 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 46 |
| 05Oct97:09:00 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 46 |
| 05Oct97:09:15 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 46 |
| 05Oct97:09:30 | 7.53 | 213.4 | 7.28 | 206.3 | 0.25 | 7.1 | 0.15 | 47 |
| 05Oct97:09:45 | 7.24 | 205.1 | 7.28 | 206.3 | -0.04 | -1.2 | -0.03 | -8 |
| 05Oct97:10:00 | 7.24 | 205.1 | 7.28 | 206.3 | -0.04 | -1.2 | -0.03 | -8 |
| 05Oct97:10:15 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.29 | 89 |
| 05Oct97:10:30 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.29 | 90 |
| 05Oct97:10:45 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.12 | 38 |
| 05Oct97:11:00 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.12 | 38 |
| 05Oct97:11:15 | 6.42 | 181.7 | 6.48 | 183.6 | -0.07 | -1.9 | -0.04 | -13 |
| 05Oct97:11:30 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.24 | 74 |
| 05Oct97:11:45 | 5.91 | 167.4 | 5.78 | 163.6 | 0.13 | 3.7 | 0.09 | 26 |
| 05Oct97:12:00 | 5.91 | 167.4 | 5.78 | 163.6 | 0.13 | 3.7 | 0.09 | 26 |
| 05Oct97:12:15 | 5.67 | 160.6 | 5.17 | 146.4 | 0.50 | 14.2 | 0.33 | 101 |
| 05Oct97:12:30 | 5.44 | 154.1 | 5.17 | 146.4 | 0.27 | 7.7 | 0.18 | 55 |
| 05Oct97:12:45 | 5.44 | 154.1 | 5.17 | 146.4 | 0.27 | 7.7 | 0.18 | 55 |
| 05Oct97:13:00 | 5.22 | 147.8 | 4.66 | 131.9 | 0.56 | 15.9 | 0.38 | 116 |
| 05Oct97:13:15 | 5.01 | 141.8 | 4.66 | 131.9 | 0.35 | 9.9 | 0.24 | 73 |
| 05Oct97:13:30 | 4.80 | 136.0 | 4.66 | 131.9 | 0.15 | 4.1 | 0.10 | 31 |
| 05Oct97:13:45 | 4.80 | 136.0 | 4.24 | 120.2 | 0.56 | 15.9 | 0.39 | 119 |
| 05Oct97:14:00 | 4.61 | 130.5 | 4.24 | 120.2 | 0.37 | 10.4 | 0.26 | 78 |
| 05Oct97:14:15 | 4.42 | 125.3 | 4.24 | 120.2 | 0.18 | 5.1 | 0.13 | 39 |
| 05Oct97:14:30 | 4.25 | 120.3 | 4.24 | 120.2 | 0.00 | 0.1 | 0.00 | 1 |
| 05Oct97:14:45 | 4.08 | 115.6 | 4.24 | 120.2 | -0.16 | -4.6 | -0.12 | -36 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | Streamflow at 08317200 at time - 45 minutes (L/s) | Streamflow at 08317207 ($ft^3/s$) | Streamflow at 08317207 (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | Streamflow loss between 08317200 and 08317207 (L/s) | Streamflow-loss rate (ft/day) | Streamflow-loss rate (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 05Oct97:15:00 | 3.92 | 111.1 | 3.92 | 111.1 | 0.00 | -0.1 | 0.00 | -1 |
| 05Oct97:15:15 | 3.77 | 106.8 | 3.92 | 111.1 | -0.15 | -4.3 | -0.11 | -34 |
| 05Oct97:15:30 | 3.63 | 102.9 | 3.92 | 111.1 | -0.29 | -8.3 | -0.22 | -67 |
| 05Oct97:15:45 | 3.50 | 99.1 | 3.92 | 111.1 | -0.42 | -12.0 | -0.32 | -98 |
| 05Oct97:16:00 | 3.38 | 95.7 | -- | -- | -- | -- | -- | -- |
| 05Oct97:16:15 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 05Oct97:16:30 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 05Oct97:16:45 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 05Oct97:17:00 | 3.07 | 86.8 | -- | -- | -- | -- | -- | -- |
| 05Oct97:17:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:17:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:17:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:18:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:18:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:18:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:18:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:19:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:19:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:19:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:19:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:20:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:20:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:20:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:20:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:21:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:21:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:21:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 05Oct97:21:45 | 4.08 | 115.6 | -- | -- | -- | -- | -- | -- |
| 05Oct97:22:00 | 5.44 | 154.1 | -- | -- | -- | -- | -- | -- |
| 05Oct97:22:15 | 5.67 | 160.6 | 4.24 | 120.2 | 1.43 | 40.4 | 0.96 | 294 |
| 05Oct97:22:30 | 5.91 | 167.4 | 4.66 | 131.9 | 1.25 | 35.4 | 0.83 | 253 |
| 05Oct97:22:45 | 6.16 | 174.4 | 4.66 | 131.9 | 1.50 | 42.5 | 0.98 | 298 |
| 05Oct97:23:00 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.80 | 245 |
| 05Oct97:23:15 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.79 | 242 |
| 05Oct97:23:30 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.57 | 175 |
| 05Oct97:23:45 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.57 | 173 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 06Oct97:00:00 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.57 | 173 |
| 06Oct97:00:15 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.57 | 173 |
| 06Oct97:00:30 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.57 | 173 |
| 06Oct97:00:45 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.57 | 173 |
| 06Oct97:01:00 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.57 | 174 |
| 06Oct97:01:15 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.40 | 123 |
| 06Oct97:01:30 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.40 | 123 |
| 06Oct97:01:45 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.24 | 74 |
| 06Oct97:02:00 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.24 | 74 |
| 06Oct97:02:15 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.25 | 75 |
| 06Oct97:02:30 | 5.91 | 167.4 | 5.78 | 163.6 | 0.13 | 3.7 | 0.09 | 26 |
| 06Oct97:02:45 | 5.91 | 167.4 | 5.17 | 146.4 | 0.74 | 21.0 | 0.48 | 147 |
| 06Oct97:03:00 | 5.91 | 167.4 | 5.17 | 146.4 | 0.74 | 21.0 | 0.48 | 147 |
| 06Oct97:03:15 | 5.67 | 160.6 | 5.17 | 146.4 | 0.50 | 14.2 | 0.33 | 100 |
| 06Oct97:03:30 | 5.91 | 167.4 | 5.17 | 146.4 | 0.74 | 21.0 | 0.48 | 147 |
| 06Oct97:03:45 | 5.91 | 167.4 | 5.17 | 146.4 | 0.74 | 21.0 | 0.48 | 147 |
| 06Oct97:04:00 | 6.16 | 174.4 | 5.17 | 146.4 | 0.99 | 28.0 | 0.64 | 194 |
| 06Oct97:04:15 | 6.42 | 181.7 | 5.17 | 146.4 | 1.25 | 35.3 | 0.80 | 244 |
| 06Oct97:04:30 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 06Oct97:04:45 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 06Oct97:05:00 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 06Oct97:05:15 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 06Oct97:05:30 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 06Oct97:05:45 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 06Oct97:06:00 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.40 | 123 |
| 06Oct97:06:15 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.40 | 123 |
| 06Oct97:06:30 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.40 | 123 |
| 06Oct97:06:45 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 06Oct97:07:00 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.24 | 74 |
| 06Oct97:07:15 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.24 | 74 |
| 06Oct97:07:30 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.24 | 74 |
| 06Oct97:07:45 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.24 | 74 |
| 06Oct97:08:00 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.24 | 74 |
| 06Oct97:08:15 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.40 | 123 |
| 06Oct97:08:30 | 6.68 | 189.2 | 5.78 | 163.6 | 0.90 | 25.6 | 0.57 | 173 |
| 06Oct97:08:45 | 6.96 | 197.0 | 5.78 | 163.6 | 1.18 | 33.4 | 0.74 | 224 |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Continued

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 06Oct97:09:00 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 06Oct97:09:15 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 06Oct97:09:30 | 6.96 | 197.0 | 6.48 | 183.6 | 0.47 | 13.4 | 0.30 | 90 |
| 06Oct97:09:45 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.12 | 38 |
| 06Oct97:10:00 | 6.68 | 189.2 | 6.48 | 183.6 | 0.20 | 5.6 | 0.12 | 38 |
| 06Oct97:10:15 | 6.42 | 181.7 | 6.48 | 183.6 | -0.07 | -1.9 | -0.04 | -13 |
| 06Oct97:10:30 | 6.42 | 181.7 | 6.48 | 183.6 | -0.07 | -1.9 | -0.04 | -13 |
| 06Oct97:10:45 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.24 | 74 |
| 06Oct97:11:00 | 5.91 | 167.4 | 5.78 | 163.6 | 0.13 | 3.7 | 0.08 | 26 |
| 06Oct97:11:15 | 5.91 | 167.4 | 5.78 | 163.6 | 0.13 | 3.7 | 0.09 | 26 |
| 06Oct97:11:30 | 5.67 | 160.6 | 5.17 | 146.4 | 0.50 | 14.2 | 0.33 | 100 |
| 06Oct97:11:45 | 5.44 | 154.1 | 5.17 | 146.4 | 0.27 | 7.7 | 0.18 | 55 |
| 06Oct97:12:00 | 5.22 | 147.8 | 5.17 | 146.4 | 0.05 | 1.4 | 0.03 | 10 |
| 06Oct97:12:15 | 5.22 | 147.8 | 4.66 | 131.9 | 0.56 | 15.9 | 0.38 | 115 |
| 06Oct97:12:30 | 5.01 | 141.8 | 4.66 | 131.9 | 0.35 | 9.9 | 0.24 | 72 |
| 06Oct97:12:45 | 4.80 | 136.0 | 4.66 | 131.9 | 0.15 | 4.1 | 0.10 | 30 |
| 06Oct97:13:00 | 4.61 | 130.5 | 4.66 | 131.9 | -0.05 | -1.4 | -0.03 | -10 |
| 06Oct97:13:15 | 4.42 | 125.3 | 4.24 | 120.2 | 0.18 | 5.1 | 0.13 | 39 |
| 06Oct97:13:30 | 4.25 | 120.3 | 4.24 | 120.2 | 0.00 | 0.1 | 0.00 | 1 |
| 06Oct97:13:45 | 4.08 | 115.6 | 4.24 | 120.2 | -0.16 | -4.6 | -0.12 | -36 |
| 06Oct97:14:00 | 3.92 | 111.1 | 4.24 | 120.2 | -0.32 | -9.1 | -0.23 | -71 |
| 06Oct97:14:15 | 3.77 | 106.8 | 3.92 | 111.1 | -0.15 | -4.3 | -0.11 | -34 |
| 06Oct97:14:30 | 3.63 | 102.9 | 3.92 | 111.1 | -0.29 | -8.3 | -0.22 | -66 |
| 06Oct97:14:45 | 3.50 | 99.1 | 3.92 | 111.1 | -0.42 | -12.0 | -0.32 | -97 |
| 06Oct97:15:00 | 3.38 | 95.7 | -- | -- | -- | -- | -- | -- |
| 06Oct97:15:15 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 06Oct97:15:30 | 3.27 | 92.5 | -- | -- | -- | -- | -- | -- |
| 06Oct97:15:45 | 3.16 | 89.5 | -- | -- | -- | -- | -- | -- |
| 06Oct97:16:00 | 3.07 | 86.8 | -- | -- | -- | -- | -- | -- |
| 06Oct97:16:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:16:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:16:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:17:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:17:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:17:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:17:45 | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 5.** Streamflow, streamflow-loss, and streamflow-loss-rate data for the Santa Fe River study reach near La Bajada, New Mexico, June 26-28 and September 27-October 6, 1997--Concluded

| Date and time | Streamflow at 08317200 at time - 45 minutes ($ft^3/s$) | (L/s) | Streamflow at 08317207 ($ft^3/s$) | (L/s) | Streamflow loss between 08317200 and 08317207 ($ft^3/s$) | (L/s) | Streamflow-loss rate (ft/day) | (mm/day) |
|---|---|---|---|---|---|---|---|---|
| 06Oct97:18:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:18:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:18:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:18:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:19:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:19:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:19:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:19:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:20:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:20:15 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:20:30 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:20:45 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:21:00 | -- | -- | -- | -- | -- | -- | -- | -- |
| 06Oct97:21:15 | 3.50 | 99.1 | -- | -- | -- | -- | -- | -- |
| 06Oct97:21:30 | 4.80 | 136.0 | -- | -- | -- | -- | -- | -- |
| 06Oct97:21:45 | 5.22 | 147.8 | 3.92 | 111.1 | 1.29 | 36.7 | 0.90 | 275 |
| 06Oct97:22:00 | 5.67 | 160.6 | 4.24 | 120.2 | 1.43 | 40.4 | 0.96 | 293 |
| 06Oct97:22:15 | 5.91 | 167.4 | 4.66 | 131.9 | 1.25 | 35.4 | 0.83 | 252 |
| 06Oct97:22:30 | 6.16 | 174.4 | 5.17 | 146.4 | 0.99 | 28.0 | 0.64 | 196 |
| 06Oct97:22:45 | 6.16 | 174.4 | 5.17 | 146.4 | 0.99 | 28.0 | 0.64 | 194 |
| 06Oct97:23:00 | 6.16 | 174.4 | 5.17 | 146.4 | 0.99 | 28.0 | 0.64 | 194 |
| 06Oct97:23:15 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 06Oct97:23:30 | 6.42 | 181.7 | 5.78 | 163.6 | 0.64 | 18.0 | 0.41 | 124 |
| 06Oct97:23:45 | 6.16 | 174.4 | 5.78 | 163.6 | 0.38 | 10.8 | 0.24 | 74 |

**Table 6.** Stream surface-area measurements for the Santa Fe River study reach near La Bajada, New Mexico, June 26-27, 1997

| Date | Measurement start time | Measurement finish time | Stream surface area, in square meters |
|---|---|---|---|
| 26June97 | 9:53 | 11:11 | 13,876 |
| 26June97 | 12:00 | 12:39 | 13,477 |
| 26June97 | 13:58 | 14:38 | 12,288 |
| 26June97 | 16:03 | 16:34 | 11,831 |
| 26June97 | 17:31 | 18:21 | 11,179 |
| 27June97 | 8:38 | 9:57 | 14,968 |

**Table 7.** Pan evaporation rates at Cochiti Dam, New Mexico, June 26-28 and September 27-October 6, 1997, and estimated stream evaporation rates

(U.S. Department of Commerce, 1997, p. 30-31. mm, millimeter)

| Date | Daily Cochiti Dam pan evaporation, in inches (mm) | Estimated stream evaporation rate, in inches (mm) |
|---|---|---|
| 26June97 | 0.43 (11) | 0.30 (7.6) |
| 27June97 | .25 (6.4) | .18 (4.4) |
| 28June97 | .35 (8.9) | .24 (6.2) |
| 27Sept97 | .33 (8.4) | .23 (5.9) |
| 28Sept97 | .24 (6.1) | .17 (4.3) |
| 29Sept97 | .30 (7.6) | .21 (5.3) |
| 30Sept97 | .20 (5.1) | .14 (3.6) |
| 01Oct97 | .20 (5.1) | .14 (3.6) |
| 02Oct97 | .20 (5.1) | .14 (3.6) |
| 03Oct97 | .27 (6.9) | .19 (4.8) |
| 04Oct97 | .36 (9.1) | .25 (6.4) |
| 05Oct97 | .25 (6.4) | .18 (4.4) |
| 06Oct97 | .19 (4.8) | .13 (3.4) |

**Table 8.** Daily mean streamflow-loss and infiltration rates, estimated stream evaporation, and percentages of streamflow loss due to evaporation and infiltration

[mm/d, millimeters per day]

| Date | Number of observations | Daily mean streamflow loss between 08317200 and 08317207 (mm/d) | Daily mean infiltration between 08317200 and 08317207 (mm/d) | Estimated stream evaporation (mm/d) | Percentage of streamflow loss due to evaporation | Percentage of streamflow loss due to infiltration |
|---|---|---|---|---|---|---|
| 26June97 | 45 | 275 | 267 | 7.6 | 2.7 | 97.3 |
| 27June97 | 58 | 234 | 230 | 4.4 | 1.9 | 98.1 |
| 28June97 | 63 | 98 | 92 | 6.2 | 6.3 | 93.7 |
| 27Sept97 | 66 | 241 | 235 | 5.9 | 2.4 | 97.6 |
| 28Sept97 | 64 | 260 | 256 | 4.3 | 1.7 | 98.3 |
| 29Sept97 | 58 | 242 | 237 | 5.3 | 2.2 | 97.8 |
| 30Sept97 | 34 | 218 | 214 | 3.6 | 1.7 | 98.3 |
| 01Oct97 | 46 | 136 | 132 | 3.6 | 2.6 | 97.4 |
| 02Oct97 | 61 | 170 | 166 | 3.6 | 2.1 | 97.9 |
| 03Oct97 | 40 | 114 | 109 | 4.8 | 4.2 | 95.8 |
| 04Oct97 | 70 | 75 | 69 | 6.4 | 8.5 | 91.5 |
| 05Oct97 | 71 | 89 | 85 | 4.4 | 4.9 | 95.1 |
| 06Oct97 | 69 | 100 | 97 | 3.4 | 3.4 | 96.6 |

**Table 9.** Streambed percolation rates at sites TCN2, TCN3, and TCN4

| Site | Percolation rate (millimeters per day) |
|---|---|
| TCN2 | |
| 0.41-meter match | 109 |
| 0.66-meter match | 66 |
| TCN3 | |
| 0.38-meter match | 76 |
| 0.63-meter match | 62 |
| TCN4 | |
| 0.51-meter match | 40 |
| 0.77-meter match | 51 |



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# BOOK RATE

C.L. Thomas, A.E. Stewart, and J. Constantz--DETERMINATION OF INFILTRATION AND PERCOLATION RATES ALONG A REACH OF THE SANTA FE RIVER NEAR LA BAJADA, NEW MEXICO--U.S. Geological Survey Water-Resources Investigations Report 00-4141