

# **Water Resources Data Colorado Water Year 2003**

Volume 2. Colorado River Basin

By R.M. Crowfoot, R.W. Boulger, and G.B. O'Neill

Water-Data Report CO-03-2

Prepared in cooperation with the State of Colorado  
and with other agencies

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## PREFACE

Volume 2 of the annual hydrologic data report of Colorado is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each state, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Colorado are contained in two volumes:

Volume 1. Missouri River, Arkansas River, and Rio Grande  
basins in Colorado,

Volume 2. Colorado River basin.

Volume 2 is the culmination of a concerted effort by dedicated personnel of the U. S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

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13. ABSTRACT <i>(Maximum 200 words)</i> Water-resources data for Colorado for the 2003 water year consist of records of stage, discharge, and water quality of streams; stage, contents, and water-quality of lakes and reservoirs; meteorological data; and water levels and water quality of wells and springs. This report (Volumes 1 and 2) contains discharge records for 329 gaging stations, stage and contents of 19 lakes and reservoirs, discharge measurements for 1 partial-record low-flow station and 1 miscellaneous site, peak flow information for 23 crest-stage partial-record stations; water-quality for 128 gaging stations and for 8 lakes and reservoirs, supplemental water-quality for 182 gaged sites; water-quality for 61 miscellaneous sites and 15 observation wells; water levels for 3 observation wells, and meteorological data for 62 sites. Three pertinent stations operated by bordering states also are included in this report. The records were collected and computed by the Water Resources Discipline of the U.S. Geological Survey under the direction of W.F. Horak, District Chief. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies.
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VII

NOTE.--Data for partial-record stations and miscellaneous sites for both surface-water  
discharge and quality are published in separate sections of the data report.

(Letter after station name designates type and frequency of published data.

**Daily tables:** (D) discharge, (C) specific conductance, (S) sediment, (T) temperature, (E) elevation or contents,  
(O) dissolved oxygen, (P) pH, (R) precipitation, (TU) turbidity.

**Periodic tables:** (c) chemical, (b) biological, (e) elevation or contents, (m) microbiological, (s) sediment, (t) temperature.)

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McElmo Creek:		
Mud Creek at Highway 32 near Cortez (DctCT) .....	09371492	443
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# CALENDAR FOR WATER YEAR 2003

2002

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OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5						1	2	1	2	3	4	5	6	7
6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14
13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21
20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28
27	28	29	30	31			24	25	26	27	28	29	30	29	30	31				

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2003

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JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4						1								1
5	6	7	8	9	10	11	2	3	4	5	6	7	8	2	3	4	5	6	7	8
12	13	14	15	16	17	18	9	10	11	12	13	14	15	9	10	11	12	13	14	15
19	20	21	22	23	24	25	16	17	18	19	20	21	22	16	17	18	19	20	21	22
26	27	28	29	30	31		23	24	25	26	27	28		23	24	25	26	27	28	29
														30	31					

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4	5				1	2	3	1	2	3	4	5	6	7
6	7	8	9	10	11	12	4	5	6	7	8	9	10	8	9	10	11	12	13	14
13	14	15	16	17	18	19	11	12	13	14	15	16	17	15	16	17	18	19	20	21
20	21	22	23	24	25	26	18	19	20	21	22	23	24	22	23	24	25	26	27	28
27	28	29	30				25	26	27	28	29	30	31	29	30					

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4	5					1	2		1	2	3	4	5	6
6	7	8	9	10	11	12	3	4	5	6	7	8	9	7	8	9	10	11	12	13
13	14	15	16	17	18	19	10	11	12	13	14	15	16	14	15	16	17	18	19	20
20	21	22	23	24	25	26	17	18	19	20	21	22	23	21	22	23	24	25	26	27
27	28	29	30	31			24	25	26	27	28	29	30	28	29	30				

31

# Conversion Factors

Multiply	By	To obtain
<b>Length</b>		
inch (in.)	$2.54 \times 10^1$	millimeter (mm)
	$2.54 \times 10^{-2}$	meter
foot (ft)	$3.048 \times 10^{-1}$	meter (m)
mile (mi)	$1.609 \times 10^0$	kilometer (km)
<b>Area</b>		
acre	$4.047 \times 10^3$	square meter (m <sup>2</sup> )
	$4.047 \times 10^{-1}$	square hectometer (hm <sup>2</sup> )
	$4.047 \times 10^{-3}$	square kilometer (km <sup>2</sup> )
square mile (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometer (km <sup>2</sup> )
<b>Volume</b>		
gallon (gal)	$3.785 \times 10^0$	liter (L)
	$3.785 \times 10^{-3}$	cubic meter (m <sup>3</sup> )
	$3.785 \times 10^0$	cubic decimeter (dm <sup>3</sup> )
million gallons (Mgal)	$3.785 \times 10^3$	cubic meter (m <sup>3</sup> )
	$3.785 \times 10^{-3}$	cubic hectometer (hm <sup>3</sup> )
cubic foot (ft <sup>3</sup> )	$2.832 \times 10^{-2}$	cubic meter (m <sup>3</sup> )
	$2.832 \times 10^1$	cubic decimeter (dm <sup>3</sup> )
cubic-foot-per-second-per-day [(ft <sup>3</sup> /s/d)]	$2.447 \times 10^3$	cubic meter (m <sup>3</sup> )
	$2.447 \times 10^{-3}$	cubic hectometer (hm <sup>3</sup> )
acre-foot (acre-ft)	$1.223 \times 10^3$	cubic meter (m <sup>3</sup> )
	$1.223 \times 10^{-3}$	cubic hectometer (hm <sup>3</sup> )
	$1.223 \times 10^{-6}$	cubic kilometer (km <sup>3</sup> )
<b>Flow rate</b>		
cubic foot per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liter (L/s)
	$2.832 \times 10^{-2}$	cubic meter per second (m <sup>3</sup> /s)
	$2.832 \times 10^1$	cubic decimeter per second (dm <sup>3</sup> /s)
gallon per minute (gal/min)	$6.309 \times 10^{-2}$	liter per second (L/s)
	$6.309 \times 10^{-5}$	cubic meter per second (m <sup>3</sup> /s)
	$6.309 \times 10^{-2}$	cubic decimeter per second (dm <sup>3</sup> /s)
million gallons per day (Mgal/d)	$4.381 \times 10^{-2}$	cubic meter per second
	$4.381 \times 10^1$	cubic decimeter per second (dm <sup>3</sup> /s)
<b>Mass</b>		
ton, short (2,000 lb)	$9.072 \times 10^{-1}$	megagram (Mg) or metric ton

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

$$^{\circ}\text{F} = (1.8 \times ^{\circ}\text{C}) + 32$$

**VOLUME 2: COLORADO RIVER BASIN**

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By R.M. Crowfoot, R.W. Boulger, and G.B. O'Neill

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**INTRODUCTION**

The Water-Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of Colorado each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the Geological Survey, the data are published annually in the report series entitled "Water Resources Data - Colorado".

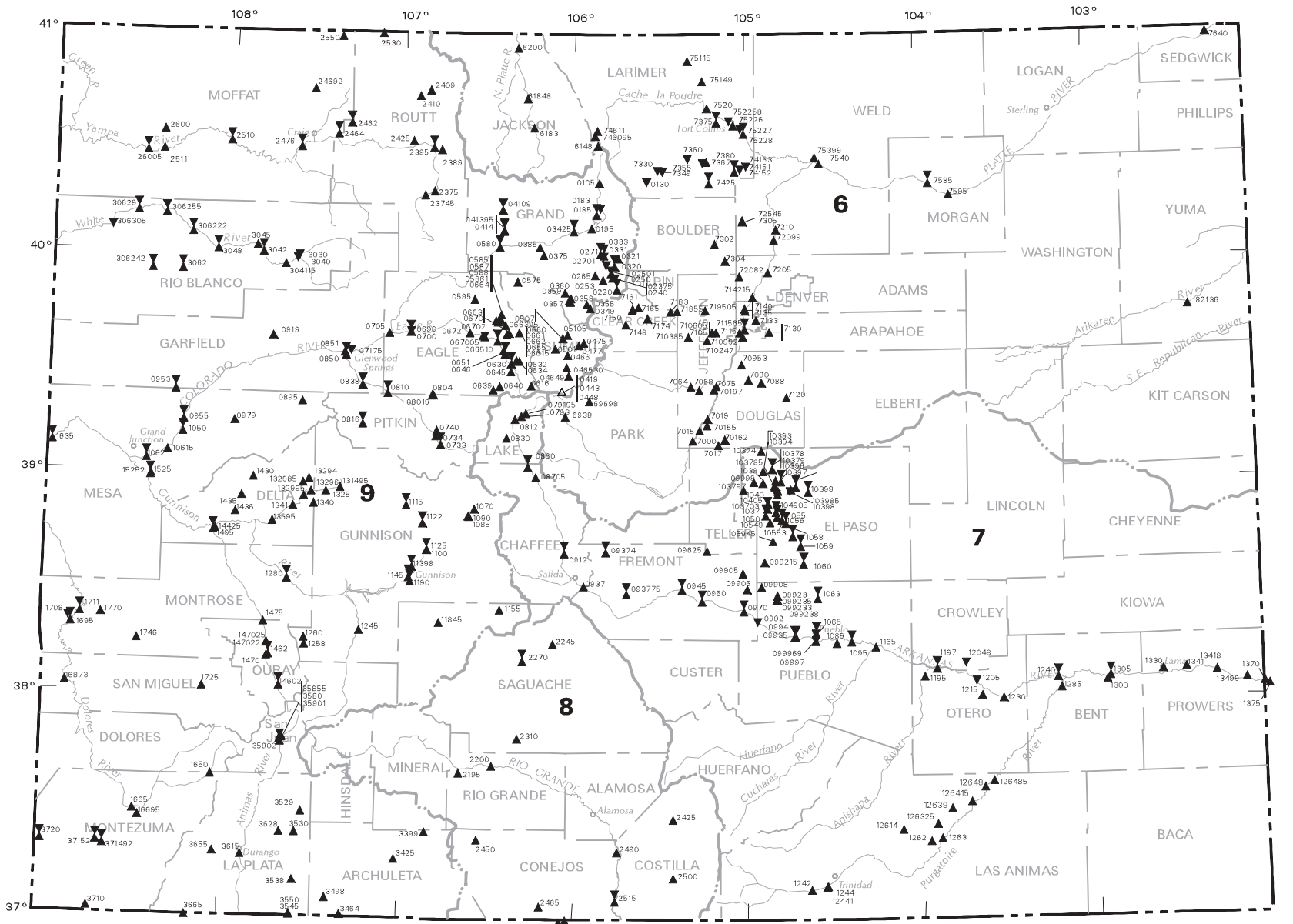
This report (Volume 2 of two volumes) includes records on both surface and ground water in the State, west of the Continental Divide. Specifically, it contains: (1) discharge records for 167 surface-water stations, and peak discharge data for 1 partial-record surface-water station and discharge-measurement data for 1 low-flow partial-record site; (2) stage and contents for 11 lakes and reservoirs; (3) surface-water-quality data for 73 surface-water stations, 4 reservoirs, 44 miscellaneous sites, and miscellaneous surface-water-quality data for 109 gaged sites; and (4) ground-water level records for 2 sites, and meteorological data for 10 sites. Locations of lake and surface-water-gaging stations and surface-water-quality stations are shown in figure 1, locations of crest-stage partial-record stations are shown in figure 2. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Colorado.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Colorado were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-water Supply of the United States," Parts 6B, 7, 8, and 9. For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States." Data on ground-water levels for the 1935 through 1955 water years were published annually under the title "Water Levels and Artesian Pressures in Observation Wells in the United States." For the 1956 through 1974 water years the data were published in four 5-year reports under the title "Ground-Water Levels in the United States." Water-supply papers may be purchased from the U.S. Geological Survey, Books and Open-File Reports, Federal Center, Building 810, Box 25425, Denver, CO 80225.

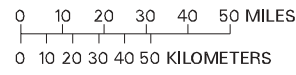
For water years 1961 through 1970, streamflow data were released by the Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1970 were similarly released either in separate reports or in conjunction with streamflow records.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report CO-03-2." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale, in paper copy or in micro-fiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District office at the address given on the back of the title page or by telephone (303) 236-4882.

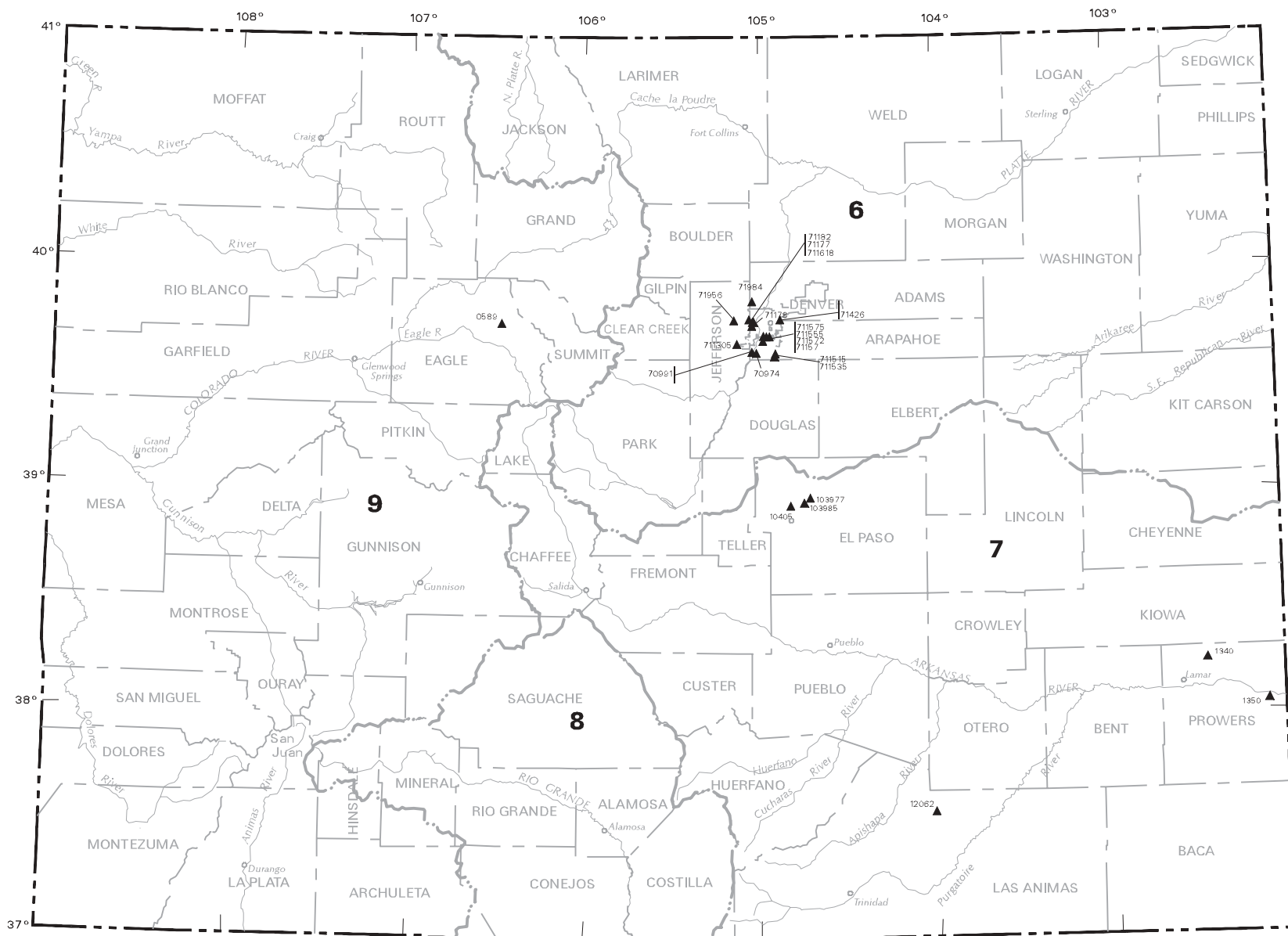


Base from U.S. Geological Survey  
 1:100,000 Digital Line Graphs  
 Lambert projection  
 Standard Parallels 33° and 45°, central meridian -105° 30"

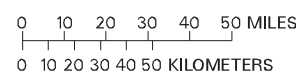


- ▲ STREAMFLOW OR RESERVOIR STATION
- ▼ WATER-QUALITY STATION
- △ TRANSMOUNTAIN DIVERSION

Figure 1.--Map showing locations of lake and surface-water stations and surface-water-quality stations in Colorado.



Base from U.S. Geological Survey  
 1:100,000 Digital Line Graphs  
 Lambert projection  
 Standard Parallels 33° and 45°, central meridian -105° 30"



▲ PARTIAL RECORD STATION

Figure 2.--Map showing locations of crest-stage partial-record stations in Colorado.



## COOPERATION

The U.S. Geological Survey and organizations in the State of Colorado have had cooperative agreements for the systematic collection of surface-water records since 1895 and for water-quality records since 1941. Organizations that supported data-collection activities through cooperative agreements with the Survey during the 2003 water year are:

Arapahoe County Water and Wastewater Authority.	Fountain Valley Authority.
Arkansas River Compact Administration.	Gilpin County.
Centennial Water and Sanitation District.	Grand County.
Cherokee Metropolitan District.	Jefferson County Board of County Commissioners.
City and County of Denver, Board of Water Commissioners.	Lower Fountain Water-Quality Management Association.
City of Aurora.	Meeker Sanitation District.
City of Black Hawk.	Metro Wastewater Reclamation District.
City of Boulder.	Mount Crested Butte Water and Sanitation District.
City of Brush.	North Front Range Water Quality Planning Association.
City and County of Broomfield.	Northern Colorado Water Conservancy District.
City of Colorado Springs.	Northwest Colorado Council of Governments.
City of Craig.	Park County.
City of Englewood.	Plum Creek Wastewater Authority.
City of Fort Collins.	Pueblo Board of Water Works.
City of Fort Morgan.	Pueblo County.
City of Glendale.	Pueblo West Metropolitan District.
City of Golden.	Rio Blanco County Board of County Commissioners.
City of Gunnison.	Rio Grande Water Conservation District.
City of Idaho Springs.	Southeastern Colorado Water Conservancy District.
City of Lakewood.	Southern Ute Indian Tribe.
City of Longmont.	Southwestern Colorado Water Conservation District.
City of Louisville.	St. Charles Mesa Water District.
City of Loveland.	Teller - Park Soil Conservation District.
City of Pueblo.	Town of Basalt.
City of Steamboat Springs	Town of Breckenridge.
City of Westminster.	Town of Colbran.
Clear Creek Board of County Commissioners.	Town of Crested Butte.
Colorado Department of Public Health and Environment.	Town of Eagle.
Colorado Division of Parks and Outdoor Recreation.	Town of Georgetown.
Colorado Division of Water Resources.	Town of Gypsum.
Colorado Division of Wildlife.	Town of Hotchkiss.
Colorado River Water Conservation District.	Town of Meeker.
Colorado Springs Utilities.	Town of Paonia.
Colorado Water Conservation Board.	Town of Rangely.
Crested Butte South Metropolitan District.	Trinchera Water Conservancy District.
Custer County.	Upper Arkansas River Water Conservancy District.
Delta County Board of County Commissioners.	Upper Eagle Regional Water Authority.
Dolores Water Conservancy District.	Upper Gunnison River Water Conservancy District.
Douglas County.	Upper Yampa Water Conservancy District.
Eagle County Board of Commissioners.	Urban Drainage and Flood Control District.
Eagle River Water and Sanitation District.	Western State College of Colorado.
East Grand County Water-Quality Board.	Wyoming State Engineer.
El Paso County.	Yellowjacket Water Conservancy District.
Evergreen Metropolitan District.	

Financial assistance was also provided by the U.S. Air Force Academy; U.S. Army, Corps of Engineers; U.S. Army; Bureau of Land Management; Bureau of Reclamation; National Park Service; U.S. Fish and Wildlife Service; and U.S. Forest Service. Organizations that supplied data are acknowledged in station descriptions.

## SPECIAL NETWORKS AND PROGRAMS

**Hydrologic Benchmark Network** is a network of 61 sites in small drainage basins in 39 States that was established in 1963 to provide consistent streamflow data representative of undeveloped watersheds nationwide, and from which data could be analyzed on a continuing basis for use in comparison and contrast with conditions observed in basins more obviously affected by human activities. At selected sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program may be accessed from <http://water.usgs.gov/hbn/>.

**National Stream-Quality Accounting Network (NASQAN)** is a network of sites used to monitor the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande River basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia Rivers so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment (NAWQA) Program; (3) to characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program may be accessed from <http://water.usgs.gov/nasqan/>.

**The National Atmospheric Deposition Program/National Trends Network (NADP/NTN)** is a network of monitoring sites that provide continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from this network of 250 precipitation-chemistry monitoring sites. The USGS supports 74 of these 250 sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as data from the individual sites, may be accessed from <http://bqs.usgs.gov/acidrain/>.

**The USGS National Water-Quality Assessment (NAWQA) Program** is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; to provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and to provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 42 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents is measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for water-resources managers to use in making decisions and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key Federal, State, and local water-resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program may be accessed from <http://water.usgs.gov/nawqa/>.

**The USGS National Streamflow Information Program (NSIP)** is a long-term program with goals to provide framework streamflow data across the Nation. Included in the program are creation of a permanent Federally funded streamflow network, research on the nature of streamflow, regional assessments of streamflow data and databases, and upgrades in the streamflow information delivery systems. Additional information about NSIP may be accessed from <http://water.usgs.gov/nsip/>.

## EXPLANATION OF THE RECORDS

**The surface-water, ground-water, and precipitation records published in this report are for the 2003 water year that began on October 1, 2002, and ended September 30, 2003.** A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, ground-water level data, water-quality data for surface and ground water, and precipitation data. The locations of the stations where the surface-water data were collected are shown in figures 1 and 2. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

### Station Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and, in Colorado, for surface-water stations where only infrequent measurements are made.

### Downstream Order System

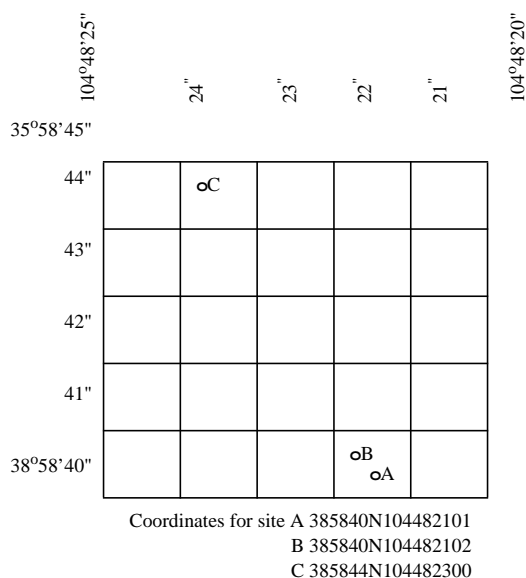
Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with

respect to the stream to which it is immediately tributary is indicated by an indentation in the "List of Stations" in the front of this report. Each indentation represents one rank. This downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 06614800, which appears just to the left of the station name, includes the two-digit Part number "06" plus the six-digit downstream-order number "614800." The Part number designates the major river basin; for example, Part "06" is the Missouri River basin.

### Latitude-Longitude System

The identification numbers for wells, springs, and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote the degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number, and may have no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure below).



### System for numbering wells, springs, and miscellaneous sites.

The local well number locates a well within a 10-acre tract using the U.S. Bureau of Land Management system of land subdivision. The components of the local well number proceed from the largest to the smallest land subdivisions. This is in contrast to the legal description, which proceeds from the smallest to the largest land subdivision. The largest subdivision is the survey. Colorado is governed by three surveys: The Sixth Principal Meridian Survey (S), the New Mexico Survey (N), and the Ute Survey (U). Costilla County was not included in any of the above official surveys. This report follows the convention of the Costilla County Assessor in which the northern part of the county is governed by the Sixth Principal Meridian Survey and the southern part of the county is governed by a local system called the Costilla Survey (C). The first letter of the well location designates the survey.

A survey is subdivided into four quadrants formed by the intersection of the baseline and the principal meridian. The second letter of the well location designates the quadrant: A indicates the northeast quadrant, B the northwest, C the southwest, and D the southeast. A quadrant is subdivided in the north-south direction every 6 mi by townships and is divided in the east-west direction every 6 mi by ranges. The first number of the well location designates the township and the second number designates the range.

The 36-mi<sup>2</sup> area described by the township and range designation is subdivided into 1-mi<sup>2</sup> areas called sections. The sections are numbered sequentially. The third number of the well location designates the section. The section, which contains 640 acres, is subdivided into quarter sections. The 160-acre area is designated by the first letter following the section: A indicates the northeast quarter, B the northwest, C the southwest, and D the southeast. The quarter section is subdivided into quarter-quarter sections. The 40-acre area is designated in the same manner by the second letter following the section. The 10-acre area is designated in the same manner by the third letter following the section. If more than one well is located within the 10-acre tract, the wells are numbered sequentially in the order in which they were originally inventoried. If this number is necessary, it will follow the three-letter designation.

### Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any

time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles. Records of miscellaneous discharge measurements or of measurements from special studies may be considered as partial records, but they are presented separately in this report. Location of all complete-record stations for which data are given in this report are shown in figure 1.

### Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges. The data obtained at a complete-record gaging station on a lake or reservoir consist of a record of stage and of notations regarding factors that may affect the relationship between stage and lake content. These data are used with stage-area and stage-capacity curves or tables to compute water-surface areas and lake storage.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage, with digital recorders that punch stage values on paper tapes at selected time intervals, with electronic recorders that store stage values on computer chips at selected time intervals, or with satellite data-collection platforms that transmit near real-time data at selected time intervals to office computers. Measurements of discharge are made with current meters using methods adapted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves, or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

For some gaging stations there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections. "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

### Data Presentation

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1992 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of four parts, the manuscript or station description and the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flow as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration.

#### Station manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

**LOCATION.**--Information on locations is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

**DRAINAGE AREA.**--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

**PERIOD OF RECORD.**--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that flow at it can reasonably be considered equivalent with records from the present station.

**REVISED RECORDS.**--Because of new information, published records occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

**GAGE.**--The type of gage in current use, the datum of the current gage referred to sea level (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

**REMARKS.**--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a REMARKS paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

**COOPERATION.**--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

**REVISIONS.**--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District office (address given on the back of the title page of this report) to determine if the published records were ever revised after the station was discontinued. Of course, if the data for a discontinued station were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, AND EXTREMES FOR CURRENT YEAR have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the EXTREMES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentations of lake contents.

### Data table of daily mean values

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the average flow in cubic feet per second during the month; and the lines headed "MAX" and "MIN" give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN"), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

If applicable, data collected at partial-record stations follow the information for continuous-record sites. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

### Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period will be expressed as "FOR WATER YEARS \_\_\_\_\_ - \_\_\_\_\_, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

## Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS \_\_\_\_\_-\_\_\_\_\_", will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (see line headings below), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

**ANNUAL TOTAL.**--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

**ANNUAL MEAN.**--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

**HIGHEST ANNUAL MEAN.**--The maximum annual mean discharge occurring for the designated period.

**LOWEST ANNUAL MEAN.**--The minimum annual mean discharge occurring for the designated period.

**HIGHEST DAILY MEAN.**--The maximum daily mean discharge for the year or for the designated period.

**LOWEST DAILY MEAN.**--The minimum daily mean discharge for the year or for the designated period.

**ANNUAL 7-DAY MINIMUM.**--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

**MAXIMUM PEAK FLOW.**-- The maximum instantaneous peak discharge occurring for the water year or designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

**MAXIMUM PEAK STAGE.**-- The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

**INSTANTANEOUS LOW FLOW.**--The minimum instantaneous discharge occurring for the water year or for the designated period.

**ANNUAL RUNOFF.**--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

Acre-foot (AC-FT) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile area drained, assuming the runoff is distributed uniformly in time and area.

Inches (INCHES) indicates the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

**10 PERCENT EXCEEDS.**--The discharge that has been exceeded 10 percent of the time for the designated period.

**50 PERCENT EXCEEDS.**--The discharge that has been exceeded 50 percent of the time for the designated period.

**90 PERCENT EXCEEDS.**--The discharge that has been exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

### Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of estimated record in the REMARKS paragraph of the station description.

### Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true value; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned, are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for daily values less than 1 ft<sup>3</sup>/s; to the nearest tenth between 1.0 and 10 ft<sup>3</sup>/s; to whole numbers between 10 and 1,000 ft<sup>3</sup>/s; and to 3 significant figures for more than 1,000 ft<sup>3</sup>/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

### Other Records Available

The National Water Data Exchange (NAWDEX), U.S. Geological Survey, Reston, VA 22092, maintains an index of records of discharge collected by other agencies but not published by the Geological Survey. Information on records at specific sites can be obtained from that office upon request.

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables are on file in the Colorado District office. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the District office.

### Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

In March 1989 the National Water-Quality Laboratory discovered a bias in the turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1989.

On October 1, 1995, the Colorado District adopted a new sampling and quality-assurance protocol for sampling of surface waters (Horowitz and others, 1994). This protocol was adopted as standard operating procedure for the collection and processing of all trace-element, major-ion, nutrient, and radiochemical species in filtered, surface-water samples.

### Accuracy of the Records

One of four accuracy classifications is applied for measured physical properties at continuous-record stations on a scale ranging from poor to excellent. The accuracy rating is based on data values recorded before any shifts or corrections are made, as described by Wagner and others (2000). Additional consideration also is given to the amount of publishable record and to the amount of data that have been corrected or shifted.

Rating continuous water-quality records

[≤, less than or equal to; ±, plus or minus value shown; °C, degree Celsius; >, greater than; %, percent; mg/L, milligram per liter; pH unit, standard pH unit]

Measured physical property	Ratings			
	Excellent	Good	Fair	Poor
Water temperature	≤ ± 0.2 °C	> ± 0.2 to 0.5 °C	> ± 0.5 to 0.8 °C	> ± 0.8 °C
Specific conductance	≤ ± 3%	> ± 3 to 10%	> ± 10 to 15%	> ± 15%
Dissolved oxygen	≤ ± 0.3 mg/L	> ± 0.3 to 0.5 mg/L	> ± 0.5 to 0.8 mg/L	> ± 0.8 mg/L
pH	≤ ± 0.2 unit	> ± 0.2 to 0.5 unit	> ± 0.5 to 0.8 unit	> ± 0.8 unit
Turbidity	≤ ± 5%	> ± 5 to 10%	> ± 10 to 15%	> ± 15%

### Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched or recorded at short intervals on a paper tape, magnetic tape, computer chip, or some other medium. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 1.

### Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the "Supplemental Water-Quality Data For Gaging Stations" Section.

### Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4; Book 9, Chap. A1-A9. All of these references are listed on pages 30 and 31 of this report. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey District office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals, depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the U.S.G.S. District Office whose address is given on the back of the title page of this report.

### Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are recorded to the nearest 0.1 degree Celsius. Water temperatures measured at the time of water-discharge measurements are published in this report as supplemental water-quality for gaging stations.

### Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.



At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

### Miscellaneous Water-Quality Data

Miscellaneous water-quality data refers to measurements of water temperature and specific conductance that are made in streams concurrently with discharge measurements. Miscellaneous water-quality measurements typically are made at an individual point in a stream cross section. If the stream is well mixed and its chemistry is relatively uniform, a single point measurement may be sufficient to represent the stream cross section. Point measurements of water temperature and specific conductance in streams that are not well mixed may not be representative of the cross section.

### Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally, most other samples are analyzed in the Geological Survey laboratories in Lakewood, CO. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratories are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Historical and current-year dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If ultraclean techniques were used, then those concentrations are reported in nanograms per liter. If other than ultraclean techniques were used, then those concentrations are reported in micrograms per liter and could reflect contamination introduced during some phase of the procedure.

### Water-Quality Data Reporting Convention

The USGS National Water Quality Laboratory collects quality-control data on a continuing basis to evaluate selected analytical methods to determine long-term method detection levels (LT-MDL's) and laboratory reporting levels (LRL's). These values are re-evaluated each year on the basis of the most recent quality-control data and, consequently, may change from year to year.

This reporting procedure limits the occurrence of false positive error. The chance of falsely reporting a concentration greater than the LT-MDL for a sample in which the analyte is present is 1 percent or less. Application of the LRL limits the occurrence of false negative error. The chance of falsely reporting a non-detection for a sample in which the analyte is present at a concentration equal to or greater than the LRL is 1 percent or less.

Accordingly, concentrations are reported as <LRL for samples in which the analyte was either not detected or did not pass identification. Analytes that are detected at concentrations between the LT-MDL and LRL and that pass identification criteria are estimated. Estimated concentrations will be noted with a remark code of "E". These data should be used with the understanding that their uncertainty is greater than that of data reported without the "E" remark code.

### Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made in the U.S. Geological Survey's distributed data system, NWIS, and subsequently to its web-based National data system, NWISWeb [<http://water.usgs.gov/nwis/nwis>]. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure the most recent updates. Updates to NWISWeb are currently made on an annual basis.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

### Remark Codes

The following remark codes may appear with the water-quality data in this report:

#### PRINTED OUTPUT REMARK

E	Estimated laboratory analysis value
e	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Based on non-ideal colony count
M	Presence of material verified but not quantified
V	Analyte was detected in both the environmental sample and the associated blanks

### Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that for most sampling sites they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes only slowly; therefore, for most general purposes one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

#### Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality statewide. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals listed at the end of the introductory text. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

#### Data Presentation

The records of ground-water quality are published in a section titled QUALITY OF GROUND WATER immediately following the ground-water-level records. Data for quality of ground water are listed alphabetically by County, and are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water. The REMARK codes listed for surface-water-quality records are also applicable to ground-water-quality records.

### ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the World Wide Web (WWW). These data may be accessed at :

<a href="http://waterdata.usgs.gov/nwis">http://waterdata.usgs.gov/nwis</a>	National water data page
<a href="http://co.water.usgs.gov">http://co.water.usgs.gov</a>	Colorado home page

Water-quality, ground-water, and meteorological data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3.5 inch floppy diskette. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices (See address on the back of the title page).

## DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units. Other glossaries that also define water-related terms are accessible from <http://water.usgs.gov/glossaries.html>.

**Acid neutralizing capacity (ANC)** is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an "unfiltered" sample (formerly reported as alkalinity).

**Acre-foot (AC-FT, acre-ft)** is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also "Annual runoff")

**Adenosine triphosphate (ATP)** is an organic, phosphate-rich compound important in the transfer of energy in organisms. Its central role in living cells makes ATP an excellent indicator of the presence of living material in water. A measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter.

**Adjusted discharge** is discharge data that have been mathematically adjusted (for example, to remove the effects of a daily tide cycle or reservoir storage).

**Algal growth potential (AGP)** is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample. (See also "Biomass" and "Dry weight")

**Alkalinity** is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a "filtered" sample.

**Annual runoff** is the total quantity of water that is discharged ("runs off") from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

**Annual 7-day minimum** is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day, 10-year low-flow statistic.)

**Aroclor** is the registered trademark for a group of poly-chlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

**Artificial substrate** is a device that purposely is placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is collected. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection. (See also "Substrate")

**Ash mass** is the mass or amount of residue present after the residue from a dry-mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter ( $\text{g}/\text{m}^3$ ), and periphyton and benthic organisms in grams per square meter ( $\text{g}/\text{m}^2$ ). (See also "Biomass" and "Dry mass")

**Aspect** is the direction toward which a slope faces with respect to the compass.

**Bacteria** are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, whereas others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

**Bankfull stage**, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

**Base discharge** (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peak flows per year will be published. (See also "Peak flow")

**Base flow** is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

**Bed material** is the sediment mixture of which a stream-bed, lake, pond, reservoir, or estuary bottom is composed. (See also "Bedload" and "Sediment")

**Bedload** is material in transport that primarily is supported by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to the top of the bedload sampler nozzle (an elevation ranging from 0.25 to 0.5 foot). These particles are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

**Bedload discharge** (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload," "Dry weight," "Sediment," and "Suspended-sediment discharge")

**Benthic organisms** are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

**Biochemical oxygen demand (BOD)** is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

**Biomass** is the amount of living matter present at any given time, expressed as mass per unit area or volume of habitat.

**Biomass pigment ratio** is an indicator of the total proportion of periphyton that are autotrophic (plants). This also is called the Autotrophic Index.

**Blue-green algae** (*Cyanophyta*) are a group of phytoplankton and periphyton organisms with a blue pigment in addition to a green pigment called chlorophyll. Blue-green algae can cause nuisance water-quality conditions in lakes and slow-flowing rivers; however, they are found commonly in streams throughout the year. The abundance of blue-green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ( $\mu\text{m}^3/\text{mL}$ ). The abundance of blue-green algae in periphyton samples is given in cells per square centimeter (cells/cm<sup>2</sup>) or biovolume per square centimeter ( $\mu\text{m}^3/\text{cm}^2$ ). (See also "Phytoplankton" and "Periphyton")

**Bottom material** (See "Bed material")

**Bulk electrical conductivity** is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved-solids content of the pore water, and the lithology and porosity of the rock.

**Canadian Geodetic Vertical Datum 1928** is a geodetic datum derived from a general adjustment of Canada's first order level network in 1928.

**Cell volume** (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are used frequently in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume ( $\mu\text{m}^3$ ) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } 4/3 \pi r^3 \quad \text{cone } 1/3 \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi ( $\pi$ ) is the ratio of the circumference to the diameter of a circle;  $\pi = 3.14159\dots$

From cell volume, total algal biomass expressed as biovolume ( $\mu\text{m}^3/\text{mL}$ ) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

**Cells/volume** refers to the number of cells of any organism that is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample volume, and generally are reported as cells or units per milliliter (mL) or liter (L).

**Cfs-day** (See "Cubic foot per second-day")

**Channel bars**, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

**Chemical oxygen demand** (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes. [See also "Biochemical oxygen demand (BOD)"]

**Clostridium perfringens** (*C. perfringens*) is a spore-forming bacterium that is common in the feces of human and other warmblooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and the presence of microorganisms that are resistant to disinfection and environmental stresses. (See also "Bacteria")

**Coliphages** are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

**Color unit** is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

**Confined aquifer** is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

**Contents** is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

**Continuous-record station** is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

**Control** designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

**Control structure**, as used in this report, is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

**Cubic foot per second** (CFS, ft<sup>3</sup>/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term "second-foot" sometimes is used synonymously with "cubic foot per second" but is now obsolete.

**Cubic foot per second-day** (CFS-DAY, Cfs-day, [(ft<sup>3</sup>/s)/d]) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables numerically are equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

**Cubic foot per second per square mile** [CFSM, (ft<sup>3</sup>/s)/mi<sup>2</sup>] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also "Annual runoff")

**Daily mean suspended-sediment concentration** is the time-weighted mean concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also "Sediment" and "Suspended-sediment concentration")

**Daily record station** is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to data collection on a daily or near-daily basis.

**Data collection platform (DCP)** is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

**Data logger** is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data usually are downloaded from onsite data loggers for entry into office data systems.

**Datum** is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or Universal Transverse Mercator (UTM) coordinates. (See also "Gage datum," "Land-surface datum," "National Geodetic Vertical Datum of 1929," and "North American Vertical Datum of 1988")

**Diatoms (*Bacillariophyta*)** are unicellular or colonial algae with a siliceous cell wall. The abundance of diatoms in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ( $\mu\text{m}^3/\text{mL}$ ). The abundance of diatoms in periphyton samples is given in cells per square centimeter (cells/cm<sup>2</sup>) or biovolume per square centimeter ( $\mu\text{m}^3/\text{cm}^2$ ). (See also "Phytoplankton" and "Periphyton")

**Diel** is of or pertaining to a 24-hour period of time; a regular daily cycle.

**Discharge, or flow,** is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, and so forth, within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

**Dissolved** refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of "dissolved" constituent concentrations are made on sample water that has been filtered.

**Dissolved oxygen (DO)** is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

**Dissolved solids concentration** in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L CaCO<sub>3</sub>) can be converted to carbonate concentration by multiplying by 0.60.

**Diversity index (H)** (Shannon index) is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = - \sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n},$$

where  $n_i$  is the number of individuals per taxon,  $n$  is the total number of individuals, and  $s$  is the total number of taxa in the sample of the community. Index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

**Drainage area** of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

**Drainage basin** is a part of the Earth's surface that contains a drainage system with a common outlet for its surface runoff. (See "Drainage area")

**Dry mass** refers to the mass of residue present after drying in an oven at 105 °C, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass. (See also "Ash mass," "Biomass," and "Wet mass")

**Dry weight** refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also "Wet weight")

**Embeddedness** is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also "Substrate embeddedness class")

**Enterococcus bacteria** commonly are found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus faecalis*, *Streptococcus faecium*, *Streptococcus avium*, and their variants. (See also "Bacteria")

**EPT Index** is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that generally are considered pollution sensitive; the index usually decreases with pollution.

**Escherichia coli (*E. coli*)** are bacteria present in the intestine and feces of warmblooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

**Estimated (E) value** of a concentration is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an E code will be reported with the value. If the analyte is identified qualitatively as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an E code even though the measured value is greater than the MDL. A value reported with an E code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<). For bacteriological data, concentrations are reported as estimated when results are based on non-ideal colony counts.

**Euglenoids** (*Euglenophyta*) are a group of algae that usually are free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also "Phytoplankton")

**Extractable organic halides** (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

**Fecal coliform bacteria** are present in the intestines or feces of warmblooded animals. They often are used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 °C plus or minus 0.2 °C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

**Fecal streptococcal bacteria** are present in the intestines of warmblooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

**Fire algae** (*Pyrrhophyta*) are free-swimming unicells characterized by a red pigment spot. (See also "Phytoplankton")

**Flow-duration percentiles** are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

**Gage datum** is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum is not an actual physical object, the datum is usually defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

**Gage height** (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term "stage," although gage height is more appropriate when used in reference to a reading on a gage.

**Gage values** are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

**Gaging station** is a site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained.

**Gas chromatography/flame ionization detector** (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

**Geomorphic channel units**, as used in this report, are fluvial geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

**Green algae** (*Chlorophyta*) are unicellular or colonial algae with chlorophyll pigments similar to those in terrestrial green plants. Some forms of green algae produce mats or floating "moss" in lakes. The abundance of green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ( $\mu\text{m}^3/\text{mL}$ ). The abundance of green algae in periphyton samples is given in cells per square centimeter (cells/cm<sup>2</sup>) or biovolume per square centimeter ( $\mu\text{m}^3/\text{cm}^2$ ). (See also "Phytoplankton" and "Periphyton")

**Habitat**, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat typically are made over a wider geographic scale than are measurements of species distribution.

**Habitat quality index** is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

**Hardness** of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate (CaCO<sub>3</sub>).

**High tide** is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA Web site: <http://www.co-ops.nos.noaa.gov/tideglos.html>

**Hilsenhoff's Biotic Index** (HBI) is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = \frac{\sum(n)(a)}{N}$$

where  $n$  is the number of individuals of each taxon,  $a$  is the tolerance value of each taxon, and  $N$  is the total number of organisms in the sample.

**Horizontal datum** (See "Datum")

**Hydrologic index stations** referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

**Hydrologic unit** is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the USGS. Each hydrologic unit is identified by an 8-digit number.

**Inch** (IN., in.), in reference to streamflow, as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were distributed uniformly on it. (See also "Annual runoff")

**Instantaneous discharge** is the discharge at a particular instant of time. (See also "Discharge")

**International Boundary Commission Survey Datum** refers to a geodetic datum established at numerous monuments along the United States-Canada boundary by the International Boundary Commission.

**Island**, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year, on average, and remains stable except during large flood events.

**Laboratory reporting level (LRL)** generally is equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a "less than" (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current quality-control data and, therefore, may change. The LRL replaces the term 'non-detection value' (NDV).

**Land-surface datum (lsd)** is a datum plane that is approximately at land surface at each ground-water observation well.

**Latent heat flux** (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-sectional area per unit time. Usually expressed in watts per square meter.

**Light-attenuation coefficient**, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:

$$I = I_0 e^{-\lambda L},$$

where  $I_0$  is the source light intensity,  $I$  is the light intensity at length  $L$  (in meters) from the source,  $\lambda$  is the light-attenuation coefficient, and  $e$  is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_0}.$$

**Lipid** is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

**Long-term method detection level (LT-MDL)** is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike-sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

**Low tide** is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. See NOAA Web site: <http://www.co-ops.nos.noaa.gov/tideglos.html>

**Macrophytes** are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

**Mean concentration of suspended sediment** (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also "Daily mean suspended-sediment concentration" and "Suspended-sediment concentration")

**Mean discharge (MEAN)** is the arithmetic mean of individual daily mean discharges during a specific period. (See also "Discharge")

**Mean high or low tide** is the average of all high or low tides, respectively, over a specific period.

**Mean sea level** is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")

**Measuring point (MP)** is an arbitrary permanent reference point from which the distance to water surface in a well is measured to obtain water level.

**Megahertz** is a unit of frequency. One megahertz equals one million cycles per second.

**Membrane filter** is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

**Metamorphic stage** refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

**Method detection limit (MDL)** is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

**Method of Cubatures** is a method of computing discharge in tidal estuaries based on the conservation of mass equation.

- Methylene blue active substances (MBAS)** indicate the presence of detergents (anionic surfactants). The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.
- Micrograms per gram (UG/G,  $\mu\text{g/g}$ )** is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.
- Micrograms per kilogram (UG/KG,  $\mu\text{g/kg}$ )** is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.
- Micrograms per liter (UG/L,  $\mu\text{g/L}$ )** is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.
- Microsiemens per centimeter (US/CM,  $\mu\text{S/cm}$ )** is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.
- Milligrams per liter (MG/L,  $\text{mg/L}$ )** is a unit for expressing the concentration of chemical constituents in water as the mass (milligrams) of constituent per unit volume (liter) of water. Concentration of suspended sediment also is expressed in milligrams per liter and is based on the mass of dry sediment per liter of water-sediment mixture.
- Minimum reporting level (MRL)** is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.
- Miscellaneous site**, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.
- Most probable number (MPN)** is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.
- Multiple-plate samplers** are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.
- Nanograms per liter (NG/L,  $\text{ng/L}$ )** is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.
- National Geodetic Vertical Datum of 1929 (NGVD 29)** is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It formerly was called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations, it does not necessarily represent local mean sea level at any particular place. See NOAA Web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88> (See "North American Vertical Datum of 1988")
- Natural substrate** refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")
- Nekton** are the consumers in the aquatic environment and consist of large, free-swimming organisms that are capable of sustained, directed mobility.
- Nephelometric turbidity unit (NTU)** is the measurement for reporting turbidity that is based on use of a standard suspension of formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.
- North American Datum of 1927 (NAD 27)** is the horizontal control datum for the United States that was defined by a location and azimuth on the Clarke spheroid of 1866.
- North American Datum of 1983 (NAD 83)** is the horizontal control datum for the United States, Canada, Mexico, and Central America that is based on the adjustment of 250,000 points including 600 satellite Doppler stations that constrain the system to a geocentric origin. NAD 83 has been officially adopted as the legal horizontal datum for the United States by the Federal government.
- North American Vertical Datum of 1988 (NAVD 88)** is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian, Mexican, and United States first-order terrestrial leveling networks.
- Open or screened interval** is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.
- Organic carbon (OC)** is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).
- Organic mass or volatile mass** of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")
- Organism count/area** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter ( $\text{m}^2$ ), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.
- Organism count/volume** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.
- Organochlorine compounds** are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.
- Parameter code** is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.



**Partial-record station** is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

**Particle size** is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method uses the principle of Stokes Law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, sedigraph) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

**Particle-size classification**, as used in this report, agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	>0.00024 - 0.004	Sedimentation
Silt	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation/sieve
Gravel	>2.0 - 64.0	Sieve
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. For the sedimentation method, most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

**Peak flow (peak stage)** is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

**Percent composition or percent of total** is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, mass, or volume.

**Percent shading** is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

**Periodic-record station** is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

**Periphyton** is the assemblage of microorganisms attached to and living upon submerged solid surfaces. Although primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

**Pesticides** are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

**pH** of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7.0 standard units are termed "acidic," and solutions with a pH greater than 7.0 are termed "basic." Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

**Phytoplankton** is the plant part of the plankton. They usually are microscopic, and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and commonly are known as algae. (See also "Plankton")

**Picocurie** (PC, pCi) is one-trillionth ( $1 \times 10^{-12}$ ) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields  $3.7 \times 10^{10}$  radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 2.22 dpm (disintegrations per minute).

**Plankton** is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample.

**Polychlorinated biphenyls** (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

**Polychlorinated naphthalenes** (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

**Pool**, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

**Primary productivity** is a measure of the rate at which new organic matter is formed and accumulated through photo-synthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated (carbon method) by the plants.

**Primary productivity (carbon method)** is expressed as milligrams of carbon per area per unit time [ $\text{mg C}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg C}/(\text{m}^3/\text{time})$ ] for phytoplankton. The carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light- and dark-bottle method and is preferred for use with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

**Primary productivity (oxygen method)** is expressed as milligrams of oxygen per area per unit time [ $\text{mg O}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg O}/(\text{m}^3/\text{time})$ ] for phytoplankton. The oxygen method defines production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light- and dark-bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

**Radioisotopes** are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

**Reach**, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

**Recoverable from bed (bottom) material** is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. (See also "Bed material")

**Recurrence interval**, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or nonexceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ( $7Q_{10}$ ) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the  $7Q_{10}$  occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the  $7Q_{10}$ .

**Replicate samples** are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

**Return period** (See "Recurrence interval")

**Riffle**, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

**River mileage** is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

**Run**, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

**Runoff** is the quantity of water that is discharged ("runs off") from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also "Annual runoff")

**Sea level**, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums.

**Sediment** is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as "fluvial sediment." Sediment includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

**Sensible heat flux** (often used interchangeably with latent sensible heat-flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

**Seven-day, 10-year low flow ( $7Q_{10}$ )** is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the  $7Q_{10}$  is 10 years; the chance that the annual 7-day minimum flow will be less than the  $7Q_{10}$  is 10 percent in any given year. (See also "Annual 7-day minimum" and "Recurrence interval")

**Shelves**, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

**Sodium adsorption ratio (SAR)** is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

**Soil heat flux** (often used interchangeably with soil heat-flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

**Soil-water content** is the water lost from the soil upon drying to constant mass at 105 °C; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

**Specific electrical conductance (conductivity)** is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to

75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

**Stable isotope ratio** (per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

**Stage** (See "Gage height")

**Stage-discharge relation** is the relation between the water-surface elevation, termed stage (gage height), and the volume of water flowing in a channel per unit time.

**Streamflow** is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

**Substrate** is the physical surface upon which an organism lives.

**Substrate embeddedness class** is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2 mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0	no gravel or larger substrate	3	26-50 percent
1	> 75 percent	4	5-25 percent
2	51-75 percent	5	< 5 percent

**Surface area of a lake** is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

**Surficial bed material** is the upper surface (0.1 to 0.2 foot) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

**Surrogate** is an analyte that behaves similarly to a target analyte, but that is highly unlikely to occur in a sample. A surrogate is added to a sample in known amounts before extraction and is measured with the same laboratory procedures used to measure the target analyte. Its purpose is to monitor method performance for an individual sample.

**Suspended** (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is defined operationally as the material retained on a 0.45-micrometer filter.

**Suspended, recoverable** is the amount of a given constituent that is in solution after the part of a representative suspended water-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment, and, thus, the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of "suspended, recoverable" constituents are made either by directly analyzing the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also "Suspended")

**Suspended sediment** is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also "Sediment")

**Suspended-sediment concentration** is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also "Sediment" and "Suspended sediment")

**Suspended-sediment discharge** (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft<sup>3</sup>/s) x 0.0027. (See also "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

**Suspended-sediment load** is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also "Sediment")

**Suspended solids, total residue at 105 °C concentration** is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

**Suspended, total** is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total." Determinations of "suspended, total" constituents are made either by directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also "Suspended")

**Synoptic studies** are short-term investigations of specific water-quality conditions during selected seasonal or hydro-logic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

**Taxa (Species) richness** is the number of species (taxa) present in a defined area or sampling unit.

**Taxonomy** is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

Kingdom:	Animal
Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	<i>Hexagenia</i>
Species:	<i>Hexagenia limbata</i>

**Thalweg** is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

**Thermograph** is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table descriptions and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

**Time-weighted average** is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water resulting from the mixing of flow proportionally to the duration of the concentration.

**Tons per acre-foot** (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

**Tons per day** (T/DAY, tons/d) is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric ton per day.

**Total** is the amount of a given constituent in a representative whole-water (unfiltered) sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined at least 95 percent of the constituent in the sample.)

**Total coliform bacteria** are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warmblooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters of sample. (See also "Bacteria")

**Total discharge** is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

**Total in bottom material** is the amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

**Total length** (fish) is the straight-line distance from the anterior point of a fish specimen's snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

**Total load** refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

**Total organism count** is the number of organisms collected and enumerated in any particular sample. (See also "Organism count/volume")

**Total recoverable** is the amount of a given constituent in a whole-water sample after a sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

**Total sediment discharge** is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also "Bedload," "Bedload discharge," "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

**Total sediment load** or **total load** is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also "Sediment," "Suspended-sediment load," and "Total load")

**Transect**, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

**Turbidity** is the reduction in the transparency of a solution because of the presence of suspended and some dissolved substances. The measurement technique records the collective optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by sus-

pended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to USEPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values.

**Ultraviolet (UV) absorbance (absorption)** at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of path length of UV light through a sample.

**Unconfined aquifer** is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See “Water-table aquifer”)

**Vertical datum** (See “Datum”)

**Volatile organic compounds (VOCs)** are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and, subsequently, analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They often are components of fuels, solvents, hydraulic fluids, paint thinners, and dry-cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human-health concern because many are toxic and are known or suspected human carcinogens.

**Water table** is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

**Water-table aquifer** is an unconfined aquifer within which the water table is found.

**Water year** in USGS reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 2002, is called the “2002 water year.”

**Watershed** (See “Drainage basin”)

**WDR** is used as an abbreviation for “Water-Data Report” in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports. (WRD was used as an abbreviation for “Water-Resources Data” in reports published prior to 1976.)

**Weighted average** is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

**Wet mass** is the mass of living matter plus contained water. (See also “Biomass” and “Dry mass”)

**Wet weight** refers to the weight of animal tissue or other substance including its contained water. (See also “Dry weight”)

**WSP** is used as an acronym for “Water-Supply Paper” in reference to previously published reports.

**Zooplankton** is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and often are large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers. (See also “Plankton”)

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## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Colorado have been discontinued or converted to partial-record stations. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. [--, data unavailable]

Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Lady Creek near Grand Lake, CO	09010100	0.08	1969-75
Jimmy Creek near Grand Lake, CO	09010400	0.08	1969-75
Onahu Creek near Grand Lake, CO	09010600	8.84	1969
Colorado River near Grand Lake, CO	09011000	102	1904-18, 1933-86
Little Columbine Creek above Shadow Mountain Lake at Grand Lake, CO	09011500	1.65	1950-55
Tonahutu Creek near Grand Lake, CO	09012400	16.0	1969
Harbison Ditch near Grand Lake, CO	09012410	--	1969
Tonahutu Creek below Harbison Ditch near Grand Lake, CO	09012420	--	1969
North Inlet at Grand Lake, CO	09012500	45.9	1905-09, 1910-12, 1947-55
East Inlet near Grand Lake, CO	09013500	27.2	1947-55
Grand Lake Outlet at Grand Lake, CO	09014000	76.3	1904-09, 1910-13
Shadow Mountain Lake near Grand Lake, CO	09014500	185	1947-98
Colorado River below Shadow Mountain Reservoir, CO	09015000	190	1947-59
Columbine Creek above Lake Granby near Grand Lake, CO	09015500	7.38	1950-55
Roaring Fork above Lake Granby, CO	09016000	5.95	1951-55
Arapahoe Creek at Monarch Lake Outlet, CO	09016500	46.9	1944-71
Arapahoe Creek below Monarch Lake, CO	09017000	56.9	1934-44
Stillwater Creek above Lake Granby, CO	09018000	17.5	1950-55
Colorado River below Lake Granby, CO	09019000	312	1950-82
Willow Creek near Granby, CO	09020000	109	1934-53
Willow Creek above Willow Creek Reservoir, CO	09020500	127	1953-60
Willow Creek Reservoir near Granby, CO	09020700	134	1953-98
Willow Creek below Willow Creek Reservoir, CO	09021000	134	1953-82
Moffat Water Tunnel at East Portal, CO	09022500	--	1935-82
Fraser River above Winter Park, CO	09023500	22.4	1907-09, 1934-37
Elk Creek near Fraser, CO	09025400	7.15	1970-96
Ranch Creek Ditch near Fraser, CO	09031900	--	1948-67
Ranch Creek near Tabernash, CO	09032500	51.3	1934-60
Meadow Creek near Tabernash, CO	09033000	8.03	1935-56
Strawberry Creek near Granby, CO	09033500	11.6	1935-45
Fraser River at Granby, CO	09034000	297	1904-09, 1937-55
Colorado River at Hot Sulphur Springs, CO	09034500	825	1904-94
Little Muddy Creek near Parshall, CO	09034800	6.52	1953-65
South Fork Williams Fork at Upper Station near Ptarmigan Pass, CO	09035820	2.78	1984-87
South Fork Williams Fork near Ptarmigan Pass, CO	09035830	4.01	1984-88
South Fork Williams Fork above Tributary near Ptarmigan Pass, CO	09035840	5.53	1984-87
South Fork Williams Fork Tributary near Ptarmigan Pass, CO	09035845	0.60	1984-88
South Fork Williams Fork above Short Creek near Ptarmigan Pass, CO	09035850	6.53	1984-87
South Fork Williams Fork below Short Creek near Ptarmigan Pass, CO	09035870	20.0	1984-87
South Fork Williams Fork below Old Baldy Mountain near Leal, CO	09035880	21.8	1985-88
Keyser Creek near Leal, CO	09036500	13.8	1942-52
Williams Fork near Scholl, CO	09037000	141	1910-17
Skylark Creek near Parshall, CO	09037200	2.42	1958-65
Williams Fork Reservoir near Parshall, CO	09038000	230	1939-98
Troublesome Creek near Pearmont, CO	09039000	44.6	1953-93
Troublesome Creek at Atmore Ranch near Troublesome, CO	09039500	48.8	1937-43
East Fork Troublesome Creek near Troublesome, CO	09040000	76.0	1937-43, 1953-83
Troublesome Creek near Troublesome, CO	09040500	168	1904-05, 1921-22, 1937-56



## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS—Continued

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Colorado have been discontinued or converted to partial-record stations. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. [--, data unavailable]

Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Muddy Creek near Kremmling, CO	09041000	87.4	1937-43, 1955-71, 1993-99
Antelope Creek near Kremmling, CO	09041100	11.5	1955-68
Red Dirt Creek near Kremmling, CO	09041200	19.0	1955-74
Pass Creek near Kremmling, CO	09041300	17.8	1957-70
Muddy Creek at Kremmling, CO	09041500	290	1904-05, 1982-95
Monte Cristo Creek near Hoosier Pass, CO	09043000	5.66	1953-58
Hoosier Creek near Hoosier Pass, CO	09044000	1.15	1953-58
Bemrose Creek near Hoosier Pass, CO	09044500	1.95	1953-58
McCullough Gulch near Breckenridge, CO	09045000	4.79	1953-58
Spruce Creek near Breckenridge, CO	09045500	5.23	1953-58
Blue River at Dillon, CO	09047000	128	1910-61
Snake River at Dillon, CO	09048000	90.9	1910-19, 1929-64
West Tenmile Creek at Copper Mountain, CO	09049200	21.0	1973-79
Tenmile Creek at Frisco, CO	09050000	81.0	1942-50
Tenmile Creek at Dillon, CO	09050500	111	1910-19, 1929-61
Dillon Reservoir	09050600	335	1963-98
Straight Creek near Dillon, CO	09051000	12.9	1943-52
Willow Creek near Dillon, CO	09051500	13.4	1942-51
Rock Creek near Dillon, CO	09052000	15.8	1942-56, 1966-94
Boulder Creek at upper station, near Dillon, CO	09052400	8.56	1966-94
Boulder Creek near Dillon, CO	09052500	9.89	1942-51
Slate Creek at upper station, near Dillon, CO	09052800	14.2	1966-94
Slate Creek near Dillon, CO	09053000	16.6	1942-54
Blue River above Green Mountain Reservoir, CO	09053500	511	1943-71, 1985-88
Black Creek below Black Lake, near Dillon, CO	09054000	15.0	1942-49, 1966-94
Black Creek above Green Mountain Reservoir, CO	09054500	18.5	1944-53
Otter Creek above Green Mountain Reservoir, CO	09055000	8.40	1944-53
Cataract Creek near Kremmling, CO	09055300	12.0	1966-94
Cataract Creek above Green Mountain Reservoir, CO	09055500	13.6	1944-53
Blue River near Kremmling, CO	09056000	571	1904-08
Green Mountain Reservoir	09057000	598	1942-98
Blue River below Spruce Creek near Kremmling, CO	09057520	645	1989-94
Colorado River near Radium, CO	09058030	2,412	1981-90
Dickson Creek near Minturn, CO	09058600	3.41	1964-71
Rock Creek near Toponas, CO	09060500	47.6	1952-81
Rock Creek at Crater, CO	09060550	72.6	1984-99
Egeria Creek near Toponas, CO	09060700	28.2	1965-73
Rock Creek at McCoy, CO	09060770	198	1983-97
Big Alkali Creek near Burns, CO	09060800	14.2	1958-65
Catamount Creek near Burns, CO	09060900	5.31	1955-61
Big Alkali Creek below Castle Creek near Burns, CO	09060950	34.2	1981-86
Sunnyside Creek near Burns, CO	09061000	9.04	1952-58
Columbine Ditch near Fremont Pass, CO	09061500	--	1930-82
Ewing Ditch at Tennessee Pass, CO	09062000	--	1908-82
Wurtz Ditch near Tennessee Pass, CO	09062500	--	1931-82
Turkey Creek at Red Cliff, CO	09063500	29.4	1913-21, 1944-56

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS—Continued

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Colorado have been discontinued or converted to partial-record stations. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. [--, data unavailable]

Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Black Gore Creek near Vail, CO	09066050	19.6	1974-79
Gore Creek at Vail, CO	09066250	57.3	1974-79
Gore Creek at Lower Station, at Vail, CO	09066310	77.1	1988-99
Gore Creek near Minturn, CO	09066500	101	1911-14, 1944-56
Beaver Creek at Avon, CO	09067000	14.8	1911, 1912-14, 1974-87, 1988
Eagle River at Avon, CO	09067005	395	1988-99,
Alkali Creek near Wolcott, CO	09067300	27.3	1958-65
Eagle River at Eagle, CO	09067500	629	1910-24
East Brush Creek at Yeoman Park near Eagle, CO	09067700	9.74	1965-72
Brush Creek near Eagle, CO	09068000	71.4	1950-72
Gypsum Creek near Gypsum, CO	09069500	62.7	1950-55, 1965-72
Colorado River near Glenwood Springs, CO	09071100	--	1941-85
Grizzly Creek near Glenwood Springs, CO	09071300	5.73	1976-96
Colorado River at Glenwood Springs, CO	09072500	4,558	1899-1966
Roaring Fork above Lost Man Creek near Aspen, CO	09072550	9.10	1980-86
Lincoln Creek below Grizzly Reservoir near Aspen, CO	09073005	15.2	1980-86
Roaring Fork River at Aspen, CO	09073500	109	1910-21, 1931-64
Hunter Creek above Midway Creek near Aspen, CO	09073700	6.18	1964-80
Hunter Creek Feeder Conduit near Aspen, CO	09073720	--	1981-83
Midway Creek Feeder Conduit near Aspen, CO	09073790	--	1981-83
Midway Creek near Aspen, CO	09073800	8.62	1971-80
No Name Creek Feeder Conduit near Aspen, CO	09073890	--	1981-83
No Name Creek near Aspen, CO	09073900	6.54	1971-80
Castle Creek above Aspen, CO	09074800	32.2	1969-94
Castle Creek near Aspen, CO	09075000	67.0	1911-20
Roaring Fork below Aspen, CO	09075500	228	1913-18
Maroon Creek above Aspen, CO	09075700	35.4	1969-94
Maroon Creek near Aspen, CO	09076000	41.7	1910-17
Owl Creek near Aspen, CO	09076520	6.60	1974-89
Fryingpan River Feeder Canal near Norrie, CO	09077150	--	1971-83
Fryingpan River near Ivanhoe Lake, CO	09077200	18.7	1963-82
Lily Pad Feeder Canal near Norrie, CO	09077250	--	1972-83
Granite Creek Feeder Conduit near Norrie, CO	09077300	--	1981-83
Fryingpan River near Norrie, CO	09077400	32.2	1963-67
Ivanhoe Creek near Norrie, CO	09077600	9.12	1963-76
Ivanhoe Creek Feeder Canal near Nast, CO	09077605	--	1976-83
Ivanhoe Creek near Nast, CO	09077610	9.43	1976-82
South Fork Fryingpan River Feeder Canal near Norrie, CO	09077750	--	1971-83
South Fork Fryingpan River at Upper Station near Norrie, CO	09077800	11.5	1963-82
South Fork Fryingpan River near Norrie, CO	09077900	17.3	1963-67
Chapman Gulch Feeder Canal near Norrie, CO	09077940	--	1971-83
Chapman Gulch near Nast, CO	09077945	6.00	1973-82
Chapman Gulch near Norrie, CO	09077950	6.38	1966-72
Sawyer Creek Feeder Canal near Norrie, CO	09077960	--	1972-83
Fryingpan River at Norrie, CO	09078000	90.6	1910-17, 1947-83
North Fork Fryingpan River Feeder Canal near Norrie, CO	09078040	--	1980-83
Morman Creek Feeder Canal near Norrie, CO	09078050	--	1979-83
Carter Creek Feeder Canal near Norrie, CO	09078060	--	1980-83

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS—Continued

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Colorado have been discontinued or converted to partial-record stations. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. [--, data unavailable]

Station name	Station number	Drainage area (sq mi)	Period of record (water years)
North Fork Fryingpan River above Cunningham Creek near Norrie, CO	09078100	12.0	1963-80
Cunningham Creek Feeder Canal near Norrie, CO	09078140	--	1979-83
Middle Cunningham Creek Feeder Canal near Norrie, CO	09078150	--	1980-83
Cunningham Creek near Norrie, CO	09078200	7.12	1963-80
North Fork Fryingpan River below Cunningham Creek near Norrie, CO	09078300	24.2	1963-68
North Fork Fryingpan River near Norrie, CO	09078500	42.0	1910-17, 1947-82
Lime Creek near Troutville, CO	09078900	4.56	1963-68
Lime Creek at Troutville, CO	09079000	7.76	1950-56
Lime Creek at Thomasville, CO	09079500	35.0	1950-56
Fryingpan River at Thomasville, CO	09080000	173	1915-20
Fryingpan River at Meredith, CO	09080100	191	1910-15, 1966-80
Fryingpan River at Ruedi, CO	09080200	226	1959-64
Rocky Fork Creek near Meredith, CO	09080300	12.3	1968-82
West Sopris Creek near Basalt, CO	09080800	14.4	1963-68
Crystal River at Marble, CO	09081500	74.3	1910-15, 1916-17
Crystal River at Placita, CO	09081550	107	1959-73, 1975-77
Crystal River near Redstone, CO	09082500	229	1935-63
North Thompson Creek near Carbondale, CO	09082800	27.8	1963-79
Thompson Creek near Carbondale, CO	09083000	75.4	1950-60, 1964-68
Prince Creek near Carbondale, CO	09083700	3.04	1963-68
Cattle Creek near Carbondale, CO	09084000	31.1	1950-55, 1962-72
Fourmile Creek near Carbondale, CO	09084500	8.10	1941-47
Fourmile Creek near Glenwood Springs, CO	09084600	16.7	1957-65
Canyon Creek above New Castle, CO	09085200	23.8	1969-86
East Canyon Creek near New Castle, CO	09085300	15.1	1969-83
Possum Creek near New Castle, CO	09085400	6.41	1969-82
Canyon Creek near New Castle, CO	09085500	55.0	1954-60
West Elk Creek near New Castle, CO	09086000	9.55	1991-97
Main Elk Creek near New Castle, CO	09086470	91.0	1991-97
East Elk Creek above Boiler Creek near New Castle, CO	09086970	23.4	1991-97
Elk Creek at New Castle, CO	09087500	180	1922-24, 1954-60
Colorado River at New Castle, CO	09087600	6,308	1966-72
Baldy Creek near New Castle, CO	09088000	15.3	1955-61
West Divide Creek below Willow Creek near Raven, CO	09089000	34.9	1938-47, 1963-70
East Divide Creek near Silt, CO	09090700	40.8	1959-65
East Rifle Creek near Rifle, CO	09091500	34.3	1936-43, 1956-64
Rifle Creek near Rifle, CO	09092000	137	1939-46, 1952-64
Beaver Creek near Rifle, CO	09092500	7.90	1952-82
Battlement Creek near Parachute, CO	09092600	10.5	1956-65
West Parachute Creek near Parachute, CO	09092800	48.1	1957-62
Northwater Creek near Anvil Points, CO	09092830	12.6	1976-83
East Middle Fork Parachute Creek near Rio Blanco, CO	09092850	22.1	1976-83
East Fork Parachute Creek near Anvil Points, CO	09092960	14.5	1976-83
East Fork Parachute Creek near Rulison, CO	09092970	20.4	1976-83
Ben Good Creek near Rulison, CO	09092980	4.04	1976-83

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS—Continued

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Colorado have been discontinued or converted to partial-record stations. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. [--, data unavailable]

Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Parachute Creek near Parachute, CO	09093000	141	1948-54, 1964-70, 1975-86
Parachute Creek at Parachute, CO	09093500	198	1921-27, 1948-54, 1975-82
Colorado River near De Beque, CO	09093700	7,370	1967-97
Roan Creek above Clear Creek near De Beque, CO	09094200	151	1962-68
Clear Creek near De Beque, CO	09094400	110	1966-68
Roan Creek near De Beque, CO	09095000	321	1921-26, 1962-72, 1975-81
Dry Fork near De Beque, CO	09095400	109	1974-82
Government Highline Canal at 16 Road near Loma, CO	09095526	--	1975-85
Lateral No 48 near Mack, CO	09095528	--	1973-81
Government Highline Canal above Camp 7 Spillway near Mack, CO	090955285	--	1983-85
Camp No 7 Spillway near Mack, CO	09095529	--	1975-82
Government Highline Canal near Mack, CO	09095530	--	1973-82
Plateau Creek near Heiberger, CO	09095800	18.6	1958-64
Plateau Creek at Upper Station near Collbran, CO	09096000	24.1	1937-43, 1951-58
Plateau Creek near Collbran, CO	09096500	80.4	1921-80
Buzzard Creek below Owens Creek near Heiberger, CO	09096800	49.7	1955-70
Buzzard Creek near Collbran, CO	09097500	143	1921-80
Brush Creek near Collbran, CO	09097600	9.57	1955-67
Atkinson Creek near Collbran, CO	09098500	0.85	1952-55
East Fork Big Creek near Collbran, CO	09099000	4.92	1940-41, 1950-55
Big Creek at Upper Station near Collbran, CO	09099500	20.2	1945-56
Big Creek near Collbran, CO	09100000	27.1	1937-44
Cottonwood Creek at Upper Station near Molina, CO	09100500	14.0	1945-57
Cottonwood Creek near Molina, CO	09101000	17.8	1937-43
Bull Creek at Upper Station near Molina, CO	09101500	9.85	1945-53
Coon Creek near Mesa, CO	09104000	9.35	1937-43
Mesa Creek near Mesa, CO	09104500	6.79	1937-60
Colorado River near Palisade, CO	09106000	8,738	1901-33
Kiefer Extension to Grand Valley Canal near Fruita, CO	09106104	--	1975-85
Kiefer Extension to Grand Valley Canal near Loma, CO	09106108	--	1975-85
Lewis Wash near Grand Junction, CO	09106200	4.72	1973-79
Texas Creek at Taylor Park, CO	09107500	40.4	1929-34, 1988-92
Willow Creek at Taylor Park, CO	09108000	--	1913-14, 1929-34
East River near Crested Butte, CO	09110500	90.3	1939-51
Coal Creek near Crested Butte, CO	09111000	8.65	1941-46
Slate River near Crested Butte, CO	09111500	70.1	1940-51
Cement Creek near Crested Butte, CO	09112000	26.1	1910-13, 1940-51
Castle Creek near Baldwin, CO	09113000	20.3	1944-50
Castle Creek above mouth near Baldwin, CO	09113100	22.4	1993-98
Ohio Creek at Baldwin, CO	09113300	47.2	1958-70
Ohio Creek near Baldwin, CO	09113500	121	1940-50, 1958-71, 1979-81
Ohio Creek near Gunnison, CO	09114000	167	1944-50

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS—Continued

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Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Tomichi Creek at Sargents, CO	09115500	149	1916-22, 1937-72
Tomichi Creek near Doyleville, CO	09116000	209	1944-50
Tomichi Creek at Parlin, CO	09117000	427	1944-51, 1963-70
Quartz Creek near Ohio City, CO	09118000	106	1937-50, 1959-70
Cochetopa Creek near Parlin, CO	09118500	361	1940-48
Gunnison River at Iola, CO	09120500	2,352	1899, 1903, 1937-51
Cebolla Creek near Lake City, CO	09121500	25.2	1946-54
Cebolla Creek near Powderhorn, CO	09121800	248	1960-63
Cebolla Creek at Powderhorn, CO	09122000	340	1937-55
Soap Creek near Sapinero, CO	09122500	57.4	1955-66
Soap Creek at Sapinero, CO	09123000	86.0	1910-14, 1945-52
Lake Fork below Mill Gulch near Lake City, CO	09123400	57.5	1981-86
Lake Fork at Lake City, CO	09123500	115	1917-24, 1928-30, 1931-37
Henson Creek at Lake City, CO	09124000	83.1	1917-19, 1928-30, 1931-37
Gunnison River below Blue Mesa Dam, CO	09124700	3,453	1963-68
Curecanti Creek near Sapinero, CO	09125000	35.0	1945-72
Cimarron River at Cimarron, CO	09126500	209	1902-05, 1962-67
Cimarron River below Squaw Creek at Cimarron, CO	09127000	229	1942-52
Crystal Creek near Maher, CO	09127500	42.2	1916-19, 1945-54, 1960-69
Gunnison River above Gunnison Tunnel, CO	09127998	3,965	1905-65
Gunnison Tunnel near Montrose, CO	09127999	3,965	1910-65
Smith Fork near Crawford, CO	09128500	42.8	1935-94
Smith Fork at Crawford, CO	09129000	63.1	1954-60
Iron Creek near Crawford, CO	09129500	71.5	1947-52
Smith Fork near Lazear, CO	09129600	166	1976-87
Clear Fork near Ragged Mountain, CO	09129800	38.5	1965-73
East Muddy Creek near Bardine, CO	09130500	133	1934-53
West Muddy Creek near Ragged Mountain, CO	09130600	7.42	1955-65
West Muddy Creek near Bowie, CO	09130800	27.7	1968-74
Cow Creek near Paonia, CO	09131100	12.0	1968-82
West Muddy Creek near Somerset, CO	09131200	49.9	1961-73
Ruby Anthracite Creek near Floresta, CO	09132000	20.7	1938-43, 1954-58
Anthracite Creek near Somerset, CO	09132050	94.6	1977-81
Main Hubbard Creek near Paonia, CO	09132700	1.33	1960-68
Middle Hubbard Creek near Paonia, CO	09132800	1.36	1960-68
West Hubbard Creek near Paonia, CO	09132900	2.34	1960-73
Hubbard Creek near Bowie, CO	09132920	20.7	1968-74
North Fork Gunnison River near Paonia, CO	09133000	653	1921-32
Minnesota Creek at Paonia, CO	09134050	53.5	1976-79
Cottonwood Creek near Hotchkiss, CO	09134200	41.0	1976-79
Leroux Creek near Cedaredge, CO	09134500	34.5	1936-56, 1960-69

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS—Continued

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Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Cow Creek near Cedaredge, CO	09134700	7.24	1960-69
Leroux Creek near Lazear, CO	09135000	51.8	1917-26
Leroux Creek at Hotchkiss, CO	09135900	66.7	1976-96
Gunnison River near Lazear, CO	09136200	5,241	1962-85
Currant Creek near Cedaredge, CO	09136500	42.2	1948-54
Currant Creek near Read, CO	09137050	56.9	1976-87
Dirty George Creek near Grand Mesa, CO	09137800	10.6	1957-69
Ward Creek near Grand Mesa, CO	09139200	12.2	1957-69
Ward Creek near Cedaredge, CO	09139500	20.4	1939-46
Kiser Creek near Grand Mesa, CO	09140200	5.35	1957-69
Kiser Creek near Cedaredge, CO	09140500	10.8	1939-46
Cottonwood Creek near Grand Mesa, CO	09140700	2.15	1957-68
Cottonwood Creek near Cedaredge, CO	09141000	4.39	1939-46
Youngs Creek near Grand Mesa, CO	09141200	10.3	1957-69
Youngs Creek near Cedaredge, CO	09141500	11.3	1939-46
Ward Creek below Kiser Creek near Cedaredge, CO	09142000	52.2	1944-52
Surface Creek at Eckert, CO	09144000	43.6	1939-51
Tongue Creek at Cory, CO	09144200	197	1957-68, 1976-87
Red Mountain Creek near Ironton, CO	09144500	18.1	1947-55
Uncompahgre River At Ouray, CO	09145000	42.0	1908, 1910-24
Canyon Creek at Ouray, CO	09145500	25.8	1910-15
Uncompahgre River below Ouray, CO	09146000	75.2	1913-29
West Fork Dallas Creek near Ridgway, CO	09146400	14.1	1955-70
East Fork Dallas Creek near Ridgway, CO	09146500	16.8	1947-53 1960-70
Beaver Creek near Ridgway, CO	09146550	12.2	1960-68
Pleasant Valley Creek near Noel, CO	09146600	8.17	1955-67
Cow Creek near Ridgway, CO	09147100	45.4	1955-73
Spring Creek near Beaver Hill, CO	09149400	41.6	1977-81
Spring Creek near Montrose, CO	09149420	76.6	1977-81
Dry Creek at Begonia Road near Delta, CO	09149480	175	1996-98
Potter Creek near Columbine Pass, CO	09149900	7.10	1980-81
Potter Creek near Olathe, CO	09149910	26.0	1980-81
Roubideau Creek at Mouth near Delta, CO	09150500	242	1938-54, 1976-83
Escalante Creek near Delta, CO	09151500	209	1922-23, 1970-89
Kannah Creek near Whitewater, CO	09152000	61.9	1917-82
Callow Creek at Whitewater, CO	09152520	4.17	2000-2003
Orchard Mesa Drain at Grand Junction, CO	09152600	3.70	1973-83
Leach Creek at Durham, CO	09152650	24.8	1973-83
Adobe Creek near Fruita, CO	09152900	15.4	1973-83
Colorado River near Fruita, CO	09153000	17,100	1907-23
Big Salt Wash at Fruita, CO	09153270	142	1973-77
Reed Wash near Mack, CO	09153290	15.7	1975-2000
Reed Wash near Loma, CO	09153300	29.3	1973-83
West Salt Creek near Carbonera, CO	09153330	95.6	1979-82
West Salt Creek near Mack, CO	09153400	168	1973-83
Badger Wash near Mack, CO	09163050	6.51	1973-82
East Salt Creek near Mack, CO	09163310	197	1973-82
Mack Wash near Mack, CO	09163340	15.9	1973-82
Salt Creek near Mack, CO	09163490	436	1973-83
Hay Press Creek above Fruita Reservoir 3 near Glade Park, CO	09163570	0.77	1983-88
Dolores River below Rico, CO	09165000	105	1952-1996, 1999-2003

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Station name	Station number	Drainage area (sq mi)	Period of record (water years)
West Fork Dolores River near Stoner, CO	09166000	162	1941-44
Lost Canyon Creek at Dolores, CO	09167000	73.5	1922-27, 1941-48
Plateau Creek near Mouth near Dolores, CO	09167450	83.0	1982-83
Dolores River near McPhee, CO	09167500	817	1938-52
Disappointment Creek near Dove Creek, CO	09168100	147	1957-86
Dolores River near Slick Rock, CO	09168730	1,432	1997-2003
Big Gypsum Creek near Slick Rock, CO	09168800	43.9	1979-81
West Paradox Creek near Paradox, CO	09170500	23.6	1944-52
West Paradox Creek above Bedrock, CO	09170800	53.3	1971-73
West Paradox Creek near Bedrock, CO	09171000	55.3	1944-52
San Miguel River near Telluride, CO	09171200	42.8	1959-65
San Miguel River at Fall Creek, CO	09171500	167	1895-99, 1910
Fall Creek near Fall Creek, CO	09172000	33.4	1941-59
Leopard Creek at Noel, CO	09172100	9.03	1955-63
Saltado Creek near Norwood, CO	09172600	--	1976-80
Gurley Ditch near Norwood, CO	09172700	--	1976-80
West Beaver Creek near Norwood, CO	09172800	--	1976-80
Beaver Creek near Norwood, CO	09173000	40.6	1941-61, 1962-67, 1975-81
Horsefly Creek near Sams, CO	09173500	28.8	1942-51
San Miguel River near Nucla, CO	09174000	649	1953-62
Cottonwood Creek near Nucla, CO	09174500	38.8	1942-51
West Naturita Creek at Upper Station near Norwood, CO	09174700	7.31	1976-80
West Naturita Creek near Norwood, CO	09175000	53.0	1940-52, 1975-80
Lilylands Canal near Norwood, CO	09175200	--	1976-80
Maverick Draw near Norwood, CO	09175400	41.3	1976-80
San Miguel River at Naturita, CO	09175500	1,069	1917-29, 1940-81
Tabeguache Creek near Nucla, CO	09176500	16.9	1946-53
Taylor Creek near Gateway, CO	09177500	15.4	1944-67
Deep Creek near Paradox, CO	09178000	4.31	1944-53
Geyser Creek near Paradox, CO	09178500	--	1944-51
Roc Creek near Uranium CO	09179000	75.8	1944-52
Salt Creek near Gateway, CO	09179200	31.2	1979-85
Dolores River at Gateway, CO	09179500	4,347	1936-54
Vermillion Creek at Ink Springs Ranch, CO	09235450	816	1977-81
Vermillion Creek below Douglas Draw, near Lodore, CO	09235490	918	1995
Bear River near Toponas, CO	09236000	22.1	1952-65, 1966-86
Bear River near Yampa, CO	09236500	41.6	1939-44
Service Creek near Oak Creek, CO	09237800	38.2	1965-73
Oak Creek near Oak Creek, CO	09238000	14.0	1952-57
North Fork Walton Creek near Rabbit Ears Pass, CO	09238300	0.71	1972-75
Fishhook Creek near Rabbit Ears Pass, CO	09238350	6.45	1972-75
Walton Creek near Steamboat Springs, CO	09238500	42.4	1920-22, 1965-73, 1978-87
Fish Creek Tributary above Long Lake near Buffalo Pass, CO	09238700	0.43	1984-86
Long Lake Inlet near Buffalo Pass, CO	09238705	0.71	1987-95
Fish Creek Tributary below Long Lake, near Buffalo Pass, CO	09238710	1.03	1985-95
Middle Fork Fish Creek near Buffalo Pass, CO	09238750	1.37	1985-95

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Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Granite Creek near Buffalo Pass, CO	09238770	2.82	1985-95
Middle Fork Fish Creek tributary, below Fish Creek Reservoir, CO	09238800	4.78	1984-94
Spring Creek near Steamboat Springs, CO	09239400	6.96	1965-72
Elk River at Hinman Park, CO	09240500	61.0	1911-18
South Fork Elk River near Clark, CO	09240800	33.7	1966-73
Middle Creek near Oak Creek, CO	09243700	23.5	1976-81, 1982-2001
Foidel Creek near Oak Creek, CO	09243800	8.61	1976-81, 82-83, 1985-2001
Foidel Creek at mouth near Oak Creek, Co	09243900	17.5	1976-81, 1982-2001
Fish Creek near Milner, CO	09244100	34.5	1955-73
Grassy Creek near Mount Harris, CO	09244300	25.8	1958-66
Yampa River near Hayden, CO	09244400	1,390	1965-72
Gibraltar Canal near Hayden, CO	09244405	--	1965-72
Yampa River below Diversion near Hayden, CO	09244410	1,390	1965-86
Sage Creek above Sage Creek Reservoir near Hayden, CO	09244415	4.17	1980-83
Watering Trough Gulch near Hayden, CO	09244460	2.65	1977-81
Hubberson Gulch near Hayden, CO	09244464	8.08	1977-81
Stokes Gulch near Hayden, CO	09244470	13.6	1976-81
Elkhead Creek near Clark, CO	09244500	45.4	1942-44, 1958-73
Elkhead Creek near Elkhead, CO	09245000	64.2	1953-96
North Fork Elkhead Creek near Elkhead, CO	09245500	21.0	1910, 1920, 1958-73
Elkhead Creek near Craig, CO	09246500	249	1906, 1909-18
Fortification Creek near Craig, CO	09246900	34.3	1955-60
Fortification Creek at Craig, CO	09247000	258	1903-06, 1909-18, 1943-47
Yampa River at Craig, CO	09247500	1,730	1901-06, 1943-47
East Fork of Williams Fork near Willow Creek, CO	09248500	96.0	1943-47
East Fork of Williams Fork above Willow Creek, CO	09248600	108	1956-72
East Fork of Williams Fork near Pagoda, CO	09249000	150	1953-71
South Fork of Williams Fork near Pagoda, CO	09249200	46.7	1965-79
Waddle Creek near Pagoda, CO	09249450	5.24	1985-86
Deep Rock Gulch near Hamilton, CO	09249455	3.53	1985-86
Williams Fork at Hamilton, CO	09249500	341	1904-06, 1909-27
Morapos Creek near Hamilton, CO	09249700	13.7	1965-67
Williams Fork River at mouth, near Hamilton, CO	09249750	419	1984-2001
Milk Creek near Thornburgh, CO	09250000	65.0	1952-86
Good Spring Creek at Axial, CO	09250400	40.0	1975-78
Wilson Creek above Taylor Creek near Axial, CO	09250507	20.0	1980-92
Taylor Creek at mouth near Axial, CO	09250510	7.22	1975-92
Jubb Creek near Axial, CO	09250610	7.53	1975-81
Morgan Gulch near Axial, CO	09250700	25.6	1980-81
Yampa River above Little Snake River near Maybell, CO	09251100	3,837	1996-2003
Middle Fork Little Snake River near Battle Creek, CO	09251500	120	1912-22
South Fork Little Snake River near Battle Creek, CO	09252500	46.0	1912-20
Battle Creek near Slater, CO	09253500	285	1942-51
Slater Fork at Baxter Ranch near Slater, CO	09254500	80.0	1911-20, 1922
Little Snake River near Dixon, WY	09257000	988	1910-23, 1938-97



## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS—Continued

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Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Willow Creek near Dixon, WY	09258000	24.0	1953-93
Little Snake River above Lily, CO	09259950	--	1950-69
Sand Wash near Sunbeam, CO	09259990	239	1987-91
North Fork White River below Trappers Lake, CO	09302400	19.5	1956-65
North Fork White River above Ripple Creek near Trappers Lake, CO	09302420	62.5	1965-73
Lost Creek near Buford, CO	09302450	21.5	1964-89
Marvine Creek near Buford, CO	09302500	59.7	1903-06, 1973-84
North Fork White River near Buford, CO	09302800	220	1903-06, 1956-72
North Fork White River at Buford, CO	09303000	259	1910-16, 1919-21, 1952-2001
South Fork White River at Budge's Resort, CO	09303300	52.3	1975-95
Wagonwheel Creek at Budge's Resort, CO	09303320	7.36	1975-89
Patterson Creek near Budge's Resort, CO	09303340	11.2	1976-77
South Fork White River near Budge's Resort, CO	09303400	128	1976-95
South Fork White River near Buford, CO	09303500	157	1903-06, 1910-15, 1942-47, 1967-92
South Fork White River at Buford, CO	09304000	177	1919-20, 1952-97
Big Beaver Creek near Buford, CO	09304100	34.1	1955-64
Miller Creek near Meeker, CO	09304150	57.6	1970-79
Coal Creek near Meeker, CO	09304300	25.1	1957-68
White River at Meeker, CO	09304600	808	1978-85
Piceance Creek at Rio Blanco, CO	09305500	8.97	1952-57
Piceance Creek below Rio Blanco, CO	09306007	177	1974-98
Middle Fork Stewart Gulch near Rio Blanco, CO	09306015	24.0	1974-76, 1977-82
Stewart Gulch above West Fork near Rio Blanco, CO	09306022	44.0	1976-85
West Fork Stewart Gulch near Rio Blanco, CO	09306025	14.2	1974-76, 1977-82
West Fork Stewart Gulch at Mouth near Rio Blanco, CO	09306028	15.7	1974-82
Sorghum Gulch near Rio Blanco, CO	09306033	1.22	1974-76, 1977-82
Sorghum Gulch at Mouth near Rio Blanco, CO	09306036	3.62	1974-86
Cottonwood Gulch near Rio Blanco, CO	09306039	1.20	1974-85
Piceance Creek Tributary near Rio Blanco, CO	09306042	1.06	1974-84, 1985-92
Piceance Creek below Gardenhire Gulch near Rio Blanco, CO	09306045	255	1980-82, 1985
Scandard Gulch near Rio Blanco, CO	09306050	6.61	1974-76, 1978-82
Scandard Gulch at Mouth near Rio Blanco, CO	09306052	7.97	1974-85
Willow Creek near Rio Blanco, CO	09306058	48.4	1974-85
Piceance Creek above Hunter Creek near Rio Blanco, CO	09306061	309	1974-87
Black Sulphur Creek near Rio Blanco, CO	09306175	103	1975-83
Horse Draw near Rangely, CO	09306202	1.47	1977-81
Horse Draw at Mouth near Rangely, CO	09306203	2.87	1977-81
White River above Crooked Wash near White River City, CO	09306224	1,821	1982-89
Stake Springs Draw near Rangely, CO	09306230	26.1	1974-77
Corral Gulch below Water Gulch near Rangely, CO	09306235	8.61	1974-89
Dry Fork near Rangely, CO	09306237	2.74	1974-82

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Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Box Elder Gulch near Rangely, CO	09306240	9.21	1974-85
Box Elder Gulch Tributary near Rangely, CO	09306241	2.39	1975-82
Corral Gulch at 84 Ranch, CO	09306244	37.8	1975-77
Yellow Creek Tributary near 84 Ranch, CO	09306246	5.53	1975-77
Duck Creek at Upper Station near 84 Ranch, CO	09306248	39.1	1975-77
Duck Creek near 84 Ranch, CO	09306250	50.0	1975-77
White River above Rangely, CO	09306300	2,773	1972-82
Douglas Creek at Rangely, CO	09306380	425	1977-78, 1995
East Fork San Juan River above Sand Creek, near Pagosa Springs, CO	09339900	64.1	1957-1996, 1999-2003
East Fork San Juan River near Pagosa Springs, CO	09340000	86.9	1935-80
West Fork San Juan River above Borns Lake near Pagosa Springs, CO	09340500	41.2	1937-53
West Fork San Juan River at West Fork Campground near Pagosa Springs, CO	09340800	50.5	1984-87, 1997-99
Wolf Creek near Pagosa Springs, CO	09341200	14.0	1968-75
Wolf Creek at Wolf Creek Campground near Pagosa Springs, CO	09341300	18.0	1984-87, 1997-99
Windy Pass Creek near Pagosa Springs, CO	09341350	1.41	1984-87
West Fork San Juan River near Pagosa Springs, CO	09341500	85.4	1935-60, 1985-87, 1997-98
Turkey Creek near Pagosa Springs, CO	09342000	23.0	1937-49
Rio Blanco near Pagosa Springs, CO	09343000	58.0	1935-71
Rio Blanco below Blanco Diversion Dam near Pagosa Springs, CO	09343300	69.1	1971-98
Rito Blanco near Pagosa Springs, CO	09343500	23.3	1935-52
Navajo River at Banded Peak Ranch near Chromo, CO	09344000	69.8	1937-95
Navajo River above Chromo, CO	09344300	96.4	1956-70
Navajo River below OSO Diversion Dam near Chromo, CO	09344400	100.5	1971-98
Little Navajo River at Chromo, CO	09345500	21.9	1935-52
Navajo River at Edith, CO	09346000	172	1912-96
Middle Fork Piedra River near Pagosa Springs, CO	09347200	32.2	1969-75
Middle Fork Piedra River near Dyke, CO	09347205	34.1	1978-84
Piedra River at Bridge Ranger Station near Pagosa Springs, CO	09347500	82.3	1936-41, 1946-54
Williams Creek near Bridge Ranger Station near Pagosa Springs, CO	09348500	43.7	1936-41, 1946-49
Weminuche Creek near Bridge Ranger Station near Pagosa Springs, CO	09349000	53.4	1936-41, 1946-49
Piedra River near Piedra, CO	09349500	371	1911-12, 1938-73
Los Pinos River near Bayfield, CO	09353500	270	1927-86
Animas River at Howardsville, CO	09357500	55.9	1935-82
Cement Creek near Silverton, CO	09358500	13.5	1935-37, 1946-49
Mineral Creek above Silverton, CO	09358900	11.0	1968-75
Mineral Creek near Silverton, CO	09359000	43.9	1935-49
Lime Creek near Silverton, CO	09359100	33.9	1956-61
Animas River above Tacoma, CO	09359500	348	1945-56
Hermosa Creek near Hermosa, CO	09361000	172	1911, 1912-14, 1919-28, 1939-80
Falls Creek near Durango, CO	09361200	7.18	1959-65
Junction Creek near Durango, CO	09361400	26.3	1959-65

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE ONLY STATIONS—Continued

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Colorado have been discontinued or converted to partial-record stations. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. [--, data unavailable]

Station name	Station number	Drainage area (sq mi)	Period of record (water years)
Lightner Creek near Durango, CO	09362000	66.0	1927-49
Wilson Gulch near Durango, CO	09362550	6.5	1995-2002
Rainbow Springs Trout Ranch near Bordad, CO	09362600	--	1995-97
Florida River near Hermosa, CO	09362900	68.8	1955-63
Florida River near Durango, CO	09363000	97.4	1899, 1901-03, 1910-12, 1917-24, 1926-60
Florida River below Florida Farmers Ditch near Durango, CO	09363050	107	1967-82
Highway Spring near Loma Linda, CO	09363070	--	1995-97
Salt Creek near Oxford, CO	09363100	17.7	1956-63, 1967-83
Florida River at Bondad, CO	09363200	221	1956-63, 1967-83
Cherry Creek near Red Mesa, CO	09366000	66.0	1928-50
West Mancos River near Mancos, CO	09368500	39.4	1910-11, 1938-53
East Mancos River near Mancos, CO	09369000	11.9	1937-51
Middle Mancos River near Mancos, CO	09369500	12.1	1937-51
Mancos River near Mancos, CO	09370000	71.5	1921, 1931-38
Mancos River near Cortez, CO	09370800	302	1976-79
Mancos River below Johnson Canyon near Cortez, CO	09370820	320	1979-82
Navajo Wash near Towaoc, CO	09371002	26.3	1986-94
Hartman Draw at Cortez, CO	09371400	34.0	1978-86
McElmoCreek above Alkali Canyon near Cortez, CO	09371420	147	1972-86
Mud Creek near Cortez, CO	09371495	33.6	1978-81
McElmo Creek near Cortez, CO	09371500	230	1926-29, 1940-45, 1950-54, 1982-93
McElmo Creek below Cortez, CO	09371700	283	1972-83

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS

The following stations were discontinued as continuous-record surface-water-quality stations. Daily records of temperature, specific conductance, pH, dissolved oxygen or sediment were collected and published for the period of record shown for each station. [--, data unavailable]

Station name	Station number	Drainage area (sq mi)	Type of record	Period of record (water years)
Colorado River below Baker Gulch near Grand Lake, Co	09010500	53.4	Temp.	1997-98
Colorado River at Hot Sulphur Springs, CO	09034500	825	Temp., S.C.	1947-94
Williams Fork near Parshall, CO	09037500	184	Temp., S.C.	1986-87
Williams Fork below Williams Fork Reservoir, CO	09038500	230	Temp., S.C.	1985-87
Muddy Creek at Kremmling, CO	09041500	290	Temp., S.C.	1986-87, 1990-95
French Gulch at Breckenridge, CO	09046530	10.9	Temp.	1997-98
West Tenmile Creek at Copper Mountain, CO	09049200	21.0	Sed.	1973-79
Boulder Creek near Dillon, CO	09052500	9.89	Temp., S.C.	1982
Blue River above Green Mountain Reservoir, CO	09053500	511	Temp. S.C.	1986 1986-87
Blue River below Green Mountain Reservoir, CO	09057500	599	Temp., S.C.	1995-99
Rock Creek at Crater, CO	09060550	72.6	Temp., S.C.	1986-87
Black Gore Creek near Vail, CO	09066050	19.6	Sed.	1973-79
Gore Creek at Vail, CO	09066250	57.3	Sed.	1973-79
Gore Creek at mouth near Minturn, CO	09066510	102	Temp. S.C.	1997-98 1997
Colorado River near Dotsero, CO	09070500	4,394	Temp., S.C. Temp. Sed.	1980-84 1997-98 1959-61
Colorado River near Glenwood Springs, CO	09071100	4,560	Temp. S.C.	1969-70, 1980-85
Colorado River at Glenwood Springs, CO	09072500	4,558	Temp. Sed.	1954-58 1959-61
Roaring Fork River above Difficult Creek near Aspen, CO	09073300	75.8	Temp., S.C.	2000
Hunter Creek above Midway Creek near Aspen, CO	09073700	6.18	Temp., S.C.	1976-77
Roaring Fork River at Glenwood Springs, CO	09085000	1,451	Temp., S.C. Sed.	1980-84 1959-61
Colorado River below Glenwood Springs, CO	09085100	6,013	Temp., S.C.	1980-84
East Middle Fork Parachute Cr near Rio Blanco, CO	09092850	22.1	Temp., S.C. Sed.	1976-82 1977-82
East Fork Parachute Creek near Rulison, CO	09092970	20.4	Temp. S.C. Sed.	1977-78, 1980-83 1977-83 1978, 1980-83
Parachute Creek near Parachute, CO	09093000	141	Temp., S.C. Sed.	1975-80 1974-75
Parachute Creek at Parachute, CO	09093500	198	Temp., S.C. Sed.	1975-80 1974-82
Colorado River near De Beque, CO	09093700	7,370	Temp., S.C. Sed.	1973-82 1974-76
Roan Creek near De Beque, CO	09095000	321	Temp., S.C. Sed.	1975-80 1975-81
Dry Fork at Upper Station near DeBeque, CO	09095300	97.4	Temp.	1997-98
Government Highline Canal near Mack, CO	09095530	--	Temp. S.C.	1973-80 1974-80
Plateau Creek near Cameo, CO	09105000	592	Temp., S.C.	1971-75
Lewis Wash near Grand Junction, CO	09106200	4.72	Temp., S.C.	1973-77
East River below Cement Creek near Crested Butte, CO	09112200	238	S.C., D.O., Temp.	1995-97 1995-98
Gunnison River below Gunnison Tunnel, CO	09128000	3,965	Temp.	1997-98
Uncompahgre River near Ridgway, CO	09146200	149	Temp.	1997-98
Dry Creek at Begonia Road near Delta, CO	09149480	175	Temp. S.C.	1997-98 1997

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS—Continued

The following stations were discontinued as continuous-record surface-water-quality stations. Daily records of temperature, specific conductance, pH, dissolved oxygen or sediment were collected and published for the period of record shown for each station. [--, data unavailable]

Station name	Station number	Drainage area (sq mi)	Type of record	Period of record (water years)
Uncompahgre River at Delta, CO	09149500	1,115	Sed.	1959
Potter Creek near Columbine Pass, CO	09149900	7.10	Temp., S.C.	1981
Potter Creek near Olathe, CO	09149910	26.0	Temp., S.C.	1981
Orchard Mesa Drain at Grand Junction, CO	09152600	3.70	Temp., S.C.	1973-77
Leach Creek at Durham, CO	09152650	24.8	Temp., S.C.	1973-77
Adobe Creek near Fruita, CO	09152900	15.4	Temp., S.C.	1973-80
Big Salt Wash at Fruita, CO	09153270	142	Temp., S.C.	1973-77
Reed Wash near Mack, CO	09153290	15.7	Temp. S.C.	1997-98 1997
Reed Wash near Loma, CO	09153300	29.3	Temp., S.C.	1973-83
West Salt Creek near Carbonera, CO	09153330	95.6	Temp., S.C.	1981-82
West Salt Creek near Mack, CO	09153400	168	Temp., S.C.	1973-84
Badger Wash Observation Res 4-A near Mack, CO	09160000	.02	Temp., S.C.	1981
Badger Wash Observation Res 12 near Mack, CO	09160500	.09	Temp., S.C.	1981-82
Badger Wash Observation Res 2-A near Mack, CO	09161000	.15	Temp., S.C.	1981
Badger Wash near Mack, CO	09163050	6.51	Temp., S.C.	1973-80
East Salt Creek near Mack, CO	09163310	197	Temp., S.C.	1973-82
Mack Wash near Mack, CO	09163340	15.9	Temp. S.C.	1973-82 1974-82
Salt Creek near Mack, CO	09163490	436	Temp., S.C.	1973-83
Disappointment Creek near Dove Creek, CO	09168100	147	Temp., S.C.	1984
Big Gypsum Creek near Slick Rock, CO	09168800	43.9	Temp., S.C.	1981
Dolores River below W. Paradox Cr near Bedrock, CO	09171070	2,144	Temp., S.C.	1986-87
Salt Creek near Gateway, CO	09179200	31.2	Temp., S.C.	1981-85
Dolores River at Gateway, CO	09179500	4,347	Temp.	1949-52
Yampa River near Oak Creek, CO	09237500	227	Sed.	1985-88
Middle Creek near Oak Creek, CO	09243700	23.5	Temp., S.C.	1976-81
Foidel Creek near Oak Creek, CO	09243800	8.61	Temp., S.C.	1976-83, 1986-88
Foidel Creek at Mouth near Oak Creek, CO	09243900	17.5	Temp., S.C. Sed.	1976-81 1978-81
Sage Creek above Sage Creek Res. near Hayden, CO	09244415	4.17	Temp., S.C.	1981-83
Watering Trough Gulch near Hayden, CO	09244460	2.65	Temp., S.C.	1979-81
Hubberson Gulch near Hayden, CO	09244464	8.08	Temp., S.C.	1979-81
Stokes Gulch near Hayden, CO	09244470	13.6	Temp., S.C., Sed.	1978-81
Elkhead Creek above Long Gulch near Hayden, CO	09246200	171	Temp., S.C.	1995-99, 2001-2003
Elkhead Creek below Maynard Gulch near Craig, CO	09246400	212	Temp., S.C.	1995-99, 2001-2003
Good Spring Creek at Axial, CO	09250400	40.0	Temp. S.C.	1975-78 1974-78
Wilson Creek above Taylor Creek near Axial, CO	09250507	20.0	Temp., S.C., Sed.	1980-81
Taylor Creek at Mouth near Axial, CO	09250507	7.22	Temp., S.C.	1976-81
Wilson Creek near Axial, CO	09250600	27.4	Temp. S.C. Sed.	1975-80 1974-80 1976-80
Jubb Creek near Axial, CO	09250610	7.53	Temp., S.C.	1976-81
Morgan Gulch near Axial, CO	09250700	25.6	Temp., S.C.	1980-81
Little Snake River above Lily, CO	09259950	3,730	Temp., S.C. Sed.	1950-69 1958-64
Little Snake River near Lily, CO	09260000	3,730	Temp., S.C. Sed.	1975-85 1958-64
Yampa River at Deerlodge Park, CO	09260050	7,660	Temp., S.C.	1977-82
White River above Coal Creek, near Meeker, CO	09304200	648	Temp., S.C.	1978-84
White River near Meeker, CO	09304500	755	Temp., S.C.	1973-74

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS—Continued

The following stations were discontinued as continuous-record surface-water-quality stations. Daily records of temperature, specific conductance, pH, dissolved oxygen or sediment were collected and published for the period of record shown for each station. [—, data unavailable]

Station name	Station number	Drainage area (sq mi)	Type of record	Period of record (water years)
White River at Meeker, CO	09304600	808	Temp., S.C.	1978-85
White River below Meeker, CO	09304800	1,024	Temp., S.C.	1978-85
Piceance Creek below Rio Blanco, CO	09306007	177	Temp., S.C., Sed.	1974-85
Middle Fork Stewart Gulch near Rio Blanco, CO	09306015	24.0	Temp., S.C.	1976, 1981
			Sed.	1976
Stewart Gulch above West Fork near Rio Blanco, CO	09306022	44.0	Temp., S.C., Sed.	1974-82
West Fork Stewart Gulch near Rio Blanco, CO	09306025	14.2	Temp.	1974-76, 1980-81
			S.C.	1975-76, 1980-81
			Sed.	1974-76
West Fork Stewart Gulch at Mouth near Rio Blanco, CO	09306028	15.7	Temp.	1980-81
			S.C.	1977, 1980-81
			Sed.	1975-76, 1980-81
Sorghum Gulch near Rio Blanco, CO	09306033	1.22	Temp., S.C.	1975-76, 1980
			Sed.	1975-76
Sorghum Gulch at Mouth near Rio Blanco, CO	09306036	3.62	Temp., S.C.	1976, 1978, 1980
			Sed.	1975-77, 1982
Cottonwood Gulch near Rio Blanco, CO	09306039	1.20	Temp., S.C.	1976-78, 1980
			Sed.	1974-77, 1980
Piceance Creek Tributary near Rio Blanco, CO	09306042	1.06	Temp., S.C.	1974-86
			Sed.	1974-82
Piceance Creek below Gardenhire Gulch near Rio Blanco, CO	09306045	255	Temp., S.C.	1980-81
Scandard Gulch near Rio Blanco, CO	09306050	6.61	Temp., S.C.	1980
			Sed.	1975-76
Scandard Gulch at Mouth near Rio Blanco, CO	09306052	7.97	Temp., S.C.	1976, 1978, 1980
			Sed.	1974-76, 1980
Willow Creek near Rio Blanco, CO	09306058	48.4	Temp., S.C.	1974-82
			pH, D.O.	1976-82
			Sed.	1974-82
Piceance Creek above Hunter Creek near Rio Blanco, CO	09306061	309	Temp., S.C., Sed.	1974-85
			pH, D.O.	1974-84
Black Sulphur Creek near Rio Blanco, CO	09306175	103	Temp., S.C., Sed.	1975-81
Piceance Creek below Ryan Gulch near Rio Blanco, CO	09306200	506	Sed.	1972-83
			Temp., S.C.	1980-82, 1986-98
Horse Draw near Rangely, CO	09306202	1.47	Sed.	1980
Horse Draw at Mouth near Rangely, CO	09306203	2.87	Temp., S.C.	1980
			Sed.	1980-81
Piceance Creek at White River, CO	09306222	652	Temp., S.C., Sed.	1974-83
Stake Springs Draw near Rangely, CO	09306230	26.1	Temp., S.C., Sed.	1977
Corral Gulch below Water Gulch near Rangely, CO	09306235	8.61	Temp., S.C.	1975-85
			Sed.	1974-82

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS—Continued

The following stations were discontinued as continuous-record surface-water-quality stations. Daily records of temperature, specific conductance, pH, dissolved oxygen or sediment were collected and published for the period of record shown for each station. [--, data unavailable]

Station name	Station number	Drainage area (sq mi)	Type of record	Period of record (water years)
Dry Fork near Rangely, CO	09306237	2.74	Temp., S.C.  Sed.	1977, 1979, 1982 1975, 1977, 1979, 1981-82
Box Elder Gulch near Rangely, CO	09306240	9.21	Temp., S.C. Sed.	1975-85 1975-82
Box Elder Gulch Tributary near Rangely, CO	09306241	2.39	Temp.  S.C.  Sed.	1976, 1980-81 1976-77, 1981 1975, 1980, 1982
Corral Gulch near Rangely, CO	09306242	31.6	Temp., S.C. Sed.	1975-87 1974-85
Corral Gulch at 84 Ranch, CO	09306244	37.8	Temp., S.C. Sed.	1975-77
Yellow Creek Tributary near 84 Ranch, CO	09306246	5.53	Sed.	1976
Duck Creek at Upper Station near 84 Ranch, CO	09306248	39.1	Sed.	1976
Duck Creek near 84 Ranch, CO	09306250	50.0	Temp., S.C.	1977
Yellow Creek near White River, CO	09306255	262	Temp., S.C. Sed.	1974-82
Windy Pass Creek near Pagosa Springs, CO	09341350	1.41	Sed.	1986
West Fork San Juan River near Pagosa Springs, CO	09341500	87.9	Sed.	1985-87
Rio Blanco near Pagosa Springs, CO	09343000	58.0	Sed.	1961-62
Navajo River above Chromo, CO	09344300	96.4	Sed.	1961-62
Vallecito Creek near Bayfield, CO	09352900	72.1	Temp.	1962-82
Mancos River near Cortez, CO	09370800	302	Temp., S.C.	1976-79
Mancos River below Johnson Canyon near Cortez, CO	09370820	320	Temp., S.C.	1979-82
Mancos River near Towaoc, CO	09371000	526	Sed.	1961
Hartman Draw at Cortez, CO	09371400	34.0	Temp., S.C.	1978-81
McElmo Creek near Cortez, CO	09371500	230	Temp., S.C.	1982-93

Type of record: Temp. (temperature), S.C. (specific conductance), pH (pH), D.O. (dissolved oxygen), Sed. (sediment).

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- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A10. 1984. 59 p.



- 3-A11. *Measurement of discharge by the moving-boat method*, by G.F. Smoot and C.E. Novak: USGS-TWRI book 3, chap. A11. 1969. 22 p.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS-TWRI book 3, chap. A12. 1986. 34 p.
- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS-TWRI book 3, chap. A13. 1983. 53 p.
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- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS-TWRI book 3, chap. A15. 1984. 48 p.
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- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS-TWRI book 3, chap. A17. 1985. 38 p.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS-TWRI book 3, chap. A18. 1989. 52 p.
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### Section B. Ground-Water Techniques

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- 3-B4. *Supplement 1. Regression modeling of ground-water flow—Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley: USGS-TWRI book 3, chap. B4. 1993. 8 p.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS-TWRI book 3, chap. B5. 1987. 15 p.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS-TWRI book 3, chap. B6. 1987. 28 p.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS-TWRI book 3, chap. B7. 1992. 190 p.
- 3-B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS-TWRI book 3, chap. B8. 2001. 29 p.

### Section C. Sedimentation and Erosion Techniques

- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS-TWRI book 3, chap. C1. 1970. 55 p.
- 3-C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS-TWRI book 3, chap. C2. 1999. 89 p.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS-TWRI book 3, chap. C3. 1972. 66 p.

## Book 4. Hydrologic Analysis and Interpretation

### Section A. Statistical Analysis

- 4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS-TWRI book 4, chap. A1. 1968. 39 p.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS-TWRI book 4, chap. A2. 1968. 15 p.
- 4-A3. *Statistical methods in water resources*, by D.R. Helsel and R.M. Hirsch: USGS-TWRI book 4, chap. A3. 1991. Available only online at <http://water.usgs.gov/pubs/twri/twri4a3/>. (Accessed August 30, 2002.)

### Section B. Surface Water

- 4-B1. *Low-flow investigations*, by H.C. Riggs: USGS-TWRI book 4, chap. B1. 1972. 18 p.

4–B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS–TWRI book 4, chap. B2. 1973. 20 p.

4–B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS–TWRI book 4, chap. B3. 1973. 15 p.

#### Section D. Interrelated Phases of the Hydrologic Cycle

4–D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS–TWRI book 4, chap. D1. 1970. 17 p.

### Book 5. Laboratory Analysis

#### Section A. Water Analysis

5–A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS–TWRI book 5, chap. A1. 1989. 545 p.

5–A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS–TWRI book 5, chap. A2. 1971. 31 p.

5–A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS–TWRI book 5, chap. A3. 1987. 80 p.

5–A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS–TWRI book 5, chap. A4. 1989. 363 p.

5–A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS–TWRI book 5, chap. A5. 1977. 95 p.

5–A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS–TWRI book 5, chap. A6. 1982. 181 p.

#### Section C. Sediment Analysis

5–C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS–TWRI book 5, chap. C1. 1969. 58 p.

### Book 6. Modeling Techniques

#### Section A. Ground Water

6–A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS–TWRI book 6, chap. A1. 1988. 586 p.

6–A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS–TWRI book 6, chap. A2. 1991. 68 p.

6–A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L.J. Torak: USGS–TWRI book 6, chap. A3. 1993. 136 p.

6–A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R.L. Cooley: USGS–TWRI book 6, chap. A4. 1992. 108 p.

6–A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak: USGS–TWRI book 6, chap. A5. 1993. 243 p.

6–A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS–TWRI book 6, chap. A6. 1996. 125 p.

6–A7. *User's guide to SEAWAT: A computer program for simulation of three-dimensional variable-density ground-water flow*, by Weixing Guo and Christian D. Langevin: USGS–TWRI book 6, chap. A7. 2002. 77 p.

### Book 7. Automated Data Processing and Computations

#### Section C. Computer Programs

7–C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS–TWRI book 7, chap. C1. 1976. 116 p.

7–C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS–TWRI book 7, chap. C2. 1978. 90 p.

7–C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI book 7, chap. C3. 1981. 110 p.

**Book 8. Instrumentation****Section A. Instruments for Measurement of Water Level**

- 8–A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS–TWRI book 8, chap. A1. 1968. 23 p.
- 8–A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS–TWRI book 8, chap. A2. 1983. 57 p.

**Section B. Instruments for Measurement of Discharge**

- 8–B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS–TWRI book 8, chap. B2. 1968. 15 p.

**Book 9. Handbooks for Water-Resources Investigations****Section A. National Field Manual for the Collection of Water-Quality Data**

- 9–A1. *National field manual for the collection of water-quality data: Preparations for water sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.
- 9–A2. *National field manual for the collection of water-quality data: Selection of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.
- 9–A3. *National field manual for the collection of water-quality data: Cleaning of equipment for water sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A3. 1998. 75 p.
- 9–A4. *National field manual for the collection of water-quality data: Collection of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.
- 9–A5. *National field manual for the collection of water-quality data: Processing of water samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999. 149 p.
- 9–A6. *National field manual for the collection of water-quality data: Field measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI book 9, chap. A6. 1998. Variously paginated.
- 9–A7. *National field manual for the collection of water-quality data: Biological indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.
- 9–A8. *National field manual for the collection of water-quality data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.
- 9–A9. *National field manual for the collection of water-quality data: Safety in field activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.

COLORADO RIVER MAIN STEM

09010500 COLORADO RIVER BELOW BAKER GULCH, NEAR GRAND LAKE, CO

LOCATION.--Lat 40°19'33", long 105°51'22", in NE¼NW¼ sec.12, T.4 N., R.76 W., Grand County, Hydrologic Unit 14010001, on left bank 500 ft downstream from Baker Gulch, 1.0 mi upstream from Bowen Gulch, and 5.5 mi northwest of town of Grand Lake.

DRAINAGE AREA.--53.4 mi².

PERIOD OF RECORD.--May 1953 to current year. Daily record for water temperature available, October 1996 to September 1998. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09010500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09010500)

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,750 ft above NGVD of 1929, from topographic map.

REMARKS.--Records poor. Transmountain diversion upstream from station by Grand River ditch (see elsewhere in this report). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	e8.0	e4.5	e4.0	e3.4	e4.0	e4.5	e45	e778	371	40	33
2	14	e7.5	e4.5	e4.0	e3.6	e3.7	e4.8	e45	e623	350	31	28
3	16	e8.0	e4.5	e4.0	e3.8	e3.5	e5.0	e50	e567	349	31	28
4	17	e8.0	e4.5	e4.0	e3.8	e3.5	e5.0	e52	e551	333	43	27
5	17	e8.0	e4.5	e4.0	e3.8	e3.6	e5.0	e58	e478	314	33	24
6	16	e7.5	e4.5	e4.0	e3.8	e3.7	e5.2	e60	437	291	31	23
7	16	e7.0	e4.5	e4.0	e3.8	e4.0	e5.4	e60	397	253	30	25
8	16	e6.8	e4.5	e4.0	e3.8	e4.1	e6.0	e56	349	238	29	31
9	15	e6.5	e4.5	e3.8	e4.0	e3.7	e6.6	e58	368	238	30	30
10	15	e6.0	e4.5	e3.5	e4.0	e3.6	e6.8	e60	433	219	29	29
11	15	e6.0	e5.0	e3.5	e4.0	e3.5	e7.0	e60	465	202	27	31
12	14	e6.0	e5.2	e3.5	e4.0	e3.5	e8.0	e68	469	192	27	32
13	13	e6.0	e5.0	e3.5	e4.0	e3.7	e15	e70	458	185	33	31
14	13	e6.0	e4.8	e3.5	e3.5	e3.8	e25	e80	484	174	30	28
15	13	e6.0	e4.6	e3.5	e3.2	e3.8	e32	e90	508	169	24	26
16	13	e6.5	e4.4	e3.5	e3.0	e3.9	e33	e100	511	160	24	26
17	12	e6.5	e4.2	e3.5	e3.2	e3.9	e36	e110	486	180	68	26
18	13	e6.5	e4.0	e3.2	e3.5	e3.9	e40	e98	513	230	75	26
19	13	e6.5	e4.0	e3.2	e3.5	e4.0	e30	e100	518	202	51	28
20	12	e6.0	e4.0	e3.2	e3.5	e4.0	e28	e130	487	208	43	26
21	12	e5.0	e4.0	e3.2	e3.5	e4.1	e27	e180	468	192	37	24
22	e11	e5.0	e4.0	e3.2	e3.5	e4.1	e29	215	454	163	32	23
23	e10	e5.0	e4.0	e3.2	e3.5	e4.2	e32	249	452	151	34	22
24	e9.5	e5.0	e4.0	e3.2	e3.5	e4.2	e40	305	460	132	40	21
25	e9.0	e5.0	e4.0	e3.2	e3.5	e4.2	e42	e366	428	125	34	20
26	e8.0	e5.0	e4.0	e3.2	e3.8	e4.4	e50	e383	369	121	34	19
27	e7.5	e5.0	e4.0	e3.2	e4.0	e4.2	e40	e458	358	112	31	19
28	e7.0	e5.0	e4.0	e3.2	e4.2	e4.0	e40	e549	377	90	31	18
29	e7.0	e4.5	e4.0	e3.2	---	e3.8	e41	e633	384	52	28	18
30	e7.5	e4.5	e4.0	e3.2	---	e4.0	e43	e706	384	46	31	18
31	e8.0	---	e4.0	e3.2	---	e4.2	---	e800	---	42	40	---
TOTAL	382.5	184.3	134.2	108.6	102.7	120.8	692.3	6,294	14,014	6,084	1,101	760
MEAN	12.3	6.14	4.33	3.50	3.67	3.90	23.1	203	467	196	35.5	25.3
MAX	17	8.0	5.2	4.0	4.2	4.4	50	800	778	371	75	33
MIN	7.0	4.5	4.0	3.2	3.0	3.5	4.5	45	349	42	24	18
AC-FT	759	366	266	215	204	240	1,370	12,480	27,800	12,070	2,180	1,510

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2003, BY WATER YEAR (WY)

	23.7	15.2	9.89	7.96	7.15	7.69	27.5	171	313	112	33.9	26.8
MEAN	23.7	15.2	9.89	7.96	7.15	7.69	27.5	171	313	112	33.9	26.8
MAX	83.7	37.2	20.2	12.8	10.6	12.1	74.5	329	596	425	104	78.1
(WY)	(1962)	(1962)	(1998)	(1985)	(1984)	(1999)	(1962)	(1996)	(1997)	(1983)	(1983)	(1997)
MIN	9.25	6.14	4.33	3.50	3.67	3.90	9.11	65.7	69.8	24.4	11.1	11.8
(WY)	(1957)	(2003)	(2003)	(2003)	(2003)	(2003)	(1991)	(1995)	(1954)	(2002)	(1954)	(1956)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1953 - 2003

ANNUAL TOTAL	9,106.7	29,978.4	
ANNUAL MEAN	24.9	82.1	63.3
HIGHEST ANNUAL MEAN			109 1983
LOWEST ANNUAL MEAN			26.3 1954
HIGHEST DAILY MEAN	191	Jun 2	916 Jun 30, 1957
LOWEST DAILY MEAN	e4.0	Dec 18	a3.0 Jan 13, 1963
ANNUAL SEVEN-DAY MINIMUM	e4.0	Dec 18	3.2 Jan 18, 2003
MAXIMUM PEAK FLOW		Not determined	976 Jun 30, 1957
MAXIMUM PEAK STAGE		7.44 Jun 1	b7.19 Jun 30, 1957
ANNUAL RUNOFF (AC-FT)	18,060	59,460	45,870
10 PERCENT EXCEEDS	64	361	190
50 PERCENT EXCEEDS	12	13	18
90 PERCENT EXCEEDS	5.0	3.5	6.5

e Estimated.

a Also occurred Feb. 16, 2003.

b Maximum gage height, 7.44 ft, Jun 1, 2003, backwater from debris.

**09018500 LAKE GRANBY NEAR GRANBY, CO**

LOCATION.--Lat 40°10'55", long 105°52'14", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ , sec.35, T.3 N., R.76 W., Grand County, Hydrologic Unit 14010001, in Granby pumping plant at north shore of lake, 2.5 mi north of Granby Dam on Colorado River and 7.5 mi northeast of Granby.

DRAINAGE AREA.--312 mi<sup>2</sup>.

**RESERVOIR ELEVATIONS AND CONTENTS RECORDS**

PERIOD OF RECORD.--October 1949 to current year. Prior to October 1955, published as Granby Reservoir near Granby. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09018500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09018500)

REVISED RECORDS.--WSP2124: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is above NGVD of 1929, (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above NGVD of 1929. Prior to Apr. 9, 1951, nonrecording gage at dam at present datum.

REMARKS.--Lake is formed by earthfill dam and dikes. Regulation began Sept. 13, 1949, and usable storage began June 14, 1950, while dam was under construction. Usable capacity, 465,600 acre-ft, between elevations 8,186.00 ft, trash rack sill at outlet, and 8,280.00 ft, top of radial spillway gates. Dead storage, 74,190 acre-ft. Figures given represent usable contents. Lake is used to store water for pumping to Shadow Mountain Lake for transmountain diversion through Alva B. Adams tunnel for power and irrigation in South Platte River basin. Water-quality data for this site is included under the Three Lakes Water-Quality Study section of this report.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 465,900 acre-ft, July 13, 1962, elevation, 8,280.05 ft; minimum since appreciable storage was attained, 13,070 acre-ft, Apr. 16, 1978, elevation, 8,190.93 ft.

EXTREMES (AT 0800) FOR CURRENT YEAR.--Maximum contents, 328,800 acre-ft, July 30, elevation, 8,259.88 ft; minimum, 14,720 acre-ft, Mar. 17, elevation, 8,191.52 ft.

**MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003**

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30 . . . . .	8,216.64	102,500	-
Oct. 31 . . . . .	8,217.39	105,600	+3,110
Nov. 30 . . . . .	8,212.29	84,910	-20,700
Dec. 31 . . . . .	8,205.52	59,460	-25,450
CAL YR 2002. . . . .	-	-	-183,800
Jan. 31 . . . . .	8,198.33	35,130	-24,330
Feb. 28 . . . . .	8,194.34	22,860	-12,280
Mar. 31 . . . . .	8,192.00	16,060	-6,800
Apr. 30 . . . . .	8,199.04	37,410	+21,350
May 31 . . . . .	8,228.74	156,300	+118,900
June 30 . . . . .	8,256.56	308,100	+151,800
July 31 . . . . .	8,259.75	328,000	+19,810
Aug. 31 . . . . .	8,256.95	310,500	-17,420
Sept. 30 . . . . .	8,254.87	297,800	-12,690
WTR YR 2003. . . . .	-	-	+195,300

**09019500 COLORADO RIVER NEAR GRANBY, CO**

LOCATION.--Lat 40°07'15", long 105°54'00", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.22, T.2 N., R.76 W., Grand County, Hydrologic Unit 14010001, on right bank 0.3 mi upstream from bridge on U.S. Highway 34, 1.3 mi upstream from Willow Creek, and 3.2 mi northeast of Granby.

DRAINAGE AREA.--323 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1907 to September 1911 (published as Grand River near Granby), October 1933 to September 1953. May 1961 to current year (irrigation season only). Monthly discharge only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09019500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09019500)

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,960 ft above NGVD of 1929, from topographic map. June 10, 1908 to Sept. 30, 1911, and May 12 to June 10, 1934, nonrecording gage, at site 300 ft upstream at different datums. June 11, 1934 to Sept. 30, 1953, water-stage recorder at present site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Lake Granby (station 09018500) since Sept. 13, 1949. Several diversions for irrigation of hay meadows upstream from station. Transmountain diversions upstream from station by Eureka and Grand River ditches and Alva B. Adams tunnel (see elsewhere in this report). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES FOR PERIOD OF SEASONAL RECORD.--Maximum discharge, 2,520 ft<sup>3</sup>/s, June 22, 1996, 5.76 ft; minimum daily, 9.6 ft<sup>3</sup>/s, Sept. 21, 1981.

EXTREMES FOR PERIOD OF CONTINUOUS RECORD.--Maximum discharge observed, 4,100 ft<sup>3</sup>/s, June 20, 1909, gage height 5.5 ft site and datum then in use; minimum daily, 6.6 ft<sup>3</sup>/s, Jan. 29, 1950; minimum observed prior to starting construction of Shadow Mountain Lake, 20 ft<sup>3</sup>/s, Apr. 6, 1936 (discharge measurement).

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 115 ft<sup>3</sup>/s, June 12, gage height, 1.37 ft; minimum daily, 16 ft<sup>3</sup>/s, Oct. 3, Nov. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	18	---	---	---	---	---	e90	81	82	42	27
2	18	17	---	---	---	---	---	e90	81	78	38	23
3	16	16	---	---	---	---	---	e90	82	76	37	23
4	18	16	---	---	---	---	---	e90	79	78	39	23
5	23	17	---	---	---	---	---	e90	75	78	38	24
6	22	18	---	---	---	---	---	e89	82	79	39	25
7	24	18	---	---	---	---	---	e89	78	79	40	24
8	18	---	---	---	---	---	---	e89	78	77	39	24
9	18	---	---	---	---	---	---	e87	78	72	37	24
10	18	---	---	---	---	---	---	e86	78	76	35	23
11	18	---	---	---	---	---	---	e85	80	75	36	22
12	18	---	---	---	---	---	---	e85	93	72	36	22
13	18	---	---	---	---	---	---	e85	85	73	39	20
14	18	---	---	---	---	---	---	e82	81	74	43	22
15	18	---	---	---	---	---	---	e82	77	71	43	21
16	19	---	---	---	---	---	---	e82	84	73	43	22
17	19	---	---	---	---	---	---	e80	84	72	44	22
18	19	---	---	---	---	---	---	e80	81	72	42	22
19	19	---	---	---	---	---	---	e80	81	72	39	22
20	19	---	---	---	---	---	---	79	84	73	39	22
21	18	---	---	---	---	---	---	77	79	73	42	21
22	18	---	---	---	---	---	---	78	77	72	41	21
23	19	---	---	---	---	---	---	80	80	73	42	21
24	18	---	---	---	---	---	---	75	78	72	42	21
25	18	---	---	---	---	---	---	76	77	72	42	21
26	18	---	---	---	---	---	---	78	82	73	41	21
27	18	---	---	---	---	---	---	71	80	71	40	22
28	18	---	---	---	---	---	---	73	79	71	40	22
29	18	---	---	---	---	---	---	73	80	75	40	22
30	17	---	---	---	---	---	---	78	80	73	44	22
31	17	---	---	---	---	---	---	81	---	71	45	---
TOTAL	575	---	---	---	---	---	---	2,550	2,414	2,298	1,247	671
MEAN	18.5	---	---	---	---	---	---	82.3	80.5	74.1	40.2	22.4
MAX	24	---	---	---	---	---	---	90	93	82	45	27
MIN	16	---	---	---	---	---	---	71	75	71	35	20
AC-FT	1,140	---	---	---	---	---	---	5,060	4,790	4,560	2,470	1,330

e Estimated.



## 09022000 FRASER RIVER AT UPPER STATION NEAR WINTER PARK, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1994 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09022000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09022000)

REMARKS.--Nutrient analysis based on low-level methods.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
17...	1300	2.7	10.3	7.9	110	2.5	32	6.89	3.50	11.8	<10	<0.015	0.126
NOV													
04...	1400	2.7	10.1	7.9	113	0.0	35	7.64	3.77	13.5	<10	<0.015	0.148
DEC													
13...	1015	2.9	11.4	8.0	105	0.0	28	7.34	2.45	17.1	<10	<0.015	0.182
MAY													
07...	1030	5.1	10.1	8.3	385	2.0	77	19.6	6.77	97.3	<10	<0.015	0.156
JUL													
10...	1330	28	9.9	7.8	73	8.5	25	5.76	2.66	8.66	<10	<0.015	0.037
SEP													
08...	1000	15	9.5	8.6	99	5.0	32	7.41	3.30	12.1	<10	<0.015	0.160

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)
OCT				
17...	<0.002	<0.007	E.002	E.002
NOV				
04...	<0.002	<0.007	<0.004	0.007
DEC				
13...	<0.002	<0.007	E.003	<0.004
MAY				
07...	<0.002	<0.007	E.004	0.005
JUL				
10...	<0.002	<0.007	E.003	E.004
SEP				
08...	<0.002	<0.007	<0.004	0.004

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.



## 09023750 FRASER RIVER BELOW BUCK CREEK AT WINTER PARK, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 39°53'33", long 105°45'49", T.2 S., R.75 W., Grand County, Hydrologic Unit 14010001 on left bank approximately 400 ft upstream from the confluence of Cub Creek and the Fraser River.

DRAINAGE AREA.--25.6 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1990 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09023750](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09023750)

REMARKS.--Nutrient analysis based on low-level methods.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
17...	1210	6.8	10.0	8.4	119	4.0	37	9.37	3.29	11.2	<10	<0.015	0.040
NOV													
07...	1000	3.0	10.2	8.4	137	1.5	39	9.97	3.37	12.9	<10	<0.015	0.085
DEC													
13...	1400	7.1	11.5	7.8	118	1.0	35	8.88	3.21	11.8	<10	<0.015	0.096
JAN													
09...	1230	9.3	11.1	8.0	125	0.0	39	9.47	3.65	13.6	<10	<0.015	0.106
FEB													
11...	1400	5.9	10.9	8.1	123	1.0	38	9.52	3.55	11.9	<10	<0.015	0.094
MAR													
26...	1300	11	11.3	7.8	220	2.5	48	12.0	4.40	43.0	53	<0.015	0.109
APR													
17...	1000	10	9.4	7.8	312	2.0	63	16.0	5.61	70.5	12	<0.015	0.179
MAY													
06...	1145	10	10.7	8.5	272	4.0	56	14.8	4.61	57.1	<10	<0.015	0.104
JUN													
24...	1430	89	8.4	8.0	62	8.5	20	4.81	2.02	6.98	<10	<0.015	0.091
JUL													
10...	1230	12	9.2	8.2	102	10.5	29	7.47	2.50	13.7	<10	<0.015	<0.022
AUG													
05...	1415	11	7.8	7.8	105	11.5	24	6.32	2.11	12.4	<10	<0.015	0.035
SEP													
08...	1050	11	8.8	8.6	110	7.5	35	8.70	3.17	12.6	<10	<0.015	0.089

09023750 FRASER RIVER BELOW BUCK CREEK AT WINTER PARK, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)
OCT 17...	E.002	<0.007	E.003	0.011
NOV 07...	<0.002	<0.007	E.003	0.014
DEC 13...	<0.002	<0.007	E.003	0.017
JAN 09...	<0.002	<0.007	<0.004	0.014
FEB 11...	<0.002	<0.007	E.003	0.014
MAR 26...	E.002	<0.007	E.003	0.059
APR 17...	<0.002	<0.007	0.004	0.020
MAY 06...	E.002	<0.007	E.003	0.019
JUN 24...	<0.002	<0.007	E.004	0.009
JUL 10...	<0.002	<0.007	0.006	0.007
AUG 05...	<0.002	<0.007	0.005	0.013
SEP 08...	<0.002	<0.007	0.005	0.010

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.



## 09025000 VASQUEZ CREEK AT WINTER PARK, CO

LOCATION.--Lat 39°55'13", long 105°47'05", in NE¼NW¼ sec.33, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank 30 ft downstream from bridge on U.S. Highway 40, 0.2 mi upstream from mouth, 2.5 mi southeast of Fraser, and 4.5 mi downstream from Moffat water tunnel diversion.

DRAINAGE AREA.--27.8 mi<sup>2</sup>.

PERIOD OF RECORD.--June to August 1907, July to November 1909, October 1933 to current year. Monthly discharge only for some periods, published in WSP 1313. Records for June to October 1908, published in WSP 269, are unreliable and should not be used. Published as Vasquez River at lower station, near Fraser 1907-09, as "near West Portal" 1934-39, and as "near Winter Park" 1940-87. Records for May 26, 1937 to September 1959, equivalent to earlier records if diversion to Moffat water tunnel is added to flow past station. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09025000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09025000)

REVISED RECORDS.--See PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 8,768.48 ft above NGVD of 1929. June 1, 1907 to Oct. 31, 1909, nonrecording gage at site 0.8 mi upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station to Moffat water tunnel not known since 1959. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	e6.2	e7.5	5.4	e4.8	e3.8	e3.7	e8.0	e100	43	12	11
2	5.1	e6.4	e7.5	5.4	e4.6	e3.8	e3.7	e8.0	e50	32	13	11
3	5.4	e6.4	e7.4	5.4	e4.4	e3.8	e3.7	e7.8	e30	15	12	11
4	5.5	e6.4	e7.3	5.6	e4.2	e3.8	e3.7	e8.0	e28	15	12	11
5	5.2	e6.4	e7.2	5.8	e4.2	e3.8	e3.7	e7.2	e27	15	12	11
6	5.3	e6.4	e7.4	5.7	e4.2	e3.8	e3.7	e7.2	e23	15	12	11
7	6.5	e6.4	e7.6	5.4	e4.2	e3.8	e3.7	e7.2	e22	14	12	11
8	5.5	e6.4	e7.8	5.4	e4.2	e3.8	e3.2	e8.2	e19	14	12	11
9	4.4	e6.4	e8.0	6.0	e4.2	e3.8	e4.0	e9.2	20	14	12	12
10	4.6	e6.4	e8.0	7.2	e4.2	e3.6	e4.8	e10	26	14	12	11
11	4.8	e6.4	e8.5	7.6	e4.2	e3.6	e5.2	e9.0	37	13	12	11
12	4.8	e6.4	e8.6	7.2	e4.2	e3.6	e5.6	e8.8	66	13	12	11
13	4.8	e6.4	e8.4	6.2	e4.2	e3.6	e6.0	e11	95	13	12	11
14	4.8	e6.4	e8.2	6.0	e4.2	e3.6	e6.8	e13	98	13	12	11
15	4.7	e6.4	e8.0	6.1	e4.2	e3.6	e7.0	16	94	13	12	11
16	4.4	e6.4	e7.8	6.1	e4.0	e3.8	e6.8	24	61	13	12	7.2
17	4.4	e6.4	e7.4	5.9	e4.0	e3.7	e6.4	26	18	14	22	6.3
18	4.3	e6.4	e7.0	5.8	e3.9	e3.7	e6.0	27	17	14	14	6.2
19	4.2	e6.4	e6.8	5.8	e3.9	e3.7	e6.0	29	40	13	11	6.2
20	4.3	e6.4	e6.6	5.8	e3.8	e3.7	e6.4	e32	88	15	11	6.1
21	4.8	e6.4	e6.4	5.8	e3.8	e3.7	e6.0	e28	122	13	11	6.1
22	5.0	e6.4	e6.2	5.8	e3.8	e3.7	e5.5	e23	115	13	11	5.8
23	e4.8	e6.4	e6.0	5.8	e3.7	e3.7	e6.0	e19	112	13	11	5.7
24	e5.4	e6.4	e6.0	5.8	e3.6	e3.7	e6.5	e32	109	13	11	5.4
25	e5.6	e6.4	e5.8	5.8	e3.6	e3.7	e7.0	e40	99	13	11	5.6
26	e5.8	e6.6	e5.5	5.7	e3.7	e3.7	e7.2	e54	91	13	11	5.7
27	e6.0	e6.8	e5.4	5.4	e3.8	e3.7	e7.5	e75	73	13	11	5.6
28	e6.2	e6.9	e5.4	5.4	e3.7	e3.7	e7.8	e100	51	12	11	5.5
29	e6.5	e7.0	e5.4	5.4	---	e3.8	e7.8	e110	47	12	11	5.5
30	e6.8	e7.0	e5.5	e5.0	---	e3.8	e8.0	e100	44	13	12	12
31	e7.0	---	5.6	e4.8	---	e3.8	---	e105	---	12	11	---
TOTAL	162.0	194.1	216.2	180.5	113.5	115.4	169.4	962.6	1,822	465	373	260.9
MEAN	5.23	6.47	6.97	5.82	4.05	3.72	5.65	31.1	60.7	15.0	12.0	8.70
MAX	7.0	7.0	8.6	7.6	4.8	3.8	8.0	110	122	43	22	12
MIN	4.2	6.2	5.4	4.8	3.6	3.6	3.2	7.2	17	12	11	5.4
AC-FT	321	385	429	358	225	229	336	1,910	3,610	922	740	517

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

MEAN	6.08	6.64	5.61	4.99	4.66	4.79	7.63	26.7	66.3	22.5	8.23	6.89
MAX	35.1	21.9	13.4	10.0	9.99	9.14	19.8	119	234	177	41.2	27.0
(WY)	(1962)	(1962)	(1962)	(1958)	(1958)	(1995)	(1943)	(1958)	(1942)	(1983)	(1936)	(1995)
MIN	0.66	1.84	1.30	1.28	0.80	1.02	2.41	2.81	0.14	0.34	0.39	0.20
(WY)	(1965)	(1963)	(1965)	(1965)	(1960)	(1965)	(1965)	(1954)	(1940)	(1956)	(1960)	(1944)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1934 - 2003

ANNUAL TOTAL	2,398.0	5,034.6	
ANNUAL MEAN	a6.57	a13.8	a14.2
HIGHEST ANNUAL MEAN			39.6 1936
LOWEST ANNUAL MEAN			2.30 1963
HIGHEST DAILY MEAN	9.2 Jun 15	122 Jun 21	417 Jun 25, 1983
LOWEST DAILY MEAN	2.9 Aug 15	e3.2 Apr 8	b0.00 Sep 9, 1944
ANNUAL SEVEN-DAY MINIMUM	2.9 Aug 14	e3.6 Mar 9	0.00 Sep 9, 1944
MAXIMUM PEAK FLOW		not determined	c526 Jun 27, 1983
MAXIMUM PEAK STAGE		not determined	4.14 Jun 27, 1983
ANNUAL RUNOFF (AC-FT)	a4,760	a9,990	a10,300
10 PERCENT EXCEEDS	8.2	27	21
50 PERCENT EXCEEDS	6.5	6.4	6.0
90 PERCENT EXCEEDS	4.5	3.8	1.6

e Estimated.

a Significantly affected by upstream diversions into the Moffat water tunnel.

b Also no flow at times in 1946, 1956, 1960, and 1966.

c From rating curve extended above 286 ft<sup>3</sup>/s.

## 09025010 FRASER RIVER BELOW VASQUEZ CREEK AT WINTER PARK, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 39°55'40", long 105°47'08", SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.28, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on left bank approximately 1,500 ft downstream from the confluence of Vasquez Creek and the Fraser River.

DRAINAGE AREA.--59 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1990 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09025010](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09025010)

REMARKS.--Nutrient analysis based on low-level methods.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
17...	1115	11	10.7	8.0	96	2.0	32	8.59	2.56	7.76	<10	<0.015	0.040
NOV													
04...	1215	11	10.4	8.2	103	0.0	32	8.49	2.58	8.07	<10	<0.015	0.124
DEC													
13...	1245	16	12.2	8.2	105	0.0	34	8.14	3.31	7.67	<10	0.017	0.277
JAN													
09...	1100	14	11.1	8.0	116	0.0	38	8.75	3.97	8.81	<10	E.012	1.10
FEB													
11...	1300	13	10.2	8.1	106	0.0	34	8.35	3.14	7.49	<10	<0.015	0.870
MAR													
26...	1130	18	11.4	8.2	185	1.0	44	10.5	4.23	30.7	<10	E.008	1.31
APR													
17...	1100	20	9.2	8.0	208	2.0	50	12.8	4.41	39.3	10	<0.015	0.430
MAY													
06...	1015	20	10.9	8.2	181	3.0	45	11.9	3.73	31.9	<10	<0.015	0.179
JUN													
24...	1330	348	8.9	8.0	47	8.5	16	4.29	1.35	3.96	<10	<0.015	0.064
JUL													
10...	1030	22	10.3	8.8	78	10.0	26	6.80	2.11	7.78	<10	<0.015	<0.022
AUG													
05...	1315	24	7.8	7.8	80	14.0	25	6.59	2.17	7.09	<10	<0.015	0.160
SEP													
08...	1130	24	8.8	8.0	87	9.0	30	8.32	2.35	7.80	<10	<0.015	0.082

09025010 FRASER RIVER BELOW VASQUEZ CREEK AT WINTER PARK, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)
OCT 17...	E.002	0.011	0.016	0.025
NOV 04...	<0.002	0.009	0.014	0.038
DEC 13...	0.006	0.020	0.025	0.049
JAN 09...	0.005	0.086	0.092	0.124
FEB 11...	0.003	0.053	0.064	0.088
MAR 26...	0.004	0.093	0.101	0.180
APR 17...	E.002	0.014	0.021	0.062
MAY 06...	0.003	E.004	0.010	0.042
JUN 24...	<0.002	<0.007	0.007	0.015
JUL 10...	<0.002	E.005	0.009	0.018
AUG 05...	E.002	0.016	0.025	0.037
SEP 08...	<0.002	0.008	0.015	0.026

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## 09025300 ELK CREEK AT UPPER STATION NEAR FRASER, CO

LOCATION.--Lat 39°53'22", long 105°49'55", (unsurveyed), T.2 S., R.76 W., Grand County, Hydrologic Unit 14010001, on right bank 150 ft downstream from Main Elk dam on the St. Louis collection system, 1,100 ft upstream from aqueduct, and 4.0 mi south of Fraser.

DRAINAGE AREA.--1.67 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1996 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09025300](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09025300)

GAGE.--Water-stage recorder. Elevation of gage is 9,400 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station to Moffat water tunnel. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.61	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.3	e13	8.9	1.7	1.5
2	0.62	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.1	e14	7.7	1.7	1.4
3	0.64	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.1	e15	5.9	1.9	1.4
4	0.62	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.0	e11	5.6	1.9	1.4
5	0.64	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.0	e9.0	5.0	1.7	1.3
6	0.67	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e2.9	e6.4	4.7	1.6	1.4
7	0.67	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.4	e6.3	4.3	1.6	1.8
8	0.65	e0.00	e0.00	e0.00	e0.00	e0.00	e0.00	e3.6	e6.2	4.0	1.5	1.6
9	0.62	e0.00	e0.00	e0.00	e0.00	e0.00	e1.0	e3.8	e6.1	3.8	1.4	2.0
10	0.61	e0.00	e0.00	e0.00	e0.00	e0.00	e1.3	e3.9	e7.0	3.9	1.4	1.7
11	0.61	e0.00	e0.00	e0.00	e0.00	e0.00	e1.5	e3.5	e8.0	3.9	1.4	1.6
12	0.60	e0.00	e0.00	e0.00	e0.00	e0.00	e1.7	e3.0	e9.0	4.0	1.4	1.5
13	e0.57	e0.00	e0.00	e0.00	e0.00	e0.00	e1.8	e2.8	e11	4.0	1.4	1.3
14	e0.59	e0.00	e0.00	e0.00	e0.00	e0.00	e2.0	e3.5	17	3.8	1.3	1.2
15	e0.65	e0.00	e0.00	e0.00	e0.00	e0.00	e2.2	e4.2	18	3.7	1.3	1.2
16	e0.57	e0.00	e0.00	e0.00	e0.00	e0.00	e2.4	e5.0	12	3.6	2.1	1.2
17	e0.58	e0.00	e0.00	e0.00	e0.00	e0.00	e2.4	e6.0	6.1	3.4	2.1	1.2
18	e0.58	e0.00	e0.00	e0.00	e0.00	e0.00	e2.3	e6.8	6.5	3.3	2.4	1.2
19	e0.58	e0.00	e0.00	e0.00	e0.00	e0.00	e2.2	e7.8	13	3.1	1.6	1.2
20	e0.55	e0.00	e0.00	e0.00	e0.00	e0.00	e2.1	e8.5	18	3.4	1.5	1.2
21	e0.48	e0.00	e0.00	e0.00	e0.00	e0.00	e2.3	e9.2	18	2.9	1.4	1.2
22	e0.39	e0.00	e0.00	e0.00	e0.00	e0.00	e2.2	e8.0	17	2.7	1.4	1.1
23	e0.38	e0.00	e0.00	e0.00	e0.00	e0.00	e2.1	e7.0	16	2.5	1.5	1.1
24	e0.39	e0.00	e0.00	e0.00	e0.00	e0.00	e2.2	e6.0	15	2.4	1.7	1.1
25	e0.40	e0.00	e0.00	e0.00	e0.00	e0.00	e2.4	e8.5	14	2.4	2.1	0.98
26	e0.41	e0.00	e0.00	e0.00	e0.00	e0.00	e2.5	e9.5	12	2.3	1.8	0.97
27	e0.38	e0.00	e0.00	e0.00	e0.00	e0.00	e2.6	e12	11	2.2	1.5	0.96
28	e0.37	e0.00	e0.00	e0.00	e0.00	e0.00	e2.8	e15	11	2.1	1.5	0.97
29	e0.37	e0.00	e0.00	e0.00	---	e0.00	e2.9	e20	10	2.1	1.4	0.97
30	e0.40	e0.00	e0.00	e0.00	---	e0.00	e3.0	e14	9.2	2.0	1.7	0.89
31	e0.45	---	e0.00	e0.00	---	e0.00	---	e15	---	1.9	1.6	---
TOTAL	16.65	0.00	0.00	0.00	0.00	0.00	47.90	208.4	345.8	115.5	50.5	38.54
MEAN	0.54	0.000	0.000	0.000	0.000	0.000	1.60	6.72	11.5	3.73	1.63	1.28
MAX	0.67	0.00	0.00	0.00	0.00	0.00	3.0	20	18	8.9	2.4	2.0
MIN	0.37	0.00	0.00	0.00	0.00	0.00	0.00	2.8	6.1	1.9	1.3	0.89
AC-FT	33	0.00	0.00	0.00	0.00	0.00	95	413	686	229	100	76

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)

MEAN	0.50	0.10	0.096	0.091	0.066	0.060	0.33	1.83	7.41	2.52	1.31	0.91
MAX	0.77	0.68	0.67	0.64	0.47	0.41	1.60	6.72	16.3	3.73	2.03	1.28
(WY)	(1997)	(1997)	(1997)	(1997)	(1997)	(1997)	(2003)	(2003)	(1997)	(2003)	(1999)	(2003)
MIN	0.22	0.000	0.000	0.000	0.000	0.000	0.000	0.17	2.27	0.92	0.62	0.57
(WY)	(2002)	(1998)	(1998)	(1998)	(1998)	(1999)	(1999)	(1997)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1997 - 2003

ANNUAL TOTAL	201.95	823.29	
ANNUAL MEAN	a0.55	a2.26	a1.27
HIGHEST ANNUAL MEAN			2.26 2003
LOWEST ANNUAL MEAN			0.53 2002
HIGHEST DAILY MEAN	3.3 Jun 3	e20 May 29	b20 Jun 10, 1997
LOWEST DAILY MEAN	e0.00 Jan 1	c,e0.00 Nov 1	d0.00 May 7, 1997
ANNUAL SEVEN-DAY MINIMUM	e0.00 Jan 1	e0.00 Nov 1	0.00 May 7, 1997
MAXIMUM PEAK FLOW		not determined	22 Jun 10, 1997
MAXIMUM PEAK STAGE		not determined	5.69 Jun 10, 1997
ANNUAL RUNOFF (AC-FT)	a401	a1,630	a918
10 PERCENT EXCEEDS	1.7	7.3	2.9
50 PERCENT EXCEEDS	0.45	0.62	0.43
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated.

a Significantly affected by upstream diversions into the Moffat water tunnel.

b Also occurred May 29, 2003.

c No flow many days. Many values estimated.

d No flow many days each year.





## 09027100 FRASER RIVER AT TABERNASH, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 39°59'25", long 105°49'44", SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.6, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank approximately 100 ft upstream from the county road bridge over the Fraser River.

DRAINAGE AREA.--119 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1990 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09027100](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09027100)

REVISED RECORDS.--WDR CO-93-2: Drainage area.

REMARKS.--Nutrient analysis based on low-level methods.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT													
17...	1015	11	11.9	8.7	138	3.0	51	15.1	3.12	7.41	<10	<0.015	0.231
NOV													
04...	1125	11	11.5	8.2	129	1.0	46	13.6	2.99	7.79	<10	<0.015	0.358
DEC													
13...	1115	12	9.2	7.2	135	0.0	47	13.2	3.34	8.89	<10	0.089	0.740
JAN													
09...	0900	22	8.8	7.4	143	0.0	46	12.4	3.54	8.89	<10	0.428	1.25
FEB													
11...	0930	18	9.5	8.1	140	0.0	43	11.5	3.40	9.28	<10	0.463	1.27
MAR													
26...	1000	23	10.4	7.7	178	0.0	47	12.7	3.65	21.7	<10	0.593	1.25
APR													
17...	1200	37	8.4	8.2	175	5.5	50	14.0	3.59	3.32	<10	E.010	0.349
MAY													
07...	1215	50	11.2	9.0	146	6.5	43	12.3	3.04	19.5	<10	<0.015	0.310
JUN													
24...	1130	381	9.3	8.2	50	8.5	20	5.93	1.28	2.53	<10	<0.015	0.047
JUL													
10...	1130	24	9.6	8.6	104	16.0	37	10.9	2.41	8.08	<10	0.033	0.073
AUG													
05...	1115	44	9.0	9.1	99	16.0	30	8.71	2.05	6.48	<10	0.023	0.289
SEP													
08...	1215	49	8.5	8.8	100	13.5	39	11.5	2.49	6.56	<10	0.040	0.228

## 09027100 FRASER RIVER AT TABERNASH, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)
OCT 17...	0.005	0.029	0.040	0.075
NOV 04...	0.005	0.031	0.043	0.070
DEC 13...	0.008	0.041	0.053	0.085
JAN 09...	0.012	0.125	0.137	0.180
FEB 11...	0.011	0.140	0.165	0.18
MAR 26...	0.011	0.136	0.150	0.22
APR 17...	0.005	0.009	0.019	0.049
MAY 07...	0.011	0.026	0.041	0.108
JUN 24...	<0.002	E.005	0.011	0.024
JUL 10...	0.019	0.054	0.075	0.094
AUG 05...	0.034	0.074	0.096	0.126
SEP 08...	0.017	0.063	0.080	0.122

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## 09032000 RANCH CREEK NEAR FRASER, CO

LOCATION.--Lat 39°57'00", long 105°45'54", in NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.22. T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on left bank 650 ft downstream from Middle Fork, and 2.7 mi east of Fraser.

DRAINAGE AREA.--19.9 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1934 to current year. Records for May 26, 1937, to September 1959, equivalent to earlier records if diversion to Moffat water tunnel is added to flow past station. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09032000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09032000)

REVISED RECORDS.--WSP 1243: 1935.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,660 ft above NGVD of 1929, from topographic map. Prior to Oct. 5, 1995, at site 200 ft upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversion upstream from station for irrigation of hay meadows along Fraser River. Transmountain diversions upstream from station to Moffat water tunnel not known since 1959.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	2.1	2.2	2.5	2.7	2.6	3.2	4.9	e270	e20	4.5	7.8
2	1.7	1.9	2.1	2.5	2.8	2.7	3.3	5.0	e250	e10	4.4	7.4
3	1.8	1.8	2.1	2.5	2.5	2.9	3.2	5.5	e160	e8.5	4.5	7.8
4	1.8	2.1	2.1	2.5	2.6	3.1	2.8	5.6	e100	7.6	4.7	7.9
5	1.9	1.8	2.0	2.5	2.6	2.9	2.9	5.1	68	7.2	4.9	7.8
6	1.9	1.9	2.1	2.5	2.5	2.8	2.7	4.9	50	7.0	5.2	8.3
7	1.8	2.0	2.1	2.5	2.5	2.8	2.4	5.1	29	6.8	5.2	11
8	1.8	2.0	2.1	2.6	3.2	2.7	2.4	5.2	23	6.0	5.1	9.4
9	1.7	2.0	2.1	2.7	3.3	2.7	2.7	5.2	24	4.9	5.2	8.7
10	1.7	1.9	2.3	2.7	3.1	2.8	3.1	6.6	34	5.1	5.1	8.2
11	1.7	1.9	2.5	2.7	2.9	2.9	3.5	4.6	55	5.2	5.7	7.9
12	1.6	1.8	2.4	2.6	2.9	2.8	3.7	5.6	87	5.2	6.3	7.9
13	1.7	1.9	2.4	2.5	3.2	2.8	4.1	7.5	114	5.0	6.2	7.5
14	1.7	1.9	2.3	2.5	3.0	2.9	4.6	9.8	116	4.7	6.0	6.9
15	1.7	1.8	2.3	2.5	2.7	3.0	4.8	13	124	4.3	6.1	6.8
16	1.7	1.9	2.3	2.5	2.8	3.0	3.8	e30	94	4.5	7.4	6.6
17	1.7	1.9	2.2	2.7	2.8	3.0	3.9	e70	61	4.5	9.4	6.3
18	1.7	1.9	2.2	2.7	2.9	e3.1	3.8	e100	67	4.5	9.9	5.9
19	1.7	1.9	2.2	2.6	2.7	e3.2	3.3	e110	88	4.5	8.0	5.8
20	1.8	1.9	2.2	2.8	2.8	e3.3	3.2	e90	103	6.9	7.4	5.7
21	1.8	1.9	2.2	2.8	2.9	e3.4	3.5	e70	102	5.7	7.1	5.6
22	1.6	1.9	2.2	2.6	3.0	3.4	3.9	53	93	4.8	7.0	5.5
23	1.8	1.9	2.3	2.6	2.8	3.3	4.4	88	93	4.7	7.2	5.5
24	1.8	1.9	2.3	2.7	2.7	3.3	e4.8	e130	93	4.7	7.4	5.4
25	1.8	1.9	2.3	2.6	2.8	2.9	5.0	e150	77	4.7	8.0	5.3
26	1.8	2.0	2.3	2.4	2.9	3.2	5.2	e170	66	4.7	7.6	5.4
27	1.9	2.1	2.3	2.6	2.8	2.9	5.2	e200	62	4.7	7.4	5.4
28	1.8	2.1	2.4	2.6	2.8	2.6	5.0	e230	61	4.6	7.2	5.4
29	1.8	2.2	2.5	2.4	---	2.6	5.1	e280	60	4.7	7.1	5.4
30	2.3	2.2	2.4	2.5	---	2.6	5.2	e250	e40	4.7	9.6	5.6
31	2.0	---	2.5	2.4	---	2.9	---	e260	---	4.6	8.9	---
TOTAL	55.2	58.4	69.9	79.8	79.2	91.1	114.7	2,374.6	2,664	185.0	205.7	206.1
MEAN	1.78	1.95	2.25	2.57	2.83	2.94	3.82	76.6	88.8	5.97	6.64	6.87
MAX	2.3	2.2	2.5	2.8	3.3	3.4	5.2	280	270	20	9.9	11
MIN	1.6	1.8	2.0	2.4	2.5	2.6	2.4	4.6	23	4.3	4.4	5.3
AC-FT	109	116	139	158	157	181	228	4,710	5,280	367	408	409

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2003, BY WATER YEAR (WY)

MEAN	4.73	4.11	3.39	3.01	2.70	2.63	5.25	30.9	75.7	24.2	7.32	4.95
MAX	19.6	14.6	8.11	5.63	4.65	5.34	17.4	99.4	206	136	27.3	13.8
(WY)	(1962)	(1962)	(1962)	(1962)	(1966)	(1950)	(1946)	(1936)	(1997)	(1995)	(1945)	(1945)
MIN	0.98	1.09	0.87	0.89	0.74	0.65	1.61	3.69	2.68	1.86	1.20	0.98
(WY)	(1969)	(1965)	(1965)	(1964)	(1964)	(1964)	(1961)	(1954)	(1966)	(2002)	(2002)	(1960)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1935 - 2003

ANNUAL TOTAL	901.56	6,183.7	
ANNUAL MEAN	a2.47	a16.9	a14.1
HIGHEST ANNUAL MEAN			31.4 1983
LOWEST ANNUAL MEAN			2.55 1964
HIGHEST DAILY MEAN	6.2 May 24	e280 May 29	402 Jun 7, 1997
LOWEST DAILY MEAN	0.72 Aug 13	1.6 Oct 12	60.40 Sep 21, 1960
ANNUAL SEVEN-DAY MINIMUM	0.92 Aug 9	1.7 Oct 9	0.42 Sep 21, 1988
MAXIMUM PEAK FLOW		not determined	548 Jun 4, 1997
MAXIMUM PEAK STAGE		not determined	6.71 Jun 4, 1997
ANNUAL RUNOFF (AC-FT)	a1,790	a12,270	a10,190
10 PERCENT EXCEEDS	4.3	60	29
50 PERCENT EXCEEDS	2.1	3.2	4.0
90 PERCENT EXCEEDS	1.3	1.9	1.8

e Estimated.

a Significantly affected by upstream diversions into the Moffat water tunnel.

b Also occurred Oct 6, 1960, and Sep 24-26, 1988.

09032000 RANCH CREEK NEAR FRASER, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1997 to September 2001. January to September 2003. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09032000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09032000)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
JAN 07...	1530	5.5	12.1	8.1	58	0.0	0.45	<10	<0.015	0.102	<0.002	<0.007	E.004
FEB 10...	1030	2.9	10.7	8.4	58	0.0	0.56	<10	<0.015	0.102	<0.002	E.004	0.005
MAR 24...	1100	3.4	10.8	8.2	61	0.0	0.55	<10	<0.015	0.081	<0.002	<0.007	0.006
APR 25...	1130	4.9	11.2	8.4	59	0.0	0.69	<10	<0.015	0.072	<0.002	<0.007	0.008
MAY 07...	1315	5.5	11.7	8.0	56	2.5	0.87	<10	<0.015	0.028	<0.002	<0.007	0.007
JUN 24...	1230	66	9.3	8.3	25	6.5	E.19	<10	<0.015	0.050	<0.002	<0.007	E.003
JUL 08...	1530	5.3	8.6	8.0	37	13.5	E.19	<10	<0.015	<0.022	<0.002	<0.007	0.004
AUG 05...	1215	5.3	8.6	7.8	40	10.0	E.17	<10	<0.015	<0.022	<0.002	<0.007	0.005
SEP 08...	1500	8.8	8.2	7.9	47	9.5	0.27	<10	<0.015	0.027	<0.002	<0.007	0.006

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
JAN 07...	0.009	<1
FEB 10...	0.009	<1
MAR 24...	0.011	<1
APR 25...	0.030	<1
MAY 07...	0.017	<1
JUN 24...	0.007	E1
JUL 08...	0.004	<1
AUG 05...	0.005	<1
SEP 08...	0.011	<1

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 21...	1445	2.0	57	0.0	DEC 11...	0945	2.5	46	--

## 09032100 CABIN CREEK NEAR FRASER, CO

LOCATION.--Lat 39°59'09", long 105°44'40", in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec.2, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on left bank 200 ft downstream from concrete diversion dam, 2.7 mi upstream from mouth, and 4.6 mi northeast of Fraser.

DRAINAGE AREA.--4.87 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1983 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09032100](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09032100)

GAGE.--Water-stage recorder. Elevation of gage is 9,560 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station to Moffat water tunnel, amount unknown. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	e3.2	e1.3	e1.2	e1.0	e1.1	e1.1	e2.9	77	8.6	6.8	6.8
2	2.4	e3.0	e1.3	e1.2	e1.0	e1.1	e1.2	e3.1	50	8.8	6.5	6.8
3	2.6	e2.9	e1.3	e1.2	e1.0	e1.1	e1.3	e3.5	36	9.2	6.8	6.8
4	2.5	e2.8	e1.3	e1.2	e1.1	e1.0	e1.4	e3.8	28	8.8	7.1	6.7
5	2.6	e2.8	e1.3	e1.2	e1.2	e0.95	e1.3	e4.1	28	8.1	6.4	6.5
6	2.8	e2.8	e1.3	e1.2	e1.2	e0.90	e1.2	e3.8	27	8.9	6.2	6.7
7	3.1	e2.8	e1.3	e1.2	e1.2	e0.90	e1.2	e4.0	24	9.5	6.4	11
8	3.2	e2.2	e1.3	e1.2	e1.2	e0.90	e1.1	e4.2	22	8.0	6.0	9.8
9	2.9	e2.1	e1.3	e1.2	e1.2	e0.90	e1.0	e4.3	23	6.2	6.0	9.5
10	2.6	e2.0	e1.5	e1.2	e1.2	e0.90	e1.0	e4.5	20	6.5	5.7	9.6
11	2.5	e1.8	e1.6	e1.2	e1.2	e0.90	e1.3	e4.8	15	7.0	5.2	9.4
12	2.3	e1.5	e1.6	e1.2	e1.2	e0.90	e1.4	e5.2	11	7.1	6.1	8.7
13	2.2	e1.4	e1.4	e1.1	e1.2	e0.90	e1.5	e5.8	10	6.6	5.5	8.2
14	2.2	e1.4	e1.4	e1.0	e1.2	e0.90	e1.4	e6.0	9.3	6.7	5.0	7.8
15	2.1	e1.4	e1.4	e1.0	e1.2	e0.90	e1.4	e7.0	9.6	7.2	4.7	4.8
16	2.0	e1.4	e1.4	e1.0	e1.1	e0.90	e1.3	e8.0	8.6	7.3	7.0	2.5
17	1.9	e1.4	e1.4	e1.0	e1.0	e0.90	e1.3	e10	11	7.3	9.6	2.5
18	2.0	e1.4	e1.4	e1.0	e1.0	e0.90	e1.3	e23	19	7.1	9.6	2.4
19	1.9	e1.4	e1.4	e1.0	e1.0	e0.90	e1.2	e21	18	7.0	7.0	2.0
20	2.0	e1.4	e1.4	e1.0	e1.0	e0.90	e1.2	e20	8.8	7.3	6.4	1.9
21	e2.9	e1.4	e1.4	e1.0	e1.0	e0.90	e1.3	e30	8.2	7.0	6.3	1.7
22	e2.6	e1.4	e1.4	e1.0	e1.0	e0.90	e1.4	e33	7.9	6.9	6.1	1.6
23	e2.5	e1.4	e1.4	e1.0	e1.0	e0.90	e1.5	e32	7.6	6.9	6.6	1.7
24	e2.5	e1.4	e1.4	e1.0	e1.0	e0.90	e1.6	e31	7.7	7.0	6.5	1.5
25	e2.6	e1.4	e1.4	e1.0	e1.0	e0.90	e1.7	e33	7.6	6.9	7.2	1.5
26	e2.7	e1.4	e1.4	e1.0	e1.0	e0.90	e1.7	e35	7.4	6.7	6.4	1.6
27	e2.4	e1.4	e1.4	e1.0	e1.0	e0.90	e1.7	e37	7.6	6.8	5.6	1.6
28	e2.3	e1.4	e1.4	e1.0	e1.0	e0.90	e1.8	e40	7.7	6.9	5.3	1.6
29	e2.5	e1.4	e1.4	e1.0	---	e0.88	e2.0	e45	7.3	8.2	5.4	1.6
30	e3.0	e1.3	e1.3	e1.0	---	e0.90	e2.5	e80	7.8	7.2	11	1.5
31	e3.1	---	e1.2	e1.0	---	e1.0	---	76	---	7.0	7.7	---
TOTAL	77.3	55.0	42.7	33.5	30.4	28.73	42.3	621.0	532.1	230.7	204.1	146.3
MEAN	2.49	1.83	1.38	1.08	1.09	0.93	1.41	20.0	17.7	7.44	6.58	4.88
MAX	3.2	3.2	1.6	1.2	1.2	1.1	2.5	80	77	9.5	11	11
MIN	1.9	1.3	1.2	1.0	1.0	0.88	1.0	2.9	7.3	6.2	4.7	1.5
AC-FT	153	109	85	66	60	57	84	1,230	1,060	458	405	290

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	2.76	2.19	1.59	1.31	1.10	1.13	1.97	10.7	29.4	12.2	4.77	3.22								
MAX	6.11	3.49	2.40	2.33	1.67	1.60	3.83	25.5	70.3	46.6	8.05	5.12								
(WY)	(1997)	(1997)	(2000)	(2000)	(2000)	(1997)	(2002)	(1996)	(1997)	(1995)	(1984)	(1984)								
MIN	1.67	0.48	0.47	0.59	0.30	0.12	0.079	1.60	3.34	2.85	1.91	1.48								
(WY)	(1990)	(1985)	(1985)	(1985)	(1985)	(1985)	(1985)	(1985)	(1985)	(2002)	(2002)	(1994)	(1994)							

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1984 - 2003

ANNUAL TOTAL	778.96	2,044.13	
ANNUAL MEAN	a2.13	a5.60	a6.03
HIGHEST ANNUAL MEAN			11.2 1997
LOWEST ANNUAL MEAN			2.18 2002
HIGHEST DAILY MEAN	5.9 Jun 25	80 May 30	112 Jun 7, 1997
LOWEST DAILY MEAN	e0.76 Feb 21	e0.88 Mar 29	0.04 May 7, 1985
ANNUAL SEVEN-DAY MINIMUM	e0.84 Feb 16	e0.90 Mar 23	0.07 Apr 12, 1985
MAXIMUM PEAK FLOW		145 May 31	162 Jun 8, 1997
MAXIMUM PEAK STAGE		2.33 May 31	b2.38 Jun 8, 1997
ANNUAL RUNOFF (AC-FT)	a1,550	a4,050	a4,370
10 PERCENT EXCEEDS	3.5	9.6	12
50 PERCENT EXCEEDS	2.1	2.0	2.2
90 PERCENT EXCEEDS	0.93	1.0	1.0

e Estimated.

a Significantly affected by upstream diversions into the Moffat water tunnel.

b Maximum gage height, 2.39 ft, Jun 17, 1995.

## 395840105472700 RANCH CREEK BELOW CABIN CREEK NEAR TABERNASH, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 39°58'40", long 105°47'27", NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec. 9, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, 25 ft upstream from bridge to Devils Thumb Ranch, over Ranch Creek, and 5.3 mi east-southeast of Tabernash.

PERIOD OF RECORD.--November 1998 to September 1999. January to September 2003. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=395840105472700](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=395840105472700)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
JAN 08...	0900	4.0	10.0	8.3	79	0.0	0.97	<10	E.008	0.093	<0.002	E.004	0.006
FEB 10...	1200	4.6	10.0	8.3	79	0.0	0.93	<10	<0.015	0.093	<0.002	<0.007	0.007
MAR 24...	1230	5.9	10.0	7.8	80	0.0	1.14	<10	0.139	0.100	E.002	<0.007	0.008
APR 25...	1000	17	11.3	7.6	81	0.5	0.90	<10	<0.015	0.210	0.003	E.004	0.013
MAY 09...	1030	23	10.7	8.3	74	3.5	2.36	<10	<0.015	0.138	0.004	E.005	0.016
JUN 24...	1030	110	9.6	8.4	35	8.0	0.25	<10	<0.015	<0.022	<0.002	<0.007	0.005
JUL 08...	1345	10	7.9	8.0	70	19.0	0.74	<10	<0.015	<0.022	<0.002	0.009	0.018
AUG 05...	1015	9.6	7.1	8.0	87	12.5	0.42	<10	<0.015	<0.022	<0.002	0.012	0.024
SEP 08...	1315	17	7.5	8.4	68	15.5	0.55	<10	<0.015	<0.022	<0.002	E.006	0.016

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
JAN 08...	0.015	<1
FEB 10...	0.014	<1
MAR 24...	0.024	<1
APR 25...	0.050	<1
MAY 09...	0.044	<1
JUN 24...	0.013	E2
JUL 08...	0.026	18
AUG 05...	0.041	35
SEP 08...	0.029	28

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

**09033100 RANCH CREEK BELOW MEADOW CREEK NEAR TABERNASH, CO**

LOCATION.--Lat 39°59'57", long 105°49'37", in NW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.6, T.1 S., R.75 W., Grand County, Hydrologic Unit 14010001, on right bank about 400 ft downstream from Meadow Creek, 0.75 mi northeast of Tabernash, and 0.85 mi above mouth.

DRAINAGE AREA.--65.7 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1997 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09033100](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09033100)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,350 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversion upstream from station for irrigation of hay meadows in Fraser River Valley. Transmountain diversion upstream from station to Moffat Water Tunnel not known since 1959.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	e6.8	e6.6	e6.8	e5.8	e6.8	e14	55	545	56	12	e16
2	6.6	e7.4	e6.6	e6.6	e5.8	e7.0	e24	54	448	30	12	e15
3	6.6	e8.6	e6.6	e6.6	e5.8	e6.4	e45	65	350	25	12	e15
4	7.4	e9.0	e6.6	e6.6	e5.8	e6.0	52	68	268	22	14	e16
5	7.4	e8.0	e6.6	e6.6	e5.8	e5.6	51	56	217	21	12	e15
6	7.3	e8.1	e6.6	e6.6	e6.2	e5.2	45	56	186	20	11	e17
7	6.7	e8.2	e6.6	e6.6	e6.4	e5.0	39	61	153	20	11	e18
8	6.7	e7.8	e6.6	e6.6	e6.6	e4.8	33	62	119	19	11	e24
9	6.5	e7.4	e6.6	e6.6	e6.6	e4.6	25	63	121	17	10	e26
10	5.8	e7.0	e7.0	e6.6	e6.6	e4.4	32	62	126	16	9.9	e20
11	5.7	e7.0	e7.4	e6.6	e6.6	e4.0	43	57	140	16	9.5	e15
12	5.9	e7.0	e7.5	e6.6	e6.6	e4.0	43	70	172	16	11	e15
13	6.0	e7.0	e7.4	e6.6	e6.6	e4.0	49	107	224	16	11	e13
14	6.1	e7.0	e7.2	e6.2	e6.2	e4.0	53	135	200	15	10	e12
15	6.0	e7.4	e7.0	e6.2	e5.8	e4.0	48	153	205	15	10	e11
16	6.1	e7.0	e6.8	e6.2	e5.8	e4.0	38	177	180	15	14	e11
17	5.8	e7.0	e6.8	e6.2	e5.8	e4.0	33	199	121	15	32	e14
18	6.0	e7.0	e6.8	e6.2	e5.9	e4.0	29	213	148	14	e26	e14
19	5.9	e7.0	e6.8	e6.2	e5.9	e4.0	24	218	166	14	e22	e14
20	5.5	e7.0	e6.8	e6.2	e5.9	e4.0	24	216	175	18	e19	e14
21	5.9	e7.0	e6.8	e6.2	e5.6	e4.0	27	198	168	17	e17	e14
22	e5.2	e7.0	e6.8	e6.2	e6.0	e4.0	31	201	146	15	e16	e14
23	e5.4	e7.0	e6.8	e6.2	e6.0	e4.0	31	220	143	14	e17	e14
24	e5.2	e7.0	e6.8	e6.2	e6.0	e4.0	27	247	137	14	e20	e14
25	e5.2	e7.0	e6.8	e6.2	e6.1	e4.0	38	266	112	14	e22	e15
26	e5.2	e7.0	e6.8	e6.0	e6.2	e4.0	42	269	92	15	e21	e14
27	e5.3	e7.0	e6.8	e6.0	e6.3	e3.9	58	285	84	16	e18	e14
28	e5.4	e7.0	e6.8	e6.0	e6.4	e3.8	63	381	77	14	e15	e15
29	e5.8	e7.0	e6.8	e6.0	---	e4.0	66	485	75	15	e15	e15
30	e6.2	e6.6	e6.8	e6.0	---	e5.0	61	557	71	15	e16	e15
31	e7.0	---	e6.8	e6.0	---	e8.0	---	513	---	13	e18	---
TOTAL	188.5	218.3	211.7	196.4	171.1	144.5	1,188	5,769	5,369	562	474.4	459
MEAN	6.08	7.28	6.83	6.34	6.11	4.66	39.6	186	179	18.1	15.3	15.3
MAX	7.4	9.0	7.5	6.8	6.6	8.0	66	557	545	56	32	26
MIN	5.2	6.6	6.6	6.0	5.6	3.8	14	54	71	13	9.5	11
AC-FT	374	433	420	390	339	287	2,360	11,440	10,650	1,110	941	910

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2003, BY WATER YEAR (WY)

MEAN	10.7	9.95	10.5	9.63	8.39	9.04	28.7	112	146	22.9	13.8	12.0
MAX	16.0	13.8	15.8	13.3	11.0	11.9	39.6	187	429	56.2	23.9	25.9
(WY)	(2000)	(1999)	(1999)	(1999)	(2000)	(1998)	(2003)	(1997)	(1997)	(1997)	(1999)	(1999)
MIN	6.08	7.28	6.83	5.84	6.11	4.66	18.8	17.4	9.02	4.56	3.11	5.02
(WY)	(2003)	(2003)	(2003)	(2002)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1997 - 2003

ANNUAL TOTAL	3,038.8	14,951.9	
ANNUAL MEAN	a8.33	a41.0	a27.3
HIGHEST ANNUAL MEAN			41.0
LOWEST ANNUAL MEAN			8.68
HIGHEST DAILY MEAN	e26	Apr 15	718
LOWEST DAILY MEAN	2.0	Sep 3	2.0
ANNUAL SEVEN-DAY MINIMUM	2.2	Sep 1	2.2
MAXIMUM PEAK FLOW		621	763
MAXIMUM PEAK STAGE		6.88	7.18
ANNUAL RUNOFF (AC-FT)	a6,030	a29,660	a19,780
10 PERCENT EXCEEDS	17	138	62
50 PERCENT EXCEEDS	6.8	9.5	12
90 PERCENT EXCEEDS	3.4	5.8	6.1

e Estimated.

a Significantly affected by upstream diversions into the Moffat water tunnel.

## 09033100 RANCH CREEK BELOW MEADOW CREEK NEAR TABERNASH, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1997 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09033100](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09033100)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
NOV 04...	1050	9.1	9.5	7.6	109	0.0	1.18	<10	<0.015	<0.022	<0.002	0.007	0.013
JAN 08...	1020	6.7	9.3	8.5	96	0.0	0.91	<10	E.014	0.069	<0.002	0.007	0.010
MAR 24...	1330	4.0	9.7	8.4	99	0.0	1.25	<10	0.021	0.082	E.002	E.004	0.009
MAY 07...	1145	54	10.7	8.1	71	3.0	1.75	<10	<0.015	0.106	0.003	<0.007	0.011
JUL 08...	1430	14	7.1	8.0	80	19.5	0.79	<10	<0.015	<0.022	<0.002	0.009	0.017
SEP 08...	1415	24	7.5	8.1	67	15.5	0.66	<10	<0.015	<0.022	<0.002	0.008	0.017

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
NOV 04...	0.022	<1
JAN 08...	0.018	<1
MAR 24...	0.021	<1
MAY 07...	0.046	<1
JUL 08...	0.023	E2
SEP 08...	0.030	32

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 21...	1235	5.3	124	2.0	APR 15...	1310	64	125	3.0
FEB 26...	1150	6.1	65	--					



## 395634105532401 CROOKED CREEK BELOW TIPPERARY CREEK NEAR TABERNASH, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 39°56'34", long 105°53'24", NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.21, T.1 S., R.76 W., Grand County, Hydrologic Unit 14010001, approximately 0.5 mi below the confluence with Tipperary Creek, and 4 mi west of Fraser.

PERIOD OF RECORD.--June 1997 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=395634105532401](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=395634105532401)

REMARKS.--Nutrient analysis based on low-level methods.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
OCT 16...	1200	1.0	10.0	7.8	195	5.5	0.39	<10	<0.015	<0.022	<0.002	E.005	0.009
NOV 05...	1115	1.2	10.2	7.9	181	1.5	0.41	<10	<0.015	<0.022	<0.002	E.006	0.009
DEC 12...	1045	1.1	11.5	8.3	187	0.0	0.23	<10	E.009	<0.022	<0.002	E.004	0.007
JAN 07...	1015	1.1	11.1	8.4	182	0.0	<0.20	<10	E.013	E.015	<0.002	E.004	0.007
FEB 11...	1115	1.0	10.4	7.8	185	0.0	0.29	<10	E.013	0.022	<0.002	<0.007	0.005
MAR 25...	1130	1.5	11.9	8.1	182	0.5	0.47	<10	E.010	0.031	<0.002	<0.007	0.005
APR 18...	1000	5.9	9.2	8.1	164	0.5	1.09	<10	E.008	0.351	0.003	<0.007	0.009
MAY 14...	1000	16	11.7	8.4	110	3.0	0.72	10	<0.015	0.248	0.003	<0.007	0.008
JUN 25...	1030	23	9.1	8.3	102	7.5	E.18	<10	0.031	<0.022	<0.002	<0.007	0.006
JUL 08...	1000	10	8.6	8.0	120	11.0	0.20	<10	<0.015	<0.022	<0.002	E.005	0.011
AUG 06...	1230	2.6	6.9	7.9	163	16.5	0.40	<10	<0.015	<0.022	<0.002	0.009	0.016
SEP 09...	1200	4.0	7.7	8.2	166	12.0	0.34	<10	<0.015	<0.022	<0.002	0.008	0.013

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 16...	0.028	<1
NOV 05...	0.029	E1
DEC 12...	0.020	<1
JAN 07...	0.019	<1
FEB 11...	0.023	<1
MAR 25...	0.019	<1
APR 18...	0.031	E1
MAY 14...	0.039	E2
JUN 25...	0.020	E3
JUL 08...	0.016	E4
AUG 06...	0.032	<1
SEP 09...	0.026	E5

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## 395927105505700 CROOKED CREEK ABOVE POLE CREEK AT TABERNASH, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 39°59'27", long 105°50'57", SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.1, T.1 S., R.76 W., Grand County, Hydrologic Unit 14010001, approximately 0.25 mi above the confluence with Pole Creek, and 4.5 mi west of Fraser.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1999 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=395927105505700](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=395927105505700)

REMARKS:--Nutrient analysis based on low-level methods.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
OCT 16...	1300	2.4	8.8	8.0	266	6.0	5.28	<10	<0.015	<0.022	<0.002	0.015	0.024
NOV 05...	1015	2.5	10.4	8.1	278	1.0	3.39	<10	<0.015	<0.022	<0.002	0.016	0.025
DEC 12...	1245	0.89	9.6	8.1	292	0.0	3.55	<10	E.013	<0.022	<0.002	0.011	0.016
JAN 07...	1115	2.2	10.7	7.6	263	0.0	2.61	<10	0.016	0.045	E.002	0.009	0.014
FEB 10...	1530	2.7	9.5	7.9	257	0.0	3.17	<10	0.020	0.053	<0.002	0.008	0.013
MAR 25...	1415	4.0	11.2	7.8	255	0.0	4.22	<10	E.013	0.054	E.002	0.009	0.015
APR 18...	1200	15	9.1	8.0	216	1.0	--	<10	0.379	0.787	0.014	0.058	0.074
MAY 14...	1200	35	9.8	8.3	114	7.0	1.44	25	<0.015	0.090	0.003	0.011	0.018
JUN 25...	1330	20	7.9	8.2	140	14.0	0.73	<10	<0.015	<0.022	<0.002	0.015	0.023
JUL 08...	1100	10	7.8	7.9	191	14.5	1.82	<10	<0.015	<0.022	<0.002	0.020	0.033
AUG 06...	1415	3.6	6.7	8.0	248	19.5	3.67	<10	<0.015	<0.022	<0.002	0.023	0.038
SEP 10...	1215	5.3	7.2	8.3	239	11.5	3.93	<10	<0.015	<0.022	<0.002	0.022	0.034

## FRASER RIVER BASIN

395927105505700 CROOKED CREEK ABOVE POLE CREEK AT TABERNASH, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phos- phorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)
OCT 16...	0.098	<1
NOV 05...	0.057	E1
DEC 12...	0.046	<1
JAN 07...	0.039	<1
FEB 10...	0.036	<1
MAR 25...	0.042	<1
APR 18...	0.179	E1
MAY 14...	0.063	E2
JUN 25...	0.050	29
JUL 08...	0.064	E14
AUG 06...	0.096	67
SEP 10...	0.070	37

< -- Actual value is known to be  
less than the value shown.  
E -- Estimated laboratory  
analysis value.

## 395901105550800 POLE CREEK AT UPPER STATION NEAR TABERNASH, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 39°59'01", long 105°55'08", SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.6, T.1 S., R.76 W., Grand County, Hydrologic Unit 14010001, approximately 5 mi upstream from confluence with the Fraser River, and 4 mi west of Tabernash.

PERIOD OF RECORD.--February 1997 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=395901105550800](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=395901105550800)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
OCT 16...	1100	0.15	9.2	8.0	261	3.5	1.29	--	<0.015	<0.022	<0.002	E.005	0.011
NOV 05...	1200	0.83	9.7	8.4	138	0.5	0.54	<10	<0.015	<0.022	<0.002	0.025	0.034
DEC 12...	1400	0.20	8.5	8.0	135	0.0	0.24	<10	<0.015	<0.022	<0.002	0.025	0.030
JAN 07...	1300	0.38	10.4	8.1	131	0.0	0.30	<10	E.009	<0.022	<0.002	0.026	0.029
FEB 10...	1330	0.16	8.4	7.8	142	0.5	1.18	12	0.016	E.016	<0.002	0.029	0.033
MAR 25...	1500	1.5	10.1	7.8	139	0.0	0.87	<10	E.009	0.022	<0.002	0.015	0.020
APR 18...	1300	2.9	9.1	7.8	123	0.0	1.00	<10	<0.015	0.233	0.003	0.007	0.015
MAY 14...	1300	13	9.7	7.8	111	4.5	0.45	14	<0.015	0.146	0.003	0.009	0.015
JUN 25...	1140	5.3	8.2	7.8	74	11.0	0.26	<10	<0.015	<0.022	<0.002	0.019	0.031
JUL 08...	1200	2.0	7.8	8.2	100	14.5	0.62	<10	E.009	<0.022	<0.002	0.025	0.041
AUG 06...	1130	0.46	6.8	8.0	137	16.0	0.40	<10	<0.015	<0.022	<0.002	0.036	0.053
SEP 10...	1030	0.87	7.2	8.2	192	9.0	0.59	<10	<0.015	<0.022	<0.002	0.019	0.028

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 16...	--	<1
NOV 05...	0.073	E1
DEC 12...	0.087	E1
JAN 07...	0.080	<1
FEB 10...	0.100	<1
MAR 25...	0.057	<1
APR 18...	0.062	<1
MAY 14...	0.058	E5
JUN 25...	0.057	<1
JUL 08...	0.072	E8
AUG 06...	0.104	E2
SEP 10...	0.078	E10

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## 395930105510700 POLE CREEK AT MOUTH NEAR TABERNASH, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 39°59'30", long 105°51'07", SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.2, T.1 S., R.76 W., Grand County, Hydrologic Unit 14010001, approximately 0.25 mi upstream from the confluence with Crooked Creek, and 0.5 mi west of Tabernash.

PERIOD OF RECORD.--February 1997 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=395930105510700](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=395930105510700)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
NOV 05...	1215	1.1	10.4	8.1	311	1.5	3.30	<10	<0.015	<0.022	<0.002	0.008	0.016
DEC 12...	1145	0.65	9.9	7.8	336	0.0	4.09	<10	0.027	0.066	<0.002	0.007	0.012
JAN 07...	1200	1.8	10.3	8.0	302	0.5	4.14	<10	0.070	0.147	0.004	E.005	0.010
FEB 10...	1430	1.6	8.9	8.0	327	0.0	4.75	<10	0.080	0.166	0.004	E.004	0.010
MAR 25...	1315	2.3	10.4	8.1	301	0.0	6.46	<10	0.021	0.158	E.002	E.006	0.014
APR 18...	1100	6.4	8.8	8.1	245	1.0	3.84	<10	0.019	0.486	0.006	0.015	0.033
MAY 14...	1100	26	10.6	8.0	143	6.0	2.27	10	<0.015	0.153	0.003	0.015	0.023
JUN 25...	1240	6.2	7.3	8.0	206	14.0	1.35	<10	0.021	0.037	<0.002	0.030	0.043
JUL 08...	1300	2.7	7.1	8.1	333	18.5	2.73	<10	E.010	E.016	<0.002	0.025	0.040
AUG 06...	1330	1.0	6.4	8.0	338	16.5	3.03	<10	E.010	<0.022	<0.002	0.027	0.044
SEP 10...	1130	1.0	7.2	8.2	335	11.0	3.48	13	E.008	<0.022	<0.002	0.022	0.033

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
NOV 05...	0.050	<1
DEC 12...	0.044	<1
JAN 07...	0.042	<1
FEB 10...	0.040	<1
MAR 25...	0.050	<1
APR 18...	0.074	<1
MAY 14...	0.066	<1
JUN 25...	0.098	11
JUL 08...	0.111	<1
AUG 06...	0.117	40
SEP 10...	0.089	10

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

**09033300 FRASER RIVER BELOW CROOKED CREEK AT TABERNASH, CO**

LOCATION.--Lat 40°00'21", long 105°50'52", in SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.36, T.1 N., R.76 W., Grand County, Hydrologic Unit 14010001, on left bank 600 ft downstream from Crooked Creek, and 1 mi north of Tabernash.

DRAINAGE AREA.--224 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1998 to September 2002. October 2002 to September 2003 (seasonal records only). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09033300](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09033300)

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,270 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station to Moffat water tunnel, amount unknown.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1550 ft<sup>3</sup>/s, May 30, 2003, gage height, 6.01 ft; minimum daily, 16 ft<sup>3</sup>/s, August 28, 2002.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 1550 ft<sup>3</sup>/s, May 30, gage height, 6.01 ft; minimum daily, 33 ft<sup>3</sup>/s, Sept. 29.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e65	185	1,460	259	59	59
2	---	---	---	---	---	---	e65	177	1,160	154	58	55
3	---	---	---	---	---	---	e65	203	849	81	61	54
4	---	---	---	---	---	---	e65	209	597	68	73	54
5	---	---	---	---	---	---	e70	175	475	60	62	51
6	---	---	---	---	---	---	e60	e156	399	57	57	57
7	---	---	---	---	---	---	e60	e196	374	58	56	85
8	---	---	---	---	---	---	e55	e177	297	55	58	87
9	---	---	---	---	---	---	e70	e160	279	50	54	99
10	---	---	---	---	---	---	e70	e140	285	50	53	82
11	---	---	---	---	---	---	e80	e155	329	50	52	77
12	---	---	---	---	---	---	e75	e157	492	49	54	69
13	---	---	---	---	---	---	e85	e221	643	47	52	63
14	---	---	---	---	---	---	e145	e200	610	47	48	59
15	---	---	---	---	---	---	e160	313	631	46	44	57
16	---	---	---	---	---	---	145	352	545	47	50	47
17	---	---	---	---	---	---	136	421	276	48	112	42
18	---	---	---	---	---	---	132	449	284	48	107	43
19	---	---	---	---	---	---	110	469	346	48	72	42
20	---	---	---	---	---	---	111	471	531	77	59	41
21	---	---	---	---	---	---	134	455	620	61	54	39
22	---	---	---	---	---	---	153	476	573	52	52	38
23	---	---	---	---	---	---	145	514	553	50	56	39
24	---	---	---	---	---	---	106	567	541	52	61	37
25	---	---	---	---	---	---	146	605	480	48	74	35
26	---	---	---	---	---	---	191	619	412	59	72	35
27	---	---	---	---	---	---	220	638	373	58	59	35
28	---	---	---	---	---	---	219	889	335	52	56	34
29	---	---	---	---	---	---	227	1,180	324	56	53	33
30	---	---	---	---	---	---	206	1,390	304	63	75	34
31	---	---	---	---	---	---	---	1,360	---	60	71	---
TOTAL	---	---	---	---	---	---	3,571	13,679	15,377	2,010	1,924	1,582
MEAN	---	---	---	---	---	---	119	441	513	64.8	62.1	52.7
MAX	---	---	---	---	---	---	227	1,390	1,460	259	112	99
MIN	---	---	---	---	---	---	55	140	276	46	44	33
AC-FT	---	---	---	---	---	---	7,080	27,130	30,500	3,990	3,820	3,140

e Estimated.

## 09033300 FRASER RIVER BELOW CROOKED CREEK AT TABERNASH, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1990 to September 1994, published as site number 400009105504600. September 1998 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09033300](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09033300)

REMARKS.--Nutrient samples based on low-level methods.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
NOV 05...	1400	38	12.4	8.8	138	1.5	56	18.0	2.70	5.18	--	<0.015	0.131
JAN 08...	1500	31	10.1	8.2	150	0.0	56	17.4	3.06	6.28	<10	0.246	0.770
APR 03...	1300	64	11.0	8.1	171	1.5	58	18.1	3.11	10.5	14	0.226	0.481
15...	1100	199	12.2	8.3	165	2.0	65	21.1	2.99	7.86	37	0.100	0.507
MAY 09...	1130	146	10.1	8.1	142	6.0	57	18.6	2.50	7.98	<10	<0.015	0.101
JUL 01...	1100	304	9.0	8.6	78	11.5	34	11.0	1.68	2.17	<10	<0.015	<0.022
09...	1100	49	8.5	8.6	144	15.0	63	21.1	2.56	3.78	<10	<0.015	E.016
AUG 06...	1030	58	8.2	8.4	129	16.0	52	16.9	2.39	5.15	<10	E.014	0.218
SEP 10...	1245	82	8.8	8.3	167	11.0	74	24.8	3.01	4.71	<10	<0.015	0.072

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
NOV 05...	0.003	0.014	0.024	0.054	E5
JAN 08...	0.008	0.057	0.065	0.097	<1
APR 03...	0.005	0.036	0.045	0.144	--
15...	0.007	0.022	0.033	0.137	<1
MAY 09...	0.004	0.012	0.022	0.059	<1
JUL 01...	<0.002	0.008	0.015	0.031	18
09...	<0.002	0.026	0.040	0.062	E1
AUG 06...	0.021	0.038	0.054	0.093	67
SEP 10...	0.005	0.025	0.040	0.079	37

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## 400453105554200 FRASER RIVER AT HIGHWAY 40 AT GRANBY, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 40°04'53", long 105°55'42", SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.6, T.1 N., R.76 W., Grand County, Hydrologic Unit 14010001, approximately 3 mi above the confluence with the Colorado River, and 0.6 mi southeast of Granby.

PERIOD OF RECORD.--November 1999 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=400453105554200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=400453105554200)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
NOV 06...	1000	14	11.1	8.4	158	0.5	5.35	<10	<0.015	<0.022	<0.002	0.009	0.015
JAN 08...	1300	38	12.2	7.9	151	0.0	5.35	<10	0.125	0.655	0.007	0.016	0.022
MAR 25...	1000	55	11.2	8.1	178	0.5	12.4	10	0.142	0.660	0.005	0.032	0.042
MAY 15...	1130	384	10.4	8.2	98	5.5	4.65	37	<0.015	0.104	0.004	0.009	0.017
JUL 09...	0930	62	7.3	8.0	139	13.5	4.24	<10	<0.015	<0.022	<0.002	0.015	0.030
SEP 09...	1000	110	8.4	8.1	125	11.5	4.48	17	<0.015	0.036	0.004	0.014	0.028

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
NOV 06...	0.024	<1
JAN 08...	0.041	<1
MAR 25...	0.107	<1
MAY 15...	0.125	<1
JUL 09...	0.047	10
SEP 09...	0.083	27

< -- Actual value is known to be less than the value shown.



## 400207105565900 TENMILE CREEK ABOVE POND ABOVE EIGHTMILE CREEK NEAR GRANBY, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 40°02'07", long 105°56'59", SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 19, T.1 N., R.76 W., Grand County, Hydrologic Unit 14010001, approximately 0.5 mi above the confluence with Eightmile Creek, and 3.5 mi southeast of Granby.

PERIOD OF RECORD.--November 1999 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=400207105565900](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=400207105565900)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
NOV 05...	1530	1.2	10.4	8.2	288	2.0	3.34	<10	<0.015	E.012	<0.002	0.026	0.036
JAN 08...	1130	1.5	9.6	7.7	281	0.0	3.63	<10	0.060	0.155	E.002	0.029	0.032
MAR 26...	0900	2.1	11.7	8.4	397	0.0	20.7	10	0.039	0.163	E.002	0.020	0.025
MAY 15...	1330	31	7.8	8.3	171	9.5	3.54	22	<0.015	0.183	0.004	0.029	0.039
JUL 09...	1200	1.9	7.2	8.3	391	15.0	4.68	<10	E.012	0.022	<0.002	0.052	0.068
SEP 09...	1115	3.1	8.4	8.2	291	11.0	4.04	<10	<0.015	<0.022	<0.002	0.041	0.054

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
NOV 05...	0.072	16
JAN 08...	0.066	<1
MAR 26...	0.072	<1
MAY 15...	0.102	<1
JUL 09...	0.092	17
SEP 09...	0.098	65

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## 400352105550700 TENMILE CREEK NEAR GRANBY, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 40°03'52", long 105°55'07", NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 8, T.1 S., R.76 W., Grand County, Hydrologic Unit 14010001, approximately 3 mi below the confluence with Ninemile Creek, and 1 mi east of Granby.

PERIOD OF RECORD.--November 1998 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=400352105550700](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=400352105550700)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
NOV 06...	1100	1.2	9.3	8.1	378	1.5	5.94	<10	<0.015	<0.022	<0.002	0.014	0.025
JAN 07...	1430	1.6	8.8	8.1	340	0.5	3.97	16	0.139	0.105	0.004	0.022	0.030
MAR 24...	1500	4.7	9.5	8.4	441	1.5	13.8	<10	0.215	0.271	0.005	0.012	0.023
MAY 15...	1215	102	8.8	8.2	190	11.0	2.95	40	E.011	0.081	0.005	0.028	0.048
JUL 09...	1500	1.4	6.6	8.1	406	20.0	4.71	10	<0.015	<0.022	<0.002	0.039	0.060
SEP 09...	1040	4.0	6.4	8.3	333	13.5	5.17	13	<0.015	0.022	0.003	0.026	0.042

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
NOV 06...	0.053	<1
JAN 07...	0.146	<1
MAR 24...	0.093	<1
MAY 15...	0.153	<1
JUL 09...	0.094	<1
SEP 09...	0.082	E10

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## 400433105560600 TENMILE CREEK ABOVE MOUTH NEAR GRANBY, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 40°04'33", long 105°56'06", NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 1, T.1 S., R.76 W., Grand County, Hydrologic Unit 14010001, 200 ft upstream from confluence with the Fraser River, and 1 mi southwest of Granby.

PERIOD OF RECORD.--August 2001 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=400433105560600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=400433105560600)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
NOV 06...	0830	4.3	9.1	8.0	340	1.0	5.72	10	<0.015	<0.022	<0.002	0.008	0.017
JAN 08...	1200	2.8	8.6	7.7	338	0.0	5.28	<10	0.059	0.084	0.003	E.004	0.008
MAR 25...	0900	6.6	9.4	7.9	387	0.5	12.0	<10	0.076	0.198	0.004	0.012	0.024
MAY 15...	1000	81	8.2	8.2	207	11.0	3.37	29	<0.015	0.023	0.003	0.027	0.042
JUL 09...	0830	4.0	5.5	7.8	292	14.5	4.47	15	E.010	<0.022	<0.002	0.030	0.046
SEP 09...	0900	2.6	4.9	8.1	319	11.0	6.05	<10	<0.015	<0.022	<0.002	0.024	0.036

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
NOV 06...	0.095	E3
JAN 08...	0.047	<1
MAR 25...	0.083	<1
MAY 15...	0.137	<1
JUL 09...	0.118	E7
SEP 09...	0.118	35

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

**09034250 COLORADO RIVER AT WINDY GAP NEAR GRANBY, CO**

LOCATION.--Lat 40°06'30", long 106°00'13" in NW<sup>1</sup>/<sub>4</sub> sec.27, T.2 N., R.77 W., Grand County, Hydrologic Unit 14010001, on right bank 300 ft downstream from county highway bridge, 1.1 mi downstream from Windy Gap diversion dam, 2.4 mi downstream from mouth of Fraser River, and 3.8 mi northwest of Granby.

DRAINAGE AREA.--789 mi<sup>2</sup>.

WATER-DISCHARGERECORDS

PERIOD OF RECORD.--October 1981 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09034250](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09034250)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,790 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, and diversions for irrigation.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	102	e67	e63	e65	e66	e106	100	1,780	369	281	134
2	56	90	e63	e63	e64	e68	e107	101	1,460	456	243	99
3	58	79	e58	e63	e64	e71	e105	102	837	361	242	94
4	60	70	e62	e63	e64	e69	e117	105	406	331	259	93
5	70	77	e71	e63	e63	e68	e94	103	168	316	201	91
6	75	68	e75	e63	e57	e71	e84	100	107	318	212	92
7	65	60	e73	e57	e60	e71	e117	103	115	319	214	102
8	62	102	e73	e66	e60	e67	e111	202	107	330	211	150
9	51	95	e58	e63	e60	e77	e99	435	102	317	208	143
10	58	75	e62	e64	e60	e73	e160	358	98	317	168	155
11	50	96	e62	e58	e60	e77	e145	189	98	319	126	140
12	49	78	e52	e58	e60	e83	e117	106	110	322	118	121
13	54	76	e66	e62	e60	e84	e120	110	125	312	118	108
14	46	82	e41	e64	e60	e84	e120	115	203	301	126	101
15	52	93	e77	e63	e66	e94	e118	209	186	318	115	96
16	69	90	e65	e63	e68	e117	e118	134	191	341	110	93
17	50	98	e69	e63	e61	e114	e115	120	117	345	192	76
18	53	82	e77	e63	e62	e113	118	157	167	335	288	70
19	53	e70	e73	e63	e62	e76	101	203	177	346	238	77
20	62	e66	e58	e61	e63	e71	99	232	187	417	149	79
21	58	e66	e58	e57	e66	e74	122	199	195	394	128	77
22	64	e66	e55	e58	e68	e88	167	201	213	360	121	74
23	62	e66	e58	e60	e65	e89	136	237	220	342	122	66
24	83	e66	e64	e60	e64	e104	94	351	217	358	134	69
25	85	e73	e64	e60	e71	e113	98	703	219	338	149	67
26	76	e78	e63	e60	e73	e92	145	724	220	305	168	58
27	62	e72	e63	e63	e59	e78	307	647	231	323	158	68
28	75	e67	e63	e65	e68	e71	235	907	231	332	152	67
29	68	e67	e63	e65	---	e72	119	1,440	226	335	105	64
30	68	e67	e63	e65	---	e85	107	1,740	217	343	122	62
31	64	---	e63	e65	---	e103	---	1,780	---	326	163	---
TOTAL	1,911	2,337	1,979	1,924	1,773	2,583	3,801	12,213	8,930	10,546	5,341	2,786
MEAN	61.6	77.9	63.8	62.1	63.3	83.3	127	394	298	340	172	92.9
MAX	85	102	77	66	73	117	307	1,780	1,780	456	288	155
MIN	46	60	41	57	57	66	84	100	98	301	105	58
AC-FT	3,790	4,640	3,930	3,820	3,520	5,120	7,540	24,220	17,710	20,920	10,590	5,530

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2003, BY WATER YEAR (WY)

MEAN	110	101	80.0	77.8	77.9	112	288	632	891	505	178	112
MAX	341	188	120	110	110	260	881	2,326	2,997	2,096	509	384
(WY)	(2000)	(1986)	(1985)	(1985)	(1985)	(1984)	(1996)	(1984)	(1984)	(1983)	(1997)	(1999)
MIN	59.9	73.8	63.8	59.0	63.3	75.8	120	123	180	120	74.3	54.4
(WY)	(1982)	(2002)	(2003)	(1989)	(2003)	(1983)	(2002)	(2001)	(2001)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1982 - 2003

ANNUAL TOTAL	34,467	56,124	
ANNUAL MEAN	94.4	154	264
HIGHEST ANNUAL MEAN			726
LOWEST ANNUAL MEAN			96.7
HIGHEST DAILY MEAN	290	Jun 5	1,780
LOWEST DAILY MEAN	29	Aug 27	e41
ANNUAL SEVEN-DAY MINIMUM	40	Sep 3	51
MAXIMUM PEAK FLOW			1,980
MAXIMUM PEAK STAGE			5.25
ANNUAL RUNOFF (AC-FT)	68,370	111,300	191,400
10 PERCENT EXCEEDS	167	319	579
50 PERCENT EXCEEDS	73	90	107
90 PERCENT EXCEEDS	56	60	68

e Estimated.

09034250 COLORADO RIVER AT WINDY GAP NEAR GRANBY, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1994 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09034250](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09034250)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd end pt, lab, mg/L as CaCO3 (90410)
OCT 08...	1400	59	11.1	9.5	138	13.0	55	17.0	2.95	1.43	0.4	6.39	E63
MAR 12...	1230	99	10.2	8.3	161	0.5	58	18.0	3.27	--	0.5	8.72	60
AUG 20...	1300	161	7.4	8.3	145	16.5	54	16.7	2.93	--	0.4	6.12	62

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
OCT 08...	3.25	0.21	7.9	4.5	<10	0.23	0.29	<0.04	<0.06	<0.008	--	E.02	E.03
MAR 12...	8.10	--	11.5	7.0	<10	0.35	1.9	0.13	0.54	E.007	0.22	0.05	0.07
AUG 20...	3.94	--	11.8	4.8	<10	0.34	0.45	0.05	0.07	E.005	0.30	0.03	0.05

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Arsenic water, unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)
OCT 08...	E.04	<0.30	<2	<2	11.1	<0.5	<0.2	<0.2	<0.8	<0.8	0.7	<0.6	137
MAR 12...	0.10	<0.30	<2	<2	19.2	<0.5	<0.2	<0.2	<0.8	<0.8	0.9	1.3	72
AUG 20...	0.09	<0.30	<2	E1	17.4	<0.4	<0.2	<0.2	E.6	<0.8	1.3	1.7	203

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recoverable, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recoverable, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recoverable, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)
OCT 08...	<0.08	0.09	20.8	<0.02	<0.02	0.36	0.95	<0.5	<0.5	<0.2	<0.16	M	E1
MAR 12...	<0.08	0.16	85.6	<0.02	<0.02	1.24	0.86	<0.5	<0.5	E.2	<0.16	2	3
AUG 20...	0.11	0.28	79.2	<0.02	<0.02	1.06	1.26	<0.5	E.3	<0.2	<0.16	2	4

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

09034250 COLORADO RIVER AT WINDY GAP NEAR GRANBY, CO—Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
FEB 26...	1000	72	115	4.0	APR 17...	1350	121	204	7.0

## 09034900 BOBTAIL CREEK NEAR JONES PASS, CO

LOCATION.--Lat 39°45'37", long 105°54'21", in sec.28, T.3 S., R.76 W., Grand County, Hydrologic Unit 14010001, on left bank 320 ft upstream from diversion dam and 0.4 mi south of entrance to August P. Gumlick Tunnel.

DRAINAGE AREA.--5.49 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1965 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09034900](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09034900)

GAGE.--Water-stage recorder. Elevation of gage is 10,430 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	e1.3	e1.5	e1.2	e1.1	e0.79	e0.99	e3.3	120	52	10	8.6
2	3.1	e1.3	e1.6	e1.2	e1.3	e0.79	e1.5	e3.3	97	51	8.9	7.8
3	3.1	e1.3	e1.4	e1.2	e1.3	e0.79	e1.9	e3.2	83	49	10	8.6
4	2.7	e1.3	e1.3	e1.2	e1.1	e0.79	e2.1	e3.5	72	47	8.4	7.8
5	2.6	e1.3	e1.1	e1.2	e1.1	e0.79	e2.1	e3.7	64	44	7.7	8.0
6	2.6	e1.3	e1.1	e1.1	e1.0	e0.93	e2.1	e3.9	53	41	7.5	11
7	2.8	e1.3	e1.1	e0.92	e0.96	e1.0	e2.1	e3.9	46	37	8.7	13
8	2.7	e1.3	e0.92	e0.82	e0.96	e1.0	e2.1	e3.6	45	35	8.4	13
9	2.6	e1.3	e0.92	e0.89	e0.93	e1.1	e2.1	e3.6	55	34	7.9	20
10	2.4	e1.4	e0.92	e0.89	e0.84	e1.1	e2.1	e3.5	67	32	7.1	18
11	2.2	e1.4	e0.92	e0.86	e0.84	e1.1	e2.2	e3.5	71	28	6.5	17
12	e2.0	e1.4	e0.92	e0.86	e0.99	e1.1	e2.5	e3.5	70	26	6.3	15
13	e2.0	e1.4	e1.1	e0.86	e0.99	e1.1	e2.7	e5.4	66	25	6.1	14
14	e1.7	e1.4	e1.3	e0.86	e0.99	e1.2	e3.1	e5.5	72	24	5.7	13
15	e1.5	e1.3	e1.4	e0.86	e1.2	e1.2	e2.6	e5.8	79	25	5.5	11
16	e1.4	e1.3	e1.5	e0.86	e1.3	e1.2	e2.4	e12	74	27	12	10
17	e1.5	e1.3	e1.5	e0.86	e1.3	e1.0	e2.2	e21	73	28	15	9.2
18	e1.5	e1.7	e1.5	e0.86	e1.4	e0.86	e2.0	e24	75	27	21	8.8
19	e1.4	e1.7	e1.4	e0.86	e1.4	e0.86	e1.8	e25	78	27	15	8.0
20	e1.4	e1.6	e1.3	e0.86	e1.4	e0.89	e1.2	24	76	28	13	7.4
21	e1.7	e1.5	e1.2	e0.86	e1.4	e0.89	e1.3	25	75	24	11	6.8
22	e1.8	e1.5	e1.1	e0.86	e1.4	e0.89	e1.8	32	72	22	9.7	6.4
23	e1.8	e1.5	e0.98	e0.86	e1.3	e0.92	e1.5	41	73	20	11	6.0
24	e1.7	e1.3	e0.92	e0.98	e1.2	e0.92	e1.5	46	67	16	9.7	5.6
25	e1.7	e1.1	e0.92	e0.98	e1.2	e0.96	e1.4	51	59	17	10	5.2
26	e1.6	e1.1	e0.92	e0.80	e1.1	e0.93	e1.7	56	55	18	9.2	4.9
27	e1.6	e1.1	e0.92	e0.71	e1.0	e0.80	e1.8	65	55	17	8.2	4.7
28	e1.5	e1.3	e1.1	e0.61	e0.70	e0.62	e1.9	85	55	14	7.7	4.5
29	e1.4	e1.2	e1.2	e0.62	---	e0.62	e3.0	101	55	13	8.2	4.3
30	e1.3	e1.4	e1.2	e0.62	---	e0.63	e3.3	110	54	12	11	4.1
31	e1.3	---	e1.2	e1.1	---	e0.71	---	127	---	11	10	---
TOTAL	61.4	40.6	36.36	28.22	31.70	28.48	60.99	904.2	2,056	871	296.4	281.7
MEAN	1.98	1.35	1.17	0.91	1.13	0.92	2.03	29.2	68.5	28.1	9.56	9.39
MAX	3.1	1.7	1.6	1.2	1.4	1.2	3.3	127	120	52	21	20
MIN	1.3	1.1	0.92	0.61	0.70	0.62	0.99	3.2	45	11	5.5	4.1
AC-FT	122	81	72	56	63	56	121	1,790	4,080	1,730	588	559

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

	1985	1984	1983	1983	1995	1995	1969	2000	1997	1995	1983	1983
MEAN	2.97	1.73	1.10	0.88	0.80	0.78	1.48	15.5	56.3	29.3	9.43	4.71
MAX	5.49	3.33	1.79	1.24	1.15	1.21	4.30	32.6	85.8	75.5	25.5	9.74
(WY)	(1985)	(1984)	(1983)	(1983)	(1995)	(1995)	(1969)	(2000)	(1997)	(1995)	(1983)	(1983)
MIN	1.51	1.03	0.78	0.58	0.48	0.52	0.68	1.57	20.1	4.74	3.39	2.35
(WY)	(1981)	(1974)	(1977)	(1972)	(1972)	(1972)	(1973)	(1995)	(2002)	(2002)	(2002)	(1987)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1966 - 2003

ANNUAL TOTAL	1,698.72	4,697.05		
ANNUAL MEAN	4.65	12.9	10.4	
HIGHEST ANNUAL MEAN			15.5	1984
LOWEST ANNUAL MEAN			4.80	2002
HIGHEST DAILY MEAN	39	Jun 1	127	May 31
LOWEST DAILY MEAN	e0.75	Mar 3	e0.61	Jan 28
ANNUAL SEVEN-DAY MINIMUM	e0.79	Feb 27	e0.75	Mar 25
MAXIMUM PEAK FLOW			197	May 31
MAXIMUM PEAK STAGE			4.96	May 31
ANNUAL RUNOFF (AC-FT)	3,370	9,320	7,560	
10 PERCENT EXCEEDS	13	51	33	
50 PERCENT EXCEEDS	2.0	2.0	2.0	
90 PERCENT EXCEEDS	0.89	0.89	0.72	

e Estimated.

a Maximum gage height, 7.57 ft, May 15, 1984, backwater from ice.











## 09036000 WILLIAMS FORK NEAR LEAL, CO

LOCATION.--Lat 39°50'02", long 106°03'21", in sec.31, T.2 S., R.77 W., Grand County, Hydrologic Unit 14010001, on right bank at downstream side of bridge, 100 ft downstream from Kinney Creek, and 1.7 mi northwest of Leal.

DRAINAGE AREA.--89.5 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1933 to current year. Records since May 10, 1940, equivalent to earlier records if diversion to August P. Gumlick Tunnel is added to flow past station. Prior to October 1958, published as Williams River near Leal. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09036000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09036000)

REVISED RECORDS.--WSP 1733: 1951. WSP 2124: Drainage area. WRD CO. 1973: 1972.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,790 ft above NGVD of 1929, from topographic map. Prior to Aug. 16, 1953, at site 15 ft downstream at present datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Transmountain diversion upstream from station through August P. Gumlick Tunnel (see table below for figures of diversion). Diversions for irrigation of about 200 acres of hay meadows upstream from station and about 40 acres downstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	19	22	14	15	18	17	57	1,320	485	74	61
2	22	19	22	14	17	18	18	53	e1,110	459	69	56
3	28	19	22	14	16	18	18	54	e990	435	79	56
4	27	18	20	14	16	18	18	56	911	410	96	57
5	26	19	21	14	17	18	17	53	838	383	72	52
6	24	18	20	14	16	18	17	51	741	354	66	59
7	24	19	19	14	e16	18	17	51	679	289	62	71
8	25	20	19	14	e17	18	16	51	620	231	67	70
9	24	21	18	14	17	18	17	50	653	212	61	96
10	23	21	17	14	17	18	20	52	724	207	57	94
11	21	21	17	14	17	18	24	47	766	183	54	88
12	22	20	16	14	17	18	31	54	785	170	54	78
13	20	20	17	14	17	18	36	74	762	161	56	71
14	20	20	17	14	17	18	45	98	761	165	51	67
15	20	20	17	14	17	18	47	137	e806	149	48	63
16	21	18	17	14	17	18	43	176	e800	143	56	61
17	20	19	17	14	17	18	41	246	e792	141	118	58
18	20	20	17	14	17	18	39	283	e806	131	119	61
19	20	19	17	15	17	18	35	290	e822	126	83	60
20	20	20	16	15	18	19	33	281	e812	122	67	57
21	21	20	16	14	18	20	35	306	774	126	60	55
22	21	19	16	14	18	19	37	373	753	111	58	52
23	22	20	15	14	18	18	37	456	737	101	76	51
24	23	21	14	14	18	18	29	521	692	107	100	49
25	25	21	14	14	18	18	41	569	636	103	90	48
26	23	19	14	14	18	17	50	592	584	104	81	46
27	25	20	13	14	18	16	58	676	560	98	69	44
28	24	21	14	14	18	15	60	880	544	99	66	43
29	23	21	14	14	---	15	62	1,020	531	92	60	42
30	22	22	14	14	---	15	61	1,110	506	81	68	48
31	23	---	14	15	---	17	---	1,130	---	76	71	---
TOTAL	700	594	526	437	479	549	1,019	9,847	22,815	6,054	2,208	1,814
MEAN	22.6	19.8	17.0	14.1	17.1	17.7	34.0	318	760	195	71.2	60.5
MAX	28	22	22	15	18	20	62	1,130	1,320	485	119	96
MIN	20	18	13	14	15	15	16	47	506	76	48	42
AC-FT	1,390	1,180	1,040	867	950	1,090	2,020	19,530	45,250	12,010	4,380	3,600
a	294	222	167	169	115	109	40	0	0	2,388	1,035	978

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

	37.9	29.7	24.1	20.7	19.2	19.2	36.3	180	484	215	70.3	44.2
MEAN	37.9	29.7	24.1	20.7	19.2	19.2	36.3	180	484	215	70.3	44.2
MAX	102	52.6	35.1	28.6	26.4	24.5	91.3	392	966	765	198	98.4
(WY)	(1962)	(1962)	(1985)	(1985)	(1962)	(1946)	(1946)	(1996)	(1938)	(1983)	(1983)	(1961)
MIN	18.5	18.7	14.4	14.1	14.0	14.1	19.8	76.1	109	31.0	17.6	18.4
(WY)	(1964)	(1964)	(1964)	(1964)	(1964)	(1964)	(1944)	(1968)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1934 - 2003

ANNUAL TOTAL	12,479		47,042									
ANNUAL MEAN	34.2		b137							b105		
HIGHEST ANNUAL MEAN										c176	1984	
LOWEST ANNUAL MEAN										35.6	2002	
HIGHEST DAILY MEAN	207	Jun 3	1,320	Jun 1	1,430	Jun 21, 1938				d12	Aug 19, 2002	
LOWEST DAILY MEAN	12	Aug 19	13	Dec 27	13	Aug 15, 2002				13	Aug 15, 2002	
ANNUAL SEVEN-DAY MINIMUM	13	Aug 15	14	Dec 24	14	Jun 10, 1952				1,720	Jun 10, 1952	
MAXIMUM PEAK FLOW			1,390	May 31	1,720	Jun 10, 1952				f4.23	Jun 10, 1952	
MAXIMUM PEAK STAGE			3.80	May 31								
ANNUAL RUNOFF (AC-FT)	24,750		b99,260		b76,070							
10 PERCENT EXCEEDS	76		525		274							
50 PERCENT EXCEEDS	20		24		33							
90 PERCENT EXCEEDS	15		15		18							

e Estimated.

a Diversions in acre-feet, through August P. Gumlick Tunnel, provided by Denver Water Board.

b Includes diversions through August P. Gumlick Tunnel, since May 10, 1940.

c Does not include diversions through August P. Gumlick Tunnel.

d Also occurred Aug 20, 27-28, 2002.

f Maximum gage height, 5.46 ft, Jun 29, 1971, backwater from log.

## 09037500 WILLIAMS FORK NEAR PARSHALL, CO

LOCATION.--Lat 40°00'01", long 106°10'45", in SW  $\frac{1}{4}$  SW  $\frac{1}{4}$  sec.31, T.1 N., R.78 W., Grand County, Hydrologic Unit 14010001, on left bank 30 ft downstream from bridge on State Highway 286, 3.7 mi downstream from Skylark Creek, 3.9 mi south of Parshall, and 4.2 mi upstream from Williams Fork Reservoir Dam.

DRAINAGE AREA.--184 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1904 to September 1924, June 1933 to current year. Records since May 10, 1940, equivalent to earlier records if diversion to August P. Gumlick Tunnel is added to flow past station. Published as "near (Hot) Sulphur Springs", 1904-12, and as Williams River near Parshall, June 1933 to September 1958. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09037500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09037500)

REVISED RECORDS.--WSP 1243: 1918. WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,808.95 ft above NGVD of 1929, (Denver Board of Water Commissioners Datum). See WSP 1733 for history of changes prior to Aug. 9, 1938. Aug. 10, 1938 to Aug. 19, 1983, gage located on right bank at present datum. Aug. 19, 1983 to May 14, 1991, gage located 120 ft downstream of present site on left bank at present datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Transmountain diversion upstream from station through August P. Gumlick Tunnel (station 09035000). Diversions for irrigation of about 1,300 acres upstream from station, and about 2,500 acres downstream from station. About 150 acres upstream from station irrigated by diversions into the drainage area. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	38	e38	e31	e30	e31	35	136	e1,500	407	21	42
2	25	38	e38	e31	e30	e31	39	124	e1,260	380	21	37
3	26	36	e38	e32	e30	e31	40	130	e1,160	340	21	35
4	26	e35	e37	e32	e29	e31	38	144	e1,040	272	27	37
5	24	e35	e37	e31	e29	e31	36	125	e952	216	21	34
6	15	e36	e37	e31	e29	e31	35	115	e873	194	21	39
7	15	e36	e37	e30	e29	e31	33	114	e811	153	21	52
8	15	e36	e36	e30	e30	e31	33	120	e739	105	21	71
9	15	e37	e36	e30	e30	e31	35	114	e768	81	21	97
10	14	e37	e36	e30	e30	e31	43	125	e808	73	21	95
11	14	e37	e36	e30	e30	e32	54	106	e833	67	23	107
12	14	e36	e35	e30	e30	e32	68	117	e830	51	23	88
13	14	e36	e36	e30	e30	e32	77	e158	e818	41	23	78
14	21	e36	e36	e30	e30	e32	95	e192	e822	34	23	72
15	34	e34	e36	e30	e30	e32	102	e248	e819	31	22	67
16	35	e36	e35	e30	e30	e32	86	e284	e786	26	24	59
17	34	e36	e35	e30	e30	e32	86	e364	e773	24	55	56
18	34	e36	e35	e31	e30	e32	84	e418	e773	25	90	59
19	33	e35	e34	e31	e30	e32	74	e438	e783	24	68	61
20	32	e36	e34	e31	e30	e32	70	e439	e763	24	71	58
21	32	e36	e34	e31	e30	e33	74	e442	e735	23	61	54
22	33	e35	e33	e30	e31	e32	80	e441	e714	24	38	50
23	37	e36	e32	e30	e31	e32	87	e523	e655	23	40	44
24	37	e36	e32	e30	e31	e32	76	e610	e643	22	88	e42
25	35	e36	e32	e30	e31	e32	82	e723	e588	22	70	39
26	34	e34	e32	e30	e31	e31	108	e707	526	23	70	43
27	35	e36	e31	e30	e31	31	132	e729	500	24	52	47
28	34	e36	e31	e30	e31	30	143	e1,060	469	23	48	46
29	34	e37	e31	e30	---	30	149	1,210	457	26	42	45
30	30	e37	e31	e29	---	32	146	e1,300	428	22	46	46
31	35	---	e31	e30	---	32	---	e1,310	---	21	53	---
TOTAL	841	1,081	1,072	941	843	977	2,240	13,066	23,626	2,821	1,246	1,700
MEAN	27.1	36.0	34.6	30.4	30.1	31.5	74.7	421	788	91.0	40.2	56.7
MAX	37	38	38	32	31	33	149	1,310	1,500	407	90	107
MIN	14	34	31	29	29	30	33	106	428	21	21	34
AC-FT	1,670	2,140	2,130	1,870	1,670	1,940	4,440	25,920	46,860	5,600	2,470	3,370
a	294	222	167	169	115	109	40	0	0	2,388	1,035	978

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 2003, BY WATER YEAR (WY)

MEAN	60.0	50.9	42.1	37.0	35.1	39.4	79.8	271	554	212	85.9	61.8
MAX	151	80.9	65.6	59.5	53.9	87.8	199	711	1,243	855	245	153
(WY)	(1962)	(1985)	(1985)	(1910)	(1912)	(1910)	(1962)	(1984)	(1918)	(1983)	(1984)	(1909)
MIN	17.6	32.5	26.8	22.6	22.6	21.5	29.9	28.9	38.6	15.9	13.8	11.1
(WY)	(1956)	(1982)	(1950)	(1964)	(1964)	(1971)	(1981)	(1963)	(1954)	(2002)	(1988)	(1966)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1905 - 2003

ANNUAL TOTAL	12,862							50,454				
ANNUAL MEAN	35.2							b146				
HIGHEST ANNUAL MEAN										b133		
LOWEST ANNUAL MEAN										c248	1984	
HIGHEST DAILY MEAN	180	Jun 1						e1,500	Jun 1	c38.4	2002	
LOWEST DAILY MEAN	13	Jul 18						14	Oct 10	d2,520	Jun 14, 1918	
ANNUAL SEVEN-DAY MINIMUM	13	Aug 24						14	Oct 7	f4.8	May 6, 1972	
MAXIMUM PEAK FLOW								not determined		5.1	May 6, 1972	
MAXIMUM PEAK STAGE								not determined		d2,620	Jun 14, 1918	
ANNUAL RUNOFF (AC-FT)	25,510							b105,800		6.05	Jun 14, 1918	
10 PERCENT EXCEEDS	70							481				
50 PERCENT EXCEEDS	30							35				
90 PERCENT EXCEEDS	14							24				

e Estimated.

a Diversions in acre-ft through August P. Gumlick Tunnel provided by Denver Water Board.

b Includes diversions through August P. Gumlick Tunnel.

c Does not include diversions through August P. Gumlick Tunnel.

d Site and datum then in use, from rating curve extended above 1,400 ft<sup>3</sup>/s.

f Also occurred May 8-10, 1972.

## 09038500 WILLIAMS FORK BELOW WILLIAMS FORK RESERVOIR, CO

LOCATION.--Lat 40°02'07", long 106°12'17", in NW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.23, T.1 N., R.79 W., Grand County, Hydrologic Unit 14010001, on left bank 400 ft downstream from Williams Fork Reservoir, 2.1 mi upstream from mouth, and 2.1 mi southwest of Parshall.

DRAINAGE AREA.--230 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1948 to September 1954, August 1958 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to October 1958, published as Williams River below Williams Fork Reservoir. Water-quality data available, April 1986 to September 1987. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09038500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09038500).

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Datum of gage is 7,615.0 ft above NGVD of 1929, (Denver Board of Water Commissioners Datum). See WSP 1713 or 1733 for history of changes prior to Oct. 21, 1959.

REMARKS.--No estimated daily discharges. Records good. Flow completely regulated by Williams Fork Reservoir (station 09038000). Transmountain diversion upstream from station through August P. Gumlick Tunnel (station 09036000). Diversions upstream from station for irrigation of about 3,200 acres and about 100 acres downstream from station. About 450 acres upstream from station irrigated by diversion into the drainage area. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	154	111	67	34	38	35	15	16	15	222	183
2	138	155	113	65	34	37	35	15	17	16	210	183
3	138	156	113	65	34	37	41	15	15	29	189	203
4	138	154	112	65	34	37	37	15	15	37	179	232
5	138	140	112	65	34	37	40	15	17	39	203	214
6	138	132	111	65	34	37	52	15	17	40	221	183
7	138	132	111	65	34	37	56	16	16	103	222	183
8	180	132	111	65	34	37	56	17	16	199	227	193
9	206	133	91	65	34	37	56	17	16	169	236	220
10	204	133	77	64	34	37	44	17	17	184	238	253
11	204	132	77	65	34	37	24	17	17	251	210	248
12	204	132	77	66	34	37	24	17	17	245	199	239
13	204	132	78	66	34	37	24	17	17	235	217	282
14	151	132	78	66	34	35	21	17	17	250	217	316
15	123	132	77	66	34	33	14	16	17	277	213	316
16	123	132	77	66	34	35	14	16	17	274	212	309
17	123	131	77	66	34	46	15	17	17	278	229	281
18	123	132	77	66	34	51	15	17	16	278	241	226
19	123	111	77	66	34	50	14	17	15	279	241	188
20	123	134	77	66	34	50	14	17	16	280	242	174
21	123	101	77	66	34	50	14	17	16	157	245	183
22	123	48	77	65	34	51	14	16	16	51	239	194
23	123	38	77	46	34	51	14	17	17	60	236	216
24	123	80	77	37	37	51	14	17	17	129	236	215
25	123	77	77	35	39	53	14	17	15	210	238	212
26	123	101	77	35	39	51	15	17	16	268	240	196
27	123	134	71	35	38	46	15	17	16	266	237	183
28	123	133	68	35	38	47	15	18	15	240	235	183
29	123	123	68	35	---	48	15	17	15	234	234	185
30	123	111	68	35	---	39	15	15	15	269	234	188
31	141	---	67	34	---	35	---	15	---	253	202	---
TOTAL	4,428	3,667	2,638	1,768	973	1,304	776	508	486	5,615	6,944	6,581
MEAN	143	122	85.1	57.0	34.8	42.1	25.9	16.4	16.2	181	224	219
MAX	206	156	113	67	39	53	56	18	17	280	245	316
MIN	123	38	67	34	34	33	14	15	15	15	179	174
AC-FT	8,780	7,270	5,230	3,510	1,930	2,590	1,540	1,010	964	11,140	13,770	13,050

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)

	MEAN	129	132	104	102	89.9	93.2	79.2	111	199	169	159	155
MAX	264	276	251	264	279	265	273	401	1,007	782	352	342	
(WY)	(1979)	(1979)	(1966)	(1984)	(1966)	(1966)	(1986)	(1952)	(1952)	(1983)	(1981)	(1981)	(1981)
MIN	23.5	36.7	13.5	14.7	7.88	14.1	6.04	6.29	10.8	7.97	19.2	17.1	
(WY)	(1988)	(1995)	(1983)	(1983)	(1995)	(1983)	(1960)	(1960)	(1961)	(1963)	(1986)	(1986)	

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1949 - 2003
ANNUAL TOTAL	41,907	35,688	
ANNUAL MEAN	115	a165	a129
HIGHEST ANNUAL MEAN			b254 1984
LOWEST ANNUAL MEAN			39.1 1959
HIGHEST DAILY MEAN	287	316	1,860 Jun 28, 1983
LOWEST DAILY MEAN	14	14	c0.30 May 14, 1963
ANNUAL SEVEN-DAY MINIMUM	14	14	0.54 Apr 27, 1959
MAXIMUM PEAK FLOW		321	d2,640 Jun 20, 1953
MAXIMUM PEAK STAGE		2.51	8.50 Jun 20, 1953
ANNUAL RUNOFF (AC-FT)	83,120	a119,600	a93,460
10 PERCENT EXCEEDS	220	234	250
50 PERCENT EXCEEDS	102	66	109
90 PERCENT EXCEEDS	31	16	16

a Adjusted for storage at Williams Fork Reservoir.

b Not adjusted for storage at Williams Fork Reservoir.

c No flow for part of Apr 29, 1975.

d Site and datum then in use, from rating curve extended above 1,500 ft<sup>3</sup>/s.



**09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO**

LOCATION.--Lat 40°12'09", long 106°25'19", in SE¼SE¼ sec.23, T.3 N., R.81 W., Grand County, Hydrologic Unit 14010001, on left bank at upstream side of box culverts on U.S. Highway 40, 10.9 mi north of Kremmling.

DRAINAGE AREA.--145 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1990 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09041090](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09041090)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,520 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	e4.8	e4.0	e2.2	e2.8	e6.1	45	137	468	12	13	8.5
2	4.4	e5.0	e4.1	e2.2	e3.1	e6.0	50	116	392	12	12	6.7
3	4.7	e5.2	e4.1	e2.2	e3.2	e6.0	53	132	288	10	12	5.9
4	e4.7	e5.3	e4.1	e2.2	e3.6	e6.2	37	180	235	10	12	5.6
5	e4.8	e5.3	e3.9	e2.2	e3.8	e6.4	31	157	189	12	12	5.2
6	e4.9	e5.4	e3.7	e2.3	e3.8	e7.2	29	135	156	13	11	5.4
7	e5.0	e5.4	e3.4	e2.2	e3.8	e8.8	25	131	167	9.5	11	6.3
8	e5.1	e5.4	e3.3	e2.2	e3.7	e10	25	137	136	9.0	11	6.4
9	5.0	e5.5	e3.1	e2.1	e3.6	e12	25	142	112	9.7	10	5.9
10	4.6	e5.6	e2.8	e2.0	e3.6	e13	36	146	107	11	9.5	5.6
11	4.2	e5.7	e2.7	e1.9	e3.7	e16	49	124	107	10	8.7	8.0
12	3.9	e5.9	e2.6	e1.8	e3.6	e22	63	115	88	11	7.5	8.8
13	3.6	e6.0	e2.6	e1.7	e3.6	e34	74	163	71	9.5	9.0	7.2
14	3.6	e6.0	e2.6	e1.7	e3.7	e32	107	231	69	9.8	8.2	5.8
15	3.5	e6.1	e2.6	e1.7	e3.8	e32	115	322	65	9.7	7.6	5.1
16	3.5	e6.0	e2.7	e1.6	e3.9	e29	90	354	62	11	7.7	4.7
17	3.4	e6.0	e2.7	e1.7	e3.9	e27	83	456	59	12	8.2	e5.0
18	3.5	e6.0	e2.7	e1.7	e4.1	e26	81	542	48	13	11	e5.2
19	3.7	e5.9	e2.8	e1.8	e4.1	e21	63	503	43	13	9.8	e5.4
20	e3.7	e5.8	e2.9	e1.9	e4.1	e33	61	456	45	20	8.9	e5.6
21	e3.7	e5.8	e2.9	e1.9	e4.1	e38	64	456	53	17	7.5	e5.8
22	e3.8	e5.7	e2.8	e1.9	e4.6	e40	80	459	47	15	7.1	e5.9
23	e4.0	e5.5	e2.7	e2.0	e5.0	e43	96	505	37	12	8.2	e6.2
24	e4.3	e5.3	e2.7	e2.0	e5.5	e46	77	551	26	10	8.0	e6.4
25	e4.3	e5.0	e2.6	e2.1	e5.8	e42	92	563	21	9.9	7.7	e6.6
26	e4.4	e4.8	e2.5	e2.1	e5.9	e42	114	473	22	12	7.9	e6.8
27	e4.4	e5.0	e2.3	e2.1	e6.0	e40	152	493	22	11	8.9	e6.9
28	e4.5	e4.7	e2.3	e2.2	e6.1	e37	163	535	19	11	8.2	e7.1
29	e4.6	e4.6	e2.3	e2.3	---	e42	183	527	17	19	7.4	e7.2
30	e4.6	e4.2	e2.3	e2.4	---	e44	181	546	14	18	7.0	e7.4
31	e4.8	---	e2.2	e2.6	---	e44	---	438	---	15	8.5	---
TOTAL	131.1	162.9	91.0	62.9	116.5	811.7	2,344	10,225	3,185	377.1	286.5	188.6
MEAN	4.23	5.43	2.94	2.03	4.16	26.2	78.1	330	106	12.2	9.24	6.29
MAX	5.1	6.1	4.1	2.6	6.1	46	183	563	468	20	13	8.8
MIN	3.4	4.2	2.2	1.6	2.8	6.0	25	115	14	9.0	7.0	4.7
AC-FT	260	323	180	125	231	1,610	4,650	20,280	6,320	748	568	374

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	8.95	9.18	8.27	7.54	8.15	19.8	94.0	359	146	14.6	11.1	9.16		
MAX	38.2	26.4	21.8	20.3	18.7	53.4	152	659	366	52.2	27.5	45.2		
(WY)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(2000)	(1997)	(1995)	(1995)	(1997)	(1997)		
MIN	4.23	4.36	2.82	2.03	3.00	9.86	40.8	76.8	6.09	2.69	2.63	2.06		
(WY)	(2003)	(1995)	(1991)	(2003)	(1991)	(2001)	(1995)	(2002)	(2002)	(1994)	(2002)	(2002)		

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1990 - 2003
ANNUAL TOTAL	5,679.18	17,982.3	
ANNUAL MEAN	15.6	49.3	59.7
HIGHEST ANNUAL MEAN			109 1997
LOWEST ANNUAL MEAN			16.1 2002
HIGHEST DAILY MEAN	153 May 8	563 May 25	908 May 18, 1996
LOWEST DAILY MEAN	0.80 Sep 8	e1.6 Jan 16	0.80 Sep 8, 2002
ANNUAL SEVEN-DAY MINIMUM	0.95 Sep 4	e1.7 Jan 12	0.95 Sep 4, 2002
MAXIMUM PEAK FLOW		719 May 30	955 Jun 20, 1994
MAXIMUM PEAK STAGE		6.47 May 30	a7.36 Jun 20, 1994
ANNUAL RUNOFF (AC-FT)	11,260	35,670	43,260
10 PERCENT EXCEEDS	56	136	184
50 PERCENT EXCEEDS	5.2	7.2	10
90 PERCENT EXCEEDS	2.3	2.6	3.9

e Estimated.

a Maximum gage height, 7.43 ft, May 18, 1996 and May 17, 1997.

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1990 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09041090](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09041090)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1990 to current year.

WATER TEMPERATURE: April 1990 to current year.

SUSPENDED-SEDIMENT DISCHARGE: April 1990 to September 1993.

INSTRUMENTATION.--Water-quality monitor from April 1990 to current year.

REMARKS.--Records for specific conductance are rated good. Records for water temperature are rated good. Daily data that are not published are either missing or of unacceptable quality.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,370 microsiemens/cm, July 7, 2001; minimum, 88 microsiemens/cm, May 20, 1994.

WATER TEMPERATURE: Maximum, 27.2°C, July 19, 2002; minimum, 0.0°C, on many days during winter.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 813 microsiemens/cm, July 11,12; minimum, 110 microsiemens/cm, May 29,31.

WATER TEMPERATURE: Maximum, 26.6°C, July 22; minimum, 0.0°C, on many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unflab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
OCT													
08...	0915	5.0	7.8	9.5	8.4	391	6.0	170	48.1	11.3	1.82	0.5	15.4
NOV													
14...	0930	6.4	8.2	10.4	8.4	356	0.5	160	46.0	10.6	1.46	0.5	13.9
DEC													
11...	1030	2.4	4.6	9.3	8.3	461	0.0	200	56.2	13.4	1.63	0.5	17.4
JAN													
15...	1000	0.46	7.0	9.9	8.2	390	0.0	160	47.6	10.9	1.95	0.5	13.4
FEB													
20...	1100	3.7	8.0	9.5	8.1	350	0.0	150	43.7	10.0	1.51	0.4	11.9
APR													
01...	1030	47	47	12.3	8.4	428	3.0	190	56.1	13.2	2.14	0.5	15.4
22...	1030	80	160	9.5	8.3	318	4.5	140	40.8	8.62	2.12	0.4	9.60
MAY													
28...	1230	608	120	9.9	8.3	119	8.5	48	14.9	2.65	0.91	0.2	3.08
JUN													
11...	1045	115	13	8.5	8.1	266	13.0	120	32.8	8.28	1.21	0.4	9.20
JUL													
29...	1030	22	6.7	6.0	8.1	675	17.5	360	100	26.0	2.41	0.6	27.7
AUG													
19...	1130	9.5	450	6.5	8.2	399	14.5	190	54.6	13.9	2.43	0.4	13.1
SEP													
23...	1045	6.3	10	6.6	8.4	390	8.5	180	50.4	12.5	1.75	0.4	12.2



## 09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, sus- pended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 08...	E141	2.05	0.18	6.0	65.0	--	--	--	244	<10	0.22	0.29	<0.015
NOV 14...	125	1.62	<0.17	7.7	60.9	217	0.31	3.89	226	--	0.22	0.21	<0.015
DEC 11...	E160	3.02	0.20	10.1	82.5	--	--	--	303	<10	0.17	0.22	<0.015
JAN 15...	127	2.23	<0.17	10.3	58.3	221	0.31	0.29	229	--	<0.10	0.21	0.017
FEB 20...	E143	1.57	0.16	10.3	56.3	--	--	--	223	--	0.22	0.25	0.022
APR 01...	125	5.74	0.14	8.3	92.0	268	0.39	36.7	290	--	0.28	0.49	0.035
22...	105	3.91	0.15	8.6	60.8	199	0.29	45.9	211	--	0.42	0.95	E.012
MAY 28...	48	0.99	<0.2	6.9	13.5	72	0.11	133	81	216	0.27	0.77	E.013
JUN 11...	92	1.32	<0.2	9.9	41.1	159	0.24	55.4	179	--	0.36	0.72	<0.015
JUL 29...	272	3.12	0.3	9.2	102	434	0.54	23.6	396	--	0.59	0.70	0.016
AUG 19...	140	1.87	<0.2	5.5	69.2	245	0.34	6.39	249	374	0.24	1.1	<0.015
SEP 23...	138	2.11	0.2	6.4	65.3	234	0.34	4.29	254	--	0.26	0.27	<0.015

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro- gen, water, fltrd, mg/L (00607)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Alum- inum, water, unfltrd recover- able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)
OCT 08...	<0.022	<0.002	--	<0.007	0.007	0.019	0.3	4.3	5	--	--	--	--
NOV 14...	<0.022	<0.002	--	<0.007	E.002	0.020	--	--	25	--	--	--	--
DEC 11...	<0.022	<0.002	--	<0.007	E.004	0.014	0.2	3.4	<1	--	--	--	--
JAN 15...	0.069	E.002	--	<0.007	E.003	0.019	--	--	<3	--	--	--	--
FEB 20...	0.094	E.002	0.20	<0.007	E.004	0.026	--	--	<1	--	--	--	--
APR 01...	0.132	0.003	0.24	E.006	0.013	0.105	--	--	<1	--	--	--	--
22...	0.423	0.005	--	E.006	0.013	0.21	--	--	E1	--	--	--	--
MAY 28...	0.058	0.004	--	0.009	0.017	0.32	3.0	5.9	E1	2,230	<2	3	25.3
JUN 11...	<0.022	E.002	--	0.007	0.019	0.066	--	--	20	--	--	--	--
JUL 29...	<0.022	<0.002	0.57	<0.007	0.010	0.030	--	--	84	--	--	--	--
AUG 19...	<0.022	<0.002	--	<0.007	E.004	0.42	0.4	4.5	<160	5,960	<2	E2	73.0
SEP 23...	<0.022	<0.002	--	<0.007	E.004	0.033	--	--	E1	--	--	--	--



## MUDDY CREEK BASIN

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silver, water, unfltrd recover- able, ug/L (01077)	Stront- ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover- able, ug/L (01092)
OCT 08...	--	--	--	--
NOV 14...	--	--	--	--
DEC 11...	--	--	--	--
JAN 15...	--	--	--	--
FEB 20...	--	--	--	--
APR 01...	--	--	--	--
22...	--	--	--	--
MAY 28...	<0.16	107	E2	25
JUN 11...	--	--	--	--
JUL 29...	--	--	--	--
AUG 19...	<0.16	420	<3	23
SEP 23...	--	--	--	--

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
OCT 08...	0930	5.0	6.0	6	0.08
NOV 14...	0915	6.4	0.5	8	0.13
14...	1030	6.4	0.5	6	0.11
DEC 10...	1400	2.4	0.5	6	0.04
11...	1015	2.4	0.0	14	0.09
JAN 15...	0945	0.50	0.0	9	0.01
FEB 20...	1115	3.7	0.0	18	0.18
APR 01...	1045	47	3.0	67	8.5
22...	1015	80	4.5	221	48
23...	1300	85	5.0	139	32
MAY 27...	1130	501	7.5	286	386
28...	1300	608	8.5	319	524
JUN 11...	1030	115	13.0	38	12
JUL 29...	1045	22	17.5	44	2.6
AUG 19...	1120	9.5	14.5	319	8.2



## MUDDY CREEK BASIN

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	142	118	127	658	643	652	614	598	605	416	381	396
2	149	118	133	659	642	651	598	560	571	403	392	397
3	166	133	147	683	651	669	567	531	554	409	394	401
4	182	151	163	687	672	680	534	525	529	413	409	411
5	201	179	190	697	687	692	531	510	518	419	409	414
6	218	197	207	688	680	684	517	506	510	414	408	412
7	230	216	221	695	681	688	522	488	504	413	398	408
8	277	211	238	750	695	718	488	443	458	414	397	405
9	277	262	268	795	750	779	443	413	425	413	400	409
10	289	271	280	799	772	787	415	410	412	419	411	415
11	295	263	276	813	797	802	412	400	405	431	368	413
12	296	267	277	813	772	785	438	405	423	368	334	341
13	302	274	288	782	767	775	439	411	431	339	325	329
14	314	302	310	778	770	773	456	410	429	335	326	330
15	329	305	316	790	776	783	454	424	435	351	334	342
16	349	329	341	808	790	801	426	399	417	---	---	---
17	367	344	355	805	770	788	399	389	395	---	---	---
18	404	362	383	783	755	769	390	375	382	---	---	---
19	462	404	423	761	726	756	415	373	395	383	367	377
20	466	436	454	771	725	738	427	408	417	393	379	386
21	454	433	447	768	725	741	423	418	420	395	388	391
22	475	432	455	777	762	771	429	415	422	395	388	391
23	493	461	481	762	751	755	417	392	406	395	390	393
24	493	461	478	779	760	768	662	389	494	403	392	397
25	542	493	525	794	779	789	515	412	450	413	397	403
26	571	523	537	795	752	773	447	423	432	415	402	407
27	625	571	602	754	740	746	433	381	412	423	404	409
28	641	579	603	743	717	732	500	365	441	422	405	412
29	632	602	609	719	626	676	427	405	414	430	418	422
30	649	613	625	627	610	618	407	399	402	433	421	427
31	---	---	---	613	601	607	411	388	397	---	---	---
MONTH	649	118	359	813	601	734	662	365	449	---	---	---



## MUDDY CREEK BASIN

09041090 MUDDY CREEK ABOVE ANTELOPE CREEK NEAR KREMMLING, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.5	8.3	11.0	21.7	14.7	18.3	23.2	15.8	19.1	18.4	12.0	15.2
2	14.1	8.5	11.1	23.3	14.3	18.8	24.5	16.8	20.4	18.7	13.6	16.1
3	15.0	8.7	11.7	23.5	15.2	19.5	24.0	18.4	21.1	18.5	13.8	16.2
4	15.5	9.1	12.2	23.9	15.4	19.7	24.0	18.6	21.1	20.4	13.2	16.7
5	16.2	9.3	12.5	23.1	15.1	19.1	24.6	17.1	20.7	17.7	13.6	16.0
6	14.0	8.6	11.4	20.3	15.3	17.9	23.8	17.5	20.6	16.8	14.2	15.3
7	15.7	8.6	11.9	19.5	13.8	17.0	20.8	17.2	19.0	15.6	13.9	14.6
8	17.2	8.1	12.6	22.6	13.0	17.8	23.3	16.3	19.5	16.6	11.7	13.9
9	14.9	10.6	13.1	23.5	13.7	18.7	23.1	17.1	20.1	16.5	12.6	14.5
10	15.4	11.3	13.5	24.8	13.0	18.9	24.0	16.5	20.3	14.3	11.4	12.6
11	15.1	10.7	13.2	22.8	14.2	18.7	24.3	17.8	21.0	13.7	10.4	11.8
12	16.5	9.5	12.9	23.9	14.0	19.0	23.6	16.6	20.3	13.4	9.7	11.7
13	16.2	10.5	13.4	22.0	14.8	18.8	23.1	17.2	20.3	15.0	10.4	12.7
14	19.8	11.2	15.3	24.6	14.4	19.4	24.4	16.9	20.3	14.2	8.6	11.3
15	20.4	12.6	16.4	21.6	16.1	19.2	23.2	15.3	19.3	14.3	8.4	11.3
16	17.8	13.9	15.9	21.7	15.5	18.7	21.8	16.9	19.5	---	---	---
17	19.9	11.7	15.5	25.2	15.1	19.7	19.2	16.5	17.8	---	---	---
18	21.0	12.8	16.8	23.4	17.3	20.5	17.5	15.1	16.3	---	---	---
19	18.2	13.3	16.2	25.1	16.4	20.5	19.5	12.9	16.0	14.1	7.3	10.7
20	18.2	12.3	15.2	25.3	16.8	20.7	22.0	14.7	18.1	13.8	8.4	11.2
21	19.0	11.3	15.2	25.4	16.7	20.9	21.9	16.2	19.0	13.4	7.7	10.7
22	19.7	11.6	15.6	26.6	16.6	21.2	22.6	16.7	19.5	13.8	7.3	10.6
23	20.7	11.5	16.1	25.5	16.3	20.7	20.8	17.4	19.0	14.2	7.9	11.1
24	20.1	12.8	16.3	24.2	16.7	20.6	19.7	16.1	18.0	14.0	8.0	11.1
25	19.4	11.7	15.4	23.2	17.1	20.2	20.6	16.2	17.9	13.4	7.8	10.8
26	20.5	10.8	15.7	24.0	16.1	20.1	21.1	15.3	17.8	13.7	8.0	10.9
27	21.1	11.5	16.5	23.2	17.0	20.1	18.7	16.1	17.4	14.0	8.5	11.4
28	21.0	12.6	16.8	23.1	16.2	19.8	21.1	15.0	17.7	14.0	9.0	11.7
29	23.4	13.5	18.3	22.4	16.6	19.6	20.2	15.5	17.9	14.1	9.3	11.8
30	22.1	13.8	18.4	22.7	15.7	19.5	17.5	14.9	16.1	14.8	10.1	12.5
31	---	---	---	20.8	16.8	19.0	17.8	13.3	15.3	---	---	---
MONTH	23.4	8.1	14.5	26.6	13.0	19.4	24.6	12.9	18.9	---	---	---

401110106244800 WOLFORD MOUNTAIN RESERVOIR AT INFLOW NEAR KREMMLING, CO

WATER-QUALITY RECORDS

LOCATION.--Lat. 40°11'10", long 106°24'48", in NE¼NW¼ sec.36, T.3 N, R.81 W. (revised), Grand County, Hydrologic Unit 14010001, 5 mi north of Kremmling.

DRAINAGE AREA.--270 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1995 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=401110106244800](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=401110106244800)

REMARKS.--Samples were collected at mid-depth at the upper inflow.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
JUN						
26...	1125	0.50	6.2	8.0	520	16.7
26...	1126	5.00	6.1	8.0	540	15.6
JUL						
17...	1107	0.50	6.9	8.0	543	20.1
17...	1108	5.00	6.9	8.1	545	19.4
AUG						
26...	1151	0.50	6.3	7.9	596	19.5
26...	1152	5.00	6.2	7.9	594	19.3
26...	1153	10.0	6.1	8.0	595	19.1
SEP						
30...	1121	0.50	7.1	8.1	599	13.4
30...	1122	5.00	7.2	8.1	600	13.1
30...	1123	10.0	6.7	8.1	617	12.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sam- pling depth, feet (00003)	Trans- parency Secchi disc, inches (00077)	Turbid- ity, wat unfl lab, Hach 2100AN NTU (99872)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	
JUN	26...	1130	5.00	63.0	--	6.1	8.0	540	15.6	230	60.5	20.3	2.18	0.6
JUL	17...	1115	4.00	68.0	4.2	6.9	8.1	545	19.4	250	63.0	21.5	2.32	0.6
AUG	26...	1200	5.00	68.0	4.3	6.2	7.9	594	19.3	290	74.1	24.8	2.60	0.6
SEP	30...	1130	5.00	38.0	7.7	7.2	8.1	600	13.1	290	73.5	25.1	2.45	0.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfl fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	
JUN	26...	22.5	116	2.87	<0.2	9.1	160	347	0.52	383	0.47	0.48	0.015	0.101
JUL	17...	23.3	113	3.20	0.2	8.4	176	366	0.55	402	0.42	0.44	0.024	0.058
AUG	26...	24.8	123	3.41	0.2	7.3	198	410	0.60	438	0.42	0.42	0.021	0.047
SEP	30...	26.2	124	3.53	0.2	7.4	203	416	0.61	452	0.35	0.43	E.010	0.082



## 401110106244800 WOLFORD MOUNTAIN RESERVOIR AT INFLOW NEAR KREMMLING, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd, mg/L (00665)	Organic carbon, suspended total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd, ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recoverable, ug/L (01007)	Beryllium, water, unfltrd recoverable, ug/L (01012)
JUN 26...	0.004	0.46	<0.007	0.012	0.030	0.5	7.6	104	<2	<2	52.9	50.5	<0.5
JUL 17...	0.006	0.40	<0.007	0.008	0.026	0.3	7.9	103	<2	<2	52.8	50.3	<0.5
AUG 26...	0.004	0.40	<0.007	0.007	0.019	0.3	6.8	66	<2	E1	57.6	64.9	<0.5
SEP 30...	0.004	--	<0.007	0.006	0.024	0.6	6.8	103	M	E2	58.1	50.6	<0.5

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd, ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)	Cobalt water, unfltrd recoverable, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)	Lithium water unfltrd recoverable, ug/L (01132)	Manganese, water, fltrd, ug/L (01056)
JUN 26...	<0.2	<0.2	<0.8	<0.8	0.507	1.8	2.9	39	200	<0.08	0.25	20.0	19.0
JUL 17...	<0.2	<0.2	<0.8	<0.8	0.496	1.9	2.4	27	160	E.07	0.12	22.8	20.0
AUG 26...	<0.2	<0.2	<0.8	<0.8	0.498	2.7	2.6	E8	30	<0.08	0.19	26.2	12.3
SEP 30...	<0.2	<0.2	<0.8	<0.8	0.510	2.0	3.4	E4	240	<0.08	0.29	27.0	37.8

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recoverable, ug/L (71900)	Molybdenum, water, unfltrd recoverable, ug/L (01062)	Nickel, water, unfltrd recoverable, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd, ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recoverable, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recoverable, ug/L (01092)
JUN 26...	25	<0.02	<0.02	2.1	3.74	2.0	1.9	<0.2	<0.16	2	E2
JUL 17...	27	<0.02	<0.02	2.4	3.83	2.1	2.5	<0.2	<0.16	M	E1
AUG 26...	27	<0.02	<0.02	2.9	3.48	2.2	2.3	<0.2	<0.16	1	<2
SEP 30...	53	<0.02	<0.02	2.8	3.53	2.6	2.3	<0.2	<0.16	M	E1

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

## 400841106240600 WOLFORD MOUNTAIN RESERVOIR AT MIDLAKE NEAR KREMMLING, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat. 40°08'41", long 106°24'06", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.18, T.2 N, R.80 W., Grand County, Hydrologic Unit 14010001, 5 mi north of Kremmling.

DRAINAGE AREA.--270 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1995 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=400841106240600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=400841106240600)

REMARKS.--Samples were collected near-surface and near-bottom in the bay east of boat ramp.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
JUN						
26...	1045	0.50	6.2	8.0	430	15.5
26...	1046	5.00	6.3	8.0	433	15.5
26...	1047	10.0	6.2	8.0	435	15.4
26...	1048	15.0	5.9	8.0	436	15.3
26...	1049	20.0	5.9	8.0	436	15.3
26...	1050	25.0	5.6	7.9	436	15.3
26...	1051	30.0	5.4	7.8	451	14.0
26...	1052	35.0	4.4	7.7	494	12.8
26...	1053	40.0	3.7	7.6	552	11.2
26...	1054	45.0	3.3	7.5	598	10.0
26...	1055	50.0	3.0	7.5	614	9.8
JUL						
17...	1035	0.50	7.1	8.0	489	19.4
17...	1036	5.00	6.9	8.1	489	18.8
17...	1037	10.0	6.8	8.1	495	18.8
17...	1038	15.0	6.4	8.0	509	18.7
17...	1039	20.0	4.9	7.9	529	17.2
17...	1040	25.0	4.0	7.8	516	15.4
17...	1041	30.0	3.6	7.7	528	14.5
17...	1042	35.0	3.1	7.6	548	13.6
17...	1043	40.0	2.7	7.6	561	13.1
17...	1044	45.0	2.0	7.5	589	11.4
AUG						
26...	1110	0.50	6.1	7.9	540	19.2
26...	1111	5.00	6.1	7.9	540	19.1
26...	1112	10.0	5.9	7.9	540	19.0
26...	1113	15.0	5.9	8.0	540	19.0
26...	1114	20.0	5.9	8.0	540	19.0
26...	1115	25.0	4.1	7.9	538	18.3
26...	1116	30.0	0.6	7.7	567	16.6
26...	1117	35.0	0.2	7.5	562	13.9
26...	1118	40.0	0.2	7.5	569	12.6
26...	1119	45.0	0.2	7.4	579	11.9
SEP						
30...	1047	0.50	6.5	8.0	566	13.8
30...	1048	5.00	6.5	8.0	564	13.6
30...	1049	10.0	6.4	8.0	564	13.6
30...	1050	15.0	6.3	8.0	564	13.6
30...	1051	20.0	6.2	8.0	563	13.6
30...	1052	25.0	5.9	8.0	565	13.5
30...	1053	30.0	5.8	8.0	566	13.5
30...	1054	35.0	5.8	8.0	567	13.4
30...	1055	40.0	5.3	7.9	572	13.3
30...	1056	45.0	4.7	7.9	573	13.2
30...	1057	50.0	2.0	7.8	590	12.4
30...	1058	55.0	0.8	7.7	601	12.0

## 400841106240600 WOLFORD MOUNTAIN RESERVOIR AT MIDLAKE NEAR KREMMLING, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sam- pling depth, feet (00003)	Trans- parency Secchi disc, inches (00077)	Turbid- ity, wat unfl lab, Hach 2100AN NTU (99872)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)
JUN													
26...	1100	0.10	92.0	--	6.2	8.0	430	15.5	190	50.4	16.0	1.99	0.6
26...	1115	45.0	--	--	3.3	7.5	598	10.0	260	65.1	23.4	2.52	0.8
JUL													
17...	1045	0.10	90.0	3.7	7.1	8.0	489	19.4	210	56.1	17.6	2.06	0.6
17...	1100	45.0	--	6.0	2.0	7.5	589	11.4	240	63.4	21.0	2.23	0.7
AUG													
26...	1130	0.10	134	1.6	6.1	7.9	540	19.2	260	68.6	21.5	2.38	0.6
26...	1145	45.0	--	4.9	0.2	7.4	579	11.9	280	71.6	23.5	2.47	0.7
SEP													
30...	1100	0.10	129	1.8	6.5	8.0	566	13.8	270	70.0	22.7	2.25	0.6
30...	1110	55.0	--	42	0.8	7.7	601	12.0	280	71.0	24.4	2.37	0.7

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfl fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
JUN													
26...	18.4	92	3.13	<0.2	8.1	128	282	0.43	315	0.42	0.38	0.021	0.130
26...	29.9	112	5.01	0.2	7.4	196	398	0.59	434	0.35	0.37	E.010	0.340
JUL													
17...	20.0	100	3.15	<0.2	8.2	144	311	0.46	337	0.38	0.41	0.017	0.070
17...	24.6	109	4.10	<0.2	8.3	181	371	0.55	401	0.35	0.40	0.016	0.271
AUG													
26...	21.4	111	3.35	0.2	7.8	172	364	0.52	385	0.35	0.35	E.010	0.082
26...	25.6	114	4.24	<0.2	8.5	188	394	0.56	415	0.36	0.36	E.012	0.306
SEP													
30...	23.9	116	3.42	0.2	8.0	185	385	0.56	414	0.33	0.38	E.014	0.132
30...	27.8	122	4.18	0.2	8.8	200	413	0.60	439	0.43	0.54	0.095	0.173

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro- gen, water, fltrd, mg/L (00607)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Chloro- phyll a phyto- plank- ton, fluoro, ug/L (70953)	Chloro- phyll b phyto- plank- ton, fluoro, ug/L (70954)	Alum- inum, water, unfltrd recover- able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover- able, ug/L (01007)
JUN													
26...	0.005	0.40	<0.007	0.007	0.021	E1	0.3	<0.1	102	<2	<2	47.4	46.7
26...	<0.002	--	E.004	0.010	0.025	--	--	--	99	<2	<2	57.7	55.2
JUL													
17...	0.006	0.36	<0.007	0.007	0.021	E2	0.3	<0.1	96	<2	<2	51.1	52.6
17...	0.003	0.33	<0.007	0.006	0.021	--	--	--	116	<2	<2	53.9	59.2
AUG													
26...	0.005	--	<0.007	0.005	0.011	E1	1.2	<0.1	25	<2	<2	54.6	57.1
26...	E.002	--	<0.007	0.006	0.017	--	--	--	55	<2	<2	53.6	58.2
SEP													
30...	0.005	--	<0.007	0.005	0.010	<1	0.6	<0.1	31	M	E1	56.8	47.3
30...	0.005	0.33	<0.007	0.009	0.064	--	--	--	409	E1	2	56.9	54.0

400841106240600 WOLFORD MOUNTAIN RESERVOIR AT MIDLAKE NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Beryllium, water, unfltrd recover-able, ug/L (01012)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Lithium water unfltrd recover-able, ug/L (01132)
JUN 26...	<0.5	<0.2	<0.2	<0.8	<0.8	0.390	1.7	3.2	31	160	0.21	0.20	15.4
JUN 26...	<0.5	<0.2	<0.2	<0.8	E.5	0.415	1.8	2.3	12	160	<0.08	0.19	22.7
JUL 17...	<0.5	<0.2	<0.2	<0.8	<0.8	0.363	1.7	2.1	28	130	<0.08	0.11	18.1
JUL 17...	<0.5	<0.2	<0.2	<0.8	<0.8	0.366	1.7	2.2	15	180	<0.08	0.10	22.4
AUG 26...	<0.5	<0.2	<0.2	<0.8	<0.8	0.376	2.8	2.7	E6	10	<0.08	0.08	21.9
AUG 26...	<0.5	<0.2	<0.2	<0.8	<0.8	0.477	2.4	2.3	17	10	<0.08	0.10	23.9
SEP 30...	<0.5	<0.2	<0.2	<0.8	<0.8	0.344	1.8	3.0	E5	40	<0.08	E.06	23.7
SEP 30...	<0.5	<0.2	<0.2	<0.8	<0.8	0.884	1.5	3.5	10	750	<0.08	0.75	28.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover-able, ug/L (71900)	Molybdenum, water, unfltrd recover-able, ug/L (01062)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)
JUN 26...	5.4	8	<0.02	<0.02	1.9	3.24	2.4	2.3	<0.2	<0.16	2	E1
JUN 26...	3.9	20	<0.02	<0.02	2.5	4.23	3.1	3.2	<0.2	<0.16	1	E2
JUL 17...	2.2	6	<0.02	<0.02	2.1	3.27	2.4	2.3	<0.2	<0.16	1	E1
JUL 17...	4.9	25	<0.02	<0.02	2.3	3.90	2.6	2.7	<0.2	<0.16	1	E2
AUG 26...	0.5	3	<0.02	<0.02	2.5	3.98	2.5	2.4	<0.2	<0.16	1	<2
AUG 26...	55.8	99	<0.02	<0.02	2.5	3.54	2.5	2.5	<0.2	<0.16	2	<2
SEP 30...	3.1	7	<0.02	<0.02	2.5	3.22	2.2	2.5	<0.2	<0.16	M	<2
SEP 30...	221	371	<0.02	<0.02	2.6	3.96	3.0	2.4	<0.2	<0.16	1	4

< -- Actual value is known to be less than the value shown.  
 E -- Estimated laboratory analysis value.  
 M -- Presence of material verified but not quantified.

## 400812106254800 ALKALI SLOUGH #2 AT WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 40°08'12", long 106°25'48", NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.18, T.2 N., R.81 W., Grand County, Hydrologic Unit 14010001, 5 mi north of Kremmling.

PERIOD OF RECORD.--July 1996 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=400812106254800](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=400812106254800)

REMARKS.--Samples were collected approximately 100 yards from mouth.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
OCT 07...	1500	0.10	13	7.8	7.6	2,550	11.0	1,800	569	88.3	5.01	0.3	28.9
JUL 23...	1020	0.10	4.2	7.6	7.9	2,240	10.5	1,700	556	63.3	4.41	0.3	26.1

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat fltr mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 07...	E236	7.03	0.93	9.3	1,500	--	--	--	2,590	22	0.30	0.43	0.143
JUL 23...	240	9.43	1.1	11.3	1,450	2,280	3.43	0.68	2,520	<10	0.47	0.54	0.264

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, unfltrd mg/L (00665)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Aluminum, water, unfltrd recoverable, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, unfltrd recoverable, ug/L (01007)
OCT 07...	0.039	E.002	0.16	<0.007	0.005	0.035	0.7	6.8	168	M	E1	6.5	22.1
JUL 23...	1.08	E.002	0.21	<0.007	0.009	0.013	0.3	8.4	16	<2	<2	19.1	19.8

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Beryllium, water, unfltrd recoverable, ug/L (01012)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recoverable, ug/L (01034)	Cobalt water, unfltrd recoverable, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recoverable, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recoverable, ug/L (01051)
OCT 07...	<2	70	E.2	0.2	<0.8	<0.8	2	1.8	13.0	23	720	<1	M
JUL 23...	<0.5	160	<0.2	<0.2	<0.8	<0.8	2	2.1	9.1	19	130	<1	M

400812106254800 ALKALI SLOUGH #2 AT WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Lithium water unfltrd recover- able, ug/L (01132)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover- able, ug/L (71900)	Molyb- denum, water, fltrd, ug/L (01060)	Molyb- denum, water, unfltrd recover- able, ug/L (01062)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover- able, ug/L (01067)	Selen- ium, water, fltrd, ug/L (01145)	Selen- ium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover- able, ug/L (01077)
OCT 07...	72.6	17.2	52	<0.02	<0.02	11.3	13.3	18.1	38	4	5.8	<0.3	<0.16
JUL 23...	55.3	35.4	36	<0.02	<0.02	14.4	13.3	16.6	33	33	86.7	<0.3	<0.16

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Stront- ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover- able, ug/L (01092)
OCT 07...	1,820	<24	19
JUL 23...	5,150	14	9

< -- Actual value is known to be less than the value shown.  
 E -- Estimated laboratory analysis value.  
 M -- Presence of material verified but not quantified.

**09041395 WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO**

LOCATION.--Lat 40°06'46", long 106°24'52", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ , sec.25, T.2 N., R.81 W., Grand County, Hydrologic Unit 14010001, in outlet tower at dam, 5 mi north of Kremmling.

DRAINAGE AREA.--270 mi<sup>2</sup>.

**RESERVOIR ELEVATIONS AND CONTENTS RECORDS**

PERIOD OF RECORD.--May 1995 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09041395](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09041395)

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,500.00 ft above NGVD of 1929; gage readings have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by an earth-filled dam. Storage began May 1995; dam completed May 1995. Usable capacity, 65,870 acre-ft, at elevation 7,489 ft, crest of spillway. No dead storage. Figures given represent total contents. Water-quality sampling at three sites in reservoir.

COOPERATION.--Colorado River Water Conservation District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 68,160 acre-ft, June 3, 1997, elevation, 7,490.62 ft; minimum observed since appreciable storage was first obtained, 16,800 acre-ft, Apr. 10, 2003, elevation, 7,440.93 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 45,600 acre-ft, July 8, elevation, 7,473.94 ft; minimum, 16,800 acre-ft, Apr. 10, elevation, 7,440.93 ft.

**MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003**

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30 . . . . .	7,451.78	24,700	-
Oct. 31 . . . . .	7,444.17	18,900	-5,800
Nov. 30 . . . . .	7,443.15	18,200	-700
Dec. 31 . . . . .	7,442.01	17,500	-700
CAL YR 2002 . . . . .	-	-	-24,400
Jan. 31 . . . . .	7,441.37	17,100	-400
Feb. 28 . . . . .	7,441.23	17,000	-100
Mar. 31 . . . . .	7,441.09	16,900	-100
Apr. 30 . . . . .	7,445.24	19,700	+2,800
May 31 . . . . .	7,465.88	36,700	+17,000
June 30 . . . . .	7,473.61	45,200	+8,500
July 31 . . . . .	7,472.03	43,400	-1,800
Aug. 31 . . . . .	7,471.10	42,300	-1,100
Sept. 30 . . . . .	7,470.30	41,400	-900
WTR YR 2003 . . . . .	-	-	+16,700

09041395 WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1995 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09041395](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09041395)

REMARKS.--Samples were collected near-surface and near-bottom, near dam.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl- uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
JUN						
26...	1002	0.50	6.5	8.0	419	15.9
26...	1003	5.00	6.4	8.0	419	15.4
26...	1004	10.0	6.6	8.0	420	15.4
26...	1005	15.0	6.7	7.9	419	15.3
26...	1006	20.0	6.6	7.9	420	15.2
26...	1007	25.0	6.2	7.9	422	15.2
26...	1008	30.0	6.3	7.9	426	15.0
26...	1009	35.0	5.0	7.7	535	11.3
26...	1010	40.0	4.3	7.6	562	10.6
26...	1011	45.0	4.3	7.6	586	10.2
26...	1012	50.0	4.0	7.5	612	9.8
26...	1013	55.0	3.7	7.5	634	9.5
26...	1014	60.0	3.5	7.5	645	9.3
26...	1015	65.0	3.4	7.5	656	9.2
26...	1016	70.0	3.4	7.5	663	9.2
26...	1017	75.0	3.2	7.5	674	9.1
26...	1018	80.0	3.1	7.5	684	9.0
26...	1019	85.0	2.9	7.4	703	9.0
26...	1020	90.0	2.9	7.4	718	8.9
JUL						
17...	0955	0.50	6.8	7.7	486	18.6
17...	0956	5.00	6.8	7.8	484	18.2
17...	0957	10.0	6.6	7.8	479	18.0
17...	0958	15.0	6.6	7.9	477	18.0
17...	0959	20.0	6.3	7.9	478	17.8
17...	1000	25.0	4.6	7.8	484	16.8
17...	1001	30.0	4.0	7.7	484	14.7
17...	1002	35.0	3.4	7.6	523	13.1
17...	1003	40.0	3.1	7.5	551	12.2
17...	1004	45.0	2.8	7.5	591	10.9
17...	1005	50.0	2.8	7.5	619	10.2
17...	1006	55.0	2.6	7.4	658	9.7
17...	1007	60.0	2.3	7.4	671	9.4
17...	1008	65.0	2.2	7.4	674	9.4
17...	1009	70.0	2.2	7.4	679	9.4
17...	1010	75.0	2.2	7.4	681	9.3
17...	1011	80.0	2.0	7.4	681	9.3



## MUDDY CREEK BASIN

09041395 WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
AUG						
26...	1027	0.50	6.2	7.9	534	19.6
26...	1028	5.00	6.1	7.9	534	19.4
26...	1029	10.0	6.1	7.9	534	19.4
26...	1030	15.0	6.1	8.0	534	19.3
26...	1031	20.0	5.8	8.0	534	19.2
26...	1032	25.0	4.8	7.8	535	18.5
26...	1033	30.0	0.7	7.6	536	15.7
26...	1034	35.0	0.7	7.6	537	14.4
26...	1035	40.0	0.7	7.6	548	13.4
26...	1036	45.0	0.6	7.5	567	12.4
26...	1037	50.0	0.4	7.5	591	11.4
26...	1038	55.0	0.4	7.4	600	11.0
26...	1039	60.0	0.3	7.4	607	10.7
26...	1040	65.0	0.2	7.4	619	10.4
26...	1041	70.0	0.2	7.4	629	10.2
26...	1042	75.0	0.1	7.3	640	10.0
26...	1043	80.0	0.1	7.3	650	10.0
26...	1044	85.0	0.1	7.3	655	10.0
26...	1045	90.0	0.1	7.3	681	9.9
SEP						
30...	1003	0.50	6.7	7.4	591	14.1
30...	1004	5.00	6.7	7.5	576	14.1
30...	1005	10.0	6.6	7.6	574	14.0
30...	1006	15.0	6.3	7.6	569	13.8
30...	1007	20.0	5.7	7.6	570	13.7
30...	1008	25.0	5.4	7.7	569	13.6
30...	1009	30.0	5.0	7.7	572	13.4
30...	1010	35.0	4.5	7.7	575	13.2
30...	1011	40.0	3.8	7.6	576	13.1
30...	1012	45.0	3.4	7.6	578	12.9
30...	1013	50.0	2.1	7.6	586	12.5
30...	1014	55.0	0.5	7.5	594	11.8
30...	1015	60.0	0.2	7.5	608	11.0
30...	1016	65.0	0.1	7.5	620	10.7
30...	1017	70.0	0.1	7.5	626	10.6
30...	1018	75.0	0.1	7.4	632	10.5
30...	1019	80.0	0.1	7.4	637	10.5
30...	1020	85.0	0.1	7.4	641	10.4
30...	1021	90.0	0.1	7.4	658	10.4

09041395 WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sam- pling depth, feet (00003)	Trans- parency Secchi disc, inches (00077)	Turbid- ity, wat unfl lab, Hach 2100AN NTU (99872)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)
JUN													
26...	1025	0.10	77.0	--	6.5	8.0	419	15.9	180	48.2	15.1	1.95	0.6
26...	1035	85.0	--	--	2.9	7.4	703	9.0	310	78.6	28.2	2.82	0.9
JUL													
17...	1015	0.10	84.0	3.7	6.8	7.7	486	18.6	200	53.3	16.6	2.01	0.6
17...	1030	80.0	--	4.2	2.0	7.4	681	9.3	290	71.5	26.6	2.65	0.9
AUG													
26...	1050	0.10	120	1.9	6.2	7.9	534	19.6	270	71.2	21.4	2.38	0.6
26...	1100	90.0	--	14	0.1	7.3	681	9.9	310	79.4	26.6	2.64	0.8
SEP													
30...	1030	0.10	96.0	2.3	6.7	7.4	591	14.1	270	69.5	22.6	2.27	0.6
30...	1040	88.0	--	7.8	0.1	7.4	658	10.4	300	76.9	26.2	2.45	0.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfl fixed end pt, lab, mg/L as CaCO3 (90410)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
JUN													
26...	17.8	88	3.18	<0.2	7.9	125	273	0.40	297	0.36	0.36	0.019	0.137
26...	36.4	124	5.73	0.2	7.1	252	487	0.72	529	0.36	0.33	E.014	0.377
JUL													
17...	19.2	97	3.14	<0.2	8.0	140	300	0.45	330	0.37	0.42	0.015	0.067
17...	34.5	121	5.59	0.2	7.4	227	449	0.13	96	0.47	0.34	0.021	0.374
AUG													
26...	21.5	110	3.33	0.2	7.9	169	363	0.53	388	0.35	0.38	0.020	0.084
26...	30.5	121	5.10	0.2	8.2	228	455	0.66	483	0.37	0.39	0.029	0.368
SEP													
30...	23.7	116	3.53	0.2	8.0	185	384	0.57	416	0.33	0.37	E.008	0.131
30...	30.4	121	4.83	0.2	8.8	221	446	0.65	477	0.44	0.47	0.132	0.226

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro- gen, water, fltrd, mg/L (00607)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Chloro- phyll a phyto- plank- ton, fluoro, ug/L (70953)	Chloro- phyll b phyto- plank- ton, fluoro, ug/L (70954)	Alum- inum, water, unfltrd recover- able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover- able, ug/L (01007)
JUN													
26...	0.004	0.34	<0.007	0.008	0.026	E2	0.7	<0.1	100	<2	<2	46.7	46.2
26...	<0.002	--	E.005	0.013	0.025	--	--	--	86	<2	M	60.6	59.8
JUL													
17...	0.006	0.36	<0.007	0.007	0.022	E1	0.5	<0.1	80	<2	<2	49.6	52.5
17...	E.002	0.45	0.008	0.014	0.025	--	--	--	77	<2	<2	60.3	63.0
AUG													
26...	0.005	0.33	<0.007	0.005	0.012	E1	0.9	<0.1	30	<2	<2	52.5	57.2
26...	<0.002	0.34	E.005	0.012	0.040	--	--	--	194	E1	E1	55.5	62.6
SEP													
30...	0.005	--	<0.007	0.004	0.011	<1	0.8	<0.1	31	E1	E1	56.7	47.2
30...	0.011	0.31	0.008	0.015	0.036	--	--	--	63	E2	3	59.1	49.5

## 09041395 WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Beryllium, water, unfltrd recover-able, ug/L (01012)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Lithium water unfltrd recover-able, ug/L (01132)
JUN													
26...	<0.5	<0.2	<0.2	<0.8	<0.8	0.370	1.7	2.2	27	160	<0.08	0.21	14.5
26...	<0.5	<0.2	<0.2	<0.8	<0.8	0.521	1.8	2.3	E6	150	<0.08	0.16	27.0
JUL													
17...	<0.5	<0.2	<0.2	<0.8	<0.8	0.360	1.8	2.2	25	120	E.06	0.06	17.7
17...	<0.5	<0.2	<0.2	<0.8	<0.8	0.365	1.5	2.1	E5	100	<0.08	<0.06	27.8
AUG													
26...	<0.5	<0.2	<0.2	<0.8	<0.8	0.378	2.6	2.7	E5	30	<0.08	0.08	21.4
26...	<0.5	<0.2	<0.2	<0.8	<0.8	0.715	2.6	3.1	16	380	<0.08	0.43	27.2
SEP													
30...	<0.5	<0.2	<0.2	<0.8	<0.8	0.354	1.9	3.5	<8	40	<0.08	E.06	23.8
30...	<0.5	<0.2	<0.2	<0.8	<0.8	0.941	1.5	2.8	23	270	<0.08	0.14	26.5

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover-able, ug/L (71900)	Molybdenum, water, unfltrd recover-able, ug/L (01062)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)
JUN												
26...	3.1	5	<0.02	<0.02	2.0	3.25	2.3	2.4	<0.2	<0.16	1	E1
26...	13.8	57	<0.02	<0.02	3.6	5.05	3.4	3.2	<0.2	<0.16	2	E2
JUL												
17...	0.6	4	<0.02	<0.02	2.2	3.34	2.3	2.5	<0.2	<0.16	2	E1
17...	2.0	54	<0.02	<0.02	3.0	4.28	3.0	3.1	<0.2	<0.16	1	E1
AUG												
26...	0.5	2	<0.02	<0.02	2.5	3.40	2.5	2.4	<0.2	<0.16	2	<2
26...	141	197	<0.02	0.05	3.2	4.52	2.9	2.7	<0.2	<0.16	2	3
SEP												
30...	1.7	6	<0.02	<0.02	2.6	3.28	3.1	2.3	<0.2	<0.16	1	<2
30...	480	502	<0.02	<0.02	3.1	3.87	2.8	2.4	<0.2	<0.16	2	E1

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

**09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO**

LOCATION.--Lat 40°06'31", long 106°24'48", in NW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.25, T.2 N., R.81 W., Grand County, Hydrologic Unit 14010001, on left bank 1,500 ft downstream from Wolford Mountain Reservoir, and 4 mi northwest of Kremmling.

DRAINAGE AREA.--270 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1995 to current year. For a complete listing of historical data available for this site see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09041400](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09041400)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,380 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow is entirely regulated by Wolford Mountain Reservoir.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	19	24	18	15	11	24	20	40	22	24	20
2	25	19	22	18	15	11	32	20	40	22	25	20
3	24	19	21	18	15	11	44	19	36	22	25	20
4	23	19	20	18	15	11	52	20	33	23	25	20
5	24	18	20	19	15	11	52	20	33	23	25	20
6	24	21	20	19	15	12	39	50	34	23	25	20
7	25	21	19	20	15	13	28	75	34	23	26	20
8	26	20	19	19	15	13	37	76	34	23	26	20
9	52	20	19	19	15	13	44	73	34	38	26	20
10	75	20	18	19	15	14	44	20	34	92	26	21
11	71	19	19	19	15	14	32	19	34	123	23	20
12	71	19	20	19	15	26	22	18	35	104	23	20
13	72	20	19	18	15	68	22	18	36	87	23	20
14	129	20	19	17	15	100	22	24	36	87	23	20
15	191	20	19	17	15	84	23	62	36	86	23	20
16	209	20	19	17	15	49	22	62	28	101	24	20
17	209	20	19	16	15	38	21	62	21	121	24	20
18	207	20	19	16	15	38	21	62	21	121	24	20
19	207	20	19	16	16	43	21	65	22	111	25	20
20	206	20	19	15	15	39	21	67	22	111	25	20
21	211	20	19	15	11	31	21	66	22	80	24	20
22	215	27	19	15	7.1	30	21	52	22	29	22	20
23	210	42	19	15	11	30	22	34	22	18	22	20
24	200	27	18	15	11	30	22	35	22	24	22	20
25	198	21	18	15	11	35	21	35	23	53	23	20
26	133	23	18	15	11	46	20	35	23	72	22	20
27	33	24	18	15	11	52	19	35	22	72	21	20
28	29	24	18	15	11	46	19	35	22	48	20	20
29	24	24	18	15	---	38	20	35	22	32	20	20
30	20	24	18	15	---	38	20	37	22	25	20	20
31	19	---	18	15	---	28	---	39	---	23	20	---
TOTAL	3,186	650	594	522	385.1	1,023	828	1,290	865	1,839	726	601
MEAN	103	21.7	19.2	16.8	13.8	33.0	27.6	41.6	28.8	59.3	23.4	20.0
MAX	215	42	24	20	16	100	52	76	40	123	26	21
MIN	19	18	18	15	7.1	11	19	18	21	18	20	20
AC-FT	6,320	1,290	1,180	1,040	764	2,030	1,640	2,560	1,720	3,650	1,440	1,190

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

	74.3	28.0	21.5	22.0	23.5	37.8	86.1	230	183	70.6	92.4	104
MEAN	74.3	28.0	21.5	22.0	23.5	37.8	86.1	230	183	70.6	92.4	104
MAX	172	46.5	32.7	32.3	34.4	75.8	249	454	492	99.6	153	189
(WY)	(1998)	(1998)	(1998)	(1998)	(1998)	(1997)	(1996)	(1998)	(1997)	(2000)	(1996)	(1998)
MIN	21.8	20.4	7.07	15.8	13.8	21.2	27.6	41.6	28.8	22.5	23.4	20.0
(WY)	(2001)	(2002)	(1996)	(1996)	(2003)	(2000)	(2003)	(2003)	(2003)	(2002)	(2003)	(2003)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1995 - 2003

ANNUAL TOTAL	19,710	12,509.1	
ANNUAL MEAN	54.0	34.3	82.5
HIGHEST ANNUAL MEAN			129 1997
LOWEST ANNUAL MEAN			34.3 2003
HIGHEST DAILY MEAN	228	Sep 2	215 Oct 22
LOWEST DAILY MEAN	10	Sep 21	7.1 Feb 22
ANNUAL SEVEN-DAY MINIMUM	15	Sep 21	10 Feb 21
MAXIMUM PEAK FLOW			217 Oct 21
MAXIMUM PEAK STAGE			5.42 Oct 21
ANNUAL RUNOFF (AC-FT)	39,090	24,810	59,730
10 PERCENT EXCEEDS	128	69	193
50 PERCENT EXCEEDS	23	22	36
90 PERCENT EXCEEDS	19	15	20

## 09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1995 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09041400](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09041400)

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1995 to current year.

WATER TEMPERATURE: October 1995 to current year.

DISSOLVED OXYGEN: October 1995 to current year.

INSTRUMENTATION.--Water-quality monitor from October 1995 to current year.

REMARKS.--Water temperature records are rated good. Specific conductance record is rated good. Dissolved oxygen records are rated poor.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum 1,910 microsiemens/cm, Oct. 20, 1996; minimum, 281 microsiemens/cm, June 10, 1997.

WATER TEMPERATURE: Maximum 19.2°C, June 24, 1997; minimum 1.1°C, Feb. 2, 1996.

DISSOLVED OXYGEN: Maximum, 12.2 mg/L, August 29, 2003; minimum, 4.9 mg/L, July 31, 1996.

## EXTREMES FOR CURRENT PERIOD.--

SPECIFIC CONDUCTANCE: Maximum, 1580 microsiemens/cm, April 29; minimum, 632 microsiemens/cm, July 30.

WATER TEMPERATURE: Maximum, 14.2°C, Oct. 1; minimum, 1.4°C, Feb. 21.

DISSOLVED OXYGEN: Maximum, 12.2 mg/L, Aug. 29; minimum, 5.6 mg/L, Sept. 30.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO <sub>3</sub> (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
OCT													
08...	1115	26	17	9.2	8.2	780	13.0	340	85.4	31.1	2.50	0.9	37.1
NOV													
14...	1200	19	9.5	9.2	8.4	950	6.0	400	95.2	39.1	2.61	1	53.6
DEC													
11...	1215	19	12	8.6	8.4	974	4.0	420	101	41.8	2.69	1	58.2
JAN													
15...	1430	16	2.5	8.7	8.5	869	4.0	390	93.8	37.0	2.70	1	45.2
FEB													
19...	1530	15	1.3	8.1	8.3	879	4.5	390	92.5	38.0	2.81	1	45.5
MAR													
12...	1035	23	2.0	7.6	8.3	894	4.0	410	99.6	39.2	2.76	1	50.2
APR													
23...	1130	22	6.8	9.4	8.5	831	8.0	350	81.9	34.1	3.17	1	43.4
MAY													
30...	1200	40	14	9.9	8.2	792	10.0	320	78.0	30.3	2.85	1	39.7
JUN													
12...	1100	36	5.6	10.7	8.4	750	10.5	310	77.9	28.8	2.58	0.9	38.4
JUL													
30...	1030	33	3.6	10.4	8.2	660	12.0	310	78.6	26.7	2.39	0.8	30.7
AUG													
21...	1115	25	1.8	10.1	8.4	688	12.0	320	85.4	26.5	2.60	0.7	30.3
SEP													
25...	1030	21	3.4	10.8	8.6	699	11.0	320	83.7	27.0	2.59	0.8	31.3

09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	ANC, wat unf fixed end pt, lab, mg/L as CaCO3 (90410)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 08...	E144	3.96	0.21	6.1	275	--	--	--	569	10	0.33	0.45	0.029
NOV 14...	153	6.42	0.22	5.6	341	636	0.95	36.5	701	--	0.41	0.46	0.058
DEC 11...	E159	7.17	0.25	5.1	367	--	--	--	727	<10	0.45	0.52	0.097
JAN 15...	154	4.18	0.23	4.7	299	579	0.87	28.4	638	--	0.39	0.46	0.077
FEB 19...	E187	5.26	0.25	4.8	316	--	--	--	649	--	0.40	0.40	0.041
MAR 12...	158	6.21	0.24	4.8	317	616	0.90	41.3	665	--	0.37	0.39	0.025
APR 23...	145	6.44	0.22	5.6	292	554	0.82	36.3	603	--	0.33	0.50	0.020
MAY 30...	132	6.09	0.2	6.4	268	512	0.77	61.1	566	--	0.42	0.45	0.058
JUN 12...	126	5.75	0.2	6.5	255	492	0.72	51.7	526	--	0.36	0.47	0.028
JUL 30...	116	4.90	0.2	7.2	219	442	0.51	33.1	376	10	0.34	0.38	E.011
AUG 21...	118	4.80	0.2	7.8	232	463	0.67	32.9	495	<10	0.40	0.44	E.013
SEP 25...	121	5.00	0.2	8.0	237	469	0.68	28.8	499	--	0.40	0.43	0.046

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Aluminum, water, unfltrd recover-able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)
OCT 08...	0.080	0.005	0.30	<0.007	0.010	0.036	0.5	6.6	<1	--	--	--	--
NOV 14...	0.088	0.003	0.35	<0.007	0.005	0.026	--	--	<1	--	--	--	--
DEC 11...	0.091	0.003	0.36	<0.007	0.007	0.028	0.4	6.5	<1	--	--	--	--
JAN 15...	0.079	0.003	0.32	<0.007	0.006	0.013	--	--	<1	--	--	--	--
FEB 19...	0.127	E.002	0.36	<0.007	0.006	0.011	--	--	<1	--	--	--	--
MAR 12...	0.169	<0.002	0.35	<0.007	0.006	0.013	--	--	<1	--	--	--	--
APR 23...	0.100	E.002	0.31	<0.007	0.005	0.023	--	--	<1	--	--	--	--
MAY 30...	0.246	0.009	0.36	<0.007	0.006	0.025	--	--	<1	--	--	--	--
JUN 12...	0.289	0.003	0.33	<0.007	0.007	0.022	--	--	E1	--	--	--	--
JUL 30...	0.334	E.002	--	<0.007	0.009	0.019	0.2	6.2	E1	53	<2	<2	55.9
AUG 21...	0.353	0.003	--	<0.007	0.009	0.031	0.1	6.4	<1	27	<2	<2	54.4
SEP 25...	0.249	0.012	0.35	<0.007	0.009	0.027	--	--	E1	--	--	--	--



09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silver, water, unfltrd recover- able, ug/L (01077)	Stront- ium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover- able, ug/L (01092)
OCT 08...	--	--	--	--
NOV 14...	--	--	--	--
DEC 11...	--	--	--	--
JAN 15...	--	--	--	--
FEB 19...	--	--	--	--
MAR 12...	--	--	--	--
APR 23...	--	--	--	--
MAY 30...	--	--	--	--
JUN 12...	--	--	--	--
JUL 30...	<0.16	654	E2	E1
AUG 21...	<0.16	723	<3	E1
SEP 25...	--	--	--	--

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.5	7.1	7.9	10.6	7.1	8.2	8.9	6.8	7.4	9.0	7.9	8.3
2	9.4	7.0	7.7	10.4	7.0	8.1	8.9	6.7	7.3	8.9	7.8	8.2
3	8.9	7.0	7.6	10.6	7.4	8.5	9.1	6.7	7.4	8.9	7.7	8.1
4	9.2	7.1	7.7	10.8	7.5	8.5	8.9	6.7	7.4	8.7	7.6	8.0
5	9.4	7.1	7.8	10.7	7.4	8.5	9.1	6.7	7.4	8.9	7.7	8.2
6	9.5	7.1	7.8	10.9	6.8	8.5	9.3	6.7	7.5	9.0	7.8	8.2
7	9.5	7.0	7.9	9.6	6.1	7.4	9.2	6.7	7.4	8.9	7.8	8.3
8	9.6	7.0	7.8	9.6	6.0	7.1	9.0	6.7	7.4	9.1	8.0	8.4
9	9.7	7.1	7.9	8.9	6.1	7.0	8.8	6.6	7.3	9.1	8.0	8.3
10	8.7	7.5	7.9	10.0	6.7	7.8	8.8	6.5	7.2	8.9	7.9	8.3
11	8.9	7.5	7.9	---	---	---	9.2	6.5	7.3	8.9	7.7	8.2
12	8.9	7.5	8.0	---	---	---	8.7	6.3	7.2	8.7	7.6	8.0
13	8.9	7.6	8.0	---	---	---	9.5	6.2	7.7	8.7	7.4	7.9
14	8.6	7.6	8.0	---	---	---	10.2	8.4	9.0	8.7	7.4	7.8
15	8.2	7.7	7.9	9.4	6.1	7.2	10.4	8.3	9.0	8.9	7.3	7.9
16	8.0	7.6	7.8	9.5	6.5	7.5	9.8	8.1	8.6	8.8	7.2	7.7
17	8.3	7.7	7.9	9.4	6.5	7.4	9.3	7.8	8.3	8.8	7.0	7.6
18	8.2	7.8	8.0	9.4	6.4	7.3	9.2	7.6	8.1	8.6	7.0	7.5
19	8.5	7.8	8.2	9.4	6.4	7.3	9.1	7.4	8.0	8.5	6.9	7.4
20	8.4	7.9	8.1	9.2	6.4	7.2	9.0	7.6	8.1	8.5	6.8	7.3
21	8.5	8.0	8.2	9.3	6.5	7.3	9.0	7.6	8.1	8.7	6.9	7.4
22	8.5	8.1	8.3	9.3	6.5	7.8	9.2	7.6	8.1	8.5	6.8	7.3
23	8.7	8.2	8.5	9.7	8.3	8.9	9.4	7.9	8.4	8.2	6.8	7.2
24	8.5	8.1	8.3	9.7	6.6	8.2	9.5	7.9	8.4	8.3	6.7	7.2
25	8.8	8.2	8.4	8.7	6.4	7.3	9.4	8.0	8.5	8.3	6.6	7.2
26	8.8	7.1	8.2	8.9	6.7	7.4	9.5	8.1	8.6	8.9	6.6	7.2
27	9.1	6.9	7.7	8.7	6.6	7.4	9.3	7.9	8.4	8.8	6.4	7.1
28	9.2	6.9	7.6	8.7	6.6	7.3	9.1	7.8	8.3	8.0	6.3	6.9
29	9.6	6.9	7.7	8.7	6.7	7.3	9.4	8.0	8.4	8.4	6.5	7.1
30	10.0	7.0	8.0	8.9	6.7	7.4	9.2	7.9	8.4	8.1	6.4	6.9
31	10.2	6.9	7.9	---	---	---	9.0	8.0	8.3	8.6	6.3	6.9
MONTH	10.2	6.9	8.0	---	---	---	10.4	6.2	8.0	9.1	6.3	7.7



## MUDDY CREEK BASIN

09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8.4	6.3	6.9	8.5	6.0	6.6	9.9	9.2	9.5	9.3	8.6	8.9
2	8.3	6.4	7.1	8.2	5.9	6.6	10.1	9.3	9.7	9.2	8.5	8.8
3	8.7	6.8	7.4	7.9	5.8	6.4	10.3	9.6	10	9.2	8.3	8.7
4	8.2	6.6	7.1	7.3	5.7	6.4	10.5	9.9	10.2	9.2	8.3	8.6
5	8.1	6.5	7.1	8.5	5.7	6.5	10.3	9.8	10.0	9.5	8.6	8.9
6	8.0	6.3	6.9	8.0	5.9	6.6	10.4	9.6	10.0	9.6	8.6	9.2
7	7.3	6.2	6.5	7.9	6.0	6.6	10.2	9.6	9.9	9.7	9.3	9.5
8	7.0	6.1	6.5	8.3	5.9	6.5	10.5	10.0	10.2	9.7	9.3	9.5
9	7.1	6.1	6.5	8.0	5.9	6.4	10.6	9.9	10.2	9.7	8.6	9.3
10	7.5	6.4	6.8	8.0	5.9	6.5	10.8	10.0	10.5	9.8	7.5	9.1
11	7.3	6.3	6.7	7.8	6.0	6.6	10.7	9.9	10.3	9.7	8.6	9.1
12	7.2	6.3	6.6	9.3	6.2	7.8	10.5	9.8	10.1	9.5	8.4	9.0
13	7.1	6.1	6.5	10.5	7.6	9.2	10.5	9.7	10.1	9.4	8.4	8.8
14	7.2	6.0	6.4	10.3	9.9	10.1	10.5	9.7	10.1	9.3	8.4	8.8
15	7.3	6.1	6.6	10.4	9.9	10.1	10.2	9.4	9.8	9.5	8.8	9.3
16	7.5	6.3	6.8	10.2	9.7	10	10.1	9.2	9.6	9.6	9.1	9.3
17	7.6	6.3	6.8	9.7	9.0	9.4	10.0	9.2	9.5	9.6	9.0	9.3
18	7.6	6.2	6.8	9.9	9.1	9.6	10.0	9.3	9.5	9.5	9.1	9.3
19	8.4	6.2	7.0	10.2	9.6	9.9	10.0	9.2	9.6	9.5	8.9	9.2
20	8.5	6.9	7.4	10.4	9.6	10.0	9.9	9.2	9.5	9.3	8.9	9.1
21	8.6	5.8	7.2	10.4	9.6	10	9.9	9.1	9.5	9.4	8.9	9.1
22	8.6	5.8	7.0	10.4	9.8	10.1	9.7	8.9	9.3	9.5	8.5	9.1
23	8.6	6.5	7.2	10.2	9.6	9.9	9.4	8.8	9.1	9.4	8.5	8.9
24	8.6	6.3	7.2	10.2	9.7	9.9	9.5	8.7	9.1	9.5	8.6	8.9
25	8.4	6.0	6.9	10.3	9.7	9.9	9.5	8.6	9.0	9.5	8.5	8.9
26	8.5	5.9	6.8	10.3	9.7	10	9.3	8.5	8.9	9.4	8.4	8.8
27	8.6	5.9	6.8	10.2	9.8	10	9.3	8.4	8.8	9.6	8.4	9.0
28	8.2	5.9	6.7	10.5	10.0	10.3	9.3	8.2	8.7	9.7	8.4	9.0
29	---	---	---	10.5	9.9	10.3	9.2	8.3	8.8	9.6	8.4	8.8
30	---	---	---	10.3	9.8	10.1	9.2	8.6	8.8	9.9	8.4	8.9
31	---	---	---	10.2	9.3	9.8	---	---	---	10.0	8.6	9.1
MONTH	8.7	5.8	6.9	10.5	5.7	8.6	10.8	8.2	9.6	10.0	7.5	9.0
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	10.5	8.4	9.3	9.8	6.5	8.1	10.3	7.2	8.4	11.6	---	---
2	10.1	8.4	9.2	9.1	6.5	7.6	10.4	7.0	8.3	11.6	6.9	8.5
3	10.1	8.3	9.1	9.6	6.5	7.8	10.3	7.0	8.2	11.7	6.9	8.5
4	10.4	8.3	9.0	9.7	6.5	7.8	10.4	7.1	8.5	11.5	6.9	8.6
5	10.4	8.1	9.2	9.3	6.4	7.7	10.7	7.6	8.8	11.7	6.8	8.6
6	9.9	8.2	8.9	9.2	6.3	7.4	10.8	7.6	8.7	11.5	6.6	8.0
7	10.3	8.1	9.1	9.3	6.3	7.5	10.9	7.6	8.7	10.2	6.5	7.8
8	10.4	8.0	9.0	10.4	6.6	8.2	10.5	7.6	8.7	10.9	6.4	7.9
9	10.3	8.0	8.9	10.1	7.0	8.3	10.8	7.4	8.5	10.7	6.4	7.9
10	---	---	---	8.9	7.7	8.3	10.6	7.3	8.6	10.3	6.5	7.8
11	---	---	---	8.7	8.2	8.4	10.2	7.2	8.3	11.7	7.0	8.6
12	---	---	---	8.6	8.0	8.3	10.5	7.1	8.3	11.2	6.8	8.5
13	10.1	7.7	8.5	8.7	7.9	8.3	10.6	7.1	8.1	11.1	6.8	8.5
14	10.0	7.6	8.6	8.7	8.0	8.3	10.9	7.1	8.9	11.3	6.8	8.4
15	10.1	7.6	8.6	8.7	8.0	8.3	11.3	7.8	9.2	11.3	6.7	8.4
16	10.7	7.4	8.8	9.1	8.1	8.5	11.3	7.6	8.9	10.9	6.5	8.1
17	10.7	7.2	8.7	9.0	8.2	8.5	10.8	7.2	8.5	10.9	6.5	7.9
18	10.4	7.0	8.3	8.9	8.2	8.5	9.9	7.1	8.0	11.0	6.7	8.3
19	10.0	7.0	8.0	9.1	8.2	8.5	10.8	7.1	8.3	11.1	6.6	8.2
20	9.8	6.7	7.9	9.2	8.2	8.6	10.6	7.1	8.4	10.9	6.6	8.0
21	9.7	6.6	7.9	9.2	7.4	8.4	10.9	7.0	8.4	---	---	---
22	10.4	6.3	8.3	9.9	6.4	8.3	11.4	6.9	8.1	---	---	---
23	9.8	6.7	8.1	10.0	6.4	8.2	10.4	6.9	7.9	---	---	---
24	10.0	6.9	8.2	10.3	7.5	8.6	11.6	6.6	8.4	---	---	---
25	9.9	7.0	8.2	10.2	7.4	8.5	11.4	7.3	8.7	---	---	---
26	10.0	6.8	8.3	9.8	8.1	8.8	11.9	6.6	8.7	9.8	5.9	7.3
27	9.4	6.6	7.9	9.9	8.5	9.0	11.1	6.7	8.1	9.8	5.9	7.3
28	10.2	7.0	8.3	10.5	7.8	9.0	12.0	7.1	8.9	9.7	5.9	7.3
29	10.1	7.1	8.5	10.3	7.7	8.7	12.2	7.1	8.8	10.4	6.2	7.7
30	10.3	6.9	8.4	10.8	7.2	8.9	12.1	6.6	8.4	9.5	5.6	7.1
31	---	---	---	10.6	7.2	8.6	11.7	6.7	8.6	---	---	---
MONTH	---	---	---	10.8	6.3	8.3	12.2	6.6	8.5	---	---	---

09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	775	766	771	847	808	824	1,000	996	999	837	832	835
2	778	768	774	864	836	856	998	990	994	841	836	839
3	790	778	784	836	806	815	998	989	994	842	840	841
4	789	777	783	815	804	809	997	993	995	844	842	843
5	788	773	784	820	807	813	998	988	994	847	841	845
6	789	779	784	848	815	826	996	991	993	847	846	847
7	795	785	789	892	848	866	996	988	992	850	847	849
8	805	794	798	914	892	905	995	987	991	851	849	850
9	805	783	796	917	845	884	992	976	986	853	851	852
10	787	780	784	855	833	838	984	973	979	853	849	851
11	786	772	776	848	838	843	995	967	974	854	851	853
12	773	761	765	882	845	856	970	965	967	855	853	854
13	765	760	762	918	882	900	966	854	924	857	854	855
14	763	754	757	986	918	948	854	827	834	857	856	856
15	757	740	750	1,020	986	1,010	829	824	827	858	853	856
16	746	730	738	1,050	1,010	1,030	831	828	829	858	856	857
17	736	714	723	1,050	1,040	1,050	834	828	832	858	856	857
18	730	718	724	1,040	1,030	1,030	836	833	834	860	857	858
19	729	706	716	1,040	1,030	1,030	836	833	835	861	858	860
20	723	708	711	1,060	1,040	1,050	835	833	834	861	859	861
21	731	714	725	1,070	1,060	1,060	835	832	834	861	860	861
22	738	725	733	1,060	996	1,050	835	833	835	861	860	861
23	732	719	725	996	965	973	835	832	834	863	861	862
24	739	711	726	971	939	953	835	832	834	864	862	863
25	747	725	738	1,000	949	979	835	833	834	865	863	864
26	779	747	756	1,020	1,000	1,010	835	833	834	866	864	865
27	820	779	798	1,030	1,020	1,030	836	834	835	866	864	865
28	859	811	836	1,030	1,000	1,020	836	828	833	866	864	865
29	862	830	853	1,000	987	993	834	832	833	866	864	865
30	869	828	841	999	988	992	835	832	834	867	866	866
31	869	839	850	---	---	---	835	830	833	868	866	867
MONTH	869	706	769	1,070	804	941	1,000	824	896	868	832	856
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	868	864	867	880	877	879	912	907	910	1,070	1,020	1,040
2	868	852	865	880	877	879	929	906	916	1,020	1,020	1,020
3	867	864	866	881	878	880	935	893	922	1,020	992	1,010
4	869	866	867	881	879	880	893	866	874	992	965	975
5	868	865	866	883	879	881	938	805	893	974	964	970
6	868	865	867	883	880	881	939	842	879	965	904	943
7	868	865	867	882	876	880	849	836	841	914	902	907
8	868	864	866	882	860	878	924	841	850	911	873	889
9	868	864	866	883	857	878	888	856	872	898	867	880
10	867	865	866	886	861	881	879	854	863	975	869	911
11	869	866	867	889	839	880	863	850	854	1,070	843	910
12	869	866	867	917	887	900	908	851	865	993	825	901
13	870	868	869	909	901	905	909	869	886	911	901	905
14	872	869	870	917	902	909	909	875	891	940	890	909
15	869	867	868	918	911	915	899	854	874	1,000	864	918
16	870	867	869	917	808	909	854	841	845	929	855	868
17	871	868	870	915	905	912	890	841	856	871	856	862
18	872	869	870	914	889	902	883	854	867	870	825	842
19	880	870	875	894	885	889	854	844	849	831	780	810
20	881	879	880	898	892	896	861	842	848	813	784	804
21	881	869	878	907	897	902	863	842	851	811	802	806
22	885	872	881	903	895	898	861	843	853	816	803	811
23	882	880	881	918	903	910	847	838	843	817	809	813
24	881	851	880	916	909	913	849	845	847	813	804	809
25	881	877	880	912	907	909	874	844	853	808	798	803
26	883	874	881	911	904	907	901	852	873	809	801	805
27	882	877	880	904	901	903	894	833	866	805	791	799
28	881	879	880	901	895	898	1,550	852	1,000	809	792	798
29	---	---	---	909	888	903	1,580	1,260	1,460	805	795	799
30	---	---	---	907	902	905	1,260	1,070	1,150	797	785	792
31	---	---	---	911	905	908	---	---	---	793	771	783
MONTH	885	851	872	918	808	896	1,580	805	902	1,070	771	874



09041400 MUDDY CREEK BELOW WOLFORD MOUNTAIN RESERVOIR NEAR KREMMLING, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.2	12.3	13.0	8.8	6.7	7.5	4.2	3.4	3.7	3.9	2.7	3.2
2	14.0	12.2	12.9	8.6	6.5	7.3	4.8	3.3	3.8	3.9	2.5	2.9
3	13.0	12.2	12.5	7.5	5.9	6.5	4.3	3.0	3.4	4.0	2.9	3.3
4	12.8	12.1	12.3	7.4	5.6	6.1	4.0	3.0	3.5	4.5	2.9	3.4
5	13.4	12.0	12.4	7.4	5.6	6.2	4.4	3.4	3.7	3.8	2.9	3.3
6	13.3	11.7	12.1	7.0	5.2	6.0	4.7	3.1	3.6	4.0	2.6	3.1
7	13.5	11.4	12.1	7.2	5.9	6.3	4.1	3.0	3.3	3.9	2.6	3.1
8	13.4	11.3	12.0	7.4	5.9	6.3	4.3	2.9	3.3	3.9	2.6	3.0
9	12.7	11.0	11.8	6.3	5.7	6.0	4.2	2.7	3.2	3.8	2.4	2.9
10	12.6	11.6	11.9	6.5	5.1	5.7	4.2	2.7	3.2	3.6	2.4	2.9
11	12.3	11.4	11.7	6.8	5.4	5.7	4.0	2.9	3.4	4.1	2.9	3.3
12	12.0	11.1	11.4	6.6	4.9	5.5	4.1	3.2	3.7	4.2	3.1	3.4
13	12.0	10.9	11.3	6.0	5.0	5.4	4.6	2.8	3.7	4.4	2.9	3.4
14	11.6	10.6	11.1	6.3	5.0	5.5	3.9	2.6	3.0	4.2	2.8	3.2
15	11.5	11.0	11.2	5.9	4.3	5.0	4.0	2.6	3.0	3.6	2.7	3.0
16	11.3	10.9	11.1	5.4	4.1	4.6	3.9	2.6	3.1	4.1	2.6	3.1
17	11.2	10.8	10.9	5.5	4.0	4.6	4.0	2.8	3.3	4.1	2.5	3.2
18	11.0	10.4	10.7	5.7	4.2	4.7	3.8	2.7	3.1	3.9	2.2	2.8
19	10.6	10.1	10.3	5.7	4.0	4.7	3.9	2.6	3.0	3.9	2.2	2.8
20	10.3	9.9	10.1	5.6	4.1	4.6	3.5	2.4	2.9	4.0	2.2	2.8
21	10.2	9.8	10	5.4	4.0	4.4	3.7	2.7	3.1	4.3	2.3	3.0
22	10.1	9.8	9.9	5.1	3.9	4.3	3.9	2.4	2.9	4.1	2.6	3.1
23	9.8	9.6	9.7	4.8	4.0	4.3	3.5	2.1	2.6	4.0	3.1	3.4
24	9.6	9.4	9.5	5.3	4.0	4.4	3.5	2.3	2.8	4.1	3.2	3.5
25	9.5	9.2	9.3	5.1	3.4	4.0	3.4	2.3	2.7	4.1	3.0	3.4
26	9.4	8.9	9.2	4.6	3.3	3.7	3.5	2.3	2.8	4.8	3.2	3.7
27	9.7	8.4	9.0	4.4	3.3	3.7	4.1	2.7	3.1	4.8	3.0	3.6
28	9.1	8.1	8.6	4.6	3.3	3.7	3.9	2.5	2.9	4.0	3.1	3.5
29	8.6	7.4	8.0	4.5	3.2	3.6	4.0	2.4	3.0	4.6	2.8	3.4
30	8.3	7.1	7.5	4.5	3.2	3.6	3.8	2.6	3.0	4.1	3.1	3.5
31	8.8	7.1	7.6	---	---	---	3.7	2.4	2.9	5.0	3.3	3.8
MONTH	14.2	7.1	10.7	8.8	3.2	5.1	4.8	2.1	3.2	5.0	2.2	3.2
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	4.9	3.1	3.7	5.1	1.8	3.0	5.9	3.6	4.5	7.0	5.0	5.7
2	4.8	1.6	3.2	4.8	1.6	2.9	5.4	3.8	4.4	6.8	5.3	5.9
3	4.2	2.3	3.0	5.5	1.9	3.2	4.7	3.8	4.1	7.9	5.5	6.3
4	4.2	2.6	3.2	3.8	2.7	3.2	4.9	3.8	4.2	7.1	5.6	6.3
5	3.9	2.4	2.8	5.2	2.5	3.4	4.9	3.8	4.2	7.8	5.8	6.5
6	4.2	2.1	2.7	5.5	2.4	3.4	5.4	3.7	4.3	8.1	5.8	6.7
7	3.9	1.9	2.6	5.4	2.8	3.7	5.5	3.8	4.4	7.8	6.7	7.1
8	3.9	2.0	2.6	5.6	2.9	3.8	5.2	3.5	4.2	7.4	6.8	7.0
9	3.5	2.5	2.9	5.4	2.6	3.6	5.4	3.7	4.4	8.1	6.3	7.2
10	4.0	2.6	3.1	5.4	2.7	3.6	5.7	3.9	4.6	7.9	6.5	7.0
11	4.3	2.4	3.0	5.8	3.0	3.8	6.8	4.1	5.1	8.2	6.4	7.2
12	4.3	2.2	3.0	4.4	3.1	3.6	6.6	4.4	5.2	9.2	6.5	7.6
13	4.2	2.8	3.4	4.2	3.2	3.7	7.0	4.1	5.2	9.1	6.7	7.7
14	5.0	3.1	3.6	4.3	3.5	3.8	6.5	4.3	5.1	9.4	6.9	7.9
15	4.3	2.8	3.4	4.4	3.6	3.9	6.5	4.5	5.4	8.6	7.5	7.9
16	4.1	2.6	3.2	4.3	3.7	4.0	8.1	5.9	6.8	8.8	7.7	8.1
17	4.6	2.7	3.4	4.7	3.1	3.9	8.3	5.7	6.7	9.1	7.6	8.0
18	4.7	2.8	3.3	4.1	3.2	3.5	7.1	5.5	6.0	9.1	7.6	8.3
19	4.9	2.5	3.3	4.6	3.3	3.7	7.9	5.8	6.5	9.6	8.1	8.8
20	5.0	2.3	3.1	4.9	3.5	4.1	8.6	6.1	7.0	9.6	8.4	8.9
21	4.5	1.4	3.0	5.6	3.8	4.3	8.3	5.9	6.9	9.6	8.3	8.9
22	4.4	1.6	2.8	5.5	4.0	4.5	8.5	6.4	7.0	10.1	8.3	9.0
23	5.0	2.1	3.1	6.0	4.2	4.8	7.9	6.4	7.0	10.0	8.3	9.0
24	4.7	2.5	3.3	5.3	4.1	4.4	8.7	6.5	7.3	10.3	8.3	9.1
25	4.6	2.8	3.4	5.4	3.8	4.5	9.1	6.7	7.6	10.1	8.5	9.0
26	5.1	3.0	3.6	4.7	3.9	4.2	9.0	6.4	7.3	10.3	8.4	9.2
27	5.6	2.7	3.6	4.6	3.6	4.1	9.2	6.4	7.5	10.6	8.7	9.5
28	4.9	2.2	3.2	4.8	3.4	3.8	8.9	6.4	7.5	10.5	8.6	9.4
29	---	---	---	4.4	3.2	3.7	7.9	5.4	6.3	10.5	8.7	9.4
30	---	---	---	4.8	3.6	4.0	7.4	5.2	5.8	10.4	8.7	9.3
31	---	---	---	5.8	3.6	4.4	---	---	---	10.4	8.9	9.4
MONTH	5.6	1.4	3.2	6.0	1.6	3.8	9.2	3.5	5.8	10.6	5.0	8.0



**09041900 MONTE CRISTO DIVERSION NEAR HOOSIER PASS, CO**

LOCATION.--Lat 39°22'51", long 106°04'15", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.2, T.8 S., R.78W., Summit County, Hydrologic Unit 14010002, on left bank at entrance to Hoosier Pass tunnel, 2,200 ft downstream from diversion point, 1.4 mi northwest of Hoosier Pass, and 7 mi southwest of Breckenridge.

PERIOD OF RECORD.--October 1957 to current year (seasonal records only). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09041900](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09041900)

GAGE.--Water-stage recorder with satellite telemetry, and Parshall flume. Elevation of gage is 10,986 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. This is a transmountain diversion from Monte Cristo Creek in Blue River basin through Hoosier Pass tunnel to South Platte River basin from which it is again diverted to South Catamount Creek in the Arkansas River basin. Water is for municipal use by city of Colorado Springs. Diversion point is in SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.2, T.8 S., R.78 W. The entire flow is regulated by diversion gates.

COOPERATION.--Gage-height record collected in cooperation with city of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 73 ft<sup>3</sup>/s, Aug. 12-14, 1980 and Sept. 29, 1994; no flow for most of each year.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e0.00	e0.00	15	17	e0.00	e0.00
2	---	---	---	---	---	---	e0.00	e0.00	11	31	e0.00	e0.00
3	---	---	---	---	---	---	e0.00	e0.00	8.6	28	e0.00	e0.00
4	---	---	---	---	---	---	e0.00	e0.00	7.5	23	e0.00	e0.00
5	---	---	---	---	---	---	e0.00	e0.00	7.1	21	e0.00	e0.00
6	---	---	---	---	---	---	e0.00	e0.00	5.6	20	e0.00	e0.00
7	---	---	---	---	---	---	e0.00	e0.00	5.5	18	e0.00	e0.00
8	---	---	---	---	---	---	e0.00	e0.00	4.9	21	e0.00	e0.00
9	---	---	---	---	---	---	e0.00	e0.00	5.1	23	e0.00	e0.00
10	---	---	---	---	---	---	e0.00	e0.00	6.1	e15	e0.00	e0.00
11	---	---	---	---	---	---	e0.00	e0.00	6.4	e0.00	e0.00	e0.00
12	---	---	---	---	---	---	e0.00	e0.00	6.2	e0.00	e0.00	e0.00
13	---	---	---	---	---	---	e0.00	e0.00	6.2	e0.00	e0.00	e0.00
14	---	---	---	---	---	---	e0.00	e0.00	5.7	e0.00	e0.00	e0.00
15	---	---	---	---	---	---	e0.00	e0.00	5.6	e0.00	e0.00	e0.00
16	---	---	---	---	---	---	e0.00	e0.00	5.4	e0.00	e0.00	e0.00
17	---	---	---	---	---	---	e0.00	e0.00	4.8	e0.00	e0.00	e0.00
18	---	---	---	---	---	---	e0.00	e0.00	4.8	e0.00	e0.00	e0.00
19	---	---	---	---	---	---	e0.00	e0.00	5.1	e0.00	e0.00	e13
20	---	---	---	---	---	---	e0.00	e0.00	4.7	e0.00	e0.00	39
21	---	---	---	---	---	---	e0.00	e4.5	4.4	e0.00	e0.00	39
22	---	---	---	---	---	---	e0.00	8.4	3.9	e8.3	e0.00	38
23	---	---	---	---	---	---	e0.00	9.8	3.6	e8.4	e0.00	37
24	---	---	---	---	---	---	e0.00	12	3.3	e0.00	e0.00	39
25	---	---	---	---	---	---	e0.00	14	3.0	e0.00	e0.00	42
26	---	---	---	---	---	---	e0.00	13	2.7	e0.00	e0.00	42
27	---	---	---	---	---	---	e0.00	14	2.5	e0.00	e0.00	42
28	---	---	---	---	---	---	e0.00	15	3.1	e0.00	e0.00	42
29	---	---	---	---	---	---	e0.00	18	5.3	e0.00	e0.00	41
30	---	---	---	---	---	---	e0.00	16	7.6	e0.00	e0.00	41
31	---	---	---	---	---	---	---	14	---	e0.00	e0.00	---
TOTAL	---	---	---	---	---	---	0.00	138.70	170.7	233.70	0.00	455.00
MEAN	---	---	---	---	---	---	0.000	4.47	5.69	7.54	0.000	15.2
MAX	---	---	---	---	---	---	0.00	18	15	31	0.00	42
MIN	---	---	---	---	---	---	0.00	0.00	2.5	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	0.00	275	339	464	0.00	902

e Estimated.

**09044300 BEMROSE-HOOSIER DIVERSION NEAR HOOSIER PASS, CO**

LOCATION.--Lat 39°22'50", long 106°04'13", in NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.2, T.8 S., R.78 W., Summit County, Hydrologic Unit 14010002, on right bank at entrance to Hoosier Pass tunnel, 1.4 mi northwest of Hoosier Pass, 1.6 mi downstream from diversion point on Bemrose Creek, and 7 mi southwest of Breckenridge.

PERIOD OF RECORD.--October 1957 to current year (seasonal records only). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09044300](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09044300)

GAGE.--Water-stage recorder with satellite telemetry, and Parshall flume. Elevation of gage is 10,986 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. This is a transmountain diversion from Bemrose and Hoosier Creeks in Blue River basin through Hoosier Pass tunnel to South Platte River basin from which it is again diverted to South Catamount Creek in the Arkansas River basin. Water is for municipal use by city of Colorado Springs. Diversion points are in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.6, T.8 S., R.77 W., and in sec.12, T.8 S., R.78 W. The entire flow is regulated by diversion gates.

COOPERATION.--Gage-height record collected in cooperation with City of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 44 ft<sup>3</sup>/s, June 21, 1965; no flow for most of each year.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e0.00	e0.00	23	8.9	1.8	1.3
2	---	---	---	---	---	---	e0.00	e0.00	22	8.4	1.6	1.2
3	---	---	---	---	---	---	e0.00	e0.00	21	8.3	1.9	1.2
4	---	---	---	---	---	---	e0.00	e0.00	19	8.0	1.9	1.3
5	---	---	---	---	---	---	e0.00	e0.00	18	7.7	1.7	1.2
6	---	---	---	---	---	---	e0.00	e0.00	15	7.3	1.6	1.4
7	---	---	---	---	---	---	e0.00	e0.00	14	6.9	1.4	1.5
8	---	---	---	---	---	---	e1.7	e0.00	13	6.5	1.5	1.4
9	---	---	---	---	---	---	e1.8	e0.00	13	5.9	1.5	1.6
10	---	---	---	---	---	---	e0.00	e0.00	14	5.1	1.4	1.5
11	---	---	---	---	---	---	e0.00	e0.00	15	3.7	1.0	1.4
12	---	---	---	---	---	---	e0.00	e1.0	15	3.6	e0.00	1.3
13	---	---	---	---	---	---	e0.00	1.8	15	3.5	e0.00	1.4
14	---	---	---	---	---	---	e0.00	2.8	14	3.3	e0.00	1.4
15	---	---	---	---	---	---	e0.00	3.0	14	3.2	e0.00	1.3
16	---	---	---	---	---	---	e0.00	2.9	14	3.0	e0.00	1.3
17	---	---	---	---	---	---	e0.00	3.7	13	3.0	e0.00	1.3
18	---	---	---	---	---	---	e0.00	3.6	14	3.0	e0.00	1.3
19	---	---	---	---	---	---	e0.00	3.6	16	3.1	e0.00	1.3
20	---	---	---	---	---	---	e0.00	3.7	15	2.8	e0.00	1.3
21	---	---	---	---	---	---	e0.00	5.1	14	2.6	e0.00	1.3
22	---	---	---	---	---	---	e0.00	6.9	14	3.1	e0.00	1.2
23	---	---	---	---	---	---	e0.00	7.9	14	3.0	e0.00	e0.40
24	---	---	---	---	---	---	e0.00	10	13	2.3	e0.00	e0.00
25	---	---	---	---	---	---	e0.00	12	12	2.3	1.0	e0.00
26	---	---	---	---	---	---	e0.00	12	11	2.1	1.6	e0.00
27	---	---	---	---	---	---	e0.00	16	11	2.3	1.3	e0.00
28	---	---	---	---	---	---	e0.00	19	10	2.2	1.2	e0.00
29	---	---	---	---	---	---	e0.00	24	9.7	2.1	1.4	e0.00
30	---	---	---	---	---	---	e0.00	25	9.4	2.0	1.9	e0.00
31	---	---	---	---	---	---	---	23	---	1.9	1.5	---
TOTAL	---	---	---	---	---	---	3.50	187.00	435.1	131.1	27.20	29.80
MEAN	---	---	---	---	---	---	0.12	6.03	14.5	4.23	0.88	0.99
MAX	---	---	---	---	---	---	1.8	25	23	8.9	1.9	1.6
MIN	---	---	---	---	---	---	0.00	0.00	9.4	1.9	0.00	0.00
AC-FT	---	---	---	---	---	---	6.9	371	863	260	54	59

e Estimated.

**09044800 MCCULLOUGH-SPRUCE-CRYSTAL DIVERSION NEAR HOOSIER PASS, CO**

LOCATION.--Lat 39°22'51", long 106°04'14", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.2, T.8 S., R.78 W., Summit County, Hydrologic Unit 14010002, on left bank at entrance to Hoosier Pass tunnel, 1.4 mi northwest of Hoosier Pass, 1.6 mi downstream from diversion point on McCullough Gulch, and 7 mi southwest of Breckenridge.

PERIOD OF RECORD.--October 1957 to current year (seasonal records only). Prior to October 1961, Published as McCullough diversion near Hoosier Pass. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09044800](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09044800)

GAGE.--Water-stage recorder with satellite telemetry, and Parshall flume. Elevation of gage is 10,986 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. This is a transmountain diversion from McCullough Gulch and Spruce and Crystal Creeks in Blue River basin through Hoosier Pass tunnel to South Platte River basin from which it is again diverted to South Catamount Creek in the Arkansas River basin. Water is for municipal use by city of Colorado Springs. Diversion points are in secs.14, 23, and 26, T.7 S., R.78 W. The entire flow is regulated by diversion gates.

COOPERATION.--Gage-height record collected in cooperation with City of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 142 ft<sup>3</sup>/s, May 30, 2003; no flow for most of each year.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	e0.00	e0.00	107	11	e0.00	e0.00
2	---	---	---	---	---	---	e0.00	e0.00	69	e3.0	e0.00	e0.00
3	---	---	---	---	---	---	e0.00	e0.00	61	e0.00	e0.00	e0.00
4	---	---	---	---	---	---	e0.00	e0.00	59	e0.00	e0.00	e0.00
5	---	---	---	---	---	---	e0.00	e0.00	54	e0.00	e0.00	e0.00
6	---	---	---	---	---	---	e0.00	e0.00	38	e0.00	e0.00	e0.00
7	---	---	---	---	---	---	e0.00	e0.00	31	e0.00	e0.00	e0.00
8	---	---	---	---	---	---	e0.00	e0.00	27	e0.00	e0.00	e0.00
9	---	---	---	---	---	---	e0.00	e0.00	35	e9.5	e0.00	e0.00
10	---	---	---	---	---	---	e0.00	e0.00	58	12	e0.00	e0.00
11	---	---	---	---	---	---	e0.00	e0.00	58	e0.00	e0.00	e0.00
12	---	---	---	---	---	---	e0.00	e0.00	50	e0.00	e0.00	e0.00
13	---	---	---	---	---	---	e0.00	e0.00	66	e0.00	e0.00	e0.00
14	---	---	---	---	---	---	e0.00	e0.00	36	e0.00	e0.00	e0.00
15	---	---	---	---	---	---	e0.00	e0.00	32	e0.00	e0.00	e0.00
16	---	---	---	---	---	---	e0.00	e0.00	32	e0.00	e0.00	e0.00
17	---	---	---	---	---	---	e0.00	e0.00	27	e0.00	e0.00	e0.00
18	---	---	---	---	---	---	e0.00	e0.00	29	e0.00	e0.00	e0.00
19	---	---	---	---	---	---	e0.00	e0.00	18	e0.00	e0.00	e0.00
20	---	---	---	---	---	---	e0.00	e0.00	8.8	e0.00	e0.00	e0.00
21	---	---	---	---	---	---	e0.00	5.8	12	e0.00	e0.00	e0.00
22	---	---	---	---	---	---	e0.00	18	19	13	e0.00	e0.00
23	---	---	---	---	---	---	e0.00	26	17	15	e0.00	e0.00
24	---	---	---	---	---	---	e0.00	38	14	e0.00	e0.00	e0.00
25	---	---	---	---	---	---	e0.00	51	11	e0.00	e0.00	e0.00
26	---	---	---	---	---	---	e0.00	50	12	e0.00	e0.00	e0.00
27	---	---	---	---	---	---	e0.00	60	20	e0.00	e0.00	e0.00
28	---	---	---	---	---	---	e0.00	82	23	e0.00	e0.00	e0.00
29	---	---	---	---	---	---	e0.00	109	20	e0.00	e0.00	e0.00
30	---	---	---	---	---	---	e0.00	142	16	e0.00	e0.00	e0.00
31	---	---	---	---	---	---	---	124	---	e0.00	e0.00	---
TOTAL	---	---	---	---	---	---	0.00	705.80	1,059.8	63.50	0.00	0.00
MEAN	---	---	---	---	---	---	0.000	22.8	35.3	2.05	0.000	0.000
MAX	---	---	---	---	---	---	0.00	142	107	15	0.00	0.00
MIN	---	---	---	---	---	---	0.00	0.00	8.8	0.00	0.00	0.00
AC-FT	---	---	---	---	---	---	0.00	1,400	2,100	126	0.00	0.00

e Estimated.



## 09046490 BLUE RIVER AT BLUE RIVER, CO

LOCATION.--Lat 39°27'21", long 106°01'52", in NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.7, T.7 S., R.77 W., Summit County, Hydrologic Unit 14010002 on left bank, 350 ft downstream from spillway of Goose Pasture Tarn Dam and 2.0 mi southeast of Breckenridge.

DRAINAGE AREA.--42.4 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1983 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09046490](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09046490)

REVISED RECORDS.--WDR CO-95-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 9,835 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Transmountain diversions upstream from station by Boreas Pass ditch and Hoosier Pass tunnel. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	22	10	2.5	2.4	1.8	3.8	20	213	100	43	33
2	17	21	10	2.6	2.4	1.8	3.9	19	186	102	40	28
3	19	21	10	2.6	2.3	1.9	3.8	18	167	113	40	27
4	17	20	10	2.7	2.0	1.9	3.9	21	151	116	49	27
5	16	20	9.7	5.5	1.9	1.9	3.6	18	145	113	44	24
6	15	19	9.9	6.5	1.9	1.8	4.0	15	125	104	39	26
7	15	20	10	6.4	1.9	1.8	4.1	16	124	93	36	30
8	15	21	10	6.4	1.8	1.8	4.0	19	109	87	34	33
9	15	24	10	6.4	1.8	1.7	3.9	18	100	84	35	41
10	16	21	10	4.3	1.9	1.8	4.2	20	98	59	35	44
11	13	20	10	2.9	1.9	1.7	4.6	18	98	85	36	41
12	13	16	10	2.3	2.0	1.8	5.0	23	131	89	34	37
13	24	13	11	2.1	2.0	1.8	5.1	35	107	87	31	31
14	22	16	11	2.3	1.9	1.8	6.3	41	104	87	31	27
15	21	16	11	2.9	1.8	1.8	7.7	57	133	82	48	25
16	21	14	10	2.8	1.8	2.1	7.8	61	141	83	41	24
17	21	13	9.7	2.9	1.9	2.3	7.2	84	126	90	33	21
18	21	14	9.6	2.9	2.0	3.9	7.3	95	127	96	45	20
19	21	14	8.8	2.9	2.0	4.5	6.6	96	142	94	41	20
20	20	14	6.7	3.0	2.1	3.4	6.4	90	143	87	32	18
21	20	15	4.6	2.6	1.9	3.8	6.6	90	137	80	22	18
22	20	15	3.7	2.0	1.9	3.3	7.4	79	128	68	16	17
23	21	14	3.7	2.1	1.9	3.1	9.1	89	125	32	18	17
24	21	14	3.7	4.8	4.0	3.3	10	104	120	55	24	17
25	20	15	3.8	2.2	3.2	3.5	7.5	123	113	60	33	17
26	20	11	3.1	1.7	2.0	3.3	9.3	123	102	58	40	16
27	22	12	2.7	1.8	2.0	4.2	12	130	99	57	34	15
28	21	13	2.6	2.0	2.0	3.5	15	155	95	59	31	15
29	22	11	2.5	1.5	---	3.0	18	177	99	56	28	15
30	20	10	2.6	1.8	---	3.6	21	221	101	53	32	14
31	22	---	2.6	2.4	---	3.5	---	201	---	46	38	---
TOTAL	586	489	233.0	97.8	58.6	81.4	219.1	2,276	3,789	2,475	1,083	738
MEAN	18.9	16.3	7.52	3.15	2.09	2.63	7.30	73.4	126	79.8	34.9	24.6
MAX	24	24	11	6.5	4.0	4.5	21	221	213	116	49	44
MIN	13	10	2.5	1.5	1.8	1.7	3.6	15	95	32	16	14
AC-FT	1,160	970	462	194	116	161	435	4,510	7,520	4,910	2,150	1,460

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

	19.0	13.4	9.70	6.67	5.27	5.03	11.1	59.9	119	84.1	43.2	25.8
MEAN	32.2	26.5	18.9	14.3	8.11	8.31	21.9	128	276	327	120	44.3
(WY)	(1985)	(1985)	(1985)	(1985)	(1985)	(2000)	(1989)	(1996)	(1995)	(1995)	(1995)	(1984)
MIN	13.5	8.62	6.96	3.15	2.09	2.63	5.53	12.5	11.7	13.9	11.5	10.6
(WY)	(1992)	(1992)	(1995)	(2003)	(2003)	(2003)	(1993)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1984 - 2003	
ANNUAL TOTAL	3,854.9		12,125.9			
ANNUAL MEAN	10.6		33.2		33.6	
HIGHEST ANNUAL MEAN					70.4 1995	
LOWEST ANNUAL MEAN					10.1 2002	
HIGHEST DAILY MEAN	28	Aug 6	221	May 30	578	Jul 12, 1995
LOWEST DAILY MEAN	2.5	Dec 29	1.5	Jan 29	1.5	Jan 29, 2003
ANNUAL SEVEN-DAY MINIMUM	2.8	Mar 25	1.8	Mar 6	1.8	Mar 6, 2003
MAXIMUM PEAK FLOW			249		681	
MAXIMUM PEAK STAGE			2.21		3.23	
ANNUAL RUNOFF (AC-FT)	7,650		24,050		24,340	
10 PERCENT EXCEEDS	19		101		88	
50 PERCENT EXCEEDS	10		16		14	
90 PERCENT EXCEEDS	3.7		2.0		4.7	

**09046530 FRENCH GULCH AT BRECKENRIDGE, CO**

LOCATION.--Lat. 39°29'35", long. 106°02'39", in SE¼SW¼, sec.30, T.6 S, R.77 W, Summit County, Hydrologic Unit 14010002, on left bank, 300 ft south of Summit Co. Rd. 450, 200 ft upstream from bridge on Hwy. 9, in Breckenridge.

DRAINAGE AREA.--10.9 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1995 to current year. Daily water temperature record available, October 1996 to September 1998. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09046530](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09046530)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,510 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are fair. No diversion or regulation upstream from gage. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	2.7	2.0	1.4	1.8	1.4	2.1	6.3	106	23	8.7	6.3
2	4.1	2.5	2.1	1.4	1.7	1.4	2.3	6.3	93	22	8.3	6.0
3	4.4	2.4	2.2	1.4	1.7	1.4	2.4	6.3	81	21	8.4	6.1
4	4.2	2.3	2.2	1.4	1.6	1.4	2.2	6.6	70	21	9.4	6.3
5	3.9	2.3	2.2	1.4	1.8	1.4	2.1	6.2	63	20	8.6	5.9
6	3.8	2.2	2.2	1.3	1.8	e1.5	2.1	5.8	52	19	8.2	6.2
7	3.7	2.2	2.2	1.3	e1.8	1.5	2.0	5.9	49	18	8.0	6.6
8	3.6	2.4	2.1	1.4	e1.9	1.6	2.1	6.2	43	17	7.9	6.8
9	3.5	2.5	2.0	1.4	1.9	1.5	2.2	6.1	41	16	7.5	7.9
10	3.4	2.6	1.9	1.4	1.9	1.5	2.5	6.3	42	15	7.3	7.4
11	3.4	2.5	1.8	1.5	1.8	1.5	2.9	6.0	44	15	7.3	7.2
12	3.2	2.2	1.7	1.5	1.6	1.5	3.1	6.0	44	14	7.3	6.9
13	3.0	2.4	1.5	1.5	1.6	1.6	3.3	6.9	44	14	8.3	6.6
14	3.0	2.6	1.6	1.6	1.5	1.6	3.7	8.0	41	13	7.7	6.4
15	3.0	2.6	1.6	1.6	1.6	1.7	3.8	9.5	43	13	6.9	6.1
16	2.9	2.3	1.7	1.6	1.6	1.7	3.6	11	42	13	7.0	5.8
17	2.9	2.4	1.7	1.7	1.5	1.6	3.6	13	40	13	8.0	5.6
18	2.9	2.6	1.7	1.7	1.5	1.5	3.6	16	40	13	8.7	5.4
19	2.9	2.3	1.7	1.7	1.5	1.5	3.3	18	39	13	8.0	5.4
20	2.8	2.6	1.7	1.7	e1.5	1.7	3.2	20	38	12	7.3	5.2
21	2.8	2.6	1.7	1.7	1.5	1.6	3.4	22	36	12	6.8	5.1
22	2.8	2.5	1.6	1.7	1.5	1.7	3.6	26	35	11	6.8	4.9
23	2.7	2.5	1.7	1.8	1.5	1.8	3.6	32	33	11	6.8	4.8
24	2.7	2.5	1.7	1.8	1.5	1.9	3.2	38	32	11	6.6	4.7
25	2.6	2.4	1.6	1.8	1.5	1.8	3.7	39	30	11	6.5	4.5
26	2.6	2.0	1.6	1.8	1.4	1.8	4.4	38	27	11	6.3	4.5
27	2.6	2.2	1.6	1.9	1.4	1.9	5.0	42	26	11	6.0	4.5
28	2.6	2.2	1.4	1.9	1.3	1.9	5.5	55	25	10	5.9	4.4
29	2.6	2.1	1.4	1.8	---	2.0	6.0	68	24	10	5.7	4.3
30	2.5	2.0	1.4	1.8	---	2.0	6.4	86	23	9.6	6.3	4.2
31	2.6	---	1.4	1.8	---	2.0	---	105	---	9.1	6.7	---
TOTAL	97.4	71.6	54.9	49.7	45.2	50.9	100.9	727.4	1,346	441.7	229.2	172.0
MEAN	3.14	2.39	1.77	1.60	1.61	1.64	3.36	23.5	44.9	14.2	7.39	5.73
MAX	4.4	2.7	2.2	1.9	1.9	2.0	6.4	105	106	23	9.4	7.9
MIN	2.5	2.0	1.4	1.3	1.3	1.4	2.0	5.8	23	9.1	5.7	4.2
AC-FT	193	142	109	99	90	101	200	1,440	2,670	876	455	341

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

MEAN	4.38	3.02	2.33	1.85	1.75	1.82	3.33	20.2	42.2	16.8	8.59	5.78
MAX	5.15	3.78	2.74	2.10	2.04	2.09	4.07	38.8	75.0	27.3	12.4	7.05
(WY)	(1996)	(1999)	(1996)	(1998)	(1996)	(1997)	(1997)	(1996)	(1997)	(1999)	(1997)	(1999)
MIN	3.14	2.39	1.77	1.60	1.54	1.41	2.48	6.76	8.97	4.14	4.64	3.56
(WY)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(1998)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1996 - 2003

ANNUAL TOTAL	1,309.3		3,386.9		9.35	
ANNUAL MEAN	3.59		9.28		13.0 1997	
HIGHEST ANNUAL MEAN					3.67 2002	
LOWEST ANNUAL MEAN					115 Jun 5, 1997	
HIGHEST DAILY MEAN	16	Jun 1	106	Jun 1	1.2	Feb 23, 2002
LOWEST DAILY MEAN	1.2	Feb 23	1.3	Jan 6	1.3	Feb 20, 2002
ANNUAL SEVEN-DAY MINIMUM	1.3	Feb 20	1.4	Jan 1	1.3	Jun 5, 1997
MAXIMUM PEAK FLOW			115	May 31	124	Jun 5, 1997
MAXIMUM PEAK STAGE			6.99	May 31	7.09	Jun 5, 1997
ANNUAL RUNOFF (AC-FT)	2,600		6,720		6,770	
10 PERCENT EXCEEDS	7.3		26		24	
50 PERCENT EXCEEDS	3.0		3.2		3.7	
90 PERCENT EXCEEDS	1.5		1.5		1.7	

e Estimated.

## 09046600 BLUE RIVER NEAR DILLON, CO

LOCATION.--Lat 39°34'00", long 106°02'56", in SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.31, T.5 S., R.77 W., Summit County, Hydrologic Unit 14010002, on left bank 0.3 mi upstream from Dillon Reservoir, and 5.0 mi south of Dillon.

DRAINAGE AREA.--121 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1957 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09046600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09046600)

REVISED RECORDS.--WSP 2124: Drainage area. WDR CO-95-2: 1994.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,020 ft above NGVD of 1929, from topographic map. Prior to Aug. 6, 1992, at site 1.4 mi upstream at different datum. Aug. 6, 1992 to Oct. 20, 1994, at site 200 ft upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station by Boreas Pass ditch and Hoosier Pass tunnel (see elsewhere in this report). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	37	e29	e22	e19	e18	e18	102	734	270	106	78
2	37	41	e28	e22	e19	e18	e18	99	702	267	100	77
3	40	42	e28	e21	e19	e18	e18	100	643	268	e105	75
4	43	41	e28	e21	e19	e18	e18	105	571	270	e108	73
5	44	38	e28	e21	e19	e18	e18	100	533	264	119	72
6	43	37	e27	e21	e19	e18	e18	92	488	251	109	70
7	41	35	e27	e21	e18	e18	e18	87	448	234	104	68
8	40	35	e27	e21	e18	e18	e18	86	410	219	101	71
9	40	39	e27	e21	e18	e18	e18	85	379	207	99	78
10	39	40	e26	e21	e18	e17	e19	88	373	184	97	86
11	39	41	e26	e21	e18	e18	e19	87	374	183	98	88
12	39	37	e26	e21	e18	e18	e22	83	395	191	94	87
13	37	34	e26	e20	e18	e18	e26	93	396	188	96	83
14	37	33	e26	e20	e18	e18	e31	117	375	183	102	77
15	43	e33	e26	e20	e18	e18	e35	155	389	178	94	72
16	44	e32	e25	e20	e18	e18	40	188	402	178	100	68
17	43	e32	e25	e20	e18	e18	40	249	387	180	102	65
18	42	e32	e25	e20	e18	e18	41	297	379	183	107	63
19	41	e32	e25	e20	e18	e18	41	314	393	187	110	61
20	41	e31	e25	e20	e18	e18	39	303	395	178	100	60
21	40	e31	e25	e20	e18	e18	39	306	384	169	89	57
22	40	e31	e24	e20	e18	e18	42	318	368	157	82	54
23	40	e31	e24	e20	e18	e18	46	357	358	132	77	53
24	41	e30	e24	e20	e18	e18	46	394	347	126	72	50
25	41	e29	e23	e20	e18	e18	48	438	332	140	70	49
26	39	e29	e23	e20	e18	e18	53	453	312	141	73	49
27	38	e29	e23	e19	e18	e18	63	462	297	135	77	48
28	39	e29	e23	e19	e18	e18	75	535	286	131	78	48
29	41	e29	e22	e19	---	e18	90	596	280	129	77	47
30	39	e29	e22	e19	---	e18	101	713	278	126	75	45
31	37	---	e22	e19	---	e18	---	730	---	115	75	---
TOTAL	1,245	1,019	785	629	510	557	1,118	8,132	12,408	5,764	2,896	1,972
MEAN	40.2	34.0	25.3	20.3	18.2	18.0	37.3	262	414	186	93.4	65.7
MAX	44	42	29	22	19	18	101	730	734	270	119	88
MIN	37	29	22	19	18	17	18	83	278	115	70	45
AC-FT	2,470	2,020	1,560	1,250	1,010	1,100	2,220	16,130	24,610	11,430	5,740	3,910

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

MEAN	51.5	38.6	31.1	26.0	24.0	23.5	40.1	179	338	201	104	67.2
MAX	101	74.4	54.0	40.3	36.0	32.5	77.7	461	661	644	241	143
(WY)	(1985)	(1985)	(1984)	(1984)	(1983)	(1983)	(1985)	(1996)	(1995)	(1995)	(1984)	(1983)
MIN	30.6	23.8	21.7	17.0	17.2	17.0	23.0	57.5	65.9	44.4	36.7	30.8
(WY)	(1978)	(1978)	(1978)	(1995)	(1992)	(1995)	(1964)	(2002)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1958 - 2003

ANNUAL TOTAL	13,175	37,035	
ANNUAL MEAN	36.1	101	a106
HIGHEST ANNUAL MEAN			168
LOWEST ANNUAL MEAN			36.9
HIGHEST DAILY MEAN		734	b1,160
LOWEST DAILY MEAN	e18	Mar 25	e17
ANNUAL SEVEN-DAY MINIMUM	e18	Mar 24	e18
MAXIMUM PEAK FLOW		764	May 31
MAXIMUM PEAK STAGE		6.44	May 31
ANNUAL RUNOFF (AC-FT)	26,130	73,460	a76,800
10 PERCENT EXCEEDS	55	313	247
50 PERCENT EXCEEDS	33	40	44
90 PERCENT EXCEEDS	20	18	22

e Estimated.

a Adjusted for diversions to Hoosier Pass tunnel.

b Also occurred Jun 18, 1995.

**09047500 SNAKE RIVER NEAR MONTEZUMA, CO**

LOCATION.--Lat 39°36'20", long 105°56'33", in NW<sup>1</sup>/<sub>4</sub> sec.19, T.5 S., R.76 W. (projected), Summit County, Hydrologic Unit 14010002, on right bank 200 ft downstream from North Fork and 4.5 mi northwest of Montezuma.

DRAINAGE AREA.--57.7 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1942 to September 1946, October 1951 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09047500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09047500).

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,320 ft above NGVD of 1929, from topographic map. Prior to Oct. 14, 1943, nonrecording gage at present site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Small diversions upstream from station for irrigation and domestic use. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	e19	e16	e16	e16	e13	e16	24	625	238	72	68
2	28	e19	e16	e16	e16	e13	e16	23	545	234	73	64
3	31	e19	e16	e16	e16	e13	e17	23	518	229	85	66
4	27	e20	e16	e16	e16	e12	e17	24	469	216	80	66
5	26	e20	e16	e16	e16	e13	e17	22	427	203	71	67
6	25	e20	e16	e16	e15	e13	e18	22	360	191	66	84
7	26	e20	e16	e16	e15	e13	e18	23	334	177	66	88
8	26	e19	e16	e16	e15	e13	e18	22	308	166	66	83
9	25	e19	e16	e16	e15	e13	e18	21	324	160	64	108
10	24	e19	e16	e16	e15	e13	e17	22	359	151	61	97
11	23	e19	e16	e16	e15	e13	e16	22	383	143	58	89
12	21	e18	e16	e16	e15	e13	15	25	378	136	57	82
13	19	e18	e16	e16	e15	e13	16	35	367	132	53	77
14	20	e18	e16	e16	e14	e13	20	49	358	127	50	72
15	20	e17	e16	e16	e14	e13	19	68	368	122	48	68
16	22	e17	e16	e16	e14	e13	17	86	357	125	62	64
17	27	e17	e16	e16	e14	e13	16	117	343	125	78	60
18	25	e17	e16	e16	e14	e13	16	136	356	121	87	58
19	19	e17	e16	e16	e14	e13	15	143	386	131	70	56
20	18	e17	e16	e16	e14	e13	15	134	356	122	60	53
21	19	e17	e16	e16	e14	e13	15	152	333	115	55	51
22	21	e17	e16	e16	e14	e13	15	212	327	107	55	49
23	21	e17	e16	e16	e14	e13	15	269	324	104	68	47
24	20	e16	e16	e16	e14	e13	16	314	311	98	78	45
25	22	e16	e16	e16	e14	e13	19	347	284	95	84	44
26	24	e16	e16	e16	e14	e13	21	365	265	93	75	42
27	24	e16	e16	e16	e14	e13	24	412	264	90	66	41
28	25	e16	e16	e16	e14	e13	26	500	261	90	64	40
29	20	e16	e16	e16	---	e14	27	563	256	90	60	39
30	e20	e16	e16	e16	---	e14	27	592	246	81	84	37
31	e19	---	e16	e16	---	e15	---	626	---	75	80	---
TOTAL	710	532	496	496	410	406	542	5,393	10,792	4,287	2,096	1,905
MEAN	22.9	17.7	16.0	16.0	14.6	13.1	18.1	174	360	138	67.6	63.5
MAX	31	20	16	16	16	15	27	626	625	238	87	108
MIN	18	16	16	16	14	12	15	21	246	75	48	37
AC-FT	1,410	1,060	984	984	813	805	1,080	10,700	21,410	8,500	4,160	3,780

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2003, BY WATER YEAR (WY)

MEAN	27.5	19.8	15.5	12.3	10.9	10.8	18.2	101	283	145	65.7	38.3
MAX	66.9	39.5	25.9	18.0	16.4	17.0	35.4	216	520	385	177	90.7
(WY)	(1985)	(1985)	(1985)	(1985)	(1997)	(1997)	(1946)	(1958)	(1997)	(1995)	(1984)	(1984)
MIN	16.1	11.8	9.90	7.03	7.00	7.40	8.34	28.7	55.8	29.0	22.9	18.0
(WY)	(1945)	(1965)	(1978)	(1963)	(1946)	(1973)	(1973)	(1995)	(2002)	(2002)	(2002)	(1977)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1943 - 2003

ANNUAL TOTAL	9,059	28,065	
ANNUAL MEAN	24.8	76.9	62.5
HIGHEST ANNUAL MEAN			95.8 1997
LOWEST ANNUAL MEAN			25.2 2002
HIGHEST DAILY MEAN	102	May 31	870 Jun 22, 1995
LOWEST DAILY MEAN	e11	Feb 26	5.0 Feb 26, 1964
ANNUAL SEVEN-DAY MINIMUM	e11	Feb 23	6.0 Jan 9, 1963
MAXIMUM PEAK FLOW		704	May 31 1,250 Jun 10, 1952
MAXIMUM PEAK STAGE		3.17	May 31 a3.51 Jun 10, 1952
ANNUAL RUNOFF (AC-FT)	17,970	55,670	45,260
10 PERCENT EXCEEDS	49	262	175
50 PERCENT EXCEEDS	18	20	23
90 PERCENT EXCEEDS	13	14	10

e Estimated.

a Maximum gage height, 3.88 ft, Jun 6, 1972.

## 09047700 KEYSTONE GULCH NEAR DILLON, CO

LOCATION.--Lat 39°35'40", long 105°58'19", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.26, T.5 S., R.77 W., Summit County, Hydrologic Unit 14010002, on right bank 0.7 mi upstream from mouth, and 4.7 mi southeast of Dillon.

DRAINAGE AREA.--9.10 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1957 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09047700](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09047700)

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,350 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No known diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	e1.9	e2.1	e2.1	e2.2	e1.9	e2.1	4.0	e84	12	4.9	e5.6
2	1.9	e1.9	e2.1	e2.1	e2.2	e2.0	e2.1	3.6	e76	12	4.9	e5.5
3	2.3	e1.9	e2.2	e2.1	e2.1	e2.0	e2.4	3.6	e69	10	5.1	e5.5
4	1.9	e1.9	e2.2	e2.1	e2.1	e2.1	e2.5	4.0	e56	8.2	4.9	e5.5
5	1.8	e2.0	e2.2	e2.1	e2.1	e2.1	e2.4	3.5	e49	7.5	4.8	e5.5
6	1.7	e2.0	e2.2	e2.1	e2.1	e2.1	e2.2	3.4	e45	7.2	4.8	e5.3
7	1.7	e2.0	e2.2	e2.1	e2.1	e2.1	e2.2	3.3	e42	6.9	4.6	e4.9
8	1.7	e2.0	e2.2	e2.1	e2.1	e2.1	e2.1	3.4	e38	6.7	4.6	e4.8
9	1.6	e2.0	e2.2	e2.1	e2.1	e2.1	e2.2	3.4	e38	6.4	4.6	e4.6
10	1.5	e2.1	e2.3	e2.1	e2.1	e2.1	e2.4	3.5	e38	6.8	4.4	4.1
11	1.6	e2.2	e2.2	e2.1	e2.1	e2.1	e2.4	3.4	e39	6.9	4.3	4.0
12	1.6	e2.3	e2.2	e2.1	e2.1	e2.1	e2.6	3.9	e39	6.6	4.3	3.8
13	1.3	e2.3	e2.1	e2.1	e2.1	e2.0	e2.8	5.3	e39	6.3	4.2	3.8
14	1.4	e2.3	e2.1	e2.1	e2.1	e2.0	e2.8	6.7	e37	6.2	4.0	3.7
15	1.4	e2.5	e2.1	e2.1	e2.1	e2.0	e2.9	7.5	e35	6.0	3.9	3.6
16	1.4	e2.5	e2.1	e2.1	e2.1	e2.0	e3.0	10	e34	6.2	4.5	3.5
17	1.4	e2.6	e2.1	e2.1	e2.1	e2.0	e2.9	13	e29	7.0	5.3	3.4
18	1.4	e2.6	e2.1	e2.2	e2.1	e2.0	e2.9	15	e25	e7.2	6.0	3.3
19	1.6	e2.6	e2.1	e2.2	e2.1	e2.0	e2.8	16	25	e7.4	5.2	3.4
20	1.5	e2.6	e2.1	e2.2	e2.1	e2.0	e2.7	e17	23	e7.6	4.4	3.3
21	1.6	e2.6	e2.1	e2.2	e2.1	e2.0	e2.7	e18	22	e7.1	5.2	3.2
22	1.9	e2.5	e2.1	e2.2	e2.1	e2.0	e2.6	e22	20	e6.5	5.7	3.4
23	1.9	e2.4	e2.1	e2.2	e2.1	e2.0	e2.5	e26	19	e6.3	6.0	e3.4
24	1.7	e2.3	e2.1	e2.2	e2.1	e2.0	2.8	e32	18	e6.0	5.9	e3.3
25	2.0	e2.2	e2.1	e2.2	e2.1	e2.0	2.8	e36	18	e5.9	6.7	e3.3
26	2.0	e2.2	e2.1	e2.2	e2.0	e2.0	2.9	e36	17	5.7	7.3	e3.2
27	1.9	e2.2	e2.1	e2.2	e1.9	e2.0	3.6	e37	16	5.6	6.7	e3.2
28	2.2	e2.1	e2.1	e2.2	e1.9	e2.0	4.0	e43	15	5.3	6.5	e3.1
29	e1.9	e2.1	e2.1	e2.2	---	e2.0	4.5	e55	14	5.1	6.0	e3.1
30	e1.9	e2.1	e2.1	e2.2	---	e2.1	4.4	e64	13	5.1	e6.1	e3.1
31	e1.9	---	e2.1	e2.2	---	e2.1	---	e86	---	5.0	e6.0	---
TOTAL	53.2	66.9	66.2	66.5	58.5	63.0	83.2	588.5	1,032	214.7	161.8	119.4
MEAN	1.72	2.23	2.14	2.15	2.09	2.03	2.77	19.0	34.4	6.93	5.22	3.98
MAX	2.3	2.6	2.3	2.2	2.2	2.1	4.5	86	84	12	7.3	5.6
MIN	1.3	1.9	2.1	2.1	1.9	1.9	2.1	3.3	13	5.0	3.9	3.1
AC-FT	106	133	131	132	116	125	165	1,170	2,050	426	321	237

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

	3.33	3.02	2.58	2.25	2.08	2.09	3.13	13.0	24.4	9.96	5.22	3.73
MEAN	3.33	3.02	2.58	2.25	2.08	2.09	3.13	13.0	24.4	9.96	5.22	3.73
MAX	6.12	4.38	3.75	2.97	2.90	3.00	6.19	40.8	58.8	31.2	15.5	7.97
(WY)	(1985)	(2000)	(2002)	(2002)	(1997)	(1986)	(1986)	(1996)	(1995)	(1995)	(1984)	(1984)
MIN	1.72	1.77	1.37	1.39	1.40	1.40	1.44	3.90	2.54	1.51	1.33	1.42
(WY)	(2003)	(1964)	(1964)	(1964)	(1961)	(1973)	(1973)	(2002)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1958 - 2003

ANNUAL TOTAL	813.11	2,573.9	
ANNUAL MEAN	2.23	7.05	
HIGHEST ANNUAL MEAN			6.24
LOWEST ANNUAL MEAN			13.1
HIGHEST DAILY MEAN	4.8	Apr 30	1984
LOWEST DAILY MEAN	0.86	Aug 18	2002
ANNUAL SEVEN-DAY MINIMUM	0.94	Sep 1	2.65
MAXIMUM PEAK FLOW			153
MAXIMUM PEAK STAGE			0.86
ANNUAL RUNOFF (AC-FT)	1,610	5,110	3.47
10 PERCENT EXCEEDS	3.5	17	14
50 PERCENT EXCEEDS	2.1	2.4	3.0
90 PERCENT EXCEEDS	1.2	2.0	1.9

e Estimated.

a Not determined.

b From rating curve extended above 65 ft<sup>3</sup>/s.

**09050100 TENMILE CREEK BELOW NORTH TENMILE CREEK AT FRISCO, CO**

LOCATION.--Lat 39°34'31", long 106°06'36", in SE ¼ NW ¼ sec.34, T.5 S., R.78 W., Summit County, Hydrologic Unit 14010002, on right bank 220 ft upstream from bridge on U.S. Highway 6, 160 ft downstream from North Tenmile Creek, and 0.6 mi west of Frisco.

DRAINAGE AREA.--93.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1971, published as "below North Fork, at Frisco." For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09050100](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09050100)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,100 ft above NGVD of 1929, from topographic map. Prior to Apr. 21, 1981 at site 720 ft downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by a few small diversions upstream from station for irrigation and municipal use, and transbasin diversion from Robinson Reservoir, capacity 2,520 acre-ft, in Eagle River basin. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	e24	e23	e23	e23	e20	e20	62	1,250	294	66	58
2	40	e24	e23	e23	e23	e20	e20	59	1,020	285	61	57
3	45	e24	e23	e23	e23	e20	e21	60	900	274	70	59
4	43	e24	e23	e23	e23	e20	e23	64	815	260	92	58
5	42	e24	e23	e23	e23	e20	e23	60	730	244	70	58
6	42	e24	e23	e23	e22	e20	e22	61	610	226	63	69
7	42	e24	e23	e23	e22	e20	e20	61	557	214	60	78
8	42	e24	e23	e23	e22	e20	e20	67	507	206	62	77
9	41	e25	e23	e23	e22	e19	e20	66	543	196	56	92
10	38	e25	e23	e23	e22	e20	e28	69	607	183	56	90
11	30	e26	e23	e23	e22	e20	28	66	614	171	61	86
12	28	e26	e23	e23	e22	e20	30	75	584	161	57	78
13	26	e26	e23	e23	e22	e20	33	99	579	153	52	74
14	26	e25	e23	e23	e22	e20	42	124	545	143	50	66
15	26	e24	e23	e23	e22	e20	47	159	560	136	46	63
16	26	e24	e23	e23	e22	e20	43	199	536	139	51	59
17	25	e24	e23	e23	e21	e20	42	290	499	131	71	55
18	25	e23	e23	e23	e21	e20	40	324	511	127	95	53
19	23	e23	e23	e23	e21	e20	37	321	506	126	74	49
20	22	e23	e23	e23	e21	e20	35	330	518	119	60	47
21	21	e23	e23	e23	e21	e20	35	371	468	116	54	44
22	22	e23	e23	e23	e21	e20	37	473	450	109	52	42
23	e22	e23	e23	e23	e21	e20	39	572	429	101	56	39
24	e22	e23	e23	e23	e21	e20	41	644	404	90	60	39
25	e22	e23	e23	e23	e21	e20	44	682	370	87	64	42
26	e22	e23	e23	e23	e21	e20	52	682	343	85	56	37
27	e23	e23	e23	e23	e20	e20	59	785	337	82	50	37
28	e23	e23	e23	e23	e20	e20	62	963	330	80	49	36
29	e22	e23	e23	e23	---	e20	65	1,100	322	84	48	35
30	e22	e23	e23	e23	---	e20	66	1,120	307	80	55	33
31	e22	---	e23	e23	---	e20	---	1,030	---	71	61	---
TOTAL	907	716	713	713	607	619	1,094	11,038	16,751	4,773	1,878	1,710
MEAN	29.3	23.9	23.0	23.0	21.7	20.0	36.5	356	558	154	60.6	57.0
MAX	45	26	23	23	23	20	66	1,120	1,250	294	95	92
MIN	21	23	23	23	20	19	20	59	307	71	46	33
AC-FT	1,800	1,420	1,410	1,410	1,200	1,230	2,170	21,890	33,230	9,470	3,730	3,390

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

	32.5	25.1	19.9	17.4	17.7	19.6	38.9	256	473	190	73.4	44.7
MEAN	32.5	25.1	19.9	17.4	17.7	19.6	38.9	256	473	190	73.4	44.7
MAX	77.7	76.2	34.5	34.0	33.8	46.0	95.0	493	818	607	251	127
(WY)	(1985)	(1985)	(1994)	(1994)	(1983)	(1983)	(1962)	(1996)	(1997)	(1995)	(1984)	(1984)
MIN	13.0	9.83	11.7	11.0	9.55	9.20	13.7	96.5	138	40.4	25.3	21.8
(WY)	(1978)	(1978)	(1978)	(1963)	(1978)	(1976)	(1973)	(1995)	(2002)	(2002)	(1977)	(1977)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1958 - 2003

ANNUAL TOTAL	17,514	41,519	
ANNUAL MEAN	48.0	114	101
HIGHEST ANNUAL MEAN			183
LOWEST ANNUAL MEAN			47.0
HIGHEST DAILY MEAN	289	May 31	1,480
LOWEST DAILY MEAN	16	Sep 1	5.3
ANNUAL SEVEN-DAY MINIMUM	16	Sep 1	7.9
MAXIMUM PEAK FLOW			1,510
MAXIMUM PEAK STAGE			4.84
ANNUAL RUNOFF (AC-FT)	34,740	82,350	73,100
10 PERCENT EXCEEDS	119	354	314
50 PERCENT EXCEEDS	24	30	31
90 PERCENT EXCEEDS	20	20	14

e Estimated.

a From rating curve extended above 750 ft<sup>3</sup>/s.

## 09050700 BLUE RIVER BELOW DILLON, CO

LOCATION.--Lat 39°37'32", long 106°03'57", in SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.12, T.5 S., R.78 W., Summit County, Hydrologic Unit 14010002, on right bank 0.3 mi downstream from Dillon Dam, 0.1 mi upstream from Straight Creek, and 1.1 mi west of Dillon.

DRAINAGE AREA.--335 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1960 to current year. Statistical summary computed for 1963 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09050700](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09050700).

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Elevation of gage is 8,760 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated since Sept. 3, 1963, by Dillon Reservoir, 0.3 mi upstream (station 09050600). Natural flow of stream affected by transmountain diversions, transbasin diversions, and diversions upstream from station for irrigation of about 400 acres of hay meadows. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	54	54	56	77	94	75	50	52	51	113	110
2	54	54	54	56	77	94	75	50	52	51	113	110
3	54	54	54	56	77	94	75	50	52	86	113	110
4	54	54	55	55	77	93	61	50	53	110	113	110
5	54	54	54	54	77	94	50	50	54	110	113	110
6	54	54	54	55	77	94	50	50	54	110	113	110
7	54	54	54	55	81	95	50	50	54	110	113	110
8	54	54	54	54	82	94	50	50	54	110	113	110
9	54	54	54	54	82	94	50	51	54	110	113	110
10	54	54	54	54	82	93	50	52	52	148	113	110
11	54	54	54	54	82	83	50	51	50	273	113	86
12	54	54	54	54	82	78	50	51	50	393	113	74
13	54	54	54	55	82	77	50	52	50	350	112	110
14	54	54	54	54	84	70	50	52	51	167	113	110
15	54	54	54	55	82	52	50	52	51	110	113	110
16	54	54	54	55	82	50	50	52	52	110	113	110
17	54	54	54	54	82	50	50	52	51	164	113	110
18	54	54	54	54	82	50	50	52	50	348	113	110
19	54	54	54	54	82	50	50	52	50	395	113	110
20	54	54	54	54	82	50	50	52	50	344	113	110
21	54	54	54	54	82	50	50	52	50	122	113	110
22	54	54	54	54	82	50	50	53	51	50	113	110
23	54	54	54	70	82	50	50	54	51	50	113	111
24	54	54	54	81	82	61	50	53	50	86	113	113
25	54	54	54	82	82	80	50	52	50	109	113	113
26	54	54	54	82	82	81	50	52	50	110	113	113
27	54	54	54	82	90	81	50	51	50	110	113	112
28	54	54	54	79	94	81	50	50	50	111	113	112
29	54	54	54	77	---	81	50	50	50	113	113	113
30	54	54	54	77	---	77	50	50	50	112	111	113
31	54	---	55	77	---	75	---	51	---	113	109	---
TOTAL	1,674	1,620	1,676	1,907	2,287	2,316	1,586	1,589	1,538	4,736	3,496	3,260
MEAN	54.0	54.0	54.1	61.5	81.7	74.7	52.9	51.3	51.3	153	113	109
MAX	54	54	55	82	94	95	75	54	54	395	113	113
MIN	54	54	54	54	77	50	50	50	50	50	109	74
AC-FT	3,320	3,210	3,320	3,780	4,540	4,590	3,150	3,150	3,050	9,390	6,930	6,470

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2003, BY WATER YEAR (WY)

	120	99.1	85.2	77.0	79.2	83.3	124	301	693	425	244	158
MEAN	120	99.1	85.2	77.0	79.2	83.3	124	301	693	425	244	158
MAX	305	268	193	158	155	269	742	1,101	1,813	1,476	999	348
(WY)	(2000)	(1985)	(1985)	(1966)	(1997)	(1996)	(1996)	(1984)	(1984)	(1984)	(1984)	(1983)
MIN	0.000	23.2	44.6	31.0	47.6	48.6	39.3	24.0	32.3	51.5	51.7	18.6
(WY)	(1964)	(1964)	(1989)	(1984)	(1986)	(1986)	(1965)	(1965)	(1965)	(1981)	(1981)	(1963)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1963 - 2003
ANNUAL TOTAL	21,746	27,685	
ANNUAL MEAN	59.6	75.8	208
HIGHEST ANNUAL MEAN			538 1984
LOWEST ANNUAL MEAN			65.5 1981
HIGHEST DAILY MEAN	96 Jan 3	395 Jul 19	1,940 May 24, 1984
LOWEST DAILY MEAN	53 Jul 14	50 Mar 16	a0.00 Sep 4, 1963
ANNUAL SEVEN-DAY MINIMUM	54 Jul 8	50 Mar 16	0.00 Sep 4, 1963
MAXIMUM PEAK FLOW		399 Jul 18	2,010 May 25, 1984
MAXIMUM PEAK STAGE		1.78 Jul 18	b3.88 May 25, 1984
ANNUAL RUNOFF (AC-FT)	43,130	54,910	150,400
10 PERCENT EXCEEDS	77	113	455
50 PERCENT EXCEEDS	54	54	103
90 PERCENT EXCEEDS	54	50	51

a Also occurred Sept 5 to Nov 29, 1963.

b Maximum gage height for period of record, 3.95 ft, Jun 22, 1983.



**09051050 STRAIGHT CREEK BELOW LASKEY GULCH, NEAR DILLON, CO**

LOCATION.--Lat 39°38'23", long 106°02'23", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.5, T.5 S., R.77 W., Summit County, Hydrologic Unit 14010002, on right bank, 120 ft upstream from culverts on Deer Trail Drive, in the community of Dillon Valley, 0.9 mi north of Dillon, 1.1 mi downstream of Laskey Gulch, and 1.8 mi upstream from mouth.

DRAINAGE AREA.--18.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1986 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09051050](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09051050)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,070 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversion upstream from station for municipal purposes downstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	2.9	e4.3	e3.2	e3.6	e2.3	e2.8	8.9	148	52	13	10
2	4.0	2.5	e4.3	e3.2	e3.5	e2.2	e2.8	8.0	123	50	12	10
3	4.8	2.6	e4.3	e3.1	e3.4	e2.2	e2.7	8.2	120	48	15	10
4	4.3	e2.6	e4.4	e3.1	e3.4	e2.2	e2.7	8.6	92	46	16	9.7
5	3.7	e2.7	e4.3	e3.1	e3.3	e2.2	e2.6	8.1	76	43	14	9.6
6	3.8	e2.8	e4.1	e3.1	e3.3	e2.2	e2.6	7.2	68	39	13	13
7	3.7	e2.9	e4.1	e3.1	e3.3	e2.1	e2.6	6.8	61	35	15	14
8	3.8	e3.0	e4.0	e3.1	e3.2	e2.1	e3.8	5.7	62	32	14	12
9	3.4	e3.3	e3.9	e3.2	e3.2	e2.0	e4.1	5.5	66	29	13	17
10	3.4	e3.7	e3.8	e3.2	e3.1	e2.2	e4.8	5.8	70	27	12	15
11	3.1	e3.9	e3.6	e3.3	e3.1	e2.2	e5.5	5.5	68	25	12	14
12	2.3	e4.3	e3.6	e3.3	e3.0	e2.2	7.4	6.3	64	24	12	13
13	2.4	e4.4	e3.6	e3.3	e3.0	e2.2	8.1	7.7	62	22	11	13
14	2.3	e4.4	e3.5	e3.3	e2.9	e2.2	10	9.8	61	20	11	12
15	2.3	e4.4	e3.5	e3.4	e2.9	e2.2	7.8	12	63	20	10	12
16	2.3	e4.4	e3.5	e3.4	e2.8	e2.2	7.9	16	67	21	14	12
17	2.1	e4.3	e3.5	e3.5	e2.8	e2.2	7.1	23	65	20	16	11
18	2.3	e4.3	e3.5	e3.5	e2.7	e2.3	6.6	27	73	19	20	11
19	2.3	e4.3	e3.5	e3.6	e2.7	e2.3	6.1	28	124	18	13	11
20	2.3	e4.3	e3.5	e3.6	e2.7	e2.3	6.2	26	126	17	11	11
21	2.4	e4.3	e3.5	e3.6	e2.6	e2.3	6.5	28	105	16	11	11
22	2.7	e4.2	e3.5	e3.6	e2.6	e2.4	7.1	36	92	15	10	11
23	2.5	e4.2	e3.5	e3.6	e2.5	e2.4	6.5	46	88	14	14	10
24	2.7	e4.2	e3.5	e3.6	e2.5	e2.5	5.5	54	81	14	14	10
25	2.5	e4.2	e3.5	e3.6	e2.4	e2.5	7.9	60	73	15	14	9.9
26	2.5	e4.2	e3.4	e3.6	e2.4	e2.6	10	65	68	17	12	9.6
27	2.5	e4.2	e3.4	e3.6	e2.4	e2.6	11	90	64	16	11	9.5
28	2.6	e4.2	e3.3	e3.6	e2.3	e2.7	10	136	61	15	11	8.6
29	2.1	e4.2	e3.3	e3.6	---	e2.7	10	113	58	15	10	8.0
30	2.2	e4.2	e3.2	e3.6	---	e2.7	9.9	105	55	14	13	7.8
31	2.7	---	e3.2	e3.6	---	e2.8	---	108	---	14	11	---
TOTAL	89.7	114.1	114.1	105.2	81.6	72.2	188.6	1,075.1	2,404	772	398	335.7
MEAN	2.89	3.80	3.68	3.39	2.91	2.33	6.29	34.7	80.1	24.9	12.8	11.2
MAX	4.8	4.4	4.4	3.6	3.6	2.8	11	136	148	52	20	17
MIN	2.1	2.5	3.2	3.1	2.3	2.0	2.6	5.5	55	14	10	7.8
AC-FT	178	226	226	209	162	143	374	2,130	4,770	1,530	789	666

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

	7.09	5.69	4.49	3.88	3.75	3.88	6.33	26.4	63.7	29.4	12.4	8.11
MEAN	7.09	5.69	4.49	3.88	3.75	3.88	6.33	26.4	63.7	29.4	12.4	8.11
MAX	12.2	8.77	6.99	5.54	6.40	7.32	9.99	63.1	119	89.0	23.6	13.3
(WY)	(1996)	(1996)	(1996)	(1996)	(1996)	(1996)	(1989)	(1996)	(1996)	(1995)	(1995)	(1995)
MIN	2.89	3.80	3.20	2.43	2.39	2.33	3.55	9.45	10.0	3.45	3.03	2.31
(WY)	(2003)	(2003)	(2001)	(1992)	(1992)	(2003)	(1995)	(1995)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1987 - 2003

ANNUAL TOTAL	1,636.1	5,750.3	
ANNUAL MEAN	4.48	15.8	
HIGHEST ANNUAL MEAN			14.6
LOWEST ANNUAL MEAN			25.5
HIGHEST DAILY MEAN	22	Jun 1	4.89
LOWEST DAILY MEAN	1.3	Aug 20	226
ANNUAL SEVEN-DAY MINIMUM	1.6	Aug 20	1.3
MAXIMUM PEAK FLOW			1.6
MAXIMUM PEAK STAGE			a416
ANNUAL RUNOFF (AC-FT)	3,250		5.78
10 PERCENT EXCEEDS	8.7		10,580
50 PERCENT EXCEEDS	3.2		38
90 PERCENT EXCEEDS	2.2		6.4

e Estimated.

a From rating curve extended above 150 ft<sup>3</sup>/s.



## 09057500 BLUE RIVER BELOW GREEN MOUNTAIN RESERVOIR, CO

LOCATION.--Lat 39°52'49", long 106°20'00", in SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec.15, T.2 S., R.80 W., Summit County, Hydrologic Unit 14010002, on left bank 0.3 mi upstream from Elliott Creek, 0.3 mi downstream from Green Mountain Dam, and 13 mi southeast of Kremmling.

DRAINAGE AREA.--599 mi<sup>2</sup>, includes 15.3 mi<sup>2</sup> of Elliott Creek above diversion for Elliott Creek feeder canal.

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1943, published as Blue River below Green Mountain Reservoir, near Kremmling. Statistical summary computed for 1943 to current year. Water-quality data available, January 1986 to September 1987. Daily specific conductance and water temperature record available, October 1986 to September 1987 and October 1995 to September 1999. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09057500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09057500).

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,682.66 ft above NGVD of 1929, (levels by U.S. Bureau of Reclamation). Prior to Oct. 1, 1951, water-stage recorder at site 3.7 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Green Mountain Reservoir since November 1942 (station 09057000). Diversions for irrigation of about 5,000 acres upstream from station. Transmountain diversions upstream from station (see elsewhere in this report). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	295	170	142	155	209	220	55	9.1	60	455	515
2	62	294	170	142	155	209	220	57	4.2	58	549	518
3	61	293	170	142	167	210	159	60	14	58	635	591
4	61	254	169	142	177	209	79	62	63	57	690	634
5	61	230	169	142	177	209	53	62	64	57	652	665
6	61	269	169	142	176	209	87	62	64	57	616	694
7	61	305	170	142	178	202	154	62	64	57	587	693
8	61	306	169	142	178	192	176	62	64	57	556	580
9	61	306	138	142	173	194	159	62	64	57	551	448
10	60	307	116	142	172	196	97	62	64	57	545	317
11	60	306	119	142	173	187	57	62	65	93	538	176
12	60	307	110	142	173	176	57	62	64	122	532	93
13	60	306	106	142	173	177	57	62	64	121	591	106
14	60	307	116	142	182	124	55	62	64	119	629	135
15	60	306	117	142	182	55	55	61	65	108	629	175
16	60	257	133	142	181	55	55	61	66	102	632	258
17	59	160	146	142	181	65	55	61	66	97	632	385
18	60	110	148	141	178	74	55	61	64	92	632	495
19	59	111	148	141	177	73	55	61	63	95	530	556
20	59	110	146	142	177	133	55	61	64	131	550	612
21	59	110	142	142	178	232	55	62	64	314	549	638
22	83	148	142	141	177	276	55	62	64	292	550	668
23	114	170	142	155	177	263	55	63	64	301	548	668
24	112	169	142	160	178	183	55	64	64	346	550	780
25	112	170	142	163	177	131	55	64	64	369	550	878
26	209	169	142	157	175	132	55	64	63	380	558	869
27	293	170	142	158	195	132	55	30	61	370	548	869
28	291	170	142	157	210	152	54	6.2	61	350	508	869
29	291	169	142	157	---	164	54	7.7	61	314	516	872
30	291	170	142	158	---	189	54	9.5	61	244	513	872
31	287	---	142	155	---	209	---	4.8	---	323	514	---
TOTAL	3,352	6,754	4,461	4,541	4,952	5,221	2,507	1,657.2	1,746.3	5,258	17,635	16,629
MEAN	108	225	144	146	177	168	83.6	53.5	58.2	170	569	554
MAX	293	307	170	163	210	276	220	64	66	380	690	878
MIN	59	110	106	141	155	55	53	4.8	4.2	57	455	93
AC-FT	6,650	13,400	8,850	9,010	9,820	10,360	4,970	3,290	3,460	10,430	34,980	32,980

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2003, BY WATER YEAR (WY)

	383	292	307	302	290	312	383	505	721	782	619	499
MEAN	383	292	307	302	290	312	383	505	721	782	619	499
MAX	1,258	800	580	566	559	864	1,286	1,557	2,134	2,536	1,547	846
(WY)	(1963)	(1963)	(1947)	(1948)	(1962)	(1962)	(1996)	(1952)	(1984)	(1984)	(1984)	(1990)
MIN	108	82.5	0.72	0.46	0.19	0.61	47.2	53.5	54.4	131	270	70.0
(WY)	(2003)	(1943)	(1943)	(1943)	(1943)	(1943)	(1943)	(2003)	(1981)	(1981)	(1964)	(2002)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1943 - 2003	
ANNUAL TOTAL	74,900	74,713.5		
ANNUAL MEAN	205	205		
HIGHEST ANNUAL MEAN			946	1984
LOWEST ANNUAL MEAN			200	1964
HIGHEST DAILY MEAN	623	Jul 20	878	Sep 25
LOWEST DAILY MEAN	59	Oct 17	4.2	Jun 2
ANNUAL SEVEN-DAY MINIMUM	59	Oct 15	7.9	May 28
MAXIMUM PEAK FLOW			894	Sep 24
MAXIMUM PEAK STAGE			5.96	Sep 24
ANNUAL RUNOFF (AC-FT)	148,600	148,200		
10 PERCENT EXCEEDS	430	549	835	
50 PERCENT EXCEEDS	167	142	362	
90 PERCENT EXCEEDS	65	57	112	

a No flow at times in 1943.

b Minimum daily discharge (prior to Green Mountain Reservoir), 80 ft<sup>3</sup>/s, Feb 18-24, 1938, Feb 18-19, 1940.

**09058000 COLORADO RIVER NEAR KREMMLING, CO**

LOCATION.--Lat 40°02'12", long 106°26'22", in NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.23, T.1 N., R.81 W., Grand County, Hydrologic Unit 14010001, on right bank at upstream end of Gore Canyon, 3.0 mi southwest of Kremmling and 3.8 mi downstream from Blue River.

DRAINAGE AREA.--2,382 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1904 to September 1918 (published as Grand River near Kremmling), October 1961 to September 1970, October 1971 to current year. Statistical summary computed for 1962 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09058000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09058000)

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,320 ft above NGVD of 1929, from topographic map. See WSP 1313 for history of changes prior to Oct. 1, 1961.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, diversions for irrigation of about 40,000 acres upstream from station, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	334	593	e460	e400	367	406	499	386	2,470	335	933	938
2	334	606	e470	e390	366	413	516	369	2,420	489	973	915
3	342	600	e460	e395	372	423	512	360	1,660	464	1,030	927
4	345	571	e450	e390	396	431	449	380	1,110	429	1,090	1,030
5	341	520	420	e400	394	420	402	412	784	421	1,080	1,050
6	e345	502	423	e390	398	418	377	381	599	435	1,050	1,060
7	e350	556	441	e370	370	424	417	399	507	449	1,030	1,070
8	346	568	e440	e370	374	423	461	346	477	577	1,000	1,030
9	401	591	e360	e360	e380	432	478	551	466	601	991	930
10	431	585	e350	e370	e390	472	443	685	460	506	1,010	877
11	436	574	341	e395	e395	530	429	556	455	660	966	767
12	430	574	352	e400	e390	580	409	418	440	732	919	607
13	426	561	e360	e395	e380	626	479	372	443	731	948	562
14	430	570	e370	e375	400	642	563	394	548	708	1,010	659
15	430	570	e360	e360	391	518	501	443	564	765	995	667
16	462	556	e350	e365	381	462	435	554	527	795	980	720
17	476	474	e380	e365	399	451	379	568	488	823	993	810
18	465	409	e385	e350	382	462	364	649	442	800	1,130	902
19	462	379	e390	e400	381	427	352	737	457	789	1,070	938
20	463	380	e390	e400	385	416	328	773	467	849	1,000	946
21	467	380	e410	e390	395	490	320	789	475	998	996	982
22	476	350	e395	e380	379	570	352	783	450	821	987	1,020
23	538	346	e390	383	380	581	394	843	417	705	990	1,040
24	546	392	e350	379	379	575	379	1,010	396	761	993	1,080
25	539	404	e355	376	383	474	356	1,280	389	863	1,010	1,230
26	549	326	e350	371	385	466	389	1,450	392	998	1,020	1,230
27	583	392	e380	400	396	454	497	1,370	377	1,020	1,030	1,190
28	551	455	e385	384	412	429	557	1,420	352	991	968	1,200
29	556	471	e400	382	---	422	457	1,780	355	914	953	1,190
30	548	461	e405	361	---	441	410	2,210	348	839	950	1,180
31	548	---	e400	364	---	461	---	2,430	---	848	975	---
TOTAL	13,950	14,716	12,172	11,810	10,800	14,739	12,904	25,098	19,735	22,116	31,070	28,747
MEAN	450	491	393	381	386	475	430	810	658	713	1,002	958
MAX	583	606	470	400	412	642	563	2,430	2,470	1,020	1,130	1,230
MIN	334	326	341	350	366	406	320	346	348	335	919	562
AC-FT	27,670	29,190	24,140	23,430	21,420	29,230	25,600	49,780	39,140	43,870	61,630	57,020

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)
	757	1,413	(1963)	450	(2003)	639	1,030	(1985)	352	(1978)	569	1,067	(1985)	277	(1964)
	551	1,000	(1985)	278	(1964)	542	1,025	(1962)	294	(1964)	642	1,394	(1962)	331	(1977)
	999	3,297	(1962)	430	(2003)	1,815	6,200	(1984)	320	(2002)	2,086	7,160	(1984)	379	(1966)
	1,531	5,840	(1983)	539	(1963)	1,085	2,321	(1984)	630	(1963)	872	1,366	(1984)	461	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1962 - 2003

ANNUAL TOTAL	182,940	217,857	
ANNUAL MEAN	501	597	1,009
HIGHEST ANNUAL MEAN			2,378
LOWEST ANNUAL MEAN			523
HIGHEST DAILY MEAN	891	2,470	a12,700
LOWEST DAILY MEAN	200	320	b200
ANNUAL SEVEN-DAY MINIMUM	225	342	225
MAXIMUM PEAK FLOW		2,620	c13,600
MAXIMUM PEAK STAGE		8.75	16.60
ANNUAL RUNOFF (AC-FT)	362,900	432,100	731,100
10 PERCENT EXCEEDS	792	1,010	1,810
50 PERCENT EXCEEDS	450	460	754
90 PERCENT EXCEEDS	333	363	417

e Estimated.

a Maximum daily discharge for period of record, 20,000 ft<sup>3</sup>/s, Jun 7, 1912.

b Minimum discharge observed for period of record, 166 ft<sup>3</sup>/s, Dec 19, 1907.

c Maximum discharge observed for period of record, 21,500 ft<sup>3</sup>/s, Jun 7, 1912, gage height, 21.8 ft, datum then in use, from rating curve extended above 14,000 ft<sup>3</sup>/s.

## 09058000 COLORADO RIVER NEAR KREMMLING, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1989 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09058000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09058000)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	ANC, wat unfltrd fixed end pt, lab, mg/L as CaCO3 (90410)
OCT 07...	1130	366	8.3	8.3	247	9.5	100	29.8	6.33	1.81	0.4	9.41	E85
MAR 11...	1230	518	9.9	8.2	252	3.5	100	31.2	5.77	3.51	0.5	10.6	81
MAY 29...	1045	1,790	6.7	8.0	187	13.5	69	19.3	4.97	1.45	0.5	8.71	55
JUN 26...	1120	388	7.1	8.0	297	15.5	120	36.7	7.41	1.83	0.6	14.6	114
AUG 20...	1020	1,020	7.5	8.4	212	14.0	91	28.3	4.97	1.79	0.3	6.39	57

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat fltrd mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT 07...	3.10	0.33	10.4	34.5	--	--	--	156	0.23	<0.015	<0.022	<0.002	<0.007
MAR 11...	7.25	0.35	8.36	38.7	156	0.22	230	165	0.64	0.044	0.236	0.004	0.043
MAY 29...	2.42	<0.2	14.0	30.8	116	0.18	650	134	0.81	E.013	0.049	0.004	0.015
JUN 26...	4.23	0.3	13.8	33.1	181	0.26	202	193	0.39	E.012	E.013	E.002	0.012
AUG 20...	6.32	0.3	7.18	28.3	119	0.18	363	132	0.26	<0.015	0.205	E.002	<0.007

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium, water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)
OCT 07...	0.010	0.019	<1	36.1	<0.5	<0.2	<0.8	0.09	0.9	50	<0.08	9.3	34.7
MAR 11...	0.057	0.140	<1	45.4	<0.5	<0.2	<0.8	0.19	1.0	26	E.04	12.3	47.4
MAY 29...	0.028	0.157	E7	26.3	<0.4	<0.2	<0.8	0.18	1.1	78	E.07	6.0	85.4
JUN 26...	0.021	0.051	13	48.9	<0.4	<0.2	<0.8	0.19	0.9	195	<0.08	10.5	114
AUG 20...	0.008	0.026	E9	39.6	<0.4	<0.2	<0.8	0.10	1.0	56	E.05	5.5	15.4

09058000 COLORADO RIVER NEAR KREMMLING, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)
OCT 07...	8.6	0.51	<0.20	182	0.6	2
MAR 11...	19.1	2.19	<0.20	200	0.7	1
MAY 29...	1.1	0.91	<0.20	174	1.1	2
JUN 26...	7.3	1.90	<0.20	255	0.8	2
AUG 20...	23.6	1.31	<0.20	144	0.3	2

< -- Actual value is known to be less than the value shown.  
 E -- Estimated laboratory analysis value.

## 09058500 PINEY RIVER BELOW PINEY LAKE NEAR MINTURN, CO

LOCATION.--Lat 39°42'29", long 106°25'34", Eagle County, Hydrologic Unit 14010001, on left bank 1.4 mi upstream from Dickson Creek, 2.0 mi downstream from Piney Lake, and 8.5 mi north of Minturn.

DRAINAGE AREA.--13.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1947 to September 1954, October 1963 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09058500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09058500)

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Datum of gage is 9,145.25 ft above NGVD of 1929, levels by U.S. Bureau of Reclamation. Prior to October 1963, water-stage recorder at site 15 ft upstream at present datum.

REMARKS.--Records fair except for the period May 23 to June 12 and estimated daily discharges, which are poor. No diversions upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	e7.5	e4.7	e2.4	e2.3	e2.1	e2.9	28	422	88	11	8.8
2	11	e6.2	e4.7	e2.4	e2.3	e2.1	e3.1	25	243	88	10	7.3
3	11	e5.8	e4.5	e2.4	e2.3	e2.1	e3.1	24	169	84	9.7	6.8
4	12	e5.4	e4.4	e2.3	e2.3	e2.1	e3.2	24	140	78	10	6.7
5	12	e6.1	e4.3	e2.3	e2.3	e2.1	e3.1	21	123	70	9.0	6.3
6	11	e5.9	e4.3	e2.2	e2.3	e2.1	e3.0	19	115	65	8.0	8.9
7	13	e5.9	e4.2	e2.2	e2.3	e2.2	e3.1	18	92	59	7.5	14
8	15	e5.7	e4.1	e2.1	e2.3	e2.2	e3.3	18	80	54	8.3	18
9	14	e6.8	e4.0	e2.1	e2.2	e2.2	e4.2	17	91	54	7.5	27
10	12	e6.5	e4.0	e2.1	e2.2	e2.3	e4.6	16	107	50	6.8	28
11	11	e6.9	e3.8	e2.1	e2.2	e2.4	e5.2	15	120	44	6.0	31
12	9.2	e6.1	e3.7	e2.1	e2.2	e2.5	e7.1	e18	132	41	6.4	32
13	8.1	e7.2	e3.6	e2.1	e2.2	e2.6	13	e28	128	40	6.3	43
14	7.4	e6.8	e3.3	e2.1	e2.2	e2.6	26	e39	136	38	5.4	31
15	6.9	e6.5	e3.4	e2.2	e2.1	e2.7	33	e58	143	35	4.7	22
16	6.3	e6.5	e3.4	e2.2	e2.1	e2.7	e28	e86	150	36	5.8	18
17	5.8	e6.9	e3.2	e2.2	e2.1	e2.7	e27	e125	126	34	24	15
18	5.5	e6.2	e3.1	e2.3	e2.1	e2.6	24	e156	135	34	36	13
19	5.3	e6.1	e3.0	e2.3	e2.1	e2.6	20	e180	134	47	25	13
20	5.0	e5.9	e2.9	e2.3	e2.1	e2.6	17	e195	157	37	17	11
21	4.8	e5.7	e2.8	e2.3	e2.1	e2.6	17	e211	130	30	12	10
22	4.6	e5.5	e2.8	e2.3	e2.1	e2.6	20	e223	130	26	10	9.1
23	e4.8	e5.4	e2.7	e2.3	e2.1	e2.7	19	268	129	23	9.9	8.4
24	e4.7	e5.3	e2.5	e2.3	e2.1	e2.8	17	252	116	20	9.1	7.7
25	e4.4	e5.3	e2.5	e2.3	e2.1	e2.8	18	259	97	18	10	7.2
26	e4.6	e5.1	e2.5	e2.3	e2.1	e2.7	22	255	86	19	11	6.8
27	e6.3	e5.0	e2.4	e2.3	e2.1	e2.6	27	250	93	19	8.9	6.4
28	e5.8	e5.0	e2.5	e2.3	e2.1	e2.6	31	311	101	16	8.7	6.1
29	e6.1	e4.9	e2.4	e2.3	---	e2.5	32	320	103	15	7.8	5.9
30	e5.9	e4.8	e2.5	e2.3	---	e2.6	32	299	94	15	8.0	5.6
31	e6.8	---	e2.4	e2.3	---	e2.7	---	345	---	13	10	---
TOTAL	251.3	178.9	104.6	69.7	61.0	76.7	468.9	4,103	4,022	1,290	329.8	434.0
MEAN	8.11	5.96	3.37	2.25	2.18	2.47	15.6	132	134	41.6	10.6	14.5
MAX	15	7.5	4.7	2.4	2.3	2.8	33	345	422	88	36	43
MIN	4.4	4.8	2.4	2.1	2.1	2.1	2.9	15	80	13	4.7	5.6
AC-FT	498	355	207	138	121	152	930	8,140	7,980	2,560	654	861

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2003, BY WATER YEAR (WY)

MEAN	6.28	4.09	2.83	2.25	2.04	2.59	11.5	68.6	123	55.5	14.5	7.50
MAX	15.1	8.82	6.41	4.00	4.01	5.52	23.0	132	202	146	45.3	14.8
(WY)	(1985)	(1985)	(1999)	(1952)	(1996)	(1995)	(1952)	(2003)	(1952)	(1995)	(1984)	(1984)
MIN	1.71	1.23	1.04	0.79	0.83	0.84	2.12	26.6	40.9	5.82	3.69	2.16
(WY)	(1980)	(1980)	(1980)	(1975)	(1975)	(1975)	(1973)	(1968)	(2002)	(2002)	(1954)	(1974)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1948 - 2003

ANNUAL TOTAL	4,504.7	11,389.9	
ANNUAL MEAN	12.3	31.2	25.1
HIGHEST ANNUAL MEAN			41.2 1984
LOWEST ANNUAL MEAN			11.8 2002
HIGHEST DAILY MEAN	122	422	422 Jun 1, 2003
LOWEST DAILY MEAN	1.5	e2.1	0.40 Oct 6, 1975
ANNUAL SEVEN-DAY MINIMUM	1.5	e2.1	0.62 Mar 28, 1975
MAXIMUM PEAK FLOW		542	560 Jun 8, 1985
MAXIMUM PEAK STAGE		5.17	a5.12 Jun 8, 1985
ANNUAL RUNOFF (AC-FT)	8,940	22,590	18,210
10 PERCENT EXCEEDS	32	105	85
50 PERCENT EXCEEDS	5.0	6.7	4.9
90 PERCENT EXCEEDS	2.2	2.2	1.6

e Estimated.

a Maximum gage height for period of record, 6.44 ft, Apr 13, 1977.



## 09058700 FREEMAN CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°41'54", long 106°26'42", Eagle County, Hydrologic Unit 14010001, on right bank 0.8 mi upstream from mouth and 7.5 mi north of Minturn.

DRAINAGE AREA.--2.94 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1964 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09058700](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09058700)

GAGE.--Water-stage recorder. Elevation of gage is 9,335 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.08	e0.08	e0.08	e0.08	e0.08	e0.07	e0.12	e1.4	30	1.1	0.36	0.17
2	0.08	e0.08	e0.08	e0.08	e0.08	e0.07	e0.13	e1.3	20	1.0	0.35	0.17
3	0.09	e0.08	e0.08	e0.08	e0.08	e0.07	e0.13	e1.2	15	0.96	0.28	0.21
4	0.08	e0.08	e0.08	e0.08	e0.08	e0.07	e0.11	e1.2	11	0.87	0.42	0.14
5	0.11	e0.08	e0.08	e0.08	e0.08	e0.07	e0.10	e1.1	9.3	0.85	0.28	0.14
6	0.10	e0.08	e0.08	e0.08	e0.08	e0.07	e0.10	e1.1	7.9	0.82	0.26	0.27
7	0.08	e0.08	e0.08	e0.08	e0.08	e0.07	e0.10	e1.0	7.9	0.79	0.27	0.43
8	0.08	e0.08	e0.08	e0.08	e0.08	e0.07	e0.10	e0.88	6.3	0.75	0.31	0.33
9	0.07	e0.08	e0.08	e0.08	e0.08	e0.07	e0.11	e0.88	6.0	0.75	0.23	0.55
10	0.07	e0.08	e0.08	e0.08	e0.08	e0.07	e0.14	e0.88	6.0	0.71	0.20	0.78
11	0.07	e0.08	e0.08	e0.08	e0.07	e0.08	e0.19	e0.87	5.8	0.69	0.18	0.64
12	0.06	e0.08	e0.08	e0.08	e0.07	e0.08	e0.28	e0.99	5.4	0.63	0.27	0.41
13	0.06	e0.09	e0.08	e0.08	e0.07	e0.08	e0.45	e1.2	5.0	0.65	0.18	0.26
14	0.05	e0.09	e0.08	e0.08	e0.07	e0.09	e0.85	e2.4	4.4	0.59	0.15	0.25
15	0.05	e0.09	e0.08	e0.08	e0.07	e0.10	e0.88	e4.6	4.0	0.61	0.14	0.21
16	0.04	e0.08	e0.08	e0.08	e0.07	e0.10	e0.75	e7.2	3.6	0.50	0.28	0.19
17	0.04	e0.08	e0.08	e0.08	e0.07	e0.10	e0.73	e11	3.3	0.63	0.54	0.17
18	0.04	e0.08	e0.08	e0.08	e0.07	e0.10	e0.70	e14	3.0	0.58	0.84	0.27
19	0.04	e0.08	e0.08	e0.09	e0.07	e0.09	e0.67	e15	4.0	0.54	0.46	0.24
20	0.03	e0.08	e0.08	e0.09	e0.07	e0.09	e0.67	e15	3.3	0.48	0.24	0.23
21	0.03	e0.08	e0.08	e0.08	e0.07	e0.09	e0.67	16	2.6	0.49	0.21	0.18
22	0.03	e0.08	e0.08	e0.08	e0.07	e0.09	e0.76	17	2.2	0.42	0.19	0.20
23	0.06	e0.08	e0.08	e0.08	e0.07	e0.10	e0.88	17	2.0	0.42	0.18	0.18
24	0.08	e0.08	e0.08	e0.08	e0.07	e0.10	e0.76	17	1.8	0.41	0.27	0.21
25	0.08	e0.08	e0.08	e0.08	e0.07	e0.10	e0.76	16	1.7	0.46	0.23	0.17
26	0.07	e0.08	e0.07	e0.08	e0.07	e0.10	e0.84	15	1.5	0.68	0.18	0.20
27	0.08	e0.08	e0.07	e0.08	e0.07	e0.09	e1.0	16	1.4	0.61	0.18	0.19
28	0.08	e0.08	e0.08	e0.08	e0.07	e0.10	e1.3	18	1.3	0.45	0.18	0.17
29	e0.08	e0.08	e0.08	e0.08	---	e0.10	e1.4	19	1.2	0.48	0.17	0.17
30	e0.07	e0.08	e0.08	e0.08	---	e0.09	e1.5	19	1.2	0.43	0.33	0.18
31	e0.08	---	e0.08	e0.08	---	e0.10	---	17	---	0.37	0.29	---
TOTAL	2.06	2.43	2.46	2.50	2.06	2.67	17.18	270.20	178.1	19.72	8.65	7.91
MEAN	0.066	0.081	0.079	0.081	0.074	0.086	0.57	8.72	5.94	0.64	0.28	0.26
MAX	0.11	0.09	0.08	0.09	0.08	0.10	1.5	19	30	1.1	0.84	0.78
MIN	0.03	0.08	0.07	0.08	0.07	0.07	0.10	0.87	1.2	0.37	0.14	0.14
AC-FT	4.1	4.8	4.9	5.0	4.1	5.3	34	536	353	39	17	16

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

MEAN	0.27	0.18	0.12	0.10	0.094	0.13	0.66	6.84	6.30	0.94	0.34	0.26
MAX	0.78	0.45	0.26	0.24	0.21	0.29	1.73	18.0	23.2	3.50	1.25	0.70
(WY)	(1985)	(1985)	(1983)	(1983)	(1983)	(1986)	(1971)	(1984)	(1983)	(1995)	(1983)	(1984)
MIN	0.066	0.030	0.000	0.000	0.000	0.000	0.000	1.26	0.30	0.12	0.065	0.079
(WY)	(2003)	(1965)	(1965)	(1965)	(1965)	(1991)	(1991)	(1977)	(1977)	(2002)	(1981)	(1977)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1965 - 2003

ANNUAL TOTAL	155.17	515.94	
ANNUAL MEAN	0.43	1.41	1.36
HIGHEST ANNUAL MEAN			3.54 1984
LOWEST ANNUAL MEAN			0.31 1977
HIGHEST DAILY MEAN	4.8 Apr 30	30 Jun 1	63 May 25, 1984
LOWEST DAILY MEAN	0.03 Aug 17	0.03 Oct 20	a0.00 Nov 10, 1964
ANNUAL SEVEN-DAY MINIMUM	0.04 Oct 16	0.04 Oct 16	0.00 Nov 10, 1964
MAXIMUM PEAK FLOW		46 Jun 1	82 May 25, 1984
MAXIMUM PEAK STAGE		2.42 Jun 1	b2.21 May 25, 1984
ANNUAL RUNOFF (AC-FT)	308	1,020	983
10 PERCENT EXCEEDS	1.5	3.1	3.3
50 PERCENT EXCEEDS	0.13	0.10	0.20
90 PERCENT EXCEEDS	0.06	0.07	0.06

e Estimated.

a No flow some days some years.

b Maximum gage height, 3.51 ft, May 18, 1973, backwater from ice.

**09058800 EAST MEADOW CREEK NEAR MINTURN, CO**

LOCATION.--Lat 39°43'54", long 106°25'34", in T.4 S., R.81 W., Eagle County, Hydrologic Unit 14010001, on left bank 1.4 mi upstream from mouth, and 10 mi north of Minturn.

DRAINAGE AREA.--3.61 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1964 to current year, For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09058800](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09058800)

GAGE.--Water-stage recorder. Elevation of gage is 9,455 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, and discharges above 25 cfs, which are poor. No regulation or diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.98	e0.69	e0.64	e0.64	e0.67	e0.62	e1.1	e4.9	52	10	2.2	1.5
2	0.94	e0.68	e0.64	e0.63	e0.68	e0.62	e1.3	e4.4	37	9.6	2.0	1.2
3	1.00	e0.67	e0.61	e0.62	e0.67	e0.62	e1.3	e4.4	33	9.0	1.9	1.1
4	0.97	e0.67	e0.61	e0.62	e0.67	e0.62	e1.1	e4.2	27	8.3	2.2	0.98
5	1.0	e0.67	e0.63	e0.63	e0.66	e0.62	e1.0	e3.9	25	7.9	1.9	0.87
6	1.1	e0.69	e0.62	e0.64	e0.66	e0.62	e0.98	e3.7	22	7.3	1.7	1.7
7	1.2	e0.67	e0.60	e0.63	e0.66	e0.62	e0.95	e3.5	22	6.7	1.8	3.0
8	1.2	e0.64	e0.61	e0.63	e0.66	e0.62	e0.97	e3.5	22	6.0	2.2	2.2
9	1.1	e0.63	e0.61	e0.64	e0.65	e0.62	e1.2	e3.4	23	5.5	1.7	3.4
10	1.0	e0.64	e0.61	e0.63	e0.64	e0.64	1.4	e3.4	26	5.2	1.4	3.2
11	0.97	e0.63	e0.61	e0.63	e0.63	e0.68	1.5	e3.5	28	4.9	1.4	3.9
12	0.91	e0.66	e0.61	e0.63	e0.62	e0.69	1.9	e4.4	28	4.6	1.5	4.9
13	e0.87	e0.66	e0.61	e0.62	e0.62	e0.75	2.3	e5.9	29	4.3	1.5	3.9
14	e0.84	e0.63	e0.62	e0.64	e0.62	e0.87	e2.9	e8.5	27	3.9	1.2	2.9
15	e0.85	e0.62	e0.62	e0.67	e0.62	e0.92	2.7	e12	27	3.9	1.1	2.4
16	e0.84	e0.63	e0.61	e0.68	e0.62	e0.92	2.0	e17	26	4.5	3.4	2.1
17	e0.81	e0.64	e0.62	e0.67	e0.62	e0.91	1.8	e23	25	5.4	5.7	1.9
18	e0.80	e0.62	e0.62	e0.70	e0.62	e0.87	1.6	e26	24	5.3	7.4	2.1
19	e0.79	e0.61	e0.62	e0.70	e0.62	e0.83	e1.5	e26	24	4.3	4.0	1.9
20	e0.81	e0.61	e0.62	e0.69	e0.61	e0.83	e1.7	e26	23	3.8	2.7	1.6
21	0.79	e0.60	e0.61	e0.68	e0.62	e0.88	e1.7	e26	21	3.4	2.1	1.5
22	0.79	e0.61	e0.61	e0.67	e0.62	e0.84	e2.2	e27	20	3.1	1.9	1.4
23	0.89	e0.61	e0.61	e0.66	e0.62	e0.90	e2.2	e29	20	2.9	1.9	1.2
24	0.77	e0.66	e0.59	e0.65	e0.62	e0.97	e2.2	e28	18	2.7	1.9	1.1
25	0.73	e0.66	e0.61	e0.66	e0.62	e0.91	e2.9	e28	17	2.8	2.1	1.0
26	0.65	e0.66	e0.59	e0.65	e0.62	e0.88	e4.2	e31	15	3.0	2.1	1.0
27	e0.68	e0.65	e0.58	e0.67	e0.62	e0.88	e4.7	e37	14	3.0	2.0	0.92
28	e0.65	e0.65	e0.61	e0.67	e0.62	e0.82	e4.7	e42	13	2.6	1.8	0.88
29	e0.64	e0.65	e0.63	e0.66	---	e0.82	e4.9	e37	12	2.9	1.4	0.83
30	e0.64	e0.65	e0.64	e0.66	---	e0.74	e5.2	34	11	2.7	2.2	0.79
31	e0.69	---	e0.62	e0.67	---	e0.86	---	38	---	2.4	2.1	---
TOTAL	26.90	19.36	19.04	20.24	17.78	23.99	66.10	548.6	711	151.9	70.4	57.37
MEAN	0.87	0.65	0.61	0.65	0.64	0.77	2.20	17.7	23.7	4.90	2.27	1.91
MAX	1.2	0.69	0.64	0.70	0.68	0.97	5.2	42	52	10	7.4	4.9
MIN	0.64	0.60	0.58	0.62	0.61	0.62	0.95	3.4	11	2.4	1.1	0.79
AC-FT	53	38	38	40	35	48	131	1,090	1,410	301	140	114

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

MEAN	1.28	0.96	0.78	0.68	0.66	0.75	1.63	11.6	22.3	7.89	2.17	1.38
MAX	2.78	2.00	1.50	1.20	1.30	1.43	3.75	26.3	45.7	28.8	5.85	3.09
(WY)	(1966)	(1966)	(1966)	(1999)	(1999)	(1999)	(1987)	(1986)	(1983)	(1983)	(1965)	(1984)
MIN	0.73	0.55	0.44	0.35	0.40	0.40	0.66	2.97	4.76	0.90	0.58	0.75
(WY)	(1978)	(1979)	(1979)	(1979)	(1965)	(1965)	(1975)	(1975)	(2002)	(2002)	(2002)	(1977)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1965 - 2003

ANNUAL TOTAL	660.80		1,732.68		4.35	
ANNUAL MEAN	1.81		4.75		8.05 1983	
HIGHEST ANNUAL MEAN					1.83 1977	
LOWEST ANNUAL MEAN					81 Jun 20, 1983	
HIGHEST DAILY MEAN	14	May 31	52	Jun 1	0.32	Jan 7, 1979
LOWEST DAILY MEAN	0.33	Sep 2	e0.58	Dec 27	0.33	Jan 6, 1979
ANNUAL SEVEN-DAY MINIMUM	0.34	Aug 31	e0.60	Dec 21	107	Jun 17, 1995
MAXIMUM PEAK FLOW			69	Jun 1	a1.86 Jun 17, 1995	
MAXIMUM PEAK STAGE			1.81	Jun 1		
ANNUAL RUNOFF (AC-FT)	1,310		3,440		3,150	
10 PERCENT EXCEEDS	6.0		20		15	
50 PERCENT EXCEEDS	0.67		0.98		1.1	
90 PERCENT EXCEEDS	0.47		0.62		0.58	

e Estimated.

a Maximum gage height, 2.22 ft, May 12, 1970, backwater from ice.



## 09059500 PINEY RIVER NEAR STATE BRIDGE, CO

LOCATION.--Lat 39°48'00", long 106°35'00", in SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.16, T.3 S., R.82 W., Eagle County, Hydrologic Unit 14010001, on left bank at old bridge crossing, 1.2 mi downstream from Rock Creek, and 6.0 mi southeast of State Bridge.

DRAINAGE AREA.--86.2 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1944 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09059500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09059500)

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Datum of gage is 7,272.35 ft above NGVD of 1929. Prior to July 29, 1944, nonrecording gage, and July 29, 1944 to Oct. 24, 1947, water-stage recorder, at datum 2.38 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 400 acres of hay meadows upstream and downstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	e20	e15	e10	e10	e12	16	133	e1,280	145	28	25
2	19	e20	e15	e10	e10	e12	18	119	e828	143	26	22
3	21	e20	e14	e10	e10	e13	18	121	e593	134	25	21
4	23	e20	e14	e10	e10	e12	17	131	e505	123	26	20
5	24	e21	e14	e9.8	e10	e12	17	113	e444	111	25	19
6	24	e19	e13	e9.8	e10	e12	16	100	e409	100	23	23
7	24	e19	e12	e9.8	e10	e12	18	97	e341	88	23	32
8	26	e18	e12	e10	e10	14	18	100	e304	75	28	37
9	25	e20	e12	e10	e11	14	18	95	e326	72	24	45
10	23	e19	e12	e10	e11	15	22	95	e349	66	22	52
11	21	e21	e12	e10	e11	16	31	87	395	65	20	54
12	19	e18	e12	e10	e11	17	40	105	385	61	21	51
13	17	e21	e12	e9.9	e11	18	48	158	356	58	21	58
14	16	e21	e11	e9.8	e11	20	80	211	347	55	19	48
15	16	e20	e12	e9.8	e11	20	98	307	334	52	17	39
16	15	e20	e12	e9.6	e11	21	83	397	343	52	19	33
17	14	e21	e11	e9.9	e11	20	78	495	309	53	48	31
18	14	e19	e11	e10	e11	21	74	572	306	56	63	29
19	13	e19	e11	e10	e11	19	66	572	298	64	51	28
20	13	e18	e11	e10	e12	20	60	579	306	56	36	27
21	12	e18	e11	e10	e12	20	65	578	275	49	30	24
22	13	e17	e11	e10	e11	20	78	584	254	44	27	23
23	16	e16	e11	e10	e11	21	84	618	247	41	27	21
24	17	e16	e11	e10	e11	22	76	568	226	39	28	20
25	17	e16	e11	e10	e12	22	74	e599	201	38	26	19
26	15	e16	e11	e10	e12	21	106	e596	176	37	28	19
27	17	e16	e11	e10	e12	21	141	e595	173	38	26	18
28	16	e16	e11	e10	e12	21	156	e928	173	35	25	18
29	17	e15	e11	e10	---	25	159	e981	165	35	23	18
30	e17	e15	e10	e10	---	20	155	e975	153	34	25	17
31	e18	---	e11	e10	---	16	---	e1,110	---	31	29	---
TOTAL	563	555	368	308.4	306	549	1,930	12,719	10,801	2,050	859	891
MEAN	18.2	18.5	11.9	9.95	10.9	17.7	64.3	410	360	66.1	27.7	29.7
MAX	26	21	15	10	12	25	159	1,110	1,280	145	63	58
MIN	12	15	10	9.6	10	12	16	87	153	31	17	17
AC-FT	1,120	1,100	730	612	607	1,090	3,830	25,230	21,420	4,070	1,700	1,770

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2003, BY WATER YEAR (WY)

MEAN	19.9	17.8	15.0	13.5	13.2	15.7	54.7	264	339	108	31.6	18.4
MAX	62.9	34.1	24.6	20.0	24.5	35.3	167	495	656	379	94.9	46.1
(WY)	(1962)	(1985)	(1985)	(1966)	(1986)	(1986)	(1962)	(1958)	(1957)	(1983)	(1983)	(1984)
MIN	6.72	8.68	7.19	7.44	7.86	9.18	16.8	99.0	74.1	14.8	6.22	4.00
(WY)	(1978)	(1980)	(1980)	(1980)	(1980)	(1980)	(1961)	(1977)	(1954)	(1977)	(1954)	(1944)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1944 - 2003

ANNUAL TOTAL	12,970.4	31,899.4	
ANNUAL MEAN	35.5	87.4	76.0
HIGHEST ANNUAL MEAN			127
LOWEST ANNUAL MEAN			27.2
HIGHEST DAILY MEAN	229	May 31	e1,300
LOWEST DAILY MEAN	5.8	Sep 3	1.9
ANNUAL SEVEN-DAY MINIMUM	6.1	Aug 31	2.3
MAXIMUM PEAK FLOW			1,400
MAXIMUM PEAK STAGE			a5.66
ANNUAL RUNOFF (AC-FT)	25,730	63,270	55,070
10 PERCENT EXCEEDS	110	300	251
50 PERCENT EXCEEDS	15	21	19
90 PERCENT EXCEEDS	9.7	10	11

e Estimated.

a From crest-stage gage.

b Maximum gage height, 5.82 ft, Jun 27, 1983, from peak stage indicator, but may have been higher May 25, 1984.

## 09061600 EAST FORK EAGLE RIVER NEAR CLIMAX, CO

LOCATION.--Lat 39°24'37", long 106°14'57", in NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.29, T.7 S., R.79 W., Eagle County, Hydrologic Unit 14010003, on right bank 0.9 mi upstream from Sheep Gulch, and 4.5 mi northwest of Climax.

DRAINAGE AREA.--7.78 mi<sup>2</sup>.

PERIOD OF RECORD.--June 2002 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09061600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09061600)

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 10,000 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for discharges above 45 ft<sup>3</sup>/s, which are fair, and estimated daily discharges and the period June 13-27, which are poor.

Transbasin diversion upstream from station from Robinson Reservoir, (capacity 2,520 acre-ft) to Tennile Creek for mining development. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.94	1.1	e0.52	e0.47	e3.9	e0.47	e0.37	2.5	48	8.9	1.9	1.1
2	1.1	e0.99	e0.52	e0.47	e4.0	e0.47	e0.38	2.3	44	8.2	1.8	0.96
3	1.5	e0.96	e0.51	e2.6	e3.7	e0.99	e0.38	2.4	50	7.6	1.9	0.95
4	1.2	0.95	e0.50	e3.9	e3.7	e0.94	e0.38	2.7	47	7.1	2.0	0.94
5	1.2	0.95	e0.49	e4.8	e3.4	e0.67	e0.38	2.5	45	6.6	1.8	0.93
6	1.2	0.93	e0.49	e3.7	e3.6	e2.5	e0.37	2.5	39	6.1	1.6	1.4
7	1.2	e0.86	e0.49	e4.1	e3.8	e0.91	e0.36	2.5	42	5.6	1.5	1.7
8	1.0	e0.72	e0.49	e4.1	e3.9	e0.79	e0.36	2.6	31	5.1	1.9	1.5
9	2.3	e0.69	e0.47	e3.8	e3.7	e0.76	0.75	2.6	27	4.6	2.0	2.2
10	4.7	e0.71	e0.47	e3.5	e4.1	e1.2	0.98	2.6	29	4.2	1.8	2.1
11	1.7	e0.68	e0.47	e0.97	e3.8	e1.3	1.2	2.7	31	3.9	1.6	1.9
12	1.5	e0.60	e0.48	e0.48	e3.7	e0.43	1.2	3.2	30	3.6	1.7	1.5
13	1.2	e0.61	e0.48	e0.48	e3.7	e0.41	1.4	4.4	33	3.4	1.6	1.3
14	1.2	e0.59	e0.48	e0.47	e3.6	e0.41	1.8	5.4	32	3.2	1.4	1.1
15	1.1	e0.59	e0.75	e0.47	e3.8	e0.41	1.8	6.7	26	3.7	1.3	1.0
16	1.1	e0.59	e2.8	e0.47	e3.7	e0.39	1.5	9.1	22	3.8	1.4	0.94
17	1.0	e0.59	e3.6	e0.47	e2.8	e0.39	1.4	12	21	3.4	1.9	0.88
18	0.96	e0.58	e0.77	e0.47	e1.9	e0.40	1.4	13	21	3.3	2.7	0.97
19	0.90	e0.57	e0.48	e0.47	e0.47	e0.39	1.3	13	19	3.1	1.9	0.99
20	0.89	e0.56	e0.48	e0.47	e0.47	e0.38	1.2	13	19	2.8	1.2	1.0
21	0.87	e0.56	e0.48	e0.47	e0.47	e0.38	1.2	15	16	2.7	1.1	0.96
22	0.91	e0.56	e0.47	e0.47	e0.47	e0.38	1.2	19	15	2.5	1.2	0.90
23	1.1	e0.56	e0.47	e0.47	e0.47	e0.39	1.2	21	17	2.3	1.5	0.87
24	1.1	e0.56	e0.47	e0.47	e0.47	e0.39	1.3	22	16	2.2	1.6	0.84
25	1.1	e0.56	e0.47	e0.47	e0.47	e0.39	1.5	24	14	2.2	1.6	0.80
26	1.0	e0.56	e0.47	e0.47	e0.47	e0.38	2.3	28	13	2.1	1.5	0.77
27	1.1	e0.55	e0.47	e1.2	e0.87	e0.37	2.6	37	12	2.9	1.3	0.73
28	1.1	e0.54	e0.47	e0.47	e0.78	e0.37	2.7	44	11	3.2	1.3	0.70
29	1.1	e0.54	e0.47	e1.0	---	e0.36	2.9	55	10	2.9	1.2	0.69
30	1.1	e0.53	e0.47	e4.0	---	e0.35	2.8	48	9.6	2.3	1.4	0.65
31	1.1	---	e0.47	e3.9	---	e0.35	---	48	---	2.0	1.3	---
TOTAL	39.47	20.34	20.92	50.05	70.21	18.72	38.61	468.7	789.6	125.5	49.9	33.27
MEAN	1.27	0.68	0.67	1.61	2.51	0.60	1.29	15.1	26.3	3.04	1.09	0.89
MAX	4.7	1.1	3.6	4.8	4.1	2.5	2.9	55	50	4.05	1.61	1.11
MIN	0.87	0.53	0.47	0.47	0.47	0.35	0.36	2.3	9.6	2.03	0.56	0.66
AC-FT	78	40	41	99	139	37	77	930	1,570	249	99	66

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

	2002	2003	2003	2003	2003	2003	2003	2003	2003	2002	2002	2002
MEAN	1.27	0.68	0.67	1.61	2.51	0.60	1.29	15.1	26.3	3.04	1.09	0.89
MAX	1.27	0.68	0.67	1.61	2.51	0.60	1.29	15.1	26.3	4.05	1.61	1.11
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	1.27	0.68	0.67	1.61	2.51	0.60	1.29	15.1	26.3	2.03	0.56	0.66
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2003 WATER YEAR

## WATER YEARS 2002 - 2003

ANNUAL TOTAL	1,725.29	
ANNUAL MEAN	4.73	4.73
HIGHEST ANNUAL MEAN		4.73 2003
LOWEST ANNUAL MEAN		4.73 2003
HIGHEST DAILY MEAN	55	55
LOWEST DAILY MEAN	e0.35	a0.13
ANNUAL SEVEN-DAY MINIMUM	0.36	0.14
MAXIMUM PEAK FLOW	79	79
MAXIMUM PEAK STAGE	b2.48	b2.48
ANNUAL RUNOFF (AC-FT)	3,420	3,420
10 PERCENT EXCEEDS	13	13
50 PERCENT EXCEEDS	1.2	1.2
90 PERCENT EXCEEDS	0.47	0.47

e Estimated.

a Also occurred Sep 6, 2002.

b Maximum gage height, 2.85 ft, Feb 7, 2003, backwater from ice.

## 392511106164000 EAST FORK EAGLE RIVER NEAR RED CLIFF, CO.

## WATER-QUALITY RECORDS

LOCATION.--Lat 39°25'11", long 106°16'40", in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 24, T 7 S. R. 80 W., Eagle County, Hydrologic Unit 14010003, at Resolution Road No. 702, 0.25 mi east of East Fork Eagle ford on East Fork Eagle Road, 1.0 mi west of Camp Hale Campground, and 10.2 mi south-southeast of Red Cliff.

DRAINAGE AREA.--10.9 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1996 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=392511106164000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=392511106164000)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO <sub>3</sub> (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, water, field, mg/L as CaCO <sub>3</sub> (39086)
NOV 13...	0900	0.63	9.5	7.9	182	0.0	94	22.3	9.40	0.75	0.1	1.76	82
FEB 20...	0936	0.54	9.2	8.0	219	0.0	--	--	--	--	--	--	86
APR 16...	0930	1.6	9.8	8.2	222	1.0	110	26.8	11.2	0.96	0.1	2.10	94
MAY 21...	1500	29	8.3	7.9	160	7.3	--	--	--	--	--	--	68
JUN 06...	0910	49	9.1	8.1	148	4.2	75	17.7	7.51	0.83	0.0	0.99	56
AUG 13...	0955	3.0	8.4	8.1	172	8.0	85	20.0	8.58	0.87	0.1	1.67	73

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Bicarbonate, water, field, titr., mg/L (00453)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents, mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd, mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)
NOV 13...	100	0.26	<0.17	5.5	8.8	98	0.13	0.17	E.05	E.06	<0.015	0.087	<0.002
FEB 20...	105	--	--	--	--	--	--	--	E.06	<0.10	<0.015	0.066	<0.002
APR 16...	115	0.83	0.20	5.1	19.4	124	0.17	0.52	<0.10	E.06	<0.015	0.089	<0.002
MAY 21...	83	--	--	--	--	--	--	--	0.16	0.23	<0.015	0.029	<0.002
JUN 06...	69	0.34	0.2	4.3	15.6	81	0.11	10.8	0.14	0.18	<0.015	0.042	<0.002
AUG 13...	89	0.26	<0.2	5.5	7.9	89	0.12	0.71	E.07	E.09	<0.015	0.051	<0.002

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd, mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)
NOV 13...	<0.007	<0.004	<0.004	<1	<1
FEB 20...	<0.007	<0.004	<0.004	<1	<1
APR 16...	<0.007	E.002	E.003	<1	<1
MAY 21...	<0.007	0.005	0.009	<1	<1
JUN 06...	<0.007	<0.004	0.010	<1	--
AUG 13...	<0.007	<0.004	E.004	43	46

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

392511106164000 EAST FORK EAGLE RIVER NEAR RED CLIFF, CO.—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
NOV 13...	<0.2	<1.2	280	<1	32.0	35.4	<0.02	<3	<0.3	<24
APR 16...	<0.2	<1.2	180	<1	10.3	14.4	<0.02	<3	<0.3	<24
JUN 06...	<0.2	<1.2	550	<1	5.1	12.2	<0.02	<3	<0.3	E2
AUG 13...	<0.2	<1.2	270	<1	20.6	21.8	<0.02	<3	<0.3	<3

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## 09063000 EAGLE RIVER AT RED CLIFF, CO

LOCATION.--Lat 39°30'30", long 106°21'58", in NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.20, T.6 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank at Red Cliff, and 0.3 mi upstream from Turkey Creek.

DRAINAGE AREA.--70.0 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1910 to September 1925, May 1944 to current year. Monthly discharge only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09063000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09063000)

REVISED RECORDS.--WSP 2124: Drainage area. WRD Colo. 1972: 1971.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,653.80 ft above NGVD of 1929, (levels by U.S. Bureau of Reclamation). Jan. 8, 1911 to Sept. 30, 1925, nonrecording gage at bridge 0.3 mi downstream at different datum. May 24, 1944 to Oct. 12, 1952, water-stage recorder at site 50 ft downstream at datum 1.46 ft lower. Oct. 13, 1952 to May 5, 1982, at site 250 ft downstream at datum 5.00 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station by Columbine, Ewing, and Wurtz ditches. Transbasin diversion upstream from station from Robinson Reservoir (capacity, 2,520 acre-ft) to Tennile Creek for mining development. Small diversions for irrigation of 400 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	8.3	e9.2	e7.8	e7.3	e9.3	e13	55	375	55	16	11
2	9.0	8.2	e9.0	e8.0	e7.4	e9.2	e13	54	348	51	15	10
3	11	7.5	e8.9	e7.8	e7.4	e9.3	e10	57	328	48	15	10
4	11	e7.6	e8.7	e8.0	e7.4	e8.9	9.7	60	305	45	18	11
5	9.8	e9.6	e8.7	e7.7	e7.6	e9.2	e9.2	51	283	43	15	10
6	9.3	e8.3	e8.7	e7.7	e7.7	e9.2	9.1	47	248	40	15	12
7	8.8	e8.5	e8.7	e7.9	e7.3	e9.3	8.7	48	230	38	14	14
8	8.6	e7.0	e8.7	e8.4	e7.7	e10	e8.5	49	200	36	14	14
9	8.2	e9.6	e8.5	e8.7	e7.9	e10	e9.4	49	185	34	14	16
10	7.9	e8.6	e8.2	e8.9	e7.4	e10	11	50	182	32	13	19
11	7.5	e10	e8.4	e8.9	e7.7	e11	14	45	175	31	12	19
12	7.1	e8.9	e8.7	e8.5	e8.1	e12	15	51	167	30	14	15
13	6.7	e10	e9.0	e8.2	e7.6	e12	16	64	175	28	15	13
14	6.7	e9.9	e9.0	e7.9	e8.2	e12	20	68	161	27	14	12
15	6.6	e10	e9.0	e7.7	e7.9	e12	22	81	148	26	13	11
16	6.6	e10	e8.7	e7.7	e8.2	e12	20	95	143	26	13	11
17	6.6	e9.9	e8.7	e7.7	e8.9	e13	21	114	133	25	17	11
18	6.7	e9.5	e8.7	e8.0	e8.7	e12	21	121	126	24	20	10
19	6.6	e9.5	e8.7	e8.2	e8.7	e11	19	126	122	24	17	10
20	6.5	e9.5	e8.7	e8.2	e9.0	e11	19	121	122	22	14	10
21	6.6	e9.4	e8.6	e8.0	e9.0	e12	20	126	113	21	12	10
22	6.6	e9.4	e8.5	e7.5	e8.9	e12	24	142	101	20	12	10
23	6.1	e9.2	e8.5	e7.3	e8.9	e12	27	168	94	19	13	10
24	6.8	e8.9	e8.5	e7.2	e8.9	e13	24	199	86	18	14	10
25	7.2	e8.9	e8.4	e7.0	e9.2	e13	24	214	80	19	14	10
26	6.9	e8.2	e8.2	e6.8	e9.3	e12	29	236	75	21	14	10
27	7.9	e8.7	e8.2	e6.8	e9.3	e12	36	255	71	20	13	10
28	7.7	e8.9	e8.2	e6.9	e9.3	e11	44	293	67	21	12	10
29	7.4	e8.9	e8.2	e6.9	---	e11	52	338	63	19	11	9.9
30	7.1	e9.2	e7.8	e6.6	---	e11	58	347	59	18	11	9.8
31	7.9	---	e8.0	e7.1	---	e12	---	336	---	16	12	---
TOTAL	237.7	270.1	266.0	240.0	230.9	343.4	626.6	4,060	4,965	897	436	348.7
MEAN	7.67	9.00	8.58	7.74	8.25	11.1	20.9	131	166	28.9	14.1	11.6
MAX	11	10	9.2	8.9	9.3	13	58	347	375	55	20	19
MIN	6.1	7.0	7.8	6.6	7.3	8.9	8.5	45	59	16	11	9.8
AC-FT	471	536	528	476	458	681	1,240	8,050	9,850	1,780	865	692

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2003, BY WATER YEAR (WY)

	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	16.0	13.4	11.2	10.4	10.2	11.8	32.0	154	194	55.3	25.2	18.0																																																																																	
MAX	31.8	25.2	18.8	16.3	19.7	25.6	81.3	387	422	161	54.5	39.0																																																																																	
(WY)	(1962)	(1985)	(1985)	(1918)	(1916)	(1916)	(1916)	(1911)	(1912)	(1995)	(1945)	(1921)																																																																																	
MIN	7.67	8.47	7.06	5.07	4.74	5.68	9.48	36.5	27.4	12.5	6.87	7.32																																																																																	
(WY)	(2003)	(1965)	(1989)	(1989)	(1989)	(1981)	(1975)	(1981)	(2002)	(2002)	(2002)	(2002)																																																																																	

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1911 - 2003	
ANNUAL TOTAL	5,192.9		12,921.4			
ANNUAL MEAN	14.2		35.4		46.0	
HIGHEST ANNUAL MEAN					90.2 1912	
LOWEST ANNUAL MEAN					14.8 2002	
HIGHEST DAILY MEAN	46	May 21	375	Jun 1	900	Jun 5, 1912
LOWEST DAILY MEAN	4.5	Aug 28	6.1	Oct 23	1.0	Oct 15, 1917
ANNUAL SEVEN-DAY MINIMUM	5.0	Sep 1	6.5	Oct 17	3.8	Jan 31, 1989
MAXIMUM PEAK FLOW			416	Jun 1	1,010	Jun 5, 1912
MAXIMUM PEAK STAGE			4.97	Jun 1	4.00	Jun 5, 1912
ANNUAL RUNOFF (AC-FT)	10,300		25,630		33,350	
10 PERCENT EXCEEDS	35		106		127	
50 PERCENT EXCEEDS	8.8		11		15	
90 PERCENT EXCEEDS	6.7		7.6		9.0	

e Estimated.

a Also occurred Oct 16, 1917.

b Maximum discharge observed, site and datum then in use, from rating curve extended above 500 ft<sup>3</sup>/s.

c Maximum gage height recorded, 6.43 ft, May 24, 1984.

## 09063000 EAGLE RIVER AT RED CLIFF, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1996 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09063000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09063000)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO <sub>3</sub> (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat fltr inc tit field, mg/L as CaCO <sub>3</sub> (39086)
NOV 13...	1245	11	12.0	8.0	234	0.5	120	28.0	13.0	0.83	0.1	2.93	107
FEB 20...	1155	12	10.0	8.3	225	0.0	120	26.1	12.2	0.86	0.1	2.90	111
APR 16...	1212	19	9.2	8.5	216	5.7	100	23.8	10.9	0.92	0.2	3.64	94
MAY 21...	1840	123	8.0	8.3	153	10.2	79	17.9	8.26	0.82	0.1	1.98	68
JUN 06...	1115	245	9.0	8.0	140	5.9	71	16.4	7.37	0.68	0.1	1.31	55
AUG 13...	1345	14	7.2	8.5	241	17.2	130	29.3	13.0	1.05	0.1	2.76	110

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Bicarbonate, wat fltr incrm. titr., field, mg/L (00453)	Carbonate, wat fltr incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
NOV 13...	130	--	2.10	<0.17	7.2	12.2	130	0.18	3.76	<0.10	E.09	<0.015	<0.022
FEB 20...	135	--	1.07	<0.17	7.8	11.2	129	0.17	4.06	E.06	<0.10	<0.015	0.032
APR 16...	108	3	5.98	<0.17	7.3	10.2	119	0.16	6.10	E.08	0.11	<0.015	0.036
MAY 21...	83	--	2.32	<0.2	6.1	8.1	86	0.12	28.7	0.15	0.23	<0.015	0.031
JUN 06...	67	--	0.96	<0.2	5.6	7.6	73	0.10	48.2	0.13	0.18	<0.015	0.031
AUG 13...	116	9	1.91	<0.2	7.5	9.9	131	0.18	4.96	E.06	E.10	<0.015	0.034

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	E coli, m-TEC MF, col/ 100 mL (31633)	Fecal coliform, M-FC col/ 100 mL (31625)
NOV 13...	<0.002	<0.007	<0.004	0.010	1.5	<1	<1
FEB 20...	<0.002	<0.007	<0.004	0.007	--	<1	<1
APR 16...	<0.002	<0.007	E.003	0.008	2.7	<1	E1
MAY 21...	E.002	<0.007	0.005	0.021	--	E1	<1
JUN 06...	<0.002	<0.007	E.003	0.016	3.4	<1	--
AUG 13...	<0.002	<0.007	E.002	0.005	1.3	E1	E3

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## EAGLE RIVER BASIN

09063000 EAGLE RIVER AT RED CLIFF, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
NOV 13...	<0.2	<1.2	230	<1	5.8	23.1	<0.02	<3	<0.3	<24
APR 16...	<0.2	<1.2	200	<1	3.5	9.7	<0.02	<3	<0.3	<24
JUN 06...	<0.2	<1.2	220	<1	9.8	21.2	<0.02	<3	<0.3	<3
AUG 13...	0.3	E.6	110	<1	5.4	11.2	<0.02	<3	<0.3	<3

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
OCT 03...	1225	12	253	7.5	JUN 11...	1425	170	148	8.7
JAN 17...	1120	8.0	231	0.3	JUL 03...	1205	50	194	10.5
MAY 29...	1130	316	116	7.8					

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
NOV 13...	1245	11	0.5	--	7	0.20
FEB 20...	1155	12	0.0	--	5	0.15
APR 16...	1212	19	5.7	--	2	0.12
MAY 21...	1840	123	10.2	77	12	4.0
JUN 06...	1115	245	5.9	59	17	11
AUG 13...	1345	14	17.2	--	2	0.06

## 09063200 WEARYMAN CREEK NEAR RED CLIFF, CO

LOCATION.--Lat 39°31'20", long 106°19'23", in SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.15, T.6 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on right bank 0.15 mi upstream from mouth, 2.25 mi east of Red Cliff.

DRAINAGE AREA.--9.53 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1964 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09063200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09063200)

GAGE.--Water-stage recorder. Elevation of gage is 9,280 ft above NGVD of 1929, from topographic map. Prior to Aug. 7, 1992, at site 0.25 mi upstream, at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.4	e1.1	e1.0	e0.89	e0.86	e1.3	e7.3	e85	20	5.5	3.8
2	1.9	1.4	e1.1	e1.0	e0.90	e0.85	e1.4	e7.2	e75	19	5.4	3.6
3	e2.1	e1.4	e1.1	e1.0	e0.89	e0.86	e1.5	e6.8	e68	e18	5.9	3.5
4	e1.9	e1.4	e1.1	e1.0	e0.89	e0.86	e1.3	e6.8	e69	e17	5.9	3.4
5	e1.9	e1.4	e1.1	e1.0	e0.88	e0.85	e1.3	e6.3	65	e16	5.3	3.4
6	e1.9	e1.3	e1.1	e0.98	e0.85	e0.85	e1.3	e5.9	61	e15	4.9	4.1
7	e1.8	e1.3	e1.1	e0.98	e0.82	e0.86	e1.3	e5.5	57	e14	4.7	4.0
8	e1.8	e1.2	e1.0	e0.98	e0.84	e0.87	e1.3	e5.3	51	e13	4.7	3.7
9	e1.7	e1.2	e1.0	e0.97	e0.88	e0.88	e1.4	e5.2	50	e12	4.5	4.1
10	1.7	e1.3	e1.0	e0.97	e0.88	e0.90	e1.7	e5.2	49	e12	4.5	4.2
11	1.6	e1.3	e1.0	e0.97	e0.87	e0.93	e2.2	e5.1	e50	e11	4.4	4.0
12	1.6	e1.2	e1.1	e0.97	e0.86	e0.96	e2.5	e5.4	e51	e11	4.4	3.9
13	1.5	e1.2	e1.0	e0.94	e0.87	e1.0	e2.9	e6.3	e53	e10	4.4	3.7
14	1.5	e1.2	e1.0	e0.95	e0.87	e1.1	e3.8	e7.8	e49	e9.7	4.3	3.5
15	1.5	e1.2	e1.0	e0.95	e0.86	e1.2	e4.2	e10	e47	e9.4	4.3	3.4
16	1.5	e1.2	e1.0	e0.92	e0.85	e1.2	e4.0	e13	e46	e9.1	4.4	3.3
17	1.5	e1.2	e1.1	e0.93	e0.86	e1.1	e3.8	e17	e44	e8.7	4.5	3.2
18	1.5	e1.2	e1.1	e0.93	e0.86	e1.1	e3.6	e18	e43	e8.5	5.1	3.2
19	1.5	e1.1	e1.1	e0.92	e0.84	e1.1	e3.6	e18	e43	e7.9	4.3	3.2
20	1.6	e1.1	e1.0	e0.92	e0.83	e1.0	e3.4	e17	e44	e7.6	4.2	3.1
21	1.4	e1.1	e1.0	e0.90	e0.86	e1.1	e3.6	e17	e41	e7.3	4.2	3.0
22	1.4	e1.1	e1.0	e0.89	e0.86	e1.1	e3.7	e19	e38	e7.0	4.2	3.0
23	1.5	e1.1	e1.0	e0.89	e0.86	e1.2	e4.2	21	e35	e6.8	4.3	2.9
24	1.5	e1.1	e1.0	e0.89	e0.87	e1.3	e4.6	24	e32	e6.5	4.2	2.9
25	1.4	e1.1	e1.0	e0.89	e0.87	e1.2	e4.6	26	e30	e6.9	4.2	2.9
26	1.4	e1.1	e1.0	e0.89	e0.86	e1.2	e5.1	27	e28	e6.6	4.2	2.8
27	1.5	e1.1	e1.0	e0.89	e0.86	e1.2	e6.3	33	27	e6.6	4.1	2.6
28	1.4	e1.1	e1.0	e0.89	e0.86	e1.1	e7.2	40	25	e6.3	4.0	2.3
29	1.4	e1.1	e1.0	e0.89	---	e1.1	e7.3	e48	24	e6.5	3.9	2.3
30	e1.3	e1.1	e1.0	e0.89	---	e1.0	e7.3	e68	22	e6.1	4.0	2.2
31	e1.4	---	e1.0	e0.89	---	e1.1	---	e79	---	5.8	4.0	---
TOTAL	49.4	36.2	32.1	29.08	24.19	31.93	101.7	581.1	1,402	321.3	140.9	99.2
MEAN	1.59	1.21	1.04	0.94	0.86	1.03	3.39	18.7	46.7	10.4	4.55	3.31
MAX	2.1	1.4	1.1	1.0	0.90	1.3	7.3	79	85	20	5.9	4.2
MIN	1.3	1.1	1.0	0.89	0.82	0.85	1.3	5.1	22	5.8	3.9	2.2
AC-FT	98	72	64	58	48	63	202	1,150	2,780	637	279	197

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

MEAN	2.75	1.94	1.56	1.36	1.27	1.38	2.22	12.9	44.5	20.4	6.60	3.79
MAX	5.02	2.86	2.48	1.95	1.80	2.28	4.66	34.4	90.2	55.5	17.4	9.57
(WY)	(1985)	(1985)	(1985)	(1985)	(1985)	(1985)	(1985)	(1984)	(1984)	(1995)	(1984)	(1984)
MIN	1.59	1.21	1.04	0.87	0.45	0.80	1.13	4.96	12.8	3.98	2.11	1.82
(WY)	(2003)	(2003)	(2003)	(1992)	(1967)	(1965)	(1968)	(1995)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1965 - 2003

ANNUAL TOTAL	1,151.9	2,849.10		
ANNUAL MEAN	3.16	7.81		8.39
HIGHEST ANNUAL MEAN				17.4
LOWEST ANNUAL MEAN				3.29
HIGHEST DAILY MEAN	19	Jun 3	e85	Jun 1
LOWEST DAILY MEAN	e1.0	Dec 8	e0.82	Feb 7
ANNUAL SEVEN-DAY MINIMUM	e1.0	Dec 20	e0.85	Feb 15
MAXIMUM PEAK FLOW			unknown	a155
MAXIMUM PEAK STAGE			unknown	a3.61
ANNUAL RUNOFF (AC-FT)	2,280	5,650		6,080
10 PERCENT EXCEEDS	7.9	24		24
50 PERCENT EXCEEDS	1.5	1.7		2.4
90 PERCENT EXCEEDS	1.1	0.89		1.2

e Estimated.

a Site and datum then in use.



## 09063400 TURKEY CREEK NEAR RED CLIFF, CO

LOCATION.--Lat 39°31'22", long 106°20'08", in NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.16, T.6 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on right bank 400 ft downstream from Lime Creek, 1.9 mi northeast of Red Cliff, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--23.8 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1963 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09063400](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09063400)

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 8,918 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for Nov. 1 to Apr. 9, which are fair, and estimated daily discharges, and the period May 29 to June 11, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	4.0	2.7	2.5	2.3	2.1	3.0	17	272	e52	15	8.1
2	4.7	3.9	2.7	2.5	2.3	2.1	3.2	17	243	e49	14	7.9
3	5.0	e3.9	2.6	2.5	2.3	2.1	3.4	16	227	e46	15	7.7
4	4.7	e3.9	2.6	2.4	e2.2	2.1	e3.1	16	234	44	15	7.9
5	4.7	e3.8	2.6	2.4	2.2	2.1	e3.0	16	241	42	13	7.8
6	4.6	e3.7	2.6	2.4	2.1	2.1	3.0	15	214	39	13	9.9
7	4.5	e3.5	2.6	2.4	2.0	2.1	3.0	14	207	37	12	9.3
8	4.5	3.2	2.5	2.4	2.0	2.1	e3.0	13	173	35	12	8.4
9	4.3	e3.2	2.5	2.4	2.2	2.2	e3.1	13	166	33	11	9.3
10	4.2	e3.2	2.4	2.4	2.2	2.2	3.8	13	152	31	11	10
11	4.2	3.2	2.5	2.4	2.2	e2.3	4.8	12	154	29	11	9.3
12	4.1	e3.2	2.5	2.4	2.2	e2.3	5.3	13	e156	28	11	8.9
13	3.9	3.0	2.5	2.4	2.2	e2.4	6.1	16	e168	26	11	8.5
14	4.0	3.0	2.4	2.4	2.2	e2.6	8.4	20	e156	25	10	8.0
15	3.9	3.0	2.4	2.4	2.1	e2.6	9.2	27	e145	25	10	7.8
16	4.0	e3.0	2.5	2.3	2.1	e2.6	8.8	35	e140	24	11	7.5
17	3.9	e3.0	2.5	e2.3	2.1	e2.6	8.7	50	e131	23	12	7.4
18	3.9	2.9	2.5	2.3	2.1	2.5	8.5	55	e124	22	14	7.4
19	3.8	2.8	2.5	2.3	2.0	2.4	8.1	53	e119	21	11	7.3
20	3.8	2.8	2.5	2.3	2.0	e2.3	7.9	53	e119	20	9.7	7.2
21	3.7	2.8	2.5	2.2	2.1	2.5	8.0	55	e111	19	9.4	7.1
22	3.8	2.8	2.4	2.2	2.1	2.6	8.8	63	e98	18	9.5	7.0
23	4.0	2.8	2.5	2.2	2.1	2.8	9.4	73	e90	18	9.5	6.7
24	4.0	2.8	2.5	2.2	2.1	2.9	11	83	e84	17	9.1	6.5
25	3.8	e2.8	2.5	2.2	2.2	2.8	10	94	e79	18	9.3	6.4
26	3.7	e2.8	2.5	2.2	2.1	e2.7	12	98	e73	17	8.9	6.4
27	4.1	2.7	2.5	2.2	2.1	e2.7	14	111	e69	17	9.1	6.4
28	3.9	2.7	2.5	2.2	2.1	e2.5	16	133	e65	16	8.9	6.4
29	3.7	2.7	2.5	2.2	---	e2.5	17	191	e60	17	8.4	6.3
30	3.5	2.6	2.5	2.2	---	2.4	18	242	e56	16	8.7	6.2
31	3.9	---	2.5	2.3	---	2.6	---	257	---	15	8.5	---
TOTAL	127.3	93.7	78.0	72.1	59.9	74.8	231.6	1,884	4,326	839	341.0	231.0
MEAN	4.11	3.12	2.52	2.33	2.14	2.41	7.72	60.8	144	27.1	11.0	7.70
MAX	5.0	4.0	2.7	2.5	2.3	2.9	18	257	272	52	15	10
MIN	3.5	2.6	2.4	2.2	2.0	2.1	3.0	12	56	15	8.4	6.2
AC-FT	252	186	155	143	119	148	459	3,740	8,580	1,660	676	458

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

	6.13	4.58	3.65	3.20	3.01	3.50	7.74	48.1	117	45.6	13.8	7.95
MEAN	6.13	4.58	3.65	3.20	3.01	3.50	7.74	48.1	117	45.6	13.8	7.95
MAX	12.2	9.19	5.76	4.96	4.64	6.36	23.1	103	274	139	39.1	19.8
(WY)	(1985)	(1985)	(1985)	(1985)	(2000)	(1985)	(1985)	(1984)	(1984)	(1995)	(1984)	(1984)
MIN	3.77	2.84	2.52	1.92	1.00	2.10	2.66	17.8	31.3	11.0	5.82	4.23
(WY)	(1978)	(1978)	(2003)	(1987)	(1964)	(1981)	(1973)	(1995)	(2002)	(1977)	(2002)	(1977)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1964 - 2003

ANNUAL TOTAL	3,290.6	8,358.4	
ANNUAL MEAN	9.02	22.9	22.1
HIGHEST ANNUAL MEAN			49.4
LOWEST ANNUAL MEAN			9.21
HIGHEST DAILY MEAN	46	272	415
LOWEST DAILY MEAN	e1.8	2.0	a1.0
ANNUAL SEVEN-DAY MINIMUM	e1.9	2.1	1.0
MAXIMUM PEAK FLOW		349	b556
MAXIMUM PEAK STAGE		3.34	c2.87
ANNUAL RUNOFF (AC-FT)	6,530	16,580	15,980
10 PERCENT EXCEEDS	25	67	67
50 PERCENT EXCEEDS	4.3	4.2	5.8
90 PERCENT EXCEEDS	2.5	2.2	2.8

e Estimated.

a Also occurred Jan 22 to Feb 29, 1964.

b From rating curve extended above 325 ft<sup>3</sup>/s.

c Maximum gage height for period of record, 3.34 ft, Jun 1, 2003.

## 09063900 MISSOURI CREEK NEAR GOLD PARK, CO

LOCATION.--Lat 39°23'25", long 106°28'10". Eagle County, Hydrologic Unit 14010003, on left bank 50 ft downstream from road culvert, 0.6 mi upstream from Fancy Creek, 2.2 mi southwest of Gold Park, and 10 mi southwest of Red Cliff.

DRAINAGE AREA.--6.39 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1972 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09063900](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09063900)

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Elevation of gage is 9,980 ft above NGVD of 1929, from topographic map.

REMARKS.-- Records good except for the period Apr. 9-12, which is fair, and estimated daily discharges, which are poor. Transmountain diversion upstream from station to Arkansas River basin through Homestake Tunnel. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	e2.5	e1.7	e1.1	e0.72	e0.66	e1.3	7.2	96	e7.0	8.5	3.4
2	10	e2.5	e1.6	e0.95	e0.72	e0.67	e1.4	6.0	49	e6.4	8.1	3.0
3	10	e2.5	e1.4	e0.98	e0.72	e0.66	e1.5	5.8	34	5.4	9.5	3.1
4	9.3	e2.5	e1.5	e0.98	e0.72	e0.66	e1.3	5.8	24	5.6	11	3.2
5	8.8	e2.5	e1.5	e0.96	e0.72	e0.65	e1.2	5.6	16	5.5	8.4	2.9
6	7.9	e2.6	e1.4	e0.96	e0.71	e0.66	e1.1	5.1	11	5.3	7.2	3.6
7	7.9	e2.5	e1.4	e0.92	e0.64	e0.66	e1.1	4.5	9.9	5.1	6.8	4.9
8	7.5	e2.3	e1.3	e0.93	e0.65	e0.69	e1.1	4.2	9.7	5.0	6.6	5.2
9	6.6	e2.2	e1.3	e0.94	e0.68	e0.73	1.3	4.0	19	4.9	5.9	9.7
10	5.8	e2.2	e1.3	e0.98	e0.68	e0.74	1.8	3.8	35	4.8	5.6	14
11	5.0	e2.2	e1.3	e0.95	e0.68	e0.79	2.7	3.8	29	4.6	5.6	14
12	4.4	e2.2	e1.3	e0.95	e0.67	e0.82	3.4	4.7	25	4.6	5.8	15
13	4.2	e2.2	e1.3	e0.95	e0.69	e0.83	3.7	7.1	29	4.5	5.2	17
14	3.6	e2.2	e1.3	e0.98	e0.69	e0.93	5.4	9.0	20	4.6	4.8	12
15	3.4	e2.2	e1.3	e0.92	e0.69	e1.00	6.8	11	24	4.1	4.2	9.5
16	2.9	e2.2	e1.3	e0.83	e0.69	e0.99	6.5	14	17	4.0	4.1	7.7
17	3.0	e2.2	e1.3	e0.83	e0.69	e0.98	5.5	19	12	3.9	5.7	6.5
18	2.7	e2.1	e1.3	e0.86	e0.69	e0.98	4.9	20	13	3.8	8.9	6.0
19	3.0	e2.1	e1.1	e0.89	e0.69	e0.93	4.3	19	12	3.7	7.2	5.4
20	2.5	e2.0	e1.1	e0.85	e0.69	e0.92	3.8	16	21	3.6	5.4	4.8
21	2.0	e2.0	e1.2	e0.83	e0.69	e0.98	3.4	16	12	3.5	4.7	4.2
22	2.1	e2.0	e1.2	e0.81	e0.65	e0.97	3.2	24	12	3.5	4.4	3.8
23	2.3	e1.9	e1.1	e0.81	e0.64	e1.1	3.3	41	10	4.2	4.7	3.4
24	2.5	e1.9	e1.1	e0.78	e0.64	e1.2	4.1	43	7.2	13	4.4	3.1
25	2.7	e1.8	e1.2	e0.79	e0.66	e1.1	4.7	46	6.1	12	5.0	2.8
26	2.8	e1.6	e1.1	e0.79	e0.67	e1.1	5.2	47	5.9	14	4.6	2.6
27	2.6	e1.6	e1.1	e0.76	e0.68	e1.1	5.8	65	e7.0	14	3.9	2.5
28	2.5	e1.6	e1.1	e0.75	e0.69	e1.1	6.5	77	e7.5	13	4.0	2.4
29	2.5	e1.7	e1.1	e0.73	---	e1.1	7.2	89	e8.1	12	3.4	2.2
30	2.5	e1.7	e1.1	e0.72	---	e0.99	8.2	80	e8.1	10	3.9	2.0
31	e2.5	---	e1.1	e0.74	---	e1.1	---	68	---	9.0	4.2	---
TOTAL	148.5	63.7	39.4	27.22	19.15	27.79	111.7	771.6	589.5	204.6	181.7	179.9
MEAN	4.79	2.12	1.27	0.88	0.68	0.90	3.72	24.9	19.6	6.60	5.86	6.00
MAX	13	2.6	1.7	1.1	0.72	1.2	8.2	89	96	14	11	17
MIN	2.0	1.6	1.1	0.72	0.64	0.65	1.1	3.8	5.9	3.5	3.4	2.0
AC-FT	295	126	78	54	38	55	222	1,530	1,170	406	360	357

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

MEAN	3.27	1.84	1.12	0.81	0.69	0.84	2.87	15.5	30.5	19.4	8.89	4.95
MAX	7.29	3.59	2.73	1.66	1.47	1.75	7.02	41.7	79.0	78.6	29.1	9.46
(WY)	(1985)	(1977)	(1996)	(1996)	(1998)	(1998)	(1974)	(1984)	(1984)	(1984)	(1983)	(1984)
MIN	0.84	0.61	0.35	0.31	0.28	0.37	0.71	4.00	8.72	5.77	2.22	1.65
(WY)	(1980)	(1977)	(1977)	(1976)	(1977)	(1979)	(1983)	(1983)	(2002)	(2002)	(2002)	(1974)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1972 - 2003

ANNUAL TOTAL	1,532.07	2,364.76	
ANNUAL MEAN	4.20	6.48	7.59
HIGHEST ANNUAL MEAN			20.6 1984
LOWEST ANNUAL MEAN			3.82 2002
HIGHEST DAILY MEAN	25 May 6	96 Jun 1	172 Jul 10, 1984
LOWEST DAILY MEAN	e0.48 Feb 20	e0.64 Feb 7	e,a0.24 Feb 12, 1977
ANNUAL SEVEN-DAY MINIMUM	0.48 Feb 17	0.66 Mar 1	0.25 Feb 7, 1977
MAXIMUM PEAK FLOW		150 May 29	b300 Jul 4, 1975
MAXIMUM PEAK STAGE		3.15 May 29	c3.19 Jul 4, 1975
ANNUAL RUNOFF (AC-FT)	3,040	4,690	5,500
10 PERCENT EXCEEDS	9.7	13	19
50 PERCENT EXCEEDS	2.4	2.9	2.3
90 PERCENT EXCEEDS	0.53	0.72	0.56

e Estimated.

a Also occurred Feb 13, 1977.

b From rating curve extended above 35 ft<sup>3</sup>/s.

c Maximum gage height, 3.83 ft, Jul 30, 1983.





## 09064600 EAGLE RIVER NEAR MINTURN, CO

LOCATION.--Lat 39°33'14", long 106°24'07", in SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> of unsurveyed sec. T.6 S., R.81 W., Eagle County, Hydrologic Unit 14010003, on left bank 500 ft upstream from U.S. Highway 24 bridge and 2.5 miles southeast of Minturn.

DRAINAGE AREA.--186 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1989 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09064600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09064600)

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,078.37 ft above NGVD of 1929, from levels by private engineering firm.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversions upstream from station by Columbine, Ewing, and Wurtz Ditches. Transmountain diversion from Robinson Reservoir (capacity 2,520 acre-ft), for use in Tenmile Creek basin. Several small diversions for irrigation upstream from station. No regulation.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	44	e32	e26	e23	e25	e37	195	1,150	200	69	53
2	54	42	e32	e26	e23	e24	e42	173	981	189	66	48
3	61	e40	e33	e25	e23	e25	e42	172	809	179	65	45
4	59	e40	e32	e25	e23	e24	38	188	722	170	75	47
5	55	e42	e31	e24	e23	e24	37	163	650	161	65	44
6	52	e39	e30	e24	e23	e24	34	141	572	153	60	50
7	49	e39	e30	e24	e22	e24	32	135	544	146	57	64
8	50	e37	e30	e25	e23	e25	32	133	488	137	58	64
9	50	e42	e30	e25	e24	e26	35	130	482	129	56	77
10	49	e41	e29	e25	e23	e26	46	132	523	122	53	102
11	48	e46	e29	e25	e23	e27	61	119	514	112	49	111
12	46	e43	e29	e25	e23	e27	69	131	491	106	53	91
13	43	e45	e28	e24	e23	e29	79	177	518	103	56	95
14	42	e43	e28	e23	e24	e30	106	215	465	99	55	83
15	41	e43	e28	e22	e23	e31	116	278	442	97	48	71
16	40	e42	e29	e24	e23	e31	99	325	433	98	49	64
17	39	e41	e28	e24	e24	e31	109	437	392	94	62	59
18	38	e39	e28	e26	e24	e30	112	489	381	92	89	55
19	38	e39	e28	e26	e24	e28	98	507	373	91	79	55
20	37	e38	e28	e25	e26	e27	91	432	404	86	64	55
21	36	e38	e28	e23	e25	e27	95	424	362	85	55	52
22	36	e37	e28	e23	e25	e27	109	482	325	81	53	50
23	38	e37	e27	e23	e24	e28	118	575	306	77	60	49
24	39	e35	e27	e23	e24	e31	99	644	282	76	66	52
25	39	e35	e27	e23	e25	e31	105	699	258	84	84	54
26	37	e33	e27	e23	e25	e31	141	663	249	96	78	52
27	42	e33	e26	e23	e26	e30	178	716	239	103	69	51
28	41	e33	e26	e22	e26	e29	196	881	229	97	64	51
29	39	e33	e26	e22	---	e28	216	958	221	88	56	50
30	36	e32	e26	e22	---	e31	229	1,050	211	85	54	50
31	41	---	e26	e23	---	e34	---	939	---	75	56	---
TOTAL	1,372	1,171	886	743	667	865	2,801	12,703	14,016	3,511	1,923	1,844
MEAN	44.3	39.0	28.6	24.0	23.8	27.9	93.4	410	467	113	62.0	61.5
MAX	61	46	33	26	26	34	229	1,050	1,150	200	89	111
MIN	36	32	26	22	22	24	32	119	211	75	48	44
AC-FT	2,720	2,320	1,760	1,470	1,320	1,720	5,560	25,200	27,800	6,960	3,810	3,660

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

MEAN	45.1	38.2	30.7	27.8	27.4	32.5	93.0	394	500	186	82.4	54.8
MAX	68.8	47.8	44.6	41.8	42.3	54.4	175	726	962	661	186	73.8
(WY)	(1998)	(1996)	(1996)	(1996)	(1996)	(1997)	(1996)	(1996)	(1995)	(1995)	(1995)	(1995)
MIN	27.6	25.3	21.2	17.9	18.4	21.0	50.4	151	124	49.4	31.1	34.1
(WY)	(1990)	(1990)	(1990)	(1990)	(1990)	(2002)	(1991)	(2002)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1990 - 2003
ANNUAL TOTAL	20,445	42,502	
ANNUAL MEAN	56.0	116	126
HIGHEST ANNUAL MEAN			197
LOWEST ANNUAL MEAN			54.2
HIGHEST DAILY MEAN	212	May 16	1,540
LOWEST DAILY MEAN	17	Sep 7	11
ANNUAL SEVEN-DAY MINIMUM	18	Sep 2	16
MAXIMUM PEAK FLOW			1,310
MAXIMUM PEAK STAGE		6.13	Jun 1
ANNUAL RUNOFF (AC-FT)	40,550	84,300	91,450
10 PERCENT EXCEEDS	139	340	358
50 PERCENT EXCEEDS	38	46	46
90 PERCENT EXCEEDS	20	24	25

e Estimated.

09064600 EAGLE RIVER NEAR MINTURN, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 2002 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09064600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09064600)

PERIOD OF DAILY RECORD.--WATER TEMPERATURE: July 2002 to current year.

INSTRUMENTATION.--Water-temperature sensor with satellite telemetry since July 2002.

REMARKS.--Daily water temperature records are poor. Additional water-quality data were collected and are published in the "Eagle River Watershed Retrospective Assessment Program" section of this report.

EXTREMES FOR PERIOD OF DAILY RECORD.--WATER TEMPERATURE: Maximum recorded, 20.5°C July 24, 2002; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--WATER TEMPERATURE: Maximum, 18.8°C, Aug. 10; minimum, 0.0°C, on several days.

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1525	53	120	10.5	MAY 30...	1425	907	85	8.5
NOV 18...	1550	39	140	0.0	JUN 10...	1620	503	119	10.1
JAN 16...	1645	24	189	0.0	JUL 01...	1745	200	135	14.9
APR 03...	1655	42	170	2.8	AUG 07...	0845	56	188	11.5

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	JUNE			JULY			AUGUST			SEPTEMBER		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	15.8	12.7	14.2	13.8	9.7	12.0			
2	---	---	---	---	---	---	15.8	12.1	13.9	15.5	9.2	12.3			
3	---	---	---	---	---	---	16.7	13.4	14.9	13.3	10.6	12.2			
4	---	---	---	---	---	---	16.6	12.8	15.0	14.1	10.0	12.0			
5	---	---	---	---	---	---	16.4	13.7	15.1	13.9	9.2	11.6			
6	---	---	---	---	---	---	16.5	13.2	14.9	12.9	10.2	11.8			
7	---	---	---	---	---	---	16.2	12.6	14.5	13.6	10.7	12.1			
8	---	---	---	---	---	---	16.5	11.5	14.0	15.2	11.1	12.9			
9	---	---	---	---	---	---	16.9	11.5	14.1	13.9	12.2	13.0			
10	---	---	---	---	---	---	16.8	10.1	13.5	14.2	11.6	12.8			
11	---	---	---	---	---	---	16.6	10.4	13.6	13.2	11.5	12.5			
12	---	---	---	---	---	---	16.0	10.4	13.4	13.5	11.4	12.3			
13	---	---	---	---	---	---	16.1	11.8	14.0	12.3	10.2	11.2			
14	---	---	---	---	---	---	16.5	11.2	13.8	13.2	8.5	10.8			
15	---	---	---	---	---	---	16.7	11.0	13.9	13.5	8.8	11.1			
16	---	---	---	---	---	---	17.0	11.2	14.1	12.6	9.2	10.9			
17	---	---	---	---	---	---	16.7	11.7	14.3	12.0	9.8	10.9			
18	---	---	---	---	---	---	16.4	11.9	14.2	11.2	9.5	10.2			
19	---	---	---	---	---	---	15.6	12.0	13.9	10.2	8.9	9.6			
20	---	---	---	---	---	---	15.2	13.1	14.0	11.1	8.1	9.6			
21	---	---	---	---	---	---	14.5	12.0	13.2	11.2	8.1	9.7			
22	---	---	---	---	---	---	15.3	10.4	12.6	11.1	8.6	9.9			
23	---	---	---	---	---	---	14.7	10.3	12.5	10.8	7.9	9.4			
24	---	---	---	20.5	11.2	15.6	16.2	10.6	13.3	10.7	7.8	9.3			
25	---	---	---	16.3	13.5	14.9	15.7	9.6	12.7	10.6	7.8	9.2			
26	---	---	---	18.0	11.8	14.6	15.1	10.0	12.8	10.4	8.8	9.7			
27	---	---	---	17.1	11.1	14.0	16.2	10.6	13.3	9.6	7.7	8.4			
28	---	---	---	17.7	11.9	14.6	15.3	11.6	13.4	8.8	7.1	8.0			
29	---	---	---	18.8	9.3	14.1	13.3	11.5	12.5	9.3	7.6	8.4			
30	---	---	---	18.3	11.8	15.0	14.2	9.3	11.8	9.9	8.0	8.8			
31	---	---	---	17.5	12.1	15.0	13.7	9.7	12.0	---	---	---			
MONTH	---	---	---	---	---	---	17.0	9.3	13.7	15.5	7.1	10.8			

## EAGLE RIVER BASIN

09064600 EAGLE RIVER NEAR MINTURN, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	9.5	7.4	8.6	3.3	1.8	2.6	0.2	0.2	0.2	0.2	0.1	0.2
2	9.6	7.9	8.8	3.2	1.9	2.5	0.2	0.2	0.2	0.2	0.1	0.2
3	8.9	7.4	8.0	1.9	1.2	1.4	0.2	0.2	0.2	0.2	0.1	0.2
4	7.4	6.5	7.0	1.2	1.0	1.1	0.2	0.2	0.2	0.2	0.1	0.2
5	7.5	6.6	7.1	1.4	0.9	1.1	0.2	0.2	0.2	0.2	0.1	0.2
6	7.9	5.9	6.9	1.1	0.8	0.9	0.2	0.2	0.2	0.2	0.1	0.2
7	8.0	5.7	6.9	0.9	0.8	0.8	0.2	0.2	0.2	0.2	0.1	0.2
8	8.0	5.9	7.1	1.1	0.8	0.8	0.2	0.2	0.2	0.2	0.1	0.2
9	7.9	6.0	7.0	1.1	0.8	0.9	0.2	0.2	0.2	0.2	0.1	0.2
10	7.6	5.5	6.7	0.8	0.7	0.7	0.2	0.2	0.2	0.2	0.1	0.1
11	7.5	5.7	6.8	0.7	0.7	0.7	0.2	0.1	0.2	0.2	0.1	0.1
12	7.3	5.7	6.6	0.7	0.6	0.7	0.2	0.1	0.2	0.2	0.1	0.1
13	6.2	4.0	5.2	0.7	0.6	0.7	0.2	0.1	0.2	0.2	0.1	0.1
14	5.9	3.8	4.9	0.7	0.6	0.7	0.2	0.1	0.1	0.2	0.1	0.1
15	5.7	3.7	4.8	0.7	0.6	0.7	0.2	0.1	0.1	0.2	0.1	0.1
16	5.6	3.6	4.7	0.7	0.6	0.6	0.2	0.1	0.2	0.2	0.1	0.1
17	5.5	3.4	4.5	0.6	0.5	0.6	0.2	0.1	0.2	0.2	0.1	0.1
18	5.5	3.2	4.4	0.6	0.5	0.5	0.2	0.1	0.2	0.2	0.1	0.1
19	5.3	3.1	4.2	0.6	0.0	0.2	0.2	0.1	0.2	0.2	0.1	0.1
20	4.6	2.7	3.8	0.2	0.0	0.1	0.2	0.1	0.2	0.2	0.1	0.1
21	4.7	2.6	3.7	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.1
22	4.6	2.9	3.8	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.1
23	5.3	4.2	4.7	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1
24	4.9	4.4	4.6	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1
25	4.5	3.4	4.0	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
26	4.2	2.5	3.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
27	4.6	3.5	4.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
28	4.7	3.8	4.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1
29	4.1	2.7	3.4	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1
30	2.7	1.6	2.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.1
31	2.8	1.4	2.1	---	---	---	0.2	0.1	0.2	0.2	0.1	0.1
MONTH	9.6	1.4	5.3	3.3	0.0	0.7	0.2	0.1	0.2	0.2	0.1	0.1
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	0.2	0.1	0.2	0.1	0.1	0.1	4.0	0.8	2.2	6.6	2.2	4.4
2	0.3	0.1	0.2	0.1	0.1	0.1	4.0	0.9	2.3	6.7	2.7	4.8
3	0.2	0.1	0.1	0.1	0.0	0.1	2.9	1.3	2.1	8.5	3.5	6.0
4	0.1	0.1	0.1	0.1	0.1	0.1	1.8	0.8	1.3	6.4	2.9	4.6
5	0.1	0.1	0.1	0.1	0.0	0.1	1.5	0.6	1.0	5.5	2.9	4.1
6	0.1	0.1	0.1	0.1	0.0	0.1	1.3	0.6	0.9	7.2	2.4	4.8
7	0.2	0.1	0.1	0.1	0.1	0.1	2.1	0.6	1.2	7.1	3.3	5.2
8	0.2	0.1	0.1	0.1	0.0	0.1	2.8	0.7	1.5	7.1	3.9	5.4
9	0.1	0.1	0.1	0.2	0.0	0.1	3.8	1.0	2.2	7.6	4.3	5.8
10	0.1	0.1	0.1	0.6	0.0	0.3	4.1	1.4	2.7	6.1	3.6	4.9
11	0.1	0.1	0.1	1.1	0.3	0.5	4.0	1.8	2.7	7.7	2.1	4.9
12	0.1	0.1	0.1	1.6	0.3	0.8	4.0	1.6	2.4	10.6	3.3	6.7
13	0.1	0.1	0.1	2.2	0.2	0.9	7.2	0.3	2.9	8.7	5.3	7.1
14	0.1	0.1	0.1	1.7	0.3	0.9	5.4	0.7	2.8	9.5	5.1	7.3
15	0.1	0.1	0.1	2.9	0.4	1.4	3.3	0.7	1.8	8.1	6.0	7.0
16	0.1	0.1	0.1	1.8	0.8	1.3	6.7	0.6	3.0	9.2	5.9	7.4
17	0.1	0.1	0.1	1.9	0.5	1.0	5.7	1.1	3.4	9.4	4.9	7.4
18	0.1	0.1	0.1	0.9	0.3	0.5	4.9	1.5	3.0	7.9	5.8	6.9
19	0.1	0.1	0.1	2.0	0.3	0.9	5.5	1.0	2.9	7.6	5.8	6.9
20	0.1	0.1	0.1	2.9	0.4	1.4	7.7	1.9	4.2	7.3	5.9	6.7
21	0.1	0.1	0.1	3.4	1.1	2.0	6.7	2.3	4.3	7.8	5.7	6.8
22	0.1	0.1	0.1	4.1	0.9	2.2	8.0	3.5	5.1	8.4	6.0	7.3
23	0.1	0.1	0.1	4.0	0.9	2.3	4.8	0.0	2.0	8.0	6.4	7.2
24	0.1	0.1	0.1	2.2	1.2	1.5	3.7	0.0	1.5	10.0	5.8	7.5
25	0.1	0.1	0.1	3.7	0.6	1.9	9.2	0.8	4.5	8.8	5.0	7.0
26	0.1	0.1	0.1	2.6	1.0	1.7	9.3	2.6	5.7	9.8	4.3	7.0
27	0.1	0.1	0.1	1.3	0.6	0.9	8.3	3.0	5.7	11.4	5.0	7.9
28	0.1	0.1	0.1	1.4	0.4	0.8	7.4	2.9	5.3	11.2	4.8	7.9
29	---	---	---	0.6	0.3	0.5	8.0	2.8	5.4	10.9	5.0	7.9
30	---	---	---	0.6	0.2	0.4	6.9	3.3	5.2	8.8	5.1	7.0
31	---	---	---	4.0	0.3	1.6	---	---	---	9.7	4.7	6.9
MONTH	0.3	0.1	0.1	4.1	0.0	0.9	9.3	0.0	3.0	11.4	2.1	6.4





## 09065100 CROSS CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°34'05", long 106°24'43", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.36, T.5 S., R.81 W., Eagle County, Hydrologic Unit 14010003, on right bank 0.4 mi upstream from mouth, and 1.5 mi southeast of Minturn.

DRAINAGE AREA.--34.2 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1956 to September 1963, October 1967 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09065100](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09065100)

REVISED RECORDS.--WDR CO-81-2: 1980 (M). WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,992 ft above NGVD of 1929, from topographic map. Prior to July 18, 1956, nonrecording gage at site 0.3 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Bolts ditch exports water upstream from station to tailings ponds and recreation lake along Eagle River. Diversion 0.5 mi upstream from station for water supply of school and for municipal supply of Minturn. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e33	11	e6.4	e5.3	e4.8	e5.0	e15	47	547	151	31	23
2	e30	e10	e6.5	e5.3	e4.6	e4.9	e16	38	429	159	28	20
3	e30	e9.9	e6.2	e5.3	e4.4	e4.9	e13	38	320	154	27	18
4	e28	e9.9	e6.2	e5.2	e4.4	e4.8	e11	47	283	145	33	17
5	e26	e10	e6.0	e5.0	e4.4	e4.9	e11	38	251	135	27	16
6	e24	e9.9	e5.9	e5.0	e4.4	e4.8	e9.0	31	209	123	23	19
7	e24	e9.9	e5.7	e5.0	e4.5	e5.0	e8.3	27	194	113	23	28
8	e24	e10	e5.7	e5.0	e4.6	e5.4	e8.5	27	166	108	28	34
9	e24	e9.9	e5.8	e5.0	e4.6	e6.0	9.6	26	200	102	25	43
10	e22	e9.2	e6.0	e5.0	e4.6	e6.0	11	24	253	89	22	58
11	20	e9.6	e6.0	e5.0	e4.4	e6.3	17	22	236	82	20	63
12	18	e9.3	e6.0	e4.9	e4.5	e7.0	23	26	247	76	23	54
13	16	e9.2	e5.9	e4.6	e4.5	e7.5	30	48	249	72	22	74
14	15	e8.5	e5.6	e4.4	e4.6	e7.9	42	62	216	68	23	56
15	13	e8.1	e5.7	e4.1	e4.8	e8.1	41	102	251	65	19	43
16	13	e7.3	e5.6	e4.3	e4.6	e8.2	35	137	260	75	18	37
17	12	e7.5	e5.5	e4.4	e4.6	e8.5	35	186	212	67	27	32
18	11	e7.1	e5.5	e4.8	e4.6	e8.6	30	229	223	65	77	30
19	11	e6.8	e5.6	e4.9	e4.9	e8.3	25	222	206	63	64	27
20	10	e6.8	e5.5	e4.9	e5.0	e8.3	22	183	225	59	42	24
21	9.5	e6.9	e5.6	e4.4	e4.9	e8.3	21	180	203	55	33	22
22	9.2	e6.9	e5.7	e4.2	e4.8	e9.0	24	224	206	51	28	20
23	9.8	e7.0	e5.7	e4.4	e4.8	e9.1	27	278	210	48	29	18
24	10	e7.0	e5.6	e4.2	e4.9	e9.8	28	331	191	43	30	16
25	9.5	e7.2	e5.5	e4.2	e4.9	e9.5	26	396	161	41	29	15
26	8.7	e7.0	e5.5	e4.5	e5.0	e9.5	40	346	133	66	30	14
27	11	e6.7	e5.5	e4.4	e5.0	e9.5	51	415	162	60	29	13
28	9.6	e6.7	e5.5	e4.5	e4.9	e9.0	57	518	172	58	35	12
29	8.8	e6.7	e5.5	e4.4	---	e8.6	60	509	176	47	27	12
30	8.1	e6.5	e5.3	e4.5	---	e10	59	531	164	43	25	11
31	9.8	---	e5.3	e4.6	---	e14	---	457	---	35	28	---
TOTAL	508.0	248.5	178.0	145.7	131.0	236.7	805.4	5,745	6,955	2,518	925	869
MEAN	16.4	8.28	5.74	4.70	4.68	7.64	26.8	185	232	81.2	29.8	29.0
MAX	33	11	6.5	5.3	5.0	14	60	531	547	159	77	74
MIN	8.1	6.5	5.3	4.1	4.4	4.8	8.3	22	133	35	18	11
AC-FT	1,010	493	353	289	260	469	1,600	11,400	13,800	4,990	1,830	1,720

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003, BY WATER YEAR (WY)

MEAN	13.7	7.24	4.38	3.21	3.08	4.26	21.8	124	247	128	43.4	22.5
MAX	49.5	15.6	9.81	8.85	8.84	11.4	57.6	221	360	355	122	65.0
(WY)	(1962)	(1962)	(1997)	(1997)	(1997)	(1997)	(1962)	(1970)	(1980)	(1957)	(1983)	(1961)
MIN	3.39	1.99	0.99	0.17	0.48	1.09	6.35	57.8	90.8	20.0	12.1	6.68
(WY)	(1957)	(1957)	(1963)	(1963)	(1977)	(1977)	(1973)	(1995)	(2002)	(2002)	(2002)	(1974)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1957 - 2003

ANNUAL TOTAL	9,499.3	19,265.3	
ANNUAL MEAN	26.0	52.8	52.0
HIGHEST ANNUAL MEAN			83.2
LOWEST ANNUAL MEAN			25.3
HIGHEST DAILY MEAN	242	May 31	618
LOWEST DAILY MEAN	e3.3	Feb 26	a0.10
ANNUAL SEVEN-DAY MINIMUM	3.4	Feb 25	0.13
MAXIMUM PEAK FLOW			754
MAXIMUM PEAK STAGE			5.13
ANNUAL RUNOFF (AC-FT)	18,840	38,210	37,700
10 PERCENT EXCEEDS	67	184	175
50 PERCENT EXCEEDS	9.9	15	11
90 PERCENT EXCEEDS	3.7	4.8	2.4

e Estimated.

a Also occurred Dec 28-31, 1962, Jan 6-8, 11-15, 1963.

b Maximum gage height, 6.14 ft, Aug 6, 1983.

## 09065500 GORE CREEK AT UPPER STATION, NEAR MINTURN, CO

LOCATION.--Lat 39°37'33", long 106°16'39", in NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.18, T.5 S., R.79 W., Eagle County, Hydrologic Unit 14010003, on right bank 20 ft downstream from bridge pier on Interstate 70, 0.2 mi upstream from Black Gore Creek, 4.4 mi east of Vail, and 8.4 mi northeast of Minturn.

DRAINAGE AREA.--14.4 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1947 to September 1956, October 1963 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09065500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09065500)

REVISED RECORDS.--WDR CO-89-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,600 ft above NGVD of 1929, from topographic map. Oct. 1, 1947 to Sept. 30, 1956, Oct. 1, 1963 to Sept. 30, 1980, at various sites about 1200 ft upstream at different datums. See WDR CO-80-2, for history of changes prior to Oct. 1, 1980. Oct. 1, 1980 to Apr. 21, 1992, gage at site 10 ft upstream and at datum 2.0 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	e4.5	e4.5	e4.0	e4.5	e3.7	e5.2	19	447	100	16	13
2	9.2	e4.5	e4.3	e4.0	e4.5	e3.9	e6.4	16	301	99	15	11
3	10	e4.7	e4.2	e4.0	e4.5	e3.8	e7.6	15	287	93	15	11
4	9.5	e5.0	e4.2	e4.1	e4.5	e3.8	e9.1	16	245	86	16	10
5	9.3	e5.3	e4.1	e3.9	e4.6	e3.7	e8.4	15	212	80	14	9.8
6	9.2	e5.5	e4.0	e4.7	e4.7	e3.6	e7.7	14	172	73	13	12
7	9.6	e5.2	e4.0	e4.7	e4.7	e3.3	e7.2	13	148	65	14	13
8	9.6	e5.2	e4.0	e4.7	e3.9	e3.4	e6.9	13	134	61	16	13
9	8.7	e5.2	e3.8	e4.7	e3.5	e3.3	e8.5	12	175	60	13	23
10	8.0	e5.0	e3.9	e4.8	e3.6	e3.3	e9.9	12	235	54	12	24
11	7.4	e5.0	e3.7	e5.1	e4.0	e3.4	e11	11	253	50	11	26
12	6.7	e5.0	e3.9	e5.1	e4.3	e3.5	e16	13	215	45	11	28
13	6.2	e4.9	e3.9	e5.1	e4.5	e4.1	e19	20	201	43	9.9	32
14	6.0	e4.8	e3.9	e5.1	e4.7	e5.1	e28	32	216	41	9.2	29
15	5.6	e4.8	e3.9	e5.1	e5.1	e6.0	e29	47	228	38	8.7	24
16	5.6	e4.8	e3.9	e5.1	e4.9	e6.1	22	70	200	39	10	21
17	5.4	e4.8	e3.7	e5.1	e4.8	e5.7	19	111	177	38	22	19
18	5.3	e4.8	e3.8	e5.0	e4.5	e5.4	17	118	186	34	37	17
19	5.1	e4.8	e3.8	e4.9	e4.0	e5.0	14	111	186	32	25	16
20	4.9	e4.8	e3.8	e4.9	e3.7	e4.1	12	100	198	31	19	15
21	4.8	e4.8	e3.8	e4.8	e3.6	e4.1	12	116	172	29	16	14
22	4.8	e4.8	e3.8	e4.8	e3.6	e4.2	13	150	171	26	15	13
23	5.1	e4.8	e3.9	e4.7	e3.6	e4.9	13	184	162	23	15	12
24	5.2	e4.7	e3.9	e4.6	e3.7	e5.1	15	204	141	23	14	11
25	5.0	e4.6	e4.0	e4.6	e3.6	e5.5	12	236	121	23	19	10
26	4.8	e4.5	e4.1	e4.5	e3.6	e5.4	17	234	111	29	15	9.1
27	5.4	e4.5	e4.1	e4.5	e3.6	e5.0	22	278	114	26	14	8.6
28	5.0	e4.5	e4.1	e4.5	e3.6	e4.6	21	328	115	21	16	8.0
29	4.6	e4.5	e4.0	e4.5	---	e4.2	22	328	115	21	14	7.5
30	4.6	e4.5	e3.9	e4.5	---	e3.9	22	337	105	19	14	7.2
31	4.8	---	e3.9	e4.5	---	e4.7	---	377	---	18	15	---
TOTAL	204.4	144.8	122.8	144.6	116.4	135.8	432.9	3,550	5,743	1,420	473.8	467.2
MEAN	6.59	4.83	3.96	4.66	4.16	4.38	14.4	115	191	45.8	15.3	15.6
MAX	10	5.5	4.5	5.1	5.1	6.1	29	377	447	100	37	32
MIN	4.6	4.5	3.7	3.9	3.5	3.3	5.2	11	105	18	8.7	7.2
AC-FT	405	287	244	287	231	269	859	7,040	11,390	2,820	940	927

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2003, BY WATER YEAR (WY)

	7.44	4.94	3.68	3.17	3.05	3.70	11.9	70.4	152	67.9	20.1	9.62
MEAN	7.44	4.94	3.68	3.17	3.05	3.70	11.9	70.4	152	67.9	20.1	9.62
MAX	19.8	15.3	9.23	9.75	10.6	12.6	22.5	121	245	198	83.7	22.9
(WY)	(1985)	(1985)	(1986)	(1986)	(1986)	(1985)	(1969)	(1974)	(1978)	(1983)	(1983)	(1984)
MIN	3.12	2.50	1.94	1.86	1.55	1.57	3.81	23.4	52.4	10.2	5.44	3.52
(WY)	(1976)	(1976)	(1964)	(1964)	(1977)	(1977)	(1973)	(1968)	(2002)	(2002)	(2002)	(1956)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1948 - 2003

ANNUAL TOTAL	5,105.1	12,955.7	
ANNUAL MEAN	14.0	35.5	29.9
HIGHEST ANNUAL MEAN			48.3 1983
LOWEST ANNUAL MEAN			13.7 2002
HIGHEST DAILY MEAN	156	May 31	447 Jun 1
LOWEST DAILY MEAN	e1.5	Mar 16	e3.3 Mar 7
ANNUAL SEVEN-DAY MINIMUM	e1.9	Mar 4	e3.4 Mar 6
MAXIMUM PEAK FLOW			526 May 31
MAXIMUM PEAK STAGE			3.74 May 31
ANNUAL RUNOFF (AC-FT)	10,130	25,700	21,640
10 PERCENT EXCEEDS	36	117	100
50 PERCENT EXCEEDS	5.0	8.4	7.0
90 PERCENT EXCEEDS	2.4	3.9	2.5

e Estimated.

a From rating curve extended above 140 ft<sup>3</sup>/s.

b Maximum gage height, 6.65 ft, Jun 18, 1951, datum then in use.

## 09066000 BLACK GORE CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°35'47", long 106°15'52", T.5 S., R.79 W., Eagle County, Hydrologic Unit 14010003, on right bank 200 ft from U.S. Highway 6, 0.3 mi upstream from Timber Creek, 2.5 mi upstream from mouth, and 9 mi east of Minturn.

DRAINAGE AREA.--12.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1947 to September 1956, October 1963 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09066000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09066000)

REVISED RECORDS.--WDR CO-89-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 9,150 ft above NGVD of 1929, from topographic map. Prior to October 1963, at site 15 ft upstream, at present datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. No diversions upstream from station. Natural regulation by two small recreation lakes upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	e2.3	e1.9	e2.2	e2.8	e3.3	e4.3	e14	275	e30	6.4	3.8
2	3.2	e2.3	e1.9	e2.2	e2.8	e3.3	e5.5	e13	223	26	6.1	3.6
3	3.8	e2.3	e1.9	e2.2	e2.8	e3.3	e6.1	e13	190	24	6.0	3.6
4	3.5	e2.3	e1.9	e2.2	e2.8	e3.2	e6.4	e15	159	22	7.4	3.5
5	3.8	e2.3	e1.9	e2.2	e2.9	e3.2	e6.8	e14	141	21	6.6	3.3
6	3.6	e2.3	e1.9	e2.2	e2.9	e3.3	e6.1	e14	125	20	e6.4	4.9
7	3.3	e2.3	e1.9	e2.2	e3.0	e3.3	e5.6	e13	116	18	e6.2	5.6
8	3.0	e2.2	e1.9	e2.3	e3.0	e3.3	e5.6	e12	105	17	e6.0	4.9
9	2.8	e2.2	e1.9	e2.3	e3.0	e3.4	e5.8	e12	105	16	e5.8	6.5
10	2.8	e2.3	e1.9	e2.3	e3.2	e3.4	e5.9	e11	106	15	e5.6	7.9
11	2.5	e2.3	e1.9	e2.4	e3.2	e3.4	e6.1	e10	103	14	e5.4	7.0
12	2.4	e2.3	e1.8	e2.4	e3.3	e4.3	e6.8	e10	99	13	5.1	6.0
13	2.4	e2.3	e1.8	e2.5	e3.3	e4.3	e7.1	e11	96	13	4.9	5.3
14	2.3	e2.3	e1.7	e2.5	e3.3	e4.7	e8.3	e13	92	12	4.7	4.6
15	2.3	e2.3	e1.7	e2.5	e3.4	e5.5	e8.8	e23	88	11	4.5	4.2
16	2.2	e2.1	e1.7	e2.7	e3.4	e5.8	e9.4	e33	83	12	5.2	3.8
17	2.2	e2.3	e1.7	e2.6	e3.4	e5.3	e9.4	38	75	11	6.8	3.6
18	2.1	e2.2	e1.6	e2.6	e3.4	e4.8	e9.0	38	71	10	9.8	3.7
19	2.1	e2.1	e1.8	e2.6	e3.4	e4.7	e8.2	43	70	9.7	6.1	3.5
20	2.1	e2.1	e1.8	e2.6	e3.4	e4.7	e7.9	43	71	9.1	5.2	3.4
21	2.0	e2.1	e1.8	e2.6	e3.4	e5.1	e8.1	50	61	8.8	4.7	3.2
22	2.0	e2.2	e2.0	e2.6	e3.4	e5.1	e8.2	68	55	9.2	4.6	3.1
23	2.2	e2.2	e2.0	e2.7	e3.4	e5.1	e8.9	103	51	8.0	4.7	3.3
24	2.4	e2.2	e2.0	e2.7	e3.4	e5.7	e9.7	118	47	7.7	4.6	3.0
25	2.3	e2.2	e2.0	e2.7	e3.3	e5.4	e10	125	43	7.5	5.0	3.1
26	2.3	e2.2	e2.0	e2.7	e3.3	e5.2	e10	125	40	7.9	4.5	2.8
27	2.7	e2.1	e2.0	e2.7	e3.4	e5.2	e9.7	149	37	8.0	4.2	2.6
28	2.5	e2.1	e2.0	e2.7	e3.4	e4.8	e11	183	35	7.3	4.4	2.6
29	2.3	e2.1	e2.1	e2.7	---	e4.1	e13	204	e33	7.5	3.9	2.6
30	e2.3	e2.0	e2.1	e2.7	---	e4.0	e14	205	e32	7.4	4.4	3.0
31	e2.2	---	e2.1	e2.8	---	e4.3	---	202	---	6.8	4.2	---
TOTAL	80.6	66.5	58.6	77.3	89.7	134.5	241.7	1,925	2,827	409.9	169.4	122.0
MEAN	2.60	2.22	1.89	2.49	3.20	4.34	8.06	62.1	94.2	13.2	5.46	4.07
MAX	3.8	2.3	2.1	2.8	3.4	5.8	14	205	275	30	9.8	7.9
MIN	2.0	2.0	1.6	2.2	2.8	3.2	4.3	10	32	6.8	3.9	2.6
AC-FT	160	132	116	153	178	267	479	3,820	5,610	813	336	242

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2003, BY WATER YEAR (WY)

	3.85	3.35	2.82	2.53	2.48	3.03	7.66	55.4	89.2	21.4	7.10	4.29
MEAN	3.85	3.35	2.82	2.53	2.48	3.03	7.66	55.4	89.2	21.4	7.10	4.29
MAX	10.7	10.7	9.57	8.08	9.09	14.5	22.8	130	160	69.2	21.4	12.0
(WY)	(1985)	(1985)	(1985)	(1986)	(1986)	(1986)	(1985)	(1948)	(1978)	(1995)	(1984)	(1984)
MIN	1.90	1.84	1.35	1.01	0.91	1.40	2.86	15.0	21.2	4.08	2.37	2.43
(WY)	(1951)	(1964)	(1970)	(1979)	(1979)	(1971)	(1973)	(1995)	(2002)	(2002)	(2002)	(1956)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1948 - 2003

ANNUAL TOTAL	2,803.2	6,202.2	
ANNUAL MEAN	7.68	17.0	16.9
HIGHEST ANNUAL MEAN			30.3 1984
LOWEST ANNUAL MEAN			7.76 2002
HIGHEST DAILY MEAN	50	275	275 Jun 1, 2003
LOWEST DAILY MEAN	e1.1	e1.6	0.90 Feb 22, 1968
ANNUAL SEVEN-DAY MINIMUM	e1.5	e1.7	0.90 Feb 4, 1979
MAXIMUM PEAK FLOW		310	370 Jun 17, 1995
MAXIMUM PEAK STAGE		5.21	a5.06 Jun 17, 1995
ANNUAL RUNOFF (AC-FT)	5,560	12,300	12,270
10 PERCENT EXCEEDS	22	43	52
50 PERCENT EXCEEDS	3.2	3.9	3.8
90 PERCENT EXCEEDS	1.8	2.1	2.0

e Estimated.

a Maximum gage height, 6.00 ft, Mar 30, 1968, backwater from ice.

## 09066100 BIGHORN CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°38'24", long 106°17'34", in N<sup>1</sup>/<sub>2</sub> sec.12, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank 0.3 mi upstream from U.S. Highway 6, 0.4 mi upstream from mouth, 4.5 mi east of Vail, and 8.5 mi northeast of Minturn.

DRAINAGE AREA.--4.54 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1963 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09066100](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09066100)

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 8,625 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No regulation or diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3.1	e1.5	e1.5	e1.2	e1.2	e0.93	e4.7	8.7	171	28	7.0	6.4
2	e3.1	e1.6	e1.4	e1.2	e1.1	e0.96	e5.2	7.3	112	29	6.7	5.6
3	e3.1	e1.6	e1.4	e1.2	e0.99	e0.96	e5.8	7.2	89	27	6.9	5.2
4	e3.1	e1.6	e1.4	e1.2	e0.90	e0.96	e5.5	7.6	71	25	7.4	4.6
5	e3.1	e1.6	e1.4	e1.2	e0.86	e0.94	e5.3	6.6	64	23	5.9	4.3
6	e3.1	e1.4	e1.4	e1.2	e0.82	e0.94	e5.2	5.8	49	21	5.4	5.0
7	e3.2	e1.5	e1.3	e1.2	e0.74	e0.96	e5.0	5.4	31	20	5.4	6.9
8	e3.2	e1.5	e1.3	e1.2	e0.68	e0.96	e5.1	5.0	31	18	5.9	7.0
9	e3.2	e1.5	e1.3	e1.2	e0.66	e0.98	e5.5	4.7	44	18	4.8	13
10	e3.1	e1.5	e1.3	e1.2	e0.67	e0.98	e6.0	4.6	67	17	4.4	13
11	e3.0	e1.5	e1.3	e1.2	e0.67	e0.98	e6.3	4.3	83	16	4.3	15
12	e2.9	e1.5	e1.3	e1.2	e0.69	e1.2	e6.7	5.1	79	16	4.2	16
13	e2.8	e1.5	e1.3	e1.2	e0.72	e1.7	e7.3	8.2	59	15	4.0	18
14	e2.7	e1.5	e1.2	e1.2	e0.76	e1.9	e9.4	13	60	15	3.8	16
15	e2.6	e1.5	e1.2	e1.2	e0.77	e2.2	e10	20	72	15	3.6	13
16	e2.4	e1.5	e1.2	e1.2	e0.79	e2.3	7.3	24	69	15	4.7	11
17	e2.3	e1.5	e1.2	e1.2	e0.82	e2.3	6.5	35	50	15	11	9.0
18	e1.9	e1.5	e1.2	e1.2	e0.83	e2.2	6.0	42	53	14	16	8.2
19	e2.0	e1.5	e1.2	e1.2	e0.83	e1.9	4.9	41	54	14	13	7.0
20	e1.8	e1.5	e1.2	e1.2	e0.83	e1.7	4.4	39	63	14	9.2	6.0
21	e1.6	e1.5	e1.2	e1.2	e0.86	e1.7	4.4	42	60	13	7.4	5.2
22	e1.6	e1.5	e1.2	e1.2	e0.87	e1.9	4.9	49	64	12	6.7	4.6
23	e1.5	e1.5	e1.2	e1.2	e0.89	e2.4	4.9	56	55	11	6.6	4.0
24	e1.8	e1.6	e1.2	e1.2	e0.89	e3.3	5.5	68	40	10	e6.3	3.7
25	e1.8	e1.6	e1.2	e1.2	e0.89	e2.9	4.2	78	33	11	e10	3.4
26	e1.8	e1.6	e1.2	e1.2	e0.89	e2.4	5.2	76	31	13	9.7	3.1
27	e1.8	e1.6	e1.2	e1.2	e0.91	e2.4	7.0	97	32	12	9.1	2.9
28	e1.5	e1.5	e1.2	e1.2	e0.93	e1.9	8.6	140	32	9.6	10	2.7
29	e1.5	e1.5	e1.2	e1.2	---	e2.3	9.7	129	32	9.6	8.5	2.6
30	e1.5	e1.5	e1.2	e1.2	---	e3.3	10	142	29	8.2	8.3	2.4
31	e1.5	---	e1.2	e1.2	---	e4.0	---	130	---	7.2	8.0	---
TOTAL	73.6	45.7	39.2	37.2	23.46	56.45	186.5	1,301.5	1,779	491.6	224.2	224.8
MEAN	2.37	1.52	1.26	1.20	0.84	1.82	6.22	42.0	59.3	15.9	7.23	7.49
MAX	3.2	1.6	1.5	1.2	1.2	4.0	10	142	171	29	16	18
MIN	1.5	1.4	1.2	1.2	0.66	0.93	4.2	4.3	29	7.2	3.6	2.4
AC-FT	146	91	78	74	47	112	370	2,580	3,530	975	445	446

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

	2.74	1.69	1.06	0.86	0.83	1.04	4.05	25.0	48.5	21.6	7.28	3.70
MEAN	2.74	1.69	1.06	0.86	0.83	1.04	4.05	25.0	48.5	21.6	7.28	3.70
MAX	8.03	4.65	2.53	2.04	2.54	2.97	10.0	52.5	85.2	61.2	22.6	9.94
(WY)	(1986)	(1985)	(1985)	(1986)	(1986)	(1986)	(1985)	(1984)	(1978)	(1983)	(1984)	(1984)
MIN	1.01	0.84	0.63	0.45	0.30	0.32	0.86	8.09	16.7	3.54	2.13	1.12
(WY)	(1964)	(1980)	(1977)	(1967)	(1964)	(1981)	(1964)	(1995)	(2002)	(2002)	(2002)	(1975)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1964 - 2003

ANNUAL TOTAL	1,755.28	4,483.21	
ANNUAL MEAN	4.81	12.3	9.88
HIGHEST ANNUAL MEAN			18.6 1984
LOWEST ANNUAL MEAN			4.77 2002
HIGHEST DAILY MEAN	45 May 31	171 Jun 1	171 Jun 1, 2003
LOWEST DAILY MEAN	e0.64 Mar 16	e0.66 Feb 9	a0.10 Feb 8, 1967
ANNUAL SEVEN-DAY MINIMUM	e0.68 Mar 15	e0.69 Feb 7	0.20 Mar 4, 1981
MAXIMUM PEAK FLOW		205 May 28	b338 Jun 8, 1985
MAXIMUM PEAK STAGE		4.11 May 28	c4.10 Jun 8, 1985
ANNUAL RUNOFF (AC-FT)	3,480	8,890	7,160
10 PERCENT EXCEEDS	12	37	32
50 PERCENT EXCEEDS	1.8	3.2	2.4
90 PERCENT EXCEEDS	0.81	0.99	0.70

e Estimated.

a Also occurred Jan 30, 1970.

b From rating curve extended above 82 ft<sup>3</sup>/s.

c Maximum gage height, 4.26 ft, Jun 8, 1985, backwater from debris.

## 09066150 PITKIN CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°38'37", long 106°18'07", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec. 1, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank, 100 ft downstream from Pitkin ditch headgate, 1,000 ft upstream from U.S. Highway 6, 1,200 ft upstream from mouth, 4.0 mi east of Vail, and 8 mi northeast of Minturn.

DRAINAGE AREA.--5.32 mi<sup>2</sup>.

PERIOD OF RECORD.--Annual maximum and occasional low-flow measurements, water years 1965-66. October 1966 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09066150](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09066150)

REVISED RECORDS.--WRD Colo. 1971: 1967-70. WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 8,525 ft above NGVD of 1929, from topographic map. Oct. 1, 1964 to Sept. 30, 1966, crest-stage gage at datum 0.98 ft lower, at site 300 ft downstream.

REMARKS.--Records good except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	3.2	2.7	e2.1	e2.4	e1.9	e3.3	e16	303	36	7.0	7.3
2	5.2	3.0	e2.7	e2.1	e2.4	e1.9	e4.9	e15	224	36	6.6	6.5
3	5.7	3.3	e2.6	e2.1	e2.3	e1.8	e5.7	e14	182	34	7.0	6.1
4	5.5	3.8	e2.6	e2.1	e2.1	e1.5	e4.9	e13	151	32	7.5	5.7
5	5.4	3.8	e2.5	e2.0	e2.0	e1.4	e4.6	e15	134	30	6.3	6.6
6	5.3	3.7	e2.4	e2.0	e1.8	e1.3	e4.6	e15	117	27	5.7	7.8
7	5.7	3.5	e2.3	e1.9	e1.7	e1.3	e4.6	e14	101	25	5.9	10
8	6.0	3.0	e2.3	e1.8	e1.5	e1.3	e5.0	e13	95	24	6.3	10
9	5.8	2.8	e2.3	e1.8	e1.7	e1.3	e5.1	e13	112	23	5.5	16
10	5.3	2.9	e2.2	e1.8	e1.6	e1.3	e5.5	e13	126	21	5.2	16
11	4.8	3.0	e2.2	e2.0	e1.8	e1.3	e6.1	e13	124	20	5.1	16
12	4.3	3.0	e2.2	e2.0	e1.8	e1.0	e6.9	e12	114	18	4.9	18
13	3.9	3.0	e2.2	e2.0	e2.3	e1.4	e7.1	e13	104	18	4.6	20
14	3.6	3.0	e2.2	e2.0	e2.3	e2.2	e7.5	e14	110	17	4.4	17
15	3.4	3.0	e2.2	e2.0	e2.4	e2.9	e8.4	18	113	17	4.2	14
16	3.3	3.0	e2.1	e2.0	e2.6	e3.1	e8.4	27	105	17	5.2	13
17	3.2	3.0	e2.0	e2.1	e2.6	e2.8	e6.9	39	97	16	11	11
18	3.0	3.0	e1.9	e2.1	e2.5	e2.3	e5.8	41	92	16	16	10
19	2.9	3.0	e2.1	e2.2	e2.1	e1.7	e4.9	42	93	16	12	8.8
20	2.7	2.8	e2.0	e2.4	e1.8	e1.9	e3.7	44	88	15	9.2	7.7
21	2.6	2.5	e2.0	e2.3	e2.3	e2.5	e3.4	52	81	14	7.6	6.9
22	2.5	2.6	e2.0	e2.3	e2.4	e3.1	e4.5	64	82	e14	7.5	6.3
23	3.0	2.7	e2.0	e2.4	e2.4	e3.2	e7.2	84	76	e14	7.6	5.7
24	3.0	2.7	e2.0	e2.4	e2.4	e3.4	e5.8	108	66	12	8.8	5.3
25	2.8	3.0	e2.1	e2.4	e2.4	e3.2	e5.4	117	49	11	12	5.0
26	2.7	3.0	e2.1	e2.4	e2.3	e3.4	e6.3	116	44	12	9.8	4.9
27	3.0	3.0	e2.0	e2.4	e2.1	e3.1	e8.0	136	50	11	9.0	4.6
28	2.8	3.0	e2.0	e2.4	e2.0	e3.1	e10	170	51	9.8	9.4	4.4
29	2.6	3.0	e2.0	e2.4	---	e3.1	e13	185	49	9.9	7.6	4.3
30	2.7	2.9	e2.1	e2.4	---	e3.1	e16	186	40	8.7	8.7	4.0
31	3.1	---	e2.1	e2.4	---	e3.2	---	291	---	7.6	9.1	---
TOTAL	121.0	91.2	68.1	66.7	60.0	70.0	193.5	1,913	3,173	582.0	236.7	278.9
MEAN	3.90	3.04	2.20	2.15	2.14	2.26	6.45	61.7	106	18.8	7.64	9.30
MAX	6.0	3.8	2.7	2.4	2.6	3.4	16	291	303	36	16	20
MIN	2.5	2.5	1.9	1.8	1.5	1.0	3.3	12	40	7.6	4.2	4.0
AC-FT	240	181	135	132	119	139	384	3,790	6,290	1,150	469	553

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

	1985	1982	1986	1986	1986	1985	2002	2003	2003	1984	1983	1984
MEAN	4.05	2.56	1.81	1.46	1.36	1.51	4.26	25.8	54.2	28.6	9.39	5.20
MAX	9.43	3.84	3.28	3.84	3.94	3.85	7.77	61.7	106	94.5	31.1	11.2
(WY)	(1985)	(1982)	(1986)	(1986)	(1986)	(1985)	(2002)	(2003)	(2003)	(1984)	(1983)	(1984)
MIN	1.49	1.26	0.94	0.58	0.70	0.87	1.44	8.48	20.3	3.94	2.59	2.78
(WY)	(1967)	(1980)	(1967)	(1967)	(1981)	(1981)	(1973)	(1995)	(2002)	(2002)	(2002)	(1988)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1967 - 2003

ANNUAL TOTAL	2,207.78	6,854.1	
ANNUAL MEAN	6.05	18.8	11.7
HIGHEST ANNUAL MEAN			22.7 1984
LOWEST ANNUAL MEAN			5.94 2002
HIGHEST DAILY MEAN	54	303	303 Jun 1, 2003
LOWEST DAILY MEAN	e0.98	e1.0	0.24 Oct 29, 1972
ANNUAL SEVEN-DAY MINIMUM	e1.0	e1.3	0.26 Mar 6, 1972
MAXIMUM PEAK FLOW		408	408 May 30, 2003
MAXIMUM PEAK STAGE		3.11	a3.11 May 30, 2003
ANNUAL RUNOFF (AC-FT)	4,380	13,600	8,480
10 PERCENT EXCEEDS	14	50	37
50 PERCENT EXCEEDS	3.0	4.6	3.3
90 PERCENT EXCEEDS	1.3	2.0	1.1

e Estimated.

a Maximum gage height, 3.75 ft, Jul 13, 1995, backwater from debris.

## 09066200 BOOTH CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°38'54", long 106°19'21", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> of sec.3, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on right bank, downstream side of old Highway 6 bridge pier, 100 ft upstream from frontage road to I-70, 0.2 mi upstream from mouth, 3.0 mi northeast of Vail, and 7.0 mi northeast of Minturn.

DRAINAGE AREA.--6.02 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1964 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09066200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09066200)

REVISED RECORDS.--WDR CO-89-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,325 ft above NGVD of 1929, from topographic map. Prior to June 4, 1984, gage at site 1,000 ft upstream at different datum (gage destroyed by rock slide).

REMARKS.--Records fair except for estimated daily discharges, which are poor. No diversion or regulation upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	2.3	e1.6	e1.2	e1.1	e1.0	e2.3	11	e215	33	4.6	4.2
2	3.0	2.2	e1.6	e1.2	e1.1	e1.0	e2.6	9.6	e144	32	4.1	3.6
3	3.5	2.1	e1.5	e1.2	e1.1	e1.0	e2.8	8.8	e87	30	4.0	3.2
4	3.4	2.2	e1.5	e1.2	e1.1	e1.0	e2.5	9.2	70	28	4.4	3.1
5	3.5	2.0	e1.5	e1.2	e1.0	e1.0	e2.4	8.5	66	26	3.8	3.0
6	3.7	2.0	e1.5	e1.2	e1.0	e1.0	e2.4	7.6	57	22	3.4	3.7
7	4.5	2.1	e1.4	e1.2	e1.0	e1.0	e2.2	7.1	49	19	3.3	4.8
8	4.8	2.1	e1.4	e1.2	e1.00	e1.1	e1.9	6.9	49	17	3.5	4.9
9	4.4	2.1	e1.4	e1.2	e0.99	e1.1	e1.7	6.5	55	17	3.2	9.4
10	4.0	e2.1	e1.4	e1.2	e0.98	e1.1	e2.2	6.4	60	15	3.0	9.6
11	3.6	e2.1	e1.4	e1.2	e0.98	e1.2	e3.0	6.0	63	13	2.8	11
12	3.1	e2.0	e1.3	e1.2	e0.96	e1.2	e3.7	6.8	58	12	2.7	14
13	2.7	e2.0	e1.3	e1.2	e0.97	e1.3	e4.8	10	54	11	2.5	15
14	2.5	e2.0	e1.2	e1.2	e0.96	e1.6	e8.8	16	57	11	2.3	11
15	2.3	e2.0	e1.2	e1.2	e0.96	e2.0	e12	26	59	11	2.1	9.1
16	2.1	e2.0	e1.2	e1.2	e0.97	e2.2	e10	33	61	10	3.0	7.8
17	2.0	e1.9	e1.2	e1.2	e0.97	e2.1	9.2	45	59	9.5	7.2	6.7
18	1.9	e1.9	e1.2	e1.2	e0.98	e1.9	7.9	47	57	9.9	11	6.2
19	1.8	e1.9	e1.2	e1.2	e0.98	e1.6	6.7	43	57	9.4	6.3	e5.7
20	1.7	e1.9	e1.2	e1.2	e0.98	e1.5	5.8	43	57	8.3	5.0	5.2
21	1.6	e1.9	e1.2	e1.2	e0.98	e1.4	5.5	e48	53	7.7	4.2	4.8
22	1.6	e1.8	e1.2	e1.2	e0.99	e1.4	5.9	e58	52	7.1	3.9	4.2
23	1.9	e1.8	e1.2	e1.2	e0.99	e1.6	6.9	e68	49	6.4	4.1	3.7
24	1.8	e1.8	e1.2	e1.2	e0.99	e1.9	13	e80	44	6.0	5.0	3.3
25	1.7	e1.8	e1.2	e1.1	e0.99	e1.6	6.2	e84	39	5.8	7.1	2.9
26	1.7	e1.7	e1.2	e1.1	e0.99	e1.6	8.0	e85	37	6.1	5.4	2.7
27	1.9	e1.7	e1.2	e1.1	e0.99	e1.5	10	e87	38	6.1	4.8	2.6
28	1.9	e1.7	e1.2	e1.1	e1.0	e1.3	12	e101	39	5.6	4.9	2.4
29	1.7	e1.6	e1.2	e1.1	---	e1.1	13	e119	38	5.8	4.1	2.3
30	1.8	e1.6	e1.2	e1.1	---	e1.4	13	e131	35	5.4	4.6	2.2
31	2.0	---	e1.2	e1.1	---	e1.9	---	e132	---	5.0	5.1	---
TOTAL	81.1	58.3	40.4	36.5	28.00	43.6	188.4	1,350.4	1,858	411.1	135.4	172.3
MEAN	2.62	1.94	1.30	1.18	1.00	1.41	6.28	43.6	61.9	13.3	4.37	5.74
MAX	4.8	2.3	1.6	1.2	1.1	2.2	13	132	215	33	11	15
MIN	1.6	1.6	1.2	1.1	0.96	1.0	1.7	6.0	35	5.0	2.1	2.2
AC-FT	161	116	80	72	56	86	374	2,680	3,690	815	269	342

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

	2.83	1.97	1.25	1.00	0.95	1.36	5.65	32.6	62.8	23.8	5.63	3.03
MEAN	2.83	1.97	1.25	1.00	0.95	1.36	5.65	32.6	62.8	23.8	5.63	3.03
MAX	8.30	7.17	3.54	2.48	2.97	5.72	14.2	58.0	123	70.4	14.4	7.29
(WY)	(1985)	(1985)	(1985)	(1985)	(1985)	(1986)	(1986)	(2001)	(1982)	(1983)	(1984)	(1984)
MIN	0.88	0.64	0.67	0.37	0.39	0.41	1.39	10.0	16.8	2.03	1.07	0.97
(WY)	(1975)	(2000)	(1975)	(1977)	(1981)	(1981)	(1973)	(1995)	(2002)	(2002)	(2002)	(1974)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1965 - 2003

ANNUAL TOTAL	2,151.54		4,403.50		11.9	
ANNUAL MEAN	5.89		12.1		19.0 1982	
HIGHEST ANNUAL MEAN					5.84 2002	
LOWEST ANNUAL MEAN					218 Jun 15, 1978	
HIGHEST DAILY MEAN	54	May 31	e215	Jun 1	0.20 Feb 8, 1967	
LOWEST DAILY MEAN	0.48	Sep 4	e0.96	Feb 12	0.33 Feb 7, 1967	
ANNUAL SEVEN-DAY MINIMUM	0.50	Sep 1	e0.97	Feb 11	355 Jun 15, 1978	
MAXIMUM PEAK FLOW			a		b,c4.07 Jun 15, 1978	
MAXIMUM PEAK STAGE			a			
ANNUAL RUNOFF (AC-FT)	4,270		8,730		8,640	
10 PERCENT EXCEEDS	20		44		40	
50 PERCENT EXCEEDS	1.8		2.5		2.3	
90 PERCENT EXCEEDS	0.80		1.1		0.76	

e Estimated.

a Not determined.

b Maximum gage height, 4.62 ft, Jun 18, 1983, backwater from debris.

c Site and datum then in use.



## 09066300 MIDDLE CREEK NEAR MINTURN, CO

LOCATION.--Lat 39°38'45", long 106°22'54", in sec.6, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on right bank 200 ft upstream from Interstate Highway 70, 0.2 mi upstream from mouth, and 5.0 mi northeast of Minturn.

DRAINAGE AREA.--5.94 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1964 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09066300](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09066300)

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 8,200 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1977 at site 700 ft upstream, at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. No diversion or regulation upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.39	e0.39	e0.35	e0.33	e0.31	e0.25	e1.2	e9.0	143	e16	2.7	2.1
2	0.39	e0.39	e0.35	e0.33	e0.31	e0.25	e1.6	e7.3	120	16	2.5	1.8
3	0.77	e0.39	e0.35	e0.33	e0.32	e0.25	e1.9	e5.3	e60	15	2.5	1.8
4	0.79	e0.38	e0.35	e0.33	e0.32	e0.25	e1.9	e9.0	e46	14	2.8	1.7
5	0.92	e0.38	e0.34	e0.33	e0.32	e0.25	e1.6	e7.3	e42	13	2.3	1.7
6	0.90	e0.38	e0.34	e0.33	e0.32	e0.25	e1.7	e7.2	e36	12	2.3	2.6
7	1.1	e0.38	e0.34	e0.32	e0.31	e0.24	e1.7	e7.0	e31	11	2.4	3.1
8	1.2	e0.37	e0.34	e0.32	e0.31	e0.24	e1.4	e7.0	e29	10	2.6	2.7
9	1.0	e0.37	e0.35	e0.32	e0.31	e0.24	e1.5	e6.8	e30	10	2.2	3.5
10	0.91	e0.37	e0.35	e0.32	e0.31	e0.24	e1.6	e6.5	e33	9.1	2.0	3.4
11	0.87	e0.37	e0.35	e0.32	e0.31	e0.24	e1.6	e6.2	e36	6.9	1.9	3.4
12	0.75	e0.37	e0.34	e0.32	e0.30	e0.27	e1.7	e5.8	e35	6.6	1.9	3.7
13	0.63	e0.37	e0.34	e0.31	e0.30	e0.32	e1.9	e5.6	e35	6.0	1.8	3.6
14	0.73	e0.37	e0.34	e0.31	e0.30	e0.42	e2.0	e5.9	e34	5.8	1.7	3.2
15	0.68	e0.37	e0.34	e0.31	e0.29	e0.48	e2.1	5.9	e36	5.8	1.5	2.9
16	0.62	e0.36	e0.34	e0.31	e0.29	e0.50	e1.9	7.8	e38	5.6	2.7	2.8
17	0.57	e0.36	e0.33	e0.32	e0.29	e0.50	e1.5	11	e35	5.3	5.5	2.6
18	0.54	e0.36	e0.33	e0.32	e0.29	e0.50	e1.5	13	e35	5.1	5.8	2.7
19	0.50	e0.37	e0.33	e0.32	e0.29	e0.47	e1.5	15	e35	5.6	3.5	2.5
20	0.44	e0.37	e0.33	e0.32	e0.28	e0.45	e1.2	17	e38	4.5	2.6	2.3
21	0.44	e0.37	e0.33	e0.32	e0.28	e0.54	e1.0	20	e34	4.0	2.3	2.2
22	0.46	e0.37	e0.33	e0.32	e0.27	e0.64	e1.0	23	e32	3.9	2.3	2.1
23	0.58	e0.35	e0.33	e0.32	e0.27	e0.75	e1.0	28	e30	3.6	2.4	2.0
24	0.57	e0.35	e0.33	e0.32	e0.26	e0.89	e1.0	30	e28	3.5	2.5	1.9
25	0.45	e0.35	e0.33	e0.32	e0.26	e0.89	e1.0	33	e24	3.4	3.6	1.7
26	0.41	e0.35	e0.33	e0.32	e0.26	e0.89	e2.2	35	e22	3.5	2.7	1.6
27	0.52	e0.35	e0.33	e0.32	e0.26	e0.76	e2.2	42	e20	3.6	2.3	1.5
28	0.41	e0.35	e0.33	e0.32	e0.25	e0.81	e3.3	55	e18	3.3	2.5	1.4
29	0.34	e0.35	e0.33	e0.32	---	e0.81	e4.8	70	e17	3.4	2.1	1.4
30	0.32	e0.35	e0.33	e0.32	---	e0.83	e6.2	75	e16	3.1	2.3	1.3
31	e0.39	---	e0.33	e0.31	---	e1.0	---	84	---	2.8	2.5	---
TOTAL	19.59	11.01	10.46	9.93	8.19	15.42	56.7	660.6	1,168	221.4	80.7	71.2
MEAN	0.63	0.37	0.34	0.32	0.29	0.50	1.89	21.3	38.9	7.14	2.60	2.37
MAX	1.2	0.39	0.35	0.33	0.32	1.0	6.2	84	143	16	5.8	3.7
MIN	0.32	0.35	0.33	0.31	0.25	0.24	1.0	5.3	16	2.8	1.5	1.3
AC-FT	39	22	21	20	16	31	112	1,310	2,320	439	160	141

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965	1965
MEAN	1.18	0.80	0.49	0.40	0.36	0.40	1.38	12.4	34.2	12.4	3.11	1.64
MAX	3.90	3.10	1.75	2.45	2.34	2.16	6.53	25.5	53.1	39.5	14.0	7.18
(WY)	(1985)	(1983)	(1986)	(1986)	(1986)	(1985)	(1985)	(1984)	(1984)	(1995)	(1983)	(1979)
MIN	0.36	0.030	0.000	0.000	0.000	0.000	0.26	3.41	9.35	1.37	0.33	0.36
(WY)	(1965)	(1965)	(1965)	(1965)	(1965)	(1965)	(1976)	(1995)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1965 - 2003

ANNUAL TOTAL	784.30	2,333.20	
ANNUAL MEAN	2.15	6.39	5.73
HIGHEST ANNUAL MEAN			11.3 1984
LOWEST ANNUAL MEAN			2.20 2002
HIGHEST DAILY MEAN	21 Jun 1	143 Jun 1	143 Jun 1, 2003
LOWEST DAILY MEAN	0.00 Aug 28	e0.24 Mar 7	a0.00 Nov 10, 1964
ANNUAL SEVEN-DAY MINIMUM	0.00 Aug 28	e0.24 Mar 5	0.00 Nov 10, 1964
MAXIMUM PEAK FLOW		180 Jun 1	180 Jun 1, 2003
MAXIMUM PEAK STAGE		3.03 Jun 1	b3.03 Jun 1, 2003
ANNUAL RUNOFF (AC-FT)	1,560	4,630	4,150
10 PERCENT EXCEEDS	7.9	21	19
50 PERCENT EXCEEDS	0.40	1.0	0.92
90 PERCENT EXCEEDS	0.11	0.31	0.20

e Estimated.

a No flow at times several years.

b Maximum gage height, 3.28 ft, Jun 25, 1983, backwater from debris.

**09066325 GORE CREEK ABOVE RED SANDSTONE CREEK, AT VAIL, CO**

LOCATION.--Lat 39°38'28", long 106°23'39", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.7, T.5 S., R.80 W., Eagle County, Hydrologic Unit 14010003, on left bank 200 ft downstream of the water treatment plant at Vail, 0.1 mi upstream from Red Sandstone Creek, and 0.6 mi downstream from Middle Creek.

DRAINAGE AREA.--77.1 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1999 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09066325](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09066325)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,055 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. No regulation or diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	25	17	13	15	20	23	96	1,730	292	56	46
2	28	24	17	13	15	19	27	87	1,390	290	55	42
3	32	20	16	14	14	18	29	86	1,110	267	55	40
4	31	20	16	14	13	20	27	94	898	254	61	39
5	32	22	17	14	12	20	25	87	803	237	54	38
6	30	20	16	13	12	20	25	80	709	218	50	45
7	32	21	15	12	10	19	23	77	605	201	49	52
8	33	22	14	13	10	20	23	75	541	188	53	53
9	31	24	13	13	11	20	25	72	600	181	47	77
10	29	23	13	14	11	20	34	72	695	169	47	85
11	27	23	14	13	11	21	47	68	781	160	44	85
12	25	21	15	14	11	20	57	73	763	151	41	85
13	23	21	15	15	13	21	61	99	712	117	40	97
14	23	21	15	15	14	24	85	138	690	111	37	80
15	22	21	15	15	15	26	92	203	697	105	34	69
16	22	22	14	15	15	26	75	271	682	105	40	61
17	21	26	15	17	15	26	69	396	631	111	68	55
18	20	23	14	14	14	24	64	444	616	106	97	54
19	19	19	13	15	13	21	57	447	615	98	74	50
20	19	19	14	14	14	19	53	446	620	92	59	45
21	18	20	14	14	18	20	54	490	551	89	52	43
22	18	19	14	16	18	19	59	584	526	83	50	40
23	22	20	13	14	18	21	62	718	499	78	52	38
24	22	21	14	14	18	23	58	815	440	74	50	36
25	21	20	15	14	18	21	61	870	378	73	66	34
26	20	15	13	14	18	20	75	858	353	83	56	33
27	24	19	14	15	18	20	91	995	346	79	51	31
28	22	17	15	15	19	19	95	1,240	342	69	55	30
29	21	17	13	14	---	18	100	1,360	327	69	49	29
30	21	17	13	14	---	19	104	1,370	306	65	51	28
31	23	---	12	14	---	19	---	1,380	---	60	53	---
TOTAL	760	622	448	438	403	643	1,680	14,091	19,956	4,275	1,646	1,540
MEAN	24.5	20.7	14.5	14.1	14.4	20.7	56.0	455	665	138	53.1	51.3
MAX	33	26	17	17	19	26	104	1,380	1,730	292	97	97
MIN	18	15	12	12	10	18	23	68	306	60	34	28
AC-FT	1,510	1,230	889	869	799	1,280	3,330	27,950	39,580	8,480	3,260	3,050

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	2000	2001	2002	2003	2000	2001	2002	2003	2000	2001	2002	2003
MEAN	25.6	19.9	17.6	15.7	15.3	18.9	62.7	400	437	92.5	40.6	34.7
MAX	27.9	22.1	20.0	19.2	19.1	22.4	74.6	531	665	138	53.1	51.3
(WY)	(2000)	(2001)	(2000)	(2000)	(2000)	(2000)	(2000)	(2000)	(2003)	(2003)	(2003)	(2003)
MIN	24.2	17.3	14.5	14.1	12.8	14.2	56.0	203	189	36.6	19.9	21.1
(WY)	(2002)	(2000)	(2003)	(2003)	(2002)	(2002)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 2000 - 2003

ANNUAL TOTAL	19,321.5	46,502		
ANNUAL MEAN	52.9	127	98.5	
HIGHEST ANNUAL MEAN			127	2003
LOWEST ANNUAL MEAN			53.1	2002
HIGHEST DAILY MEAN	451	May 31	1,730	Jun 1, 2003
LOWEST DAILY MEAN	9.3	Sep 6	10	Sep 6, 2002
ANNUAL SEVEN-DAY MINIMUM	9.9	Sep 1	11	Sep 1, 2002
MAXIMUM PEAK FLOW			1,890	Jun 1, 2003
MAXIMUM PEAK STAGE			9.88	Jun 1, 2003
ANNUAL RUNOFF (AC-FT)	38,320	92,240	71,390	
10 PERCENT EXCEEDS	155	445	286	
50 PERCENT EXCEEDS	21	29	25	
90 PERCENT EXCEEDS	13	14	14	

a From rating curve extended above 700 ft<sup>3</sup>/s.





**09066510 GORE CREEK AT MOUTH NEAR MINTURN, CO**  
**(Eagle River Watershed Retrospective Assessment Program)**

LOCATION.--Lat 39°36'34", long 106°26'50", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.22, T.5 S., R.81W., Eagle County, Hydrologic Unit 14010003, on left bank 0.1 mi upstream from the confluence with Eagle River and 2 mi northwest of Minturn.

DRAINAGE AREA.-- 102 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1995 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09066510](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09066510)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,730 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversion upstream from station for Vail water treatment plant.

DISCHARGE, CUBIC FEET PER SECOND  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	26	e21	16	17	18	27	139	e1,960	e320	67	49
2	31	24	20	16	17	18	32	128	e1,590	e320	63	44
3	35	19	20	15	16	17	34	126	e1,270	e295	61	42
4	33	21	20	16	15	18	30	141	e1,020	e280	68	40
5	34	21	21	15	17	19	29	127	e900	e260	59	39
6	32	19	19	15	e15	19	29	115	e800	e235	54	50
7	33	21	e19	e16	e14	19	26	109	e680	e220	54	58
8	35	22	e19	e16	e14	20	25	107	e610	e210	61	59
9	33	25	e18	e17	e14	19	28	103	e674	e200	53	90
10	30	24	e18	e17	e15	19	38	101	e770	e190	49	102
11	28	23	e18	17	e15	20	55	95	e850	e180	47	101
12	26	23	e19	17	e15	22	69	105	e830	e167	46	98
13	23	27	e19	17	e16	24	74	152	e770	e135	45	114
14	23	22	20	17	16	28	104	210	e760	e125	43	92
15	22	21	18	17	16	29	113	302	e760	e120	40	77
16	22	21	17	e17	15	30	96	361	e740	e120	46	69
17	21	26	17	e17	15	31	88	484	e690	e125	86	62
18	21	20	17	e19	15	28	84	526	e670	e120	122	59
19	20	20	17	e18	14	25	74	546	e670	e113	89	55
20	19	20	e18	e18	16	23	68	552	e675	e110	67	49
21	19	20	e18	e18	16	23	71	595	e600	e107	57	45
22	19	22	e19	17	16	22	80	691	e580	104	54	43
23	24	22	e18	17	16	24	85	810	e550	99	56	41
24	24	23	e18	17	16	28	80	884	e480	90	51	39
25	22	22	e18	17	17	24	84	906	e410	85	75	37
26	21	24	e18	17	17	24	105	910	e380	98	62	36
27	25	e23	e17	17	17	24	131	1,050	e365	95	54	35
28	23	e22	18	16	18	21	139	1,380	e355	82	61	33
29	21	e22	16	16	---	19	145	1,510	e350	82	52	32
30	20	e22	16	15	---	e21	150	1,530	e330	77	54	31
31	23	---	e16	17	---	e26	---	1,560	---	70	59	---
TOTAL	793	667	567	517	440	702	2,193	16,355	22,089	4,834	1,855	1,721
MEAN	25.6	22.2	18.3	16.7	15.7	22.6	73.1	528	736	156	59.8	57.4
MAX	35	27	21	19	18	31	150	1,560	1,960	320	122	114
MIN	19	19	16	15	14	17	25	95	330	70	40	31
AC-FT	1,570	1,320	1,120	1,030	873	1,390	4,350	32,440	43,810	9,590	3,680	3,410

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
MEAN	36.1	26.6	21.9	19.2	18.2	26.5	74.4	440	629	176	63.9	41.1
MAX	48.5	33.3	27.0	26.6	22.3	42.4	102	678	1,103	291	108	57.4
(WY)	(1998)	(1997)	(1997)	(1997)	(1997)	(1997)	(1996)	(1996)	(1997)	(1997)	(1997)	(2003)
MIN	25.6	18.2	18.3	15.9	14.0	16.3	48.1	224	196	39.1	20.6	23.4
(WY)	(2003)	(2000)	(2003)	(2002)	(2002)	(2002)	(1998)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1996 - 2003
ANNUAL TOTAL	21,260	52,733	
ANNUAL MEAN	58.2	144	131
HIGHEST ANNUAL MEAN			194
LOWEST ANNUAL MEAN			58.5
HIGHEST DAILY MEAN	439	1,960	1,960
LOWEST DAILY MEAN	11	e14	11
ANNUAL SEVEN-DAY MINIMUM	11	e15	11
MAXIMUM PEAK FLOW		2,690	2,690
MAXIMUM PEAK STAGE		a10.88	a10.88
ANNUAL RUNOFF (AC-FT)	42,170	104,600	95,150
10 PERCENT EXCEEDS	177	534	400
50 PERCENT EXCEEDS	22	31	35
90 PERCENT EXCEEDS	14	17	18

e Estimated.

a From highwater marks.

09066510 GORE CREEK AT MOUTH NEAR MINTURN, CO—Continued  
(Eagle River Watershed Retrospective Assessment Program)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1995 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09066510](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09066510)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1996 to September 1997.

WATER TEMPERATURE: October 1996 to September 1998, July 2002 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry, October 1996 to September 1997. Water temperature sensor and logger, October 1997 to September 1998. Water temperature sensor with satellite telemetry, July 2002 to current year.

REMARKS.--Daily record of water temperature is good, except for the period July 24, 2002 to Dec. 15, 2002 which is fair.

EXTREMES FOR PERIOD OF DAILY RECORD.-

SPECIFIC CONDUCTANCE: Maximum, 464 microsiemens Jan. 29, 1997; minimum, 83 microsiemens June 19-20, 1997.

WATER TEMPERATURE: Maximum, 21.1°C July 30, 2002; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 19.1°C, Aug. 9; minimum, 0.0°C, on many days.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat fltr inc tit field, mg/L as CaCO3 (39086)	
OCT	22...	1010	19	10.1	8.4	342	3.0	160	51.6	8.75	1.34	0.2	7.11	108
NOV	13...	1515	20	10.6	8.9	367	1.5	180	55.0	9.75	1.22	0.3	9.39	104
DEC	16...	1620	26	10.7	8.7	392	0.0	180	55.2	9.45	1.80	0.3	9.08	108
JAN	16...	0945	13	12.2	8.3	446	0.0	200	61.7	10.8	1.81	0.5	14.6	106
FEB	20...	1500	22	11.3	8.6	485	0.2	200	62.4	11.1	3.15	0.6	19.7	117
MAR	27...	0900	21	11.5	8.6	498	0.6	190	58.5	10.8	1.59	0.7	21.6	108
APR	16...	1455	94	9.3	9.0	276	8.0	110	33.8	5.92	0.96	0.5	11.9	73
MAY	21...	0845	550	10.2	8.1	131	2.7	62	19.8	3.17	0.55	0.2	3.15	50
JUN	04...	1345	947	8.9	8.0	117	7.3	56	17.8	2.79	0.59	0.1	2.40	46
JUL	22...	1250	107	8.5	9.1	206	14.3	110	32.8	5.70	0.83	0.2	4.18	73
AUG	14...	0845	43	8.7	8.4	324	11.7	160	49.3	8.28	1.38	0.3	7.41	104
SEP	10...	0920	101	9.0	7.9	202	7.4	92	28.2	5.33	0.84	0.2	4.48	69

## 09066510 GORE CREEK AT MOUTH NEAR MINTURN, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 22...	124	4	12.9	<0.2	4.1	46.0	199	0.27	10.2	0.14	0.16	E.008	0.515
NOV 13...	113	7	19.7	<0.17	4.91	51.4	217	0.30	11.7	0.13	0.18	<0.015	0.709
DEC 16...	128	2	17.1	<0.17	5.2	53.8	222	0.30	15.6	0.19	0.35	0.023	1.22
JAN 16...	126	2	30.5	<0.17	5.4	55.2	251	0.34	9.07	0.12	0.14	E.010	1.37
FEB 20...	120	12	37.1	0.19	4.6	62.7	288	0.39	17.3	0.31	0.69	E.014	3.43
MAR 27...	117	8	54.7	0.17	3.8	46.0	270	0.37	15.3	0.20	0.29	E.008	1.51
APR 16...	73	8	28.9	0.10	4.95	16.8	149	0.20	37.9	0.14	0.28	<0.015	0.521
MAY 21...	62	--	6.46	<0.2	5.3	5.4	75	0.10	112	0.12	0.25	<0.015	0.264
JUN 04...	56	--	4.29	<0.2	5.14	4.4	65	0.09	167	E.07	0.23	<0.015	0.120
JUL 22...	62	13	7.54	<0.2	3.5	19.3	118	0.16	34.0	E.09	0.15	<0.015	0.025
AUG 14...	119	4	13.4	<0.2	4.60	35.1	184	0.25	21.4	0.10	0.24	<0.015	0.517
SEP 10...	85	--	8.46	<0.2	4.4	18.2	113	0.15	30.8	E.10	0.28	<0.015	0.344

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)
OCT 22...	0.004	--	0.083	0.094	0.106	--	--	--
NOV 13...	0.006	--	0.088	0.099	0.114	1.7	E2	E2
DEC 16...	0.020	0.17	0.194	0.21	0.25	--	--	--
JAN 16...	0.004	--	0.169	0.179	0.190	--	--	--
FEB 20...	0.016	--	0.452	0.51	0.58	--	E10	E2
MAR 27...	0.005	--	0.170	0.192	0.20	--	--	--
APR 16...	0.003	--	0.030	0.039	0.068	3.6	E13	28
MAY 21...	E.002	--	E.004	0.008	0.031	--	E3	E7
JUN 04...	0.003	--	<0.007	E.004	0.061	3.5	E4	--
JUL 22...	E.002	--	0.015	0.022	0.033	--	--	--
AUG 14...	0.007	--	0.053	0.066	0.077	1.4	E8	E6
SEP 10...	E.002	--	0.022	0.030	0.070	--	--	--

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## 09066510 GORE CREEK AT MOUTH NEAR MINTURN, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cadmium water, fltrd, ug/L (01025)	Chrom- ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
NOV 13...	<0.2	<0.8	1.2	<10	50	<0.08	E1.4	5.1	<0.02	1.27	<0.5	<0.20	<24
APR 16...	<0.2	<0.8	1.2	13	160	<0.08	2.7	14.6	<0.02	1.39	<0.5	<0.20	<24
JUN 04...	<0.2	<0.8	0.6	13	1,100	E.05	4.0	42.4	<0.02	0.30	<0.5	<0.20	E2
AUG 14...	<0.2	<0.8	0.9	13	50	<0.08	2.8	5.1	<0.02	1.62	<0.5	<0.20	4

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
NOV 13...	1515	20	1.5	--	2	0.14
FEB 20...	1500	22	0.2	--	14	0.85
APR 16...	1455	94	8.0	--	7	1.7
MAY 21...	0845	550	2.7	50	26	39
JUN 04...	1345	947	7.3	35	144	368
AUG 14...	0845	43	11.7	--	13	1.5

## 09066510 GORE CREEK AT MOUTH NEAR MINTURN, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	JUNE			JULY			AUGUST			SEPTEMBER		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	---	---	---	17.4	13.4	15.2	16.5	10.5	13.6
2	---	---	---	---	---	---	---	---	---	17.4	12.5	14.9	18.1	10.0	13.9
3	---	---	---	---	---	---	---	---	---	18.7	14.1	16.0	15.4	11.4	13.7
4	---	---	---	---	---	---	---	---	---	18.8	13.4	16.2	16.7	10.5	13.5
5	---	---	---	---	---	---	---	---	---	17.6	13.7	15.5	16.8	10.0	13.5
6	---	---	---	---	---	---	---	---	---	17.3	12.7	15.0	14.4	11.1	13.1
7	---	---	---	---	---	---	---	---	---	16.9	12.0	14.5	15.1	11.5	13.2
8	---	---	---	---	---	---	---	---	---	17.0	11.1	14.0	17.2	11.8	14.2
9	---	---	---	---	---	---	---	---	---	18.6	11.2	14.7	15.6	12.9	14.1
10	---	---	---	---	---	---	---	---	---	18.9	10.5	14.5	15.6	12.0	13.5
11	---	---	---	---	---	---	---	---	---	19.0	10.9	14.7	14.8	12.2	13.4
12	---	---	---	---	---	---	---	---	---	17.3	10.9	14.2	14.1	11.2	12.4
13	---	---	---	---	---	---	---	---	---	17.9	11.5	14.5	12.6	10.0	11.1
14	---	---	---	---	---	---	---	---	---	18.9	10.6	14.5	14.9	7.6	11.0
15	---	---	---	---	---	---	---	---	---	19.2	10.7	14.8	15.3	8.6	11.7
16	---	---	---	---	---	---	---	---	---	19.2	11.1	15.0	15.0	8.7	11.7
17	---	---	---	---	---	---	---	---	---	18.6	11.6	15.1	12.9	9.6	11.1
18	---	---	---	---	---	---	---	---	---	18.1	11.8	14.9	11.1	8.8	9.9
19	---	---	---	---	---	---	---	---	---	18.0	11.8	15.0	10.0	7.1	8.6
20	---	---	---	---	---	---	---	---	---	16.8	13.5	14.9	13.3	6.3	9.4
21	---	---	---	---	---	---	---	---	---	16.1	12.3	14.1	13.5	7.1	10.2
22	---	---	---	---	---	---	---	---	---	16.7	10.5	13.3	13.2	7.0	10
23	---	---	---	---	---	---	---	---	---	17.6	11.0	14.2	12.8	6.6	9.6
24	---	---	---	---	---	---	---	---	---	18.7	11.3	14.9	12.9	6.8	9.7
25	---	---	---	---	---	---	---	---	---	17.4	14.4	15.9	17.2	10.1	13.9
26	---	---	---	---	---	---	---	---	---	19.4	12.6	15.6	18.3	10.7	14.5
27	---	---	---	---	---	---	---	---	---	18.6	12.0	15.3	17.8	11.4	14.6
28	---	---	---	---	---	---	---	---	---	19.2	12.6	15.7	16.0	11.5	14.0
29	---	---	---	---	---	---	---	---	---	20.2	11.3	15.6	15.0	11.9	13.4
30	---	---	---	---	---	---	---	---	---	21.1	12.5	16.5	17.0	9.7	13.3
31	---	---	---	---	---	---	---	---	---	20.4	12.7	16.6	16.6	10.7	13.8
MONTH	---	---	---	---	---	---	---	---	---	19.2	9.7	14.6	18.1	6.1	11.3

## EAGLE RIVER BASIN

09066510 GORE CREEK AT MOUTH NEAR MINTURN, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	10.3	5.5	8.1	5.4	1.0	3.1	2.2	0.0	1.0	2.1	0.4	1.2
2	11.5	6.6	9.0	4.2	1.8	2.9	3.0	1.3	2.2	1.5	0.0	0.5
3	9.3	6.1	7.3	2.7	0.0	1.2	1.5	0.0	0.7	3.3	0.9	1.9
4	7.4	5.0	6.2	2.6	0.0	1.0	2.0	0.0	0.8	3.5	1.3	2.4
5	8.2	5.9	6.9	3.7	0.6	1.7	3.5	1.3	2.1	3.1	1.7	2.5
6	10.3	4.6	7.2	1.8	0.0	0.6	1.8	0.1	0.9	2.1	0.0	0.9
7	10.2	4.8	7.5	3.0	0.0	1.1	0.2	0.0	0.0	0.4	0.0	0.0
8	10.2	5.1	7.6	3.3	1.6	2.5	0.0	0.0	0.0	0.0	0.0	0.0
9	9.9	4.7	7.2	3.0	0.7	1.6	0.0	0.0	0.0	0.0	0.0	0.0
10	9.4	4.2	6.9	2.8	0.4	1.5	0.0	0.0	0.0	2.4	0.0	1.2
11	7.9	4.7	6.6	3.2	0.0	0.9	0.0	0.0	0.0	3.1	2.0	2.4
12	8.5	4.2	6.3	0.3	0.0	0.0	0.0	0.0	0.0	2.7	1.1	1.9
13	7.8	2.3	4.9	1.7	0.0	0.6	0.2	0.0	0.0	2.1	0.0	0.8
14	8.0	2.7	5.2	4.1	0.9	2.1	0.7	0.0	0.2	2.7	0.3	1.4
15	7.8	2.6	5.0	2.8	0.4	1.4	1.8	0.0	0.7	1.7	0.3	0.9
16	7.9	2.8	5.2	0.4	0.0	0.1	1.2	0.0	0.4	0.3	0.0	0.0
17	7.9	2.5	5.0	0.9	0.0	0.1	2.1	1.1	1.5	1.8	0.0	0.6
18	7.8	2.7	5.0	2.4	0.2	1.1	1.2	0.0	0.6	0.0	0.0	0.0
19	7.7	2.7	4.9	1.7	0.0	0.5	0.5	0.0	0.1	0.0	0.0	0.0
20	6.2	2.3	4.2	3.3	0.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0
21	7.0	1.9	4.3	2.6	0.0	1.1	0.0	0.0	0.0	2.2	0.0	0.6
22	6.4	3.3	4.7	2.3	0.0	0.8	0.0	0.0	0.0	2.8	0.5	1.5
23	7.2	4.5	5.8	2.8	0.0	1.2	0.0	0.0	0.0	3.6	1.7	2.5
24	6.8	4.8	5.7	3.5	1.5	2.2	0.0	0.0	0.0	3.8	1.5	2.7
25	6.3	3.0	4.7	2.2	0.0	1.0	0.0	0.0	0.0	4.0	2.3	3.2
26	6.3	2.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	3.8	1.5	2.5
27	6.7	4.4	5.3	0.0	0.0	0.0	0.4	0.0	0.0	4.1	1.1	2.6
28	6.6	4.0	4.9	0.0	0.0	0.0	1.3	0.0	0.3	3.1	1.5	2.4
29	4.0	2.2	3.0	0.0	0.0	0.0	2.0	0.0	0.7	3.8	1.5	2.5
30	3.9	1.0	2.3	0.0	0.0	0.0	1.3	0.2	0.9	2.7	0.7	1.8
31	3.9	0.2	1.9	---	---	---	1.9	0.0	0.5	5.6	2.6	3.7
MONTH	11.5	0.2	5.6	5.4	0.0	1.1	3.5	0.0	0.4	5.6	0.0	1.4
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	4.8	1.8	3.2	4.0	0.0	1.8	9.7	2.6	6.0	6.6	1.6	4.0
2	4.2	2.2	3.0	4.7	0.0	1.9	8.9	2.4	5.6	7.2	1.9	4.4
3	2.4	0.3	1.3	3.5	0.0	1.1	5.5	2.8	4.1	8.4	3.0	5.5
4	0.6	0.0	0.1	2.5	0.0	1.3	5.8	0.8	3.3	5.8	1.4	4.0
5	0.6	0.0	0.1	2.8	0.0	0.6	6.9	1.1	3.8	7.3	2.1	4.6
6	0.0	0.0	0.0	4.4	0.0	1.8	5.4	1.3	2.9	7.8	2.5	5.1
7	0.0	0.0	0.0	5.9	2.0	3.6	4.6	0.7	2.7	7.7	2.3	4.9
8	0.0	0.0	0.0	7.0	2.0	4.1	9.5	0.0	4.0	6.7	3.4	5.1
9	0.0	0.0	0.0	6.2	1.1	3.6	11.0	1.6	5.9	8.3	3.4	5.4
10	0.0	0.0	0.0	7.3	1.7	4.3	11.2	2.7	6.5	6.5	2.5	4.4
11	0.0	0.0	0.0	8.4	3.4	5.5	10.2	2.4	6.0	8.5	1.6	5.0
12	0.0	0.0	0.0	8.2	3.2	5.4	7.1	1.8	4.7	11.5	2.5	6.6
13	2.4	0.0	0.6	8.6	1.8	5.0	10.6	1.8	5.6	9.5	3.3	6.5
14	3.3	1.9	2.5	6.4	1.4	4.1	8.7	1.3	4.8	11.2	3.1	6.6
15	4.6	2.0	3.2	7.9	2.1	4.9	4.9	1.6	3.3	6.6	3.2	5.0
16	3.7	1.1	2.5	5.2	2.3	3.9	9.6	1.5	4.8	9.4	3.3	5.6
17	3.7	0.4	1.9	4.6	1.6	3.0	7.7	1.9	4.9	7.7	2.3	4.5
18	4.5	1.7	2.9	4.5	0.9	2.8	6.6	2.6	4.5	6.9	2.6	4.3
19	3.1	0.0	1.4	7.4	1.4	4.0	5.4	1.7	3.6	7.9	2.5	4.5
20	2.2	0.0	0.5	7.7	2.0	4.8	10.2	2.4	5.8	7.8	2.4	4.5
21	3.1	0.6	1.5	6.9	3.4	5.0	8.3	3.1	5.8	8.4	2.0	4.6
22	2.7	0.6	1.3	9.3	2.7	5.6	8.3	3.6	6.0	9.0	2.4	4.8
23	2.4	0.0	0.9	8.9	2.7	5.8	6.3	0.0	2.1	8.4	2.5	4.6
24	3.6	0.0	1.6	6.3	3.1	4.2	4.8	0.0	1.7	7.8	2.6	4.6
25	3.6	1.5	2.5	8.7	1.3	4.6	9.9	0.8	4.7	6.4	3.0	4.5
26	3.3	1.1	2.2	4.9	1.7	3.6	10.3	1.6	5.5	7.0	2.9	4.7
27	3.3	1.2	2.1	6.8	0.3	2.9	8.7	2.1	5.2	8.8	3.3	5.1
28	3.8	0.0	1.3	5.1	0.0	2.0	8.8	2.0	5.1	8.1	3.1	4.9
29	---	---	---	2.6	0.0	0.9	7.9	2.4	5.1	8.4	3.3	5.0
30	---	---	---	6.3	---	---	6.7	2.7	4.6	7.9	3.5	4.9
31	---	---	---	---	1.9	---	---	---	---	8.2	3.6	5.2
MONTH	4.8	0.0	1.3	---	---	---	11.2	0.0	4.6	11.5	1.4	4.9

## 09066510 GORE CREEK AT MOUTH NEAR MINTURN, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	6.3	3.8	4.7	12.8	7.1	9.8	16.6	10.8	13.8	15.8	9.0	12.3
2	---	---	---	13.3	6.6	9.8	18.2	10.9	14.3	16.0	9.4	12.6
3	---	---	---	13.4	7.0	10.1	16.8	12.6	14.8	16.0	10.5	13.0
4	8.0	3.2	5.2	13.7	7.1	10.3	17.5	11.5	14.4	15.3	9.4	12.3
5	7.8	4.1	5.4	13.9	7.0	10.4	17.5	11.0	14.4	14.4	10.2	12.6
6	7.1	2.9	4.9	14.0	7.5	10.5	16.2	11.3	14.0	14.6	11.0	12.8
7	7.8	3.7	5.5	12.7	7.7	10.3	17.6	11.6	14.3	12.9	10.3	11.5
8	9.5	2.7	5.7	14.8	7.6	11.0	18.7	11.9	14.9	13.4	8.0	10.6
9	8.7	3.9	6.0	14.3	7.5	10.9	19.1	11.9	15.3	12.0	9.2	10.5
10	8.8	4.5	6.1	14.8	7.5	11.0	18.2	12.2	15.2	10.2	7.1	8.7
11	9.5	3.9	6.1	15.5	7.6	11.1	17.6	12.4	14.9	9.1	6.3	7.5
12	9.2	3.7	6.0	---	---	---	18.0	11.6	14.7	12.3	5.7	8.7
13	9.1	4.6	6.4	---	---	---	18.3	12.0	15.0	10.4	7.1	8.8
14	9.7	4.3	6.6	---	---	---	18.9	11.8	15.1	10.3	3.9	6.9
15	10.6	4.1	6.8	---	---	---	17.8	11.2	14.5	11.1	4.3	7.5
16	7.7	4.8	6.2	---	---	---	15.0	12.1	13.7	11.3	5.5	8.3
17	9.3	4.3	6.6	---	---	---	13.5	10.9	12.3	11.6	6.5	8.8
18	10.0	4.9	7.1	---	---	---	12.9	10.3	11.7	10.4	5.0	7.7
19	8.3	4.8	6.6	---	---	---	16.0	8.9	12.1	10.7	4.1	7.4
20	8.3	5.1	6.7	---	---	---	16.7	9.7	13.2	10.7	5.1	8.0
21	10.4	4.7	7.0	---	---	---	14.9	10.7	13.1	11.0	5.1	8.1
22	10.6	4.5	7.3	16.5	10.7	13.5	15.4	11.3	13.4	11.3	4.8	8.0
23	10.7	4.8	7.6	16.9	11.0	13.7	15.5	11.1	13.4	11.6	5.3	8.4
24	10.0	4.9	7.4	16.6	10.8	13.8	18.2	11.3	14.4	11.7	5.5	8.6
25	10.4	5.5	7.7	16.8	11.4	14.0	16.1	11.4	13.7	11.3	5.3	8.3
26	11.1	4.5	7.7	17.8	10.9	13.9	15.1	10.3	12.8	11.8	5.7	8.6
27	11.7	5.1	8.3	16.5	11.8	13.9	15.6	11.2	13.5	12.1	6.2	9.1
28	12.3	5.6	8.8	16.9	10.8	13.8	16.3	11.3	13.7	12.5	6.5	9.3
29	12.5	6.2	9.2	16.6	11.2	13.7	15.7	10.4	13.2	12.3	6.6	9.4
30	11.9	6.3	9.1	17.3	10.3	13.5	15.0	11.1	12.6	12.5	8.0	10.1
31	---	---	---	17.1	10.5	13.3	15.3	9.3	11.9	---	---	---
MONTH	---	---	---	---	---	---	19.1	8.9	13.8	16.0	3.9	9.5



## 09067000 BEAVER CREEK AT AVON, CO

LOCATION.--Lat 39°37'47", long 106°31'20", in NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.12, T.5 S., R.82 W., Eagle County, Hydrologic Unit 14010003, on left bank at Avon, 550 ft upstream from U.S. Highway 6 and 24, and 700 ft upstream from mouth.

DRAINAGE AREA.--14.8 mi<sup>2</sup>.

PERIOD OF RECORD.--January to December 1911, January 1912 to September 1914 (gage heights and discharge measurements only), May 1974 to February 1988, October 1988 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09067000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09067000)

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,453 ft above NGVD of 1929, from topographic map. Prior to May 1, 1974, nonrecording gage near present site, at different datum.

REMARKS.--Records good except for estimated daily discharges, and the period Apr. 10 to Sept. 30, which are poor. Diversions upstream from station for irrigation upstream and downstream from station. Slight natural regulation by several small lakes in headwaters. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	3.9	e2.6	e2.1	e2.1	e2.5	3.8	9.7	e145	23	5.3	e4.4
2	4.1	3.8	2.6	e2.1	e2.1	e2.4	4.2	6.6	e109	20	5.1	e3.9
3	4.7	3.5	2.6	e2.1	e2.1	e2.6	3.9	7.9	e92	19	5.2	e3.5
4	4.3	e3.4	e2.6	e2.1	e2.1	e2.5	3.4	10	e83	19	4.7	e3.2
5	4.4	3.3	2.6	e2.1	e2.1	e2.6	2.9	7.1	e70	17	4.9	e3.0
6	4.2	e3.1	2.6	e2.1	e2.1	e2.5	3.1	5.1	e59	16	5.5	e3.5
7	4.2	e3.0	e2.5	e2.1	e2.1	e2.7	3.0	4.9	e56	15	5.4	e4.3
8	4.0	3.0	e2.5	e2.1	e2.2	e2.8	3.3	5.0	e50	14	5.8	e5.4
9	3.9	3.5	e2.5	2.1	e2.2	2.9	3.2	5.2	e54	14	5.7	e6.7
10	3.8	3.3	e2.5	2.1	e2.2	3.0	4.3	5.8	58	12	4.9	e7.5
11	3.8	3.2	e2.5	2.1	e2.2	3.1	5.9	4.5	60	11	5.1	7.4
12	4.2	e3.0	e2.4	2.1	e2.2	3.2	6.4	7.7	57	11	5.1	6.6
13	3.6	e3.0	e2.3	2.1	e2.2	3.3	7.3	15	59	11	5.4	6.0
14	3.5	3.1	2.3	2.1	e2.3	3.4	8.7	25	53	9.7	4.7	5.9
15	3.3	3.1	2.3	2.2	e2.2	3.5	9.1	29	60	9.6	3.8	5.4
16	3.2	e2.9	2.2	e2.2	e2.3	3.4	7.5	43	60	9.8	4.5	4.3
17	2.8	e3.0	2.3	e2.2	e2.4	3.8	6.7	56	58	8.7	7.8	4.0
18	2.8	3.0	2.3	e2.2	e2.3	3.8	6.8	60	56	8.8	10	4.3
19	2.7	e2.8	2.3	e2.2	e2.4	3.4	5.9	60	52	8.4	8.2	3.7
20	2.7	e2.8	2.2	e2.2	e2.5	3.3	5.9	52	56	7.8	6.2	3.7
21	2.7	e2.8	2.3	e2.2	e2.4	3.5	7.7	57	49	7.6	5.2	3.5
22	2.8	e2.8	2.3	e2.1	e2.4	3.7	10	67	44	7.2	5.2	3.2
23	3.6	e2.8	2.2	e2.1	e2.4	4.1	10	80	42	7.1	4.5	3.5
24	3.4	2.7	2.2	e2.1	e2.4	4.2	9.6	85	39	6.4	4.4	3.2
25	3.2	e2.7	2.3	e2.1	e2.4	3.6	11	e92	36	6.5	e4.5	3.2
26	3.0	e2.6	2.2	e2.1	e2.5	3.5	10	e95	33	7.8	e4.5	3.3
27	3.5	e2.6	2.2	e2.1	e2.5	3.7	12	e105	33	7.6	e4.4	2.7
28	3.2	e2.6	2.2	e2.1	e2.5	3.6	14	e130	33	7.5	e5.0	2.9
29	2.7	e2.6	2.2	e2.1	---	4.1	15	e138	28	6.7	e4.5	2.5
30	3.2	e2.6	e2.1	e2.1	---	3.1	15	e130	26	6.5	e4.3	2.6
31	3.7	---	2.1	e2.1	---	3.4	---	e116	---	5.9	e4.9	---
TOTAL	109.7	90.5	73.0	65.8	63.8	101.2	219.6	1,514.5	1,710	341.6	164.7	127.3
MEAN	3.54	3.02	2.35	2.12	2.28	3.26	7.32	48.9	57.0	11.0	5.31	4.24
MAX	4.7	3.9	2.6	2.2	2.5	4.2	15	138	145	23	10	7.5
MIN	2.7	2.6	2.1	2.1	2.1	2.4	2.9	4.5	26	5.9	3.8	2.5
AC-FT	218	180	145	131	127	201	436	3,000	3,390	678	327	252

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2003, BY WATER YEAR (WY)

MEAN	4.46	3.61	2.97	2.51	2.40	2.99	6.48	29.8	60.3	27.6	9.65	5.64
MAX	8.42	5.78	5.01	4.17	3.99	4.71	11.2	60.3	114	79.5	25.6	10.6
(WY)	(1998)	(1997)	(1984)	(1986)	(1986)	(1997)	(1996)	(2000)	(1983)	(1983)	(1984)	(1984)
MIN	2.28	2.07	1.65	1.44	1.51	1.49	2.48	11.5	17.5	4.69	2.34	1.41
(WY)	(1981)	(1980)	(1995)	(1981)	(1977)	(1977)	(1975)	(1977)	(2002)	(2002)	(1977)	(1977)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1974 - 2003

ANNUAL TOTAL	2,136.9	4,581.7	
ANNUAL MEAN	5.85	12.6	
HIGHEST ANNUAL MEAN			13.2
LOWEST ANNUAL MEAN			22.7 1984
HIGHEST DAILY MEAN	36 Jun 2	e145 Jun 1	4.94 1977
LOWEST DAILY MEAN	1.7 Sep 6	e2.1 Dec 30	242 Jun 27, 1983
ANNUAL SEVEN-DAY MINIMUM	2.0 Sep 2	e2.1 Dec 30	0.55 Sep 10, 1977
MAXIMUM PEAK FLOW		unknown	0.75 Sep 5, 1977
MAXIMUM PEAK STAGE		unknown	249 Jun 27, 1983
ANNUAL RUNOFF (AC-FT)	4,240	9,090	3.46 Jun 27, 1983
10 PERCENT EXCEEDS	13	46	9,550
50 PERCENT EXCEEDS	3.2	3.7	39
90 PERCENT EXCEEDS	2.3	2.2	4.4
			2.1

e Estimated.

## 09067005 EAGLE RIVER AT AVON, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 39°37'54", long 106°31'19", in SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.12, T.5 S., R.82 W., Eagle County, Hydrologic Unit 14010003, on left bank 100 ft downstream from bridge, 300 ft north of Highway 6 and 24, and 350 ft downstream from Beaver Creek, in the city of Avon.

DRAINAGE AREA.--395 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1993 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09067005](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09067005)

REMARKS.--Records of discharge are given for Eagle River below wastewater treatment plant at Avon (station 09067020), located 0.6 mi downstream; flows are considered to be equivalent. Additional water-quality data were collected and are published in the "Eagle River Watershed Retrospective Assessment Program" section of this report.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
OCT													
22...	1210	67	--	9.8	8.1	293	4.0	140	38.3	10.6	1.08	0.2	6.02
NOV													
14...	0850	92	--	10.7	7.8	262	0.5	120	33.0	9.75	0.90	0.2	5.57
DEC													
16...	1345	62	--	11.3	8.2	324	0.5	150	39.6	11.3	1.30	0.2	6.40
JAN													
16...	1200	39	--	13.3	8.3	401	0.0	190	51.5	14.3	1.43	0.3	8.85
FEB													
21...	0850	52	--	11.1	8.2	379	0.2	170	46.2	13.8	1.44	0.3	8.90
MAR													
27...	1240	71	--	10.6	8.4	393	4.1	170	44.5	13.3	1.30	0.4	11.8
APR													
17...	0915	241	--	10.4	7.9	223	2.7	95	26.0	7.32	0.81	0.3	6.57
24...	1135	225	6.3	10.7	8.0	240	0.7	100	28.5	8.03	0.93	0.3	6.18
MAY													
02...	1425	362	5.4	9.2	8.2	221	5.6	94	25.9	7.15	0.87	0.2	4.90
07...	1048	301	2.5	9.4	8.3	233	5.0	100	27.7	7.56	0.87	0.2	5.15
13...	1025	399	4.3	9.3	8.3	207	5.8	91	25.1	6.73	0.86	0.2	4.59
21...	1130	1,240	5.4	9.9	8.1	128	5.8	--	--	4.43	0.62	--	2.45
28...	1410	2,910	15	8.7	7.8	93	8.7	41	11.4	2.96	0.57	0.1	1.50
JUN													
04...	1030	2,560	11	9.5	7.9	105	5.3	50	14.2	3.41	0.60	0.1	1.62
JUL													
23...	1145	261	--	8.2	8.6	202	13.6	97	27.6	6.91	0.70	0.1	3.13
AUG													
14...	1045	141	--	8.4	8.4	246	14.4	120	33.1	8.35	0.96	0.2	4.14
SEP													
10...	1450	306	--	8.4	8.2	179	10.4	80	22.1	5.92	0.95	0.2	3.48

## 09067005 EAGLE RIVER AT AVON, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 22...	78	95	--	5.89	<0.2	5.3	58.4	173	0.24	31.4	E.08	0.11	<0.015
NOV 14...	69	84	--	7.26	<0.17	5.6	46.6	152	0.21	37.6	E.07	0.12	<0.015
DEC 16...	80	98	--	7.68	<0.17	6.4	60.5	184	0.25	30.8	0.11	0.12	0.023
JAN 16...	90	104	3	12.4	<0.17	6.9	79.0	231	0.31	24.4	E.06	0.11	E.008
FEB 21...	94	114	--	12.8	0.12	6.9	73.2	223	0.30	31.3	E.09	0.11	<0.015
MAR 27...	87	106	4	24.0	0.12	6.0	66.6	226	0.31	43.3	0.15	0.21	E.009
APR 17...	58	70	--	12.9	0.07	6.5	27.4	124	0.17	80.7	0.31	0.23	<0.015
24...	62	75	--	11.4	<0.17	6.39	30.6	130	0.18	78.7	--	--	--
MAY 02...	68	78	2	8.04	<0.17	6.71	22.0	117	0.16	114	--	--	--
07...	74	90	--	10.2	<0.17	6.31	22.2	125	0.17	101	--	--	--
13...	58	70	--	8.72	<0.2	5.87	19.4	106	0.14	114	--	--	--
21...	46	56	--	3.49	<0.2	5.90	8.8	8.8			0.15	0.28	<0.015
28...	36	43	--	1.93	<0.2	4.68	5.3	50	0.07	392	--	--	--
JUN 04...	42	51	--	2.03	<0.2	5.26	6.0	59	0.08	406	E.10	0.24	<0.015
JUL 23...	--	--	--	4.39	<0.2	4.4	25.6	--	--	--	0.10	0.10	<0.015
AUG 14...	78	95	6	6.09	<0.2	5.6	31.0	143	0.19	54.4	E.10	0.15	<0.015
SEP 10...	56	68	--	4.85	<0.2	5.0	23.5	100	0.14	82.6	E.08	0.35	<0.015

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF 100 mL (31625)
OCT 22...	0.193	E.002	--	0.012	0.017	0.024	--	--	--
NOV 14...	0.251	<0.002	--	0.008	0.012	0.020	1.8	43	21
DEC 16...	0.560	0.008	0.09	0.043	0.050	0.061	--	--	--
JAN 16...	0.639	0.003	--	0.048	0.055	0.068	--	--	--
FEB 21...	0.716	0.003	--	0.058	0.069	0.083	--	E5	E8
MAR 27...	0.531	0.003	--	0.030	0.037	0.066	--	--	--
APR 17...	0.403	E.002	--	0.007	0.012	0.031	4.1	E3	E2
24...	--	--	--	--	--	--	--	--	--
MAY 02...	--	--	--	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--
21...	0.224	E.002	--	<0.007	0.007	0.026	--	E4	E6
28...	--	--	--	--	--	--	--	--	--
JUN 04...	0.095	0.003	--	<0.007	E.003	0.037	3.6	E5	--
JUL 23...	0.062	<0.002	--	<0.007	0.005	0.016	--	--	--
AUG 14...	0.227	0.003	--	<0.007	0.016	0.026	1.6	33	30
SEP 10...	0.187	0.003	--	0.008	0.015	0.082	--	--	--

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## 09067005 EAGLE RIVER AT AVON, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)
NOV 14...	--	--	<0.2	--	E.9	83	320	<1	73.3	97.7	<0.02	--	<3
APR 17...	--	--	E.2	--	3.7	--	530	<1	93.7	136	<0.02	--	<3
24...	28	E.1	0.33	<0.8	--	138	690	0.37	115	256	--	1.09	--
MAY 02...	31	E.2	0.24	<0.8	--	91	400	0.18	58.5	80	--	0.82	--
07...	28	E.2	0.27	<0.8	--	123	360	0.23	71.5	79	--	0.94	--
13...	25	E.2	0.20	<0.8	--	118	420	0.22	50.1	75	--	1.32	--
21...	86	E.2	0.08	0.8	--	86	420	0.40	19.5	59	--	1.61	--
28...	41	E.2	0.04	--	1.8	45	--	--	13.9	--	--	--	--
JUN 04...	32	E.1	0.04	--	1.4	39	--	<1	10.3	60.2	<0.02	--	<3
AUG 14...	--	--	<0.2	--	7.6	--	330	<1	42.9	53.0	<0.02	--	<3

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)
NOV 14...	<0.3	53	--
APR 17...	<0.3	120	--
24...	<0.20	138	230
MAY 02...	<0.20	72	101
07...	<0.20	92	112
13...	<0.20	64	100
21...	<0.20	29	43
28...	--	12	--
JUN 04...	<0.3	11	--
AUG 14...	<0.3	23	--

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diameter percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV 14...	0850	92	0.5	--	3	0.72
FEB 21...	0850	52	0.2	--	4	0.56
APR 17...	0915	241	2.7	--	7	4.5
MAY 21...	1130	1,240	5.8	60	17	57
JUN 04...	1030	2,560	5.3	40	64	442
AUG 14...	1045	141	14.4	--	5	1.8

## 09067020 EAGLE RIVER BELOW WASTEWATER TREATMENT PLANT AT AVON, CO

LOCATION.--Lat 39°38'06", long 106°31'57", in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.11, T.5 S., R.82 W., Eagle County, Hydrologic Unit 14010003, on right bank 60 ft downstream from Eagle River Wastewater Treatment Plant effluent discharge point, and 0.2 mi upstream from Beaver Creek Boulevard bridge, in the city of Avon.

DRAINAGE AREA.--402 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1999 to current year. October 1988 to September 1999, streamflow data were collected 0.6 mi upstream at site 09067005 Eagle River at Avon; streamflow records are considered to be equivalent. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09067020](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09067020)

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 7,380 ft above NGVD of 1929, from topographic map. Prior to October 14, 1999, streamflow data were collected 0.6 mi upstream at site 09067005 Eagle River at Avon; streamflow records are considered to be equivalent.

REMARKS.--No estimated daily discharges. Records good except Nov. 18 to Mar. 18 and May 28 to June 13, which are fair, and June 14 to July 1, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, and diversions for irrigation and municipal use.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	88	66	58	51	54	85	423	3,730	841	197	143
2	120	86	66	53	52	52	102	375	3,400	820	186	128
3	133	71	62	55	50	49	112	368	2,940	780	179	118
4	131	66	60	54	44	54	102	415	2,600	731	209	117
5	128	73	59	52	50	55	90	370	2,310	674	181	111
6	121	58	50	48	45	51	92	327	2,040	618	164	131
7	116	65	47	45	40	54	84	309	1,870	569	160	165
8	116	80	44	43	42	56	77	304	1,680	522	170	181
9	114	90	37	48	50	56	87	295	1,700	494	158	224
10	109	81	38	58	48	58	114	298	1,830	452	144	283
11	104	89	47	54	52	60	158	276	1,830	423	136	297
12	96	78	51	53	48	65	190	292	1,750	397	137	262
13	88	85	56	49	49	71	206	396	1,730	378	137	303
14	86	88	53	49	52	78	277	491	1,650	363	137	258
15	83	81	61	43	48	81	306	707	1,680	349	120	220
16	81	66	62	44	44	84	268	850	1,680	358	121	194
17	76	72	67	49	47	86	260	1,130	1,530	347	192	175
18	74	79	69	40	45	80	262	1,260	1,520	338	298	168
19	71	68	62	46	44	73	232	1,300	1,490	326	255	160
20	68	73	54	44	43	69	213	1,250	1,550	305	193	151
21	69	71	67	46	49	73	218	1,280	1,420	294	160	139
22	69	71	60	45	49	70	246	1,380	1,370	274	147	132
23	77	69	51	45	48	76	271	1,780	1,330	255	158	125
24	80	71	61	48	49	89	244	2,060	1,210	242	163	121
25	78	68	56	49	51	81	252	2,240	1,080	245	196	120
26	71	42	48	48	51	78	316	2,170	985	300	184	116
27	83	55	51	51	52	80	387	2,460	989	300	163	112
28	81	63	50	50	51	73	423	3,170	974	280	176	109
29	77	65	52	48	---	66	452	3,660	958	256	151	107
30	68	62	53	47	---	70	475	3,970	900	242	149	103
31	79	---	49	50	---	71	---	3,550	---	212	162	---
TOTAL	2,876	2,174	1,709	1,512	1,344	2,113	6,601	39,156	51,726	12,985	5,283	4,973
MEAN	92.8	72.5	55.1	48.8	48.0	68.2	220	1,263	1,724	419	170	166
MAX	133	90	69	58	52	89	475	3,970	3,730	841	298	303
MIN	68	42	37	40	40	49	77	276	900	212	120	103
AC-FT	5,700	4,310	3,390	3,000	2,670	4,190	13,090	77,670	102,600	25,760	10,480	9,860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

MEAN	101	75.1	66.3	63.2	58.4	67.6	250	1,174	1,158	296	146	124
MAX	128	78.6	83.9	74.9	69.1	76.8	298	1,665	1,724	419	188	166
(WY)	(2000)	(2001)	(2001)	(2001)	(2000)	(2000)	(2000)	(2000)	(2003)	(2003)	(2001)	(2003)
MIN	77.2	70.9	55.1	48.8	48.0	53.5	220	555	488	114	65.1	80.0
(WY)	(2002)	(2002)	(2003)	(2003)	(2003)	(2002)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 2000 - 2003
ANNUAL TOTAL	59,477	132,452	
ANNUAL MEAN	163	363	299
HIGHEST ANNUAL MEAN			369
LOWEST ANNUAL MEAN			163
HIGHEST DAILY MEAN	1,060	3,970	3,970
LOWEST DAILY MEAN	29	37	a29
ANNUAL SEVEN-DAY MINIMUM	31	45	31
MAXIMUM PEAK FLOW		4,670	4,670
MAXIMUM PEAK STAGE		9.26	9.26
ANNUAL RUNOFF (AC-FT)	118,000	262,700	216,700
10 PERCENT EXCEEDS	448	1,250	837
50 PERCENT EXCEEDS	74	109	95
90 PERCENT EXCEEDS	48	49	53

a Also occurred Sep 7, 2002.

## 09067200 LAKE CREEK NEAR EDWARDS, CO

LOCATION.--Lat 39°38'51", long 106°36'31", in SE¼NE¼ sec.6, T.5 S., R.82 W., Eagle County, Hydrologic Unit 14010003, on right bank 30 ft upstream from U.S. Highway 6, and 1.0 mi west of Edwards.

DRAINAGE AREA.--49.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1993 to current year. Published as station number 09066980 during the 1994-96 water years. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09067200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09067200)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,160 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	22	13	9.5	8.4	9.2	12	39	650	143	42	23
2	38	21	13	9.7	8.4	8.9	13	35	644	158	38	21
3	39	18	12	9.3	8.2	9.4	13	33	539	150	33	22
4	37	17	e12	9.2	8.5	8.9	12	38	453	134	30	19
5	35	19	12	9.2	8.3	9.1	12	38	347	121	28	20
6	33	16	11	9.2	8.8	8.9	12	37	221	107	26	22
7	32	16	e11	e9.0	e7.7	9.3	11	32	191	97	26	29
8	32	15	e11	e9.0	e8.6	9.8	11	30	174	95	29	36
9	31	17	e11	e9.0	8.5	10	12	27	215	94	27	43
10	27	17	e11	9.1	8.2	10	14	27	340	90	26	58
11	26	18	e11	9.0	8.3	11	16	25	366	84	23	58
12	23	15	11	9.0	8.4	11	18	25	344	77	23	54
13	21	17	11	8.5	8.3	12	20	35	336	72	22	69
14	20	16	10	8.0	8.8	12	23	44	271	68	23	56
15	18	16	11	7.7	8.5	12	28	72	353	62	21	49
16	17	15	11	8.4	8.7	12	29	106	384	69	21	43
17	16	16	11	8.3	8.9	12	30	142	279	62	26	38
18	17	15	10	9.5	8.8	12	28	190	268	62	71	35
19	18	14	10	9.4	8.9	11	24	181	228	63	58	34
20	16	14	e10	9.2	9.6	11	22	149	239	58	42	32
21	15	14	11	8.3	9.0	12	22	159	230	54	32	29
22	16	13	10	8.3	8.9	12	23	214	232	52	28	28
23	18	13	e10	8.3	8.8	12	26	286	235	50	29	24
24	18	13	11	8.2	8.8	13	24	303	205	47	30	22
25	17	14	10	8.2	9.1	12	28	307	171	50	30	22
26	17	e13	10	8.2	9.3	12	31	315	135	67	30	23
27	20	e14	9.8	8.3	9.3	12	35	493	165	56	26	22
28	19	e13	9.7	8.2	9.2	11	41	570	174	54	29	21
29	19	e13	9.5	8.0	---	11	45	733	173	52	25	21
30	18	e13	9.4	8.0	---	11	44	609	155	51	24	21
31	20	---	9.5	8.4	---	11	---	546	---	45	26	---
TOTAL	739	467	332.9	269.6	243.2	338.5	679	5,840	8,717	2,444	944	994
MEAN	23.8	15.6	10.7	8.70	8.69	10.9	22.6	188	291	78.8	30.5	33.1
MAX	46	22	13	9.7	9.6	13	45	733	650	158	71	69
MIN	15	13	9.4	7.7	7.7	8.9	11	25	135	45	21	19
AC-FT	1,470	926	660	535	482	671	1,350	11,580	17,290	4,850	1,870	1,970

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)	(WY)
MEAN	28.1	20.7	13.8	11.8	11.1	12.5	23.7	130	240	116	55.0	33.6
MAX	44.8	28.4	19.0	16.0	13.3	14.9	36.1	197	418	293	125	56.0
(WY)	(1998)	(1996)	(1996)	(1997)	(1998)	(1997)	(2000)	(2000)	(1997)	(1995)	(1995)	(1997)
MIN	16.1	13.7	10.6	8.70	8.14	8.92	15.4	43.8	90.5	22.2	14.5	19.8
(WY)	(2002)	(2002)	(2002)	(2003)	(2002)	(2002)	(1995)	(1995)	(2002)	(2002)	(2002)	(2001)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1994 - 2003

ANNUAL TOTAL	10,288.6	22,008.2		
ANNUAL MEAN	28.2	60.3	58.2	
HIGHEST ANNUAL MEAN			87.3	1997
LOWEST ANNUAL MEAN			27.4	2002
HIGHEST DAILY MEAN	181	May 21	733	May 29
LOWEST DAILY MEAN	5.4	Sep 5	7.7	Jan 15
ANNUAL SEVEN-DAY MINIMUM	5.6	Sep 2	8.2	Jan 24
MAXIMUM PEAK FLOW			1,180	May 29
MAXIMUM PEAK STAGE			3.30	May 29
ANNUAL RUNOFF (AC-FT)	20,410	43,650	42,160	
10 PERCENT EXCEEDS	65	174	170	
50 PERCENT EXCEEDS	15	21	23	
90 PERCENT EXCEEDS	8.1	8.9	10	

e Estimated.

a Also occurred Sep 6,7, 2002.

**394220106431500 EAGLE RIVER BELOW MILK CREEK NEAR WOLCOTT, CO**  
**(Eagle River Watershed Retrospective Assessment Program)**

WATER-QUALITY RECORDS

LOCATION.--Lat 39°42'20", long 106°43'15", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec. 17, T.4S, R.83W., Eagle County, Hydrologic Unit 14010003, at U.S. Highway 6, 0.75 mi downstream from Milk Creek, and 2.3 mi west of Wolcott.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--May to August 1976, October 1999 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=394220106431500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=394220106431500)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO <sub>3</sub> (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat fltrd inc tit field, mg/L as CaCO <sub>3</sub> (39086)
OCT 22...	1440	115	10.8	8.9	887	7.5	210	62.2	13.6	3.06	3	98.9	99
NOV 12...	1445	116	12.8	9.0	814	2.0	200	57.1	13.4	2.46	3	86.3	84
DEC 16...	1015	73	11.1	8.2	1,030	0.0	230	67.3	15.9	3.62	3	104	100
JAN 15...	1415	75	11.7	8.4	1,130	0.0	260	74.9	17.3	3.68	3	126	103
FEB 19...	1440	75	12.0	8.7	1,250	4.3	280	81.5	19.4	4.70	4	145	112
MAR 26...	1500	123	9.9	8.8	1,000	6.4	250	70.1	18.2	2.91	3	101	103
APR 15...	1450	315	9.3	8.3	374	6.1	120	33.7	8.59	1.42	1	25.8	65
MAY 20...	1710	1,610	8.6	8.2	186	9.8	77	22.0	5.46	0.90	0.3	6.28	54
JUN 05...	0930	3,100	9.3	8.0	138	6.9	59	17.1	3.94	0.699	0.2	4.01	46
JUL 23...	1400	294	8.0	8.9	467	18.1	140	40.0	8.92	1.62	1	40.3	75
AUG 12...	1515	177	7.4	8.7	724	21.6	190	55.8	13.4	2.78	2	72.8	98
SEP 09...	1610	292	7.9	8.3	478	14.3	150	42.0	10.7	1.91	1	36.2	83

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Bicarbonate, wat fltrd incrm. titr., field, mg/L (00453)	Carbonate, wat fltrd incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 22...	99	11	152	<0.2	4.6	111	508	0.69	158	0.13	0.16	E.009	0.617
NOV 12...	93	5	137	<0.17	4.8	102	456	0.62	143	0.11	0.18	<0.015	0.621
DEC 16...	122	--	175	0.17	6.1	122	561	0.76	111	0.18	0.19	0.016	1.71
JAN 15...	120	3	199	0.18	5.9	135	634	0.86	128	0.18	0.34	0.021	2.15
FEB 19...	122	7	229	0.17	4.4	152	713	0.97	144	0.30	0.34	0.015	2.02
MAR 26...	106	10	157	0.16	4.5	130	551	0.75	183	0.24	0.61	0.025	1.25
APR 15...	79	--	43.1	0.09	6.23	45.5	207	0.28	176	0.22	0.66	0.021	0.676
MAY 20...	66	--	8.71	<0.2	6.3	18.5	102	0.14	442	0.17	0.46	E.010	0.306
JUN 05...	57	--	5.01	<0.2	5.28	11.9	76	0.10	639	0.11	0.21	<0.015	0.131
JUL 23...	80	6	61.5	<0.2	4.1	49.5	252	0.34	200	0.15	0.18	0.018	0.176
AUG 12...	120	--	110	<0.2	5.52	78.5	401	0.55	192	0.18	0.24	E.010	0.606
SEP 09...	101	--	59.4	<0.2	5.7	56.9	265	0.36	209	0.13	0.49	<0.015	0.522

## 394220106431500 EAGLE RIVER BELOW MILK CREEK NEAR WOLCOTT, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Organic nitro- gen, water, fltrd, mg/L (00607)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, fltrd, mg/L (00666)	Phos- phorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli- form, M-FC 0.7u MF col/ 100 mL (31625)
OCT 22...	0.034	--	0.046	0.054	0.068	--	--	--
NOV 12...	0.036	--	0.042	0.051	0.072	1.8	<1	E1
DEC 16...	0.135	0.17	0.150	0.166	0.184	--	--	--
JAN 15...	0.092	0.15	0.216	0.22	0.26	--	--	--
FEB 19...	0.067	0.28	0.243	0.26	0.27	--	<1	<1
MAR 26...	0.036	0.21	0.140	0.159	0.30	--	--	--
APR 15...	0.015	0.20	0.035	0.044	0.24	4.2	23	30
MAY 20...	0.003	--	0.010	0.015	0.120	--	E3	E4
JUN 05...	0.003	--	<0.007	0.007	0.065	3.6	E7	--
JUL 23...	0.004	0.13	0.020	0.030	0.039	--	--	--
AUG 12...	0.010	--	0.061	0.079	0.096	1.6	E90	E10
SEP 09...	0.005	--	0.035	0.051	0.190	--	--	--

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cadmium water, fltrd, ug/L (01025)	Chrom- ium, water, fltrd, ug/L (01030)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Nickel, water, fltrd, ug/L (01065)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
NOV 12...	<0.2	--	E.9	42	150	<1	19.8	28.0	<0.02	--	<3	<0.3	<24
APR 15...	<0.2	<0.8	2.2	68	1,500	0.23	69.3	162	<0.02	1.77	E.3	<0.2	24
JUN 05...	<0.2	<0.8	1.3	33	1,110	0.12	12.8	79.6	<0.02	0.41	<0.5	<0.2	9
AUG 12...	<0.2	<0.8	1.4	38	320	0.27	19.4	47.2	<0.02	1.25	E.4	<0.2	9

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
NOV 12...	1445	116	2.0	--	5	1.6
FEB 19...	1440	75	4.3	--	7	1.5
APR 15...	1450	315	6.1	84	174	148
MAY 20...	1710	1,610	9.8	75	134	582
JUN 05...	0930	3,100	6.9	62	46	385
AUG 12...	1515	177	21.6	98	15	7.2



## 09069000 EAGLE RIVER AT GYPSUM, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 39°39'00", long 106°57'06", Eagle County, Hydrologic Unit 14010003, at bridge at Gypsum, about 400 ft upstream from Gypsum Creek, about 520 ft upstream from bridge on U.S. Highways 6 and 24, and about 550 ft upstream from gaging station.

DRAINAGE AREA.--944 mi<sup>2</sup>, at gaging station.

PERIOD OF RECORD.--April 1947 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09069000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09069000)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1947 to March 31, 1995.

WATER TEMPERATURE: April 1949 to March 31, 1995.

REMARKS.--Records of discharge are given for Eagle River below Gypsum (station 09070000), located 550 ft downstream from Eagle River at Gypsum (station 09069000), except for Nov. 12, Dec. 17, Jan. 15, Feb. 19, and Mar 26.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)
OCT													
23...	0850	162	9.5	8.2	983	6.5	330	103	18.3	3.38	2	76.7	125
NOV													
12...	1145	143	13.6	8.6	941	2.5	310	94.6	17.7	2.84	2	75.4	114
DEC													
17...	0900	122	11.2	8.2	1,100	0.0	320	97.6	19.0	3.44	2	89.0	120
JAN													
15...	1050	96	11.8	8.3	1,160	0.2	330	101	19.9	3.07	2	93.4	120
FEB													
19...	1200	86	12.4	8.3	1,190	2.8	360	108	21.7	4.09	2	104	116
MAR													
26...	1045	146	9.6	8.3	1,040	6.4	310	91.5	20.6	3.11	2	85.3	116
APR													
15...	1200	420	9.0	8.2	486	8.4	170	49.5	11.2	1.70	1	31.7	81
MAY													
20...	1315	1,680	9.0	7.9	218	9.6	94	27.5	6.05	0.90	0.3	6.86	38
JUN													
05...	1345	3,020	8.4	8.1	178	11.7	79	23.3	4.92	0.82	0.3	5.82	49
JUL													
23...	0844	336	7.9	8.3	599	15.9	220	67.0	12.1	1.97	1	37.5	98
AUG													
12...	1220	216	7.6	8.2	881	20.2	300	93.0	16.1	3.22	2	62.1	109
SEP													
09...	1200	305	7.5	8.1	735	14.3	280	84.9	16.6	3.02	1	46.2	112

## 09069000 EAGLE RIVER AT GYPSUM, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 23...	152	--	119	<0.2	4.1	200	601	0.82	263	--	0.15	0.21	E.013
NOV 12...	133	3	119	<0.17	4.6	184	569	0.77	220	--	0.11	0.22	E.010
DEC 17...	146	--	150	<0.17	5.6	196	637	0.87	210	--	0.14	0.18	E.014
JAN 15...	147	2	156	0.18	6.1	215	675	0.92	174	--	0.14	0.20	0.025
FEB 19...	128	7	169	0.18	4.1	219	706	0.96	164	--	0.22	0.26	0.038
MAR 26...	135	4	133	0.18	6.2	185	600	0.82	237	--	0.27	0.63	0.059
APR 15...	99	2	48.9	0.11	6.7	77.9	281	0.38	319	--	0.24	1.5	0.062
MAY 20...	47	--	9.30	<0.2	6.5	29.5	111	0.15	503	--	0.19	0.63	E.012
JUN 05...	60	--	6.45	<0.2	5.5	22.6	100	0.14	812	28	0.14	0.23	<0.015
JUL 23...	112	4	55.7	<0.2	5.4	106	345	0.47	313	--	0.19	0.19	0.021
AUG 12...	132	--	94.4	<0.2	7.4	168	512	0.70	299	442	0.20	1.3	0.030
SEP 09...	137	--	68.0	<0.2	7.1	151	447	0.61	368	--	0.13	7.0	0.037

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
OCT 23...	0.351	0.014	--	0.007	0.012	0.029	--	--	--
NOV 12...	0.484	0.065	--	0.015	0.023	0.046	2.0	E2	E2
DEC 17...	1.03	0.024	--	0.057	0.066	0.085	--	--	--
JAN 15...	1.40	0.032	0.12	0.110	0.120	0.137	--	--	--
FEB 19...	1.31	0.017	0.18	0.127	0.150	0.173	--	E1	<1
MAR 26...	1.15	0.024	0.21	0.122	0.134	0.27	--	--	--
APR 15...	0.667	0.014	0.18	0.031	0.040	0.56	3.2	E14	33
MAY 20...	0.279	0.003	--	0.007	0.013	0.190	--	E30	28
JUN 05...	0.138	0.004	--	E.004	0.009	0.056	3.4	E10	--
JUL 23...	0.300	0.006	0.17	0.022	0.032	0.045	--	--	--
AUG 12...	0.659	0.008	0.17	0.032	0.043	0.46	1.9	E3	250
SEP 09...	0.586	0.006	0.09	0.014	0.022	2.55	--	--	--

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## 09069000 EAGLE RIVER AT GYPSUM, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recover-able, ug/L (01034)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)
OCT 23...	--	--	--	--	--	--	--	--	--	--	26	--	--
NOV 12...	--	--	--	--	<0.2	--	--	--	E.9	--	30	160	<1
DEC 17...	--	--	--	--	--	--	--	--	--	--	14	--	--
JAN 15...	--	--	--	--	--	--	--	--	--	--	<10	--	--
FEB 19...	--	--	--	--	--	--	--	--	--	--	E9	--	--
MAR 26...	--	--	--	--	--	--	--	--	--	--	<10	--	--
APR 15...	--	--	--	--	<0.2	--	--	--	1.3	--	56	6,450	<1
MAY 20...	--	--	--	--	--	--	--	--	--	--	41	--	--
JUN 05...	<2	<2	36.3	<0.4	<0.2	E.1	<0.8	1.1	E.9	1.8	29	--	<1
JUL 23...	--	--	--	--	--	--	--	--	--	--	49	--	--
AUG 12...	<2	3	83.1	<0.4	<0.2	1.8	<0.8	2.4	1.5	7.9	E4	--	<1
SEP 09...	--	--	--	--	--	--	--	--	--	--	<8	--	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Lead, water, unfltrd recover-able, ug/L (01051)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover-able, ug/L (71900)	Nickel, water, fltrd, ug/L (01065)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)
OCT 23...	--	25.6	--	--	--	--	--	--	--	--	--	--	--
NOV 12...	--	22.8	30.1	<0.02	--	--	--	<3	--	<0.3	--	<24	--
DEC 17...	--	24.2	--	--	--	--	--	--	--	--	--	--	--
JAN 15...	--	22.3	--	--	--	--	--	--	--	--	--	--	--
FEB 19...	--	33.3	--	--	--	--	--	--	--	--	--	--	--
MAR 26...	--	31.7	--	--	--	--	--	--	--	--	--	--	--
APR 15...	--	71.0	289	<0.02	--	--	--	<3	--	<0.3	--	E13	--
MAY 20...	--	19.2	--	--	--	--	--	--	--	--	--	--	--
JUN 05...	3	17.6	--	<0.02	<0.02	<2.0	<2.0	<3	<3	<0.3	<0.3	7	40
JUL 23...	--	23.5	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	6	17.1	--	<0.02	0.02	<2.0	15.1	<3	<3	<0.3	<0.3	4	20
SEP 09...	--	8.5	--	--	--	--	--	--	--	--	--	--	--

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

09069000 EAGLE RIVER AT GYPSUM, CO—Continued

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diameter percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV 12...	1145	143	2.5	--	7	2.9
FEB 19...	1200	86	2.8	--	5	1.2
APR 15...	1200	420	8.4	97	421	477
MAY 20...	1315	1,680	9.6	78	158	717
JUN 05...	1345	3,020	11.7	54	79	644
AUG 12...	1220	216	20.2	100	456	266

## 09070000 EAGLE RIVER BELOW GYPSUM, CO

LOCATION.--Lat 39°38'58", long 106°57'11", in SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.5, T.5 S., R.85 W., Eagle County, Hydrologic Unit 14010003, on right bank 20 ft downstream from bridge on U.S. Highways 6 and 24 at Gypsum and 150 ft downstream from Gypsum Creek.

DRAINAGE AREA.--944 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1946 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09070000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09070000)

REVISED RECORDS.--WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,275.11 ft, above NGVD of 1929.

REMARKS.--No estimated daily discharges. Records good except for the period Aug. 19-27, and estimated daily discharges, which are poor. Transmountain diversions upstream from station, see elsewhere in this report. Transbasin diversions upstream from station from Robinson Reservoir (capacity, 2,520 acre-ft) to Tenmile Creek for mining development. Many small diversions for irrigation of hay meadows upstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	231	200	144	146	130	123	145	571	5,140	1,060	302	235
2	222	193	152	165	132	123	164	502	5,030	1,030	283	210
3	231	185	146	149	133	118	181	476	3,980	1,020	268	195
4	238	159	149	143	123	121	187	544	3,440	957	278	192
5	230	172	140	142	121	122	175	528	3,030	889	272	186
6	223	163	131	132	120	120	172	453	2,640	830	250	190
7	211	156	117	139	106	119	169	413	2,360	768	238	237
8	203	173	115	137	95	125	158	405	2,090	709	250	280
9	204	200	121	142	137	135	157	396	2,100	663	247	315
10	194	195	95	144	137	136	171	395	2,290	619	231	418
11	186	185	106	146	150	145	209	375	2,350	569	222	478
12	180	177	132	140	152	148	254	365	2,310	538	214	410
13	170	166	133	151	135	146	275	454	2,250	508	215	426
14	163	184	137	149	140	148	328	585	2,120	486	215	407
15	164	170	131	133	149	147	397	849	2,160	448	209	351
16	161	154	146	132	132	152	384	1,030	2,210	452	202	314
17	156	148	152	140	130	157	350	1,440	1,970	440	265	288
18	152	165	153	152	126	162	356	1,760	1,940	428	432	272
19	154	153	156	132	119	146	333	1,850	1,860	426	485	263
20	153	150	130	149	113	139	307	1,690	1,960	399	354	250
21	147	153	148	154	121	145	298	1,670	1,830	379	284	240
22	148	152	162	147	125	143	316	1,910	1,720	361	242	229
23	166	154	139	132	122	153	373	2,390	1,680	338	259	219
24	167	155	114	134	117	154	361	2,730	1,540	318	263	199
25	165	155	146	137	123	156	388	3,030	1,360	319	265	199
26	161	130	133	134	123	150	429	3,030	1,210	374	258	193
27	163	107	136	131	124	160	519	3,230	1,210	388	234	187
28	171	147	143	132	121	149	603	4,020	1,200	371	250	187
29	171	156	146	129	---	138	596	4,430	1,220	362	239	186
30	166	165	137	126	---	140	636	4,780	1,140	364	224	185
31	176	---	134	127	---	141	---	4,570	---	326	245	---
TOTAL	5,627	4,922	4,224	4,346	3,556	4,361	9,391	50,871	67,340	17,139	8,195	7,941
MEAN	182	164	136	140	127	141	313	1,641	2,245	553	264	265
MAX	238	200	162	165	152	162	636	4,780	5,140	1,060	485	478
MIN	147	107	95	126	95	118	145	365	1,140	318	202	185
AC-FT	11,160	9,760	8,380	8,620	7,050	8,650	18,630	100,900	133,600	34,000	16,250	15,750

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2003, BY WATER YEAR (WY)

MEAN	258	239	197	181	174	189	350	1,343	2,260	986	380	267
MAX	526	382	277	243	252	297	862	2,722	4,134	2,989	1,096	625
(WY)	(1962)	(1985)	(1985)	(1984)	(1986)	(1986)	(1962)	(1984)	(1984)	(1957)	(1984)	(1984)
MIN	129	164	136	139	125	138	183	528	597	170	124	141
(WY)	(1957)	(2003)	(2003)	(1990)	(1992)	(1965)	(1983)	(1977)	(2002)	(2002)	(2002)	(1956)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1947 - 2003	
ANNUAL TOTAL	91,473		187,913			
ANNUAL MEAN	251		515		569	
HIGHEST ANNUAL MEAN					1,082 1984	
LOWEST ANNUAL MEAN					255 2002	
HIGHEST DAILY MEAN	1,270	Jun 1	5,140	Jun 1	6,580	May 25, 1984
LOWEST DAILY MEAN	70	Sep 6	95	Dec 10	70	Sep 6, 2002
ANNUAL SEVEN-DAY MINIMUM	72	Sep 1	117	Dec 6	72	Sep 1, 2002
MAXIMUM PEAK FLOW			5,880	Jun 2	7,020	May 25, 1984
MAXIMUM PEAK STAGE			8.72	Jun 2	9.46	May 25, 1984
ANNUAL RUNOFF (AC-FT)	181,400		372,700		412,500	
10 PERCENT EXCEEDS	516		1,670		1,560	
50 PERCENT EXCEEDS	171		187		241	
90 PERCENT EXCEEDS	117		130		158	

09070000 EAGLE RIVER BELOW GYPSUM, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 2002 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09070000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09070000)

PERIOD OF DAILY RECORD.--WATER TEMPERATURE: July 2002 to current year.

INSTRUMENTATION.--Water-temperature sensor with satellite telemetry since July 2002.

REMARKS.--Daily water temperature records are good except for the period May 29 to Aug. 5, 2003, which is poor.

EXTREMES FOR PERIOD OF DAILY RECORD.--WATER TEMPERATURE: Maximum recorded, 25.8°C July 30, 2002; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--WATER TEMPERATURE: Maximum, 24.9°C, Aug. 13; minimum, 0.0°C, on many days.

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JAN 15...	1115	134	--	0.2	JUL 01...	1530	1,030	298	15.8
APR 15...	1330	430	--	8.3					

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	20.9	16.5	18.7	20.3	13.3	16.7
2	---	---	---	---	---	---	20.7	15.5	18.0	21.4	13.1	17.0
3	---	---	---	---	---	---	22.7	16.9	19.3	18.3	14.0	16.5
4	---	---	---	---	---	---	24.2	16.6	20.0	18.8	13.5	16.4
5	---	---	---	---	---	---	22.7	17.3	19.9	20.0	12.8	16.3
6	---	---	---	---	---	---	21.7	16.7	18.7	18.3	13.4	16.1
7	---	---	---	---	---	---	20.0	15.8	17.8	17.6	14.2	15.9
8	---	---	---	---	---	---	20.1	15.1	17.4	19.6	14.0	16.7
9	---	---	---	---	---	---	21.5	14.5	17.7	18.4	15.8	17.1
10	---	---	---	---	---	---	21.4	13.7	17.5	20.3	15.2	17.4
11	---	---	---	---	---	---	22.4	13.9	17.9	19.1	15.9	17.4
12	---	---	---	---	---	---	21.8	14.1	17.7	17.0	14.7	15.9
13	---	---	---	---	---	---	21.9	14.4	17.9	17.3	13.5	15.1
14	---	---	---	---	---	---	22.2	14.0	17.9	17.7	11.4	14.5
15	---	---	---	---	---	---	23.1	13.9	18.2	18.1	11.6	14.8
16	---	---	---	---	---	---	22.6	14.3	18.3	17.8	12.0	14.9
17	---	---	---	---	---	---	21.4	14.6	18.0	16.4	12.5	14.3
18	---	---	---	---	---	---	21.0	14.5	17.6	14.2	11.7	13.0
19	---	---	---	---	---	---	19.8	14.3	17.1	14.7	10.9	12.6
20	---	---	---	---	---	---	19.1	16.0	17.6	15.7	9.1	12.3
21	---	---	---	---	---	---	20.0	15.6	17.6	16.5	10.3	13.3
22	---	---	---	---	---	---	20.2	13.9	17.2	16.0	10.1	13.0
23	---	---	---	24.3	---	---	21.2	14.7	17.7	15.7	9.7	12.6
24	---	---	---	25.3	16.7	20.7	21.6	14.1	17.7	15.6	9.7	12.6
25	---	---	---	21.4	17.8	19.0	21.5	13.3	17.4	15.2	10.0	12.6
26	---	---	---	24.2	16.1	19.2	21.6	13.8	17.6	16.6	11.7	13.9
27	---	---	---	23.4	15.8	19.1	20.9	14.0	17.4	13.2	10.1	11.6
28	---	---	---	22.9	16.2	19.0	18.8	13.5	16.5	12.7	9.3	11.0
29	---	---	---	24.6	14.5	19.1	18.2	14.8	16.5	13.1	9.8	11.3
30	---	---	---	25.8	16.0	20.4	19.0	12.4	15.9	13.5	8.8	10.9
31	---	---	---	25.0	16.2	20.4	19.2	13.2	16.4	---	---	---
MONTH	---	---	---	---	---	---	24.2	12.4	17.8	21.4	8.8	14.5

## EAGLE RIVER BASIN

09070000 EAGLE RIVER BELOW GYPSUM, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	13.6	8.7	11.2	6.3	2.0	4.0	0.3	0.0	0.1	0.4	0.0	0.1
2	13.1	10.1	11.6	6.9	3.7	5.4	1.9	0.0	0.7	0.3	0.0	0.0
3	12.1	9.3	10.8	5.8	2.0	3.6	1.0	0.0	0.3	0.4	0.0	0.1
4	10.8	8.6	9.5	3.9	0.5	2.1	1.0	0.0	0.3	0.4	0.0	0.1
5	12.2	8.8	10	5.0	0.1	2.5	2.8	0.0	1.2	0.3	0.0	0.1
6	13.2	7.3	10.1	5.1	0.3	2.5	2.8	0.0	1.1	0.7	0.0	0.2
7	13.5	7.9	10.6	4.6	0.1	2.3	1.8	0.0	0.5	0.5	0.0	0.1
8	13.7	8.5	11.0	4.5	2.2	3.4	0.6	0.0	0.1	0.3	0.0	0.0
9	13.0	8.0	10.5	5.1	3.7	4.4	0.0	0.0	0.0	0.0	0.0	0.0
10	12.2	7.4	9.9	4.3	1.9	3.2	0.0	0.0	0.0	0.1	0.0	0.0
11	11.0	7.6	9.5	5.8	2.0	3.3	0.0	0.0	0.0	0.7	0.0	0.2
12	11.9	6.5	9.1	3.8	0.0	1.8	0.2	0.0	0.0	1.0	0.0	0.2
13	10.7	5.0	7.8	2.9	0.6	1.8	0.3	0.0	0.0	0.6	0.0	0.1
14	11.0	4.8	7.7	5.3	1.5	3.2	0.4	0.0	0.1	0.5	0.0	0.1
15	10.8	4.7	7.7	5.2	2.4	3.5	0.5	0.0	0.1	0.9	0.0	0.2
16	11.0	4.9	7.7	3.3	0.2	1.7	0.4	0.0	0.1	0.1	0.0	0.0
17	10.8	4.7	7.6	2.7	0.0	1.3	1.2	0.0	0.5	0.3	0.0	0.1
18	11.0	4.8	7.7	4.4	0.3	2.3	1.5	0.0	0.4	0.0	0.0	0.0
19	10.6	4.6	7.5	4.3	0.3	2.2	0.4	0.0	0.1	0.0	0.0	0.0
20	9.6	4.1	6.9	4.5	0.1	2.2	0.0	0.0	0.0	0.1	0.0	0.0
21	10.0	4.0	6.8	4.7	0.6	2.5	0.2	0.0	0.0	0.2	0.0	0.0
22	9.6	4.7	7.2	4.3	0.3	2.2	0.3	0.0	0.1	0.6	0.0	0.1
23	9.3	7.0	8.1	3.6	0.3	1.9	0.0	0.0	0.0	1.3	0.0	0.4
24	10.5	7.0	8.3	4.9	1.8	3.1	0.1	0.0	0.0	1.4	0.0	0.7
25	9.6	6.0	7.6	4.3	0.5	2.1	0.1	0.0	0.0	2.9	0.4	1.4
26	9.4	5.2	7.3	0.5	0.0	0.1	0.2	0.0	0.0	3.5	0.2	1.6
27	9.6	6.6	8.0	0.0	0.0	0.0	0.1	0.0	0.0	4.1	0.0	1.9
28	9.1	6.2	7.5	0.0	0.0	0.0	0.3	0.0	0.0	3.2	0.8	2.1
29	7.1	4.7	6.1	0.3	0.0	0.0	0.4	0.0	0.1	4.3	0.2	2.0
30	6.3	3.3	4.9	0.3	0.0	0.0	0.5	0.0	0.1	3.0	0.3	1.8
31	6.1	3.0	4.5	---	---	---	0.2	0.0	0.0	6.0	2.1	3.8
MONTH	13.7	3.0	8.4	6.9	0.0	2.3	2.8	0.0	0.2	6.0	0.0	0.6
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	6.4	1.6	3.9	5.7	0.6	3.1	12.2	5.5	8.8	10.6	5.8	8.2
2	5.4	2.6	3.9	7.0	0.7	3.5	11.4	5.8	8.6	11.1	5.1	8.1
3	4.6	0.7	2.5	7.0	0.1	3.4	7.8	5.4	6.3	11.8	7.3	9.4
4	3.9	0.0	1.6	3.6	1.4	2.3	9.2	3.2	6.1	10.4	6.9	8.4
5	2.7	0.0	1.0	6.1	0.0	2.6	10.5	3.8	6.9	11.9	6.3	8.9
6	0.6	0.0	0.2	5.3	0.5	2.8	8.9	4.8	6.6	11.3	6.3	8.9
7	0.1	0.0	0.0	8.1	1.8	4.8	8.3	3.9	5.9	12.4	5.6	9.0
8	0.1	0.0	0.0	9.9	2.9	6.2	11.7	1.9	6.5	10.4	7.3	9.0
9	0.2	0.0	0.0	8.4	2.7	5.6	13.8	4.5	9.0	12.5	6.9	9.3
10	0.1	0.0	0.0	8.9	2.8	5.8	14.9	6.2	10.5	11.5	6.2	8.7
11	0.2	0.0	0.0	10.3	4.4	7.1	14.3	7.8	11.0	11.4	5.6	8.6
12	0.2	0.0	0.0	11.0	5.2	7.9	11.7	7.6	9.9	14.5	6.6	10.6
13	0.6	0.0	0.2	11.2	4.3	7.7	13.6	6.2	9.8	14.1	9.0	11.7
14	4.4	0.5	1.9	9.4	4.8	7.1	12.9	7.1	10.2	14.7	8.9	11.8
15	4.4	0.7	2.4	10.9	4.9	7.9	10.8	6.8	8.4	12.5	9.2	10.9
16	3.3	0.1	1.9	8.8	6.2	7.5	12.2	5.3	8.4	12.8	8.0	10.4
17	5.2	0.6	2.9	9.2	5.2	6.9	10.4	6.1	8.4	11.5	8.6	10.2
18	5.2	1.5	3.3	8.1	3.7	6.0	11.1	6.3	8.5	10.2	7.8	9.2
19	6.1	0.4	3.0	8.5	3.8	6.1	9.7	6.1	7.9	11.1	7.2	9.1
20	5.6	0.0	2.4	9.5	3.2	6.4	13.3	5.3	9.2	11.2	6.6	9.0
21	5.5	0.9	2.9	10.0	5.8	7.7	11.4	6.4	9.2	11.1	6.8	9.0
22	3.9	1.0	2.4	12.2	5.1	8.4	11.8	7.5	9.6	11.6	7.5	9.7
23	5.0	0.0	2.1	12.2	5.8	9.0	9.7	5.1	7.0	10.9	7.1	9.3
24	4.6	0.1	2.3	9.3	6.7	7.8	9.5	3.9	6.6	10.6	6.8	9.1
25	4.6	1.2	3.1	11.3	4.6	7.7	13.0	5.3	9.1	10.4	7.0	8.9
26	4.5	2.0	3.3	9.5	4.9	7.1	14.0	7.6	10.8	10.2	6.6	8.6
27	6.9	1.8	4.1	7.3	3.6	5.5	13.3	7.7	10.7	11.3	7.1	9.4
28	5.9	1.9	3.8	6.9	1.4	4.0	12.7	7.5	10.2	11.2	7.2	9.5
29	---	---	---	7.6	0.7	4.0	11.8	7.7	9.8	10.9	7.3	9.3
30	---	---	---	8.8	1.5	4.9	11.2	7.4	9.2	10.8	7.6	9.1
31	---	---	---	12.2	3.6	7.8	---	---	---	10.4	7.2	8.8
MONTH	6.9	0.0	2.0	12.2	0.0	6.0	14.9	1.9	8.6	14.7	5.1	9.4







**09071750 COLORADO RIVER ABOVE GLENWOOD SPRINGS, CO**

WATER-QUALITY RECORDS

LOCATION.--Lat 39°33'32", long 107°17'25", in NW¼SE¼ sec.2, T.6 S., R.89 W., Garfield County, Hydrologic Unit 14010001, 0.25 mi upstream from No Name Creek and 2.0 mi above Glenwood Springs.

DRAINAGE AREA.--4,556 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1985 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09071750](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09071750)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1985 to current year.

WATER TEMPERATURE: December 1985 to current year.

INSTRUMENTATION.--Water-quality monitor since December 1985.

REMARKS.--Discharge obtained by subtracting the flow in Roaring Fork River at Glenwood Springs (station 09085000) from the flow in the Colorado River below Glenwood Springs (station 09085100). Water-quality data collection was moved downstream to the site downstream from No Name Creek previous site 09071100 on Dec. 12, 1985. Water-quality data collection was relocated upstream 0.25 mi above No Name Creek on Oct. 19, 1995. Water-quality data collected at this site are considered equivalent to data collected at old site. Prior to Oct. 1995, daily maximum and minimum specific-conductance data available in district office. Daily specific-conductance records are excellent except Oct. 11-26, Nov. 30 to Dec. 8, Dec. 13-18, Jan. 22 to Feb. 6, and Feb. 11 to June 10, which are good, and Nov. 27-29, Jan. 3-7, Jan. 10-18, Feb. 7-10, June 11-26, July 2-14, and minimums from Oct. 13 to Nov. 12, and Mar. 18-26, which are fair, and Dec 9-12, Dec. 19 to Jan. 2, and Jan. 8-9, 19-21, which are poor. Daily water temperature records are excellent except June 26 to July 1, and July 14-22, which are good. Interruptions in record are due to equipment malfunctions or sensor fouling.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,740 microsiemens/cm, Aug. 21, 1990; minimum, 178 microsiemens/cm, June 1, 2003.

WATER TEMPERATURE: Maximum, 23.0°C, July 19, 2002; minimum, 0.0°C on many days during the winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,280 microsiemens/cm, Aug. 18; minimum, 178 microsiemens/cm, June 1.

WATER TEMPERATURE: Maximum, 22.5°C, July 25, Aug. 14, 15; minimum, 0.0°C, on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Residue on evap. at 180degC wat flt mg/L (70300)
OCT							
23...	1125	798	10.1	8.6	963	8.0	588
NOV							
12...	0945	1,020	11.2	8.3	707	3.0	418
DEC							
17...	1145	517	12.5	8.4	979	1.0	584
FEB							
19...	0920	741	11.6	8.3	893	2.5	529
APR							
15...	0935	1,270	8.3	8.2	642	11.4	393
MAY							
20...	1000	4,500	--	7.9	306	10.1	176
JUN							
10...	1000	4,050	8.6	8.0	311	11.6	185
JUL							
22...	1015	1,640	7.1	8.0	593	21.3	344
AUG							
12...	1020	1,290	8.3	8.5	567	21.0	337

## COLORADO RIVER MAIN STEM

09071750 COLORADO RIVER ABOVE GLENWOOD SPRINGS, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	741	729	737	969	856	889	1,010	919	967
2	---	---	---	734	669	715	883	827	850	1,000	---	---
3	---	---	---	714	632	703	898	789	823	1,020	---	---
4	---	---	---	727	699	717	898	823	849	954	890	922
5	---	---	---	---	---	---	865	815	836	935	895	915
6	---	---	---	779	732	760	876	808	835	915	869	894
7	---	---	---	793	773	781	882	816	847	968	877	916
8	---	---	---	800	754	780	917	841	876	1,030	824	921
9	---	---	---	762	742	750	928	---	---	---	855	---
10	---	---	---	750	718	729	1,010	907	979	1,060	937	990
11	863	844	851	730	716	724	1,050	957	1,010	990	931	968
12	856	816	831	731	718	723	1,150	942	1,050	943	892	925
13	854	761	824	741	724	735	1,030	953	987	945	885	908
14	872	831	864	738	724	733	1,010	919	959	946	865	914
15	882	831	872	742	719	734	1,020	963	991	955	852	913
16	887	760	853	727	716	721	1,010	960	983	1,010	---	---
17	889	845	876	736	726	732	1,030	921	976	977	878	936
18	914	865	885	793	734	760	942	897	913	997	917	951
19	950	914	932	832	788	807	952	---	---	1,060	895	968
20	956	947	951	850	831	843	---	---	---	1,080	871	967
21	961	938	951	896	849	870	---	---	---	1,030	909	972
22	967	870	943	896	870	877	996	903	951	986	897	947
23	961	902	940	910	868	884	977	883	936	926	871	907
24	939	885	922	917	890	910	---	---	---	927	882	897
25	885	860	870	917	890	904	---	---	---	912	881	899
26	874	855	865	894	837	852	---	---	---	922	897	911
27	883	764	862	1,030	862	942	---	---	---	933	887	909
28	864	822	839	1,250	1,030	1,110	---	---	---	946	888	911
29	839	805	831	1,120	948	1,000	---	---	---	941	894	910
30	805	734	763	970	902	924	990	901	948	958	895	918
31	740	726	734	---	---	---	1,000	888	947	958	875	909
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	920	891	902	916	862	894	938	889	919	497	481	487
2	922	864	893	937	831	887	903	861	883	536	497	519
3	894	866	879	935	828	890	870	816	844	570	536	556
4	939	883	900	926	815	881	816	785	792	582	561	572
5	989	883	929	923	850	878	836	779	802	561	541	547
6	995	886	930	910	822	878	879	828	842	574	543	562
7	1,060	973	1,010	919	846	888	912	848	880	608	574	593
8	1,130	978	1,040	897	846	870	925	909	920	631	608	620
9	1,140	1,000	1,070	884	851	865	909	883	893	617	593	607
10	1,040	947	987	887	846	868	883	835	858	647	557	619
11	1,030	911	951	895	823	858	847	803	821	561	522	541
12	938	871	906	863	773	818	843	775	804	601	558	589
13	871	848	856	814	756	792	792	748	764	614	595	603
14	860	833	846	779	637	713	749	689	735	603	535	571
15	843	815	823	755	645	709	689	582	637	535	448	503
16	839	803	818	802	651	723	582	559	567	448	390	419
17	851	792	824	869	802	846	621	579	598	390	326	362
18	853	826	840	896	865	879	657	621	640	326	290	311
19	949	842	878	889	870	881	663	653	660	299	282	289
20	977	880	923	890	839	869	701	662	681	291	283	288
21	1,020	863	934	917	851	902	744	701	723	297	280	288
22	974	883	915	917	840	896	751	735	746	290	266	278
23	959	913	932	878	815	849	735	662	703	274	244	259
24	987	910	935	817	782	801	662	625	634	254	230	241
25	974	880	918	789	727	768	654	625	641	239	217	227
26	919	894	909	854	759	802	674	645	663	239	220	229
27	922	897	908	859	837	846	647	577	618	226	209	216
28	909	868	893	868	852	860	582	522	561	215	199	206
29	---	---	---	902	867	884	522	489	507	206	192	197
30	---	---	---	925	902	917	489	484	486	195	182	187
31	---	---	---	937	893	922	---	---	---	200	181	186
MONTH	1,140	792	912	937	637	849	938	484	727	647	181	409

09071750 COLORADO RIVER ABOVE GLENWOOD SPRINGS, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	190	178	183	---	---	---	597	592	595	585	557	572
2	190	180	183	505	485	496	597	574	584	582	563	574
3	206	190	195	508	479	493	574	555	565	599	576	586
4	227	206	212	508	478	493	568	543	553	603	595	599
5	244	227	234	517	495	505	550	526	535	597	557	572
6	271	244	256	543	517	528	534	524	526	570	545	558
7	292	271	282	565	541	549	547	534	544	553	540	546
8	315	292	303	575	560	565	557	541	546	551	521	542
9	325	308	316	587	567	576	572	557	565	653	537	561
10	317	265	302	569	553	559	564	559	562	590	545	561
11	305	289	296	602	538	578	566	557	562	558	531	547
12	307	292	299	610	562	584	579	565	572	560	531	546
13	311	299	306	568	554	561	592	573	583	623	560	596
14	320	304	313	567	562	565	604	579	593	623	606	613
15	330	304	316	---	---	---	784	555	597	621	598	608
16	323	308	319	---	---	---	578	563	570	618	600	611
17	342	323	334	---	---	---	588	575	583	620	615	618
18	356	341	348	---	---	---	1,280	570	731	619	595	602
19	362	346	354	---	---	---	614	488	535	597	562	569
20	366	340	353	---	---	---	531	493	502	564	556	560
21	354	341	350	---	---	---	556	531	547	568	554	563
22	373	354	365	---	---	---	566	548	559	564	556	560
23	384	361	374	616	558	593	579	563	572	562	546	550
24	391	366	382	664	609	639	622	529	565	553	542	546
25	408	382	399	670	657	665	667	503	582	548	538	543
26	421	---	---	657	605	620	663	564	595	538	495	503
27	---	---	---	606	541	568	564	550	556	501	495	497
28	---	---	---	553	536	544	560	544	553	510	500	503
29	---	---	---	551	539	547	574	560	567	511	505	508
30	---	---	---	633	547	582	575	564	571	514	507	510
31	---	---	---	598	583	591	617	567	582	---	---	---
MONTH	---	---	---	---	---	---	1,280	488	569	653	495	561

## COLORADO RIVER MAIN STEM

09071750 COLORADO RIVER ABOVE GLENWOOD SPRINGS, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.9	11.4	11.8	5.8	4.8	5.4	0.6	0.1	0.4	0.4	0.0	0.1
2	12.8	11.4	12.1	5.7	4.8	5.3	0.9	0.3	0.6	0.1	0.0	0.0
3	12.3	11.1	11.8	5.0	3.7	4.5	1.3	0.1	0.7	0.4	0.0	0.1
4	11.2	9.9	10.7	4.2	2.8	3.6	0.8	0.0	0.4	0.4	0.0	0.1
5	10.9	10.0	10.3	3.2	2.0	2.8	1.2	0.6	0.9	0.3	0.0	0.1
6	11.8	10.0	10.7	3.3	2.1	2.7	1.4	0.3	0.9	0.4	0.0	0.1
7	11.9	10.0	10.8	3.3	2.3	2.8	1.2	0.0	0.6	0.3	0.0	0.1
8	12.3	10.6	11.3	3.8	2.6	3.3	0.9	0.0	0.4	0.1	0.0	0.0
9	12.3	10.6	11.4	4.4	3.3	3.9	0.1	0.0	0.0	0.0	0.0	0.0
10	11.8	10.4	11.0	4.2	3.0	3.8	0.0	0.0	0.0	0.4	0.0	0.2
11	11.3	10.2	10.7	3.7	2.7	3.2	0.0	0.0	0.0	0.8	0.4	0.5
12	10.7	9.0	9.9	3.2	2.0	2.7	0.2	0.0	0.1	0.9	0.1	0.5
13	10.0	8.2	9.1	3.1	2.4	2.7	0.5	0.0	0.2	0.6	0.0	0.3
14	9.4	7.8	8.5	3.3	2.6	2.9	0.5	0.0	0.2	0.6	0.0	0.3
15	8.9	7.6	8.2	3.9	2.8	3.3	0.7	0.0	0.4	0.6	0.0	0.3
16	8.9	7.6	8.1	3.1	1.9	2.6	0.7	0.2	0.4	0.3	0.0	0.0
17	8.9	7.6	8.1	2.3	1.3	1.9	1.2	0.4	0.8	0.4	0.0	0.1
18	8.9	7.6	8.1	2.7	1.6	2.1	1.1	0.0	0.6	0.4	0.0	0.1
19	8.8	7.4	8.0	2.4	1.7	2.0	0.7	0.0	0.2	0.0	0.0	0.0
20	8.4	7.1	7.7	2.5	1.7	2.1	0.0	0.0	0.0	0.4	0.0	0.1
21	8.0	6.8	7.3	2.6	1.8	2.2	0.4	0.0	0.0	0.5	0.0	0.1
22	7.9	6.8	7.5	2.8	2.1	2.4	0.0	0.0	0.0	1.0	0.1	0.4
23	8.3	7.3	7.9	3.0	2.3	2.6	0.0	0.0	0.0	1.1	0.5	0.7
24	8.7	7.9	8.4	3.2	2.6	2.8	0.0	0.0	0.0	1.4	1.0	1.2
25	8.5	7.7	8.1	3.3	2.1	2.8	0.0	0.0	0.0	2.0	1.2	1.6
26	8.0	7.0	7.6	2.1	0.0	1.2	0.0	0.0	0.0	2.4	1.1	1.7
27	8.1	7.0	7.5	0.7	0.0	0.1	0.0	0.0	0.0	1.9	0.9	1.5
28	8.0	7.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.2	1.9
29	7.7	6.6	7.3	0.4	0.0	0.1	0.0	0.0	0.0	2.3	0.8	1.5
30	6.6	4.9	6.0	0.6	0.0	0.2	0.0	0.0	0.0	2.1	1.0	1.6
31	5.8	5.0	5.3	---	---	---	0.0	0.0	0.0	2.6	1.4	2.0
MONTH	12.9	4.9	9.0	5.8	0.0	2.6	1.4	0.0	0.3	2.6	0.0	0.6
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3.3	1.9	2.7	3.4	1.9	2.8	9.3	6.7	8.1	10.0	9.4	9.7
2	3.6	2.1	2.9	3.2	1.3	2.4	9.1	7.9	8.5	10.3	9.0	9.6
3	2.5	0.9	1.9	3.1	1.7	2.3	7.9	6.0	7.3	10.6	9.6	10.1
4	1.5	0.4	1.0	3.1	1.3	2.5	7.1	5.5	6.0	10.5	9.0	9.6
5	1.7	0.0	0.9	2.9	1.3	1.9	7.6	6.1	6.7	10.2	9.4	9.7
6	0.8	0.0	0.3	3.7	2.1	2.8	7.6	6.2	6.7	10.5	9.6	10.1
7	0.2	0.0	0.0	4.6	3.0	3.7	7.7	6.3	6.9	10.6	9.2	10.1
8	0.2	0.0	0.0	5.7	4.1	4.7	8.1	6.1	6.7	10.7	9.4	10.0
9	0.0	0.0	0.0	6.0	4.6	5.1	9.5	6.3	7.9	10.1	8.9	9.5
10	0.4	0.0	0.1	6.1	5.0	5.4	11.1	8.4	9.7	10.7	9.2	10
11	0.8	0.0	0.2	7.1	5.4	6.2	12.4	10.0	11.0	10.3	9.3	9.8
12	0.9	0.0	0.3	7.8	6.3	6.7	12.2	10.4	11.2	11.6	9.5	10.3
13	1.1	0.4	0.9	8.2	6.4	7.1	11.7	10.0	10.6	13.0	11.6	12.3
14	1.9	1.1	1.6	8.0	6.4	7.2	12.0	10.3	11.0	13.5	12.6	12.9
15	2.8	1.9	2.3	8.3	6.3	7.2	11.3	8.9	10.4	13.8	12.3	13.1
16	2.6	1.5	2.2	7.9	6.9	7.4	9.7	8.5	8.9	13.3	11.2	12.1
17	2.7	1.4	1.9	7.5	6.6	7.0	10.4	9.0	9.8	13.3	11.6	12.4
18	3.3	1.8	2.5	7.5	6.1	6.6	10.1	9.0	9.5	12.6	10.9	11.5
19	2.8	0.8	1.9	6.8	5.7	6.2	10.2	8.5	9.4	11.7	9.6	10.7
20	2.7	0.7	1.8	7.2	5.8	6.2	10.6	8.4	9.2	11.8	9.8	10.8
21	2.7	1.2	2.1	8.2	6.3	7.2	11.4	9.3	10.5	11.8	9.8	10.8
22	3.0	1.5	2.3	8.8	7.3	7.9	11.5	10.0	10.6	12.2	10.2	11.3
23	2.1	0.7	1.4	9.5	7.4	8.4	10.7	7.9	9.7	12.2	10.7	11.5
24	2.1	0.8	1.5	9.2	7.9	8.7	8.7	7.3	7.8	11.9	10.2	11.0
25	2.2	1.4	1.9	8.7	7.0	7.7	10.2	7.8	9.0	11.5	10.5	10.9
26	2.9	1.7	2.4	8.1	6.8	7.6	11.4	9.6	10.6	11.6	9.9	10.7
27	3.1	2.3	2.6	7.5	5.6	6.7	12.3	10.9	11.5	12.0	10.3	11.0
28	3.8	2.4	3.0	6.0	4.1	5.1	12.0	10.8	11.4	12.2	11.1	11.6
29	---	---	---	5.7	3.6	4.5	11.4	10.4	10.9	12.2	11.0	11.6
30	---	---	---	5.9	3.8	4.7	11.4	9.5	10.4	11.8	10.9	11.3
31	---	---	---	7.9	4.7	6.3	---	---	---	11.5	10.8	11.2
MONTH	3.8	0.0	1.5	9.5	1.3	5.7	12.4	5.5	9.3	13.8	8.9	10.9



## 09073300 ROARING FORK RIVER ABOVE DIFFICULT CREEK NEAR ASPEN, CO

LOCATION.--Lat 39°08'28", long 106°46'25", Pitkin County, Hydrologic Unit 14010004, on left bank in the White River National Forest at Difficult Creek Campground, 0.45 mi upstream from Difficult Creek, and 4.25 mi southeast of Aspen.

DRAINAGE AREA.--75.8 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09073300](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09073300)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,120 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Transmountain diversion 11 mi upstream through Twin Lakes Tunnel to Arkansas River basin since May 24, 1935 (45,240 acre-ft diverted during current year, provided by Colorado Division of Water Resources).

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	14	12	11	10	9.7	13	35	385	68	21	20
2	21	13	12	11	11	e9.2	14	33	216	67	22	19
3	19	12	11	11	10	e9.4	14	31	186	63	22	20
4	18	12	11	11	e10	10	14	31	187	55	23	20
5	18	11	12	11	e10	10	13	28	169	55	22	19
6	16	9.1	11	11	e7.8	e9.4	13	26	147	52	21	20
7	15	11	12	10	e7.6	10	13	26	129	49	21	26
8	16	12	11	11	e8.8	10	e12	27	132	47	36	26
9	15	11	e9.4	10	e9.8	9.8	13	25	133	43	34	25
10	15	10	e9.0	11	e10	9.9	16	26	141	42	34	28
11	14	11	e9.6	11	10	11	19	25	139	40	32	28
12	14	13	11	10	9.9	11	21	29	130	38	35	26
13	14	12	11	10	10	11	22	37	136	35	35	25
14	14	13	11	11	10	12	27	43	133	34	34	24
15	13	12	11	11	9.9	12	28	58	134	33	33	24
16	13	e11	11	e8.6	9.7	12	25	76	129	32	33	22
17	13	12	11	11	10	11	27	101	121	31	37	24
18	13	12	11	e8.4	10	11	27	107	119	29	40	37
19	13	e11	11	e9.8	9.5	11	25	103	124	28	38	48
20	13	12	e8.4	10	9.6	11	24	100	117	26	21	43
21	13	12	11	10	10	11	25	104	111	27	19	36
22	13	12	e8.8	10	10	11	26	120	105	25	19	35
23	13	12	e7.4	10	9.6	11	25	136	99	24	20	33
24	13	12	e9.6	10	10	12	22	146	91	25	19	32
25	13	12	e10	10	10	12	24	167	85	23	19	33
26	13	e10	e9.8	10	10	12	28	172	80	26	23	30
27	14	e9.0	e10	10	9.9	11	32	225	77	45	30	28
28	14	e10	11	10	9.8	e11	35	292	73	28	22	27
29	13	12	11	9.9	---	e10	39	529	69	26	21	27
30	13	12	11	10	---	e11	38	571	66	22	21	26
31	14	---	11	10	---	12	---	401	---	22	21	---
TOTAL	458	347.1	327.0	318.7	272.9	334.4	674	3,830	3,963	1,160	828	831
MEAN	14.8	11.6	10.5	10.3	9.75	10.8	22.5	124	132	37.4	26.7	27.7
MAX	25	14	12	11	11	12	39	571	385	68	40	48
MIN	13	9.0	7.4	8.4	7.6	9.2	12	25	66	22	19	19
AC-FT	908	688	649	632	541	663	1,340	7,600	7,860	2,300	1,640	1,650

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

MEAN	29.4	21.6	17.2	15.1	14.3	15.8	31.1	139	361	164	57.9	38.6
MAX	53.3	43.3	31.0	24.4	21.1	24.4	53.8	512	939	872	145	83.7
(WY)	(1987)	(1985)	(1985)	(1985)	(1998)	(1997)	(1985)	(1984)	(1984)	(1995)	(1995)	(1986)
MIN	14.8	11.6	10.5	10.3	9.75	9.60	14.9	57.4	55.9	33.8	18.1	17.7
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(1981)	(1983)	(1995)	(2002)	(2001)	(2002)	(1981)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1980 - 2003

ANNUAL TOTAL	9,344.9	13,344.1	
ANNUAL MEAN	25.6	36.6	a126
HIGHEST ANNUAL MEAN			194
LOWEST ANNUAL MEAN			26.8
HIGHEST DAILY MEAN	100	571	1,930
LOWEST DAILY MEAN	e7.4	e7.4	e7.4
ANNUAL SEVEN-DAY MINIMUM	9.3	9.1	9.1
MAXIMUM PEAK FLOW		942	b2,350
MAXIMUM PEAK STAGE		3.89	5.10
ANNUAL RUNOFF (AC-FT)	18,540	26,470	a91,290
10 PERCENT EXCEEDS	59	100	164
50 PERCENT EXCEEDS	14	15	27
90 PERCENT EXCEEDS	11	10	12

e Estimated.

a Includes Twin Lakes Tunnel diversions.

b From rating curve extended above 910 ft<sup>3</sup>/s.

09073300 ROARING FORK RIVER ABOVE DIFFICULT CREEK NEAR ASPEN, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1996 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09073300](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09073300)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1999 to June 2000.

WATER TEMPERATURE: December 1999 to June 2000.

INSTRUMENTATION.--Water-quality monitor, December 1999 to June 2000.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
OCT 08...	1150	16	9.3	8.0	79	5.3	33	10.5	1.76	0.41	0.1	1.95	E29
FEB 05...	1115	12	10.6	7.5	86	0.0	--	--	--	--	--	--	--
APR 23...	1150	25	11.6	7.6	69	1.0	29	9.07	1.51	0.46	0.2	1.99	26
MAY 28...	1505	190	9.5	--	33	8.3	15	4.48	0.820	0.34	0.1	1.09	14
JUL 22...	1430	25	7.7	7.9	58	16.4	--	--	--	--	--	--	--
SEP 03...	1420	20	8.1	8.0	79	12.5	36	11.4	1.81	0.52	0.1	1.80	25

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT 08...	1.12	0.4	5.4	9.7	--	--	--	E.08	E.07	<0.015	0.025	E.002	<0.007
FEB 05...	--	--	--	--	--	--	--	E.07	E.10	<0.015	0.102	<0.002	<0.007
APR 23...	0.62	0.38	6.6	7.1	44	0.06	2.93	0.11	E.09	<0.015	0.091	<0.002	<0.007
MAY 28...	0.23	0.2	5.8	2.1	24	0.03	12.2	0.13	0.24	<0.015	0.026	E.002	<0.007
JUL 22...	--	--	--	--	--	--	--	E.06	0.12	<0.015	E.021	<0.002	<0.007
SEP 03...	0.25	0.5	6.0	12.1	50	0.07	2.69	<0.10	E.08	<0.015	0.048	<0.002	<0.007

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coli-form, M-FC 0.7u MF col/ 100 mL (31625)
OCT 08...	<0.004	E.003	E1	E1
FEB 05...	<0.004	<0.004	<1	<1
APR 23...	0.004	E.003	E3	<1
MAY 28...	<0.004	0.014	<1	E2
JUL 22...	E.002	E.003	E1	<1
SEP 03...	<0.004	<0.004	<1	<1

< -- Actual value is known to be less than the value shown.  
 E -- Estimated laboratory analysis value.



## ROARING FORK RIVER BASIN

09073300 ROARING FORK RIVER ABOVE DIFFICULT CREEK NEAR ASPEN, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 08...	<0.2	E1.1	30	<1	E2.2	E2.6	<0.02	<3	<0.3	<24
APR 23...	<0.2	1.4	80	<1	3.8	E3.7	<0.02	<3	<0.3	<24
MAY 28...	<0.2	1.7	250	<1	2.5	11.4	<0.02	<3	<0.3	<3
SEP 03...	<0.2	E1.0	30	<1	1.3	2.4	<0.02	<3	<0.3	<3

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
OCT 02...	1135	20	80	6.2	JUN 03...	0900	178	31	3.9
NOV 13...	1130	13	80	1.0	JUL 01...	1145	68	44	10.9

## 09073400 ROARING FORK RIVER NEAR ASPEN, CO

LOCATION.--Lat 39°10'48", long 106°48'05", T. 10 S., R. 84 W., Pitkin County, Hydrologic Unit 14010004, on right bank 25 ft upstream from private bridge, 115 ft upstream from Salvation ditch headgate, 1.0 mi southeast of Aspen, and 2.0 mi upstream from Hunter Creek.

DRAINAGE AREA.--108 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,014.01 ft above NGVD of 1929. Prior to Apr. 25, 1968, at site 85 ft upstream, at datum 1.16 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Transmountain diversion 14 mi upstream through Twin Lakes tunnel to Arkansas River basin since May 24, 1935, (45,240 acre-ft diverted during current year, provided by Colorado Division of Water Resources). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	26	23	21	20	20	25	69	832	107	36	32
2	35	25	23	20	20	19	28	65	568	102	35	29
3	36	22	22	21	20	19	28	62	454	95	35	29
4	33	21	25	21	18	21	28	65	411	87	37	30
5	33	22	23	21	20	20	26	61	354	82	35	29
6	30	18	23	20	e15	20	28	55	304	78	34	32
7	28	20	25	21	e14	20	27	55	280	74	33	49
8	27	23	23	23	e17	20	24	57	264	69	49	49
9	27	24	20	22	19	20	26	55	277	64	49	44
10	26	21	20	20	20	20	31	58	290	61	47	52
11	25	22	20	21	20	21	37	54	280	58	45	54
12	23	21	21	21	19	22	42	60	270	55	51	49
13	22	22	21	21	20	22	43	84	295	53	53	49
14	24	25	22	22	21	23	55	98	257	52	50	42
15	22	24	21	21	20	24	54	136	258	51	47	39
16	22	21	24	e18	20	24	46	167	247	51	50	39
17	21	23	21	20	21	24	49	225	228	49	58	36
18	21	24	21	21	20	24	49	247	228	47	60	52
19	20	22	20	20	19	23	45	245	234	44	64	71
20	20	23	e18	21	18	22	42	241	220	42	38	68
21	20	24	21	20	20	24	42	240	206	42	32	56
22	21	23	20	20	20	23	45	277	192	40	31	54
23	24	23	e16	20	20	23	45	319	182	39	33	52
24	22	24	e18	20	20	25	41	349	168	40	32	49
25	23	24	20	20	21	25	43	372	156	38	30	50
26	22	19	20	19	21	23	51	363	144	38	35	45
27	25	20	20	20	20	24	58	429	137	69	42	44
28	24	22	21	20	20	22	64	546	129	45	38	43
29	24	24	21	19	---	20	72	752	119	48	34	42
30	21	24	20	19	---	23	75	916	112	39	33	40
31	26	---	20	20	---	24	---	756	---	36	34	---
TOTAL	788	676	653	633	543	684	1,269	7,478	8,096	1,795	1,280	1,349
MEAN	25.4	22.5	21.1	20.4	19.4	22.1	42.3	241	270	57.9	41.3	45.0
MAX	41	26	25	23	21	25	75	916	832	107	64	71
MIN	20	18	16	18	14	19	24	54	112	36	30	29
AC-FT	1,560	1,340	1,300	1,260	1,080	1,360	2,520	14,830	16,060	3,560	2,540	2,680

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

MEAN	43.6	34.8	29.8	26.7	25.5	27.5	49.0	198	415	194	68.6	51.0
MAX	80.0	61.6	47.5	44.6	41.1	44.3	79.7	554	1,017	1,057	186	94.0
(WY)	(1966)	(1985)	(1987)	(1997)	(1997)	(1997)	(1985)	(1984)	(1984)	(1995)	(1995)	(1999)
MIN	23.5	20.7	18.6	17.0	15.4	16.6	26.2	97.0	77.8	46.5	25.7	23.8
(WY)	(1978)	(1978)	(1977)	(1977)	(1977)	(1977)	(1973)	(1983)	(2002)	(2002)	(2002)	(1977)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1965 - 2003

ANNUAL TOTAL	14,493	25,244	
ANNUAL MEAN	39.7	69.2	a150
HIGHEST ANNUAL MEAN			229
LOWEST ANNUAL MEAN			41.0
HIGHEST DAILY MEAN	166	May 31	1,900
LOWEST DAILY MEAN	e16	Dec 23	12
ANNUAL SEVEN-DAY MINIMUM	19	Dec 19	15
MAXIMUM PEAK FLOW		1,090	b2,230
MAXIMUM PEAK STAGE		4.11	5.97
ANNUAL RUNOFF (AC-FT)	28,750	50,070	a108,700
10 PERCENT EXCEEDS	90	198	244
50 PERCENT EXCEEDS	24	28	40
90 PERCENT EXCEEDS	20	20	22

e Estimated.

a Includes diversions through Twin Lakes Tunnel.

b Also occurred Jun 9, 1985.

## 09074000 HUNTER CREEK NEAR ASPEN, CO

LOCATION.--Lat 39°12'21", long 106°47'49", Pitkin County, Hydrologic Unit 14010004, on right bank 280 ft upstream from headgate of Red Mountain ditch, 1.5 mi upstream from mouth, and 1.5 mi northeast of Aspen.

DRAINAGE AREA.--41.1 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1950 to September 1956, September 1969 to current year. Statistical summary computed for 1980 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09074000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09074000)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,610 ft above NGVD of 1929, from topographic map. Prior to Sept. 1, 1969, at site 220 ft downstream, at different datum, Sept. 1, 1969 to July 10, 1991 at datum 1.0 ft lower.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Transmountain diversion upstream from station to Charles H. Boustead tunnel by feeder conduit. Several small diversions upstream from station for irrigation of hay meadows upstream and downstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	9.5	e7.0	5.2	4.3	3.9	7.1	29	567	46	19	13
2	18	9.2	e6.6	5.0	4.4	3.9	7.8	26	422	44	18	11
3	18	e7.8	e6.4	5.0	4.3	3.9	7.3	25	355	41	17	10
4	17	e7.8	e6.0	5.1	4.3	3.9	e7.1	26	324	40	19	11
5	15	e7.6	e6.4	5.1	4.3	3.8	e6.9	23	248	39	16	11
6	15	e7.0	e6.0	5.0	4.3	3.9	e6.9	21	77	38	15	13
7	15	e7.4	e5.8	4.9	3.9	4.0	e6.8	20	74	36	14	22
8	15	e7.6	e5.6	4.9	3.9	4.0	e6.4	21	68	35	17	24
9	14	e10	e5.0	5.0	3.8	4.0	e7.6	20	76	34	14	25
10	13	e8.8	e4.6	5.1	3.7	4.2	9.8	20	101	33	13	27
11	12	e8.2	e4.8	5.1	3.7	4.5	12	19	67	32	13	27
12	12	e7.4	e5.8	4.8	3.8	4.7	13	24	63	31	16	26
13	10	e8.0	e6.2	4.7	4.0	5.1	15	37	81	31	e16	25
14	9.6	e7.8	e5.4	4.8	4.1	5.6	19	43	66	30	e15	23
15	8.8	e7.5	e5.8	4.8	4.0	5.6	21	56	63	30	e15	20
16	9.1	e6.8	e5.6	4.5	4.0	5.6	20	70	62	30	14	18
17	9.1	e7.2	e5.8	4.5	4.0	5.3	20	87	60	30	18	17
18	8.7	e7.2	e5.8	4.5	4.1	5.1	19	84	58	29	19	15
19	8.2	e6.8	e5.0	4.5	3.8	e4.9	17	84	58	29	18	15
20	7.7	e7.0	5.7	4.4	3.9	4.6	16	83	59	28	14	14
21	7.8	e7.0	5.8	4.3	4.0	3.6	16	84	56	28	12	13
22	7.8	e7.2	5.5	4.3	3.9	3.5	18	93	53	27	12	12
23	9.8	e7.4	5.3	4.3	4.0	4.8	17	110	52	26	17	12
24	8.7	e7.0	5.1	4.3	4.0	6.2	16	121	51	26	14	11
25	8.7	e7.2	5.1	4.2	4.0	5.8	16	124	50	25	13	9.9
26	8.4	e6.0	4.9	4.1	4.0	5.6	23	140	49	23	16	9.7
27	10	e5.4	4.9	4.1	3.9	e5.6	28	290	48	23	17	10
28	8.8	e6.0	5.0	4.1	3.9	e5.4	30	496	48	24	16	9.7
29	7.7	e6.8	5.1	4.2	---	e5.2	33	571	47	26	14	9.0
30	e7.5	e6.6	5.0	4.2	---	5.6	34	592	47	23	14	7.4
31	e8.8	---	5.0	4.3	---	6.6	---	550	---	20	16	---
TOTAL	351.2	223.2	172.0	143.3	112.3	148.4	476.7	3,989	3,450	957	481	470.7
MEAN	11.3	7.44	5.55	4.62	4.01	4.79	15.9	129	115	30.9	15.5	15.7
MAX	22	10	7.0	5.2	4.4	6.6	34	592	567	46	19	27
MIN	7.5	5.4	4.6	4.1	3.7	3.5	6.4	19	47	20	12	7.4
AC-FT	697	443	341	284	223	294	946	7,910	6,840	1,900	954	934

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	16.0	10.4	6.85	5.79	5.35	6.43	20.0	122	192	73.3	30.7	19.0													
MAX	32.7	25.1	14.4	11.3	9.21	11.3	40.8	287	462	271	74.4	42.1													
(WY)	(1985)	(1985)	(1985)	(1987)	(1985)	(1997)	(1989)	(1996)	(1996)	(1995)	(1995)	(1999)													
MIN	5.35	3.32	2.33	2.74	2.89	3.66	7.68	44.8	36.3	11.1	4.90	7.03													
(WY)	(1990)	(1990)	(1981)	(1981)	(1990)	(1990)	(1983)	(1995)	(2002)	(2002)	(2002)	(1980)													

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1980 - 2003

ANNUAL TOTAL	5,399.9	10,974.8		
ANNUAL MEAN	14.8	30.1	a42.4	
HIGHEST ANNUAL MEAN			81.2	1996
LOWEST ANNUAL MEAN			14.3	2002
HIGHEST DAILY MEAN	78	May 12	592	May 30
LOWEST DAILY MEAN	e2.1	Jan 31	3.5	Mar 22
ANNUAL SEVEN-DAY MINIMUM	2.6	Jan 28	3.8	Feb 7
MAXIMUM PEAK FLOW			884	May 29
MAXIMUM PEAK STAGE			3.16	May 29
ANNUAL RUNOFF (AC-FT)	10,710	21,770	30,730	
10 PERCENT EXCEEDS	42	57	108	
50 PERCENT EXCEEDS	7.4	10	13	
90 PERCENT EXCEEDS	3.0	4.2	4.6	

e Estimated.

a Average discharge for 16 years (water years 1951-1956, 1970-1979), 50.7 ft<sup>3</sup>/s; 36,730 acre-ft/yr, prior to diversion through Charles H. Boustead tunnel.

b From rating curve extended above 300 ft<sup>3</sup>/s.

c Maximum gage height for period of record, 4.30 ft, Nov 30, 1984, backwater from ice.

**09080190 RUEDI RESERVOIR NEAR BASALT, CO**

LOCATION.--Lat 39°21'50", long 106°49'05", in NW<sup>1</sup>/<sub>4</sub> sec.18, T.8 S., R.84 W., Pitkin County, Hydrologic Unit 14010004, in gatehouse of Ruedi Dam just upstream from Rocky Fork Creek, and 13 mi east of Basalt.

DRAINAGE AREA.--223 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1968 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09080190](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09080190)

GAGE.--Water-stage recorder. Datum of gage is 7766.00 ft above NGVD of 1929, (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by an earthfill dam. Storage began in May 1968; dam completed July 16, 1968. Capacity, 102,300 acre-ft, 1969 survey, between elevations 7,540.00 ft, sill of auxiliary outlet and 7,766.00 ft, crest of spillway. Dead storage below elevation 7,540.00 ft, 61 acre-ft. Figures given are total contents.

COOPERATION.--Records provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 104,000 acre-ft, June 11, 12, 2000, elevation, 7,767.62 ft; minimum after first filling, 32,430 acre-ft, Apr. 24, 1996, elevation, 7,670.17 ft.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 98,160 acre-ft, July 24, elevation, 7,761.72 ft; minimum contents, 46,110 acre-ft, Mar. 13, elevation, 7,694.95 ft.

## MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30 .....	7,697.75	47,830	-
Oct. 31 .....	7,696.96	47,340	-490
Nov. 30 .....	7,697.63	47,750	+410
Dec. 31 .....	7,697.15	47,450	-300
CAL YR 2002 .....	-	-	-18,850
Jan. 31 .....	7,696.20	46,870	-580
Feb. 28 .....	7,695.35	46,350	-520
Mar. 31 .....	7,695.12	46,210	-140
Apr. 30 .....	7,701.51	50,190	+3,980
May 31 .....	7,730.98	71,160	+20,970
June 30 .....	7,759.31	95,840	+24,680
July 31 .....	7,760.72	97,190	+1,350
Aug. 31 .....	7,753.34	90,250	-6,940
Sept. 30 .....	7,745.94	83,610	-6,640
WTR YR 2003 .....	-	-	+35,780

## 09080400 FRYINGPAN RIVER NEAR RUEDI, CO

LOCATION.--Lat 39°21'56", long 106°49'30", in SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.12, T.8 S., R.85 W., Pitkin County, Hydrologic Unit 14010004, on right bank 0.4 mi downstream from Rocky Fork Creek and Ruedi Dam, 1.5 mi west of former site of Ruedi, and 12.5 mi east of Basalt.

DRAINAGE AREA.--238 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1964 to current year. Statistical summary computed for 1969 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09080400](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09080400)

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Datum of gage is 7,473.25 ft above NGVD of 1929, (levels by U.S. Bureau of Reclamation). Prior to Nov. 7, 1970, at site 2.0 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Diversions for irrigation of hay meadows upstream from station. Transmountain diversions upstream from station to Arkansas River basin through Busk-Ivanhoe Tunnel since June 1925 and Charles H. Boustead Tunnel since May 16, 1972 (see elsewhere in this report). Flow regulated by Ruedi Reservoir (station 09080190) since May 18, 1968. Several observations of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	51	42	41	40	41	41	65	140	116	129	239
2	94	43	42	41	40	41	41	115	134	118	130	239
3	94	42	42	41	40	41	42	116	111	118	130	315
4	94	42	42	41	40	41	41	116	108	118	131	288
5	94	42	42	41	40	41	41	116	117	118	130	301
6	94	42	42	41	40	41	41	116	111	118	135	293
7	94	42	42	41	40	41	41	113	107	117	163	293
8	95	42	42	41	40	41	41	110	104	116	178	254
9	94	43	41	41	40	41	41	110	102	116	221	175
10	89	42	41	41	40	41	41	109	102	116	220	137
11	71	42	41	41	40	41	42	109	108	116	220	136
12	71	42	41	41	40	41	73	109	114	116	228	136
13	71	42	41	41	40	41	88	109	117	116	247	139
14	70	42	41	41	40	41	63	109	113	116	242	139
15	71	42	41	41	40	41	42	109	111	115	242	139
16	70	42	41	41	40	41	42	111	109	116	242	139
17	70	42	41	41	40	41	42	114	109	116	242	150
18	67	42	41	41	41	41	42	119	109	116	242	219
19	53	42	41	41	40	41	43	124	110	116	242	231
20	52	42	41	41	40	41	42	130	117	116	241	231
21	52	42	41	41	41	41	43	131	119	116	241	231
22	52	42	41	41	41	41	43	134	117	116	242	230
23	52	42	41	41	41	41	44	144	115	116	242	229
24	52	42	41	41	41	41	42	148	114	116	242	229
25	52	42	41	41	41	41	42	149	112	146	242	229
26	52	42	41	40	41	42	45	150	111	277	242	228
27	52	42	41	40	41	42	44	140	110	329	242	228
28	52	42	41	40	41	41	44	114	109	275	242	228
29	52	42	41	40	---	41	45	121	109	120	241	228
30	52	42	41	40	---	41	45	128	110	102	239	228
31	52	---	41	40	---	41	---	129	---	108	238	---
TOTAL	2,174	1,271	1,279	1,265	1,129	1,275	1,372	3,717	3,379	4,151	6,608	6,481
MEAN	70.1	42.4	41.3	40.8	40.3	41.1	45.7	120	113	134	213	216
MAX	95	51	42	41	41	42	88	150	140	329	247	315
MIN	52	42	41	40	40	41	41	65	102	102	129	136
AC-FT	4,310	2,520	2,540	2,510	2,240	2,530	2,720	7,370	6,700	8,230	13,110	12,860

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

MEAN	151	122	129	126	128	137	157	262	352	261	172	155
MAX	366	185	224	228	250	280	370	669	950	812	293	262
(WY)	(1970)	(1985)	(1996)	(1996)	(1996)	(1996)	(1971)	(1970)	(1984)	(1995)	(2000)	(2001)
MIN	54.8	42.4	38.2	36.8	36.3	33.6	39.1	116	113	95.9	57.1	49.1
(WY)	(1978)	(2003)	(1969)	(1969)	(1969)	(1977)	(1969)	(1990)	(2003)	(1977)	(1977)	(1977)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1969 - 2003

ANNUAL TOTAL	39,084	34,101	
ANNUAL MEAN	107	93.4	a180
HIGHEST ANNUAL MEAN			288
LOWEST ANNUAL MEAN			83.9
HIGHEST DAILY MEAN	322	329	1,390
LOWEST DAILY MEAN	41	40	b28
ANNUAL SEVEN-DAY MINIMUM	41	40	29
MAXIMUM PEAK FLOW		710	c1,400
MAXIMUM PEAK STAGE		2.96	d3.50
ANNUAL RUNOFF (AC-FT)	77,520	67,640	130,100
10 PERCENT EXCEEDS	211	229	295
50 PERCENT EXCEEDS	67	52	152
90 PERCENT EXCEEDS	42	41	73

a Subsequent to completion of Ruedi Reservoir.

b Minimum daily discharge for period of record, 16 ft<sup>3</sup>/s, Feb 2, 1968 (result of storage in Ruedi Reservoir); minimum daily discharge prior to construction of Ruedi Reservoir, 28 ft<sup>3</sup>/s, Mar 4, 1966.

c Maximum discharge and stage for period of record, 2,690 ft<sup>3</sup>/s, Jun 18, 1965, gage height 5.16 ft, site and datum then in use.

d Maximum gage height for statistical period, 3.89 ft, Jun 24, 1983.

**09081000 ROARING FORK RIVER NEAR EMMA, CO**

LOCATION.--Lat 39°22'24", long 107°05'00", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec. 11, T.8 S., R.87 W., Eagle County, Hydrologic Unit 14010004, on left bank 10 ft upstream from bridge on Hooks Lane, 1.2 mi downstream from Sopris Creek, and 1.2 mi northwest of Emma.

DRAINAGE AREA.--853 mi<sup>2</sup>, approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1908 to September 1909 (monthly discharge only, published in WSP 1313), March 1998 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09081000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09081000)

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 6,470 ft above NGVD of 1929, from topographic map. Prior to Mar. 1998, nonrecording gage at different datum.

REMARKS.--Records good except for the period July 3-24, which is fair, and estimated daily discharges, which are poor. Diversions for irrigation of about 16,000 acres above station. Transmountain diversions to Arkansas River basin through Busk-Ivanhoe tunnel since 1925 and through Twin Lakes tunnel since 1935. Transmountain diversion from headwaters of Fryingspan River through Charles H. Boustead Tunnel to Arkansas River basin began May 16, 1972. Natural flow of stream affected by storage in Ruedi Reservoir on Fryingspan River (station 09080190) since May 1968.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	277	250	221	195	168	158	181	291	3,860	814	326	337
2	277	249	210	179	170	152	190	322	3,190	810	323	332
3	295	227	204	182	170	154	192	322	2,630	778	319	379
4	289	214	200	183	160	163	185	361	2,440	748	316	367
5	282	217	207	e170	e150	162	177	351	2,190	727	305	376
6	277	207	192	e155	e120	159	185	315	1,670	694	300	371
7	274	209	189	e165	e115	162	181	300	1,480	664	311	425
8	268	214	191	e160	135	163	174	286	1,330	640	316	438
9	262	264	175	e165	157	162	177	274	1,410	601	352	379
10	268	233	177	e195	e155	164	186	277	1,540	573	345	424
11	250	219	187	187	e165	169	200	269	1,420	541	337	406
12	246	200	209	183	e160	177	227	262	1,480	518	339	368
13	244	210	203	178	e175	180	266	277	1,570	501	355	369
14	242	233	186	180	187	182	280	293	1,360	476	349	356
15	242	227	198	170	175	185	266	376	1,430	455	343	341
16	243	207	190	157	163	185	244	424	1,510	453	349	327
17	243	218	202	182	164	186	244	577	1,320	430	362	324
18	242	222	196	e140	162	186	254	690	1,290	420	379	377
19	226	210	180	e160	159	177	239	739	1,310	410	376	407
20	222	215	160	e170	154	172	231	717	1,260	413	353	414
21	218	216	197	e175	164	179	229	716	1,180	403	337	401
22	216	213	165	182	161	173	249	793	1,130	395	335	395
23	229	220	139	180	156	177	274	1,040	1,120	390	333	385
24	229	227	173	172	160	192	262	1,240	1,040	369	333	376
25	223	227	176	172	163	188	254	1,500	933	346	332	374
26	219	193	161	167	159	181	268	1,440	922	432	334	365
27	225	179	166	166	158	191	301	1,750	920	535	336	358
28	223	197	e170	168	158	177	324	2,530	908	495	345	352
29	220	214	e180	166	---	165	313	3,120	877	353	334	349
30	219	217	e180	164	---	171	309	3,680	851	325	339	341
31	241	---	e160	168	---	175	---	3,440	---	310	342	---
TOTAL	7,631	6,548	5,744	5,336	4,443	5,367	7,062	28,972	45,571	16,019	10,455	11,213
MEAN	246	218	185	172	159	173	235	935	1,519	517	337	374
MAX	295	264	221	195	187	192	324	3,680	3,860	814	379	438
MIN	216	179	139	140	115	152	174	262	851	310	300	324
AC-FT	15,140	12,990	11,390	10,580	8,810	10,650	14,010	57,470	90,390	31,770	20,740	22,240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2003, BY WATER YEAR (WY)

MEAN	381	283	250	237	215	218	342	920	1,439	786	506	420
MAX	555	318	283	270	245	260	551	1,177	2,476	1,495	741	547
(WY)	(2000)	(2000)	(2002)	(2002)	(2000)	(1999)	(1998)	(1998)	(1999)	(1999)	(1999)	(1999)
MIN	246	218	185	172	159	173	235	399	519	307	298	292
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1998 - 2003

ANNUAL TOTAL	103,927	154,361		
ANNUAL MEAN	285	423		481
HIGHEST ANNUAL MEAN				680
LOWEST ANNUAL MEAN				308
HIGHEST DAILY MEAN	920	Jun 1	3,860	Jun 1
LOWEST DAILY MEAN	139	Dec 23	e115	Feb 7
ANNUAL SEVEN-DAY MINIMUM	164	Dec 22	142	Feb 4
MAXIMUM PEAK FLOW			4,350	May 30
MAXIMUM PEAK STAGE			9.33	May 30
ANNUAL RUNOFF (AC-FT)	206,100	306,200		348,500
10 PERCENT EXCEEDS	388	913		986
50 PERCENT EXCEEDS	264	244		304
90 PERCENT EXCEEDS	193	163		208

e Estimated.

a Datum then in use.

## ROARING FORK RIVER BASIN

09081000 ROARING FORK RIVER NEAR EMMA, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1998 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09081000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09081000)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
OCT 08...	1415	271	9.5	8.5	406	10.3	210	66.3	11.7	1.33	0.1	4.16	E115
FEB 05...	1700	173	11.9	8.8	435	0.8	--	--	--	--	--	--	--
APR 24...	0915	263	11.2	8.2	393	3.9	200	61.2	10.6	1.28	0.1	4.46	105
MAY 27...	1730	1,490	8.9	--	210	12.7	94	29.9	4.62	0.75	0.1	1.94	59
JUL 22...	1905	376	7.9	8.2	363	18.0	--	--	--	--	--	--	--
SEP 04...	0900	359	9.8	8.1	345	9.2	170	53.5	9.29	1.13	0.1	3.35	96

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT 08...	3.17	0.2	7.7	96.1	--	--	--	E.09	0.17	E.009	0.131	E.002	0.010
FEB 05...	--	--	--	--	--	--	--	0.13	0.14	<0.015	0.263	0.004	0.027
APR 24...	4.48	0.23	6.6	90.5	243	0.33	173	0.12	0.23	E.012	0.195	E.002	0.009
MAY 27...	1.58	0.2	6.4	39.6	121	0.16	488	0.18	0.37	<0.015	0.122	E.002	E.005
JUL 22...	--	--	--	--	--	--	--	E.09	0.12	E.013	0.084	0.003	0.010
SEP 04...	2.56	0.2	7.7	74.5	211	0.29	204	0.12	0.19	<0.015	0.177	<0.002	0.007

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
OCT 08...	0.014	0.020	E2	E6
FEB 05...	0.035	0.046	<1	E1
APR 24...	0.014	0.038	E23	E18
MAY 27...	0.009	0.059	E51	83
JUL 22...	0.015	0.021	E19	E11
SEP 04...	0.015	0.023	E30	30

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

09081000 ROARING FORK RIVER NEAR EMMA, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 08...	<0.2	<1.2	50	<1	4.1	6.9	<0.02	<3	<0.3	<24
APR 24...	<0.2	<1.2	210	<1	4.5	15.3	<0.02	<3	<0.3	<24
MAY 27...	<0.2	E.9	700	<1	6.0	38.4	<0.02	<3	<0.3	4
SEP 04...	<0.2	1.2	90	<1	5.5	15.4	<0.02	<3	<0.3	3

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
OCT 03...	1445	297	400	9.5	APR 02...	1525	183	422	11.4
NOV 12...	1415	183	427	2.9	MAY 08...	1350	302	346	9.0
JAN 15...	1500	164	425	1.4	JUL 02...	1215	804	283	11.8

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
OCT 08...	1415	271	10.3	--	2	1.3
FEB 05...	1700	173	0.8	--	3	1.3
APR 24...	0915	263	3.9	--	8	5.7
MAY 27...	1730	1,490	12.7	77	45	181
JUL 22...	1905	376	18.0	--	2	2.3
SEP 04...	0900	359	9.2	--	7	6.9



**09081600 CRYSTAL RIVER ABOVE AVALANCHE CREEK, NEAR REDSTONE, CO**

LOCATION.--Lat 39°13'56", long 107°13'36", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.33, T.9 S., R.88 W., Pitkin County, Hydrologic Unit 14010004, on right bank 1.2 mi upstream from Avalanche Creek, and 3.6 mi north of Redstone.

DRAINAGE AREA.--167 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1955 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09081600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09081600)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,905 ft above NGVD of 1929, from river-profile map.

REMARKS.--Records good except for estimated discharges, which are fair. A few small diversions for irrigation upstream from station.

Discharge, cubic feet per second  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	70	56	43	38	37	60	284	2,180	603	189	89
2	101	74	51	36	38	34	66	266	2,010	613	161	86
3	111	61	50	40	38	35	65	266	1,710	578	160	85
4	106	62	47	43	35	37	62	305	1,560	550	150	85
5	107	60	51	39	35	36	60	270	1,370	513	139	83
6	100	55	47	e36	27	35	60	235	1,200	472	132	89
7	99	59	46	e38	26	35	58	221	1,060	443	128	116
8	98	61	44	37	30	39	55	220	1,020	427	132	117
9	94	83	38	38	37	42	62	215	1,120	404	124	136
10	88	71	36	45	35	43	83	204	1,150	373	121	223
11	84	65	38	44	37	45	120	192	1,090	352	119	177
12	80	57	45	41	35	48	150	218	1,200	328	121	152
13	75	64	48	36	42	53	158	296	1,210	314	126	165
14	74	61	42	41	48	58	207	362	1,160	304	127	145
15	70	59	45	40	42	60	209	531	1,220	299	123	130
16	68	52	43	32	39	61	170	660	1,240	293	124	122
17	66	57	45	41	38	58	166	868	1,050	272	144	117
18	64	56	44	31	38	57	171	1,060	995	274	135	113
19	61	53	38	37	36	53	150	973	949	262	130	106
20	59	55	33	38	35	53	138	912	917	253	115	100
21	58	55	45	40	39	56	144	954	e920	240	108	95
22	58	56	36	40	38	55	186	1,080	e940	228	107	91
23	68	58	29	40	34	58	196	1,270	e920	216	107	88
24	70	56	40	39	38	63	183	1,370	e850	210	103	86
25	65	56	42	39	40	61	190	1,420	e670	204	102	83
26	62	48	37	37	38	60	e233	1,460	647	208	97	81
27	69	42	38	38	37	61	e276	1,660	679	254	96	79
28	65	47	38	38	38	56	e312	1,970	684	199	93	77
29	67	53	41	37	---	52	e319	2,150	669	187	90	75
30	65	52	41	37	---	54	310	2,210	636	173	96	73
31	69	---	35	38	---	55	---	2,020	---	163	98	---
TOTAL	2,432	1,758	1,309	1,199	1,031	1,550	4,619	26,122	33,026	10,209	3,797	3,264
MEAN	78.5	58.6	42.2	38.7	36.8	50.0	154	843	1,101	329	122	109
MAX	111	83	56	45	48	63	319	2,210	2,180	613	189	223
MIN	58	42	29	31	26	34	55	192	636	163	90	73
AC-FT	4,820	3,490	2,600	2,380	2,040	3,070	9,160	51,810	65,510	20,250	7,530	6,470

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2003, BY WATER YEAR (WY)

MEAN	98.1	71.9	55.5	49.0	48.6	65.9	193	762	1,255	611	197	124
MAX	223	152	95.9	85.3	89.9	184	464	1,223	2,019	1,872	640	253
(WY)	(1998)	(1987)	(1986)	(1985)	(1986)	(1986)	(1962)	(1984)	(1957)	(1957)	(1995)	(1986)
MIN	49.7	39.5	34.1	32.2	28.3	32.4	83.4	288	375	96.9	58.0	59.8
(WY)	(1978)	(1978)	(2002)	(2002)	(1964)	(1964)	(1964)	(1977)	(1977)	(1977)	(2002)	(1956)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1956 - 2003
ANNUAL TOTAL	49,614	90,316	
ANNUAL MEAN	136	247	295
HIGHEST ANNUAL MEAN			468
LOWEST ANNUAL MEAN			107
HIGHEST DAILY MEAN	873	2,210	3,500
LOWEST DAILY MEAN	21	26	21
ANNUAL SEVEN-DAY MINIMUM	29	32	27
MAXIMUM PEAK FLOW		2,630	4,180
MAXIMUM PEAK STAGE		4.92	6.12
ANNUAL RUNOFF (AC-FT)	98,410	179,100	213,600
10 PERCENT EXCEEDS	364	914	938
50 PERCENT EXCEEDS	65	80	94
90 PERCENT EXCEEDS	34	38	43

e Estimated.

09081600 CRYSTAL RIVER ABOVE AVALANCHE CREEK, NEAR REDSTONE, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1996 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09081600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09081600)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
OCT 09...	0935	93	9.7	7.8	469	5.8	210	71.6	8.26	1.42	0.5	17.6	E107
FEB 06...	1520	36	10.4	7.6	740	3.0	--	--	--	--	--	--	--
APR 22...	1250	186	10.4	7.8	404	7.9	180	58.7	8.04	1.14	0.5	14.6	105
MAY 27...	1440	1,360	9.5	--	165	10.4	72	22.9	3.50	0.51	0.2	3.35	61
JUL 23...	1355	212	8.7	7.7	331	15.6	--	--	--	--	--	--	--
SEP 04...	1350	84	8.4	7.7	525	14.2	240	78.9	10.2	1.78	0.5	17.1	116

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT 09...	5.54	0.3	7.9	126	--	--	--	E.06	0.13	<0.015	0.067	E.002	<0.007
FEB 06...	--	--	--	--	--	--	--	<0.10	E.08	0.028	0.078	<0.002	<0.007
APR 22...	4.23	0.19	6.9	92.1	250	0.34	125	E.06	0.19	<0.015	0.193	<0.002	<0.007
MAY 27...	0.95	<0.2	5.3	20.3	94	0.13	346	E.08	0.37	<0.015	0.179	<0.002	<0.007
JUL 23...	--	--	--	--	--	--	--	<0.10	<0.10	<0.015	0.053	<0.002	<0.007
SEP 04...	7.44	0.3	8.8	141	335	0.46	76.0	<0.10	<0.10	E.009	0.046	<0.002	<0.007

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
OCT 09...	<0.004	0.005	E7	E15
FEB 06...	<0.004	E.003	<1	<1
APR 22...	E.004	0.050	<1	<1
MAY 27...	E.002	0.25	<33	E18
JUL 23...	<0.004	E.003	E2	E5
SEP 04...	<0.004	E.003	E4	E6

< -- Actual value is known to be less than the value shown.  
 E -- Estimated laboratory analysis value.

## ROARING FORK RIVER BASIN

09081600 CRYSTAL RIVER ABOVE AVALANCHE CREEK, NEAR REDSTONE, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 09...	<0.2	<1.2	90	<1	7.4	9.8	<0.02	<3	<0.3	<24
APR 22...	<0.2	<1.2	970	<1	5.5	28.8	<0.02	<3	<0.3	<24
MAY 27...	<0.2	E.7	4,740	<1	4.0	143	<0.02	<3	<0.3	3
SEP 04...	<0.2	<1.2	80	<1	9.8	12.1	<0.02	E1	<0.3	<3

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
OCT 03...	1145	118	440	8.4	APR 03...	1130	61	604	4.1
NOV 14...	1115	61	595	3.6	30...	1055	305	321	5.4
JAN 16...	1055	26	808	3.2	JUN 02...	1240	1,690	152	7.3
					JUL 02...	0900	613	196	7.5

09083800 CRYSTAL RIVER BELOW CARBONDALE, CO

LOCATION.--Lat 39°24'29", long 107°13'47", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.33, T.7 S., R.88 W., Garfield County, Hydrologic Unit 14010004, on left bank at downstream side of bridge on County Road 108, 1.0 mi upstream from mouth, and 1.0 mi northwest of Carbondale.

DRAINAGE AREA.--350 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 2000 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09083800](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09083800)

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 6,120 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 4,000 acres upstream and downstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	78	103	94	74	66	68	97	340	2,870	638	158	69
2	72	107	90	e66	68	66	103	316	2,620	651	126	67
3	81	104	88	72	67	66	105	310	2,230	602	119	69
4	83	106	84	74	62	73	102	368	2,060	550	124	71
5	82	103	87	72	62	70	101	315	1,820	502	118	69
6	76	98	84	70	e50	69	101	259	1,580	445	106	75
7	76	104	82	67	e48	68	100	233	1,360	407	100	89
8	76	107	81	70	e56	70	96	219	1,260	386	97	98
9	74	126	79	75	e64	74	98	210	1,400	364	91	126
10	73	122	80	71	e62	77	109	196	1,450	331	86	193
11	71	115	82	72	e66	81	141	175	1,310	310	83	184
12	70	105	84	68	e64	84	172	173	1,480	285	88	158
13	69	110	86	64	69	89	181	241	1,500	268	87	161
14	71	112	82	66	76	93	231	305	1,420	253	83	151
15	70	107	85	68	71	95	232	531	1,500	245	79	134
16	72	100	83	e60	67	96	209	751	1,580	248	82	124
17	76	104	86	e70	66	95	199	1,170	1,310	224	93	113
18	74	102	84	e58	64	93	202	1,530	1,250	218	94	107
19	74	96	79	e68	65	89	182	1,410	1,240	210	97	101
20	73	98	e68	e70	64	88	173	1,280	1,190	203	83	94
21	63	98	e78	75	70	92	173	1,320	1,020	195	76	87
22	65	98	e72	73	68	90	198	1,520	1,050	183	77	84
23	75	100	e60	72	66	93	220	1,790	1,040	169	77	74
24	75	98	71	71	65	98	205	1,890	964	174	75	65
25	78	97	76	71	71	97	212	2,030	756	169	72	59
26	81	90	82	69	69	96	255	1,980	709	176	68	49
27	83	81	71	68	68	98	304	2,230	750	246	59	44
28	85	85	75	70	69	92	350	2,540	768	192	60	40
29	81	91	74	68	---	87	393	2,800	745	167	57	33
30	84	91	75	68	---	92	369	2,850	697	145	61	32
31	94	---	71	67	---	93	---	2,780	---	131	73	---
TOTAL	2,355	3,058	2,473	2,147	1,823	2,632	5,613	34,062	40,929	9,287	2,749	2,820
MEAN	76.0	102	79.8	69.3	65.1	84.9	187	1,099	1,364	300	88.7	94.0
MAX	94	126	94	75	76	98	393	2,850	2,870	651	158	193
MIN	63	81	60	58	48	66	96	173	697	131	57	32
AC-FT	4,670	6,070	4,910	4,260	3,620	5,220	11,130	67,560	81,180	18,420	5,450	5,590

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	2000	2001	2002	2003	2000	2001	2002	2003	2000	2001	2002	2003
MEAN	64.7	99.5	86.9	73.9	71.8	84.0	210	891	989	209	91.2	68.5
MAX	76.0	102	93.4	79.6	76.6	84.9	256	1,129	1,364	300	162	94.0
(WY)	(2003)	(2003)	(2002)	(2002)	(2001)	(2003)	(2002)	(2001)	(2003)	(2003)	(2001)	(2003)
MIN	48.2	94.8	79.8	69.3	65.1	82.8	187	446	447	62.0	33.9	41.8
(WY)	(2002)	(2002)	(2003)	(2003)	(2003)	(2001)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 2000 - 2003

ANNUAL TOTAL	54,202	109,948	
ANNUAL MEAN	148	301	240
HIGHEST ANNUAL MEAN			301
LOWEST ANNUAL MEAN			147
HIGHEST DAILY MEAN	1,190	Jun 1	2,870
LOWEST DAILY MEAN	28	Aug 19	32
ANNUAL SEVEN-DAY MINIMUM	29	Sep 1	46
MAXIMUM PEAK FLOW			3,490
MAXIMUM PEAK STAGE			4.56
ANNUAL RUNOFF (AC-FT)	107,500	218,100	174,000
10 PERCENT EXCEEDS	337	1,040	609
50 PERCENT EXCEEDS	81	93	89
90 PERCENT EXCEEDS	38	66	52

e Estimated.

a Maximum gage height, 4.56 ft, May 29, 2003.

## 09083800 CRYSTAL RIVER BELOW CARBONDALE, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1976 to January 1978, January 2000 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09083800](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09083800)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
OCT 09...	1130	75	10.4	8.1	550	10.4	280	90.2	13.1	1.68	0.3	13.2	E120
FEB 06...	1140	53	12.2	8.5	665	0.0	--	--	--	--	--	--	--
APR 22...	1435	210	9.6	8.4	431	11.0	190	62.4	9.11	1.33	0.4	12.8	111
MAY 28...	1115	2,320	10.3	--	154	6.5	72	23.3	3.45	0.60	0.1	2.86	58
JUL 23...	1105	179	9.2	8.1	419	15.0	--	--	--	--	--	--	--
SEP 04...	1100	75	9.2	8.4	568	14.3	290	90.9	14.9	1.85	0.3	12.1	140

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT 09...	4.72	0.2	10.6	134	--	--	--	E.07	E.08	<0.015	0.177	0.003	<0.007
FEB 06...	--	--	--	--	--	--	--	E.09	0.15	0.019	0.158	<0.002	<0.007
APR 22...	4.27	0.18	7.4	102	267	0.36	151	0.10	0.25	E.009	0.188	E.002	<0.007
MAY 28...	0.96	<0.2	5.8	19.2	92	0.12	575	0.24	0.79	<0.015	0.174	E.002	<0.007
JUL 23...	--	--	--	--	--	--	--	E.05	E.05	E.008	0.164	E.002	<0.007
SEP 04...	4.79	0.2	11.7	132	353	0.48	71.5	<0.10	E.08	E.008	0.215	<0.002	<0.007

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)
OCT 09...	<0.004	0.007	E3	E6
FEB 06...	E.002	0.014	<1	<1
APR 22...	<0.004	0.055	E8	E9
MAY 28...	0.005	0.48	E110	E54
JUL 23...	E.004	0.007	21	29
SEP 04...	0.006	0.007	E10	E21

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

09083800 CRYSTAL RIVER BELOW CARBONDALE, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 09...	<0.2	<1.2	30	<1	E3.0	E2.8	<0.02	<3	<0.3	<24
APR 22...	<0.2	<1.2	950	<1	2.4	28.7	<0.02	<3	<0.3	<24
MAY 28...	<0.2	E.6	7,850	<1	5.0	259	<0.02	<3	<0.3	<3
SEP 04...	<0.2	E.6	40	<1	3.4	4.9	<0.02	<3	<0.3	E2

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
OCT 03...	0920	85	543	9.7	APR 03...	0930	106	585	5.7
NOV 14...	0930	109	584	4.2	MAY 07...	1430	222	371	11.6
JAN 16...	0915	60	649	0.0					

## 09085000 ROARING FORK RIVER AT GLENWOOD SPRINGS, CO

LOCATION.--Lat 39°32'37", long 107°19'44", in SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.9, T.6 S., R.89 W., Garfield County, Hydrologic Unit 14010004, on left bank at Glenwood Springs, 2,100 ft upstream from mouth.

DRAINAGE AREA.--1,451 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1905 to September 1909, September 1910 to current year. Monthly discharge only for some periods, published in WSP 1313. Prior to October 1960, published as Roaring Fork at Glenwood Springs. Statistical summary computed for 1972 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09085000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09085000)

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,720.73 ft above NGVD of 1929. Prior to Nov. 20, 1915, nonrecording gage on highway bridge 800 ft downstream, at different datum. Nov. 20, 1915 to Oct. 26, 1917, nonrecording gage at present site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 35,000 acres. Transmountain diversions to Arkansas River basin through Busk-Ivanhoe tunnel since 1925, Twin Lakes tunnel since 1935, and Charles H. Boustead tunnel since 1972. Natural flow of stream affected by storage in Ruedi Reservoir on Frypan River (station 09080190) since May 1968.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	529	489	395	342	282	252	308	713	6,950	1,710	712	657
2	511	489	385	321	287	245	329	687	6,150	1,710	678	644
3	548	473	369	331	292	236	341	683	5,070	1,630	670	653
4	545	446	362	335	268	261	332	786	4,630	1,550	682	704
5	529	446	372	331	272	261	319	752	4,160	1,470	660	690
6	514	426	357	325	e190	253	326	663	3,450	1,380	629	710
7	503	424	346	306	e180	255	325	609	2,980	1,300	626	766
8	488	435	344	302	e210	259	307	594	2,710	1,240	629	822
9	471	537	333	306	e260	269	308	597	2,890	1,170	647	781
10	470	515	330	330	259	274	322	581	3,120	1,110	648	910
11	456	469	341	333	286	289	374	550	2,830	1,050	627	909
12	440	430	360	318	286	308	438	537	3,050	998	632	805
13	440	422	367	297	308	317	501	607	3,180	957	641	802
14	429	443	340	308	322	321	584	692	2,940	913	654	782
15	425	431	352	307	310	325	604	997	3,040	885	648	745
16	423	400	345	276	285	326	541	1,290	3,260	889	664	712
17	427	403	360	303	277	327	504	1,790	2,810	865	695	689
18	420	418	360	276	270	332	522	2,250	2,710	849	731	711
19	406	394	337	286	262	307	492	2,260	2,720	834	719	750
20	396	398	324	303	249	295	472	2,070	2,660	825	686	747
21	383	398	367	306	270	302	466	2,040	2,430	794	666	725
22	385	393	331	310	267	291	524	2,250	2,410	772	672	706
23	415	400	308	315	259	295	594	2,700	2,390	748	673	679
24	417	404	375	304	247	327	560	3,130	2,280	753	665	659
25	414	405	338	297	270	335	554	3,550	1,970	734	660	647
26	411	377	311	291	262	318	614	3,470	1,880	801	644	626
27	411	338	329	285	261	330	730	4,060	1,910	1,020	634	613
28	417	353	326	284	257	302	792	5,240	1,910	942	651	601
29	409	379	349	279	---	280	809	5,990	1,880	785	643	590
30	410	387	351	277	---	285	775	6,720	1,800	725	655	581
31	447	---	315	281	---	297	---	6,520	---	683	675	---
TOTAL	13,889	12,722	10,779	9,465	7,448	9,074	14,667	65,378	92,170	32,092	20,516	21,416
MEAN	448	424	348	305	266	293	489	2,109	3,072	1,035	662	714
MAX	548	537	395	342	322	335	809	6,720	6,950	1,710	731	910
MIN	383	338	308	276	180	236	307	537	1,800	683	626	581
AC-FT	27,550	25,230	21,380	18,770	14,770	18,000	29,090	129,700	182,800	63,650	40,690	42,480

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)
MEAN	729	658	559	494	467	523	807	2,211	3,952	2,297	978	739			
MAX	1,159	969	790	677	689	861	1,602	4,663	7,383	7,483	2,676	1,160			
(WY)	(1985)	(1985)	(1985)	(1996)	(1986)	(1986)	(1985)	(1984)	(1984)	(1995)	(1995)	(1995)			
MIN	384	411	348	305	266	293	352	593	1,100	422	316	363			
(WY)	(1978)	(1978)	(2003)	(2003)	(2003)	(2003)	(1977)	(1977)	(2002)	(1977)	(1977)	(1977)			

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1972 - 2003
ANNUAL TOTAL	192,968	309,616	
ANNUAL MEAN	529	848	a1,203
HIGHEST ANNUAL MEAN			2,092 1984
LOWEST ANNUAL MEAN			485 1977
HIGHEST DAILY MEAN	2,170	6,950	b11,800 Jul 12, 1995
LOWEST DAILY MEAN	e270	e180	c,d180 Feb 7, 2003
ANNUAL SEVEN-DAY MINIMUM	302	234	234 Feb 4, 2003
MAXIMUM PEAK FLOW		7,650	f13,000 Jul 13, 1995
MAXIMUM PEAK STAGE		6.43	g8.31 Jul 13, 1995
ANNUAL RUNOFF (AC-FT)	382,800	614,100	871,600
10 PERCENT EXCEEDS	787	2,140	2,870
50 PERCENT EXCEEDS	445	472	668
90 PERCENT EXCEEDS	331	283	420

e Estimated.

a Average discharge for 65 years (water years 1906-09, 1911-71), 1368 ft<sup>3</sup>/s; 99,1100 acre-ft/yr, prior to diversion through Charles H. Boustead tunnel.

b Maximum daily discharge for period of record, 16,600 ft<sup>3</sup>/s, Jun 30, 1957.

c Minimum daily discharge for period of record, 179 ft<sup>3</sup>/s, Jan 21, 1935; minimum discharge during the day of Jan 21, 1935, 145 ft<sup>3</sup>/s, gage height, 0.65 ft.

d Also occurred Aug 12, 1977.

f Maximum discharge for period of record, 19,000 ft<sup>3</sup>/s, Jul 1, 1957, gage height, 8.65 ft.

g Maximum gage height for period of record, 8.7 ft, Jun 14, 1921, from floodmarks.

09085000 ROARING FORK RIVER AT GLENWOOD SPRINGS, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1958 to August 1961, May 1962 to September 1967, January 1970 to May 1972, January 1980 to September 1984, October 1993 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09085000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09085000)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1962 to September 1967, January 1980 to September 1984.

WATER TEMPERATURE: May 1962 to May 1967, January 1980 to September 1984, July 2002 to current year.

INSTRUMENTATION:--Water-quality monitor, January 1980 to September 1984. Water temperature sensor with satellite telemetry, July 2002 to current year.

REMARKS.--Daily maximum and minimum specific-conductance data available in district office. Daily water temperature records are fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum recorded, 21.7°C July 24, 2002; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 21.5°C, July 20, Aug. 9; minimum, 0.0°C, on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
OCT 10...	1020	469	10.8	8.5	658	8.2	280	87.0	14.7	1.69	0.9	33.4	126
FEB 04...	1355	258	13.1	8.6	652	1.6	--	--	--	--	--	--	--
APR 24...	1125	547	11.2	8.3	482	6.8	210	66.0	11.3	1.44	0.5	18.1	116
MAY 28...	0915	5,700	11.8	--	186	7.2	82	26.1	3.96	0.86	0.2	3.52	59
JUL 24...	1140	780	10.7	8.6	540	16.2	--	--	--	--	--	--	--
SEP 05...	1155	685	10.7	8.6	590	14.7	230	72.4	13.2	1.61	0.8	28.8	130

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)
OCT 10...	43.5	0.2	8.7	132	397	0.54	502	0.10	0.14	<0.015	0.067	0.003	--
FEB 04...	--	--	--	--	--	--	--	0.16	0.15	E.012	0.173	0.003	--
APR 24...	18.6	0.21	8.0	104	297	0.40	439	0.15	0.36	0.021	0.208	0.004	0.13
MAY 28...	2.96	<0.2	6.1	28.4	108	0.15	1,660	0.23	1.7	E.011	0.160	E.002	--
JUL 24...	--	--	--	--	--	--	--	0.10	0.11	E.014	0.076	0.003	--
SEP 05...	39.7	0.2	8.9	110	352	0.48	652	0.12	0.30	<0.015	0.069	<0.002	--



## ROARING FORK RIVER BASIN

09085000 ROARING FORK RIVER AT GLENWOOD SPRINGS, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd, mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)
OCT 10...	<0.007	E.003	0.011	E18	24
FEB 04...	E.005	0.013	0.022	<1	E2
APR 24...	0.007	0.013	0.065	E20	20
MAY 28...	E.006	0.010	0.64	E86	E114
JUL 24...	<0.007	0.006	0.013	E9	E15
SEP 05...	<0.007	0.008	0.015	E35	26

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 10...	<0.2	<1.2	40	<1	4.9	8.9	<0.02	<3	<0.3	<24
APR 24...	<0.2	E.9	720	<1	5.1	30.4	<0.02	<3	<0.3	<24
MAY 28...	<0.2	<1.2	9,730	M	8.1	403	<0.02	<3	<0.3	E3
SEP 05...	<0.2	<1.2	60	M	3.4	9.6	<0.02	<3	<0.3	E2

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.  
M -- Presence of material verified but not quantified.

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 04...	0915	547	648	8.8	MAY 06...	0955	708	422	6.6
NOV 15...	0915	436	668	3.6	JUL 30...	1230	6,350	173	8.2
JAN 14...	1200	302	652	0.9	JUL 03...	0845	1,750	344	12.0
APR 04...	0915	329	598	4.0					

09085000 ROARING FORK RIVER AT GLENWOOD SPRINGS, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	18.9	14.8	16.9	16.7	11.8	14.4
2	---	---	---	---	---	---	17.6	14.4	16.3	17.4	11.4	14.6
3	---	---	---	---	---	---	18.7	15.4	17.1	16.0	12.3	14.2
4	---	---	---	---	---	---	20.0	14.8	17.5	16.8	12.1	14.4
5	---	---	---	---	---	---	19.8	15.9	18.0	16.4	11.2	14.0
6	---	---	---	---	---	---	19.0	15.2	17.2	16.0	12.2	14.3
7	---	---	---	---	---	---	17.2	14.4	16.0	16.4	13.6	14.9
8	---	---	---	---	---	---	18.7	13.8	16.1	17.2	13.3	15.3
9	---	---	---	---	---	---	19.3	13.3	16.4	---	---	---
10	---	---	---	---	---	---	19.1	12.8	16.3	16.8	---	---
11	---	---	---	---	---	---	19.4	12.9	16.4	16.7	14.2	15.3
12	---	---	---	---	---	---	18.8	13.0	16.3	15.4	---	---
13	---	---	---	---	---	---	18.8	13.8	16.5	15.9	12.6	14.3
14	---	---	---	---	---	---	19.1	12.7	16.2	---	11.1	---
15	---	---	---	---	---	---	19.1	13.0	16.5	---	---	---
16	---	---	---	---	---	---	19.5	13.0	16.6	16.9	---	---
17	---	---	---	---	---	---	18.9	13.5	16.6	15.5	12.5	14.1
18	---	---	---	---	---	---	18.8	13.7	16.3	13.5	11.5	12.6
19	---	---	---	---	---	---	17.6	13.3	15.8	14.2	10.4	12.3
20	---	---	---	---	---	---	16.9	14.5	15.7	15.3	9.5	12.6
21	---	---	---	---	---	---	16.8	13.8	15.3	15.9	10.4	13.4
22	---	---	---	---	---	---	17.4	12.8	15.2	15.7	10.7	13.6
23	---	---	---	---	---	---	18.5	13.6	16.1	15.3	10.0	13.0
24	---	---	---	21.7	---	---	18.1	12.8	15.8	15.3	9.8	12.9
25	---	---	---	20.0	16.8	17.6	17.8	12.1	15.2	13.8	10.0	12.4
26	---	---	---	20.5	14.7	17.4	17.6	11.9	15.0	15.5	11.5	13.4
27	---	---	---	19.7	14.4	17.3	17.5	12.4	15.2	13.3	9.8	11.5
28	---	---	---	20.6	15.1	17.8	16.5	11.8	14.5	12.6	9.7	11.3
29	---	---	---	20.9	13.7	17.5	15.4	13.3	14.4	13.3	10.7	12.0
30	---	---	---	21.6	14.7	18.3	16.3	11.1	13.8	13.4	9.4	11.4
31	---	---	---	21.4	15.0	18.4	16.3	12.1	14.5	---	---	---
MONTH	---	---	---	---	---	---	20.0	11.1	16.0	---	---	---

## ROARING FORK RIVER BASIN

09085000 ROARING FORK RIVER AT GLENWOOD SPRINGS, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.0	9.0	11.7	7.2	5.3	6.2	3.6	2.1	2.9	2.0	0.2	0.9
2	12.6	9.9	11.5	7.1	5.0	6.2	3.8	1.8	3.1	0.7	0.0	0.3
3	11.4	9.8	10.7	6.0	3.3	4.8	3.5	1.7	2.8	1.1	0.0	0.3
4	11.2	8.7	9.9	5.6	3.2	4.5	3.0	0.7	2.1	2.4	0.0	1.1
5	12.2	9.5	10.7	5.8	2.7	4.5	4.0	2.1	3.1	1.7	0.0	0.9
6	12.8	8.2	10.6	5.9	2.5	4.5	3.7	1.4	2.8	2.2	0.0	1.2
7	13.0	8.3	10.9	5.8	2.6	4.4	2.8	0.8	2.0	1.6	0.0	0.8
8	13.3	8.6	11.1	6.0	4.7	5.3	2.3	0.5	1.6	1.4	0.0	0.6
9	12.6	8.3	10.8	6.0	4.7	5.8	1.9	0.0	0.9	1.6	0.0	0.6
10	12.5	7.8	10.4	4.9	3.8	4.3	1.4	0.0	0.6	2.6	0.6	1.5
11	11.8	8.6	10.3	5.9	3.2	4.4	1.9	0.0	0.7	3.8	2.0	2.8
12	11.7	7.7	10	4.8	2.2	3.8	2.4	0.8	1.6	3.3	1.2	2.4
13	10.4	6.1	8.6	4.1	2.7	3.6	3.3	1.3	2.4	2.6	0.0	1.5
14	10.8	6.2	8.7	6.0	3.9	5.0	2.5	0.1	1.6	2.4	0.0	1.3
15	10.4	6.0	8.5	5.5	3.7	4.6	2.9	0.9	2.0	2.6	0.5	1.4
16	10.4	6.1	8.5	4.3	1.8	3.3	3.3	0.3	1.8	0.9	0.0	0.4
17	10.4	6.0	8.5	4.2	1.5	3.1	3.2	2.0	2.7	1.9	0.0	0.9
18	10.4	6.1	8.6	4.8	2.6	3.9	2.8	0.9	1.8	1.0	0.0	0.4
19	10.0	6.0	8.3	4.4	1.6	3.3	1.3	0.0	0.3	1.3	0.0	0.5
20	9.5	5.7	7.9	4.8	2.0	3.6	0.1	0.0	0.0	1.7	0.0	0.7
21	9.5	5.6	7.9	5.1	2.1	3.8	1.3	0.0	0.5	2.2	0.0	1.1
22	9.5	6.3	7.9	5.1	2.2	3.9	0.9	0.0	0.4	3.0	0.1	1.7
23	9.9	8.2	9.1	4.7	2.4	3.8	0.0	0.0	0.0	3.1	1.6	2.3
24	9.7	7.8	8.6	5.6	3.4	4.6	0.2	0.0	0.0	3.6	1.2	2.5
25	9.4	6.5	7.9	5.1	3.4	4.3	0.5	0.0	0.2	5.4	3.0	4.1
26	8.8	6.0	7.5	3.5	1.0	2.3	0.6	0.0	0.1	4.9	2.6	4.0
27	9.7	7.3	8.5	2.5	0.0	1.4	0.5	0.0	0.1	4.8	1.5	3.4
28	8.9	7.3	8.1	2.7	0.0	1.4	0.7	0.0	0.2	4.6	2.8	3.7
29	8.0	5.8	7.0	3.2	0.3	1.9	1.2	0.0	0.4	4.4	1.9	3.3
30	6.7	4.3	5.5	3.5	0.6	2.3	1.6	0.0	0.8	3.6	1.7	2.9
31	7.2	5.3	6.2	---	---	---	0.5	0.0	0.1	5.7	3.1	4.3
MONTH	14.0	4.3	9.0	7.2	0.0	4.0	4.0	0.0	1.3	5.7	0.0	1.7
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	5.6	2.9	4.5	5.1	2.5	3.9	11.4	6.4	9.2	10.4	6.7	8.6
2	6.3	3.6	4.7	6.4	2.0	4.1	9.5	6.3	8.2	9.7	6.4	8.1
3	4.4	1.9	3.2	5.5	1.6	3.9	8.6	5.5	6.6	12.0	7.0	9.6
4	2.8	1.1	1.7	4.7	1.8	3.3	7.7	3.4	5.9	10.5	7.1	8.4
5	2.7	0.3	1.3	5.1	1.0	3.1	8.7	4.2	6.6	11.3	6.5	8.6
6	1.7	0.0	0.6	6.0	2.8	4.6	8.3	5.0	6.7	11.4	6.0	8.9
7	0.7	0.0	0.1	8.0	4.0	6.0	8.6	4.6	6.8	12.5	7.1	9.7
8	0.3	0.0	0.0	8.8	4.4	6.8	10.6	4.3	7.5	11.3	8.4	9.5
9	0.4	0.0	0.1	8.4	4.2	6.6	12.4	5.6	9.2	9.7	7.2	8.2
10	0.8	0.0	0.3	8.5	4.4	6.6	13.7	6.9	10.5	9.8	6.5	8.0
11	2.0	0.0	0.9	9.6	5.6	7.5	13.3	7.6	10.7	11.0	5.7	8.6
12	2.6	0.0	1.2	10.8	5.8	8.4	11.2	7.3	9.5	14.5	7.0	10.7
13	4.0	1.4	2.7	10.2	5.2	8.1	12.8	6.1	9.5	13.9	9.2	11.9
14	5.0	2.9	4.0	9.3	5.7	7.8	12.5	7.3	9.9	14.9	8.8	11.9
15	5.1	3.2	4.2	9.6	5.8	8.2	10.2	7.3	8.1	13.0	9.7	10.9
16	4.1	1.9	3.0	8.8	6.9	8.0	12.2	5.9	8.8	13.9	8.4	11.1
17	5.1	2.0	3.7	8.1	5.8	6.4	10.3	6.8	8.9	12.2	7.9	10.4
18	5.7	3.1	4.4	7.7	4.2	6.2	10.0	7.3	8.6	11.2	8.0	9.2
19	5.2	1.6	3.6	7.3	4.7	6.2	10.4	6.4	8.4	11.8	6.4	9.0
20	4.9	0.9	3.2	7.9	4.3	6.5	12.4	7.1	9.7	11.9	6.8	9.5
21	4.3	2.3	3.6	10.0	5.9	7.7	11.3	7.2	9.5	12.3	6.6	9.5
22	3.9	2.3	2.9	10.9	6.0	8.5	12.6	7.9	10.2	13.0	7.3	10.2
23	3.3	0.8	2.2	10.8	6.0	8.8	10.4	6.3	7.6	12.0	7.3	9.8
24	3.9	1.1	2.7	9.7	7.1	8.0	10.8	5.5	7.9	12.3	7.2	9.8
25	4.0	2.5	3.3	10.7	5.3	8.1	13.5	6.4	9.9	11.4	7.4	9.3
26	4.6	3.4	3.9	8.7	6.0	7.0	13.5	8.1	11.0	12.4	6.9	9.6
27	5.1	2.7	3.8	6.9	4.8	6.0	12.7	7.9	10.5	13.0	7.6	10.2
28	6.0	3.2	4.4	6.9	3.0	5.0	13.2	8.0	10.4	12.7	7.1	9.9
29	---	---	---	6.5	2.3	4.8	12.4	8.0	10.2	11.9	7.3	9.7
30	---	---	---	8.5	3.1	6.0	11.2	7.6	9.6	11.2	7.3	9.3
31	---	---	---	---	4.8	---	---	---	---	10.8	7.1	9.1
MONTH	6.3	0.0	2.6	---	1.0	---	13.7	3.4	8.9	14.9	5.7	9.6

## 09085000 ROARING FORK RIVER AT GLENWOOD SPRINGS, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	10.9	7.3	9.1	16.5	11.8	14.2	20.3	14.9	17.7	18.4	12.7	15.8
2	11.4	7.0	9.1	16.8	11.8	14.5	20.1	15.4	17.9	18.0	13.3	15.8
3	11.8	7.3	9.6	16.9	12.0	14.6	19.5	15.8	17.5	17.3	13.6	15.5
4	11.4	7.3	9.5	17.3	12.3	15.0	20.7	15.1	17.9	17.8	11.8	14.9
5	11.4	8.1	9.8	17.4	12.3	15.0	20.5	15.2	18.0	16.6	13.4	15.0
6	11.1	7.2	9.4	16.1	12.5	14.5	19.7	14.9	17.7	16.5	13.3	14.9
7	12.5	8.5	10.4	17.3	12.3	14.9	19.0	15.2	17.3	16.4	13.6	14.7
8	12.7	7.6	10.3	18.0	12.6	15.5	21.1	15.3	18.1	16.0	11.8	14.0
9	12.2	8.7	10.6	18.1	12.9	15.7	21.5	15.8	18.7	15.1	12.9	13.9
10	10.9	8.8	10.2	18.4	12.5	15.6	21.1	15.7	18.5	13.2	11.1	12.2
11	12.8	8.6	10.7	18.2	12.8	15.9	19.8	15.6	18.0	13.8	10.0	11.9
12	12.9	8.6	10.9	18.6	13.5	16.2	20.7	15.1	18.0	15.2	9.5	12.5
13	12.1	9.0	10.7	18.5	13.2	16.1	21.4	15.6	18.5	15.2	11.8	13.5
14	13.9	8.6	11.1	19.8	13.7	16.8	20.7	15.3	18.1	13.7	8.6	11.4
15	13.9	9.0	11.6	18.8	14.4	16.8	19.4	14.5	17.3	14.4	8.7	11.7
16	13.3	10.3	11.6	19.6	14.0	16.6	18.1	15.1	16.7	15.0	10.2	12.8
17	12.7	9.0	11.0	20.4	15.0	17.7	17.6	14.0	15.8	14.7	11.8	13.1
18	13.7	9.6	11.6	21.2	15.9	18.5	18.3	14.4	16.1	13.5	8.8	11.3
19	12.6	9.4	11.3	20.0	15.4	18.0	18.7	12.8	15.8	13.3	8.4	10.7
20	12.3	9.7	11.2	21.5	15.4	18.3	19.4	13.8	16.8	13.9	9.1	11.6
21	14.4	9.3	11.8	21.3	15.7	18.4	18.4	14.1	16.6	13.6	8.8	11.4
22	14.4	9.8	12.2	20.6	15.4	18.2	19.3	15.0	17.1	13.9	8.7	11.5
23	14.8	9.8	12.5	21.0	15.4	18.2	17.8	15.3	16.8	14.2	9.2	11.9
24	14.1	10.7	12.6	20.3	15.1	18.0	19.7	14.5	17.1	14.3	9.3	12.1
25	14.5	10.4	12.4	20.6	15.9	18.5	19.4	15.1	17.2	13.9	9.0	11.8
26	14.8	9.7	12.4	20.6	16.0	18.3	18.4	14.7	16.9	14.3	9.0	11.9
27	15.4	10.4	13.0	19.3	15.4	17.4	16.8	14.1	15.4	14.5	9.6	12.4
28	15.6	10.8	13.4	19.5	14.4	17.2	19.0	14.0	16.3	14.8	9.9	12.6
29	16.1	11.2	13.8	19.7	15.6	17.8	17.9	14.2	16.3	14.8	9.9	12.7
30	15.9	11.3	13.8	20.7	14.7	17.7	16.9	13.6	15.3	14.9	10.7	13.0
31	---	---	---	20.2	15.2	17.8	18.0	12.8	15.5	---	---	---
MONTH	16.1	7.0	11.3	21.5	11.8	16.7	21.5	12.8	17.1	18.4	8.4	12.9

## 09085100 COLORADO RIVER BELOW GLENWOOD SPRINGS, CO

LOCATION.--Lat 39°33'18", long 107°20'13", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.9, T.6 S., R.89 W., Garfield County, Hydrologic Unit 14010005, on left bank 0.6 mi downstream from Roaring Fork River and 1.0 mi northwest of Post Office in Glenwood Springs.

DRAINAGE AREA.--6,013 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1966 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09085100](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09085100)

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,700.75 ft above NGVD of 1929, Colorado State Highway Department benchmark.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversions for irrigation of 110,000 acres.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,300	1,500	1,170	969	947	963	1,000	2,390	16,700	3,520	1,930	2,000
2	1,260	1,530	1,240	931	987	1,000	1,090	2,210	17,100	3,450	1,930	1,900
3	1,330	1,500	1,210	932	985	972	1,170	2,090	14,000	3,410	1,940	1,860
4	1,340	1,420	1,100	993	898	1,020	1,210	2,230	11,900	3,300	2,000	1,930
5	1,320	1,410	1,140	980	916	1,040	1,110	2,300	10,300	3,120	2,070	2,010
6	1,280	1,340	1,120	987	838	1,020	1,040	2,100	8,700	2,960	2,010	2,040
7	1,250	1,290	1,050	893	748	1,050	1,020	1,900	7,650	2,810	1,980	2,210
8	1,230	1,370	1,030	862	684	1,010	967	1,860	6,890	2,720	1,990	2,410
9	1,200	1,590	841	848	788	1,020	1,010	1,890	6,820	2,640	1,990	2,400
10	1,230	1,590	962	933	868	1,040	1,150	1,970	7,130	2,610	1,960	2,530
11	1,230	1,490	918	974	912	1,080	1,160	2,150	6,990	2,430	1,960	2,660
12	1,240	1,440	909	964	957	1,170	1,370	2,000	7,080	2,340	1,910	2,320
13	1,210	1,360	1,030	929	1,030	1,210	1,500	1,980	7,050	2,400	1,900	2,100
14	1,180	1,400	962	948	1,050	1,370	1,690	2,220	6,680	2,340	1,890	2,040
15	1,180	1,420	951	945	1,070	1,350	1,950	3,030	6,790	2,250	2,010	1,950
16	1,180	1,360	942	848	1,020	1,310	1,900	3,880	6,980	2,260	1,940	1,890
17	1,180	1,320	1,010	922	1,020	1,230	1,680	5,080	6,350	2,300	2,040	1,860
18	1,200	1,280	1,050	864	974	1,250	1,620	6,170	6,060	2,290	2,270	1,950
19	1,170	1,200	955	827	946	1,160	1,550	6,590	5,900	2,260	2,570	2,090
20	1,160	1,130	844	870	901	1,110	1,440	6,380	5,990	2,220	2,310	2,110
21	1,140	1,120	967	915	963	1,040	1,370	6,440	5,730	2,190	2,080	2,100
22	1,150	1,140	945	936	987	1,080	1,430	6,920	5,450	2,280	2,040	2,080
23	1,220	1,110	804	961	941	1,200	1,690	7,950	5,300	2,080	2,000	2,080
24	1,320	1,110	814	949	922	1,300	1,750	8,840	4,980	1,930	2,100	2,090
25	1,340	1,150	871	943	1,020	1,350	1,700	9,850	4,460	1,890	2,120	2,100
26	1,310	1,090	840	921	992	1,200	1,810	10,200	4,160	2,100	2,060	2,250
27	1,310	870	837	924	980	1,220	2,230	11,000	4,070	2,580	2,030	2,220
28	1,380	906	890	944	978	1,060	2,540	12,800	3,970	2,510	2,040	1,860
29	1,340	1,090	965	915	---	948	2,700	3,880	14,100	2,250	2,000	2,170
30	1,360	1,080	993	915	---	939	2,600	15,500	3,710	2,120	1,930	2,140
31	1,420	---	884	949	---	977	---	15,800	---	1,960	1,990	---
TOTAL	38,960	38,606	30,244	28,691	26,322	34,689	46,447	179,820	218,770	77,520	62,990	63,670
MEAN	1,257	1,287	976	926	940	1,119	1,548	5,801	7,292	2,501	2,032	2,122
MAX	1,420	1,590	1,240	993	1,070	1,370	2,700	15,800	17,100	3,520	2,570	2,660
MIN	1,140	870	804	827	684	939	967	1,860	3,710	1,890	1,890	1,860
AC-FT	77,280	76,580	59,990	56,910	52,210	68,810	92,130	356,700	433,900	153,800	124,900	126,300

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

MEAN	2,109	1,874	1,574	1,484	1,466	1,685	2,666	6,867	10,040	5,446	2,848	2,267
MAX	3,082	2,703	2,487	2,192	2,209	2,814	5,113	15,570	20,710	15,180	5,975	3,716
(WY)	(1985)	(1985)	(1985)	(1985)	(1986)	(1986)	(1996)	(1984)	(1984)	(1995)	(1984)	(1984)
MIN	1,257	1,186	976	926	940	1,018	1,548	2,146	2,364	1,594	1,464	1,255
(WY)	(2003)	(1978)	(2003)	(2003)	(2003)	(1977)	(2003)	(1977)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1967 - 2003

ANNUAL TOTAL	537,176	846,729		
ANNUAL MEAN	1,472	2,320		
HIGHEST ANNUAL MEAN			6,276	1984
LOWEST ANNUAL MEAN			1,523	2002
HIGHEST DAILY MEAN	4,170	Jun 1	17,100	Jun 2
LOWEST DAILY MEAN	804	Dec 23	684	Feb 8
ANNUAL SEVEN-DAY MINIMUM	857	Dec 22	820	Feb 4
MAXIMUM PEAK FLOW			18,500	Jun 2
MAXIMUM PEAK STAGE			9.39	Jun 2
ANNUAL RUNOFF (AC-FT)	1,065,000	1,679,000		2,438,000
10 PERCENT EXCEEDS	2,080	5,360		7,610
50 PERCENT EXCEEDS	1,320	1,380		2,070
90 PERCENT EXCEEDS	967	927		1,280

**09089500 WEST DIVIDE CREEK NEAR RAVEN, CO**

LOCATION.--Lat 39°19'52", long 107°34'46", in NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.29, T.8 S., R.91 W., Mesa County, Hydrologic Unit 14010005, on left bank 10 ft downstream from private road bridge, 0.8 mi upstream from Brook Creek, 8 mi south of Raven, and 16 mi south of Silt.

DRAINAGE AREA.--64.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1955 to September 1999. October 1999 to current year (seasonal records only). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09089500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09089500)

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,050 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharge, which is fair. Natural flow of stream affected by water imported from Thompson Creek (Roaring Fork basin), Muddy Creek (Muddy Creek basin), and Buzzard Creek (Plateau Creek basin). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,410 ft<sup>3</sup>/s, May 14, 1984, from rating curve extended above 670 ft<sup>3</sup>/s, gage height, 5.83 ft; no flow at times in most years.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 324 ft<sup>3</sup>/s, May 18, gage height, 4.10 ft; minimum daily, 0.07 ft<sup>3</sup>/s, Aug. 12.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.64	---	---	---	---	---	e12	82	161	15	0.32	0.35
2	0.61	---	---	---	---	---	11	69	143	14	0.24	0.26
3	2.0	---	---	---	---	---	11	80	120	13	0.22	0.17
4	1.6	---	---	---	---	---	8.1	107	125	11	0.64	0.14
5	1.4	---	---	---	---	---	6.6	78	115	9.4	1.1	0.18
6	1.3	---	---	---	---	---	6.1	67	102	8.2	0.54	0.77
7	1.1	---	---	---	---	---	5.8	66	116	7.4	0.31	2.3
8	0.85	---	---	---	---	---	5.3	69	104	6.2	0.33	1.3
9	0.76	---	---	---	---	---	7.4	70	93	5.3	0.25	1.4
10	0.67	---	---	---	---	---	14	63	97	4.5	0.16	4.5
11	0.60	---	---	---	---	---	22	56	92	3.8	0.10	5.2
12	0.54	---	---	---	---	---	28	63	82	3.2	0.07	2.4
13	0.46	---	---	---	---	---	31	97	77	2.6	0.19	1.7
14	0.46	---	---	---	---	---	41	122	70	2.3	0.09	1.3
15	0.45	---	---	---	---	---	38	164	66	2.0	0.37	0.91
16	0.44	---	---	---	---	---	29	183	61	1.8	0.81	0.68
17	0.42	---	---	---	---	---	32	215	57	1.8	0.90	0.57
18	0.43	---	---	---	---	---	34	232	54	2.9	1.7	0.52
19	0.37	---	---	---	---	---	25	215	50	1.8	1.7	0.53
20	0.39	---	---	---	---	---	22	206	50	1.3	0.85	0.55
21	0.43	---	---	---	---	---	27	203	41	1.2	0.63	0.53
22	0.47	---	---	---	---	---	36	210	35	1.0	1.1	0.47
23	0.80	---	---	---	---	---	41	185	31	0.86	0.54	0.41
24	0.97	---	---	---	---	---	32	182	29	0.67	0.42	0.37
25	1.0	---	---	---	---	---	38	182	27	0.51	0.39	0.36
26	0.86	---	---	---	---	---	66	169	25	0.45	0.30	0.34
27	0.75	---	---	---	---	---	87	178	22	0.46	0.30	0.32
28	0.76	---	---	---	---	---	100	168	20	0.41	0.27	0.31
29	0.92	---	---	---	---	---	101	171	19	0.44	0.22	0.32
30	0.86	---	---	---	---	---	93	167	17	0.43	0.30	0.30
31	0.99	---	---	---	---	---	---	152	---	0.40	0.33	---
TOTAL	24.30	---	---	---	---	---	1,010.3	4,271	2,101	124.33	15.69	29.46
MEAN	0.78	---	---	---	---	---	33.7	138	70.0	4.01	0.51	0.98
MAX	2.0	---	---	---	---	---	101	232	161	15	1.7	5.2
MIN	0.37	---	---	---	---	---	5.3	56	17	0.40	0.07	0.14
AC-FT	48	---	---	---	---	---	2,000	8,470	4,170	247	31	58

e Estimated.

**09091900 RIFLE GAP RESERVOIR NEAR RIFLE, CO**

LOCATION.--Lat 39°37'37", long 107°45'25", in NW¼SE¼ sec.7, T.4 S., R.92 W., Garfield County, Hydrologic Unit 14010005, in gate house of Rifle Gap dam on Rifle Creek, 6.7 mi northeast of Rifle.

DRAINAGE AREA.--136 mi<sup>2</sup>.

PERIOD OF RECORD.--May to September 2003. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09091900](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09091900)

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,960.00 ft above NGVD of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by an earthfill dam. Dam completed May 1967. Capacity, 13,600 acre-ft, 1967 survey, at elevation 5,960.00, crest of spillway. Dead storage below elevation 5,903.0 ft, 896 acre-ft. Inactive storage below elevation 5,908.0 ft, 1,440 acre-ft. Figures given are total contents.

COOPERATION.--Capacity tables provided by U.S. Bureau of Reclamation.

EXTREMES FOR CURRENT YEAR.--Maximum daily mean contents during period May to September, 7,990 acre-ft, May 1, elevation, 5,941.80 ft; minimum daily mean contents, 2,860 acre-ft, Sept. 30, elevation 5,917.63 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30 .....	-	-	-
Oct. 31 .....	-	-	-
Nov. 30 .....	-	-	-
Dec. 31 .....	-	-	-
CAL YR 2002 .....	-	-	-
Jan. 31 .....	-	-	-
Feb. 28 .....	-	-	-
Mar. 31 .....	-	-	-
Apr. 30 .....	-	-	-
May 31 .....	5,937.82	6,980	-
June 30 .....	5,932.06	5,650	-1,330
July 31 .....	5,923.96	4,000	-1,650
Aug. 31 .....	5,919.20	3,130	-870
Sept. 30 .....	5,917.61	2,850	-280
WTR YR 2003 .....	-	-	-

**09095300 DRY FORK AT UPPER STATION, NEAR DE BEQUE, CO**

LOCATION.--Lat 39°22'29", long 108°19'02", in SE¼NW¼ sec.10.T.8 S., R.98 W., Garfield County, Hydrologic Unit 14010006, on left bank 120 ft upstream from county bridge on S. Dry Fork Road, 3.8 mi west of intersection with Roan Creek Road, and 7.8 mi northwest of De Beque.

DRAINAGE AREA.--97.4 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1995 to September 1998, November 2000 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09095300](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09095300)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,385 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected March to October by diversions for irrigation upstream from gage.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.28	4.4	e0.26	e0.19	e0.19	e0.16	0.25	0.32	0.29	0.17	0.02	0.03
2	0.26	1.0	e0.25	e0.20	e0.18	e0.18	0.22	0.33	0.28	0.16	0.02	0.04
3	6.7	0.35	e0.25	e0.20	e0.17	e0.18	0.27	0.32	0.22	0.16	0.02	0.03
4	e1.3	0.30	e0.23	e0.19	e0.15	e0.18	0.25	0.81	0.19	0.19	0.02	0.05
5	e0.35	0.23	e0.21	e0.18	e0.13	e0.19	0.25	2.4	0.17	0.23	0.01	0.07
6	e0.23	0.21	e0.21	e0.19	e0.14	e0.36	0.25	0.59	0.18	0.21	0.01	3.3
7	e0.14	0.47	e0.20	e0.18	e0.16	2.9	0.23	0.39	0.19	0.09	0.01	1.8
8	0.15	0.35	e0.18	e0.19	e0.18	5.5	0.22	0.40	0.19	0.03	0.02	1.6
9	0.14	21	e0.18	e0.23	e0.18	6.4	0.22	2.9	0.19	0.08	0.01	0.27
10	0.10	1.5	e0.19	e0.21	e0.18	5.2	0.22	4.1	0.22	0.12	0.00	17
11	0.11	e0.54	e0.24	e0.19	e0.18	8.6	0.21	2.6	0.19	0.13	0.00	5.8
12	0.12	e0.39	e0.24	e0.18	e0.21	8.9	0.21	0.78	0.18	0.14	0.00	0.45
13	0.10	e0.33	e0.22	e0.20	e0.24	6.7	0.21	0.49	0.23	0.11	0.01	0.16
14	0.12	e0.29	e0.24	e0.19	e0.20	3.6	0.20	0.40	0.21	0.09	0.01	0.12
15	0.12	e0.27	e0.23	e0.16	e0.19	2.3	0.22	0.58	0.17	0.07	0.02	0.12
16	0.10	e0.29	e0.23	e0.21	e0.19	1.5	0.22	1.4	0.14	0.03	0.01	0.11
17	0.10	e0.28	e0.22	e0.15	e0.19	1.7	0.25	0.53	0.19	0.03	0.01	0.09
18	0.14	e0.27	e0.18	e0.18	e0.18	0.81	0.40	0.42	0.17	0.06	0.03	0.08
19	0.07	e0.28	e0.17	e0.19	e0.17	0.48	0.34	0.37	0.22	0.05	0.01	0.10
20	0.08	e0.28	e0.22	e0.19	e0.19	0.48	0.32	0.36	0.33	0.06	0.00	0.13
21	0.07	e0.27	e0.17	e0.20	e0.18	0.59	0.32	0.36	0.36	0.06	0.00	0.10
22	0.07	e0.26	e0.15	e0.20	e0.17	0.40	0.34	0.35	0.26	0.04	0.00	0.09
23	0.18	e0.27	e0.21	e0.20	e0.20	0.38	0.35	0.34	0.19	0.05	0.15	0.10
24	1.2	e0.25	e0.20	e0.19	e0.19	0.65	0.35	0.30	0.21	0.03	0.13	0.09
25	1.6	e0.20	e0.18	e0.19	e0.19	1.2	0.34	0.30	0.26	0.02	0.09	0.10
26	0.31	e0.24	e0.19	e0.19	e0.18	0.42	0.32	0.30	0.26	0.05	0.03	0.08
27	0.23	e0.29	e0.19	e0.18	e0.18	0.38	0.32	0.31	0.25	0.04	0.03	0.10
28	0.61	e0.29	e0.21	e0.18	e0.17	0.31	0.30	0.26	0.22	0.05	0.05	0.10
29	0.54	e0.30	e0.17	e0.18	---	0.30	0.32	0.23	0.19	0.06	0.03	0.10
30	0.62	e0.28	e0.24	e0.18	---	0.26	0.33	0.23	0.21	0.04	0.04	0.13
31	1.9	---	e0.18	e0.19	---	0.26	---	0.24	---	0.02	0.04	---
TOTAL	18.04	35.68	6.44	5.88	5.06	61.47	8.25	23.71	6.56	2.67	0.83	32.34
MEAN	0.58	1.19	0.21	0.19	0.18	1.98	0.28	0.76	0.22	0.086	0.027	1.08
MAX	6.7	21	0.26	0.23	0.24	8.9	0.40	4.1	0.36	0.23	0.15	17
MIN	0.07	0.20	0.15	0.15	0.13	0.16	0.20	0.23	0.14	0.02	0.00	0.03
AC-FT	36	71	13	12	10	122	16	47	13	5.3	1.6	64

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
MEAN	2.71	2.65	1.72	1.92	3.18	4.97	2.32	4.97	1.37	1.67	1.56	1.97
MAX	7.18	5.09	4.58	4.97	9.42	12.8	9.42	25.9	4.62	7.50	4.05	6.69
(WY)	(1998)	(1998)	(1998)	(1998)	(1996)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1997)
MIN	0.58	0.46	0.020	0.010	0.16	0.59	0.27	0.19	0.007	0.003	0.014	0.33
(WY)	(2003)	(2002)	(2001)	(2001)	(2001)	(2002)	(2003)	(2001)	(2001)	(2001)	(2002)	(2001)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1996 - 2003

ANNUAL TOTAL	138.04	206.93	
ANNUAL MEAN	0.38	0.57	2.94
HIGHEST ANNUAL MEAN			7.84
LOWEST ANNUAL MEAN			0.36
HIGHEST DAILY MEAN	21	Nov 9	95
LOWEST DAILY MEAN	0.00	Mar 28	a0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 29	0.00
MAXIMUM PEAK FLOW			b2,660
MAXIMUM PEAK STAGE			16.93
ANNUAL RUNOFF (AC-FT)	274	410	2,130
10 PERCENT EXCEEDS	0.51	0.61	5.9
50 PERCENT EXCEEDS	0.25	0.20	1.5
90 PERCENT EXCEEDS	0.00	0.04	0.10

e Estimated.

a No flow many days some years.

b On basis of slope-area measurement of peak flow.



09095300 DRY FORK AT UPPER STATION, NEAR DE BEQUE, CO—Continued  
(National Water-Quality Assessment Program station)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1995 to September 1998, November 2000 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09095300](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09095300)

PERIOD OF DAILY RECORD.--WATER TEMPERATURE: October 1996 to September 1998.

INSTRUMENTATION.--Water temperature sensor and logger, October 1996 to September 1998.

REMARKS.--Upper Colorado River Basin National Water Quality Assessment Program station (NAWQA).

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Alkalinity, wat tit inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat tit incrm. titr., field, mg/L (00453)	Carbonate, wat tit incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 22...	1305	0.08	10.7	8.5	3,920	10.2	415	445	30	22.4	1,910	0.36	<0.04
NOV 27...	1120	0.37	12.3	8.5	4,350	0.0	484	536	26	24.3	2,200	0.56	<0.04
DEC 30...	1245	0.34	12.3	8.4	4,000	0.0	549	625	22	17.4	1,940	0.33	<0.04
FEB 19...	1245	0.66	11.4	8.6	2,410	2.9	349	389	18	10.7	1,040	0.74	<0.04
APR 16...	1200	0.25	9.4	8.5	4,180	13.8	488	534	30	24.8	2,060	0.33	<0.04
JUN 27...	1200	0.28	8.6	8.4	3,030	21.7	364	415	14	15.9	1,370	0.44	<0.04
AUG 29...	1135	0.04	9.6	8.4	3,410	22.2	349	367	29	17.6	1,620	0.56	<0.04

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)
OCT 22...	E.04	<0.008	<0.02	0.021
NOV 27...	0.48	E.005	<0.02	0.086
DEC 30...	0.53	<0.008	<0.02	0.037
FEB 19...	0.34	0.011	0.02	0.167
APR 16...	<0.06	<0.008	<0.02	0.023
JUN 27...	<0.06	<0.008	<0.02	0.019
AUG 29...	<0.06	<0.008	<0.02	0.018

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

09095300 DRY FORK AT UPPER STATION, NEAR DE BEQUE, CO—Continued

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT					
22...	1300	0.08	10.2	a15	0.00
22...	1305	0.08	10.2	b7	0.00
NOV					
27...	1115	0.37	--	a240	0.24
27...	1120	0.37	0.0	b245	0.24
DEC					
30...	1240	0.34	--	a100	0.09
30...	1245	0.34	0.0	b72	0.07
FEB					
19...	1240	0.66	--	a229	0.41
19...	1245	0.66	2.9	b191	0.34
APR					
16...	1155	0.25	13.8	a44	0.03
16...	1200	0.25	13.8	b58	0.04
JUN					
27...	1200	0.28	21.7	b43	0.03
27...	1205	0.28	--	a36	0.03
AUG					
29...	1130	0.04	--	a32	0.00
29...	1135	0.04	22.2	b15	0.00

a Suspended-sediment concentration determined from a composite sample.

b Suspended-sediment concentration determined from a subsample split of a composite sample.

## 09095500 COLORADO RIVER NEAR CAMEO, CO

LOCATION.--Lat 39°14'21" (revised), long 108°15'56" (revised), in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.30, T.9 S., R.97 W., Mesa County, Hydrologic Unit 14010005, on left bank 100 ft north of Interstate 70, 0.5 mi upstream from Jackson Canyon, 5.9 mi upstream from Grand Valley project diversion dam, and 7 mi northeast of Cameo.

DRAINAGE AREA.--8,050 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1933 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09095500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09095500)

REVISED RECORDS.--WRD Colo. 1973: 1970.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Datum of gage is 4,813.73 ft above NGVD of 1929, (levels by Colorado Department of Highways). Prior to Oct. 10, 1934, nonrecording gage on river and water-stage recorder on Highline Canal, about 10 mi downstream at different datum. Oct. 10, 1934 to Feb. 27, 1958, water-stage recorder at site 3.0 mi downstream at datum 22.55 ft lower. Feb. 27, 1958 to Apr. 10, 2003, water-stage recorder at site 200 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversion for irrigation of about 160,000 acres.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,360	1,820	e1,340	1,020	1,140	1,090	1,150	2,780	18,600	4,110	2,060	2,250
2	1,340	1,670	e1,390	1,090	1,140	1,040	1,170	2,600	20,300	3,930	2,070	2,240
3	1,620	1,640	e1,440	1,040	1,170	1,050	1,290	2,460	17,600	3,830	2,070	2,110
4	1,460	1,580	1,310	1,070	1,150	1,030	1,350	2,530	14,900	3,840	2,100	2,140
5	1,400	1,520	1,240	1,110	1,050	1,090	1,350	2,740	12,900	3,620	2,170	2,160
6	1,370	1,500	1,280	1,070	1,060	1,070	1,270	2,600	11,100	3,410	2,210	2,300
7	1,330	1,440	1,260	1,050	959	1,060	1,200	2,370	9,400	3,270	2,150	2,410
8	1,310	1,420	1,190	982	888	1,100	1,160	2,220	8,410	3,100	2,160	2,550
9	1,280	1,930	1,180	976	871	1,100	1,130	2,510	7,930	2,960	2,170	2,710
10	1,230	1,790	1,000	1,000	932	1,130	1,190	2,330	e8,080	2,930	2,170	2,920
11	1,270	1,660	1,100	1,100	1,030	1,150	1,380	2,450	e8,200	2,800	2,140	3,020
12	1,260	1,580	1,070	1,140	1,090	1,200	1,400	2,450	8,050	2,640	2,110	2,840
13	1,270	1,540	1,090	1,120	1,120	1,290	1,630	2,330	7,970	2,610	2,080	2,570
14	1,240	1,490	1,160	1,090	1,270	1,320	1,730	2,490	7,730	2,610	2,120	2,350
15	1,230	1,510	1,100	1,110	1,340	1,420	1,990	2,940	7,400	2,510	2,210	2,330
16	1,220	1,520	1,100	1,090	1,210	1,420	2,210	4,150	7,630	2,410	2,320	2,250
17	1,230	1,440	1,110	1,020	1,140	1,330	2,020	5,370	7,350	2,480	2,240	2,140
18	1,260	1,430	1,180	1,080	1,120	1,290	1,900	6,680	6,750	2,420	2,420	2,140
19	1,270	1,390	1,190	1,010	1,050	1,280	1,850	7,990	6,550	2,470	2,700	2,290
20	1,240	1,320	1,090	1,020	993	1,210	1,770	7,930	6,490	2,410	2,850	2,390
21	1,220	1,260	1,020	1,060	963	1,180	1,670	7,840	6,490	2,390	2,550	2,400
22	1,210	1,260	1,120	1,110	1,020	1,130	1,590	8,250	6,060	2,310	2,420	2,350
23	1,250	1,270	1,070	1,140	1,030	1,180	1,730	9,400	5,850	2,360	2,400	2,290
24	1,430	1,230	925	1,160	989	1,320	2,000	10,700	5,550	2,150	2,360	2,260
25	1,490	1,270	982	1,160	1,020	1,410	2,020	11,900	5,190	1,990	2,410	2,250
26	1,420	1,270	1,010	1,130	1,110	1,370	1,990	12,800	4,750	2,030	2,440	2,270
27	1,400	e1,320	977	1,110	1,070	1,260	2,200	13,400	4,520	2,370	2,390	2,370
28	1,410	e1,140	982	1,110	1,110	1,260	2,610	15,100	4,470	2,710	2,440	2,360
29	1,500	e1,120	1,020	1,130	---	1,180	2,860	16,700	4,340	2,630	2,370	2,320
30	1,450	e1,310	1,080	1,100	---	1,110	2,890	17,900	4,180	2,430	2,280	2,310
31	1,600	---	1,080	1,100	---	1,120	---	18,600	---	2,260	2,240	---
TOTAL	41,570	43,640	35,086	33,498	30,035	37,190	51,700	212,510	254,740	85,990	70,820	71,290
MEAN	1,341	1,455	1,132	1,081	1,073	1,200	1,723	6,855	8,491	2,774	2,285	2,376
MAX	1,620	1,930	1,440	1,160	1,340	1,420	2,890	18,600	20,300	4,110	2,850	3,020
MIN	1,210	1,120	925	976	871	1,030	1,130	2,220	4,180	1,990	2,060	2,110
AC-FT	82,450	86,560	69,590	66,440	59,570	73,770	102,500	421,500	505,300	170,600	140,500	141,400

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

MEAN	2,143	1,946	1,697	1,587	1,596	1,802	3,156	9,044	12,320	5,752	2,841	2,210
MAX	3,732	3,253	3,002	2,621	2,775	3,365	8,615	20,290	25,830	17,430	6,571	4,271
(WY)	(1985)	(1985)	(1985)	(1985)	(1986)	(1986)	(1962)	(1984)	(1984)	(1957)	(1984)	(1984)
MIN	1,084	1,038	1,004	940	941	1,020	1,723	2,536	2,606	1,515	1,332	1,243
(WY)	(1935)	(1935)	(1935)	(1964)	(1935)	(1935)	(2003)	(1977)	(2002)	(1934)	(1940)	(1934)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1934 - 2003

ANNUAL TOTAL	604,026	968,069	
ANNUAL MEAN	1,655	2,652	3,847
HIGHEST ANNUAL MEAN			7,605
LOWEST ANNUAL MEAN			1,751
HIGHEST DAILY MEAN	4,020	Jun 2	38,000
LOWEST DAILY MEAN	925	Dec 24	700
ANNUAL SEVEN-DAY MINIMUM	995	Dec 23	852
MAXIMUM PEAK FLOW			21,000
MAXIMUM PEAK STAGE			11.19
ANNUAL RUNOFF (AC-FT)	1,198,000	1,920,000	2,787,000
10 PERCENT EXCEEDS	2,500	5,930	9,350
50 PERCENT EXCEEDS	1,450	1,520	2,140
90 PERCENT EXCEEDS	1,160	1,070	1,360

e Estimated.

09095500 COLORADO RIVER NEAR CAMEO, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1933 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09095500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09095500)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1935 to current year.

WATER TEMPERATURE: April 1949 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1982.

REMARKS.--Daily record of specific conductance is good, except for the periods Dec. 4-18, Aug. 22 to Sept. 30, which are fair, and Oct. 1-4, Oct. 24 to Dec. 1, Apr. 11-23, May 7-19, which are poor. Daily record of water temperature is good. Missing daily data were due to sensor fouling or instrument malfunctions. Prior to water year 1995, daily maximum and minimum specific conductance data are available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,970 microsiemens/cm Jan. 19, 1940; minimum, 190 microsiemens/cm June 17-18, 1993.

WATER TEMPERATURE: Maximum, 28.5°C July 22, 1989; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,650 microsiemens/cm, Feb. 10; minimum, 222 microsiemens/cm, June 2.

WATER TEMPERATURE: Maximum, 26.2°C, July 26; minimum, 0.0°C, on many days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
OCT 17...	1215	1,240	9.9	8.5	1,230	9.0	280	79.7	19.1	3.92	4	155	E151
DEC 18...	1000	1,190	11.6	8.4	1,360	1.4	300	85.5	20.0	4.51	4	176	E161
FEB 19...	1015	1,080	10.4	8.3	1,350	4.5	280	79.7	19.7	4.85	4	173	E183
MAR 11...	1025	1,150	9.5	8.2	1,330	7.5	280	77.4	20.1	4.45	5	180	154
APR 23...	1400	1,750	9.8	7.9	1,080	11.1	220	63.3	15.3	4.05	4	127	131
MAY 19...	1555	8,450	8.4	7.8	383	12.4	110	33.7	7.22	1.71	1	24.8	90
JUN 10...	1130	7,940	8.3	8.1	398	14.2	130	37.3	7.80	1.38	1	29.1	91
JUL 24...	0915	2,190	6.8	8.3	834	21.5	200	59.5	13.2	2.97	3	84.4	129
AUG 08...	1205	2,190	8.2	8.6	875	21.3	200	59.0	12.0	2.81	3	88.8	120

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Selenium, water, fltrd, ug/L (01145)
OCT 17...	216	0.3	6.7	151	--	--	--	E.5
DEC 18...	247	0.31	6.6	159	--	--	--	0.6
FEB 19...	243	0.34	8.2	153	--	--	--	0.9
MAR 11...	235	0.32	6.6	153	769	1.05	2,390	1.0
APR 23...	179	0.24	5.6	116	588	0.80	2,780	1.0
MAY 19...	31.3	<0.2	7.9	37.8	198	0.27	4,520	0.6
JUN 10...	38.2	<0.2	7.2	40.9	217	0.29	4,640	E.4
JUL 24...	123	0.3	8.3	95.9	465	0.63	2,750	0.6
AUG 08...	140	0.3	8.2	93.0	477	0.65	2,820	E.5

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## COLORADO RIVER MAIN STEM

09095500 COLORADO RIVER NEAR CAMEO, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1,210	1,120	1,180	1,180	1,120	1,160	1,480	1,350	1,420	1,340	1,290	1,320
2	1,120	975	1,020	1,190	1,160	1,170	---	---	---	1,410	1,340	1,390
3	993	955	976	1,190	1,180	1,180	---	---	---	1,390	1,370	1,380
4	992	933	957	1,180	1,170	1,170	1,260	1,200	1,230	1,400	1,350	1,370
5	---	---	---	1,220	1,180	1,200	1,290	1,210	1,250	1,400	1,320	1,370
6	---	---	---	1,240	1,220	1,240	1,330	1,280	1,300	1,320	1,300	1,310
7	---	---	---	1,260	1,240	1,250	1,300	1,280	1,290	1,330	1,310	1,320
8	---	---	---	1,310	1,260	1,300	1,340	1,280	1,300	1,340	1,310	1,320
9	---	---	---	1,300	1,170	1,250	1,360	1,330	1,350	1,410	1,330	1,380
10	---	---	---	1,310	1,230	1,270	1,430	1,360	1,390	1,510	1,360	1,450
11	---	---	---	1,230	1,200	1,220	1,640	1,350	1,460	1,440	1,330	1,380
12	---	---	---	1,270	1,230	1,250	1,500	1,410	1,460	1,430	1,380	1,390
13	---	---	---	1,400	1,270	1,320	1,490	1,450	1,470	1,390	1,350	1,360
14	---	---	---	1,350	1,290	1,320	1,500	1,420	1,470	1,360	1,320	1,350
15	---	---	---	1,340	1,250	1,290	1,420	1,370	1,390	1,380	1,320	1,350
16	---	---	---	1,330	1,300	1,320	1,410	1,360	1,380	1,380	1,330	1,360
17	---	---	---	1,320	1,310	1,320	1,410	1,390	1,400	1,370	1,340	1,350
18	---	---	---	1,370	1,320	1,350	1,400	1,360	1,380	1,440	1,330	1,400
19	---	---	---	1,380	1,360	1,370	1,390	1,310	1,350	1,430	1,380	1,400
20	---	---	---	1,420	1,360	1,400	1,310	1,300	1,310	1,440	1,360	1,410
21	---	---	---	1,490	1,420	1,460	1,350	1,220	1,310	1,470	1,400	1,450
22	---	---	---	1,510	1,480	1,500	1,440	1,330	1,390	1,440	1,390	1,420
23	---	---	---	1,530	1,500	1,520	1,440	1,300	1,350	1,440	1,360	1,400
24	1,310	1,260	1,290	1,520	1,500	1,510	1,420	1,350	1,380	1,410	1,350	1,380
25	1,330	1,250	1,280	1,540	1,500	1,520	1,480	1,420	1,440	1,380	1,330	1,350
26	1,260	1,240	1,250	1,520	1,500	1,510	---	---	---	1,350	1,340	1,340
27	1,260	1,240	1,250	1,520	1,480	1,500	1,500	1,440	1,480	1,360	1,340	1,350
28	1,270	1,250	1,260	1,480	1,440	1,460	---	---	---	1,370	1,340	1,360
29	1,280	1,220	1,260	1,550	1,450	1,500	1,430	1,300	1,360	1,380	1,370	1,370
30	1,250	1,230	1,240	1,580	1,480	1,540	1,470	1,350	1,410	1,390	1,350	1,370
31	1,270	1,170	1,230	---	---	---	1,410	1,320	1,360	1,390	1,350	1,370
MONTH	---	---	---	1,580	1,120	1,350	---	---	---	1,510	1,290	1,370
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1,390	1,370	1,380	1,370	1,320	1,360	1,360	1,310	1,330	666	619	650
2	1,380	1,330	1,360	1,390	1,360	1,380	1,340	1,320	1,330	674	618	648
3	1,370	1,330	1,360	1,410	1,360	1,390	1,330	1,250	1,300	707	674	690
4	1,360	1,330	1,340	1,390	1,370	1,380	1,250	1,200	1,240	758	707	731
5	1,350	1,330	1,340	1,400	1,370	1,380	1,230	1,180	1,210	779	752	764
6	1,420	1,340	1,380	1,400	1,360	1,370	1,180	1,170	1,180	777	750	760
7	1,450	---	---	1,470	1,280	1,390	1,220	1,180	1,210	842	777	800
8	---	---	---	1,400	1,280	1,360	1,250	1,220	1,240	898	842	864
9	1,600	---	---	1,380	1,340	1,370	1,280	1,250	1,270	925	884	906
10	1,650	---	---	1,360	1,330	1,340	1,340	1,280	1,320	961	914	929
11	---	---	---	1,340	1,310	1,330	1,320	1,300	1,320	971	949	960
12	1,490	---	---	1,340	1,300	1,320	1,320	1,240	1,280	965	880	908
13	1,460	1,390	1,440	1,310	1,270	1,300	1,270	1,200	1,250	980	911	935
14	1,390	1,290	1,360	1,270	1,210	1,240	1,200	1,140	1,170	984	954	974
15	1,300	1,240	1,290	1,220	1,160	1,200	1,150	1,080	1,120	954	817	901
16	1,280	1,210	1,250	1,160	1,130	1,140	1,080	976	1,020	817	520	669
17	1,300	1,270	1,280	1,140	1,130	1,130	993	948	963	520	444	486
18	1,340	1,290	1,310	1,230	1,130	1,170	1,040	977	1,010	444	405	423
19	1,350	1,340	1,350	1,260	1,230	1,240	1,120	1,040	1,080	407	359	378
20	1,380	1,340	1,370	1,260	1,250	1,250	1,140	1,090	1,120	369	345	362
21	1,410	1,370	1,390	1,280	1,260	1,280	1,090	1,020	1,040	350	325	334
22	1,440	1,400	1,420	1,290	1,260	1,270	1,060	1,020	1,040	365	309	340
23	1,440	1,380	1,410	1,320	1,290	1,300	1,060	1,040	1,060	350	309	327
24	1,380	1,370	1,380	1,290	1,240	1,280	1,040	976	1,010	331	310	321
25	1,410	1,370	1,390	1,240	1,180	1,210	976	934	948	310	289	301
26	1,410	1,380	1,400	1,180	1,160	1,170	953	939	943	295	281	289
27	1,400	1,330	1,370	1,170	1,150	1,150	957	932	943	292	261	280
28	1,360	1,310	1,350	1,220	1,170	1,200	932	785	856	267	246	257
29	---	---	---	1,230	1,210	1,210	785	728	748	249	235	244
30	---	---	---	1,290	1,230	1,250	741	666	704	237	226	233
31	---	---	---	1,320	1,290	1,310	---	---	---	232	225	227
MONTH	---	---	---	1,470	1,130	1,280	1,360	666	1,110	984	225	577

09095500 COLORADO RIVER NEAR CAMEO, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	232	223	228	623	592	605	931	889	917	894	870	878
2	229	222	226	650	610	623	939	927	934	905	892	899
3	242	228	236	650	620	632	935	929	933	922	902	908
4	263	241	255	643	623	632	934	905	919	922	904	913
5	285	263	276	654	622	633	923	894	910	920	892	906
6	317	284	299	667	645	653	907	875	891	905	876	893
7	352	317	335	685	666	671	891	878	883	876	853	865
8	379	351	363	705	685	692	901	888	895	853	830	843
9	395	378	389	713	702	707	909	899	902	833	807	821
10	402	387	394	726	713	721	914	900	907	832	787	808
11	392	385	388	779	724	752	922	893	908	827	797	816
12	396	384	391	814	779	794	924	891	913	797	776	786
13	392	383	388	836	814	829	931	904	924	816	790	801
14	398	386	393	828	816	821	944	927	937	846	816	827
15	417	397	409	842	822	828	951	930	943	864	845	854
16	408	396	404	862	842	853	944	891	924	874	858	866
17	417	394	406	871	861	866	962	891	925	878	869	873
18	447	417	436	871	844	857	916	891	906	890	875	882
19	459	444	450	884	855	868	1,110	882	925	910	884	889
20	516	454	461	883	867	875	1,080	802	877	907	864	880
21	462	456	459	888	874	882	837	782	810	864	855	858
22	483	459	473	888	872	883	884	837	864	857	845	851
23	494	476	485	890	858	875	883	864	874	859	852	856
24	503	484	493	897	846	866	878	864	871	862	851	857
25	529	494	509	935	897	921	875	843	862	864	852	858
26	567	529	546	978	935	966	879	841	856	863	853	858
27	588	559	573	975	906	948	862	827	843	859	841	852
28	592	577	584	906	797	847	858	830	837	841	829	836
29	592	573	583	813	790	797	831	822	825	846	832	838
30	604	579	591	852	813	829	833	818	824	856	843	849
31	---	---	---	889	852	864	870	833	849	---	---	---
MONTH	604	222	414	978	592	793	1,110	782	890	922	776	857

## COLORADO RIVER MAIN STEM

09095500 COLORADO RIVER NEAR CAMEO, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.8	12.7	13.9	6.7	5.0	5.9	2.9	1.5	2.3	0.2	0.0	0.0
2	14.2	12.5	13.4	6.4	5.3	5.9	3.3	1.8	2.6	0.0	0.0	0.0
3	13.1	11.4	12.1	5.6	3.9	4.8	3.2	1.8	2.5	0.0	0.0	0.0
4	12.9	10.9	11.9	5.6	3.7	4.6	2.9	1.2	2.2	0.0	0.0	0.0
5	14.1	11.5	12.7	5.4	3.1	4.4	3.2	1.4	2.3	0.0	0.0	0.0
6	14.1	11.2	12.7	5.7	3.2	4.6	2.5	0.8	1.9	0.9	0.0	0.3
7	14.6	11.3	13.0	5.2	3.1	4.3	2.8	1.0	2.0	0.9	0.0	0.3
8	14.8	11.5	13.3	5.5	4.0	4.8	2.6	0.9	1.8	0.8	0.0	0.3
9	14.7	11.6	13.3	5.8	4.9	5.3	1.8	0.1	1.1	0.6	0.0	0.2
10	14.2	11.3	13.0	5.3	4.1	4.7	1.1	0.0	0.5	1.4	0.6	0.9
11	13.5	11.3	12.7	5.5	3.8	4.5	0.8	0.0	0.3	2.3	0.6	1.4
12	12.9	10.4	11.8	4.9	2.7	3.9	1.4	0.1	0.7	2.9	1.6	2.2
13	11.9	8.8	10.6	4.1	3.2	3.7	1.7	0.0	0.9	2.8	1.1	2.1
14	11.5	8.5	10.3	4.8	3.1	3.9	1.6	0.0	1.0	2.3	0.8	1.7
15	11.4	8.3	10.1	5.4	3.9	4.6	2.1	0.7	1.4	2.5	1.1	1.7
16	11.3	8.2	10.0	4.5	2.8	3.8	1.9	0.3	1.2	1.5	0.2	1.0
17	11.3	8.3	10.0	4.0	2.1	3.2	2.5	1.9	2.2	1.9	0.2	1.1
18	11.3	8.3	10.0	4.6	2.5	3.6	2.6	1.1	1.9	1.4	0.0	0.7
19	11.0	8.0	9.7	4.2	2.4	3.4	2.6	0.6	1.4	1.1	0.0	0.4
20	10.4	7.7	9.3	4.4	2.0	3.3	1.0	0.0	0.3	1.2	0.0	0.4
21	10.3	7.4	9.1	4.9	2.5	3.8	0.9	0.0	0.3	1.5	0.0	0.6
22	10.2	7.9	9.2	4.9	2.7	4.0	0.6	0.0	0.1	2.3	0.2	1.3
23	10.3	9.1	9.7	4.8	3.0	4.1	0.0	0.0	0.0	3.7	1.6	2.6
24	10.6	8.9	9.6	5.2	3.1	4.2	0.0	0.0	0.0	3.6	2.2	3.0
25	10.1	8.0	9.1	4.8	3.5	4.2	0.0	0.0	0.0	4.8	3.0	3.8
26	9.5	8.1	8.7	3.6	1.9	2.7	0.0	0.0	0.0	4.3	2.3	3.4
27	9.6	7.7	8.7	2.3	0.5	1.5	0.0	0.0	0.0	4.4	2.4	3.5
28	9.4	8.1	8.7	1.8	0.0	1.0	0.0	0.0	0.0	4.2	3.2	3.8
29	9.2	7.6	8.4	1.8	0.1	1.1	0.0	0.0	0.0	4.6	2.9	3.8
30	8.8	6.9	7.9	2.3	0.1	1.4	0.3	0.0	0.0	4.5	3.0	3.8
31	7.8	6.3	7.1	---	---	---	0.0	0.0	0.0	4.6	2.9	3.8
MONTH	14.8	6.3	10.6	6.7	0.0	3.8	3.3	0.0	1.0	4.8	0.0	1.6
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	4.5	2.6	3.7	5.5	3.0	4.5	11.5	8.3	10.1	13.0	10.5	11.8
2	4.8	4.0	4.3	6.5	3.7	5.0	10.7	8.8	9.5	14.0	10.7	12.3
3	4.5	2.4	3.5	6.9	4.0	5.6	8.9	7.1	8.1	13.2	11.2	12.2
4	4.1	2.0	3.0	5.9	4.3	4.9	9.0	6.0	7.7	11.5	10.2	10.9
5	3.0	1.5	2.3	5.3	2.5	4.0	8.5	6.7	7.8	12.9	10.2	11.3
6	2.1	0.3	1.3	6.1	3.2	4.7	9.5	6.2	7.7	13.8	10.0	11.8
7	0.8	0.0	0.2	8.1	4.7	6.3	10.8	6.6	8.5	13.8	10.9	12.3
8	0.7	0.0	0.1	8.6	5.5	7.2	11.7	7.2	9.4	13.7	11.5	12.5
9	0.7	0.0	0.2	8.7	5.8	7.4	13.1	8.3	10.7	12.4	10.0	11.0
10	0.0	0.0	0.0	8.5	5.9	7.3	14.1	9.5	11.8	12.0	8.7	10.1
11	0.6	0.0	0.1	10.0	6.7	8.3	15.2	10.6	12.9	13.9	9.4	11.6
12	0.7	0.0	0.2	11.5	8.0	9.7	14.0	11.3	12.7	15.6	10.9	13.2
13	2.2	0.7	1.4	11.8	8.1	10.2	14.4	10.1	12.3	16.0	12.2	14.2
14	4.3	2.2	3.1	10.7	8.2	9.6	14.4	10.8	12.6	16.7	12.9	15.0
15	5.4	3.6	4.4	10.0	7.9	9.3	13.2	11.3	12.1	15.6	14.3	14.8
16	4.7	3.0	3.9	10.2	8.6	9.3	12.9	9.2	11.2	16.6	13.2	14.8
17	5.3	3.1	4.2	9.3	8.5	8.8	12.0	9.5	10.9	15.4	14.0	14.6
18	5.6	3.8	4.7	8.6	6.5	7.6	12.5	9.9	11.0	14.2	12.2	13.2
19	6.0	3.3	4.7	7.5	5.6	6.5	13.1	9.8	11.3	13.4	10.3	12.0
20	5.7	3.0	4.5	8.2	5.9	7.2	13.9	9.2	11.4	13.6	10.7	12.2
21	6.2	3.7	5.0	9.8	7.0	8.3	13.3	10.5	12.0	13.9	11.1	12.5
22	5.2	3.5	4.2	11.2	7.2	9.2	13.0	11.0	12.0	14.4	11.4	12.9
23	4.0	1.9	3.0	12.0	8.4	10.3	11.7	10.1	10.8	14.7	11.9	13.3
24	3.7	1.6	2.8	11.4	9.7	10.5	13.3	9.0	10.9	14.1	11.7	12.9
25	4.1	3.0	3.5	11.3	7.7	9.5	14.8	9.7	12.1	13.5	11.6	12.6
26	4.7	3.5	4.1	10.0	8.0	9.2	15.2	10.9	13.1	13.4	10.8	12.1
27	5.8	4.1	4.9	9.5	7.4	8.5	15.4	11.5	13.5	13.9	11.4	12.8
28	5.7	3.9	4.8	8.1	5.5	6.8	14.9	12.5	13.6	14.0	11.9	13.0
29	---	---	---	8.2	4.4	6.5	13.4	12.0	12.5	13.9	12.0	12.9
30	---	---	---	9.4	5.0	7.3	13.4	11.3	12.3	13.4	12.1	12.7
31	---	---	---	---	6.3	---	---	---	---	13.2	11.7	12.4
MONTH	6.2	0.0	2.9	---	2.5	---	15.4	6.0	11.1	16.7	8.7	12.6

09095500 COLORADO RIVER NEAR CAMEO, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	13.1	11.6	12.4	20.8	18.3	19.4	24.1	19.9	22.0	21.6	17.9	19.8
2	12.5	11.1	11.9	20.7	17.8	19.2	24.4	20.8	22.5	20.6	17.8	19.4
3	13.3	10.9	12.1	21.1	17.8	19.4	23.2	20.6	21.9	20.9	17.5	19.3
4	13.7	11.3	12.5	21.4	18.3	19.8	24.7	20.7	22.5	21.1	17.5	19.2
5	14.2	11.5	12.8	21.8	18.8	20.2	24.6	20.8	22.6	20.2	18.1	19.2
6	14.0	11.3	12.7	21.4	19.0	20.3	24.5	20.7	22.6	19.0	17.1	18.0
7	13.9	11.4	12.6	21.7	18.5	20.0	23.5	21.1	22.4	20.2	17.4	18.7
8	15.0	11.6	13.4	22.0	18.3	20.1	24.4	20.1	22.3	19.5	17.0	18.3
9	14.7	12.4	13.8	22.1	18.3	20.2	25.4	21.2	23.3	18.2	16.0	17.1
10	15.7	12.7	14.2	22.7	18.8	20.8	25.9	21.8	23.9	16.0	14.5	15.2
11	15.5	12.7	14.2	23.0	19.2	21.1	25.9	22.1	24.0	15.8	13.2	14.4
12	15.8	13.1	14.5	23.5	19.5	21.4	25.6	21.9	23.8	16.5	13.3	14.8
13	15.6	12.9	14.4	23.3	19.8	21.6	26.0	22.0	23.9	16.7	14.0	15.3
14	16.0	12.8	14.4	23.9	20.0	21.9	25.5	22.2	23.8	16.4	12.9	14.7
15	16.9	13.5	15.3	24.2	20.6	22.4	23.9	21.5	22.6	16.6	12.7	14.7
16	16.8	14.3	15.8	24.5	20.6	22.6	22.8	20.5	21.8	16.6	13.5	15.1
17	16.2	14.0	15.2	25.1	20.9	23.0	23.0	19.7	21.2	16.2	14.0	14.9
18	16.7	13.5	15.2	25.7	22.2	23.9	22.7	19.4	21.1	15.1	11.9	13.5
19	16.3	14.7	15.5	24.4	21.7	23.3	22.3	18.9	20.7	15.3	11.7	13.2
20	15.5	13.8	14.8	24.9	22.0	23.6	22.0	18.9	20.6	15.6	11.9	13.8
21	15.9	13.1	14.6	25.9	22.1	24.0	22.5	19.5	21.1	15.8	12.2	14.1
22	17.1	14.0	15.6	25.4	22.1	23.8	23.1	19.8	21.4	16.1	12.3	14.2
23	16.9	14.6	15.9	24.4	21.3	22.6	24.0	20.6	22.2	16.4	12.4	14.4
24	16.3	14.5	15.3	25.2	21.0	23.2	23.9	20.7	22.3	16.6	12.6	14.7
25	17.5	13.9	15.6	25.8	22.4	24.2	23.9	21.1	22.5	16.3	12.7	14.6
26	18.1	15.4	16.7	26.2	22.6	24.4	23.6	20.1	21.8	16.5	12.6	14.6
27	18.6	15.8	17.2	25.2	21.5	23.4	22.2	20.2	21.2	16.8	13.0	15.0
28	19.1	16.6	17.8	25.2	22.2	23.6	22.0	18.8	20.4	17.0	13.4	15.2
29	20.0	17.0	18.3	24.9	21.7	23.1	22.4	18.9	20.7	17.2	13.6	15.4
30	20.4	17.5	18.8	24.0	20.5	22.3	22.0	19.1	20.6	17.3	13.8	15.6
31	---	---	---	24.1	21.1	22.5	21.5	17.4	19.5	---	---	---
MONTH	20.4	10.9	14.8	26.2	17.8	22.0	26.0	17.4	22.0	21.6	11.7	15.9



## 09097900 PLATEAU CREEK BELOW COLLBRAN, CO

LOCATION.--Lat 39°14'23", long 107°58'15", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.34, T.9 S., R.95 W., Mesa County, Hydrologic Unit 14010005, on right bank 15 ft downstream from private bridge, 0.3 mi downstream from Grove Creek, and 0.6 mi west of Collbran.

DRAINAGE AREA.--328 mi<sup>2</sup>.

PERIOD OF RECORD.--April to September 2003. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09097900](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09097900)

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 5,920 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs and diversions for irrigation. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period April to September, 780 ft<sup>3</sup>/s, May 22, gage height, 5.27 ft; minimum daily, 5.9 ft<sup>3</sup>/s, July 8.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	140	274	8.9	8.0	7.4
2	---	---	---	---	---	---	---	117	277	9.3	8.0	6.8
3	---	---	---	---	---	---	---	126	151	7.4	e9.6	6.7
4	---	---	---	---	---	---	---	184	114	6.9	e9.2	6.1
5	---	---	---	---	---	---	---	183	89	6.9	e8.2	6.7
6	---	---	---	---	---	---	---	164	69	6.8	8.0	8.4
7	---	---	---	---	---	---	---	151	58	6.4	7.9	15
8	---	---	---	---	---	---	---	138	50	5.9	8.4	19
9	---	---	---	---	---	---	---	147	42	6.1	7.8	18
10	---	---	---	---	---	---	---	155	39	6.6	e7.6	67
11	---	---	---	---	---	---	---	135	43	6.7	e8.2	45
12	---	---	---	---	---	---	---	132	39	7.1	e11	33
13	---	---	---	---	---	---	---	169	38	6.6	e14	29
14	---	---	---	---	---	---	---	193	33	6.5	e12	26
15	---	---	---	---	---	---	---	286	29	6.5	e44	25
16	---	---	---	---	---	---	---	343	27	6.7	e23	23
17	---	---	---	---	---	---	---	444	24	7.7	e16	22
18	---	---	---	---	---	---	---	425	25	8.3	e14	23
19	---	---	---	---	---	---	---	399	24	7.3	e10	24
20	---	---	---	---	---	---	---	406	31	8.1	e8.2	23
21	---	---	---	---	---	---	---	422	28	8.0	e8.4	23
22	---	---	---	---	---	---	---	505	22	7.9	e7.8	22
23	---	---	---	---	---	---	---	488	20	8.2	7.0	18
24	---	---	---	---	---	---	---	379	19	6.6	8.6	18
25	---	---	---	---	---	---	---	356	17	7.0	8.6	17
26	---	---	---	---	---	---	137	318	14	8.8	6.9	16
27	---	---	---	---	---	---	198	397	12	7.2	6.9	16
28	---	---	---	---	---	---	218	426	11	7.8	8.7	15
29	---	---	---	---	---	---	202	379	9.2	7.3	7.9	15
30	---	---	---	---	---	---	166	325	7.8	7.8	7.0	16
31	---	---	---	---	---	---	---	241	---	8.1	8.4	---
TOTAL	---	---	---	---	---	---	---	8,673	1,636.0	227.4	329.3	610.1
MEAN	---	---	---	---	---	---	---	280	54.5	7.34	10.6	20.3
MAX	---	---	---	---	---	---	---	505	277	9.3	44	67
MIN	---	---	---	---	---	---	---	117	7.8	5.9	6.9	6.1
AC-FT	---	---	---	---	---	---	---	17,200	3,250	451	653	1,210

e Estimated.

## 09105000 PLATEAU CREEK NEAR CAMEO, CO

LOCATION.--Lat 39°11'00", long 108°16'02", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.18, T.10 S., R.97 W., Mesa County, Hydrologic Unit 14010005, on left bank 300 ft from State Highway 65, 1.15 mi upstream from mouth, and 4.0 mi northeast of Cameo.

DRAINAGE AREA.--592 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1935 to September 1983. October 1985 to current year. Prior to May 1936, monthly discharges only, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09105000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09105000)

REVISED RECORDS.--WSP 979: 1942. WSP 2124: Drainage area. WDR CO-83-2: 1973 (M), 1975 (M).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,840 ft above NGVD of 1929, from topographic map. Prior to Aug. 27, 1936, nonrecording gage.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation of about 25,000 acres, return flow from irrigated areas, and for power development.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	76	47	e47	45	e46	73	173	324	32	30	29
2	42	53	46	e41	e46	48	94	149	425	31	28	27
3	102	49	45	e44	e45	46	92	149	209	29	29	27
4	77	46	42	e46	43	52	75	247	159	28	28	26
5	53	46	44	e43	43	52	70	238	125	28	27	35
6	46	44	41	e40	e40	47	66	211	100	28	27	39
7	43	45	41	e42	e37	49	65	189	88	28	27	44
8	42	49	41	e40	e39	53	62	168	79	26	29	55
9	40	135	39	e44	e45	54	65	207	68	26	30	82
10	38	72	42	e49	e42	56	81	195	59	27	29	237
11	37	58	44	e48	e45	60	113	174	60	26	29	129
12	37	50	43	e46	41	71	154	157	62	25	32	91
13	37	49	41	42	44	87	148	185	62	25	36	81
14	37	52	40	44	e55	100	183	211	54	24	34	78
15	37	51	42	44	e50	100	192	318	48	24	72	76
16	38	46	42	e39	e47	96	167	385	46	20	46	73
17	38	46	47	e44	e48	84	144	501	45	19	40	68
18	39	49	e45	e37	e47	79	144	474	48	20	39	71
19	40	45	e41	e44	e46	66	131	480	50	19	35	73
20	41	46	e39	e45	45	57	106	465	62	19	28	73
21	42	48	e49	46	49	64	97	494	73	20	28	71
22	43	47	e42	45	46	61	107	536	64	21	25	70
23	46	48	e35	45	44	65	138	690	55	22	24	65
24	50	49	e44	45	41	103	111	474	53	21	27	63
25	48	51	e46	46	49	85	91	431	51	21	26	61
26	46	45	e41	45	46	73	146	348	48	23	25	61
27	46	41	e42	45	e45	77	229	452	45	23	25	59
28	48	45	e41	46	e47	68	253	550	42	22	28	58
29	52	46	e44	44	---	57	237	485	38	23	29	58
30	48	46	e44	43	---	56	196	432	33	23	30	59
31	50	---	e41	44	---	62	---	310	---	23	31	---
TOTAL	1,430	1,573	1,321	1,363	1,260	2,074	3,830	10,478	2,675	746	973	2,039
MEAN	46.1	52.4	42.6	44.0	45.0	66.9	128	338	89.2	24.1	31.4	68.0
MAX	102	135	49	49	55	103	253	690	425	32	72	237
MIN	37	41	35	37	37	46	62	149	33	19	24	26
AC-FT	2,840	3,120	2,620	2,700	2,500	4,110	7,600	20,780	5,310	1,480	1,930	4,040

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2003, BY WATER YEAR (WY)

MEAN	114	103	86.5	77.3	82.4	107	241	662	502	120	79.7	93.8
MAX	333	207	148	117	148	220	759	1,825	2,975	796	328	255
(WY)	(1942)	(1987)	(1942)	(1998)	(1958)	(1998)	(1942)	(1942)	(1983)	(1995)	(1983)	(1997)
MIN	25.2	37.3	42.1	41.4	42.8	58.3	71.9	33.8	15.6	10.2	13.4	17.4
(WY)	(1978)	(1978)	(1991)	(1961)	(1978)	(1964)	(1990)	(1977)	(2002)	(2002)	(1977)	(1977)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1936 - 2003

ANNUAL TOTAL	16,754.9	29,762	
ANNUAL MEAN	45.9	81.5	190
HIGHEST ANNUAL MEAN			542
LOWEST ANNUAL MEAN			48.8
HIGHEST DAILY MEAN	135	Nov 9	4,100
LOWEST DAILY MEAN	7.4	Jul 21	a7.4
ANNUAL SEVEN-DAY MINIMUM	8.2	Jul 19	8.2
MAXIMUM PEAK FLOW			5,580
MAXIMUM PEAK STAGE			b7.99
ANNUAL RUNOFF (AC-FT)	33,230	59,030	137,700
10 PERCENT EXCEEDS	85	173	408
50 PERCENT EXCEEDS	44	46	96
90 PERCENT EXCEEDS	11	28	46

e Estimated.

a Also occurred Jul 24, 2002.

b Maximum gage height, 8.73 ft, Jun 16, 1995.

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1968 to August 1979, November 1993 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09105000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09105000)

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1994 to current year.

WATER TEMPERATURE: June 1994 to current year.

INSTRUMENTATION.--Water-quality monitor since June 1994.

REMARKS.-- Daily record of specific conductance is good, except for the periods Dec. 20 to Jan. 12, Jan. 16-21, Feb. 6-12, Feb. 20 to Apr. 12, and Sept. 9, which are fair, and Oct. 1-3, Oct. 17-31, and Sept. 10-30, which are poor. Daily record of water temperature is good. Interruptions in daily record are due to sensor fouling or missing transmissions. Daily maximum and minimum specific conductance data from June 1994 to Sept. 1995 are available in district office.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 2,220 microsiemens/cm, Sept. 9, 2003, minimum, 160 microsiemens/cm several days in June 1995.

WATER TEMPERATURE: Maximum, 32.1°C, July 11, 2002; minimum, 0.0°C, on many days during winter months.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,220 microsiemens/cm, Sept. 9; minimum, 189 microsiemens/cm, May 23.

WATER TEMPERATURE: Maximum, 31.1°C, July 18; minimum, 0.0°C, on many days.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
OCT 17...	0930	38	10.4	8.3	760	5.5	300	54.6	39.9	5.30	2	65.5	E315
DEC 19...	1230	40	12.5	8.7	778	0.0	320	61.5	40.2	5.05	2	68.3	--
FEB 19...	1315	49	10.4	8.5	760	5.5	300	60.3	35.5	5.48	2	64.8	--
MAR 11...	1230	57	9.8	8.4	751	9.5	290	56.6	35.7	4.43	2	69.1	292
APR 24...	1335	111	8.8	8.4	504	13.6	200	48.6	18.8	3.16	1	32.6	217
MAY 16...	1140	412	8.9	8.2	334	13.5	130	34.3	11.3	2.17	0.6	16.9	146
JUN 09...	1245	71	8.4	8.5	573	19.3	230	51.5	24.0	4.05	1	40.0	257
JUL 24...	1200	21	8.2	8.6	678	24.8	220	33.9	33.7	5.98	2	57.1	286
AUG 13...	0815	34	6.5	8.5	689	21.5	190	29.3	27.6	6.31	3	89.9	280

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)
OCT 17...	6.98	0.6	28.6	85.4	--	--	--
DEC 19...	9.73	0.57	26.4	95.4	--	--	--
FEB 19...	6.93	0.51	25.6	98.9	--	--	--
MAR 11...	6.59	0.51	20.8	102	471	0.64	72.4
APR 24...	3.34	0.29	15.4	50.0	302	0.41	90.6
MAY 16...	2.33	0.2	14.8	23.7	193	0.26	215
JUN 09...	5.24	0.4	23.7	54.8	358	0.49	68.4
JUL 24...	8.23	0.6	25.7	69.4	406	0.55	23.0
AUG 13...	7.77	0.6	24.2	82.3	436	0.59	40.0

E -- Estimated laboratory analysis value.

09105000 PLATEAU CREEK NEAR CAMEO, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	771	709	747	---	---	---	---	---	---	740	684	702
2	709	662	689	---	---	---	---	---	---	740	690	726
3	662	577	617	---	---	---	---	---	---	736	720	730
4	---	---	---	---	---	---	---	---	---	738	704	727
5	---	---	---	---	---	---	---	---	---	743	705	717
6	---	---	---	---	---	---	---	---	---	769	711	749
7	---	---	---	---	---	---	---	---	---	750	711	734
8	---	---	---	---	---	---	---	---	---	742	676	714
9	---	---	---	---	---	---	---	---	---	740	681	720
10	---	---	---	---	---	---	---	---	---	691	665	677
11	---	---	---	---	---	---	---	---	---	670	639	658
12	---	---	---	---	---	---	---	---	---	697	645	676
13	---	---	---	---	---	---	---	---	---	700	607	651
14	---	---	---	---	---	---	---	---	---	707	671	689
15	---	---	---	---	---	---	---	---	---	671	633	647
16	---	---	---	---	---	---	---	---	---	686	659	673
17	---	---	---	---	---	---	---	---	---	692	660	675
18	796	762	778	---	---	---	---	---	---	709	657	688
19	792	762	778	---	---	---	---	---	---	744	685	713
20	793	763	777	---	---	---	833	769	801	738	651	703
21	786	759	773	---	---	---	788	747	769	723	641	682
22	782	757	768	---	---	---	789	752	768	746	662	701
23	781	758	769	---	---	---	847	764	811	734	711	723
24	914	750	777	---	---	---	803	753	779	721	703	714
25	772	750	761	---	---	---	755	723	745	724	698	713
26	769	747	758	---	---	---	808	752	786	710	700	705
27	775	742	762	---	---	---	805	771	786	724	695	708
28	774	734	751	---	---	---	803	752	780	713	693	703
29	769	722	748	---	---	---	767	700	740	712	694	703
30	767	744	756	---	---	---	700	681	690	731	698	715
31	772	704	753	---	---	---	721	693	711	732	702	717
MONTH	---	---	---	---	---	---	---	---	---	769	607	702
	FEBRUARY			MARCH			APRIL			MAY		
1	721	702	710	766	607	706	669	624	655	366	345	359
2	728	690	714	754	607	716	667	592	620	397	364	386
3	739	686	707	739	712	729	600	591	596	407	379	394
4	757	718	741	739	704	720	629	600	615	628	360	408
5	781	723	754	740	693	711	659	629	644	449	402	411
6	782	665	738	739	707	728	665	630	653	426	410	417
7	842	733	792	767	725	749	660	629	649	457	420	431
8	843	771	806	762	716	734	680	624	650	436	422	431
9	787	687	752	750	708	729	683	619	644	507	416	453
10	743	697	721	736	704	723	683	583	619	464	423	436
11	743	689	719	733	665	713	593	508	548	438	426	432
12	707	686	698	719	670	698	---	---	---	459	435	447
13	712	687	699	692	626	664	---	---	---	441	382	413
14	687	524	596	650	564	590	---	---	---	385	371	379
15	549	523	539	601	568	580	---	---	---	478	328	363
16	644	546	593	612	583	597	---	---	---	382	318	327
17	696	643	677	633	593	621	---	---	---	---	---	---
18	751	680	735	675	621	650	---	---	---	---	---	---
19	758	739	749	698	675	692	488	451	469	---	---	---
20	781	751	768	733	691	712	520	485	505	---	---	---
21	794	743	765	758	703	727	551	504	528	---	---	---
22	768	744	761	755	696	723	535	476	510	276	224	247
23	774	753	764	754	671	710	490	437	464	277	189	228
24	775	750	766	709	587	646	495	441	474	312	266	284
25	778	743	757	665	611	647	543	495	523	325	276	304
26	771	745	760	697	663	681	518	402	465	344	306	322
27	773	735	755	706	664	683	410	339	369	346	264	304
28	761	614	715	708	670	691	362	321	335	358	247	299
29	---	---	---	721	687	707	334	316	325	326	255	293
30	---	---	---	720	699	707	348	327	342	330	272	304
31	---	---	---	707	667	698	---	---	---	389	326	351
MONTH	843	523	723	767	564	690	---	---	---	---	---	---

## PLATEAU CREEK BASIN

09105000 PLATEAU CREEK NEAR CAMEO, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	720	661	687	752	684	707	670	636	652
2	370	280	317	724	674	696	847	699	735	680	649	664
3	---	---	---	727	665	695	732	687	711	683	644	665
4	433	381	405	725	668	696	736	694	710	672	643	656
5	470	420	445	728	665	696	726	685	704	680	643	666
6	504	469	484	720	661	685	734	692	714	691	675	685
7	543	504	525	731	662	694	725	687	707	709	676	695
8	563	543	553	730	660	696	729	691	709	713	635	675
9	588	563	578	728	665	692	724	675	701	2,220	644	1,050
10	604	587	598	711	655	682	734	683	708	865	576	780
11	614	597	606	714	656	686	748	683	717	804	781	790
12	597	567	581	730	664	696	748	688	720	796	756	774
13	601	583	594	722	666	689	831	675	741	797	778	788
14	625	582	605	719	658	688	782	733	754	779	726	758
15	636	625	629	710	661	684	823	414	654	757	712	732
16	644	636	640	704	662	680	897	791	820	765	735	749
17	657	644	652	712	665	682	804	744	779	763	747	753
18	658	638	649	705	666	682	762	734	747	777	742	756
19	650	625	635	693	666	675	747	716	735	787	748	762
20	689	617	630	678	651	664	743	708	724	791	756	774
21	623	601	612	690	649	669	735	708	719	802	769	783
22	621	614	618	686	656	671	722	687	706	797	731	775
23	642	618	630	688	650	669	701	671	686	752	716	733
24	657	629	642	691	671	680	962	659	718	763	743	751
25	666	646	656	688	655	673	696	656	675	758	724	738
26	670	640	655	693	653	674	682	653	666	737	713	726
27	675	639	657	701	655	679	678	656	667	722	700	713
28	676	644	662	699	660	681	689	650	669	711	689	700
29	708	672	690	703	659	682	674	643	657	704	680	692
30	730	674	702	716	670	692	669	634	650	697	670	685
31	---	---	---	718	674	694	671	633	652	---	---	---
MONTH	---	---	---	731	649	684	962	414	708	2,220	576	737

09105000 PLATEAU CREEK NEAR CAMEO, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.4	9.4	12.6	7.2	3.9	5.7	5.0	1.5	3.0	0.0	0.0	0.0
2	13.8	10.4	11.9	6.7	4.5	5.9	4.4	2.5	3.3	0.0	0.0	0.0
3	11.6	8.7	10.3	5.8	1.6	3.8	3.3	0.9	2.2	0.0	0.0	0.0
4	14.0	8.7	11.0	5.2	1.9	3.5	2.8	0.0	1.3	0.0	0.0	0.0
5	16.4	10.4	12.9	5.7	0.4	3.0	4.1	0.7	2.1	0.0	0.0	0.0
6	15.7	8.6	12.2	5.8	0.4	3.1	2.5	0.0	1.3	0.0	0.0	0.0
7	15.9	8.7	12.3	5.2	0.7	3.1	2.6	0.0	1.1	0.0	0.0	0.0
8	16.0	8.6	12.3	6.8	3.3	4.9	1.8	0.0	0.7	0.0	0.0	0.0
9	15.1	8.4	11.9	6.4	4.3	5.9	0.4	0.0	0.1	0.0	0.0	0.0
10	15.1	7.8	11.5	5.6	2.4	3.9	0.1	0.0	0.0	0.0	0.0	0.0
11	14.9	8.6	11.9	5.7	3.0	4.2	0.4	0.0	0.0	0.0	0.0	0.0
12	13.6	7.1	10.6	4.8	0.5	2.8	2.7	0.0	1.1	2.5	0.0	1.0
13	12.2	4.8	8.7	3.4	1.5	2.6	2.2	0.0	0.9	2.3	0.0	1.0
14	12.3	5.2	8.9	6.2	2.8	4.3	1.0	0.0	0.3	2.2	0.0	0.8
15	12.0	4.8	8.5	5.9	3.5	4.8	2.1	0.0	0.8	3.0	0.4	1.5
16	12.2	4.7	8.5	4.4	0.5	2.6	2.8	0.0	1.0	0.7	0.0	0.1
17	12.3	5.1	8.8	3.9	0.0	2.1	3.7	2.0	2.6	1.6	0.0	0.5
18	12.2	5.2	8.9	4.4	0.8	2.7	2.1	0.4	1.3	0.1	0.0	0.0
19	11.5	4.7	8.3	4.0	0.4	2.3	1.1	0.0	0.1	0.0	0.0	0.0
20	10.7	4.1	7.6	4.5	0.1	2.2	0.0	0.0	0.0	0.8	0.0	0.1
21	10.8	4.1	7.6	5.0	0.9	2.9	0.0	0.0	0.0	1.7	0.0	0.5
22	10.6	6.2	8.3	5.1	0.9	3.0	0.0	0.0	0.0	3.2	0.0	1.2
23	11.9	7.9	9.7	4.8	1.7	3.2	0.0	0.0	0.0	4.7	1.0	2.7
24	11.3	7.6	9.3	5.9	1.9	3.8	0.0	0.0	0.0	3.9	0.9	2.5
25	11.1	6.7	8.9	5.0	2.1	3.5	0.0	0.0	0.0	5.7	2.5	3.9
26	9.3	6.2	7.6	2.1	0.0	0.8	0.0	0.0	0.0	4.6	0.0	2.4
27	11.0	6.0	8.2	0.6	0.0	0.1	0.0	0.0	0.0	4.9	0.1	2.5
28	10.8	7.3	8.9	1.5	0.0	0.3	0.0	0.0	0.0	4.4	1.5	2.9
29	9.6	5.6	7.4	2.3	0.0	0.7	0.0	0.0	0.0	4.8	0.5	2.6
30	8.3	5.1	6.7	3.3	0.0	1.1	0.0	0.0	0.0	4.4	0.9	2.7
31	7.8	5.8	6.8	---	---	---	0.0	0.0	0.0	5.5	1.2	3.3
MONTH	16.4	4.1	9.6	7.2	0.0	3.1	5.0	0.0	0.7	5.7	0.0	1.0
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	5.9	1.9	3.9	7.0	0.4	4.1	13.4	6.4	10.1	12.1	6.3	9.4
2	5.6	2.9	4.1	7.3	0.5	3.6	10.2	6.8	8.4	14.3	7.3	10.9
3	4.2	0.3	2.3	7.5	0.4	3.9	8.2	5.4	6.8	14.5	9.1	11.9
4	2.6	0.0	1.0	4.9	2.1	3.5	9.2	2.9	6.1	11.9	7.7	9.1
5	2.0	0.0	0.4	7.4	0.8	3.7	8.1	3.9	6.1	11.6	6.2	8.8
6	0.8	0.0	0.1	8.2	1.9	4.9	11.8	4.5	7.5	14.0	6.5	10.4
7	0.0	0.0	0.0	10.2	3.4	6.7	13.8	4.6	8.3	12.6	8.6	10.9
8	0.0	0.0	0.0	11.0	3.3	7.1	14.0	3.7	8.7	12.6	8.6	10.7
9	0.0	0.0	0.0	9.8	3.0	6.5	15.8	5.2	10.3	11.1	7.7	8.9
10	0.0	0.0	0.0	9.1	3.4	6.2	15.9	6.6	11.3	10.9	5.3	7.8
11	0.6	0.0	0.1	12.3	4.6	8.0	15.6	7.3	11.6	13.9	5.6	10.0
12	2.3	0.0	0.7	13.0	5.7	9.1	12.7	7.3	10.1	16.7	8.0	12.4
13	4.2	0.7	2.4	12.3	4.4	8.6	14.5	5.9	10.2	15.0	10.2	13.0
14	4.4	1.7	2.9	9.8	4.6	7.7	12.3	7.9	10.5	15.8	9.6	13.0
15	4.7	1.8	3.1	9.7	4.7	7.7	11.1	7.8	9.4	14.1	11.4	12.4
16	4.3	1.2	2.9	9.0	6.7	7.8	13.6	5.6	9.5	16.8	9.5	13.0
17	5.9	1.3	3.6	9.2	6.0	7.2	11.2	6.7	8.9	15.6	10.6	12.8
18	6.6	2.8	4.5	6.5	4.2	5.5	11.6	7.3	9.0	13.0	10.9	11.9
19	7.0	0.0	3.9	8.4	3.7	5.9	13.2	6.0	9.0	14.6	8.6	11.6
20	6.7	0.1	3.4	8.6	3.8	6.4	15.5	5.2	10.1	15.0	8.8	12.1
21	7.2	1.7	4.3	11.8	5.1	7.9	12.7	7.8	10.3	15.2	8.2	12.1
22	5.0	1.9	3.5	13.1	4.0	8.3	12.2	8.6	10.4	16.6	8.8	13.0
23	6.6	0.2	3.0	13.7	5.5	9.6	10.9	7.3	8.7	16.8	8.7	12.7
24	5.0	0.5	2.8	10.7	7.5	9.0	16.3	6.7	11.0	17.4	10.4	14.4
25	4.7	2.3	3.6	12.8	4.5	8.5	17.1	8.2	12.8	16.8	10.9	14.2
26	5.4	2.9	4.1	9.3	5.0	7.4	16.3	9.1	12.8	18.4	10.7	14.4
27	6.7	3.0	4.8	8.4	4.8	6.7	14.2	8.0	11.6	19.5	11.6	15.9
28	7.9	1.6	4.4	9.9	2.1	5.6	12.9	8.6	10.9	19.4	11.3	15.8
29	---	---	---	10.3	1.1	5.5	10.9	8.6	9.7	19.9	12.2	16.5
30	---	---	---	12.9	2.4	7.5	11.7	7.4	9.6	19.7	14.3	17.2
31	---	---	---	14.0	4.8	8.4	---	---	---	20.3	13.8	16.9
MONTH	7.9	0.0	2.5	14.0	0.4	6.7	17.1	2.9	9.7	20.3	5.3	12.4



**09106150 COLORADO RIVER BELOW GRAND VALLEY DIVERSION NEAR PALISADE, CO**

LOCATION.--Lat 39°05'55", long 108°21'16", in NW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.3, T.1 S., R.98 W., Mesa County, Hydrologic Unit 14010005, on right bank 0.25 mi downstream of intake structure for Grand Valley Diversion Canal, and 0.25 mi south of Palisade.

DRAINAGE AREA.--8,753 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1990 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09106150](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09106150)

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 4,670 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversion for irrigation of about 230,000 acres. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	513	1,400	1,380	1,140	1,160	1,240	1,110	1,470	18,100	2,400	456	750
2	461	1,280	1,440	1,130	1,170	1,170	1,070	1,220	20,300	2,180	437	747
3	871	1,250	1,480	1,120	1,220	1,170	1,030	1,040	e16,500	2,080	478	622
4	699	1,230	1,470	1,150	1,190	1,150	1,110	1,260	e13,600	2,070	495	579
5	601	1,340	1,360	1,250	1,120	1,190	1,130	1,520	e11,900	1,880	535	619
6	516	1,580	1,390	1,250	1,090	1,200	1,050	1,350	e10,100	1,650	582	784
7	484	1,590	1,380	1,230	1,020	1,320	775	1,090	8,170	1,490	516	933
8	440	1,870	1,310	1,130	931	1,250	587	910	7,230	1,330	506	1,120
9	436	2,980	1,260	1,100	931	1,250	418	1,280	6,590	1,180	509	1,420
10	415	2,540	1,120	1,130	912	1,250	364	1,240	6,760	1,120	507	e1,760
11	425	2,280	1,160	1,200	1,040	1,280	362	1,220	6,880	1,030	481	e1,910
12	370	2,060	1,160	1,230	1,130	1,340	403	1,280	6,740	866	405	1,730
13	394	1,800	1,130	1,200	1,190	1,440	493	1,090	6,670	806	353	1,410
14	359	1,730	1,250	1,160	1,390	1,410	555	1,130	6,530	837	342	1,180
15	325	1,750	1,210	1,170	1,490	1,580	688	1,590	6,090	747	408	1,150
16	303	1,760	1,160	1,150	1,330	1,600	863	3,290	6,320	657	584	1,080
17	290	1,670	1,180	1,080	1,250	1,510	721	5,120	6,110	710	467	987
18	323	1,650	1,240	1,100	1,220	1,410	547	6,830	5,450	734	586	945
19	337	1,610	1,280	1,090	1,160	1,410	452	e7,990	5,250	751	857	1,050
20	331	1,430	1,180	1,040	1,140	1,330	363	e7,930	5,170	718	1,130	1,170
21	360	1,440	1,100	1,080	1,110	1,320	254	e7,820	5,230	698	852	1,180
22	418	1,450	1,170	1,120	1,120	1,250	209	e8,050	4,770	625	650	1,160
23	434	1,460	1,110	1,130	1,150	1,300	228	e9,080	4,480	704	662	1,110
24	e525	1,420	1,050	1,170	1,120	1,420	474	9,680	4,230	529	678	1,060
25	e722	1,450	1,070	1,160	1,120	1,550	526	10,400	3,740	404	784	1,020
26	786	1,450	1,080	1,150	1,210	1,540	487	11,400	3,210	359	821	991
27	735	1,380	1,040	1,140	1,210	1,400	714	12,100	2,910	617	759	1,080
28	739	1,160	1,020	1,130	1,240	1,400	1,200	13,800	2,880	1,070	828	1,060
29	874	1,160	1,100	1,140	---	1,320	1,500	15,700	2,780	981	817	1,010
30	816	1,360	1,250	1,120	---	1,240	1,610	17,100	2,620	766	751	1,020
31	1,010	---	1,210	1,120	---	1,180	---	18,100	---	620	711	---
TOTAL	16,312	48,530	37,740	35,510	32,364	41,420	21,293	183,080	217,310	32,609	18,947	32,637
MEAN	526	1,618	1,217	1,145	1,156	1,336	710	5,906	7,244	1,052	611	1,088
MAX	1,010	2,980	1,480	1,250	1,490	1,600	1,610	18,100	20,300	2,400	1,130	1,910
MIN	290	1,160	1,020	1,040	912	1,150	209	910	2,620	359	342	579
AC-FT	32,350	96,260	74,860	70,430	64,190	82,160	42,230	363,100	431,000	64,680	37,580	64,740

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)

MEAN	1,171	1,885	1,691	1,671	1,706	1,945	1,957	7,162	9,401	3,720	1,470	1,153
MAX	2,560	2,484	2,370	2,375	2,416	2,913	4,837	14,160	20,860	16,010	3,897	2,461
(WY)	(1998)	(1998)	(1998)	(1998)	(1996)	(1998)	(1996)	(1993)	(1997)	(1995)	(1995)	(1997)
MIN	526	1,220	1,209	1,145	1,156	1,302	710	1,016	935	161	115	241
(WY)	(2003)	(1995)	(1991)	(2003)	(2003)	(1991)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1991 - 2003	
ANNUAL TOTAL	331,092		717,752			
ANNUAL MEAN	907		1,966		2,913	
HIGHEST ANNUAL MEAN					5,114 1997	
LOWEST ANNUAL MEAN					938 2002	
HIGHEST DAILY MEAN	2,980	Nov 9	20,300	Jun 2	29,600	Jun 17, 1995
LOWEST DAILY MEAN	58	Aug 19	209	Apr 22	58	Aug 19, 2002
ANNUAL SEVEN-DAY MINIMUM	61	Aug 30	324	Oct 14	61	Aug 30, 2002
MAXIMUM PEAK FLOW			21,500	Jun 2	30,600	Jun 17, 1995
MAXIMUM PEAK STAGE			10.18	Jun 2	12.41	Jun 17, 1995
ANNUAL RUNOFF (AC-FT)	656,700		1,424,000		2,110,000	
10 PERCENT EXCEEDS	1,550		4,910		6,740	
50 PERCENT EXCEEDS	1,100		1,150		1,670	
90 PERCENT EXCEEDS	91		476		718	

e Estimated.



## 09106200 LEWIS WASH NEAR GRAND JUNCTION, CO

LOCATION (REVISED).--Lat 39°03'38", long 108°28'38", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.21, T.1 S., R.1 E, Ute Meridian, Mesa County, Hydrologic Unit 14020005, on right bank 70 ft downstream of the 31 Road bridge, 650 ft upstream from mouth, and 4.5 mi east of Grand Junction.

DRAINAGE AREA.--4.72 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1973 to September 1979, April 2002 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09106200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09106200)

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 4,610 ft above NGVD of 1929, from topographic map. Prior to April 22, 2002 at site 70 ft upstream at different datum.

REMARKS.--Records poor except for the period Nov. 7, 2002 to Mar. 11, 2003, which is good. Flow is mostly return flow and waste water from lands irrigated under the Government Highline Canal and Price and Stub ditches. At times overflow from water delivered by the Grand Valley Canal to Mesa County ditch flows past station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	4.5	e5.1	e10	e2.0	e4.3
2	---	---	---	---	---	---	---	5.3	e9.2	e9.8	e2.0	e4.8
3	---	---	---	---	---	---	---	5.4	e10	e8.6	e2.4	e4.1
4	---	---	---	---	---	---	---	5.5	e10	e7.0	e4.1	e4.7
5	---	---	---	---	---	---	---	5.0	e10	e11	e5.9	e5.2
6	---	---	---	---	---	---	---	5.5	e9.8	e11	e18	e6.7
7	---	---	---	---	---	---	---	5.0	e10	e10	e4.1	e6.4
8	---	---	---	---	---	---	---	5.8	e5.5	e9.2	e5.8	e8.7
9	---	---	---	---	---	---	---	e9.4	e4.8	e8.7	e6.2	e9.9
10	---	---	---	---	---	---	---	e11	e4.6	e8.6	e6.8	e11
11	---	---	---	---	---	---	---	e5.2	e5.2	e7.8	e6.6	e11
12	---	---	---	---	---	---	---	e5.5	e6.6	e6.8	e6.7	e11
13	---	---	---	---	---	---	---	e4.7	e7.6	e5.2	e5.4	e10
14	---	---	---	---	---	---	---	e4.7	e7.9	e1.6	e4.1	e9.0
15	---	---	---	---	---	---	---	e3.8	e8.0	e1.2	e3.8	e8.2
16	---	---	---	---	---	---	---	e2.8	e7.0	e1.2	e3.8	e10
17	---	---	---	---	---	---	---	e2.6	e6.4	e1.1	e3.6	e13
18	---	---	---	---	---	---	---	e3.7	e6.4	e1.2	e3.2	e14
19	---	---	---	---	---	---	---	e5.3	e3.6	e1.9	e4.0	e15
20	---	---	---	---	---	---	---	e8.8	e5.0	e1.5	e16	e15
21	---	---	---	---	---	---	---	e10	e5.7	e1.6	e15	e11
22	---	---	---	---	---	---	---	e10	e3.9	e2.1	e13	e10
23	---	---	---	---	---	---	11	e9.9	e5.3	e2.4	e13	e12
24	---	---	---	---	---	---	8.5	e11	e5.7	e9.5	e12	e13
25	---	---	---	---	---	---	11	e6.7	e5.3	e16	e11	e13
26	---	---	---	---	---	---	16	e5.4	e2.9	e16	e9.3	e12
27	---	---	---	---	---	---	16	e5.4	e2.2	e16	e6.6	9.6
28	---	---	---	---	---	---	10	e4.9	e6.0	e16	e4.7	8.2
29	---	---	---	---	---	---	8.0	e4.9	e9.8	e4.3	e9.8	13
30	---	---	---	---	---	---	5.5	e3.8	e11	e2.5	e8.4	12
31	---	---	---	---	---	---	---	e3.5	---	e2.5	e6.1	---
TOTAL	---	---	---	---	---	---	---	185.0	200.5	212.3	223.4	295.8
MEAN	---	---	---	---	---	---	---	5.97	6.68	6.85	7.21	9.86
MAX	---	---	---	---	---	---	---	11	11	16	18	15
MIN	---	---	---	---	---	---	---	2.6	2.2	1.1	2.0	4.1
AC-FT	---	---	---	---	---	---	---	367	398	421	443	587

e Estimated.

## 09106200 LEWIS WASH NEAR GRAND JUNCTION,CO—Continued

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	e5.0	0.26	0.19	0.16	0.96	0.16	18	e13	2.4	e13	12
2	13	e5.9	0.19	0.15	1.4	0.11	0.47	17	e13	5.2	e15	14
3	15	e6.1	0.19	0.14	0.46	0.09	0.58	12	e11	7.5	e19	e14
4	14	e7.2	0.18	0.16	0.17	0.14	0.49	e21	9.3	9.0	e17	e16
5	14	e8.6	0.20	0.17	0.15	0.09	0.61	e14	10	10	e18	e18
6	14	e8.4	0.21	0.15	0.11	0.07	0.78	e19	9.1	9.5	e18	21
7	14	8.1	0.23	0.14	0.09	0.07	e0.99	e19	8.2	7.8	e13	21
8	14	7.7	0.23	0.16	0.12	0.05	e3.9	e25	8.9	7.6	e13	19
9	13	19	0.20	0.18	0.13	0.04	e5.7	e30	11	6.5	e16	19
10	12	8.3	0.21	0.19	0.10	0.07	e4.0	e23	12	8.5	e16	48
11	11	7.6	0.22	1.2	0.13	0.08	e0.99	e22	10	10	e16	27
12	9.6	3.2	0.21	0.17	0.12	e0.08	e0.48	e20	7.9	8.7	e17	23
13	9.9	0.40	0.19	0.15	0.28	e0.08	e2.3	e15	8.5	9.4	e16	22
14	8.4	0.33	0.19	0.16	0.66	e0.07	e5.3	e15	6.2	10	17	22
15	e11	0.25	0.20	0.17	0.15	e0.06	9.6	e20	2.9	11	17	21
16	e13	0.20	0.23	0.13	0.13	e0.06	9.6	e14	0.83	9.5	17	22
17	e13	0.22	0.27	0.15	0.14	e0.05	12	e13	3.7	9.5	16	21
18	e9.2	0.19	0.21	0.14	0.15	e0.06	18	e13	3.6	7.4	14	21
19	e9.3	0.19	0.16	0.13	0.10	e0.06	20	e13	8.6	8.5	10	21
20	e9.3	0.18	0.18	0.15	0.10	e0.05	19	e13	15	11	9.9	20
21	e5.0	0.20	0.20	0.16	0.10	e0.05	20	e13	14	9.2	12	19
22	e2.2	0.23	0.19	0.13	0.15	e0.05	17	e12	13	7.7	12	18
23	e3.3	0.24	0.19	0.12	0.15	e0.05	13	e11	11	12	14	18
24	e3.8	0.23	0.18	0.15	0.15	e0.05	12	e11	9.0	16	13	e19
25	e4.3	0.21	0.17	0.14	0.71	e0.05	9.9	e10	7.0	e16	13	e19
26	e4.7	0.18	0.15	0.10	0.16	e0.05	9.6	e10	6.8	e14	12	e19
27	e4.9	0.19	0.14	0.13	0.22	e0.04	11	e10	7.2	e12	11	e20
28	e5.2	0.18	0.16	0.15	1.6	e0.03	12	e10	5.1	e12	13	e21
29	e5.4	0.20	0.21	0.12	---	0.02	14	e8.0	2.7	e12	13	21
30	e5.1	0.19	0.18	0.12	---	0.03	18	e6.6	2.7	e12	14	21
31	e5.0	---	0.18	0.12	---	0.06	---	e12	---	e13	13	---
TOTAL	286.6	99.11	6.11	5.62	8.09	2.82	251.45	469.6	251.23	304.9	447.9	617
MEAN	9.25	3.30	0.20	0.18	0.29	0.091	8.38	15.1	8.37	9.84	14.4	20.6
MAX	15	19	0.27	1.2	1.6	0.96	20	30	15	16	19	48
MIN	2.2	0.18	0.14	0.10	0.09	0.02	0.16	6.6	0.83	2.4	9.9	12
AC-FT	568	197	12	11	16	5.6	499	931	498	605	888	1,220

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2003, BY WATER YEAR (WY)

	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003			
MEAN	16.6	1.76	0.96	0.49	0.49	0.87	8.10	14.6	12.9	12.2	12.5	14.4	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6		
MAX	22.7	3.30	2.34	0.67	0.68	2.95	14.6	25.1	17.6	16.5	16.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6		
(WY)	(1974)	(2003)	(1978)	(1976)	(1979)	(1977)	(1976)	(1976)	(1976)	(1974)	(1973)	(2003)	(1974)	(1973)	(2003)	(1974)	(1973)	(2003)	(1974)	(1973)	(2003)	(1974)	(1973)	(2003)	(1974)	(1973)	(2003)	(1974)	(1973)	(2003)	(1974)	(1973)	(2003)	
MIN	9.25	1.02	0.20	0.18	0.29	0.091	2.05	5.97	6.68	5.64	4.26	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	6.83	
(WY)	(2003)	(1977)	(2003)	(2003)	(2003)	(2003)	(1979)	(2002)	(2002)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)

## SUMMARY STATISTICS

	FOR 2003 WATER YEAR	WATER YEARS 1973 - 2003
ANNUAL TOTAL	2,750.43	
ANNUAL MEAN	7.54	8.17
HIGHEST ANNUAL MEAN		10.6 1976
LOWEST ANNUAL MEAN		6.24 1977
HIGHEST DAILY MEAN	48 Sep 10	58 Sep 8, 1978
LOWEST DAILY MEAN	0.02 Mar 29	0.02 Mar 29, 2003
ANNUAL SEVEN-DAY MINIMUM	0.04 Mar 24	0.04 Mar 24, 2003
MAXIMUM PEAK FLOW	190 Sep 10	190 Sep 10, 2003
MAXIMUM PEAK STAGE	5.40 Sep 10	5.40 Sep 10, 2003
ANNUAL RUNOFF (AC-FT)	5,460	5,920
10 PERCENT EXCEEDS	19	19
50 PERCENT EXCEEDS	7.2	7.4
90 PERCENT EXCEEDS	0.12	0.36

e Estimated.

## 09106200 LEWIS WASH NEAR GRAND JUNCTION, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1973 to July 1977, March 1991 to September 1993, November 1997 to December 1998, April 2002 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09106200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09106200)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
APR 23...	1405	12	--	8.5	864	13.7	220	61.7	16.3	3.33	3	90.7	135
MAY 28...	1240	3.7	--	8.4	985	18.4	250	67.7	20.8	2.89	3	93.8	141
JUN 27...	1025	2.1	--	8.2	1,180	22.4	290	75.2	25.9	3.73	3	129	125
JUL 26...	1215	16	6.3	8.2	1,120	23.7	260	75.6	17.3	4.81	3	125	141
SEP 26...	1455	12	7.8	8.2	1,410	17.5	330	93.2	23.2	4.89	4	157	E166

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Selenium, water, fltrd, ug/L (01145)
APR 23...	120	0.24	7.1	117	496	0.68	16.5	0.8
MAY 28...	126	0.26	5.3	161	563	0.77	5.58	2.0
JUN 27...	165	0.3	4.4	216	694	0.94	3.95	3.3
JUL 26...	173	0.4	9.6	142	632	0.86	28.0	0.7
SEP 26...	222	0.3	7.1	198	--	--	--	1.0

E -- Estimated laboratory analysis value.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
OCT 17...	1350	13	9.1	8.6	1,300	11.9	300	84.8	22.7	4.30	4	149	E175
NOV 14...	1350	0.38	9.2	7.8	3,610	8.4	1,700	381	182	7.20	3	261	256
DEC 12...	1115	0.19	11.0	8.0	4,270	2.7	2,200	472	250	7.81	3	293	E256
JAN 16...	0950	0.08	10.6	8.0	4,420	0.7	2,500	511	287	8.44	3	343	302
FEB 19...	0915	0.08	9.6	8.0	4,470	3.3	2,300	448	291	8.25	3	345	E294
MAR 12...	0920	0.09	9.1	7.8	4,600	7.8	2,400	456	296	7.70	3	377	250
APR 22...	1145	18	8.2	8.4	981	13.1	230	65.5	17.3	4.22	3	114	142
JUN 05...	1027	11	8.1	8.1	334	14.5	120	34.2	8.29	1.37	0.8	19.0	80
JUN 24...	1007	9.4	7.8	8.2	542	16.5	170	48.0	11.9	1.89	1	44.5	103
JUL 16...	0940	7.5	--	8.2	871	22.0	220	63.5	15.9	3.51	3	88.8	134
SEP 03...	1040	15	7.3	8.0	976	20.1	230	66.2	16.8	3.68	3	93.8	136

09106200 LEWIS WASH NEAR GRAND JUNCTION,CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Selen- ium, water, fltrd, ug/L (01145)
OCT 17...	202	0.3	7.7	181	--	--	--	1.2
NOV 14...	210	0.4	13.4	1,720	2,930	3.99	3.01	26.7
DEC 12...	215	0.42	12.8	2,280	--	--	--	25.0
JAN 16...	228	0.44	7.8	2,340	3,910	5.32	0.84	30.8
FEB 19...	219	0.41	4.7	2,370	--	--	--	34.0
MAR 12...	240	0.46	3.8	2,440	3,970	5.40	0.96	26.8
APR 22...	150	0.25	6.7	120	563	0.77	27.8	1.2
JUN 05...	22.4	<0.2	7.4	46.8	188	0.26	5.47	0.6
JUN 24...	55.9	0.2	7.1	77.0	309	0.42	7.85	0.7
JUL 16...	118	0.3	7.8	116	494	0.67	9.98	0.8
SEP 03...	139	0.3	8.4	129	539	0.73	21.5	1.0

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## 09107000 TAYLOR RIVER AT TAYLOR PARK, CO

LOCATION.--Lat 38°51'37", long 106°33'58", in NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec.5, T.14 S., R.82 W., Gunnison County, Hydrologic Unit 14020001, on left bank 0.2 mi upstream from Taylor Park Reservoir waterline, 2.7 mi north of Taylor Park, and 21 mi northeast of Almont.

DRAINAGE AREA.--128 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1929 to September 1934, October 1987 to current year. Records for 1929-1934 provided by Colorado Division of Water Resources, published in WSP 1313. Statistical summary computed for 1988 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09107000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09107000)

REVISED RECORDS.--WSP 1313: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry, and crest-stage gage. Elevation of gage is 9,340 ft above NGVD of 1929, from topographic map. June 1929 to Sept. 1934 water-stage recorder at different datum at site flooded by waters of Taylor Park Reservoir since 1937.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	e49	e44	e29	e29	e22	e40	87	722	133	75	51
2	62	e47	e40	e31	e29	e21	e39	83	577	128	65	47
3	66	e41	e42	e28	e27	e22	e34	86	521	122	64	51
4	59	e43	e40	e28	e25	e23	e32	87	476	118	62	51
5	58	e42	e42	e29	e25	e22	e31	86	421	113	57	46
6	55	e41	e40	e28	e24	e22	e31	78	363	107	53	49
7	53	e42	e40	e28	e23	e23	e30	77	328	102	53	72
8	52	e43	e40	e30	e24	e25	e30	77	311	98	55	67
9	51	e50	e37	e29	e22	e28	e35	74	328	92	52	80
10	50	e47	e35	e28	e23	e32	42	73	338	89	51	117
11	49	e44	e35	e30	e24	e35	51	69	329	87	51	92
12	48	e38	e35	e28	e23	e35	57	83	314	84	51	77
13	46	e34	e36	e27	e25	e33	63	104	332	80	51	88
14	46	e41	e36	e28	e29	e34	74	114	284	78	49	75
15	47	e40	e37	e28	e28	e30	71	161	280	79	44	68
16	46	e36	e35	e27	e26	e29	62	172	270	87	49	64
17	45	e41	e38	e25	e26	e29	67	223	243	82	60	61
18	45	e41	e39	e25	e28	e26	65	241	237	80	60	57
19	45	e41	e37	e25	e27	e25	61	232	238	77	58	56
20	44	e44	e33	e24	e26	e24	62	230	228	76	47	54
21	44	e48	e37	e23	e26	e28	69	260	210	78	44	52
22	45	e50	e35	e23	e25	e26	73	303	192	73	51	51
23	51	e51	e34	e24	e23	e31	63	374	183	70	58	50
24	52	e50	e34	e25	e26	e35	59	461	172	74	57	49
25	49	e46	e33	e25	e25	e34	74	519	164	70	64	48
26	48	e42	e34	e24	e22	e33	98	493	158	68	66	47
27	53	e39	e30	e24	e23	e31	105	625	153	71	58	46
28	50	e41	e31	e25	e24	e27	105	741	149	77	74	46
29	51	e42	e32	e25	---	e26	101	699	143	81	62	46
30	e50	e42	e32	e25	---	e29	100	743	138	68	62	44
31	e51	---	e28	e27	---	e34	---	639	---	67	58	---
TOTAL	1,573	1,296	1,121	825	707	874	1,824	8,294	8,802	2,709	1,761	1,802
MEAN	50.7	43.2	36.2	26.6	25.2	28.2	60.8	268	293	87.4	56.8	60.1
MAX	66	51	44	31	29	35	105	743	722	133	75	117
MIN	44	34	28	23	22	21	30	69	138	67	44	44
AC-FT	3,120	2,570	2,220	1,640	1,400	1,730	3,620	16,450	17,460	5,370	3,490	3,570

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

MEAN	58.3	47.6	39.9	34.4	33.2	38.2	76.2	261	379	174	86.3	64.8
MAX	91.3	71.6	53.8	41.9	38.2	50.5	119	447	767	719	236	122
(WY)	(1996)	(1996)	(1996)	(1997)	(1995)	(1997)	(1996)	(1996)	(1995)	(1995)	(1995)	(1995)
MIN	39.6	34.5	30.0	26.6	25.2	28.2	39.4	148	94.9	38.0	28.5	32.6
(WY)	(1989)	(1989)	(1989)	(2003)	(2003)	(2003)	(1995)	(2002)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1988 - 2003
ANNUAL TOTAL	20,207	31,588	
ANNUAL MEAN	55.4	86.5	108
HIGHEST ANNUAL MEAN			197
LOWEST ANNUAL MEAN			56.3
HIGHEST DAILY MEAN	196	May 21	743
LOWEST DAILY MEAN	19	Sep 6	e21
ANNUAL SEVEN-DAY MINIMUM	20	Sep 1	22
MAXIMUM PEAK FLOW			946
MAXIMUM PEAK STAGE			3.33
ANNUAL RUNOFF (AC-FT)	40,080	62,650	78,150
10 PERCENT EXCEEDS	120	199	260
50 PERCENT EXCEEDS	40	49	53
90 PERCENT EXCEEDS	27	25	33

e Estimated.

**09108500 TAYLOR PARK RESERVOIR AT TAYLOR PARK, CO**

LOCATION.--Lat 38°49'07", long 106°36'24", Gunnison County, Hydrologic Unit 14020001, at dam on Taylor River just downstream from Taylor Park, and 16 mi northeast of Almont.

DRAINAGE AREA.--254 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1938, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09108500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09108500)

REVISED RECORDS.--WSP 1089: 1940(M), 1942(M), 1945-46. WSP 1924: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry, and nonrecording gage (read once daily). Datum of gage is 9,187 ft above NGVD of 1929, (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by an earth and rockfill dam. Dam completed by U. S. Bureau of Reclamation in September 1937. Capacity of reservoir, 106,200 acre-ft between elevations 9,187 ft, bottom of outlet gates, and 9,330 ft, crest of spillway. No dead storage. Water used for irrigation in Uncompahgre Valley. Figures given are usable contents.

COOPERATION.--Records provided by Uncompahgre Valley Water Users Association.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 111,000 acre-ft, July 1, 1957, elevation, 9,332.35 ft; minimum after first filling, 8,780 acre-ft, Oct. 19-20, 1956, elevation, 9,240.70 ft.

EXTREMES (at 1800) FOR CURRENT YEAR.--Maximum contents, 81,100 acre-ft, June 27-30, elevation, 9,316.70 ft; minimum contents, 39,100 acre-ft, Apr. 9, 11, 12, elevation, 9,286.48 ft.

MONTHEND ELEVATION AND CONTENTS, AT 1800, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30 . . . . .	9,289.63	42,400	-
Oct. 31 . . . . .	9,289.23	42,000	-400
Nov. 30 . . . . .	9,289.12	41,800	-200
Dec. 31 . . . . .	9,288.42	41,100	-700
CAL YR 2002. . . . .	-	-	-23,700
Jan. 31 . . . . .	9,287.57	40,200	-900
Feb. 28 . . . . .	9,287.04	39,600	-600
Mar. 31 . . . . .	9,286.61	39,200	-400
Apr. 30 . . . . .	9,289.66	42,400	+3,200
May 31 . . . . .	9,305.60	63,100	+20,700
June 30 . . . . .	9,316.70	81,100	+18,000
July 31 . . . . .	9,313.09	74,900	-6,200
Aug. 31 . . . . .	9,308.70	67,800	-7,100
Sept. 30 . . . . .	9,309.00	68,300	+500
WTR YR 2003. . . . .	-	-	+25,900

## 09109000 TAYLOR RIVER BELOW TAYLOR PARK RESERVOIR, CO

LOCATION.--Lat 38°49'06", long 106°36'31", Gunnison County, Hydrologic Unit 14020001, on bridge 1,000 ft downstream from Taylor Park Reservoir Dam, 3.4 mi upstream from Lottis Creek, and 17 mi northeast of Almont.

DRAINAGE AREA.--254 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1929 to September 1934 (monthly discharges only, published in WSP 1313), October 1938 to current year. Statistical summary computed for 1939 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09109000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09109000)

REVISED RECORDS.--WSP 1924: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 9,169.67 ft above NGVD of 1929, (levels by U.S. Bureau of Reclamation). Prior to Nov. 11, 1952, at site 1,600 ft downstream, at datum 1.00 ft lower. Oct. 15, 1946 to May 4, 1952, supplementary nonrecording gage just downstream from reservoir outlet at different sites and datums used during winter months.

REMARKS.--Records good, except for estimated daily discharges, which are fair. Flow regulated by Taylor Park Reservoir (station 09108500) since 1937. One small diversion for irrigation from Willow Creek upstream from reservoir. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e104	57	55	56	59	60	63	87	139	252	249	193
2	104	57	55	56	59	61	64	128	154	253	249	193
3	104	e57	55	56	59	61	64	144	176	253	249	193
4	104	e57	55	56	59	62	63	144	176	253	249	193
5	104	e57	55	56	59	62	62	143	177	253	249	186
6	104	e57	55	56	59	62	62	143	177	254	249	157
7	90	e57	55	56	59	61	62	143	177	251	248	142
8	79	e56	55	56	59	61	62	143	177	250	248	114
9	78	e56	55	57	59	61	62	143	177	251	248	109
10	77	e56	55	57	60	62	70	143	177	250	248	104
11	76	e56	55	57	60	63	131	145	194	250	248	100
12	76	e56	56	57	60	63	139	133	225	251	248	100
13	79	e56	57	57	60	64	91	125	237	250	248	100
14	77	56	56	57	60	64	64	126	237	250	247	100
15	65	56	e56	58	60	64	61	126	238	250	221	100
16	57	56	e57	e58	60	63	61	126	237	250	199	100
17	57	56	58	e59	60	63	61	127	238	250	199	100
18	57	57	57	e59	60	62	61	128	238	250	198	100
19	57	56	57	e59	60	62	61	128	238	251	198	100
20	57	56	56	e59	60	63	61	129	240	250	198	100
21	56	56	56	59	60	63	61	129	240	250	198	100
22	56	55	56	59	60	63	61	129	240	249	198	100
23	56	55	56	59	60	63	61	129	240	249	197	100
24	e56	57	56	59	60	64	61	130	241	249	195	100
25	56	56	56	59	60	64	61	131	240	249	195	100
26	57	55	56	59	60	64	61	132	240	249	194	100
27	57	55	56	59	60	63	61	134	247	249	195	100
28	57	55	56	59	60	62	61	135	252	249	194	100
29	57	55	56	59	---	62	61	135	253	249	194	100
30	57	55	56	59	---	63	61	136	253	249	194	100
31	57	---	56	59	---	62	---	138	---	249	194	---
TOTAL	2,228	1,682	1,731	1,791	1,671	1,937	2,035	4,112	6,475	7,762	6,838	3,584
MEAN	71.9	56.1	55.8	57.8	59.7	62.5	67.8	133	216	250	221	119
MAX	104	57	58	59	60	64	139	145	253	254	249	193
MIN	56	55	55	56	59	60	61	87	139	249	194	100
AC-FT	4,420	3,340	3,430	3,550	3,310	3,840	4,040	8,160	12,840	15,400	13,560	7,110

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

MEAN	188	94.8	74.8	64.5	63.0	86.2	147	181	329	394	354	385
MAX	586	438	353	195	196	320	655	550	931	1,249	646	809
(WY)	(1969)	(1968)	(1966)	(1966)	(1971)	(1986)	(1970)	(1962)	(1948)	(1957)	(1950)	(1956)
MIN	11.4	10.0	6.00	4.02	4.00	4.19	9.44	0.000	0.000	147	166	99.5
(WY)	(1962)	(1941)	(1964)	(1964)	(1964)	(1964)	(1964)	(1940)	(1940)	(1964)	(2002)	(1961)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1939 - 2003

ANNUAL TOTAL	42,478	41,846		
ANNUAL MEAN	116	115	197	
HIGHEST ANNUAL MEAN			341	1995
LOWEST ANNUAL MEAN			94.8	1941
HIGHEST DAILY MEAN	284	Jul 2	254	Jul 6
LOWEST DAILY MEAN	55	Nov 22	55	Nov 22
ANNUAL SEVEN-DAY MINIMUM	55	Nov 26	55	Nov 26
MAXIMUM PEAK FLOW			260	Jun 27
MAXIMUM PEAK STAGE			4.12	Jun 27
ANNUAL RUNOFF (AC-FT)	84,260	83,000	143,000	
10 PERCENT EXCEEDS	240	249	471	
50 PERCENT EXCEEDS	78	63	107	
90 PERCENT EXCEEDS	56	56	19	

e Estimated.

a Also occurred May 2 to Jul 3, 1940, May 7-22, 1942, May 5-21, 1943.

**09110000 TAYLOR RIVER AT ALMONT, CO**

LOCATION.--Lat 38°39'52", long 106°50'41", in NW¼SE¼ sec.22, T.51 N., R.1 E., Gunnison County, Hydrologic Unit 14020001, on left bank at Almont, 15 ft downstream from bridge on State Highway 306, and 800 ft upstream from confluence with East River.

DRAINAGE AREA.--477 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1910 to current year. Monthly discharge only for some periods, published in WSP 1313. Water-quality data available, October 1993 to September 2000. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09110000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09110000)

REVISED RECORDS.--WSP 1213: 1911. WSP 1924: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Datum of gage is 8,010.76 ft above NGVD of 1929. Prior to Apr. 16, 1922, nonrecording gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow partly regulated since September 1937 by Taylor Park Reservoir (station 09108500), 24 mi upstream from station. Diversions for irrigation of about 360 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and published are in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	99	e94	e88	e85	e83	97	176	704	368	324	242
2	139	99	e93	e87	e86	e84	100	203	638	366	320	241
3	141	e95	e91	e87	e85	e86	98	234	619	359	317	244
4	137	e94	e91	e88	e84	e88	97	245	580	365	315	246
5	137	e92	e91	e87	e83	e90	97	249	547	358	310	241
6	136	e90	e91	e88	e81	e95	98	241	498	357	308	219
7	130	e91	e90	e87	e82	e101	95	240	466	354	305	221
8	111	e96	e89	e87	e82	e100	98	240	439	345	306	196
9	113	e103	e89	e87	e85	e98	101	232	443	344	305	180
10	119	e95	e89	e87	e86	e101	105	234	448	342	295	227
11	118	e94	e89	e87	e86	83	150	229	440	340	290	201
12	118	e95	e89	e87	e86	84	198	231	465	338	296	180
13	116	e97	e89	e86	e86	86	156	230	476	351	298	179
14	115	e95	e90	e85	e84	86	121	229	472	350	291	169
15	111	e94	e90	e85	e84	87	120	259	456	346	276	157
16	98	e90	e90	e85	e84	88	112	283	456	345	245	148
17	98	e94	e91	e84	e85	88	114	313	445	345	245	144
18	97	e95	e90	e84	e84	88	115	342	437	343	249	143
19	97	e97	e91	e84	e83	86	110	378	426	342	253	140
20	96	e97	e92	e84	e85	87	107	363	444	339	244	132
21	96	e98	e91	e84	e83	90	112	374	418	343	242	133
22	96	e99	e92	e85	e82	89	123	413	403	340	242	135
23	99	e99	e90	e85	e83	91	124	465	392	339	244	136
24	101	e98	e91	e83	e82	92	115	519	386	337	248	139
25	101	e96	e91	e84	e83	92	116	553	378	329	250	139
26	99	e96	e92	e87	e82	92	137	535	370	327	248	135
27	100	e96	e87	e89	e83	94	166	565	371	327	251	134
28	100	e95	e90	e90	e82	e107	173	640	373	333	257	135
29	100	e96	e87	e85	---	e109	175	699	369	332	257	135
30	98	e95	e87	e85	---	e102	178	732	368	323	254	134
31	100	---	e87	e85	---	92.0	---	701	---	319	247	---
TOTAL	3,457	2,870	2,794	2,666	2,346	2,839.0	3,708	11,347	13,727	10,646	8,532	5,205
MEAN	112	95.7	90.1	86.0	83.8	91.6	124	366	458	343	275	174
MAX	141	103	94	90	86	109	198	732	704	368	324	246
MIN	96	90	87	83	81	83	95	176	368	319	242	132
AC-FT	6,860	5,690	5,540	5,290	4,650	5,630	7,350	22,510	27,230	21,120	16,920	10,320

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 2003, BY WATER YEAR (WY)

MEAN	243	155	122	111	110	133	245	595	909	567	411	387
MAX	699	518	424	240	288	456	784	1,485	2,419	1,975	707	855
(WY)	(1969)	(1968)	(1966)	(1966)	(1971)	(1985)	(1970)	(1936)	(1914)	(1957)	(1960)	(1956)
MIN	60.3	53.3	39.8	40.8	35.2	34.6	55.8	129	109	168	83.2	91.6
(WY)	(1938)	(1938)	(1963)	(1941)	(1941)	(1938)	(1941)	(1940)	(1940)	(1931)	(1913)	(1937)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1910 - 2003

ANNUAL TOTAL	59,572	70,137.0	
ANNUAL MEAN	163	192	333
HIGHEST ANNUAL MEAN			550 1995
LOWEST ANNUAL MEAN			155 1977
HIGHEST DAILY MEAN	307	Jun 26	732 May 30
LOWEST DAILY MEAN	e87	Dec 27	e81 Feb 6
ANNUAL SEVEN-DAY MINIMUM	e89	Dec 25	e82 Feb 22
MAXIMUM PEAK FLOW			787 May 31
MAXIMUM PEAK STAGE		2.98	May 31
ANNUAL RUNOFF (AC-FT)	118,200	139,100	241,500
10 PERCENT EXCEEDS	275	376	729
50 PERCENT EXCEEDS	139	112	195
90 PERCENT EXCEEDS	94	85	85

e Estimated.

a Minimum discharge observed for period of record, before storage began in Taylor Park Reservoir, 50 ft<sup>3</sup>/s for several days in Aug 1913, gage height, 1.2 ft.

b From rating curve extended above 2,300 ft<sup>3</sup>/s.

c Maximum gage height, 5.32 ft, Jul 1, 1957.



## 385408106543600 EAST RIVER ABOVE CRESTED BUTTE, CO.

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°52'51", long 106°54'30", Gunnison County, Hydrologic Unit 14020001, approximately 200 ft upstream from confluence with Brush Creek, and 4.2 mi northeast of Crested Butte.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD--August 1995 to August 2003 (discontinued). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=385408106543600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=385408106543600)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 22...	1130	14	9.3	8.2	301	3.5	<0.10	<0.015	<0.022	<0.002	<0.007	0.004	E2
DEC 03...	0940	9.6	9.5	7.8	333	0.5	E.06	<0.015	0.055	<0.002	<0.007	0.006	E3
FEB 11...	1030	7.2	10.1	8.0	334	0.3	<0.10	<0.015	0.058	<0.002	<0.007	E.002	E2
APR 16...	0930	43	10.4	8.1	311	0.9	0.22	<0.015	0.198	<0.002	<0.007	0.025	<1
JUN 17...	1800	158	8.0	8.0	197	11.0	0.10	<0.015	0.097	<0.002	<0.007	0.034	60
AUG 26...	1300	25	7.6	8.3	282	15.3	0.10	<0.015	0.032	<0.002	<0.007	0.004	E43

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Periphyton biomass ash weight, g/m2 (00572)	Periphyton biomass dry weight, g/m2 (00573)	Biomass chlorophyll ratio, periphyton, number (70950)	Pheophytin a, periphyton, mg/m2 (62359)	Chlorophyll a periphyton, chromofluoro, mg/m2 (70957)	Biomass periphyton, ashfree drymass g/m2 (49954)
AUG 26...	1305	1,800	1,867	1,460	33	55.8	81.2

384950106544200 EAST RIVER ABOVE SLATE RIVER, NEAR CRESTED BUTTE, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°48'50", long 106°53'56", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.28, T.14 S., R.85 W., Gunnison County, Hydrologic Unit 14020001, 100 ft upstream from confluence with Slate River, and 4.7 mi southeast of Crested Butte.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--April 1995 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=384950106544200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=384950106544200)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)
OCT 22...	1300	25	9.2	8.4	314	6.0	<0.10	<0.015	0.037	<0.002	<0.007	E.003	<2.0
DEC 04...	0840	13	11.0	8.1	333	0.5	E.09	<0.015	0.077	<0.002	<0.007	0.004	<2.0
FEB 11...	1240	12	10.5	8.4	348	1.5	E.07	<0.015	0.059	<0.002	<0.007	<0.004	<2.0
APR 15...	1250	80	10.6	8.4	313	2.7	0.20	0.027	0.177	E.002	<0.007	0.025	<2.0
JUN 17...	1550	327	7.9	8.1	231	12.0	0.11	<0.015	0.075	<0.002	<0.007	0.019	<2.0
AUG 26...	1520	61	7.5	8.4	295	14.4	0.13	<0.015	0.033	<0.002	<0.007	0.020	<2.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 22...	E9
DEC 04...	E2
FEB 11...	E2
APR 15...	<1
JUN 17...	100
AUG 26...	E22

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Periphyton biomass ash weight, g/m2 (00572)	Periphyton biomass dry weight, g/m2 (00573)	Biomass chlorophyll ratio, periphyton, number (70950)	Pheophytin a, periphyton, mg/m2 (62359)	Chlorophyll a periphyton, chromofluoro, mg/m2 (70957)	Biomass periphyton, ashfree drymass g/m2 (49954)
AUG 26...	1525	670	686.2	1,100	9.9	17.7	20.0

## 385240106583600 SLATE RIVER ABOVE COAL CREEK, NEAR CRESTED BUTTE, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°53'22", long 106°59'48", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.27, T.13 S., R.86 W., Gunnison County, Hydrologic Unit 14020001, 2.9 mi upstream from confluence with Coal Creek, and 1.5 mi northwest of Crested Butte.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD--April 1995 to August 2003 (discontinued). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=385240106583600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=385240106583600)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water unfltrd, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 21...	1650	14	<1.0	7.6	7.3	132	9.3	59	20.0	2.21	<0.10	<0.015	0.039
DEC 02...	1432	15	--	9.7	7.2	136	1.5	--	--	--	<0.10	<0.015	0.062
FEB 10...	1540	6.7	--	8.4	7.2	144	0.6	--	--	--	<0.10	<0.015	0.062
APR 14...	1620	93	7.3	8.8	7.4	133	4.0	58	19.4	2.27	0.13	E.008	0.182
JUN 16...	1600	321	2.2	8.1	7.4	67	9.0	32	11.1	1.14	E.07	<0.015	0.073
AUG 25...	1550	12	1.6	6.1	7.2	133	15.1	58	19.3	2.33	E.08	<0.015	0.053

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 21...	<0.002	<0.007	E.002	<1
DEC 02...	<0.002	<0.007	0.005	<1
FEB 10...	<0.002	<0.007	<0.004	E1
APR 14...	<0.002	<0.007	0.028	<1
JUN 16...	<0.002	<0.007	0.009	E3
AUG 25...	<0.002	<0.007	<0.004	E7

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Aluminum, water, fltrd, ug/L (01106)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 21...	<20	E.2	<1.2	12	<1	5.9	<0.3	25
APR 14...	M	0.2	1.7	24	<1	17.2	<0.3	31
JUN 16...	19	0.3	1.4	23	1	8.5	<0.3	40
AUG 25...	7	E.1	<1.2	20	<1	7.9	<0.3	22

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

385240106583600 SLATE RIVER ABOVE COAL CREEK, NEAR CRESTED BUTTE, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Peri- phyton biomass ash weight, g/m2 (00572)	Peri- phyton biomass dry weight, g/m2 (00573)	Pheo- phytin a, peri- phyton, mg/m2 (62359)	Chloro- phyll a peri- phyton, chromo- fluoro, mg/m2 (70957)	Biomass peri- phyton, ashfree drymass g/m2 (49954)
AUG 25...	1600	1,100	1,083	0.3	<0.6	<16.200

&lt; -- Actual value is known to be less than the value shown.

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
OCT 21...	1650	14	9.3	<0.5	--
APR 14...	1620	93	4.0	24	6.1
JUN 16...	1600	321	9.0	7	6.3
AUG 25...	1550	12	15.1	1	0.03

&lt; -- Actual value is known to be less than the value shown.

## 385224106590100 COAL CREEK ABOVE MOUTH AT CRESTED BUTTE, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°52'24", long 106°59'01", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.3,T.14 S., R.86 W., Gunnison County, Hydrologic Unit 14020001, at pedestrian bridge on Butte Avenue, 0.2 mi north of Crested Butte, and 0.3 mi west of Highway 135, and 0.6 mi above mouth.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD--November 2000 to current year. Published as "at mouth near Crested Butte" 2001-02. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=385224106590100](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=385224106590100)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 21...	1800	0.60	1.9	8.5	7.9	259	5.5	94	29.8	4.72	<0.10	<0.015	<0.022
DEC 02...	1505	2.3	--	10.1	7.3	282	0.0	--	--	--	<0.10	<0.015	0.072
FEB 11...	1630	2.8	--	10.1	8.0	365	0.0	--	--	--	<0.10	<0.015	0.058
APR 15...	0810	30	12	9.9	7.2	162	1.1	50	15.7	2.66	0.19	E.010	0.494
JUN 17...	0900	55	1.2	9.1	7.6	62	5.5	32	10.7	1.34	0.12	<0.015	<0.022
AUG 26...	0830	3.1	4.2	7.9	7.9	222	9.3	91	28.8	4.72	0.11	<0.015	0.083

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 21...	<0.002	<0.007	0.004	E10
DEC 02...	<0.002	<0.007	E.003	E4
FEB 11...	<0.002	<0.007	<0.004	E1
APR 15...	<0.002	<0.007	0.019	E1
JUN 17...	<0.002	<0.007	0.006	E2
AUG 26...	<0.002	<0.007	0.008	E19

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Aluminum, water, fltrd, ug/L (01106)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 21...	E10	0.3	E.8	E5	<1	10.3	<0.3	57
APR 15...	40	6.2	9.1	E9	<2	598	<0.3	1,120
JUN 17...	60	0.7	3.9	36	M	33.0	<0.3	141
AUG 26...	50	1.3	2.3	E6	<1	217	<0.3	214

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

385224106590100 COAL CREEK ABOVE MOUTH AT CRESTED BUTTE, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Peri- phyton biomass ash weight, g/m2 (00572)	Peri- phyton biomass dry weight, g/m2 (00573)	Biomass chloro- phyll ratio, peri- phyton, number (70950)	Pheo- phytin a, peri- phyton, mg/m2 (62359)	Chloro- phyll a peri- phyton, chromo- fluoro, mg/m2 (70957)	Biomass peri- phyton, ashfree drymass g/m2 (49954)
AUG 26...	0850	860	874.8	4,170	2.1	3.9	<16.400

&lt; -- Actual value is known to be less than the value shown.

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
OCT 21...	1800	0.60	5.5	<0.5	--
APR 15...	0810	30	1.1	13	1.1
JUN 17...	0900	55	5.5	2	0.33
AUG 26...	0830	3.1	9.3	5	0.05

&lt; -- Actual value is known to be less than the value shown.

## 385325106581200 WASHINGTON GULCH BELOW WOODS CREEK AT MT. CRESTED BUTTE, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°53'25", long 106°58'12", in SW $\frac{1}{4}$  SE $\frac{1}{4}$  sec.26, T.13 S., R.86 W., Gunnison County, Hydrologic Unit 14020001, 50 ft downstream from confluence with Woods Creek, and 0.2 mi south of Mt. Crested Butte.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD--November 2000 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=385325106581200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=385325106581200)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 22...	0840	0.50	9.9	8.1	282	2.0	0.22	0.018	0.744	0.009	0.170	0.23	E57
DEC 03...	1230	1.8	10.0	8.0	244	2.0	0.20	<0.015	0.218	E.002	0.063	0.101	E9
FEB 10...	1430	2.3	10.0	8.1	273	1.4	0.37	0.029	2.01	0.027	0.641	0.77	E8
APR 14...	1520	26	9.8	7.7	202	2.7	1.7	0.023	1.09	0.005	0.010	0.46	<1
JUN 16...	1440	11	7.2	8.0	143	13.4	0.23	<0.015	0.471	E.002	0.061	0.097	E3
AUG 25...	1430	2.5	6.8	8.2	236	16.4	0.36	<0.015	0.988	E.002	0.753	0.86	23

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Periphyton biomass ash weight, g/m2 (00572)	Periphyton biomass dry weight, g/m2 (00573)	Biomass chlorophyll ratio, periphyton, number (70950)	Pheophytin a, periphyton, mg/m2 (62359)	Chlorophyll a periphyton, chromofluoro, mg/m2 (70957)	Biomass periphyton, ashfree drymass g/m2 (49954)
AUG 25...	1440	1,700	1,727	11,400	1.5	2.1	<24.300

< -- Actual value is known to be less than the value shown.

09111500 SLATE RIVER NEAR CRESTED BUTTE, CO

LOCATION.--Lat 38°52'11", long 106°58'08", in NW¼NE¼ sec.2, T.14 S., R.86 W., Gunnison County, Hydrologic Unit 14020001, on right bank 400 ft downstream from Washington Gulch, 1 mi east of Crested Butte, and 6.3 mi upstream from mouth.

DRAINAGE AREA.--68.9 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1940 to September 1951, October 1993 to current year. Monthly discharges only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09111500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09111500)

GAGE.--Water-stage recorder with satellite telemetry, and crest-stage gage. Elevation of gage is 8,820 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1993, gage at site 0.3 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 1,300 acres upstream and downstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	24	e23	e14	e14	e14	e27	242	1,110	149	36	17
2	47	24	e25	e16	e15	e14	e30	229	980	140	30	15
3	46	21	e26	e14	e14	e13	e34	221	846	128	35	14
4	44	21	e22	e15	e15	e14	32	223	749	119	32	15
5	43	22	e21	e16	e13	e15	31	195	650	109	28	16
6	41	20	e20	e16	e14	e14	31	169	564	101	25	18
7	42	21	e19	e14	e12	e13	29	156	495	91	23	20
8	40	e22	e19	e15	e12	e14	30	147	457	86	22	26
9	39	e22	e18	e14	e13	e16	31	135	465	79	21	35
10	37	e27	e16	e15	e14	e16	37	129	462	72	22	68
11	34	e24	e16	e16	e12	e15	50	121	479	67	25	50
12	32	e23	e16	e16	e14	e16	65	142	470	62	22	45
13	29	e23	e18	e15	e14	e18	81	184	458	57	23	53
14	28	e22	e20	e14	e16	e18	116	229	422	55	26	46
15	27	e21	e17	e15	e18	e20	126	339	427	55	21	40
16	26	e21	e17	e15	e16	e21	102	443	432	54	23	35
17	24	e19	e17	e13	e15	e20	99	613	371	50	28	33
18	24	e20	e18	e15	e15	e21	91	685	361	50	23	31
19	23	e20	e17	e13	e15	23	82	659	345	49	22	29
20	22	e19	e16	e15	e14	24	88	661	316	49	19	26
21	22	e19	e15	e15	e14	24	103	718	264	48	18	24
22	21	e21	e17	e15	e14	23	121	788	262	42	18	22
23	24	e21	e15	e15	e15	25	109	880	248	40	21	21
24	25	e23	e12	e16	e14	26	95	958	220	39	19	20
25	23	e22	e15	e14	e15	26	107	1,000	178	37	20	19
26	21	e21	e15	e15	e14	25	148	933	171	36	22	18
27	24	e20	e15	e15	e15	27	200	1,070	170	38	18	18
28	22	e19	e15	e14	e14	28	252	1,140	171	35	18	18
29	23	e20	e14	e13	---	31	273	1,200	164	38	18	17
30	21	e23	e16	e15	---	30	265	1,260	156	32	17	17
31	22	---	e16	e14	---	e27	---	1,120	---	30	18	---
TOTAL	950	645	546	457	400	631	2,885	16,989	12,863	2,037	713	826
MEAN	30.6	21.5	17.6	14.7	14.3	20.4	96.2	548	429	65.7	23.0	27.5
MAX	54	27	26	16	18	31	273	1,260	1,110	149	36	68
MIN	21	19	12	13	12	13	27	121	156	30	17	14
AC-FT	1,880	1,280	1,080	906	793	1,250	5,720	33,700	25,510	4,040	1,410	1,640

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

	30.9	23.3	16.5	13.7	12.5	20.0	124	525	566	193	51.0	26.9
MEAN	30.9	23.3	16.5	13.7	12.5	20.0	124	525	566	193	51.0	26.9
MAX	68.4	38.4	25.1	23.5	21.6	44.3	303	778	971	804	237	62.7
(WY)	(1998)	(1998)	(1994)	(1996)	(2002)	(1999)	(1943)	(1941)	(1995)	(1995)	(1995)	(1995)
MIN	10.2	8.63	8.03	8.35	6.20	8.52	36.4	248	134	17.9	7.74	13.8
(WY)	(1943)	(1943)	(1943)	(1947)	(1945)	(1950)	(1944)	(2002)	(2002)	(2002)	(2002)	(1942)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	22,573.8		39,942			
ANNUAL MEAN	61.8		109		136	
HIGHEST ANNUAL MEAN					214	
LOWEST ANNUAL MEAN					61.6	
HIGHEST DAILY MEAN	395	May 31	1,260	May 30	1,390	Jun 17, 1995
LOWEST DAILY MEAN	4.1	Sep 3	e12	Dec 24	3.9	Nov 26, 1942
ANNUAL SEVEN-DAY MINIMUM	4.6	Aug 31	13	Feb 5	4.6	Aug 31, 2002
MAXIMUM PEAK FLOW			1,420	May 30	1,550	Jun 17, 1995
MAXIMUM PEAK STAGE			5.66	May 30	5.84	Jun 17, 1995
ANNUAL RUNOFF (AC-FT)	44,780		79,220		98,410	
10 PERCENT EXCEEDS	204		325		495	
50 PERCENT EXCEEDS	22		24		26	
90 PERCENT EXCEEDS	9.4		14		11	

e Estimated.



## 09111500 SLATE RIVER NEAR CRESTED BUTTE, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD--March 1995 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09111500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09111500)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water unfiltered, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfiltered, std units (00400)	Specific conductance, water unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfiltered, mg/L as CaCO3 (00900)	Calcium, water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Ammonia + org-N, water, unfiltered, mg/L as N (00625)	Ammonia, water, filtered, mg/L as N (00608)	Nitrite + nitrate, water, filtered, mg/L as N (00631)
OCT 22...	0950	21	1.1	9.2	7.8	156	4.5	66	21.9	2.79	E.05	<0.015	0.270
DEC 03...	1340	26	--	10.0	7.5	177	1.0	--	--	--	0.12	0.045	0.191
FEB 11...	1510	12	--	8.4	7.5	218	0.1	--	--	--	0.90	0.696	0.226
APR 15...	1700	131	E11	9.3	7.6	163	2.6	69	22.3	3.25	0.27	0.042	0.402
JUN 17...	1120	351	2.3	8.4	7.4	81	8.0	38	13.1	1.41	E.08	<0.015	0.072
AUG 26...	1025	22	4.0	7.4	7.6	171	12.5	80	26.0	3.72	0.11	<0.015	0.073

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite, water, filtered, mg/L as N (00613)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered, mg/L (00665)	BOD, water, unfiltered, 5 day, 20 degC, mg/L (00310)	E coli, m-TEC, MF, water, col/100 mL (31633)
OCT 22...	0.005	0.071	0.098	2.4	E7
DEC 03...	0.003	0.033	0.051	<2.0	E1
FEB 11...	0.003	0.162	0.21	<2.0	55
APR 15...	0.003	<0.007	0.040	2.2	E2
JUN 17...	<0.002	<0.007	0.017	<2.0	E3
AUG 26...	E.002	0.007	0.027	<2.0	83

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Aluminum, water, filtered, ug/L (01106)	Cadmium, water, filtered, ug/L (01025)	Copper, water, filtered, ug/L (01040)	Iron, water, filtered, ug/L (01046)	Lead, water, filtered, ug/L (01049)	Manganese, water, filtered, ug/L (01056)	Silver, water, filtered, ug/L (01075)	Zinc, water, filtered, ug/L (01090)
OCT 22...	<20	E.2	<1.2	44	<1	56.2	<0.3	26
APR 15...	20	1.0	2.4	29	<1	133	<0.3	207
JUN 17...	22	0.3	E1.0	34	1	20.8	<0.3	54
AUG 26...	8	E.1	E1.0	20	<1	67.6	<0.3	26

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## 09111500 SLATE RIVER NEAR CRESTED BUTTE, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Peri- phyton biomass ash weight, g/m2 (00572)	Peri- phyton biomass dry weight, g/m2 (00573)	Biomass chloro- phyll ratio, peri- phyton, number (70950)	Pheo- phytin a, peri- phyton, mg/m2 (62359)	Chloro- phyll a peri- phyton, chromo- fluoro, mg/m2 (70957)	Biomass peri- phyton, ashfree drymass g/m2 (49954)
AUG 26...	1030	840	858.1	1,810	5.3	8.8	<15.800

< -- Actual value is known to be less than the value shown.

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
OCT 02...	1302	48	158	9.5

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
OCT 22...	0950	21	4.5	1	0.06
APR 15...	1700	131	2.6	19	6.7
JUN 17...	1120	351	8.0	12	12
AUG 26...	1025	22	12.5	7	0.40

**09112200 EAST RIVER BELOW CEMENT CREEK NEAR CRESTED BUTTE, CO**

LOCATION.--Lat 38°47'03", long 106°52'13", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.3, T.15 S., R.85 W., Gunnison County, Hydrologic Unit 14020001, on left bank 11 ft downstream from bridge on State Highway 135, 1.6 mi downstream from Cement Creek, and 8.5 mi southeast of Crested Butte.

DRAINAGE AREA.--238 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1963 to September 1972, October 1979 to September 1981, October 1993 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09112200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09112200)

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 8,440 ft above NGVD of 1929, from topographic map. Prior to Oct. 1993, water-stage recorder 0.5 mi upstream, at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversions for irrigation of about 4,500 acres upstream and downstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	137	87	e62	e47	e42	e42	72	468	2,490	483	188	101
2	119	90	e61	e43	e43	e40	81	432	2,190	476	179	96
3	114	74	e62	e46	e42	e41	81	415	1,930	412	191	94
4	112	75	e60	e47	e40	e42	79	442	1,770	386	184	98
5	105	75	e61	e45	e39	e41	76	387	1,550	357	162	95
6	99	68	e59	e44	e35	e40	75	319	1,370	331	152	100
7	96	72	e57	e42	e32	e42	71	283	1,220	307	150	112
8	95	85	e56	e44	e38	e46	64	277	1,110	292	146	119
9	92	83	e50	e47	e42	e49	73	255	1,160	277	136	145
10	90	e78	e42	e48	e42	e48	89	223	1,160	256	136	252
11	87	e77	e48	e48	e48	e51	115	209	1,140	228	142	199
12	82	e74	e51	e46	e53	e55	152	236	1,130	191	144	163
13	78	e95	e52	e45	e57	e59	194	312	1,080	169	143	187
14	77	e76	e46	e47	e61	e62	274	392	1,000	167	144	168
15	74	e69	e48	e46	e54	e65	302	658	1,010	168	130	153
16	73	e62	e46	e44	e50	e67	253	759	1,020	168	131	147
17	70	e64	e48	e45	e47	e67	253	1,120	869	157	145	143
18	69	e62	e47	e42	e48	e64	245	1,280	836	160	133	135
19	67	e58	e43	e42	e44	59	220	1,230	799	160	125	129
20	66	e60	e40	e43	e42	53	235	1,190	741	161	114	123
21	65	e62	e49	e44	e44	62	263	1,300	687	227	110	116
22	65	e63	e41	e44	e43	55	292	1,450	695	261	113	104
23	74	e65	e35	e44	e40	62	289	1,670	688	242	120	101
24	76	e63	e44	e44	e43	67	247	1,880	645	247	116	97
25	71	e62	e45	e43	e45	62	270	2,030	563	217	116	94
26	73	e55	e42	e42	e45	63	367	1,870	545	214	131	90
27	83	e48	e41	e42	e43	63	469	2,190	545	223	116	86
28	80	e55	e41	e42	e43	61	542	2,420	539	210	116	82
29	80	e60	e45	e42	---	61	551	2,480	516	218	111	79
30	74	e58	e44	e42	---	e61	524	2,490	508	186	109	77
31	82	---	e41	e42	---	e68	---	2,390	---	163	110	---
TOTAL	2,625	2,075	1,507	1,372	1,245	1,718	6,818	33,057	31,506	7,714	4,243	3,685
MEAN	84.7	69.2	48.6	44.3	44.5	55.4	227	1,066	1,050	249	137	123
MAX	137	95	62	48	61	68	551	2,490	2,490	483	191	252
MIN	65	48	35	42	32	40	64	209	508	157	109	77
AC-FT	5,210	4,120	2,990	2,720	2,470	3,410	13,520	65,570	62,490	15,300	8,420	7,310

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

MEAN	113	88.0	68.4	60.6	57.0	68.5	241	1,004	1,263	524	202	134
MAX	188	125	96.2	83.2	76.0	113	404	1,606	2,450	1,796	609	271
(WY)	(1966)	(1998)	(1966)	(1971)	(1971)	(1999)	(1971)	(1996)	(1995)	(1995)	(1995)	(1965)
MIN	58.5	62.4	48.6	43.8	42.7	43.5	77.0	406	309	102	63.5	64.3
(WY)	(1964)	(1964)	(2003)	(1995)	(1964)	(1964)	(1964)	(1981)	(2002)	(2002)	(2002)	(1994)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1964 - 2003	
ANNUAL TOTAL	50,640		97,565			
ANNUAL MEAN	139		267		319	
HIGHEST ANNUAL MEAN					531	
LOWEST ANNUAL MEAN					140	
HIGHEST DAILY MEAN	730	Jun 1	2,490	May 30	3,610	Jun 17, 1995
LOWEST DAILY MEAN	e35	Dec 23	e32	Feb 7	e32	Feb 7, 2003
ANNUAL SEVEN-DAY MINIMUM	e41	Dec 22	e38	Feb 3	38	Feb 3, 2003
MAXIMUM PEAK FLOW			2,870	May 30	4,350	Jun 18, 1995
MAXIMUM PEAK STAGE			4.53	May 30	a5.06	Jun 18, 1995
ANNUAL RUNOFF (AC-FT)	100,400		193,500		231,300	
10 PERCENT EXCEEDS	366		713		987	
50 PERCENT EXCEEDS	73		87		104	
90 PERCENT EXCEEDS	46		43		54	

e Estimated.

a Maximum gage height for period of record, 8.30 ft, Jun 12, 1980, from floodmarks, site and datum then in use.

09112200 EAST RIVER BELOW CEMENT CREEK NEAR CRESTED BUTTE, CO—Continued  
(National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1993 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09112200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09112200)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1995 to May 1997.  
WATER TEMPERATURE: May 1995 to September 1998.  
DISSOLVED OXYGEN: May 1995 to May 1997.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry, May 1995 to May 1997. Water temperature sensor and logger, May 1997 to September 1998.

REMARKS.--Suspended sediment sample concentration determined from a subsample split.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, uS/cm 25 degC (00095)	Temperature, deg C (00010)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., mg/L (00453)	Carbonate, wat flt incrm. titr., mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
OCT 22...	1400	65	9.4	8.9	305	7.5	119	125	10	1.29	34.4	E.07	<0.015
DEC 04...	1000	61	11.2	8.2	319	0.0	126	154	--	2.37	37.8	E.07	<0.015
FEB 12...	0930	53	11.6	8.3	332	0.0	133	162	--	1.68	39.7	0.12	0.027
APR 15...	1020	292	10.2	8.2	227	2.1	70	86	--	2.91	32.9	0.27	E.012
MAY 06...	1100	308	9.3	8.2	236	4.4	78	96	--	2.20	26.6	0.35	E.009
JUN 18...	0910	810	8.9	8.0	181	8.0	70	86	--	0.84	16.4	E.09	<0.015
JUL 16...	1220	175	7.4	8.3	265	15.2	90	109	--	1.37	23.7	E.11	<0.015
AUG 27...	0905	80	8.1	8.3	315	11.1	87	106	--	1.76	34.1	0.10	<0.015

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 22...	0.024	<0.002	<0.007	0.008	E3
DEC 04...	0.094	<0.002	<0.007	0.009	<1
FEB 12...	0.169	E.002	<0.007	0.009	E5
APR 15...	0.321	E.002	<0.007	0.047	E3
MAY 06...	0.322	0.003	<0.007	0.015	--
JUN 18...	0.065	<0.002	<0.007	0.014	E46
JUL 16...	E.031	<0.002	<0.007	E.007	--
AUG 27...	0.069	<0.002	<0.007	0.007	E25

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

09112200 EAST RIVER BELOW CEMENT CREEK NEAR CRESTED BUTTE, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	2,6-Diethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)
APR 15...	<0.006	<0.006	<0.006	<0.004	<0.005	<0.007	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
AUG 27...	<0.006	<0.006	<0.006	<0.004	<0.005	<0.007	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water, fltrd 0.7u GF ug/L (82682)	Desulf-inyl fipronil, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	Disul-foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal-flur-alin, water, fltrd 0.7u GF ug/L (82663)	Etho-prop, water, fltrd 0.7u GF ug/L (82672)	Desulf-inyl-fipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)
APR 15...	<0.018	E.002	<0.004	<0.005	<0.005	<0.02	<0.002	<0.009	<0.005	E.004	<0.005	<0.005	<0.007
AUG 27...	<0.018	<0.003	<0.004	<0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Malathion, water, fltrd, ug/L (39532)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)
APR 15...	<0.003	<0.004	<0.035	<0.027	<0.006	<0.013	<0.006	<0.002	<0.007	<0.003	<0.010	<0.004	<0.022
AUG 27...	<0.003	<0.004	<0.035	<0.027	<0.006	<0.013	<0.006	<0.002	<0.007	<0.003	<0.010	<0.004	<0.022

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phorate water fltrd 0.7u GF ug/L (82664)	Prome-ton, water, fltrd, ug/L (04037)	Pron-amide, water, fltrd 0.7u GF ug/L (82676)	Propa-chlor, water, fltrd, ug/L (04024)	Pro-panil, water, fltrd 0.7u GF ug/L (82679)	Propar-gite, water, fltrd 0.7u GF ug/L (82685)	Sima-zine, water, fltrd, ug/L (04035)	Tebu-thiuron water fltrd 0.7u GF ug/L (82670)	Terba-cil, water, fltrd 0.7u GF ug/L (82665)	Terbu-fos, water, fltrd 0.7u GF ug/L (82675)	Thio-bencarb water fltrd 0.7u GF ug/L (82681)	Tri-allate, water, fltrd 0.7u GF ug/L (82678)	Tri-flur-alin, water, fltrd 0.7u GF ug/L (82661)
APR 15...	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02	<0.034	<0.02	<0.005	<0.002	<0.009
AUG 27...	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02	<0.034	<0.02	<0.005	<0.002	<0.009

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Peri-phyton biomass ash weight, g/m2 (00572)	Peri-phyton biomass dry weight, g/m2 (00573)	Biomass chloro-phyll ratio, peri-phyton, number (70950)	Pheo-phytin a, peri-phyton, mg/m2 (62359)	Chloro-phyll a peri-phyton, chromo-fluoro, mg/m2 (70957)	Biomass peri-phyton, ashfree drymass g/m2 (49954)
FEB 12...	0920	870	919.1	650	39	68.3	44.4
AUG 27...	0845	1,100	1,086	1,840	7.2	13.7	25.3

09112200 EAST RIVER BELOW CEMENT CREEK NEAR CRESTED BUTTE, CO—Continued

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1104	126	299	8.0	APR 02...	0845	69	299	2.6
NOV 13...	1441	95	303	1.5	MAY 13...	1120	315	233	7.0

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT 22...	1400	65	7.5	1	0.18
DEC 04...	1000	61	0.0	1	0.20
FEB 12...	0930	53	0.0	1	0.17
APR 15...	1020	292	2.1	24	19
MAY 06...	1100	308	4.4	6	4.7
JUN 18...	0910	810	8.0	9	19
JUL 16...	1220	175	15.2	2	0.80
AUG 27...	0905	80	11.1	3	0.63

## 09112500 EAST RIVER AT ALMONT, CO

LOCATION.--Lat 38°39'52", long. 106°50'51", in NW¼SE¼ sec.22, T.51 N., R.1 E., Gunnison County, Hydrologic Unit 14020001, on left bank at Almont, 200 ft upstream from bridge on State Highway 135, and 400 ft upstream from confluence with Taylor River.

DRAINAGE AREA.--289 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April to October 1905, July 1910 to September 1922, October 1934 to current year. Monthly discharges only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09112500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09112500)

REVISED RECORDS.--WSP 1313: 1911. WSP 1733: 1952. WSP 1924: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,006.29 ft above NGVD of 1929. Apr. 16 to Sept. 30, 1905, and July 27, 1910 to Apr. 30, 1922, nonrecording gages at bridge 200 ft downstream, at different datums. Oct. 1, 1934 to Sept. 22, 1954, water-stage recorder at present site at datum 2.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 7,400 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	85	e74	e47	e49	e48	68	376	2,310	423	200	105
2	109	88	e69	e55	e49	e46	75	354	2,060	423	194	97
3	102	82	e68	e47	e48	e45	77	346	1,810	e377	200	94
4	101	81	e65	e50	e48	e47	74	358	1,650	e351	199	97
5	98	82	e68	e51	e47	e48	71	332	1,460	e323	188	94
6	102	76	e65	e49	e42	e47	71	271	1,270	e298	180	100
7	100	78	e63	e49	e40	e46	68	248	1,120	e270	176	111
8	96	90	e61	e51	e37	e48	62	234	1,010	e259	172	121
9	96	93	e55	e49	e42	e51	69	227	1,050	257	163	140
10	96	83	e53	e51	e48	49	80	202	1,050	241	161	245
11	95	88	e56	e56	e47	53	104	190	1,020	225	164	204
12	91	81	e63	e56	e49	58	142	188	1,020	202	170	135
13	86	84	e66	e54	e47	58	183	230	983	189	169	153
14	85	90	e60	e49	e54	62	253	280	924	190	171	146
15	83	84	e61	e55	e58	68	296	487	925	190	155	138
16	80	69	e62	e54	e51	70	243	572	937	e188	152	130
17	80	80	e61	e45	e50	67	241	905	828	e190	163	123
18	79	83	e56	e53	e51	63	233	1,070	810	193	153	120
19	76	78	e51	e44	e49	61	198	1,050	779	191	140	114
20	77	81	e46	e49	e47	56	205	1,010	731	187	128	112
21	75	79	e53	e49	e46	64	230	1,080	662	256	122	108
22	77	75	e55	e51	e50	59	253	1,220	650	326	121	97
23	80	75	e44	e51	e49	63	262	1,460	635	290	130	92
24	83	84	e38	e50	e46	67	221	1,620	601	293	127	80
25	80	79	e57	e51	e49	63	233	1,770	517	257	125	77
26	78	64	e53	e49	e48	63	301	1,630	483	252	136	75
27	85	e59	e47	e49	e48	63	379	1,870	459	261	123	74
28	86	e66	e49	e49	e48	56	445	2,120	456	240	122	73
29	88	e72	e49	e49	---	56	440	2,220	445	246	119	72
30	82	e71	e52	e49	---	59	419	2,370	441	218	113	67
31	82	---	e48	e49	---	69	---	2,250	---	183	112	---
TOTAL	2,749	2,380	1,768	1,560	1,337	1,773	5,996	28,540	29,096	7,989	4,748	3,394
MEAN	88.7	79.3	57.0	50.3	47.8	57.2	200	921	970	258	153	113
MAX	121	93	74	56	58	70	445	2,370	2,310	423	200	245
MIN	75	59	38	44	37	45	62	188	441	183	112	67
AC-FT	5,450	4,720	3,510	3,090	2,650	3,520	11,890	56,610	57,710	15,850	9,420	6,730

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2003, BY WATER YEAR (WY)

	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	117	95.2	73.1	62.2	59.5	68.2	248	1,018	1,353	555	233	130																																																																																	
MAX	279	172	128	102	90.4	137	670	1,978	2,670	2,037	659	271																																																																																	
(WY)	(1912)	(1987)	(1985)	(1985)	(1962)	(1986)	(1936)	(1936)	(1920)	(1957)	(1995)	(1965)																																																																																	
MIN	56.3	47.8	42.0	25.5	28.7	43.1	77.2	222	282	93.5	25.0	52.4																																																																																	
(WY)	(1978)	(1978)	(1977)	(1940)	(1940)	(1976)	(1964)	(1977)	(2002)	(1977)	(1913)	(1977)																																																																																	

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1911 - 2003	
ANNUAL TOTAL	50,808		91,330			
ANNUAL MEAN	139		250		335	
HIGHEST ANNUAL MEAN					574	
LOWEST ANNUAL MEAN					104	
HIGHEST DAILY MEAN	681	Jun 1	2,370	May 30	5,000	Jun 12, 1918
LOWEST DAILY MEAN	32	Sep 6	e37	Feb 8	19	Aug 13, 1913
ANNUAL SEVEN-DAY MINIMUM	35	Sep 1	43	Feb 5	21	Jan 15, 1940
MAXIMUM PEAK FLOW			2,560	May 30	a6,500	Jun 15, 1921
MAXIMUM PEAK STAGE			6.42	May 30	b6.60	Jun 15, 1921
ANNUAL RUNOFF (AC-FT)	100,800		181,200		242,700	
10 PERCENT EXCEEDS	350		655		1,040	
50 PERCENT EXCEEDS	86		88		108	
90 PERCENT EXCEEDS	53		49		55	

e Estimated.

a Site and datum then in use, from rating curve extended above 3,000 ft<sup>3</sup>/s.

b Maximum gage height 8.41 ft, Jun 18, 1995, present datum.

09112500 EAST RIVER AT ALMONT, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD--October 1990 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09112500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09112500)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 22...	1442	76	8.3	8.8	320	9.5	<0.10	<0.015	E.011	<0.002	<0.007	0.005	<1
DEC 04...	1120	59	11.2	8.3	312	0.0	E.05	<0.015	0.055	<0.002	<0.007	0.005	<1
FEB 12...	1145	52	10.6	8.2	319	0.2	0.11	<0.015	0.071	<0.002	<0.007	0.004	E1
APR 16...	1200	237	10.0	8.4	238	5.4	0.18	<0.015	0.283	0.003	<0.007	0.023	<1
JUN 18...	1145	820	8.7	8.3	217	10.5	E.08	<0.015	0.034	<0.002	<0.007	0.012	53
AUG 27...	1030	118	8.4	8.4	326	13.3	E.07	<0.015	0.039	<0.002	<0.007	0.007	E20

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Periphyton biomass ash weight, g/m2 (00572)	Periphyton biomass dry weight, g/m2 (00573)	Biomass chlorophyll ratio, periphyton, number (70950)	Pheophytin a, periphyton, mg/m2 (62359)	Chlorophyll a periphyton, chromofluoro, mg/m2 (70957)	Biomass periphyton, ashfree drymass g/m2 (49954)
AUG 27...	1040	980	993.7	1,530	6.6	11.2	<17.200

< -- Actual value is known to be less than the value shown.

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1659	104	310	10.0	MAY 06...	1140	285	255	6.1
NOV 13...	1420	77	323	2.5	MAY 28...	1504	2,080	161	11.6
APR 02...	1055	73	315	6.0	JUN 17...	1843	795	223	12.1
					JUL 17...	1340	195	326	18.1



## 09113980 OHIO CREEK ABOVE MOUTH, NEAR GUNNISON, CO

LOCATION.--Lat 38°35'16", long 106°55'51", in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.13, T.50 N., R.1 W., Gunnison County, Hydrologic Unit 14020002, on left bank at County Road 48 bridge, 1.1 mi upstream from confluence with the Gunnison River, and 3.1 mi north of Gunnison.

DRAINAGE AREA.--161 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1998 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09113980](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09113980)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,770 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 10,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	12	e15	e9.8	e12	e12	44	31	531	66	52	19
2	18	11	e15	e11	e12	e10	56	24	462	74	51	18
3	19	10	e11	e13	e11	e14	52	22	383	79	48	e17
4	19	10	e15	e12	e9.9	e14	44	31	323	68	53	19
5	19	10	e14	e11	e10	e13	37	41	265	62	42	20
6	19	9.8	e13	e10	e8.9	e12	35	37	220	59	39	29
7	19	10	e12	e9.6	e8.5	e14	33	33	192	61	38	40
8	18	12	e9.7	e11	e8.3	e17	32	34	177	56	33	39
9	17	e19	e9.3	e16	e11	e17	43	31	177	55	27	39
10	16	16	e10	e15	e9.5	e21	53	27	197	50	21	120
11	14	15	e13	e13	e9.9	e25	65	23	205	48	21	90
12	13	13	e15	e10	e13	e28	72	27	187	55	22	71
13	12	13	e13	e14	e13	e30	69	30	162	68	26	77
14	12	e18	e15	e14	13	31	73	37	148	68	23	59
15	11	e15	e13	e9.3	e13	31	77	82	148	76	19	51
16	11	e17	e15	e11	e14	32	58	94	156	90	28	46
17	11	e18	e15	e8.9	14	29	56	138	150	88	57	43
18	11	e16	e12	e9.1	14	25	37	191	157	93	32	e40
19	10	e17	e9.7	e11	16	22	23	264	161	99	37	e35
20	9.9	e18	e13	e12	e17	23	22	228	175	104	26	e32
21	9.7	e18	e10	e12	e17	27	23	222	138	107	23	e33
22	9.5	e18	e9.7	e12	e16	28	23	242	124	105	20	e29
23	10	e17	e10	e11	e13	33	23	284	109	95	29	e24
24	11	e17	e12	e11	e15	37	15	309	84	109	24	e22
25	10	e13	e9.5	e9.9	14	38	13	323	73	100	21	e18
26	10	e9.8	e9.7	e11	14	36	14	276	74	88	20	e17
27	11	e14	e9.8	e12	16	32	16	298	68	83	19	e17
28	11	e18	e12	e11	14	29	23	360	66	78	36	e15
29	12	e17	e12	e10	---	30	34	433	63	68	30	e15
30	11	e18	e9.7	e11	---	32	44	496	70	60	26	e15
31	11	---	e13	e12	---	e37	---	447	---	55	21	---
TOTAL	411.1	439.6	375.1	353.6	357.0	779	1,209	5,115	5,445	2,367	964	1,109
MEAN	13.3	14.7	12.1	11.4	12.8	25.1	40.3	165	182	76.4	31.1	37.0
MAX	19	19	15	16	17	38	77	496	531	109	57	120
MIN	9.5	9.8	9.3	8.9	8.3	10	13	22	63	48	19	15
AC-FT	815	872	744	701	708	1,550	2,400	10,150	10,800	4,690	1,910	2,200

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

MEAN	17.9	14.2	16.2	14.2	15.6	28.6	70.9	155	126	75.4	48.6	29.8
MAX	25.9	16.3	21.2	18.5	18.8	45.3	153	229	236	152	103	49.2
(WY)	(2000)	(2000)	(2000)	(1999)	(2000)	(1999)	(2000)	(2000)	(1999)	(1999)	(1999)	(1999)
MIN	13.0	12.8	12.1	10.6	12.7	21.3	38.8	6.75	26.0	17.5	7.23	10.2
(WY)	(2001)	(2002)	(2003)	(2002)	(2003)	(2002)	(1999)	(2002)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1999 - 2003

ANNUAL TOTAL	6,015.3	18,924.4	
ANNUAL MEAN	16.5	51.8	45.7
HIGHEST ANNUAL MEAN			60.2
LOWEST ANNUAL MEAN			17.4
HIGHEST DAILY MEAN	106	Apr 3	531
LOWEST DAILY MEAN	1.5	May 3	e8.3
ANNUAL SEVEN-DAY MINIMUM	1.9	May 1	9.4
MAXIMUM PEAK FLOW			607
MAXIMUM PEAK STAGE			4.68
ANNUAL RUNOFF (AC-FT)	11,930	37,540	33,080
10 PERCENT EXCEEDS	27	130	116
50 PERCENT EXCEEDS	13	21	20
90 PERCENT EXCEEDS	5.3	10	10

e Estimated.

09113980 OHIO CREEK ABOVE MOUTH, NEAR GUNNISON, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD--November 1996 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09113980](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09113980)

REMARKS--Prior to September 1998, published as site number 383516106555000.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)
OCT 16...	1400	18	8.9	8.0	402	12.0	0.15	<0.015	<0.022	<0.002	0.015	0.029	<2.0
DEC 04...	1330	26	10.0	8.2	262	3.5	0.17	<0.015	E.015	<0.002	0.016	0.046	<2.0
FEB 12...	1330	14	11.0	7.9	164	0.1	E.09	<0.015	E.020	<0.002	0.015	0.031	<2.0
APR 16...	1320	55	9.0	8.3	163	8.3	0.59	E.009	0.169	0.003	0.012	0.149	2.5
JUN 18...	1345	163	7.7	8.1	294	17.7	0.43	<0.015	<0.022	E.002	0.033	0.078	<2.0
AUG 27...	1320	18	7.8	8.5	249	19.0	0.21	<0.015	<0.022	<0.002	0.025	0.057	<2.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 16...	<1
DEC 04...	E6
FEB 12...	E3
APR 16...	E10
JUN 18...	E32
AUG 27...	38

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Periphyton biomass ash weight, g/m2 (00572)	Periphyton biomass dry weight, g/m2 (00573)	Biomass chlorophyll ratio, periphyton, number (70950)	Pheophytin a, periphyton, mg/m2 (62359)	Chlorophyll a periphyton, chromofluoro, mg/m2 (70957)	Biomass periphyton, ashfree drymass g/m2 (49954)
AUG 27...	1325	1,200	1,189	744	24	45.4	33.8

09113980 OHIO CREEK ABOVE MOUTH, NEAR GUNNISON, CO—Continued

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT					MAY				
02...	0946	20	438	8.5	05...	1802	46	297	11.2
NOV					27...	1535	278	175	17.8
13...	1535	17	370	5.0					
APR									
02...	1155	59	195	4.2					

09114500 GUNNISON RIVER NEAR GUNNISON, CO

LOCATION.--Lat 38°32'31", long 106°56'57", in NW¼NW¼ sec.2, T.49 N., R.1 W., Gunnison County, Hydrologic Unit 14020002, on right bank 0.7 mi downstream from Antelope Creek and 1.2 mi west of Gunnison.

DRAINAGE AREA.--1,012 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1910 to December 1928, October 1944 to current year. Monthly discharges only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09114500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09114500)

REVISED RECORDS.--WSP 1313: 1911, 1916.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 7,655 ft above NGVD of 1929, from topographic map.

Nov. 25, 1910 to Dec. 31, 1928, nonrecording gages (supplementary water-stage recorder Apr. 28, 1916 to June 17, 1918) at bridge about 0.6 mi downstream at various datums. April 11, 1945 to July 28, 1970, water-stage recorder at sites 0.4 mi upstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Taylor Park Reservoir (station 09108500), 37 mi upstream from station. Diversions for irrigation of about 22,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	286	228	e202	e185	e181	156	214	484	3,260	750	583	368
2	278	230	e200	e177	e183	154	236	481	2,940	746	568	347
3	258	222	e197	e182	e182	146	227	488	2,580	693	565	345
4	254	219	e195	e185	e177	174	225	516	2,330	667	575	354
5	245	222	e194	e181	e179	164	208	533	2,090	649	538	339
6	243	216	e191	e178	e170	160	199	480	1,900	628	521	338
7	241	218	e189	e179	e170	158	187	445	1,730	608	517	350
8	221	233	e188	e180	e174	162	173	422	1,590	569	506	344
9	218	257	e183	e183	e181	157	192	404	1,600	543	484	328
10	226	239	e180	e189	e179	163	208	367	1,700	527	476	618
11	226	240	e185	e187	e183	177	264	345	1,670	502	469	529
12	226	e230	e191	e184	e182	194	336	348	1,620	477	481	368
13	228	e218	e194	e180	e189	199	325	356	1,580	467	495	381
14	240	e220	e188	e186	e191	208	342	409	1,530	467	483	343
15	238	e214	e190	e185	e184	211	389	632	1,510	459	455	313
16	225	e207	e189	e177	185	214	326	790	1,550	488	416	281
17	223	e210	e190	e184	170	205	310	1,190	1,450	478	471	270
18	218	e207	e190	e176	165	204	300	1,430	1,400	507	441	257
19	217	e203	e183	e181	150	198	262	1,520	1,410	538	432	240
20	216	e207	e178	e182	149	188	263	1,410	1,430	541	390	207
21	210	e208	e190	e184	162	207	280	1,430	1,280	639	380	214
22	217	e210	e175	e184	174	191	290	1,580	1,220	781	377	224
23	222	e211	e170	e184	151	201	303	1,910	1,150	729	396	222
24	230	e208	e182	e182	144	204	269	2,110	1,060	732	398	213
25	227	e205	e183	e183	167	210	269	2,290	953	674	398	207
26	219	e197	e178	e181	155	206	321	2,110	896	642	401	202
27	228	e193	e179	e181	158	211	425	2,300	804	656	398	197
28	230	e200	e179	e182	162	191	511	2,670	790	649	436	198
29	231	e202	e183	e180	---	190	528	2,950	765	656	415	199
30	223	e203	e183	e180	---	191	525	3,230	767	613	408	193
31	222	---	e177	e182	---	208	---	3,170	---	555	395	---
TOTAL	7,186	6,477	5,776	5,644	4,797	5,802	8,907	38,800	46,555	18,630	14,268	8,989
MEAN	232	216	186	182	171	187	297	1,252	1,552	601	460	300
MAX	286	257	202	189	191	214	528	3,230	3,260	781	583	618
MIN	210	193	170	176	144	146	173	345	765	459	377	193
AC-FT	14,250	12,850	11,460	11,190	9,510	11,510	17,670	76,960	92,340	36,950	28,300	17,830

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2003, BY WATER YEAR (WY)

MEAN	400	298	237	211	204	251	604	1,812	2,457	1,260	730	537
MAX	805	614	616	395	365	582	1,381	3,605	6,074	4,621	1,510	908
(WY)	(1969)	(1968)	(1966)	(1966)	(1971)	(1986)	(1962)	(1914)	(1918)	(1957)	(1957)	(1985)
MIN	186	162	128	119	111	117	214	283	425	288	261	170
(WY)	(1978)	(1964)	(1963)	(1945)	(1955)	(1964)	(1964)	(1977)	(1977)	(1977)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1911 - 2003

ANNUAL TOTAL	100,808	171,831	
ANNUAL MEAN	276	471	752
HIGHEST ANNUAL MEAN			1,278
LOWEST ANNUAL MEAN			256
HIGHEST DAILY MEAN	788	Jun 1	11,400
LOWEST DAILY MEAN	116	Sep 6	80
ANNUAL SEVEN-DAY MINIMUM	122	Sep 1	95
MAXIMUM PEAK FLOW			3,510
MAXIMUM PEAK STAGE			3.60
ANNUAL RUNOFF (AC-FT)	200,000	340,800	544,600
10 PERCENT EXCEEDS	473	1,200	1,860
50 PERCENT EXCEEDS	222	228	386
90 PERCENT EXCEEDS	154	178	180

e Estimated.

a Site and datum then in use, from rating curve extended above 5,000 ft<sup>3</sup>/s, gage height, 4.05 ft.

b Site and datum then in use.

WATER-QUALITY RECORDS

PERIOD OF RECORD--April 1995 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09114500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09114500)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)
OCT 17...	0830	223	9.8	8.2	257	3.5	E.08	<0.015	<0.022	<0.002	<0.007	0.005	<2.0
DEC 04...	1430	173	13.0	8.4	250	1.5	E.09	<0.015	E.019	<0.002	<0.007	0.009	<2.0
FEB 12...	1500	183	11.6	8.4	213	0.1	0.14	<0.015	<0.022	<0.002	<0.007	0.011	<2.0
APR 16...	1420	311	9.7	8.8	213	10.1	0.22	<0.015	0.108	E.002	<0.007	0.027	<2.0
JUN 18...	1505	1,410	8.6	8.4	223	14.5	0.17	<0.015	<0.022	<0.002	<0.007	0.018	<2.0
AUG 28...	1530	424	7.7	8.5	210	17.0	0.15	<0.015	E.021	<0.002	<0.007	0.019	<2.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 17...	E4
DEC 04...	<1
FEB 12...	<1
APR 16...	<1
JUN 18...	50
AUG 28...	82

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Periphyton biomass ash weight, g/m2 (00572)	Periphyton biomass dry weight, g/m2 (00573)	Biomass chlorophyll ratio, periphyton, number (70950)	Pheophytin a, periphyton, mg/m2 (62359)	Chlorophyll a periphyton, chromofluoro, mg/m2 (70957)	Biomass periphyton, ashfree drymass g/m2 (49954)
AUG 28...	1535	740	749.4	1,570	4.5	7.5	<11.800

< -- Actual value is known to be less than the value shown.

## 09114500 GUNNISON RIVER NEAR GUNNISON, CO—Continued

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	0910	262	265	8.0	APR 03...	1110	229	238	4.3
NOV 14...	1005	220	262	1.0					

## 09115500 TOMICHI CREEK AT SARGENTS, CO

LOCATION.--Lat 38°24'42", long 106°25'20", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.21, T.48 N., R.5 E., Saguache County, Hydrologic Unit 14020003, on right bank 300 ft from U.S. Highway 50, 0.5 mi downstream from Marshall Creek, and 0.8 mi south of Sargents.

DRAINAGE AREA.-- 149 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1916 to September 1922, October 1937 to September 1972, October 1992 to current year. Monthly discharge only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09115500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09115500)

REVISED RECORDS.--WSP 1313: 1922(M). WRD Colo. 1967: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 8,416 ft above NGVD of 1929, from topographic map. May 12 to Oct. 5, 1917, nonrecording gage. Oct. 6, 1917 to Sept. 30, 1922, water-stage recorder, at railroad bridge 1,000 ft upstream at different datum. Apr. 18, 1938 to Sept. 9, 1953, water-stage recorder at present site at datum 1.0 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 1,900 acres upstream from station. Larkspur ditch diverts water upstream from station to Arkansas River basin. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	16	e29	e14	e14	e14	e30	74	297	45	38	26
2	15	15	e27	e17	e15	e13	e29	69	258	43	36	24
3	16	14	e25	e15	e16	e12	e31	67	235	39	35	25
4	15	e13	e22	e18	e15	e12	e33	72	210	38	33	27
5	14	e10	e23	e18	e11	e14	e34	68	201	37	30	25
6	13	e11	e24	e16	e10	e13	e32	57	177	38	30	27
7	13	e12	e21	e14	e11	e12	e33	51	158	39	30	40
8	13	e15	e21	e15	e11	e14	e30	55	142	37	27	43
9	13	e21	e19	e15	e13	e15	e32	51	135	31	23	39
10	12	e17	e18	e17	e13	e20	e32	53	129	25	26	63
11	12	e14	e17	e20	e13	e21	e35	51	122	24	26	53
12	12	e13	e18	e18	e13	e24	e38	56	112	24	33	46
13	12	e14	e19	e17	e15	e27	e44	66	107	27	26	44
14	12	e11	e21	e16	e19	e31	e45	63	99	27	25	39
15	12	e10	e21	e16	e18	e34	e28	87	89	28	24	35
16	12	e10	e21	e14	e16	e36	e23	95	88	30	25	34
17	13	e11	e20	e16	e15	e36	e22	120	89	34	25	32
18	13	e14	e21	e17	e15	e33	e13	138	88	33	27	30
19	12	e15	e20	e14	e14	e30	e14	156	102	30	27	30
20	13	e19	e17	e14	e12	e31	e19	172	101	36	24	29
21	e13	e20	e19	e15	e14	e30	e25	171	85	38	23	28
22	e13	e23	e18	e17	e15	e31	e42	183	74	40	24	27
23	e15	e24	e15	e18	e14	e31	e34	209	67	42	28	27
24	e16	e25	e15	e17	e15	e33	e50	220	57	46	42	26
25	e16	e23	e16	e16	e16	e36	e64	244	55	38	31	25
26	15	e18	e15	e15	e16	e37	e73	235	54	37	33	24
27	16	e16	e15	e15	e15	e37	e75	248	50	61	29	24
28	16	e19	e14	e14	e15	e35	e73	283	48	57	32	24
29	15	e24	e15	e14	---	e30	73	298	47	47	37	23
30	16	e26	e18	e14	---	e29	75	294	45	45	28	23
31	16	---	e16	e15	---	e28	---	289	---	39	27	---
TOTAL	429	493	600	491	399	799	1,181	4,295	3,521	1,155	904	962
MEAN	13.8	16.4	19.4	15.8	14.2	25.8	39.4	139	117	37.3	29.2	32.1
MAX	16	26	29	20	19	37	75	298	297	61	42	63
MIN	12	10	14	14	10	12	13	51	45	24	23	23
AC-FT	851	978	1,190	974	791	1,580	2,340	8,520	6,980	2,290	1,790	1,910

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1917 - 2003, BY WATER YEAR (WY)

MEAN	31.2	27.8	23.2	21.4	22.0	28.3	66.3	196	194	63.5	38.9	29.2
MAX	48.9	38.1	39.0	43.2	49.6	50.3	139	382	588	255	128	59.5
(WY)	(1971)	(1997)	(1996)	(1996)	(1996)	(1972)	(1962)	(1958)	(1957)	(1957)	(1957)	(1957)
MIN	13.8	16.4	12.3	10.7	10.9	15.0	27.9	24.7	14.7	11.8	9.10	11.9
(WY)	(2003)	(2003)	(2002)	(1967)	(1967)	(1970)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1917 - 2003	
ANNUAL TOTAL	6,204.6		15,229			
ANNUAL MEAN	17.0		41.7		61.9	
HIGHEST ANNUAL MEAN					122	1921
LOWEST ANNUAL MEAN					18.4	2002
HIGHEST DAILY MEAN	60	Mar 30	298	May 29	838	Jun 18, 1995
LOWEST DAILY MEAN	4.8	Aug 18	e10	Nov 5	4.8	Aug 18, 2002
ANNUAL SEVEN-DAY MINIMUM	5.9	Aug 13	12	Feb 5	5.9	Aug 13, 2002
MAXIMUM PEAK FLOW			339	May 30	964	Jun 18, 1995
MAXIMUM PEAK STAGE			2.47	May 30	4.03	Jun 18, 1995
ANNUAL RUNOFF (AC-FT)	12,310		30,210		44,870	
10 PERCENT EXCEEDS	28		87		152	
50 PERCENT EXCEEDS	15		25		30	
90 PERCENT EXCEEDS	8.7		13		18	

e Estimated.

a Maximum gage height for period of record, 4.05 ft, Jun 16, 1917, and Jun 9, 1921, site and datum then in use.

383604106312400 QUARTZ CREEK BELOW PITKIN, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°36'04", long 106°31'24", in SW¼SE¼ sec.9, T.50 N., R.4 E., Gunnison County, Hydrologic Unit 14020003, 1 mi south of Pitkin on Wuanita Pass Road.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--November 2000 to August 2003 (discontinued). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=383604106312400](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=383604106312400)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 18...	0830	5.2	3.0	10.0	8.2	180	0.0	98	28.5	6.48	E.06	<0.015	0.033
DEC 05...	1000	8.2	--	10.3	8.2	180	0.0	--	--	--	<0.10	<0.015	0.052
FEB 13...	0840	5.6	--	10.0	8.2	181	0.9	--	--	--	<0.10	<0.015	0.052
APR 17...	0920	13	E1.1	9.8	8.0	169	0.9	84	24.4	5.52	0.17	<0.015	0.030
JUN 19...	0940	62	<1.0	8.0	7.8	113	6.5	61	18.5	3.54	E.09	<0.015	E.016
AUG 28...	0845	23	1.3	7.9	8.0	157	10.5	79	24.1	4.68	0.13	<0.015	0.025

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 18...	<0.002	<0.007	0.004	<2.0	<1
DEC 05...	<0.002	<0.007	0.004	<2.0	E1
FEB 13...	<0.002	<0.007	0.006	<2.0	E2
APR 17...	<0.002	<0.007	0.009	<2.0	<1
JUN 19...	<0.002	<0.007	0.006	<2.0	E3
AUG 28...	<0.002	<0.007	0.013	<2.0	65

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Aluminum, water, fltrd, ug/L (01106)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 18...	<20	<0.2	E.6	32	<1	E2.2	<0.3	<24
APR 17...	<20	<0.2	E1.1	27	<1	3.0	<0.3	<24
JUN 19...	7	<0.2	E1.2	32	<1	4.0	<0.3	E3
AUG 28...	5	<0.2	E.7	49	<1	2.8	<0.3	E2

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.



## GUNNISON RIVER BASIN

383604106312400 QUARTZ CREEK BELOW PITKIN, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Peri- phyton biomass ash weight, g/m <sup>2</sup> (00572)	Peri- phyton biomass dry weight, g/m <sup>2</sup> (00573)	Biomass chloro- phyll ratio, peri- phyton, number (70950)	Pheo- phytin a, peri- phyton, mg/m <sup>2</sup> (62359)	Chloro- phyll a peri- phyton, chromo- fluoro, mg/m <sup>2</sup> (70957)	Biomass peri- phyton, ashfree drymass g/m <sup>2</sup> (49954)
AUG 28...	0850	1,200	1,268	1,550	8.0	11.6	<17.500

&lt; -- Actual value is known to be less than the value shown.

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
OCT 18...	0830	5.2	0.0	1	0.01
APR 17...	0920	13	0.9	2	0.08
JUN 19...	0940	62	6.5	3	0.49
AUG 28...	0845	23	10.5	4	0.26

**09118450 COCHETOPA CREEK BELOW ROCK CREEK, NEAR PARLIN, CO**

LOCATION.--Lat 38°20'08", long 106°46'18", in SW¼NE¼ sec.17, T.47 N., R.2 E. Saguache County, Hydrologic Unit 14020003, on left bank 0.75 mi downstream from Rock Creek and 12 mi south of Parlin.

DRAINAGE AREA.--334 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1981 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09118450](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09118450)

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 8,470 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of hay meadows upstream from station. Transmountain diversion by Tarbell ditch exports water upstream from station to Saguache Creek, since 1913. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e16	e16	e15	e9.1	e6.3	e11	29	28	39	8.0	11	20
2	14	e17	e14	e9.1	e6.7	e13	33	27	36	6.8	9.6	18
3	14	e18	e13	e11	e6.7	e13	28	25	32	6.0	12	18
4	14	e19	e12	e9.5	e6.7	e14	25	27	26	6.9	14	21
5	14	e19	e12	e9.5	e7.9	e14	21	26	23	6.0	8.8	22
6	14	e18	e11	e9.5	e8.3	e14	20	24	20	6.0	9.2	28
7	14	e18	e11	e8.7	e8.3	e15	19	23	15	11	9.1	32
8	15	e18	e12	e7.5	e9.5	e16	19	24	13	13	7.9	27
9	15	e18	e11	e8.3	e11	e16	22	24	13	11	6.7	26
10	16	e17	e12	e8.3	e9.9	e17	30	22	17	14	6.7	59
11	14	e18	e10	e7.5	e9.9	e19	37	22	16	e11	7.6	49
12	16	e18	e12	e6.0	e11	e20	40	18	16	e9.5	8.0	36
13	17	e17	e14	e7.5	e11	e19	41	20	18	e8.0	15	29
14	18	e18	e12	e7.1	e11	e18	44	22	16	e7.5	15	26
15	18	e18	e9.1	e6.7	e10	e21	49	29	15	e6.8	13	24
16	18	e21	e13	e6.3	e10	e23	36	35	14	e8.5	14	23
17	18	e21	e9.8	e7.1	e8.4	e21	34	29	14	e11	15	26
18	19	e22	e9.4	e6.7	e11	e25	32	31	10	10	15	24
19	e22	e20	e9.1	e6.7	e11	e27	29	36	16	8.7	16	22
20	e21	e19	e10	e6.7	e9.6	e27	27	29	29	8.9	15	24
21	e21	e18	e9.8	e6.3	e9.6	e25	28	27	21	13	13	23
22	e21	e19	e8.3	e7.1	e10	e23	30	24	17	10	13	22
23	e23	e19	e9.9	e7.1	e10	e23	28	29	14	13	15	22
24	e22	e20	e8.3	e7.5	e9.6	e22	23	23	11	12	17	20
25	e22	e20	e8.7	e6.7	e8.8	e26	24	23	13	8.5	34	20
26	e20	e20	e8.7	e8.3	e11	e32	24	24	13	8.9	25	18
27	e20	e18	e11	e9.9	e10	e32	25	20	13	8.5	20	17
28	e18	e18	e9.5	e9.1	e9.2	e31	28	21	13	7.7	23	17
29	e14	e16	e8.7	e9.0	---	e28	30	25	14	7.7	41	16
30	e15	e16	e9.5	e7.1	---	e26	29	29	12	8.6	33	16
31	e15	---	e9.1	e7.1	---	e25	---	30	---	9.1	26	---
TOTAL	538	554	332.9	244.0	262.4	656	884	796	539	285.6	488.6	745
MEAN	17.4	18.5	10.7	7.87	9.37	21.2	29.5	25.7	18.0	9.21	15.8	24.8
MAX	23	22	15	11	11	32	49	36	39	14	41	59
MIN	14	16	8.3	6.0	6.3	11	19	18	10	6.0	6.7	16
AC-FT	1,070	1,100	660	484	520	1,300	1,750	1,580	1,070	566	969	1,480

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)																																								
	35.5	72.6	(1983)	17.4	(2003)	29.9	49.9	(1983)	15.0	(1993)	22.3	39.5	(1985)	10.3	(1982)	19.2	36.6	(1984)	7.87	(2003)	19.6	33.4	(1986)	9.37	(2003)	31.4	52.3	(1985)	12.5	(1982)	52.4	135	(1990)	27.9	(1990)	82.7	413	(2002)	13.2	(2002)	82.4	240	(2002)	8.66	(2002)	49.1	130	(2002)	7.63	(2002)	62.2	153	(2002)	10.9	(2002)	45.2	90.8	(1982)	14.7	(1996)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1982 - 2003

ANNUAL TOTAL	6,053.7	6,325.5	
ANNUAL MEAN	16.6	17.3	44.4
HIGHEST ANNUAL MEAN			106 1984
LOWEST ANNUAL MEAN			17.3 2002
HIGHEST DAILY MEAN	73 Apr 4	59 Sep 10	954 May 23, 1984
LOWEST DAILY MEAN	4.0 Jul 31	e6.0 Jan 12	4.0 Jul 31, 2002
ANNUAL SEVEN-DAY MINIMUM	5.4 Jul 27	6.6 Jan 15	5.4 Jul 27, 2002
MAXIMUM PEAK FLOW		62 Sep 10	1,120 May 23, 1984
MAXIMUM PEAK STAGE		2.25 Sep 10	a4.49 May 23, 1984
ANNUAL RUNOFF (AC-FT)	12,010	12,550	32,170
10 PERCENT EXCEEDS	28	29	89
50 PERCENT EXCEEDS	13	16	31
90 PERCENT EXCEEDS	7.6	8.0	14

e Estimated.

a Maximum gage height, 5.64 ft, Mar 25, 1998, backwater from ice.

## 383126106475600 TOMICHI CREEK BELOW COCHETOPA CREEK NEAR PARLIN, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°31'26", long 106°47'56", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec. 7, T.49 N., R.2 E., Gunnison County, Hydrologic Unit 14020003, 100 ft south of Highway 50, 1 mi downstream of confluence with Cochetopa Creek, and 4 mi northwest of Parlin.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--March to September 1998, November 2000 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=383126106475600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=383126106475600)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water unfltrd, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO <sub>3</sub> (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 17...	1100	28	14	10.0	8.2	319	4.5	150	43.2	10.6	0.24	<0.015	<0.022
DEC 05...	0840	22	--	10.8	8.2	269	0.0	--	--	--	0.13	<0.015	<0.022
FEB 13...	1020	45	--	10.0	7.7	236	0.2	--	--	--	0.10	<0.015	E.018
APR 17...	1015	86	E8.0	9.4	8.1	239	6.1	110	29.9	7.52	0.36	<0.015	<0.022
JUN 20...	0900	186	2.3	8.0	8.1	367	12.1	180	48.9	13.6	0.55	E.009	<0.022
AUG 28...	1010	73	4.8	8.2	8.3	256	15.1	120	34.4	8.28	0.29	<0.015	<0.022

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 17...	<0.002	0.029	0.059	E14
DEC 05...	<0.002	0.024	0.039	E5
FEB 13...	<0.002	0.011	0.028	E27
APR 17...	<0.002	0.031	0.085	<1
JUN 20...	<0.002	0.011	0.044	89
AUG 28...	<0.002	0.029	0.066	E5

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Aluminum, water, fltrd, ug/L (01106)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 17...	<20	<0.2	<1.2	65	<1	50.3	<0.3	<24
APR 17...	<20	<0.2	<1.2	157	<1	65.5	<0.3	<24
JUN 20...	2	<0.2	1.3	98	M	71.6	<0.3	5
AUG 28...	2	<0.2	E1.0	43	<1	31.9	<0.3	E2

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

383126106475600 TOMICHI CREEK BELOW COCHETOPA CREEK NEAR PARLIN, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Peri- phyton biomass ash weight, g/m2 (00572)	Peri- phyton biomass dry weight, g/m2 (00573)	Biomass chloro- phyll ratio, peri- phyton, number (70950)	Pheo- phytin a, peri- phyton, mg/m2 (62359)	Chloro- phyll a peri- phyton, chromo- fluoro, mg/m2 (70957)	Biomass peri- phyton, ashfree drymass g/m2 (49954)
FEB 13...	1015	830	858.7	--	E22	E35.7	24.700
AUG 28...	1015	760	782.6	736	18	29.2	22.0

E -- Estimated laboratory analysis value.

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
OCT 17...	1100	28	4.5	6	0.45
APR 17...	1015	86	6.1	18	4.1
JUN 20...	0900	186	12.1	6	2.8
AUG 28...	1010	73	15.1	8	1.6

**09119000 TOMICHI CREEK AT GUNNISON, CO**

LOCATION.--Lat 38°31'18", long 106°56'25", in NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.11, T.49 N., R.1 W., Gunnison County, Hydrologic Unit 14020003, on right bank 300 ft downstream from highway bridge, 1.8 mi southwest of Post Office in Gunnison, and 2.0 mi upstream from mouth.

DRAINAGE AREA.--1,061 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November and December 1910 (gage heights and discharge measurements only), October 1937 to current year. Monthly discharges only for some periods, published in WSP 1313. Published as "near Gunnison" 1910. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09119000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09119000)

REVISED RECORDS.--WSP 2124: Drainage area. WDR CO-86-2: 1985.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Datum of gage is 7,628.58 ft above NGVD of 1929. Nov. 25 to Dec. 24, 1910, nonrecording gage 300 ft upstream at different datum. Apr. 20, 1938 to Oct. 2, 1940, water-stage recorder at present site at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 24,000 acres upstream from station. Water diverted upstream from station by Larkspur ditch to Arkansas River basin since 1935 and by Tarbell ditch to Rio Grande basin since 1914.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	66	e59	e51	e51	e44	e93	10	558	50	120	72
2	35	65	e57	e53	e51	e43	107	e12	555	51	117	66
3	34	61	e57	e50	e49	e44	103	e11	470	52	107	64
4	23	51	e55	e50	e47	e44	90	e11	379	52	101	67
5	25	51	e54	e51	e47	e44	88	e12	333	52	100	70
6	27	48	e54	e50	e46	e43	78	e11	297	52	89	82
7	27	46	e55	e50	e46	e45	76	e9.8	255	51	87	93
8	26	57	e54	e52	e46	e48	67	e8.7	228	48	87	104
9	29	101	e53	e51	e44	e56	70	e11	202	45	83	106
10	29	107	e53	e50	e44	e69	75	e8.7	200	42	88	184
11	29	86	e52	e51	e46	e82	80	e10	195	41	79	239
12	30	76	e52	e50	e45	e81	84	e8.7	174	38	82	201
13	29	69	e52	e49	e47	e77	82	e12	165	46	85	163
14	29	e69	e50	e49	e50	e78	66	15	164	48	94	148
15	30	e69	e49	e49	e50	e68	78	15	150	47	81	133
16	31	e65	e50	e49	e47	e68	82	18	138	48	74	124
17	32	e70	e51	e47	e48	e64	74	46	130	50	78	109
18	33	e69	e53	e48	e50	e64	70	89	136	54	77	99
19	34	e69	e52	e47	e49	e63	70	157	154	54	83	89
20	38	e70	e51	e46	e48	e61	66	164	165	51	79	88
21	39	e74	e49	e45	e47	e67	59	180	165	61	69	87
22	39	e75	e49	e45	e47	e64	40	178	155	77	67	82
23	45	e77	e48	e45	e45	e74	7.4	208	133	86	67	79
24	51	e73	e47	e46	e48	e77	12	254	108	92	73	77
25	48	e73	e48	e47	e47	e76	11	319	92	95	74	75
26	50	e69	e47	e46	e45	e76	14	369	90	90	85	69
27	52	e62	e47	e46	e45	e72	16	386	72	105	73	65
28	53	e60	e49	e47	e45	e69	15	419	61	139	71	61
29	58	e59	e50	e47	---	e64	14	469	60	167	76	59
30	66	e60	e50	e47	---	e63	9.8	565	52	160	83	49
31	66	---	e50	e49	---	e71	---	550	---	124	79	---
TOTAL	1,175	2,047	1,597	1,503	1,320	1,959	1,797.2	4,536.9	6,036	2,168	2,608	3,004
MEAN	37.9	68.2	51.5	48.5	47.1	63.2	59.9	146	201	69.9	84.1	100
MAX	66	107	59	53	51	82	107	565	558	167	120	239
MIN	23	46	47	45	44	43	7.4	8.7	52	38	67	49
AC-FT	2,330	4,060	3,170	2,980	2,620	3,890	3,560	9,000	11,970	4,300	5,170	5,960

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2003, BY WATER YEAR (WY)

MEAN	94.1	101	76.8	67.3	69.6	112	236	392	461	190	160	93.2
MAX	209	158	117	116	98.0	279	564	2,073	1,481	859	440	318
(WY)	(1970)	(1971)	(1987)	(1971)	(1986)	(1939)	(1942)	(1984)	(1984)	(1957)	(1957)	(1970)
MIN	33.5	62.4	45.8	37.1	36.2	59.8	56.5	10.1	24.7	26.8	25.6	19.2
(WY)	(1964)	(1951)	(1964)	(1979)	(1979)	(1981)	(1967)	(2002)	(2002)	(2002)	(2002)	(1956)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1938 - 2003
ANNUAL TOTAL	17,322.4	29,751.1	
ANNUAL MEAN	47.5	81.5	171
HIGHEST ANNUAL MEAN			478
LOWEST ANNUAL MEAN			54.2
HIGHEST DAILY MEAN	156	565	4,040
LOWEST DAILY MEAN	e3.4	7.4	2.6
ANNUAL SEVEN-DAY MINIMUM	e4.5	e9.7	e4.5
MAXIMUM PEAK FLOW		617	4,620
MAXIMUM PEAK STAGE		3.23	5.49
ANNUAL RUNOFF (AC-FT)	34,360	59,010	124,100
10 PERCENT EXCEEDS	84	154	375
50 PERCENT EXCEEDS	41	59	97
90 PERCENT EXCEEDS	18	31	52

e Estimated.

09119000 TOMICHI CREEK AT GUNNISON, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD--October 1990 to September 1993, April 1995 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09119000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09119000)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
OCT 17...	0920	32	2.8	10.0	8.2	361	4.0	180	53.0	12.5	0.22	<0.015	E.018
DEC 05...	1140	54	--	10.8	8.4	290	0.0	--	--	--	0.18	<0.015	E.019
FEB 13...	1120	44	--	10.7	8.1	265	2.2	--	--	--	0.15	<0.015	E.013
APR 17...	1130	72	E8.3	9.4	8.1	253	9.3	120	33.1	8.32	0.33	<0.015	<0.022
JUN 19...	1220	153	1.2	9.2	8.0	378	16.5	190	52.4	13.3	0.53	<0.015	<0.022
AUG 28...	1340	71	3.1	11.3	8.7	279	18.5	140	40.1	10.8	0.27	<0.015	<0.022

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 17...	E.002	E.004	0.019	<2.0	97
DEC 05...	<0.002	0.008	0.032	<2.0	E5
FEB 13...	<0.002	E.006	0.024	<2.0	<1
APR 17...	<0.002	0.022	0.074	<2.0	E1
JUN 19...	<0.002	0.010	0.042	<2.0	79
AUG 28...	<0.002	0.013	0.041	<2.0	E42

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Aluminum, water, fltrd, ug/L (01106)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 17...	<20	<0.2	<1.2	34	<1	21.7	<0.3	<24
APR 17...	<20	<0.2	E.7	104	<1	87.3	<0.3	<24
JUN 19...	<2	<0.2	1.8	43	<1	63.5	<0.3	4
AUG 28...	2	<0.2	<1.2	20	<1	19.0	<0.3	E2

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## GUNNISON RIVER BASIN

09119000 TOMICHI CREEK AT GUNNISON, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Peri- phyton biomass ash weight, g/m <sup>2</sup> (00572)	Peri- phyton biomass dry weight, g/m <sup>2</sup> (00573)	Biomass chloro- phyll ratio, peri- phyton, number (70950)	Pheo- phytin a, peri- phyton, mg/m <sup>2</sup> (62359)	Chloro- phyll a peri- phyton, chromo- fluoro, mg/m <sup>2</sup> (70957)	Biomass peri- phyton, ashfree drymass g/m <sup>2</sup> (49954)
AUG 28...	1335	1,800	1,838	38,000	0.7	1.1	43.0

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
OCT 03...	1033	36	358	9.5	MAY 02...	1520	11	389	13.6
NOV 14...	1010	69	345	1.0	29...	1313	501	298	18.0
APR 01...	1730	93	272	9.5	SEP 04...	1404	66	297	19.2

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)
OCT 17...	0920	32	4.0	2	0.17
APR 17...	1130	72	9.3	11	2.1
JUN 19...	1220	153	16.5	3	1.2
AUG 28...	1340	71	18.5	4	0.73

**383103106594200 GUNNISON RIVER AT COUNTY ROAD 32 BELOW GUNNISON, CO**

WATER-QUALITY RECORDS

LOCATION.--Lat 38°31'03", long 106°59'42", in SW¼SE¼ sec. 8, T.49 N., R.1 W., Gunnison County, Hydrologic Unit 14020002, at County Road 32 bridge, 0.25 mi south of US HWY 50, and 3.3 mi west of Gunnison.

DRAINAGE AREA.--2,128 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1994 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=383103106594200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=383103106594200)

PERIOD OF DAILY RECORD.--WATER TEMPERATURE: October 1996 to September 1998.

INSTRUMENTATION.--Water temperature sensor and logger, October 1996 to September 1998.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)
OCT 16...	1230	255	3.1	9.4	8.2	282	6.5	140	42.7	8.83	0.25	<0.015	0.032
DEC 04...	1530	248	3.7	11.3	8.4	259	1.0	130	37.0	8.27	E.09	<0.015	0.025
FEB 13...	1240	249	5.0	10.9	8.5	230	0.2	120	34.9	7.75	0.18	<0.015	0.078
APR 17...	1300	384	E4.6	10.1	8.6	235	8.1	110	33.7	6.98	0.26	<0.015	0.104
JUN 19...	1455	1,260	1.1	8.7	8.3	241	15.0	130	37.9	7.70	0.28	<0.015	E.018
AUG 29...	0840	487	2.7	8.4	8.1	240	12.4	120	34.5	7.27	0.16	<0.015	0.078

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, m-TEC MF, water, col/100 mL (31633)
OCT 16...	<0.002	0.009	0.014	<2.0	<1
DEC 04...	<0.002	E.005	0.017	<2.0	E1
FEB 13...	<0.002	0.011	0.049	<2.0	<1
APR 17...	E.002	0.012	0.036	<2.0	E1
JUN 19...	E.002	E.004	0.025	<2.0	23
AUG 29...	<0.002	0.012	0.033	<2.0	71

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.



383103106594200 GUNNISON RIVER AT COUNTY ROAD 32 BELOW GUNNISON, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cadmium water, fltred, ug/L (01025)	Copper, water, fltred, ug/L (01040)	Lead, water, fltred, ug/L (01049)	Mangan- ese, water, fltred, ug/L (01056)	Selen- ium, water, fltred, ug/L (01145)	Silver, water, fltred, ug/L (01075)	Zinc, water, fltred, ug/L (01090)
OCT 16...	<0.04	0.4	0.10	12.4	<0.5	<0.2	1
DEC 04...	<0.04	0.5	E.07	15.9	<0.5	<0.2	1
FEB 13...	<0.04	0.5	<0.08	10.2	E.3	<0.2	1
APR 17...	<0.04	1.0	0.10	26.9	E.4	<0.2	3
JUN 19...	E.02	0.7	E.06	21.4	<0.5	<0.2	3
AUG 29...	<0.04	0.7	<0.08	16.4	<0.5	<0.2	1

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Biomass peri- phyton, ashfree drymass g/m2 (49954)	Peri- phyton biomass ash weight, g/m2 (00572)	Peri- phyton biomass dry weight, g/m2 (00573)	Biomass chloro- phyll ratio, peri- phyton, number (70950)	Pheo- phytin a, peri- phyton, mg/m2 (62359)	Chloro- phyll a peri- phyton, chromo- fluoro, mg/m2 (70957)
AUG 29...	0845	<7.400	840	849.9	356	13	20.8

&lt; -- Actual value is known to be less than the value shown.

09124500 LAKE FORK AT GATEVIEW, CO

LOCATION.--Lat 38°17'56", long 107°13'46", in SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.29, T.47 N., R.3 W., Gunnison County, Hydrologic Unit 14020002, on left bank at old village of Gateview, 25 ft downstream from private bridge, 0.2 mi upstream from Indian Creek, and 6.3 mi upstream from waterline of Blue Mesa Reservoir, at elevation 7,519 ft.

DRAINAGE AREA.--334 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for some periods, published in WSP 1313. Water-quality data available, October 1990 to September 1993. Sediment data available, October 1998 to September 1999. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09124500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09124500)

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Datum of gage is 7,827.66 ft above NGVD of 1929. Prior to Oct. 1, 1938, at datum 2.00 ft higher, Oct. 1, 1938 to Sept. 30, 1945, at datum 1.00 ft higher, and Oct. 1, 1945 to Sept. 3, 1991, at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 1,600 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	52	e57	e40	e40	e34	e57	195	1,200	311	162	169
2	72	51	e53	e42	e41	e33	e46	166	1,190	304	155	159
3	86	e45	e54	e39	e39	e34	41	154	1,120	295	151	158
4	84	e43	e52	e39	e37	e34	37	158	1,000	277	152	153
5	85	e46	e53	e40	e37	e34	35	151	936	266	155	144
6	85	e41	e51	e40	e35	e33	33	133	815	253	143	181
7	85	e42	e51	e39	e35	e35	32	125	743	241	137	182
8	85	e44	e51	e41	e36	e38	28	122	723	222	137	171
9	84	e55	e49	e41	e33	e45	36	112	744	206	126	184
10	81	e49	e48	e40	e34	e60	41	109	746	196	117	194
11	78	e46	e47	e40	e35	e73	50	103	709	181	113	281
12	76	e41	e47	e39	e34	e72	58	110	e649	174	108	258
13	72	e56	e48	e38	e37	e68	59	143	e592	166	131	294
14	71	e50	e47	e39	e40	e69	68	166	e532	150	151	313
15	67	e48	e48	e39	e39	e59	74	252	e541	114	141	313
16	65	e45	e47	e38	e37	e58	66	275	e525	113	148	309
17	64	e52	e50	e36	e37	e54	62	334	e490	119	147	305
18	62	e59	e51	e37	e39	e54	62	428	435	107	140	284
19	62	e57	e49	e37	e38	e52	62	422	433	108	131	271
20	60	e61	e45	e35	e38	e51	59	445	438	111	122	256
21	58	e65	e49	e34	e37	e57	62	461	410	114	117	233
22	59	e66	e46	e34	e36	e54	70	610	410	117	117	215
23	61	e68	e45	e34	e34	e65	71	846	408	116	120	196
24	61	e64	e45	e36	e37	e68	66	1,010	391	118	141	183
25	60	e55	e44	e37	e36	e67	64	974	366	120	134	173
26	58	e57	e45	e35	e34	e64	73	869	357	124	134	160
27	60	e48	e42	e36	e35	e48	93	1,090	350	122	150	149
28	58	e55	e42	e37	e35	e41	120	1,270	343	147	158	142
29	56	e56	e43	e36	---	e47	174	1,410	332	132	172	136
30	51	e56	e44	e36	---	e53	230	1,480	321	136	172	129
31	55	---	e39	e39	---	e62	---	1,260	---	143	177	---
TOTAL	2,131	1,573	1,482	1,173	1,025	1,616	2,029	15,383	18,249	5,303	4,359	6,295
MEAN	68.7	52.4	47.8	37.8	36.6	52.1	67.6	496	608	171	141	210
MAX	86	68	57	42	41	73	230	1,480	1,200	311	177	313
MIN	51	41	39	34	33	33	28	103	321	107	108	129
AC-FT	4,230	3,120	2,940	2,330	2,030	3,210	4,020	30,510	36,200	10,520	8,650	12,490

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2003, BY WATER YEAR (WY)

MEAN	95.2	68.3	52.0	46.1	43.8	56.0	131	536	966	473	206	132
MAX	242	143	75.7	66.5	71.0	102	340	1,153	1,586	1,266	480	430
(WY)	(1942)	(1942)	(1984)	(1984)	(1986)	(1939)	(1952)	(1984)	(1944)	(1957)	(1999)	(1970)
MIN	40.3	42.7	32.9	29.9	30.4	30.5	53.3	205	176	63.2	48.1	45.5
(WY)	(1957)	(1940)	(2002)	(2002)	(1990)	(1977)	(1990)	(1977)	(2002)	(2002)	(2002)	(1956)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1938 - 2003
ANNUAL TOTAL	29,657	60,618	
ANNUAL MEAN	81.3	166	234
HIGHEST ANNUAL MEAN			413 1984
LOWEST ANNUAL MEAN			79.8 2002
HIGHEST DAILY MEAN	355 May 21	1,480 May 30	2,410 Jun 29, 1957
LOWEST DAILY MEAN	e21 Jan 3	28 Apr 8	e,a21 Jan 3, 2002
ANNUAL SEVEN-DAY MINIMUM	e26 Jan 29	e34 Feb 28	23 Jan 19, 1976
MAXIMUM PEAK FLOW		1,700 May 30	2,720 Jul 10, 1983
MAXIMUM PEAK STAGE		4.04 May 30	b4.18 Jul 10, 1983
ANNUAL RUNOFF (AC-FT)	58,820	120,200	169,700
10 PERCENT EXCEEDS	182	409	677
50 PERCENT EXCEEDS	56	67	85
90 PERCENT EXCEEDS	32	37	40

e Estimated.

a Also occurred Feb 1, 2002.

b At datum then in use. Maximum gage height, 4.77 ft, Jun 16, 1995, at present datum.

**09125800 SILVER JACK RESERVOIR NEAR CIMARRON, CO**

LOCATION.--Lat 38°13'58", long 107°32'28", in T.46 N., R. 6 W., Gunnison County, Hydrologic Unit 14020002, in gate house of Silver Jack Dam on Cimarron River, 14.5 mi south of Cimarron.

DRAINAGE AREA.--59 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1987 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09125800](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09125800)

REVISED RECORDS.--WDR CO-92-2: 1991 minimum contents.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8925.60 ft. above NGVD of 1929, (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by an earthfill dam. Storage began in December 1970; dam completed December 1971. Capacity, 13,520 acre-ft, 1971 survey, between elevation 8,800.0 ft, streambed at dam, and 8,925.6 ft, crest of spillway. Dead storage below elevation 8,836.0 ft, 520 acre-ft. Figures given are live contents.

COOPERATION.--Capacity tables provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 13,550 acre-ft, June 15-16, 1995, elevation, 8,927.45 ft; minimum daily mean contents, 934 acre-ft, Oct. 2, 2002, mean elevation, 8,853.77 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily mean contents, 13,370 acre-ft, May 30, mean elevation, 8,926.84 ft; minimum daily mean contents, 934 acre-ft, Oct. 2, mean elevation, 8,853.77 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	8,853.93	940	-
Oct. 31	8,856.79	1,150	+210
Nov. 30	8,862.51	1,630	+480
Dec. 31	8,865.81	1,930	+300
CAL YR 2002	-	-	-730
Jan. 31	8,868.38	2,180	+250
Feb. 28	8,869.47	2,300	+120
Mar. 31	8,871.77	2,540	+240
Apr. 30	8,888.43	4,790	+2,250
May 31	8,926.76	13,350	+8,560
June 30	8,925.72	13,040	-310
July 31	8,912.07	9,430	-3,610
Aug. 31	8,891.53	5,290	-4,140
Sept. 30	8,890.71	5,150	-140
WTR YR 2003	-	-	+4,210

**09126000 CIMARRON RIVER NEAR CIMARRON, CO**

LOCATION.--Lat 38°15'26", long 107°32'46", in NW¼NE¼ Sec.8, T.46 N., R.6 W., Gunnison County, Hydrologic Unit 14020002, on right bank 0.2 mi upstream from Forest Service bridge, 0.8 mi upstream from headgate on Cimarron ditch, 1.9 mi downstream from Silver Jack Dam, and 13 mi south of Cimarron.

DRAINAGE AREA.--66.6 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1954 to current year. Prior to October 1965, published as Cimarron Creek near Cimarron. Statistical summary computed for 1971 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09126000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09126000)

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Datum of gage is 8,641.48 ft above NGVD of 1929. Oct. 14, 1954 to Oct. 11, 1972 at site 0.4 mi downstream at different datum. Oct. 12, 1972 to Sept. 30, 1996 at site 0.2 mi downstream at datum 10.00 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are poor, and discharges above 800 ft<sup>3</sup>/s, which are fair. Diversion upstream from station through Owl Creek ditch into Uncompahgre River basin. Flow regulated by Silver Jack Dam, 1.9 mi upstream since Dec. 23, 1970, total capacity, 13,520 acre-ft. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	14	e16	e11	e17	e14	e16	27	943	138	124	99
2	27	14	e16	e11	e16	e14	e16	26	913	130	123	99
3	23	e14	e14	e11	e14	e16	e18	26	862	124	121	103
4	23	e13	e13	e14	e10	e16	e16	31	809	138	127	105
5	23	e14	e11	e12	e11	e18	e15	51	724	153	135	109
6	23	e14	e12	e12	e11	e17	e16	73	617	154	135	107
7	23	e13	e13	e13	e10	e18	e18	73	550	154	131	110
8	23	e13	e14	e15	e10	e18	e20	77	484	152	125	106
9	23	e15	e13	e13	e12	e18	e19	86	506	152	124	112
10	23	e19	e12	e14	e14	e19	19	86	456	153	125	114
11	23	e14	e13	e13	e14	e21	20	85	466	156	121	108
12	22	e13	e13	e12	e15	e19	21	94	454	153	118	102
13	19	e13	e13	e12	e16	e15	23	110	380	152	118	96
14	13	e13	e12	e13	e18	e17	24	111	349	155	118	93
15	13	e14	e12	e13	e17	e15	23	94	391	150	117	92
16	13	e13	e12	e13	e16	e15	22	73	370	149	117	91
17	13	e14	e13	e14	e14	e14	24	126	315	145	118	91
18	13	e15	e15	e13	e16	e13	23	130	292	142	118	92
19	22	e16	e13	e12	e15	e12	21	130	271	142	119	92
20	28	e17	e11	e11	e15	e14	23	130	271	142	117	92
21	28	e18	e13	e11	e15	e14	24	135	245	145	117	65
22	28	e20	e13	e11	e15	e16	25	117	236	148	118	33
23	28	e21	e12	e11	e15	e17	24	68	240	147	120	26
24	28	e17	e13	e11	e17	e19	22	71	206	144	115	20
25	23	e14	e13	e11	e15	e21	26	85	183	142	107	19
26	14	e13	e13	e11	e13	e20	31	95	172	143	103	19
27	14	e12	e11	e13	e14	e18	31	120	171	144	101	19
28	14	e13	e12	e15	e14	e16	32	662	162	138	100	20
29	14	e13	e13	e15	---	e17	30	984	153	124	100	19
30	13	e16	e11	e17	---	e18	28	1,120	147	123	101	19
31	14	---	e11	e17	---	e18	---	1,060	---	124	100	---
TOTAL	637	442	396	395	399	517	670	6,156	12,338	4,456	3,633	2,272
MEAN	20.5	14.7	12.8	12.7	14.2	16.7	22.3	199	411	144	117	75.7
MAX	29	21	16	17	18	21	32	1,120	943	156	135	114
MIN	13	12	11	11	10	12	15	26	147	123	100	19
AC-FT	1,260	877	785	783	791	1,030	1,330	12,210	24,470	8,840	7,210	4,510

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)
	46.1	135	(1983)	20.2	(1991)	22.4	46.9	(1986)	8.18	(1990)	16.4	31.7	(1974)	6.79	(1978)
	15.0	30.0	(1974)	2.36	(1971)	15.3	29.4	(1986)	3.03	(1971)	16.7	35.3	(1986)	4.45	(1971)
	24.4	46.5	(1987)	8.46	(1977)	24.4	44.0	(1996)	46.5	(1995)	174	440	(1984)	82.7	(2002)
	421	799	(1984)	109	(2002)	212	640	(1995)	116	(2002)	116	239	(1983)	63.8	(2002)
	74.7	126	(1995)	32.2	(1977)										

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1971 - 2003

ANNUAL TOTAL	16,602	32,311	
ANNUAL MEAN	45.5	88.5	a96.4
HIGHEST ANNUAL MEAN			180 1984
LOWEST ANNUAL MEAN			40.2 1977
HIGHEST DAILY MEAN	128	May 31	1,330 Jun 16, 1995
LOWEST DAILY MEAN	e11	Dec 5	b,c0.00 Dec 24, 1970
ANNUAL SEVEN-DAY MINIMUM	e12	Dec 25	0.00 Dec 24, 1970
MAXIMUM PEAK FLOW			d,f1,620 Jun 5, 1997
MAXIMUM PEAK STAGE		3.75	May 30 g3.91 Jun 5, 1997
ANNUAL RUNOFF (AC-FT)	32,930	64,090	69,820
10 PERCENT EXCEEDS	102	153	249
50 PERCENT EXCEEDS	27	21	30
90 PERCENT EXCEEDS	13	13	11

e Estimated.

a Average discharge for 16 years (water years 1955-70), 88.6 ft<sup>3</sup>/s; 64,190 acre-ft/yr, prior to completion of Silver Jack Dam.

b Also occurred Dec 25-31, 1970, and Jan 1-9, 1971. Result of storage in Silver Jack Dam.

c Minimum daily discharge prior to construction of Silver Jack Dam, 8.0 ft<sup>3</sup>/s, Dec 27-28, 1962, and Jan 13, 1963.

d Also occurred May 30, 2003.

f Maximum discharge and stage for period of record, 1,790 ft<sup>3</sup>/s, Jun 28, 1957, gage height, 8.32 ft, site and datum then in use.

g Maximum gage height for statistical period, 6.16 ft, Jun 25, 1971.

## 09128000 GUNNISON RIVER BELOW GUNNISON TUNNEL, CO

LOCATION.--Lat 38°31'45", long 107°38'54", in NE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.10, T.49 N., R.7 W., Montrose County, Hydrologic Unit 14020002, on left bank 0.4 mi downstream from east portal of Gunnison tunnel, 4.7 mi downstream from Crystal Creek, and 12 mi northeast of Montrose.

DRAINAGE AREA.--3,965 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1903 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at east portal of Gunnison tunnel" 1905-6 and as "at River portal" 1907-11. Statistical summary computed for 1911 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09128000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09128000)

REVISED RECORDS.--WSP 1313: 1906(M). WSP 1733: 1918-19, 1948. WSP 2124: Drainage area. WDR CO-77-2: 1926, 1941.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,526.06 ft above NGVD of 1929. Apr. 9, 1905 to Aug. 20, 1915, nonrecording gage at site 300 ft upstream from diversion dam at east portal of Gunnison Tunnel, at different datum. Aug. 21, 1915 to Jan. 19, 1943, nonrecording gage at site 500 ft downstream from diversion dam at east portal of Gunnison Tunnel, at different datum. Jan. 20, 1943 to Sept. 30, 1956, water-stage recorder at present site at datum 1.0 ft, higher.

REMARKS.--Records good except for estimated discharges, which are fair. Natural flow of stream affected by transmountain diversions, transbasin diversion through Gunnison Tunnel for irrigation of about 75,000 acres in Uncompahgre Valley (see table below for figures of diversion), Taylor Park Reservoir (station 09108500), Blue Mesa Reservoir (station 09124600), Morrow Point Reservoir (station 09125400), Crystal Reservoir (station 09127600), diversions for irrigation of about 63,000 acres, and return flow from irrigated areas.

COOPERATION.--Diversions, in acre-feet, through Gunnison Tunnel; provided by Colorado Division of Water Resources.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	322	279	254	260	257	269	272	272	1,270	693	670	641
2	324	e277	254	260	255	268	273	295	1,330	739	676	600
3	324	e276	250	260	252	268	276	313	1,270	765	677	546
4	309	275	250	260	259	268	271	313	1,050	815	673	548
5	318	285	250	260	266	272	268	313	837	814	673	553
6	328	292	247	255	254	276	272	312	658	814	676	556
7	320	272	247	256	254	272	275	312	627	818	674	557
8	315	272	247	263	254	272	274	313	631	816	673	560
9	317	274	248	264	254	270	274	313	515	816	672	525
10	319	273	250	264	255	269	278	312	381	845	673	464
11	317	272	248	263	255	269	279	311	384	899	672	433
12	316	272	248	263	257	269	279	311	388	892	673	436
13	315	289	251	262	260	269	280	320	387	890	676	438
14	316	290	251	260	260	268	279	320	386	885	747	441
15	271	273	251	260	260	267	293	323	383	850	821	443
16	265	272	251	260	260	267	277	367	383	823	821	444
17	258	270	252	260	260	271	275	362	382	826	821	436
18	256	269	251	260	261	271	276	351	386	818	790	426
19	256	269	253	260	267	270	274	331	384	816	731	426
20	256	267	254	257	272	270	274	349	383	811	732	428
21	256	266	254	261	264	271	276	359	380	774	732	428
22	277	266	252	264	264	272	277	356	415	749	733	395
23	317	265	257	258	266	272	275	357	514	746	727	372
24	279	263	251	258	268	275	275	361	361	747	721	372
25	279	267	252	258	268	270	274	361	368	749	708	372
26	279	266	255	257	264	270	275	362	444	746	679	372
27	279	257	255	255	267	270	275	363	546	744	672	371
28	279	257	255	255	267	269	274	362	596	745	667	371
29	279	256	256	256	---	271	273	553	596	736	660	371
30	279	254	256	256	---	272	273	911	636	669	653	369
31	279	---	255	257	---	272	---	1,260	---	668	646	---
TOTAL	9,104	8,135	7,805	8,042	7,300	8,379	8,266	12,018	17,271	24,518	21,819	13,694
MEAN	294	271	252	259	261	270	276	388	576	791	704	456
MAX	328	292	257	264	272	276	293	1,260	1,330	899	821	641
MIN	256	254	247	255	252	267	268	272	361	668	646	369
AC-FT	18,060	16,140	15,480	15,950	14,480	16,620	16,400	23,840	34,260	48,630	43,280	27,160
a	38,060	647	656	589	476	5,370	42,820	49,730	47,600	62,240	60,990	44,820

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2003, BY WATER YEAR (WY)

MEAN	568	759	800	781	770	863	1,271	3,081	3,896	1,514	688	507
MAX	2,114	1,888	2,165	2,732	3,153	3,278	3,282	8,617	11,670	8,468	2,237	2,447
(WY)	(1912)	(1971)	(1987)	(1974)	(1971)	(1971)	(1930)	(1928)	(1957)	(1957)	(1957)	(1929)
MIN	17.0	116	141	143	155	248	177	216	123	61.1	34.4	8.37
(WY)	(1935)	(1935)	(1966)	(1966)	(1966)	(1966)	(1954)	(1967)	(1954)	(1940)	(1924)	(1937)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1911 - 2003

ANNUAL TOTAL	164,181	146,351	1,292
ANNUAL MEAN	450	401	2,936
HIGHEST ANNUAL MEAN			1984
LOWEST ANNUAL MEAN			261
HIGHEST DAILY MEAN	723	Feb 15	1,330
LOWEST DAILY MEAN	247	Dec 6	247
ANNUAL SEVEN-DAY MINIMUM	248	Dec 6	248
MAXIMUM PEAK FLOW			1,400
MAXIMUM PEAK STAGE			3.87
ANNUAL RUNOFF (AC-FT)	325,700	290,300	936,000
10 PERCENT EXCEEDS	645	745	3,050
50 PERCENT EXCEEDS	473	279	611
90 PERCENT EXCEEDS	257	255	196

e Estimated.

a Diversions, in acre-feet, through Gunnison tunnel, provided by Colorado Division of Water Resources.

b Also occurred Sep 26, 1936, Oct 8, 1949, Sep 5-6, and 15-16, 1950.

c Present datum, from rating curve extended above 14,000 ft<sup>3</sup>/s.

09128000 GUNNISON RIVER BELOW GUNNISON TUNNEL, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1994 to September 1998, November 2002 to September 2003. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09128000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09128000)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 2002 to September 2003.

WATER TEMPERATURE: October 1996 to September 1998, November 2002 to September 2003.

TURBIDITY: November 2002 to September 2003.

INSTRUMENTATION.--Water temperature sensor and logger, October 1996 to September 1998. Water quality monitor with satellite telemetry, November 2002 to September 2003.

REMARKS.--Daily specific conductance records are excellent, except Apr. 10-16, May 3-12, July 9-25, and Sept. 28-30, which are good. Daily water temperature record is good. Daily turbidity records are good, except Dec. 3-10, Feb. 19 to Mar. 3, May 13-21, and June 19 to Aug. 6, which are fair, and Dec. 27 to Jan. 8, Mar. 31 to Apr. 9, which are poor. Daily maximum turbidity values are not published because of unusually high and erratic readings which are probably not representative of the turbidity of the stream.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 276 microsiemens/cm, Mar. 26, 2003; minimum, 155 microsiemens/cm, May 27, 2003.

WATER TEMPERATURE: Maximum, 13.7°C Sept. 14, 2003; minimum, 1.0°C, Feb. 7, 8, 10, 2003.

TURBIDITY: Maximum, not determined; minimum, 0.1 NTU, Jan. 30, 31, Mar. 11, 2003.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 276 microsiemens/cm, Mar. 26; minimum, 155 microsiemens/cm, May 27.

WATER TEMPERATURE: Maximum, 13.7°C, Sept. 14; minimum, 1.0°C, Feb. 7, 8, 10.

TURBIDITY: Maximum, not determined; minimum, 0.1 NTU, Jan. 30, 31, Mar. 11.

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfiltered 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfiltered 25 degC (00095)	Temperature, water, deg C (00010)
APR 09...	1252	267	230	4.8	JUN 02...	1440	1,410	171	11.3

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	---	---	---	---	---	---	246	244	245	235	233	234
2	---	---	---	---	---	---	246	245	246	235	232	233
3	---	---	---	---	---	---	246	245	246	234	232	233
4	---	---	---	---	---	---	246	245	246	234	232	233
5	---	---	---	251	248	249	246	245	246	234	232	233
6	---	---	---	239	237	238	246	245	246	233	231	232
7	---	---	---	238	236	237	247	245	246	236	231	232
8	---	---	---	239	237	238	247	245	246	232	230	231
9	---	---	---	239	235	238	247	245	246	231	229	230
10	---	---	---	239	238	239	256	243	247	230	228	229
11	---	---	---	243	238	239	246	244	245	230	228	229
12	---	---	---	239	238	239	246	244	245	230	229	230
13	---	---	---	239	238	239	246	242	244	230	229	230
14	---	---	---	240	238	239	243	238	240	230	228	229
15	---	---	---	245	240	242	238	237	238	230	227	229
16	---	---	---	246	244	245	238	237	238	229	227	229
17	---	---	---	246	244	245	238	237	237	229	228	229
18	---	---	---	246	245	246	238	237	238	230	228	229
19	---	---	---	247	245	246	239	237	238	230	229	230
20	---	---	---	248	246	247	239	236	237	231	230	230
21	---	---	---	250	248	249	237	235	236	231	229	230
22	---	---	---	249	247	248	237	236	236	231	229	230
23	---	---	---	249	247	248	237	235	236	231	228	229
24	---	---	---	248	247	248	236	234	236	230	227	229
25	---	---	---	256	246	248	237	235	236	229	226	228
26	---	---	---	248	246	247	237	236	237	229	227	228
27	---	---	---	248	247	247	238	236	237	229	226	227
28	---	---	---	251	246	248	237	235	236	228	226	227
29	---	---	---	252	244	247	236	234	235	228	226	227
30	---	---	---	246	245	246	235	234	235	229	225	227
31	---	---	---	---	---	---	235	234	235	228	226	227
MONTH	---	---	---	---	---	---	256	234	240	236	225	230

## 09128000 GUNNISON RIVER BELOW GUNNISON TUNNEL, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	228	225	227	238	234	236	248	241	244	---	---	---
2	228	226	227	238	234	236	245	238	242	---	---	---
3	228	225	227	237	232	235	248	239	243	220	215	217
4	228	225	227	236	234	235	250	239	242	220	217	218
5	228	226	227	235	232	234	244	237	240	218	216	217
6	228	225	227	235	231	233	259	241	243	220	216	218
7	228	225	227	234	230	233	241	237	239	221	217	219
8	227	225	226	233	229	231	240	233	236	220	217	218
9	227	225	226	232	228	230	235	229	233	218	214	216
10	228	224	226	231	227	229	233	230	231	218	212	215
11	227	224	226	233	227	230	233	229	231	215	207	211
12	227	224	226	237	233	235	232	229	230	221	205	212
13	227	224	226	241	235	237	233	228	230	219	215	217
14	227	224	226	244	238	240	235	228	232	220	217	218
15	227	224	226	246	240	243	242	232	236	220	218	219
16	227	224	226	255	246	249	242	238	241	221	218	220
17	229	225	227	266	248	255	---	---	---	220	217	219
18	230	227	229	269	259	264	---	---	---	219	215	217
19	231	227	229	271	264	266	---	---	---	217	213	215
20	231	228	230	269	265	267	---	---	---	213	210	211
21	232	228	230	269	264	267	---	---	---	211	204	208
22	235	231	232	270	267	269	---	---	---	205	198	202
23	236	232	234	273	268	270	---	---	---	198	188	193
24	236	233	235	269	267	268	---	---	---	189	175	183
25	237	234	235	274	268	270	---	---	---	175	165	170
26	237	234	236	276	269	271	---	---	---	166	157	161
27	237	234	236	274	265	269	---	---	---	200	155	176
28	237	234	236	269	264	266	---	---	---	202	187	194
29	---	---	---	265	257	261	---	---	---	194	179	185
30	---	---	---	257	252	254	---	---	---	205	186	197
31	---	---	---	252	246	249	---	---	---	206	197	201
MONTH	237	224	229	276	227	249	---	---	---	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	197	175	184	202	201	202	203	201	202	213	210	212
2	181	165	173	204	201	203	203	202	202	214	213	213
3	181	172	176	205	204	204	203	202	202	214	209	211
4	175	171	173	205	204	204	204	202	203	210	209	209
5	172	169	171	206	203	204	205	203	204	210	209	210
6	170	168	169	206	204	205	204	203	203	211	209	210
7	171	168	169	206	204	205	203	202	202	212	210	211
8	175	169	172	212	203	206	203	202	202	213	211	212
9	175	173	174	204	202	203	204	202	203	214	212	213
10	---	---	---	203	202	202	205	203	204	214	212	213
11	---	---	---	205	202	203	204	203	204	218	212	215
12	183	181	182	206	204	205	204	202	203	222	218	219
13	185	183	183	207	204	206	205	203	204	225	221	224
14	185	184	185	207	205	206	206	205	205	226	220	224
15	185	184	185	208	206	207	206	206	206	230	222	226
16	184	183	183	209	207	208	206	205	205	230	224	228
17	183	182	183	209	207	208	206	205	205	230	226	228
18	184	181	182	211	209	210	211	210	206	228	219	223
19	182	181	181	213	210	211	206	205	206	223	219	220
20	183	181	182	213	212	212	207	205	206	223	219	221
21	186	183	184	214	212	213	207	205	206	222	218	220
22	187	184	185	214	213	213	206	205	206	223	217	219
23	193	186	189	215	213	215	206	205	206	219	216	218
24	196	193	195	217	215	216	207	205	206	219	216	218
25	198	196	197	217	202	209	208	207	208	219	216	218
26	199	197	198	202	201	202	209	207	208	219	216	218
27	200	198	199	202	201	202	209	208	208	218	215	217
28	202	200	201	202	201	202	209	207	208	221	215	217
29	201	200	201	203	201	202	209	207	208	220	213	217
30	203	201	202	202	201	202	208	207	208	229	215	222
31	---	---	---	202	201	202	210	208	209	---	---	---
MONTH	---	---	---	217	201	206	211	201	205	230	209	218

## 09128000 GUNNISON RIVER BELOW GUNNISON TUNNEL, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	5.6	5.1	5.3	2.8	2.0	2.4
2	---	---	---	---	---	---	5.3	4.8	5.0	2.3	1.9	2.1
3	---	---	---	---	---	---	5.4	4.8	5.1	2.6	2.0	2.2
4	---	---	---	---	---	---	5.0	4.5	4.7	2.5	2.1	2.3
5	---	---	---	9.5	8.5	8.8	5.1	4.6	4.8	2.8	2.2	2.5
6	---	---	---	9.3	8.4	8.7	4.8	4.4	4.6	2.7	2.2	2.4
7	---	---	---	9.1	8.2	8.6	4.6	4.2	4.4	2.5	2.0	2.2
8	---	---	---	8.8	8.4	8.6	4.7	4.1	4.3	2.2	1.9	2.0
9	---	---	---	8.6	8.2	8.5	4.4	4.0	4.2	2.5	1.8	2.1
10	---	---	---	8.6	8.0	8.2	4.5	3.9	4.1	2.6	2.1	2.3
11	---	---	---	8.3	7.7	8.1	4.1	3.7	3.9	2.6	2.1	2.3
12	---	---	---	7.9	7.4	7.6	4.4	3.8	4.1	2.4	1.9	2.2
13	---	---	---	7.9	7.2	7.5	4.0	3.3	3.8	2.3	1.8	2.0
14	---	---	---	8.2	7.5	7.8	3.3	2.6	3.0	2.4	1.8	2.0
15	---	---	---	7.8	7.0	7.4	3.3	2.6	2.9	2.4	1.9	2.0
16	---	---	---	7.4	6.8	7.1	3.1	2.6	2.8	2.1	1.6	1.8
17	---	---	---	7.4	6.7	7.0	3.0	2.6	2.9	2.3	1.6	1.9
18	---	---	---	7.2	6.6	6.9	3.1	2.6	2.9	2.1	1.4	1.7
19	---	---	---	7.0	6.4	6.6	3.3	2.8	3.0	1.9	1.3	1.6
20	---	---	---	6.9	6.3	6.5	2.8	2.4	2.7	1.9	1.3	1.5
21	---	---	---	6.8	6.3	6.5	2.9	2.3	2.5	2.0	1.3	1.6
22	---	---	---	6.6	6.1	6.3	2.6	2.0	2.3	2.1	1.4	1.7
23	---	---	---	6.5	6.0	6.2	2.3	1.9	2.1	2.2	1.4	1.7
24	---	---	---	6.6	5.9	6.2	2.5	1.9	2.1	2.3	1.4	1.8
25	---	---	---	6.3	5.9	6.1	2.8	2.2	2.4	2.3	1.6	1.9
26	---	---	---	6.1	5.5	5.8	2.7	2.2	2.4	2.0	1.3	1.6
27	---	---	---	5.7	5.2	5.4	2.7	2.0	2.3	2.0	1.3	1.7
28	---	---	---	5.6	5.1	5.3	2.2	1.5	1.9	2.2	1.4	1.8
29	---	---	---	5.5	5.1	5.2	1.9	1.4	1.6	2.1	1.3	1.6
30	---	---	---	5.5	4.9	5.2	2.3	1.7	1.9	2.2	1.3	1.7
31	---	---	---	---	---	---	2.5	1.9	2.1	2.3	1.4	1.8
MONTH	---	---	---	---	---	---	5.6	1.4	3.3	2.8	1.3	1.9
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	2.2	1.5	1.8	3.1	1.7	2.2	4.6	3.1	3.6	6.2	4.8	5.3
2	2.1	1.4	1.8	3.2	1.6	2.2	4.3	3.2	3.6	6.2	5.0	5.5
3	2.0	1.1	1.5	3.3	1.5	2.2	4.0	3.2	3.4	6.5	5.2	5.6
4	2.3	1.2	1.6	2.0	1.8	1.9	4.4	3.2	3.6	6.1	5.1	5.4
5	2.0	1.4	1.7	3.2	1.6	2.2	4.4	3.4	3.7	6.1	5.3	5.6
6	1.9	1.1	1.4	3.3	1.9	2.5	4.4	3.4	3.7	6.7	5.2	5.7
7	1.9	1.0	1.4	3.9	1.9	2.6	4.6	3.4	3.8	6.3	5.2	5.6
8	2.0	1.0	1.4	3.9	1.9	2.6	5.1	3.3	3.9	5.9	5.3	5.6
9	1.9	1.2	1.4	4.1	1.9	2.7	5.5	3.5	4.1	6.8	5.4	5.8
10	2.4	1.0	1.6	4.0	2.1	2.8	5.4	3.7	4.3	6.4	5.4	5.8
11	2.2	1.2	1.6	4.3	2.2	3.0	5.6	3.9	4.4	7.4	5.5	6.2
12	2.5	1.3	1.8	4.7	2.7	3.4	5.3	4.0	4.4	7.8	5.8	6.4
13	2.3	1.8	2.0	5.1	2.8	3.7	5.6	4.0	4.5	7.3	5.8	6.3
14	2.5	1.9	2.1	4.1	3.0	3.5	5.5	3.9	4.4	7.7	6.0	6.5
15	2.7	1.8	2.1	4.7	3.0	3.7	4.5	3.9	4.1	6.9	6.2	6.6
16	2.3	1.6	1.9	4.0	3.2	3.5	5.6	3.8	4.4	7.8	6.4	6.8
17	3.0	1.9	2.3	3.9	3.1	3.5	5.1	3.9	4.3	8.0	6.5	7.0
18	3.0	2.0	2.4	3.8	3.0	3.3	5.1	4.2	4.4	7.3	6.8	6.9
19	3.6	2.1	2.5	3.7	2.8	3.2	5.6	4.2	4.6	8.8	6.8	7.5
20	3.2	2.0	2.5	4.1	2.6	3.2	5.8	4.3	4.8	8.7	7.0	7.5
21	3.3	2.1	2.5	3.9	2.8	3.2	6.0	4.5	5.1	8.8	7.1	7.6
22	2.8	2.0	2.3	4.8	2.5	3.3	5.9	4.8	5.2	9.0	7.3	7.9
23	2.9	1.7	2.1	4.9	2.5	3.4	5.2	4.6	4.9	9.2	7.5	8.2
24	3.0	1.8	2.3	3.8	2.7	3.0	5.6	4.6	4.9	9.1	7.7	8.2
25	2.5	2.0	2.2	4.4	2.7	3.2	6.3	4.6	5.1	9.2	7.9	8.3
26	2.7	1.9	2.2	3.5	2.6	3.0	6.4	4.7	5.2	9.7	7.9	8.5
27	2.8	2.0	2.3	3.7	2.6	3.0	6.2	4.6	5.1	10.0	8.1	8.8
28	2.8	1.8	2.2	3.7	2.7	3.0	6.0	4.7	5.2	10.0	8.2	8.9
29	---	---	---	4.0	2.7	3.1	6.0	4.8	5.1	9.8	8.5	8.9
30	---	---	---	4.6	2.8	3.4	6.0	4.8	5.2	9.6	8.4	8.8
31	---	---	---	4.8	3.0	3.4	---	---	---	9.5	8.5	8.9
MONTH	3.6	1.0	2.0	5.1	1.5	3.0	6.4	3.1	4.4	10.0	4.8	7.0



## GUNNISON RIVER BASIN

09128000 GUNNISON RIVER BELOW GUNNISON TUNNEL, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	9.9	9.0	9.3	11.2	10.2	10.5	11.8	11.1	11.3	13.1	12.2	12.5
2	10.2	9.2	9.6	11.1	10.1	10.5	11.9	11.1	11.3	13.3	12.3	12.6
3	10.2	9.4	9.7	11.2	10.2	10.5	11.9	11.1	11.3	13.2	12.4	12.6
4	10.5	9.4	9.8	11.2	10.2	10.5	12.0	11.1	11.5	13.2	12.4	12.6
5	10.5	9.4	9.9	11.2	10.2	10.5	12.3	11.3	11.6	13.2	12.4	12.6
6	---	9.3	---	11.1	10.2	10.5	12.1	11.3	11.6	13.2	12.5	12.6
7	---	9.5	---	11.1	10.2	10.5	11.9	11.1	11.3	13.2	12.4	12.6
8	---	9.4	---	11.2	10.2	10.5	12.0	11.1	11.4	13.3	12.4	12.7
9	---	9.7	---	11.2	10.3	10.6	12.2	11.2	11.5	12.6	12.4	12.5
10	---	---	---	11.3	10.3	10.7	12.1	11.3	11.6	12.9	12.5	12.6
11	---	---	---	11.3	10.3	10.7	12.3	11.4	11.7	13.0	12.2	12.5
12	---	---	---	11.2	10.3	10.7	12.2	11.4	11.7	13.5	12.2	12.6
13	10.9	9.7	10.1	11.2	10.3	10.6	12.3	11.4	11.7	13.3	12.3	12.6
14	11.4	9.7	10.3	11.2	10.4	10.7	12.4	11.5	11.8	13.7	12.3	12.7
15	11.4	9.7	10.3	11.1	10.5	10.7	12.1	11.6	11.8	13.6	12.3	12.7
16	10.7	9.9	10.2	11.3	10.5	10.7	12.3	11.6	11.8	13.4	12.4	12.7
17	11.4	10.0	10.3	11.2	10.4	10.7	12.3	11.6	11.8	13.0	12.1	12.5
18	11.3	10.0	10.4	11.2	10.4	10.7	12.1	11.6	11.8	13.5	12.1	12.6
19	11.3	10.0	10.4	11.3	10.4	10.7	12.6	11.6	11.9	13.6	12.3	12.7
20	11.2	10.1	10.4	11.4	10.5	10.8	12.6	11.6	11.9	13.4	12.3	12.6
21	11.3	10.0	10.5	11.4	10.6	10.9	12.6	11.7	12.0	13.4	12.2	12.5
22	11.5	10.1	10.5	11.5	10.6	10.9	12.5	11.8	12.0	13.5	12.2	12.6
23	11.3	10.1	10.5	11.4	10.7	10.9	12.7	11.9	12.1	13.6	12.2	12.5
24	11.4	10.1	10.5	11.6	10.7	10.9	12.7	11.9	12.2	13.5	12.1	12.5
25	11.7	10.2	10.7	11.5	10.7	10.9	12.9	12.1	12.3	13.4	12.1	12.5
26	11.6	10.2	10.6	11.5	10.7	10.9	13.0	12.1	12.4	13.3	12.1	12.5
27	11.3	10.2	10.6	11.7	10.8	11.1	12.9	12.2	12.4	13.4	12.1	12.5
28	11.3	10.2	10.6	11.7	10.8	11.1	12.7	12.3	12.4	13.4	12.2	12.5
29	11.3	10.2	10.6	11.9	10.9	11.2	13.0	12.2	12.4	13.4	12.2	12.5
30	11.3	10.2	10.6	11.8	10.9	11.2	13.0	12.2	12.4	13.4	12.2	12.5
31	---	---	---	11.8	10.9	11.2	13.0	12.2	12.4	---	---	---
MONTH	---	---	---	11.9	10.1	10.8	13.0	11.1	11.8	13.7	12.1	12.6

09128000 GUNNISON RIVER BELOW GUNNISON TUNNEL, CO—Continued

TURBIDITY, WATER, UNFILTERED, NEPHELOMETRIC TURBIDITY UNITS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MIN MEDIAN		MIN MEDIAN		MIN MEDIAN		MIN MEDIAN		MIN MEDIAN		MIN MEDIAN	
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	1.2	1.5	0.9	1.9	0.2	0.4	2.1	10
2	---	---	---	---	1.1	1.5	0.9	2.9	0.3	0.6	0.7	3.6
3	---	---	---	---	1.2	1.7	0.7	2.3	0.3	0.5	0.3	0.9
4	---	---	---	---	1.3	1.8	0.7	2.1	0.3	0.5	0.7	0.9
5	---	---	1.1	1.7	1.2	2.0	0.7	2.4	0.3	0.5	0.6	0.8
6	---	---	1.0	1.6	1.3	2.9	0.6	2.8	0.3	0.5	0.5	0.8
7	---	---	0.9	1.4	1.1	1.6	0.7	2.3	0.4	0.5	0.4	0.7
8	---	---	0.9	1.4	1.3	2.0	0.6	1.2	0.4	0.6	0.3	0.6
9	---	---	1.2	1.7	1.4	2.0	0.5	0.7	0.5	0.8	0.3	0.5
10	---	---	1.0	1.4	0.7	1.7	0.5	0.7	0.6	0.8	0.2	0.4
11	---	---	0.8	1.5	0.8	1.0	0.5	0.7	0.6	0.8	0.1	0.4
12	---	---	0.9	1.4	0.7	1.2	0.5	0.6	0.6	0.8	0.3	0.5
13	---	---	1.1	1.7	0.9	1.2	0.5	0.6	0.5	0.7	0.2	0.6
14	---	---	1.2	1.7	0.8	1.3	0.5	0.7	0.5	0.7	0.7	1.0
15	---	---	1.3	2.0	1.1	1.6	0.5	0.6	0.6	0.9	2.0	2.8
16	---	---	2.1	2.9	1.2	1.7	0.5	0.6	0.9	1.1	4.1	6.9
17	---	---	2.3	2.8	1.3	1.8	0.5	0.6	1.0	1.2	5.6	9.9
18	---	---	2.0	2.7	1.4	1.9	0.5	0.6	0.9	1.5	11	14
19	---	---	1.9	2.5	1.8	2.1	0.4	0.6	1.3	1.7	12	14
20	---	---	1.6	2.4	1.5	2.4	0.4	0.6	1.3	1.6	9.1	14
21	---	---	1.9	2.4	2.0	2.5	0.4	0.6	1.7	2.9	8.9	14
22	---	---	1.5	2.2	1.5	3.2	0.5	0.6	1.7	3.9	13	15
23	---	---	1.6	2.1	1.4	2.3	0.4	0.7	2.0	6.3	12	16
24	---	---	1.4	1.9	1.2	2.3	0.3	0.6	2.1	11	12	14
25	---	---	1.5	2.0	1.9	2.6	0.2	0.5	10	17	12	14
26	---	---	1.3	1.7	1.3	1.9	0.3	0.4	12	50	8.8	12
27	---	---	1.1	1.6	1.3	2.0	0.2	0.4	35	120	7.0	9.7
28	---	---	1.1	1.6	0.8	2.2	0.3	0.4	8.8	83	6.1	7.4
29	---	---	1.2	1.6	0.8	1.9	0.2	0.4	---	---	4.7	5.8
30	---	---	1.0	1.6	0.6	1.8	0.1	0.3	---	---	4.3	5.2
31	---	---	---	---	0.8	1.9	0.1	0.3	---	---	4.0	13
MAX	---	---	---	---	2.0	3.2	0.9	2.9	35	120	13	16
MIN	---	---	---	---	0.6	1.0	0.1	0.3	0.2	0.4	0.1	0.4
DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MIN	MEDIAN	MIN	MEDIAN	MIN	MEDIAN	MIN	MEDIAN	MIN	MEDIAN	MIN	MEDIAN
1	4.6	9.0	---	---	21	55	1.5	1.9	1.0	1.8	4.3	6.8
2	5.5	13	---	---	30	66	1.0	1.5	1.1	1.7	5.5	6.6
3	3.3	17	5.3	6.6	22	27	0.8	1.2	1.3	1.7	3.7	4.8
4	3.3	23	5.1	6.3	15	20	0.8	1.3	1.4	1.8	2.9	3.5
5	4.2	12	4.2	5.2	13	15	0.9	1.5	1.2	1.6	2.3	2.8
6	8.0	85	3.7	4.6	13	15	0.8	1.5	1.4	2.0	2.0	2.6
7	3.5	78	3.1	3.9	12	14	0.8	1.3	2.0	2.3	2.1	2.6
8	2.1	3.1	3.2	3.8	9.5	12	0.6	1.1	1.9	2.3	2.0	2.4
9	2.0	3.0	---	---	---	---	0.5	1.9	1.8	2.2	1.6	2.3
10	2.4	2.9	---	---	---	---	0.4	0.7	1.7	2.2	1.8	2.3
11	2.4	3.1	---	---	---	---	0.4	0.9	1.8	2.3	2.0	2.6
12	2.7	3.1	---	---	---	---	0.7	1.0	1.9	2.2	8.7	11
13	2.6	3.1	1.8	2.2	7.6	8.5	0.8	1.2	1.9	2.2	17	23
14	2.8	3.2	1.3	1.9	6.8	7.5	1.0	1.4	2.0	2.4	14	22
15	3.5	5.8	1.6	2.0	6.5	7.2	0.9	1.4	2.3	2.7	14	21
16	---	---	1.5	2.1	6.1	6.6	1.1	1.6	2.1	2.5	11	14
17	---	---	1.7	3.1	5.5	6.2	1.3	2.8	2.0	2.5	7.4	8.8
18	---	---	2.5	4.1	5.5	6.1	1.8	16	2.0	2.6	3.8	5.1
19	---	---	4.6	15	5.0	5.6	1.5	2.4	1.8	2.3	3.4	4.3
20	---	---	2.2	2.9	4.3	5.1	1.2	2.3	1.9	2.3	2.7	3.7
21	---	---	2.0	3.4	3.9	4.6	2.7	4.6	2.0	2.4	2.2	2.9
22	---	---	2.0	2.9	3.8	4.5	4.2	6.9	1.7	2.3	1.7	2.3
23	---	---	2.8	3.7	3.3	4.0	1.2	2.8	1.9	2.2	1.7	2.1
24	---	---	3.4	4.2	2.8	3.8	1.4	1.7	1.9	2.2	1.2	2.0
25	---	---	2.8	3.4	2.8	3.4	0.8	1.9	2.4	4.5	1.3	1.9
26	---	---	2.7	3.5	2.6	3.0	0.8	1.2	4.3	5.1	1.3	1.8
27	---	---	3.1	4.3	2.3	2.8	0.8	1.1	3.2	4.2	1.4	1.8
28	---	---	4.7	6.2	1.8	2.3	0.7	1.2	2.4	3.1	1.0	1.8
29	---	---	4.0	6.0	1.3	1.7	1.2	1.5	2.3	2.7	1.6	1.9
30	---	---	4.3	5.7	1.4	1.7	1.0	1.4	2.0	2.4	1.3	2.0
31	---	---	3.8	8.7	---	---	1.0	1.5	2.0	2.5	---	---
MAX	---	---	---	---	---	---	4.2	16	4.3	5.1	17	23
MIN	---	---	---	---	---	---	0.4	0.7	1.0	1.6	1.0	1.8

**09131495 PAONIA RESERVOIR NEAR BARDINE, CO**

LOCATION.--Lat 38°56'39", long 107°21'06", in NE $\frac{1}{4}$  sec.8, T.13 S., R.89 W., Gunnison County, Hydrologic Unit 14020004, in gate house of Paonia Dam on Muddy Creek, 16 mi east of Paonia.

DRAINAGE AREA.--246 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1961 to current year. Monthend active contents provided by U.S. Bureau of Reclamation from December 1961 to September 1987. Extremes for period of record are subsequent to 1987. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09131495](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09131495)

REVISED RECORD.--WDR CO-92-2; 1988-91.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,447.50 ft above NGVD of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by an earthfill dam. Storage began in December 1961; dam completed January 1962. Capacity, 20,950 acre-ft 1966 survey, between elevation 6,290.0 ft streambed at dam, and 6,447.5 ft, crest of spillway. Dead storage below elevation 6,358.0 ft, 2,440 acre-ft. Inactive storage below elevation 6360.0 ft, 2,620 acre-ft. Figures published prior to 1988 water year are active contents; figures given beginning 1988 water year are live contents.

COOPERATION.--Capacity tables provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 17,460 acre-ft, June 6, 1995, elevation 6,449.76 ft; minimum contents, 117 acre-ft, Apr. 14, 1996, elevation 6,360.72 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily mean contents, 16,970 acre-ft, May 28, elevation, 6,448.29 ft; minimum daily mean contents, 1,090 acre-ft, Sept. 5,6, mean elevation, 6,377.36 ft.

## MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30 . . . . .	6,384.57	1,780	-
Oct. 31 . . . . .	6,391.23	2,680	+900
Nov. 30 . . . . .	6,397.27	3,650	+970
Dec. 31 . . . . .	6,401.32	4,360	+710
CAL YR 2002. . . . .	-	-	+1,740
Jan. 31 . . . . .	6,405.01	5,070	+710
Feb. 28 . . . . .	6,409.49	6,020	+950
Mar. 31 . . . . .	6,417.88	8,020	+2,000
Apr. 30 . . . . .	6,425.61	10,060	+2,040
May 31 . . . . .	6,448.12	16,910	+6,850
June 30 . . . . .	6,447.77	16,790	-120
July 31 . . . . .	6,432.55	12,040	-4,750
Aug. 31 . . . . .	6,385.64	1,910	-10,130
Sept. 30 . . . . .	6,382.18	1,520	-390
WTR YR 2003. . . . .	-	-	-260

09132500 NORTH FORK GUNNISON RIVER NEAR SOMERSET, CO

LOCATION.--Lat 38°55'33", long 107°26'01", in SE 1/4 SW 1/4 sec.10, T.13 S., R.90 W., Gunnison County, Hydrologic Unit 14020004, on left bank 2.3 mi east of Somerset and 4.8 mi upstream from Hubbard Creek.

DRAINAGE AREA.--526 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1933 to current year. Monthly discharge only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09132500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09132500)

REVISED RECORDS.--WSP 2124: Drainage area. WDR CO-77-2: 1976.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 6,280 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1982, at various sites 0.8 mi downstream, at different datums. See WDR CO-81-2, for history of changes.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by small diversions for irrigation in nearby drainage areas, irrigation of about 3,000 acres upstream from station, storage in Overland Reservoir (capacity, 6,280 acre-ft), and storage in Paonia Reservoir (capacity, 18,300 acre-ft), since February 1962. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	60	e72	e45	e41	e41	150	818	2,690	426	228	207
2	91	64	e71	e40	e43	e39	190	773	2,470	405	228	162
3	99	56	e63	e45	e43	e38	201	782	2,070	381	229	60
4	95	54	e52	e46	e38	e46	189	814	1,830	356	220	59
5	91	54	e64	e44	e41	e43	173	711	1,620	e327	217	59
6	88	46	e53	e40	e40	e47	162	632	1,380	e311	215	72
7	85	50	e48	e43	e34	e47	150	614	1,200	e289	211	94
8	86	58	e42	e42	e35	e51	141	589	1,110	e267	211	100
9	84	85	e37	e42	e40	67	153	570	1,110	e258	207	112
10	81	76	e26	e46	e42	77	206	563	1,110	257	212	269
11	75	66	e32	e46	e40	90	290	548	1,150	266	217	209
12	71	52	e46	e45	e43	119	339	650	1,110	248	214	166
13	69	e59	e51	e40	e50	140	410	e845	1,040	237	228	185
14	66	61	e49	e45	e54	155	595	e1,100	958	242	220	166
15	62	57	e45	e44	e56	158	534	e1,480	963	243	206	144
16	59	50	e49	e37	e51	169	490	e1,760	958	257	216	130
17	56	e53	e51	e43	e47	163	499	e2,180	862	280	215	119
18	55	71	e50	e39	e44	150	484	e2,550	833	287	203	110
19	53	61	e39	e45	e42	140	429	e3,150	797	278	205	104
20	53	e73	e38	e46	e38	132	430	e2,930	764	264	211	96
21	51	e76	e46	e46	e44	136	485	e2,930	698	255	222	90
22	49	e75	e41	e46	e45	138	610	e2,810	676	252	230	85
23	59	e73	e35	e43	e44	154	679	e2,760	639	251	241	82
24	62	e68	e39	e43	e39	177	578	e2,970	590	253	225	78
25	59	e63	e42	e45	e44	165	585	e2,900	518	237	219	75
26	57	e56	e38	e43	e45	161	731	2,630	496	247	218	72
27	61	e44	e38	e42	e44	160	860	2,640	485	256	215	70
28	58	e38	e38	e42	e46	139	947	3,210	478	247	213	69
29	60	e57	e43	e40	---	126	997	3,070	468	246	214	67
30	56	e65	e43	e37	---	123	893	3,060	447	223	219	65
31	60	---	e39	e42	---	123	---	2,640	---	224	214	---
TOTAL	2,147	1,821	1,420	1,332	1,213	3,514	13,580	55,679	31,520	8,570	6,743	3,376
MEAN	69.3	60.7	45.8	43.0	43.3	113	453	1,796	1,051	276	218	113
MAX	99	85	72	46	56	177	997	3,210	2,690	426	241	269
MIN	49	38	26	37	34	38	141	548	447	223	203	59
AC-FT	4,260	3,610	2,820	2,640	2,410	6,970	26,940	110,400	62,520	17,000	13,370	6,700

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

MEAN	119	92.9	75.7	64.5	69.8	153	716	1,905	1,451	446	199	151
MAX	466	318	271	166	180	721	1,736	3,993	4,095	1,834	438	319
(WY)	(1987)	(1987)	(1966)	(1966)	(1986)	(1986)	(1986)	(1984)	(1957)	(1995)	(1957)	(1986)
MIN	47.9	35.2	33.1	29.6	30.4	40.2	166	314	179	64.6	48.1	47.6
(WY)	(1957)	(1990)	(1978)	(1990)	(1978)	(1964)	(1977)	(1977)	(1934)	(1934)	(1977)	(1934)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1934 - 2003
ANNUAL TOTAL	59,054	130,915	
ANNUAL MEAN	162	359	455
HIGHEST ANNUAL MEAN			829
LOWEST ANNUAL MEAN			114
HIGHEST DAILY MEAN	654	3,210	7,080
LOWEST DAILY MEAN	e26	e26	17
ANNUAL SEVEN-DAY MINIMUM	35	39	25
MAXIMUM PEAK FLOW		a3,710	9,220
MAXIMUM PEAK STAGE		a5.15	b8.20
ANNUAL RUNOFF (AC-FT)	117,100	259,700	329,500
10 PERCENT EXCEEDS	439	915	1,480
50 PERCENT EXCEEDS	64	119	135
90 PERCENT EXCEEDS	41	42	52

e Estimated.

a Maximum recorded, may have been higher during estimated period, May 13-25.

b From outside high-water mark.

## 09132940 HUBBARD CREEK ABOVE IRON POINT GULCH NEAR BOWIE, CO

LOCATION.--Lat 38°58'57", long 107°31'52", in SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.27, T.12 S., R.91 W., Delta County, Hydrologic Unit 14020004, on right bank 0.4 mi upstream from Iron Point Gulch, and 4.2 mi northeast of Bowie.

DRAINAGE AREA.--48.4 mi<sup>2</sup>.

PERIOD OF RECORD.--August 2001 to current year (seasonal records only). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09132940](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09132940)

GAGE.--Water-stage recorder. Elevation of gage is 6,600 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. No known diversions upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum discharge, 30 ft<sup>3</sup>/s, Sept. 6, 2003, gage height, 2.10 ft; minimum daily, 0.05 ft<sup>3</sup>/s, Aug. 19, 2002.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 30 ft<sup>3</sup>/s, Sept. 6, gage height, 2.10 ft; minimum daily, 0.79 ft<sup>3</sup>/s, Sept. 27.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	3.7	---	---	---	---	---	---	---	1.8	2.7	2.0
2	2.4	4.1	---	---	---	---	---	---	---	1.7	3.0	1.6
3	3.8	---	---	---	---	---	---	---	---	1.6	4.2	1.7
4	3.6	---	---	---	---	---	---	---	---	1.5	2.8	2.3
5	2.9	---	---	---	---	---	---	---	---	1.5	2.7	3.2
6	3.0	---	---	---	---	---	---	---	---	1.5	2.4	19
7	3.6	---	---	---	---	---	---	---	---	1.4	2.3	13
8	3.5	---	---	---	---	---	---	---	---	1.3	2.9	5.0
9	3.0	---	---	---	---	---	---	---	---	1.2	2.7	3.8
10	2.7	---	---	---	---	---	---	---	e12	1.2	2.5	21
11	2.5	---	---	---	---	---	---	---	e9.8	1.1	2.5	16
12	2.3	---	---	---	---	---	---	---	e7.8	1.0	2.7	8.5
13	2.1	---	---	---	---	---	---	---	e6.6	1.1	e2.6	5.3
14	1.8	---	---	---	---	---	---	---	e5.8	1.2	e6.9	3.2
15	1.8	---	---	---	---	---	---	---	e4.5	1.2	e4.0	2.4
16	1.7	---	---	---	---	---	---	---	e3.6	1.2	e4.3	2.0
17	1.7	---	---	---	---	---	---	---	e3.4	1.2	e5.3	1.8
18	1.7	---	---	---	---	---	---	---	e3.0	1.1	e3.0	1.4
19	1.7	---	---	---	---	---	---	---	e3.2	1.4	e1.8	1.3
20	1.6	---	---	---	---	---	---	---	e3.1	2.1	e1.2	1.4
21	1.5	---	---	---	---	---	---	---	e3.1	1.9	e1.1	1.3
22	1.6	---	---	---	---	---	---	---	e2.9	1.8	e1.0	1.2
23	3.1	---	---	---	---	---	---	---	e2.6	2.0	e1.1	1.2
24	4.3	---	---	---	---	---	---	---	e2.5	2.1	1.1	1.1
25	3.5	---	---	---	---	---	---	---	e2.4	2.0	1.6	0.88
26	3.2	---	---	---	---	---	---	---	e2.4	2.9	2.2	0.85
27	3.9	---	---	---	---	---	---	---	e2.3	2.7	2.9	0.79
28	3.7	---	---	---	---	---	---	---	e2.1	2.1	2.8	0.84
29	3.8	---	---	---	---	---	---	---	e2.2	2.0	2.2	0.81
30	3.3	---	---	---	---	---	---	---	e2.3	2.0	2.1	0.83
31	3.6	---	---	---	---	---	---	---	---	2.5	2.3	---
TOTAL	86.0	---	---	---	---	---	---	---	---	51.3	82.9	125.70
MEAN	2.77	---	---	---	---	---	---	---	---	1.65	2.67	4.19
MAX	4.3	---	---	---	---	---	---	---	---	2.9	6.9	21
MIN	1.5	---	---	---	---	---	---	---	---	1.0	1.0	0.79
AC-FT	171	---	---	---	---	---	---	---	---	102	164	249

e Estimated.

**09132960 HUBBARD CREEK AT HIGHWAY 133 AT MOUTH NEAR BOWIE, CO**

LOCATION.--Lat 38°55'32", long 107°31'04", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.14, T.13 S., R.91 W., Delta County, Hydrologic Unit 14020004, on left bank at upstream side of bridge on State Highway 133, 100 ft upstream from mouth, and 1.3 mi northeast of Bowie.

DRAINAGE AREA.--57.7 mi<sup>2</sup>.

PERIOD OF RECORD.--October 2001 to current year. Water-quality data available, May 1999 to March 2000, published as 385532107310501 Hubbard Creek at mouth near Bowie, CO. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09132960](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09132960)

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 5,880 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except May 7 to June 4, which are fair, and estimated daily discharges, which are poor. Diversions upstream from station for irrigation. Most of the flow is diverted during irrigation season. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	1.7	0.23	0.23	0.30	e0.11	18	73	144	0.26	0.38	0.13
2	1.4	2.3	e0.20	0.25	0.31	e0.12	22	69	120	0.26	0.20	0.09
3	2.7	1.1	0.29	0.24	0.41	e0.10	19	75	87	0.24	1.2	0.08
4	3.1	0.69	e0.23	0.22	e0.14	e0.09	13	89	68	0.26	0.42	0.12
5	2.0	0.98	0.29	0.21	e0.13	e0.10	11	83	57	0.25	0.33	0.49
6	2.0	0.88	e0.17	0.22	e0.11	e0.20	10	79	35	0.25	0.24	14
7	2.6	0.89	e0.16	0.23	e0.09	0.94	8.7	86	22	0.25	0.19	10
8	2.6	1.4	e0.16	0.25	e0.08	1.5	8.7	89	18	0.25	0.34	2.7
9	1.7	4.8	e0.15	0.25	e0.09	2.1	16	99	17	0.26	0.34	1.5
10	0.90	2.7	e0.15	0.22	e0.10	2.0	37	100	14	0.24	0.28	16
11	0.68	2.1	e0.14	0.23	e0.12	2.7	61	81	11	0.23	0.32	15
12	0.52	1.2	0.21	0.24	0.38	4.9	83	89	8.5	0.20	0.29	5.4
13	0.32	1.7	0.22	0.28	e0.20	6.4	104	104	7.3	0.17	0.42	e3.8
14	0.22	1.3	e0.13	0.30	e0.21	8.8	126	109	6.4	0.17	3.7	e2.5
15	0.19	1.2	0.22	0.25	e0.20	8.3	116	138	4.7	0.16	0.88	e1.7
16	0.18	1.4	e0.12	e0.11	e0.19	9.5	76	135	4.0	0.16	1.4	e1.4
17	0.17	1.6	e0.11	0.27	0.49	8.9	78	140	3.8	0.16	2.3	e0.99
18	0.18	1.3	e0.12	e0.11	0.41	6.4	66	225	3.4	0.14	0.90	e0.65
19	0.19	1.2	e0.13	e0.12	e0.14	5.3	53	219	3.6	0.13	0.35	e0.65
20	0.19	1.2	e0.14	e0.13	e0.14	5.2	49	156	3.6	0.16	0.15	e0.60
21	0.19	1.1	e0.13	e0.11	e0.13	6.3	58	146	2.9	0.17	0.09	e0.53
22	0.20	1.1	e0.13	0.27	e0.12	7.3	86	139	1.8	0.15	0.09	e0.48
23	0.89	1.1	e0.14	0.22	e0.13	12	82	137	1.6	0.15	0.09	e0.39
24	2.0	1.1	0.27	0.23	e0.14	15	58	123	0.80	0.17	0.08	e0.25
25	1.8	1.0	0.25	0.26	0.45	13	87	121	0.27	0.12	0.08	e0.30
26	1.1	e0.80	0.27	0.32	0.46	12	133	116	0.25	0.30	0.13	e0.29
27	2.1	e0.50	0.24	e0.09	0.38	12	150	119	0.25	0.75	0.16	e0.27
28	2.0	e0.30	0.25	0.29	0.39	7.9	138	133	0.24	0.22	0.35	e0.27
29	2.1	e0.20	0.24	e0.09	---	6.6	112	138	0.27	0.15	0.16	e0.27
30	1.3	e0.40	0.25	e0.10	---	7.4	86	141	0.27	0.15	0.14	e0.34
31	1.6	---	0.26	e0.11	---	7.8	---	132	---	0.14	0.16	---
TOTAL	39.32	39.24	6.00	6.45	6.44	180.96	1,965.4	3,683	646.95	6.67	16.16	81.19
MEAN	1.27	1.31	0.19	0.21	0.23	5.84	65.5	119	21.6	0.22	0.52	2.71
MAX	3.1	4.8	0.29	0.32	0.49	15	150	225	144	0.75	3.7	16
MIN	0.17	0.20	0.11	0.09	0.08	0.09	8.7	69	0.24	0.12	0.08	0.08
AC-FT	78	78	12	13	13	359	3,900	7,310	1,280	13	32	161

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

MEAN	0.68	0.96	0.49	0.55	0.52	4.14	49.0	60.6	10.8	0.13	0.27	1.50
MAX	1.27	1.31	0.78	0.89	0.81	5.84	65.5	119	21.6	0.22	0.52	2.71
(WY)	(2003)	(2003)	(2002)	(2002)	(2002)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	0.083	0.61	0.19	0.21	0.23	2.43	32.4	2.32	0.055	0.052	0.011	0.29
(WY)	(2002)	(2002)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 2002 - 2003

ANNUAL TOTAL	1,266.51	6,677.78	
ANNUAL MEAN	3.47	18.3	10.8
HIGHEST ANNUAL MEAN			18.3 2003
LOWEST ANNUAL MEAN			3.36 2002
HIGHEST DAILY MEAN	58 Apr 11	225 May 18	225 May 18, 2003
LOWEST DAILY MEAN	0.00 Aug 17	e0.08 Feb 8	a0.00 Aug 17, 2002
ANNUAL SEVEN-DAY MINIMUM	0.00 Aug 22	0.10 Aug 20	0.00 Aug 22, 2002
MAXIMUM PEAK FLOW		355 May 18	355 May 18, 2003
MAXIMUM PEAK STAGE		3.18 May 18	3.18 May 18, 2003
ANNUAL RUNOFF (AC-FT)	2,510	13,250	7,840
10 PERCENT EXCEEDS	5.3	86	28
50 PERCENT EXCEEDS	0.70	0.49	0.63
90 PERCENT EXCEEDS	0.03	0.13	0.05

e Estimated.

a Also occurred Aug 18, 19, Aug 22 to Sep 6, 2002.

**09132985 EAST FORK TERROR CREEK BELOW COTTONWOOD STOMP NEAR BOWIE, CO**

LOCATION.--Lat 38°57'53", long 107°33'59", in NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.33, T.12 S., R.91 W., Delta County, Hydrologic Unit 14020004, on right bank 200 ft downstream from culvert crossing, 0.6 mi downstream from Cottonwood Stomp, and 3.2 mi northwest of Bowie.

DRAINAGE AREA.--4.76 mi<sup>2</sup>.

PERIOD OF RECORD.--August 2001 to current year (seasonal records only). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09132985](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09132985)

GAGE.--Water-stage recorder. Elevation of gage is 7,500 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No diversions upstream from station. Flow partially regulated by Terror Creek Reservoir 1.4 mi upstream from station on unnamed tributary. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum discharge, 8.3 ft<sup>3</sup>/s, July 3, 2003, gage height, 0.95 ft; minimum daily, 0.14 ft<sup>3</sup>/s, Sept. 26, 27, 2003.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge during period of operation, 8.3 ft<sup>3</sup>/s, July 3, gage height, 0.95 ft; minimum daily, 0.14 ft<sup>3</sup>/s, Sept. 26, 27.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.96	0.41	---	---	---	---	---	---	---	5.1	4.1	e2.1
2	1.0	0.39	---	---	---	---	---	---	---	6.2	3.9	e2.0
3	1.2	---	---	---	---	---	---	---	---	7.4	4.0	e2.1
4	1.1	---	---	---	---	---	---	---	---	7.4	4.0	e2.1
5	1.1	---	---	---	---	---	---	---	e1.4	7.3	3.8	e2.3
6	1.0	---	---	---	---	---	---	---	1.3	7.1	3.1	e2.4
7	1.1	---	---	---	---	---	---	---	1.4	6.9	2.9	e2.1
8	1.1	---	---	---	---	---	---	---	1.6	7.1	2.8	e2.0
9	1.1	---	---	---	---	---	---	---	1.5	7.1	2.8	e2.2
10	1.1	---	---	---	---	---	---	---	1.6	6.8	2.7	e2.7
11	1.0	---	---	---	---	---	---	---	1.5	6.5	2.6	e2.6
12	1.0	---	---	---	---	---	---	---	1.4	6.1	2.5	e1.8
13	1.0	---	---	---	---	---	---	---	1.4	5.8	e2.9	e0.80
14	1.0	---	---	---	---	---	---	---	1.3	5.6	e3.2	e0.55
15	0.99	---	---	---	---	---	---	---	1.4	5.8	e3.0	e0.42
16	0.94	---	---	---	---	---	---	---	2.8	6.0	e2.9	0.31
17	0.88	---	---	---	---	---	---	---	3.0	5.9	e2.9	0.24
18	0.85	---	---	---	---	---	---	---	3.2	5.9	e2.8	0.22
19	0.66	---	---	---	---	---	---	---	3.7	5.8	e2.7	0.22
20	0.42	---	---	---	---	---	---	---	4.4	5.6	e2.7	0.20
21	0.36	---	---	---	---	---	---	---	4.1	5.6	e2.6	0.17
22	0.28	---	---	---	---	---	---	---	4.3	5.7	e2.5	0.17
23	0.34	---	---	---	---	---	---	---	4.2	5.5	e2.6	0.16
24	0.37	---	---	---	---	---	---	---	4.2	5.3	e2.7	0.15
25	0.36	---	---	---	---	---	---	---	4.2	5.3	e2.4	0.15
26	0.36	---	---	---	---	---	---	---	4.3	5.2	e2.3	0.14
27	0.42	---	---	---	---	---	---	---	4.3	5.1	e2.2	0.14
28	0.42	---	---	---	---	---	---	---	4.6	4.3	e2.1	0.15
29	0.37	---	---	---	---	---	---	---	5.2	4.1	e2.1	0.15
30	0.35	---	---	---	---	---	---	---	5.2	3.8	e2.1	0.16
31	0.37	---	---	---	---	---	---	---	---	4.0	e2.2	---
TOTAL	23.50	---	---	---	---	---	---	---	---	181.3	88.1	30.90
MEAN	0.76	---	---	---	---	---	---	---	---	5.85	2.84	1.03
MAX	1.2	---	---	---	---	---	---	---	---	7.4	4.1	2.7
MIN	0.28	---	---	---	---	---	---	---	---	3.8	2.1	0.14
AC-FT	47	---	---	---	---	---	---	---	---	360	175	61

e Estimated.

## 09132995 TERROR CREEK AT MOUTH NEAR BOWIE, CO

LOCATION.--Lat 38°54'14", long 107°33'41", in NW¼SE¼ sec.21, T.13 S., R.91 W., Delta County, Hydrologic Unit 14020004, on right downstream end of box culvert, 450 ft upstream from mouth, and 1.6 mi southwest of Bowie.

DRAINAGE AREA.--29.5 mi<sup>2</sup>.

PERIOD OF RECORD.--June 2001 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09132995](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09132995)

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 5,740 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	0.17	e0.17	0.12	0.07	0.46	12	67	37	0.37	0.10	0.07
2	0.03	0.20	e0.09	0.10	e0.06	0.46	14	79	23	0.24	0.10	0.09
3	0.11	0.20	e0.07	0.13	e0.06	0.41	10	110	22	0.83	0.13	0.07
4	0.05	0.17	0.07	0.13	e0.06	0.46	7.0	101	3.5	1.2	0.12	0.10
5	0.04	0.16	0.03	0.11	e0.05	0.64	6.0	59	1.3	1.1	0.14	0.11
6	0.04	0.15	0.03	0.10	e0.05	0.72	5.5	58	0.81	0.87	0.11	0.68
7	0.04	0.10	0.02	0.09	e0.05	0.53	4.2	59	0.61	0.44	0.12	0.22
8	0.04	0.04	0.02	0.09	e0.04	0.64	2.5	52	1.3	0.42	0.15	0.10
9	0.04	0.23	0.02	0.11	e0.05	1.0	6.2	48	1.4	0.48	0.17	0.09
10	0.04	0.05	0.02	0.12	e0.08	1.5	24	51	5.3	0.28	0.13	1.5
11	0.03	0.32	0.02	e0.06	e0.12	2.1	54	39	3.8	0.24	0.19	1.4
12	0.03	0.44	0.02	e0.06	e0.16	4.2	74	82	2.3	0.19	0.29	0.44
13	0.03	0.70	0.02	0.14	0.31	6.3	100	114	1.5	0.17	0.33	0.14
14	0.04	0.63	0.02	0.14	e0.50	7.5	128	130	1.1	0.15	0.34	0.02
15	0.03	0.61	0.02	0.16	e0.60	7.4	97	166	1.00	0.15	0.31	0.02
16	0.03	0.49	0.02	e0.06	e0.60	6.4	49	151	0.99	0.20	0.33	0.01
17	0.03	0.65	e0.01	0.13	0.59	4.8	50	159	0.79	0.18	0.34	0.01
18	0.03	0.57	0.04	e0.05	0.54	3.7	30	206	0.56	0.19	0.36	0.01
19	0.03	0.68	0.03	0.14	0.51	3.3	21	224	0.64	0.21	0.34	0.01
20	0.03	0.69	e0.02	e0.06	e0.40	2.8	18	200	0.92	0.21	0.31	0.01
21	0.02	0.66	e0.03	e0.08	e0.40	2.8	21	195	0.57	0.18	0.27	0.01
22	0.02	0.79	e0.02	0.12	0.44	4.0	37	188	0.70	0.19	0.30	0.01
23	0.08	0.98	e0.03	0.10	0.56	7.9	36	175	0.72	36	0.32	0.00
24	0.09	0.96	e0.05	e0.07	e0.60	11	24	124	0.48	0.40	0.29	0.00
25	0.09	0.85	0.17	e0.06	0.53	8.5	59	94	0.43	0.29	0.31	0.00
26	0.07	0.55	0.14	e0.05	0.50	8.7	123	73	0.31	0.15	0.25	0.00
27	0.28	0.69	0.12	0.06	0.48	7.8	143	53	0.36	0.13	0.18	0.00
28	0.28	e0.60	0.14	0.07	0.46	5.8	144	51	0.40	0.13	0.07	0.00
29	0.27	e0.50	0.16	0.07	---	5.6	106	46	0.40	0.12	0.07	0.00
30	0.19	e0.25	0.12	0.06	---	5.9	66	44	0.37	0.14	0.07	0.00
31	0.19	---	0.12	0.06	---	6.4	---	33	---	0.12	0.11	---
TOTAL	2.34	14.08	1.86	2.90	8.87	129.72	1,471.4	3,231	114.56	45.97	6.65	5.12
MEAN	0.075	0.47	0.060	0.094	0.32	4.18	49.0	104	3.82	1.48	0.21	0.17
MAX	0.28	0.98	0.17	0.16	0.60	11	144	224	37	36	0.36	1.5
MIN	0.02	0.04	0.01	0.05	0.04	0.41	2.5	33	0.31	0.12	0.07	0.00
AC-FT	4.6	28	3.7	5.8	18	257	2,920	6,410	227	91	13	10

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

MEAN	0.065	0.33	0.052	0.066	0.21	2.83	32.2	52.8	2.00	0.54	0.12	0.096
MAX	0.075	0.47	0.060	0.094	0.32	4.18	49.0	104	3.82	1.48	0.21	0.17
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	0.055	0.19	0.043	0.039	0.11	1.47	15.3	1.32	0.19	0.063	0.039	0.012
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 2001 - 2003

ANNUAL TOTAL	577.35	5,034.47	
ANNUAL MEAN	1.58	13.8	7.67
HIGHEST ANNUAL MEAN			13.8 2003
LOWEST ANNUAL MEAN			1.56 2002
HIGHEST DAILY MEAN	35 Apr 9	224 May 19	224 May 19, 2003
LOWEST DAILY MEAN	0.00 Aug 26	0.00 Sep 23	a0.00 Aug 26, 2002
ANNUAL SEVEN-DAY MINIMUM	0.00 Aug 26	0.00 Sep 23	0.00 Aug 26, 2002
MAXIMUM PEAK FLOW		335 May 18	335 May 18, 2003
MAXIMUM PEAK STAGE		4.23 May 18	4.23 May 18, 2003
ANNUAL RUNOFF (AC-FT)	1,150	9,990	5,560
10 PERCENT EXCEEDS	0.81	51	15
50 PERCENT EXCEEDS	0.08	0.29	0.13
90 PERCENT EXCEEDS	0.02	0.03	0.02

e Estimated.

a No flow several days, most years.



## 09134000 MINNESOTA CREEK NEAR PAONIA, CO

LOCATION.--Lat 38°52'12", long. 107°30'13", in NW $\frac{1}{4}$ NE $\frac{1}{4}$  of sec.1 (revised), T.14 S., R.91 W., Delta County, Hydrologic Unit 14020004, on right bank 0.25 mi downstream from South Fork, 6 mi upstream from mouth, and 4.5 mi east of Paonia.

DRAINAGE AREA.--41.3 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1936 to September 1947, October 1985 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09134000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09134000)

GAGE.--Water-stage recorder. Elevation of gage is 6,200 ft above NGVD of 1929, from topographic map. Apr. 1936 to Oct. 1941, staff gages at different datums. Oct. 1941 to Sept. 1947, water-stage recorder at different datum. Dec. 1985 to present, water-stage recorder, at datum 2.0 ft lower.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by two small storage reservoirs, one of which obtains water from the East Muddy Creek Basin. Small trans-basin diversions from Coal Creek into Minnesota Creek. Diversions upstream from station for irrigation of about 100 acres. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	4.0	e1.9	e1.9	2.6	2.5	5.6	21	153	28	19	8.2
2	3.7	3.8	e1.7	e1.7	2.6	2.4	6.4	20	149	28	18	7.7
3	4.8	3.1	e1.6	e1.8	e2.6	2.7	6.0	20	131	27	18	7.4
4	4.4	3.3	e1.5	e1.9	e2.5	2.4	5.0	22	112	26	18	7.1
5	4.3	3.2	e1.7	e1.8	e2.4	2.7	4.7	21	95	25	18	7.2
6	4.0	3.2	e1.6	e1.6	e1.5	2.4	4.6	20	70	25	17	6.4
7	3.9	3.3	e1.5	e1.7	e1.7	2.8	4.4	18	63	25	17	3.7
8	3.8	e2.6	e1.4	e1.7	e2.0	3.0	4.1	17	57	25	17	2.2
9	3.7	e3.7	e1.3	e1.8	e2.2	3.2	5.1	19	54	23	17	4.0
10	3.6	4.2	e1.3	e2.2	e2.1	3.5	7.3	17	50	23	17	11
11	3.6	3.6	e1.4	e1.9	e2.2	4.4	9.8	16	46	22	17	6.5
12	3.4	e2.6	e1.8	e1.7	e1.9	6.1	12	16	42	20	17	4.6
13	3.4	e1.9	e2.0	e2.0	e3.0	6.4	13	20	37	20	16	3.5
14	3.2	e2.6	e1.7	e2.2	e4.0	5.9	16	24	35	20	16	3.3
15	3.2	e2.2	e1.8	e2.1	e3.0	6.2	17	31	35	18	17	3.1
16	3.4	e1.6	e1.7	e1.7	e2.6	6.3	13	38	36	18	17	2.8
17	3.4	e1.8	e1.8	e2.2	e2.1	5.5	16	46	36	19	16	2.6
18	3.5	e1.7	e1.7	e2.0	e2.1	4.7	20	52	35	18	16	2.6
19	3.4	e1.6	e1.6	e2.8	e2.4	4.0	18	61	35	17	16	2.6
20	3.4	e1.5	e1.5	e2.9	e2.5	4.0	17	66	35	17	15	2.6
21	3.3	e1.6	e1.9	e2.8	e2.6	4.7	19	76	34	17	15	3.1
22	2.9	e1.6	e1.6	e2.9	2.6	4.5	22	76	31	17	15	2.6
23	3.7	e1.7	e1.3	e2.9	e2.5	5.5	22	89	31	18	15	2.4
24	4.0	e1.7	e1.8	2.6	e2.6	6.3	20	117	30	19	14	2.5
25	3.6	e1.7	e1.8	2.5	2.5	5.3	21	114	29	19	11	7.3
26	3.6	e1.6	e1.6	e2.6	2.5	5.0	24	120	28	19	5.2	13
27	4.6	e1.5	e1.7	e2.7	2.5	5.4	25	122	27	19	8.9	13
28	4.3	e1.8	e1.7	2.5	2.5	4.5	25	124	27	19	11	12
29	4.6	e1.8	e1.8	2.4	---	4.5	24	129	28	20	8.7	5.1
30	3.9	e1.7	e1.8	2.4	---	4.5	23	125	28	19	5.1	3.4
31	4.2	---	e1.7	2.5	---	4.4	---	126	---	19	2.2	---
TOTAL	116.8	72.2	51.2	68.4	68.3	135.7	430.0	1,783	1,599	649	450.1	163.5
MEAN	3.77	2.41	1.65	2.21	2.44	4.38	14.3	57.5	53.3	20.9	14.5	5.45
MAX	4.8	4.2	2.0	2.9	4.0	6.4	25	129	153	28	19	13
MIN	2.9	1.5	1.3	1.6	1.5	2.4	4.1	16	27	17	2.2	2.2
AC-FT	232	143	102	136	135	269	853	3,540	3,170	1,290	893	324

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2003, BY WATER YEAR (WY)

MEAN	5.73	5.01	4.15	3.43	3.82	7.03	26.3	87.9	69.5	27.4	14.9	7.80
MAX	16.6	12.9	9.08	5.80	8.62	19.2	89.6	199	194	88.2	29.7	19.8
(WY)	(1942)	(1987)	(1987)	(1942)	(1986)	(1986)	(1942)	(1993)	(1993)	(1995)	(1993)	(1993)
MIN	2.64	1.84	1.65	1.70	1.89	2.57	7.18	15.1	15.5	5.05	2.05	2.91
(WY)	(2000)	(2000)	(2003)	(2000)	(2000)	(2000)	(1990)	(2002)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1937 - 2003

ANNUAL TOTAL	2,029.2	5,587.2	
ANNUAL MEAN	5.56	15.3	22.0
HIGHEST ANNUAL MEAN			46.9
LOWEST ANNUAL MEAN			5.73
HIGHEST DAILY MEAN	22	May 30	340
LOWEST DAILY MEAN	e1.3	Dec 9	1.0
ANNUAL SEVEN-DAY MINIMUM	1.5	Dec 5	a1.4
MAXIMUM PEAK FLOW			359
MAXIMUM PEAK STAGE		2.01	Jun 1
ANNUAL RUNOFF (AC-FT)	4,020	11,080	15,930
10 PERCENT EXCEEDS	15	34	62
50 PERCENT EXCEEDS	3.2	4.5	6.8
90 PERCENT EXCEEDS	1.7	1.7	2.6

e Estimated.

a Also occurred Jan 16, 1990.

b Maximum gage height, 3.70 ft, May 22, 1942, site and datum then in use.

**09134100 NORTH FORK GUNNISON RIVER BELOW PAONIA, CO**

LOCATION.--Lat 38°51'27", long 107°37'19", in SW¼SE¼ sec.1, T.14 S., R.92 W., Delta County, Hydrologic Unit 14020004, on left bank 1,250 ft downstream from Roatcap Creek, and 1.5 mi southwest of Paonia.

DRAINAGE AREA.--741 mi<sup>2</sup>.

PERIOD OF RECORD.--March 2000 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09134100](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09134100)

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 5,560 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, and the period May 15 to July 4, which are fair. Natural flow of stream affected by diversion to Fire Mountain Canal for irrigation of about 5,000 acres above and below station and many other smaller diversions for irrigation above station, storage in Overland Reservoir (capacity, 6,280 acre-ft), and storage in Paonia Reservoir (capacity, 18,300 acre-ft), since February 1962. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	89	80	47	42	46	178	955	3,550	71	13	20
2	64	95	75	e43	44	43	235	866	3,370	61	17	16
3	82	92	65	e47	e45	42	240	903	2,520	75	17	14
4	81	75	56	e48	39	49	209	997	2,010	28	15	12
5	72	81	68	48	42	49	182	823	1,680	e20	14	16
6	69	68	56	e42	e41	52	177	710	1,270	e18	13	35
7	62	69	52	e44	e35	51	143	709	974	e14	12	45
8	52	90	45	e43	e35	55	74	668	821	e12	12	51
9	49	131	40	e44	e42	60	67	624	811	e9.4	12	60
10	45	127	28	48	e45	72	148	619	781	8.6	12	256
11	41	104	37	e48	e42	83	299	530	770	19	13	238
12	36	78	49	e46	e44	123	403	632	738	9.6	16	175
13	33	80	e55	e42	52	144	488	931	661	8.4	19	185
14	30	96	51	48	e57	173	856	1,130	571	6.2	41	171
15	25	87	50	e47	e59	178	963	1,820	569	5.6	13	137
16	33	65	51	e39	e53	187	624	2,180	574	e8.8	21	94
17	38	66	e53	e45	e49	182	610	2,870	473	e22	24	78
18	50	90	53	e42	e46	160	559	3,690	447	25	16	66
19	48	62	45	48	e44	146	456	3,990	410	24	12	69
20	45	73	e42	48	40	136	419	3,770	380	19	11	71
21	42	76	e50	49	e47	143	478	3,760	323	14	12	64
22	41	78	e45	48	e47	141	706	3,530	295	8.6	21	49
23	57	83	e37	45	e46	159	766	3,440	263	43	36	32
24	77	85	44	45	41	199	556	3,780	223	11	34	26
25	88	82	e47	47	e47	195	613	3,540	156	11	21	35
26	79	70	e42	45	47	189	963	3,090	127	9.0	16	41
27	94	47	e43	42	47	186	1,290	3,340	114	25	15	21
28	93	40	e43	43	48	157	1,420	3,950	110	22	14	21
29	94	62	e45	42	---	143	1,290	3,820	102	21	13	46
30	85	66	e45	39	---	143	1,050	e3,830	90	11	16	45
31	90	---	e41	43	---	148	---	3,110	---	8.4	18	---
TOTAL	1,865	2,407	1,533	1,395	1,266	3,834	16,462	68,607	25,183	648.6	539	2,189
MEAN	60.2	80.2	49.5	45.0	45.2	124	549	2,213	839	20.9	17.4	73.0
MAX	94	131	80	49	59	199	1,420	3,990	3,550	75	41	256
MIN	25	40	28	39	35	42	67	530	90	5.6	11	12
AC-FT	3,700	4,770	3,040	2,770	2,510	7,600	32,650	136,100	49,950	1,290	1,070	4,340

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

MEAN	41.9	82.0	59.1	53.8	53.8	105	616	1,348	413	18.4	17.9	30.1
MAX	60.2	87.9	71.1	61.2	58.9	124	1,042	2,213	839	23.7	33.3	73.0
(WY)	(2003)	(2001)	(2002)	(2002)	(2001)	(2003)	(2000)	(2003)	(2003)	(2000)	(2001)	(2003)
MIN	28.6	77.7	49.5	45.0	45.2	88.5	380	255	72.8	8.89	9.89	13.3
(WY)	(2002)	(2002)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2000)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 2000 - 2003
ANNUAL TOTAL	34,685.6	125,928.6	
ANNUAL MEAN	95.0	345	227
HIGHEST ANNUAL MEAN			345
LOWEST ANNUAL MEAN			94.0
HIGHEST DAILY MEAN	626	3,990	3,990
LOWEST DAILY MEAN	4.4	5.6	4.4
ANNUAL SEVEN-DAY MINIMUM	6.0	9.5	6.0
MAXIMUM PEAK FLOW		4,770	4,770
MAXIMUM PEAK STAGE		4.85	4.85
ANNUAL RUNOFF (AC-FT)	68,800	249,800	164,500
10 PERCENT EXCEEDS	272	860	566
50 PERCENT EXCEEDS	58	55	60
90 PERCENT EXCEEDS	8.1	16	11

e Estimated.

**09135950 NORTH FORK GUNNISON RIVER BELOW LEROUX CREEK, NEAR HOTCHKISS, CO**

LOCATION.--Lat 38°47'18", long 107°44'21", in SW $\frac{1}{4}$ SW $\frac{1}{4}$  sec.36, T.14 S., R.93 W., Delta County, Hydrologic Unit 14020004, on left bank 0.7 mi downstream from Leroux Creek, and 1 mi southwest of Hotchkiss.

DRAINAGE AREA.--922 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1997 to current year (seasonal records only). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09135950](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09135950)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,240 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by diversions for irrigation of about 44,000 acres upstream from station, storage in Overland Reservoir, capacity, 6,280 acre-ft, and storage in Paonia Reservoir (capacity, 18,300 acre-ft). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES FOR PERIOD OF RECORD (seasonal only).--Maximum discharge, 3,220 ft<sup>3</sup>/s, May 24, 1999, gage height, 11.34, minimum daily, 21 ft<sup>3</sup>/s, Aug. 17, 2002.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge 3,230 ft<sup>3</sup>/s (discharge measurement), June 11, 1997, gage height, 11.82 ft.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge during period of operation, 521 ft<sup>3</sup>/s, Sept. 10, gage height, 9.35 ft; minimum daily, 30 ft<sup>3</sup>/s, July 10.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	123	---	---	---	---	---	---	---	---	147	49	64
2	116	---	---	---	---	---	---	---	---	126	55	61
3	201	---	---	---	---	---	---	---	---	150	53	57
4	153	---	---	---	---	---	---	---	---	93	57	58
5	131	---	---	---	---	---	---	---	---	73	54	59
6	124	---	---	---	---	---	---	---	---	63	50	86
7	121	---	---	---	---	---	---	---	---	57	51	104
8	114	---	---	---	---	---	---	---	---	47	53	121
9	112	---	---	---	---	---	---	---	---	35	51	151
10	107	---	---	---	---	---	---	---	---	30	49	411
11	100	---	---	---	---	---	---	---	---	35	51	384
12	96	---	---	---	---	---	---	---	---	43	50	276
13	93	---	---	---	---	---	---	---	---	37	51	270
14	90	---	---	---	---	---	---	---	---	39	66	259
15	86	---	---	---	---	---	---	---	---	35	56	220
16	88	---	---	---	---	---	---	---	---	36	54	165
17	87	---	---	---	---	---	---	---	---	56	56	147
18	92	---	---	---	---	---	---	---	---	56	56	134
19	90	---	---	---	---	---	---	---	---	56	52	132
20	87	---	---	---	---	---	---	---	---	56	52	132
21	85	---	---	---	---	---	---	---	---	54	52	120
22	84	---	---	---	---	---	---	---	---	45	56	110
23	107	---	---	---	---	---	---	---	---	61	66	98
24	131	---	---	---	---	---	---	---	---	53	83	90
25	129	---	---	---	---	---	---	---	---	49	66	88
26	113	---	---	---	---	---	---	---	---	47	61	96
27	136	---	---	---	---	---	---	---	---	50	60	81
28	136	---	---	---	---	---	---	---	---	62	62	77
29	143	---	---	---	---	---	---	---	---	53	61	93
30	123	---	---	---	---	---	---	---	---	57	61	91
31	119	---	---	---	---	---	---	---	---	50	61	---
TOTAL	3,517	---	---	---	---	---	---	---	---	1,851	1,755	4,235
MEAN	113	---	---	---	---	---	---	---	---	59.7	56.6	141
MAX	201	---	---	---	---	---	---	---	---	150	83	411
MIN	84	---	---	---	---	---	---	---	---	30	49	57
AC-FT	6,980	---	---	---	---	---	---	---	---	3,670	3,480	8,400

**09143000 SURFACE CREEK NEAR CEDAREEDGE, CO**

LOCATION.--Lat 38°59'05", long 107°51'13", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.25, T.12 S., R.94 W., Delta County, Hydrologic Unit 14020005, on left bank 5 ft downstream from private bridge, 1.4 mi downstream from Caesar Creek, and 7.0 mi northeast of Cedareedge.

DRAINAGE AREA.--27.4 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1939 to September 1999. October 1999 to current year (seasonal records only). Monthly discharge only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09143000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09143000)

REVISED RECORDS.--WDR CO-83-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,261 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by many small reservoirs. Some water imported from Leon Lake in Plateau Creek drainage. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 892 ft<sup>3</sup>/s, June 15, 1995, gage height, 3.79 ft; maximum gage height, 5.10 ft, Apr. 13, 1958 (ice jam); minimum daily, 0.80 ft<sup>3</sup>/s, Jan. 15, 1977.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 200 ft<sup>3</sup>/s, May 22, gage height, 2.41 ft; minimum daily, 5.5 ft<sup>3</sup>/s, Apr. 8.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	---	---	---	---	---	e8.6	68	e145	42	42	31
2	9.1	---	---	---	---	---	e9.2	74	e140	50	41	30
3	11	---	---	---	---	---	e8.0	e64	138	49	40	31
4	10	---	---	---	---	---	e7.3	e60	129	49	36	30
5	11	---	---	---	---	---	e6.7	e50	124	48	38	29
6	11	---	---	---	---	---	e6.2	e44	113	49	80	31
7	12	---	---	---	---	---	e5.9	43	104	66	82	32
8	12	---	---	---	---	---	5.5	41	101	65	48	39
9	11	---	---	---	---	---	8.4	36	97	51	46	45
10	8.4	---	---	---	---	---	16	33	92	50	52	42
11	7.6	---	---	---	---	---	30	35	85	52	65	31
12	7.1	---	---	---	---	---	43	52	76	50	65	23
13	6.5	---	---	---	---	---	50	57	72	50	60	21
14	6.2	---	---	---	---	---	56	67	69	59	58	21
15	6.3	---	---	---	---	---	43	76	66	59	39	20
16	6.0	---	---	---	---	---	31	89	63	57	37	19
17	6.0	---	---	---	---	---	34	92	e62	55	36	19
18	8.4	---	---	---	---	---	26	103	e64	42	29	19
19	8.4	---	---	---	---	---	20	108	67	42	29	21
20	8.4	---	---	---	---	---	19	127	73	41	32	20
21	7.6	---	---	---	---	---	24	147	62	41	34	20
22	7.8	---	---	---	---	---	32	153	57	42	45	20
23	8.0	---	---	---	---	---	27	140	63	71	45	20
24	11	---	---	---	---	---	24	e135	58	69	43	20
25	17	---	---	---	---	---	57	e120	53	39	73	20
26	17	---	---	---	---	---	90	e115	52	38	71	23
27	15	---	---	---	---	---	101	e125	53	36	55	23
28	11	---	---	---	---	---	97	e135	51	35	53	23
29	11	---	---	---	---	---	81	e145	47	35	53	20
30	11	---	---	---	---	---	72	e135	42	36	54	20
31	10	---	---	---	---	---	---	e125	---	34	52	---
TOTAL	302.8	---	---	---	---	---	1,038.8	2,794	2,418	1,502	1,533	763
MEAN	9.77	---	---	---	---	---	34.6	90.1	80.6	48.5	49.5	25.4
MAX	17	---	---	---	---	---	101	153	145	71	82	45
MIN	6.0	---	---	---	---	---	5.5	33	42	34	29	19
AC-FT	601	---	---	---	---	---	2,060	5,540	4,800	2,980	3,040	1,510

e Estimated.

## 09143500 SURFACE CREEK AT CEDAREDDGE, CO

LOCATION.--Lat 38°54'06", long 107°55'14", in SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.20, T.13 S., R.94 W., Delta County, Hydrologic Unit 14020005, on left bank at Cedaredge, 700 ft east of State Highway 65, and 8.5 mi upstream from mouth.

DRAINAGE AREA.--39.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1916 to September 1999. October 1999 to current year (seasonal records only). Monthly discharge only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09143500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09143500)

REVISED RECORDS.--WRD CO-83-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 6,220 ft above NGVD of 1929, from topographic map. Prior to June 8, 1917, nonrecording gage at present site at datum 0.50 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions to and from nearby streams, many small storage reservoirs, diversions for irrigation, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,190 ft<sup>3</sup>/s, May 13, 1941, gage height, 2.50 ft from rating curve extended above 640 ft<sup>3</sup>/s; maximum gage height, 3.10 ft, May 21, 1993; minimum daily, no flow at times some years.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge during period of operation, 155 ft<sup>3</sup>/s, May 18, gage height, 1.94 ft; minimum daily, 4.5 ft<sup>3</sup>/s, Oct. 20.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	---	---	---	---	---	9.5	67	89	25	18	22
2	e7.6	---	---	---	---	---	10	69	83	30	18	20
3	e10	---	---	---	---	---	9.1	79	68	30	18	21
4	e9.4	---	---	---	---	---	8.4	76	63	29	13	20
5	e10	---	---	---	---	---	7.6	55	62	28	12	15
6	e11	---	---	---	---	---	7.4	51	64	27	27	17
7	e11	---	---	---	---	---	7.0	55	64	27	26	22
8	e11	---	---	---	---	---	6.9	52	64	23	23	14
9	e10	---	---	---	---	---	11	49	61	22	21	13
10	e8.0	---	---	---	---	---	24	47	61	25	23	28
11	e7.2	---	---	---	---	---	36	43	59	28	30	21
12	6.8	---	---	---	---	---	43	59	55	25	30	20
13	6.0	---	---	---	---	---	51	65	53	24	32	21
14	5.5	---	---	---	---	---	63	63	50	29	32	19
15	5.1	---	---	---	---	---	60	77	51	28	21	18
16	4.9	---	---	---	---	---	43	78	50	29	18	16
17	4.8	---	---	---	---	---	49	87	46	29	17	17
18	5.6	---	---	---	---	---	42	110	46	19	17	17
19	4.6	---	---	---	---	---	33	103	46	17	17	18
20	4.5	---	---	---	---	---	31	88	54	15	18	17
21	4.6	---	---	---	---	---	34	82	46	17	17	17
22	5.9	---	---	---	---	---	46	78	40	18	23	16
23	7.6	---	---	---	---	---	42	80	36	20	23	15
24	9.4	---	---	---	---	---	29	75	29	16	22	15
25	13	---	---	---	---	---	46	72	27	14	29	14
26	11	---	---	---	---	---	75	65	26	14	27	17
27	10	---	---	---	---	---	81	71	27	13	32	16
28	8.9	---	---	---	---	---	84	77	25	13	34	16
29	11	---	---	---	---	---	73	96	22	12	34	13
30	9.8	---	---	---	---	---	68	90	24	12	35	12
31	9.7	---	---	---	---	---	---	80	---	9.9	34	---
TOTAL	252.7	---	---	---	---	---	1,129.9	2,239	1,491	667.9	741	527
MEAN	8.15	---	---	---	---	---	37.7	72.2	49.7	21.5	23.9	17.6
MAX	13	---	---	---	---	---	84	110	89	30	35	28
MIN	4.5	---	---	---	---	---	6.9	43	22	9.9	12	12
AC-FT	501	---	---	---	---	---	2,240	4,440	2,960	1,320	1,470	1,050

e Estimated.

**09143600 FRUIT GROWERS RESERVOIR NEAR ORCHARD CITY, CO**

LOCATION.--Lat 39°49'35", long 107°57'15", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.24, T.14 S., R.95 W., Delta County, Hydrologic Unit 14020005, on crest of Fruit Growers dam 0.9 mi east of Orchard City.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--May to September 2003. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09143600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09143600)

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,485.00 ft above NGVD of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by an earthfill dam. Dam completed October 1938. Capacity, 4,469 acre-ft, 1987 survey, at elevation 5,485.00, crest of spillway. No dead storage. Figures given are total contents.

COOPERATION.--Capacity tables provided by U.S. Bureau of Reclamation.

EXTREMES FOR CURRENT YEAR.--Maximum daily mean contents during period May to September, 4,630 acre-ft, May 24, elevation, 5,485.35 ft; minimum daily mean contents, 1,030 acre-ft, Sept. 30, elevation 5,473.34 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30 . . . . .	-	-	-
Oct. 31 . . . . .	-	-	-
Nov. 30 . . . . .	-	-	-
Dec. 31 . . . . .	-	-	-
CAL YR 2002. . . . .	-	-	-
Jan. 31 . . . . .	-	-	-
Feb. 28 . . . . .	-	-	-
Mar. 31 . . . . .	-	-	-
Apr. 30 . . . . .	-	-	-
May 31. . . . .	5,485.05	4,490	-
June 30 . . . . .	5,483.39	3,800	-690
July 31 . . . . .	5,480.32	2,700	-1,100
Aug. 31 . . . . .	5,477.18	1,810	-890
Sept. 30. . . . .	5,473.13	1,000	-810
WTR YR 2003. . . . .	-	-	-

## 09144250 GUNNISON RIVER AT DELTA, CO

LOCATION.--Lat 38°45'11", long 108°04'40", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.13, T.15 S., R.96 W., Delta County, Hydrologic Unit 14020005, in Confluence Park on left bank, 0.7 mi downstream from U.S. Highway 50 bridge at north edge of Delta.

DRAINAGE AREA.--5,628 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1976 to current year. Gage-height records collected at this site 1912-77 (flood seasons only) are in reports of the National Weather Service. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09144250](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09144250)

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 4,910 ft above NGVD of 1929, from topographic map. Prior to May 1976 nonrecording gage at site 0.7 mi upstream at datum 4.52 ft higher. June 1, 1976 to Mar. 19, 1998 water-stage recorder at site 0.7 mi upstream at datum 4.52 ft higher.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, and many diversions for irrigation. Auxillary gage established 200 ft downstream from present site to collect streamflow data during bridge construction at principal site then in use, June 27, 1991 to September 30, 1992. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water Quality Data For Gaging Stations" section of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum gage height observed, 13.5 ft, June 6, 1957, from National Weather Service wire-weight gage at site 0.7 mi upstream, at datum 4.52 ft higher (discharge not determined).

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	564	421	417	399	376	398	483	1,230	4,460	774	759	761
2	544	414	427	392	381	388	537	1,120	4,540	811	762	742
3	838	425	419	393	393	378	564	1,140	3,930	835	778	603
4	650	420	409	405	376	381	517	1,280	3,410	881	795	578
5	577	411	403	396	380	393	505	1,230	2,950	877	758	646
6	565	420	417	402	376	397	469	1,060	2,460	891	730	742
7	562	414	407	380	340	395	455	1,010	2,120	934	723	801
8	549	410	403	386	329	387	401	972	1,950	866	733	821
9	539	471	390	381	368	388	320	947	1,880	814	749	922
10	528	501	383	401	372	394	295	983	1,640	788	724	1,300
11	516	457	377	405	373	404	423	910	1,570	873	722	1,220
12	499	429	389	406	373	421	616	894	1,500	926	724	998
13	492	393	405	393	390	456	686	1,130	1,430	890	720	913
14	490	431	406	387	416	482	1,050	1,270	1,360	897	736	906
15	490	439	406	395	425	499	1,300	1,820	1,250	898	810	861
16	449	417	403	381	417	504	1,040	2,220	1,250	866	815	791
17	457	402	415	383	398	517	915	2,670	1,160	881	832	745
18	432	418	424	371	402	513	877	3,220	1,130	876	855	700
19	418	420	412	370	391	486	842	3,910	1,090	900	741	690
20	401	411	390	373	384	472	711	3,570	1,070	912	680	695
21	399	417	398	379	380	468	712	3,660	1,010	906	692	667
22	400	424	402	387	383	447	914	3,700	889	816	715	650
23	457	424	395	388	372	457	1,140	3,890	971	809	752	583
24	503	429	392	383	373	508	1,000	3,830	822	848	790	563
25	438	432	402	385	383	528	867	3,770	649	841	765	549
26	407	430	395	378	399	485	1,130	3,620	617	839	730	563
27	425	406	389	373	393	494	1,480	3,540	672	837	681	557
28	440	377	399	378	395	471	1,670	3,720	779	918	715	538
29	448	387	410	376	---	487	1,590	3,900	780	878	735	532
30	433	404	403	373	---	492	1,400	4,290	729	811	735	527
31	423	---	384	373	---	474	---	4,410	---	770	755	---
TOTAL	15,333	12,654	12,471	11,972	10,738	13,964	24,909	74,916	50,068	26,663	23,211	22,164
MEAN	495	422	402	386	384	450	830	2,417	1,669	860	749	739
MAX	838	501	427	406	425	528	1,670	4,410	4,540	934	855	1,300
MIN	399	377	377	370	329	378	295	894	617	770	680	527
AC-FT	30,410	25,100	24,740	23,750	21,300	27,700	49,410	148,600	99,310	52,890	46,040	43,960

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 2003, BY WATER YEAR (WY)

	1,346	1,454	1,518	1,504	1,535	1,786	2,336	4,371	3,842	2,061	1,162	1,179
MEAN	1,346	1,454	1,518	1,504	1,535	1,786	2,336	4,371	3,842	2,061	1,162	1,179
MAX	2,833	3,156	3,103	3,349	3,381	3,744	6,641	11,090	13,520	10,110	2,752	2,496
(WY)	(1987)	(1987)	(1987)	(1985)	(1985)	(1997)	(1985)	(1984)	(1984)	(1995)	(1984)	(1986)
MIN	398	422	402	386	384	450	366	411	331	275	269	335
(WY)	(1978)	(2003)	(2003)	(2003)	(2003)	(2003)	(1977)	(1977)	(1977)	(1977)	(1977)	(1977)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1976 - 2003	
ANNUAL TOTAL	222,369		299,063			
ANNUAL MEAN	609		819		2,026	
HIGHEST ANNUAL MEAN					4,670	
LOWEST ANNUAL MEAN					601	
HIGHEST DAILY MEAN	1,350		4,540		20,300	
LOWEST DAILY MEAN	377		295		208	
ANNUAL SEVEN-DAY MINIMUM	393		362		215	
MAXIMUM PEAK FLOW			4,920		a25,500	
MAXIMUM PEAK STAGE			5.08		a13.15	
ANNUAL RUNOFF (AC-FT)	441,100		593,200		1,468,000	
10 PERCENT EXCEEDS	773		1,300		3,980	
50 PERCENT EXCEEDS	594		528		1,400	
90 PERCENT EXCEEDS	410		383		524	

a At site 0.7 mi upstream, at datum 4.52 ft higher.

09146020 UNCOMPAHGRE RIVER NEAR OURAY, CO

LOCATION.--Lat 38°02'36", long 107°40'57", in SE¼SE¼ sec.24, T.44 N., R.8 W., Ouray County, Hydrologic Unit 14020006, on right bank at downstream side of foot bridge, 0.4 mi downstream from Bridalveil Creek, and 1.6 mi north of Ouray.

DRAINAGE AREA.--77.0 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 2001 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09146020](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09146020)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,600 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Slight regulation of low flow by power plant at Ouray. One small diversion above station for irrigation below station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	38	30	19	21	18	56	145	860	164	67	64
2	79	36	28	20	21	19	51	143	832	162	79	60
3	92	27	29	20	20	20	42	144	708	157	65	57
4	93	33	26	20	20	20	37	136	627	146	64	55
5	79	29	27	21	20	20	35	110	557	137	58	63
6	72	29	25	21	18	19	34	96	452	125	55	78
7	68	30	25	22	16	22	34	92	425	117	53	79
8	67	32	25	24	17	24	38	88	425	115	54	74
9	66	38	24	22	16	27	52	80	435	110	50	259
10	62	35	24	20	15	32	62	76	416	104	51	272
11	60	36	23	21	16	33	78	85	398	97	49	178
12	56	34	25	20	16	37	84	136	358	91	54	169
13	53	36	24	20	19	47	101	184	311	85	81	178
14	51	34	23	22	20	42	110	231	289	81	98	166
15	48	31	25	21	19	37	101	261	327	80	74	148
16	46	33	23	19	19	35	85	309	294	81	73	136
17	44	36	24	19	19	32	89	392	247	80	72	130
18	43	34	24	19	21	31	80	390	230	76	71	118
19	42	33	23	20	21	30	70	373	237	74	63	109
20	40	36	22	20	21	30	73	397	235	71	58	103
21	39	42	24	20	20	31	82	459	231	69	55	96
22	40	42	23	20	20	36	80	583	245	71	61	88
23	42	38	22	20	20	46	71	703	239	67	85	84
24	41	35	22	20	20	43	72	738	213	65	68	82
25	38	34	21	20	20	48	106	653	188	73	61	80
26	39	29	20	19	19	44	148	715	187	66	57	78
27	44	29	19	20	19	37	180	889	190	63	64	76
28	39	30	20	20	19	36	188	1,040	186	72	77	74
29	39	31	20	20	---	33	167	1,100	180	91	68	73
30	39	31	20	19	---	37	151	1,030	172	72	90	73
31	41	---	20	21	---	42	---	878	---	73	71	---
TOTAL	1,667	1,011	730	629	532	1,008	2,557	12,656	10,694	2,935	2,046	3,300
MEAN	53.8	33.7	23.5	20.3	19.0	32.5	85.2	408	356	94.7	66.0	110
MAX	93	42	30	24	21	48	188	1,100	860	164	98	272
MIN	38	27	19	19	15	18	34	76	172	63	49	55
AC-FT	3,310	2,010	1,450	1,250	1,060	2,000	5,070	25,100	21,210	5,820	4,060	6,550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

MEAN	44.3	30.7	23.4	19.9	18.9	32.8	92.0	331	284	92.0	58.9	75.7
MAX	53.8	33.7	23.5	20.3	19.0	33.1	98.9	408	368	138	76.4	110
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2003)	(2001)	(2001)	(2001)	(2003)
MIN	34.8	27.6	23.2	19.6	18.8	32.5	85.2	179	126	43.6	34.4	48.1
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2001)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	22,344		39,765			
ANNUAL MEAN	61.2		109		84.0	
HIGHEST ANNUAL MEAN					109	2003
LOWEST ANNUAL MEAN					59.1	2002
HIGHEST DAILY MEAN	273	May 31	1,100	May 29	1,100	May 29, 2003
LOWEST DAILY MEAN	16	Feb 9	15	Feb 10	15	Feb 10, 2003
ANNUAL SEVEN-DAY MINIMUM	17	Feb 4	16	Feb 6	16	Feb 6, 2003
MAXIMUM PEAK FLOW			1,400	May 28	1,400	May 28, 2003
MAXIMUM PEAK STAGE			5.74	May 28	5.74	May 28, 2003
ANNUAL RUNOFF (AC-FT)	44,320		78,870		60,860	
10 PERCENT EXCEEDS	143		246		180	
50 PERCENT EXCEEDS	38		54		39	
90 PERCENT EXCEEDS	19		20		20	



## WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 2001 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09146020](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09146020)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
NOV 13...	1315	36	9.0	7.3	648	7.0	300	111	4.61	1.34	0.3	13.3	E35
APR 23...	1430	67	9.3	7.5	432	5.3	200	72.9	3.63	1.09	0.3	8.17	43
MAY 28...	1415	917	8.7	7.9	143	9.8	59	21.4	1.47	0.60	0.1	1.73	27
AUG 11...	1120	40	7.3	7.9	551	16.7	250	93.1	3.89	1.22	0.3	12.0	41

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)
NOV 13...	5.32	0.6	11.0	269	--	--	--	<0.10	E.05	E.011	0.133	<0.002	<0.007
APR 23...	4.41	0.44	9.0	158	285	0.39	51.6	<0.10	E.09	0.017	0.183	<0.002	<0.007
MAY 28...	0.54	<0.2	5.3	38.4	87	0.12	215	E.07	0.33	<0.015	0.205	<0.002	<0.007
AUG 11...	3.57	0.6	10.1	219	369	0.50	39.8	<0.10	<0.10	0.020	0.150	<0.002	<0.007

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, col/100 mL (31633)	Fecal coliform, M-FC MF, col/100 mL (31625)	Cadmium, water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury, water, fltrd, ug/L (71890)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)
NOV 13...	<0.004	0.021	<1	<1	0.8	4.6	1,590	<1	389	404	<0.02	<3	<0.3
APR 23...	<0.004	0.085	<1	E2	1.1	4.9	2,550	<1	396	442	<0.02	<3	<0.3
MAY 28...	<0.004	2.95	E3	E8	E.2	4.5	16,700	<1	99.3	1,820	<0.02	<3	<0.3
AUG 11...	<0.004	0.085	<1	<1	0.7	E4.3	2,050	<1	249	279	<0.02	<3	<0.3

09146020 UNCOMPAHGRE RIVER NEAR OURAY, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Zinc, water, fltrd, ug/L (01090)
NOV 13...	145
APR 23...	179
MAY 28...	14
AUG 11...	42

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
OCT 01...	1510	61	502	9.6	JUN 24...	1540	197	236	11.6
JAN 07...	1230	20	828	8.3	AUG 12...	1500	47	557	17.7
APR 03...	1240	40	580	7.5					

## 09146200 UNCOMPAHGRE RIVER NEAR RIDGWAY, CO

LOCATION.--Lat 38°11'02", long 107°44'43", in SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.4, T.45 N., R.8 W., Ouray County, Hydrologic Unit 14020006, on right bank 15 ft downstream from bridge, 0.2 mi downstream from Dry Creek, 0.5 mi upstream from Dallas Creek, and 2.3 mi north of Ridgway.

DRAINAGE AREA.--149 mi<sup>2</sup>

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1958 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09146200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09146200)

REVISED RECORDS.--WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,877.58 ft above NGVD of 1929, (levels by U.S. Bureau of Reclamation).

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation upstream from station. Water is imported upstream from station in some years by Red Mountain ditch from Mineral Creek in San Juan River basin.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	60	57	41	41	34	79	170	911	222	116	106
2	90	58	53	43	42	33	80	166	892	218	120	93
3	118	51	54	e40	39	34	70	166	785	208	125	95
4	111	55	51	40	37	34	64	154	709	197	115	94
5	103	53	53	41	37	34	61	131	622	188	101	103
6	95	52	51	40	e36	34	60	113	504	176	98	119
7	92	53	51	40	e36	35	60	103	459	166	98	122
8	89	55	50	42	e36	38	57	94	433	158	98	111
9	86	80	48	41	34	46	66	86	458	170	91	297
10	83	68	47	40	e34	61	82	83	446	169	85	390
11	82	65	46	41	36	74	98	82	424	159	78	206
12	77	60	46	40	35	73	115	107	398	150	78	191
13	74	63	47	39	37	69	120	152	363	143	85	193
14	72	62	46	39	e41	70	143	177	319	137	170	175
15	68	61	47	39	40	59	140	224	354	130	116	161
16	66	56	45	39	37	59	111	235	344	135	119	153
17	65	62	47	37	38	55	122	363	308	139	117	149
18	64	61	49	38	40	54	121	376	284	134	111	140
19	61	60	47	37	39	53	110	336	289	127	98	130
20	59	62	43	36	38	52	104	355	305	125	91	120
21	59	66	46	35	37	58	115	384	282	119	90	111
22	59	67	44	35	37	55	117	540	282	121	89	106
23	62	69	e46	35	35	66	109	664	280	115	125	101
24	60	64	42	36	38	69	99	697	256	111	118	97
25	58	64	e43	38	37	68	124	617	231	112	105	94
26	60	59	e43	36	35	67	175	637	224	120	99	91
27	64	55	e43	36	35	64	211	807	227	112	113	88
28	62	55	e43	37	35	60	222	1,020	228	114	136	86
29	62	57	41	37	---	55	199	1,220	225	142	126	84
30	60	56	41	37	---	54	180	1,110	226	121	146	83
31	62	---	e40	39	---	63	---	942	---	116	123	---
TOTAL	2,304	1,809	1,450	1,194	1,042	1,680	3,414	12,311	12,068	4,554	3,380	4,089
MEAN	74.3	60.3	46.8	38.5	37.2	54.2	114	397	402	147	109	136
MAX	118	80	57	43	42	74	222	1,220	911	222	170	390
MIN	58	51	40	35	34	33	57	82	224	111	78	83
AC-FT	4,570	3,590	2,880	2,370	2,070	3,330	6,770	24,420	23,940	9,030	6,700	8,110

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2003, BY WATER YEAR (WY)

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
MEAN	87.8	67.1	51.8	44.6	45.3	59.3	112	326	576	326	157	108
MAX	153	94.4	67.3	61.5	61.5	102	188	765	914	848	313	250
(WY)	(1985)	(1971)	(1971)	(1997)	(1995)	(1997)	(1985)	(1984)	(1984)	(1983)	(1995)	(1970)
MIN	57.3	48.8	35.8	33.1	32.0	40.5	67.5	122	149	57.1	47.5	52.9
(WY)	(2002)	(1990)	(1977)	(1977)	(1990)	(1964)	(1973)	(1977)	(2002)	(2002)	(2002)	(1959)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1959 - 2003	
ANNUAL TOTAL	28,325		49,295			
ANNUAL MEAN	77.6		135		164	
HIGHEST ANNUAL MEAN					270 1984	
LOWEST ANNUAL MEAN					72.6 1977	
HIGHEST DAILY MEAN	272	May 31	1,220	May 29	1,740	Jun 24, 1983
LOWEST DAILY MEAN	e35	Mar 20	33	Mar 2	26	Jan 13, 1963
ANNUAL SEVEN-DAY MINIMUM	e40	Mar 15	34	Feb 28	30	Feb 13, 1990
MAXIMUM PEAK FLOW			1,480	May 29	a2,100	Jun 24, 1983
MAXIMUM PEAK STAGE			5.05	May 29	5.73	Jun 24, 1983
ANNUAL RUNOFF (AC-FT)	56,180		97,780		118,600	
10 PERCENT EXCEEDS	146		286		423	
50 PERCENT EXCEEDS	58		81		79	
90 PERCENT EXCEEDS	41		37		43	

e Estimated.

a From rating curve extended above 1800 ft<sup>3</sup>/s.

09146200 UNCOMPAHGRE RIVER NEAR RIDGWAY, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1995 to September 1998, April 2001 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09146200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09146200)

PERIOD OF DAILY RECORD.--WATER TEMPERATURE: October 1996 to June 1998.

INSTRUMENTATION.--Water temperature sensor and logger, October 1996 to June 1998.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat fltrd end lab, mg/L as CaCO3 (29801)
NOV 13...	1045	62	9.6	8.0	699	6.0	330	115	11.3	1.76	0.6	23.2	E98
APR 23...	1220	107	9.0	8.1	526	7.5	230	80.2	7.54	1.66	0.5	16.1	79
MAY 28...	1100	833	8.7	7.8	236	9.5	96	33.9	2.73	0.92	0.2	4.22	45
AUG 11...	1415	76	8.5	8.4	710	22.4	340	111	14.1	2.29	0.6	24.5	115

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)
NOV 13...	6.50	0.48	11.2	258	--	--	--	E.06	0.11	0.023	0.148	E.002	<0.007
APR 23...	5.65	0.43	9.6	175	345	0.47	99.8	E.08	0.17	0.037	0.180	0.003	<0.007
MAY 28...	1.30	0.2	6.1	59.6	137	0.19	308	E.09	0.71	E.009	0.213	E.002	<0.007
AUG 11...	5.74	0.5	11.1	235	473	0.64	97.1	<0.10	0.12	0.020	0.072	0.003	<0.007

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, col/ 100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/ 100 mL (31625)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)
NOV 13...	0.005	0.045	E2	E4	0.3	3.2	830	<1	147	183	<0.02	<3	<0.3
APR 23...	<0.004	0.099	E8	E3	0.4	3.6	2,000	<1	192	284	<0.02	<3	<0.3
MAY 28...	0.005	2.82	E40	67	<0.2	2.6	21,400	M	39.3	2,180	<0.02	<3	<0.3
AUG 11...	0.005	0.026	E16	E20	E.1	3.6	280	<1	48.5	55.5	<0.02	<3	<0.3

## GUNNISON RIVER BASIN

09146200 UNCOMPAHGRE RIVER NEAR RIDGWAY, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Zinc, water, fltrd, ug/L (01090)
NOV 13...	39
APR 23...	50
MAY 28...	7
AUG 11...	4

< -- Actual value is  
known to be less  
than the value  
shown.

E -- Estimated  
laboratory analysis  
value.

M -- Presence of  
material verified but  
not quantified.

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
OCT 01...	1250	82	631	12.0	JUN 24...	1215	251	471	13.4
JAN 07...	1400	43	815	5.2	AUG 12...	1340	76	727	20.5
APR 02...	1420	74	640	11.6					

09147000 DALLAS CREEK NEAR RIDGWAY, CO

LOCATION.--Lat 38°10'40", long 107°45'28", on line between sec.4 and 5, T.45 N., R.8 W., Ouray County, Hydrologic Unit 14020006, on right bank 20 ft downstream from county road bridge, 1.5 mi upstream from mouth, and 1.5 mi northwest of Ridgway.

DRAINAGE AREA.--97.2 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1922 to October 1927, October 1955 to September 1971, October 1979 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09147000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09147000)

REVISED RECORDS.--WSP 1924: 1960. WDR CO-88-2: Drainage area.

GAGE.--Water stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 6,980 ft above NGVD of 1929, from topographic map. Mar. 1, 1922 to Oct. 31, 1927, nonrecording gage at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 4,500 acres upstream from and 700 acres downstream from station. One small ditch imports water from Leopard Creek (Dolores River basin) to drainage upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	22	20	e16	15	13	30	4.3	87	5.0	47	45
2	29	22	22	e15	14	e15	36	3.8	86	5.3	37	38
3	43	18	19	e16	12	17	32	2.7	81	12	34	34
4	32	20	20	e16	e14	13	25	2.8	81	15	31	30
5	33	17	17	e16	e16	13	22	2.7	71	15	29	29
6	30	18	20	15	e15	14	23	2.5	46	16	26	33
7	30	19	22	e15	e15	14	23	2.0	34	16	24	43
8	29	20	22	e16	e15	16	20	1.9	30	12	25	44
9	29	37	e21	e15	e15	e22	25	2.1	29	11	21	123
10	27	28	e21	14	e14	e26	33	2.1	26	8.4	19	192
11	25	24	e21	14	e15	e27	60	2.0	24	11	17	90
12	25	19	22	14	e15	e30	96	2.4	23	16	18	66
13	25	21	20	e15	e15	33	114	2.1	19	18	19	63
14	25	21	e20	e16	e17	26	93	2.0	15	22	75	63
15	25	21	16	16	e15	28	71	2.1	18	21	54	57
16	25	21	19	e16	14	26	50	2.0	18	21	57	53
17	26	24	14	e15	14	22	62	2.0	16	22	74	52
18	27	21	14	e15	14	20	55	1.9	14	20	66	52
19	26	20	16	e16	13	18	51	2.8	15	21	37	49
20	25	23	e18	e16	15	16	46	1.8	15	19	30	44
21	22	21	e17	e16	13	20	45	4.3	12	18	26	41
22	22	20	e19	e15	13	17	54	7.0	13	21	24	41
23	22	20	e18	16	e16	21	41	8.5	16	26	23	39
24	22	19	e17	14	14	25	27	11	13	26	22	35
25	22	20	e17	13	13	29	33	35	9.1	24	25	28
26	23	18	e17	15	13	25	33	32	8.0	23	22	26
27	25	20	e16	15	e15	24	30	32	8.6	22	25	22
28	23	e22	e17	14	12	19	20	64	6.4	24	35	20
29	25	23	e16	14	---	15	13	94	6.0	42	44	17
30	24	24	e16	15	---	16	7.9	94	7.5	37	43	15
31	23	---	e16	14	---	21	---	85	---	48	42	---
TOTAL	815	643	570	468	401	641	1,270.9	514.8	847.6	617.7	1,071	1,484
MEAN	26.3	21.4	18.4	15.1	14.3	20.7	42.4	16.6	28.3	19.9	34.5	49.5
MAX	43	37	22	16	17	33	114	94	87	48	75	192
MIN	22	17	14	13	12	13	7.9	1.8	6.0	5.0	17	15
AC-FT	1,620	1,280	1,130	928	795	1,270	2,520	1,020	1,680	1,230	2,120	2,940

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

	25.6	24.4	20.1	17.8	18.7	25.6	57.5	49.0	59.4	72.6	57.7	39.6
MEAN	25.6	24.4	20.1	17.8	18.7	25.6	57.5	49.0	59.4	72.6	57.7	39.6
MAX	65.1	39.1	33.9	32.0	32.0	59.4	183	249	171	230	141	117
(WY)	(1985)	(1926)	(1924)	(1924)	(1924)	(1985)	(1985)	(1984)	(1984)	(1983)	(1983)	(1927)
MIN	2.07	14.4	13.4	9.61	11.9	14.8	4.13	0.67	1.49	0.75	3.95	2.58
(WY)	(1957)	(1957)	(1994)	(1980)	(1994)	(1980)	(1990)	(1981)	(2002)	(2002)	(2002)	(1956)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1922 - 2003	
ANNUAL TOTAL	5,606.42		9,344.0			
ANNUAL MEAN	15.4		25.6		38.8	
HIGHEST ANNUAL MEAN					86.4 1984	
LOWEST ANNUAL MEAN					13.8 1990	
HIGHEST DAILY MEAN	103	Sep 11	192	Sep 10	740 May 3, 1924	
LOWEST DAILY MEAN	0.48	May 17	1.8	May 20	0.21 Jun 19, 1981	
ANNUAL SEVEN-DAY MINIMUM	0.58	Jun 25	2.1	May 12	0.38 May 11, 1981	
MAXIMUM PEAK FLOW			1,170	Sep 9	a3,960 Jul 31, 1999	
MAXIMUM PEAK STAGE			b5.79	Sep 9	c8.42 Jul 31, 1999	
ANNUAL RUNOFF (AC-FT)	11,120		18,530		28,130	
10 PERCENT EXCEEDS	29		47		88	
50 PERCENT EXCEEDS	16		21		24	
90 PERCENT EXCEEDS	0.68		12		11	

e Estimated.

a On basis of slope-area measurement of peak flow.

b From crest-stage gage.

c From high water mark.

**09147022 RIDGWAY RESERVOIR NEAR RIDGWAY, CO**

LOCATION.--Lat 38°14'14", long 107°45'27", NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.16, T.46 N., R.8 W., Ouray County, Hydrologic Unit 14020006, in concrete gate house at base of Ridgway Reservoir on Uncompahgre River, 0.5 mi upstream from Fisher Creek, and 5.3 mi north of Ridgway.

DRAINAGE AREA.--265 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1988 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09147022](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09147022)

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,871.3 ft. above NGVD of 1929, (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by an earthfill dam. Dam completed Mar. 22, 1988. Capacity 84,590 acre-ft, between 6,680.0 ft, streambed at dam axis and 6,871.3 ft, crest of spillway. Dead storage below elevation 6,720.0 ft, 1,430 acre-ft. Figures given are live contents.

COOPERATION.--Capacity tables provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents 84,900 acre-ft, June 11, 1990, elevation 6,872.93 ft; minimum contents, 49,810 acre-ft, June 2, 1995, elevation, 6,834.93 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily mean contents, 83,420 acre-ft, May 31, mean elevation, 6,871.54 ft; minimum daily mean contents, 53,720 acre-ft, Oct. 21; mean elevation, 6,839.84 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30 . . . . .	6,840.39	54,170	-
Oct. 31 . . . . .	6,841.26	54,880	+710
Nov. 30 . . . . .	6,844.68	57,740	+2,860
Dec. 31 . . . . .	6,846.86	59,620	+1,880
CAL YR 2002. . . . .	-	-	-6,760
Jan. 31 . . . . .	6,848.64	61,180	+1,560
Feb. 28 . . . . .	6,850.16	62,530	+1,350
Mar. 31 . . . . .	6,853.38	65,460	+2,930
Apr. 30 . . . . .	6,860.14	71,850	+6,390
May 31 . . . . .	6,871.49	83,360	+11,510
June 30 . . . . .	6,869.39	81,140	-2,220
July 31 . . . . .	6,862.33	73,990	-7,150
Aug. 31 . . . . .	6,857.03	68,870	-5,120
Sept. 30 . . . . .	6,860.46	72,160	+3,290
WTR YR 2003. . . . .	-	-	+17,990

**09147025 UNCOMPAHGRE RIVER BELOW RIDGWAY RESERVOIR, CO**

LOCATION.--Lat 38°14'17", long 107°45'31", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.17, T.46 N., R.8 W., Ouray County, Hydrologic Unit 14020006, on right bank 1,600 ft upstream from Fisher Creek, 800 ft downstream from Ridgway Reservoir gate house, and 5.4 mi north of Ridgway.

DRAINAGE AREA.--265 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1988 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09147025](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09147025)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,650 ft above NGVD of 1929, from topographic map.

REMARKS.-- No estimated daily discharges. Records good. Diversions for irrigation by means of numerous canals downstream from station. Flow regulated by Ridgway Reservoir (capacity 84,591 acre-ft). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149	31	31	30	30	30	28	72	1,050	274	206	201
2	149	31	31	30	30	30	29	84	1,050	285	226	215
3	149	31	31	30	30	30	29	91	1,020	294	236	243
4	149	31	31	30	30	29	29	92	989	297	236	220
5	149	31	31	30	30	30	29	91	982	298	239	193
6	149	31	31	30	30	29	29	91	957	299	238	193
7	149	31	31	30	30	28	29	91	941	287	236	193
8	120	31	31	30	30	28	28	111	938	279	236	192
9	102	32	31	30	30	28	28	123	722	279	236	153
10	102	31	31	30	30	28	28	125	446	305	239	78
11	102	31	31	30	30	28	28	126	378	321	241	57
12	102	31	31	30	30	28	28	126	378	321	241	84
13	102	31	31	30	30	28	28	127	379	322	245	102
14	102	31	31	30	30	28	28	129	381	311	245	102
15	102	32	30	30	30	28	28	129	381	301	248	100
16	102	31	30	30	30	28	28	129	382	284	250	99
17	102	31	31	30	30	29	28	129	348	274	250	99
18	102	31	31	30	30	30	28	132	326	274	250	99
19	102	31	31	30	30	30	29	132	326	275	250	99
20	102	31	31	30	30	29	30	132	326	277	250	97
21	58	31	31	30	30	30	30	132	326	278	250	97
22	31	31	31	30	30	29	30	132	326	279	250	97
23	31	31	30	30	30	28	30	172	326	279	250	97
24	31	31	31	30	30	29	30	197	297	279	250	127
25	31	31	30	30	30	30	56	199	264	274	246	175
26	31	31	31	30	30	29	72	201	235	274	245	193
27	31	31	30	30	30	30	72	201	233	274	245	193
28	31	31	30	30	30	30	72	398	235	264	218	193
29	31	31	30	30	---	29	72	811	235	240	201	193
30	31	31	30	30	---	29	72	1,020	260	231	201	192
31	31	---	30	30	---	28	---	1,060	---	215	201	---
TOTAL	2,755	932	952	930	840	897	1,105	6,785	15,437	8,744	7,355	4,376
MEAN	88.9	31.1	30.7	30.0	30.0	28.9	36.8	219	515	282	237	146
MAX	149	32	31	30	30	30	72	1,060	1,050	322	250	243
MIN	31	31	30	30	30	28	28	72	233	215	201	57
AC-FT	5,460	1,850	1,890	1,840	1,670	1,780	2,190	13,460	30,620	17,340	14,590	8,680

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

MEAN	125	80.9	69.6	57.3	58.4	82.2	223	322	413	392	317	196
MAX	307	165	105	76.5	93.9	179	560	510	652	846	535	456
(WY)	(1998)	(1999)	(1993)	(1997)	(1997)	(1995)	(1997)	(1997)	(1999)	(1995)	(1992)	(1999)
MIN	55.4	31.1	30.7	30.0	30.0	28.9	36.8	159	199	154	131	68.1
(WY)	(1991)	(2003)	(2003)	(2003)	(2003)	(2003)	(1990)	(1989)	(1989)	(2002)	(2002)	(1993)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1989 - 2003

ANNUAL TOTAL	36,912	51,108	
ANNUAL MEAN	101	140	195
HIGHEST ANNUAL MEAN			311 1995
LOWEST ANNUAL MEAN			114 2002
HIGHEST DAILY MEAN	250 Jun 13	1,060 May 31	1,110 Jun 25, 1999
LOWEST DAILY MEAN	30 Dec 15	28 Mar 7	a28 Mar 7, 2003
ANNUAL SEVEN-DAY MINIMUM	30 Dec 25	28 Mar 7	28 Mar 7, 2003
MAXIMUM PEAK FLOW		1,100 May 31	1,160 Jun 13, 1990
MAXIMUM PEAK STAGE		3.44 May 31	b3.56 Jun 13, 1990
ANNUAL RUNOFF (AC-FT)	73,210	101,400	141,500
10 PERCENT EXCEEDS	207	297	451
50 PERCENT EXCEEDS	91	31	109
90 PERCENT EXCEEDS	31	29	46

a Also occurred Mar 8-16, 23, 31, Apr 1, 8-18, 2003.

b Maximum gage height, 3.63 ft, Jul 10, 1995.



## 09147500 UNCOMPAHGRE RIVER AT COLONA, CO

LOCATION.--Lat. 38°19'53", long 107°46'44", in NW¼NW¼ sec.17, T.47 N., R.8 W., Ouray County, Hydrologic Unit 14020006, on right bank 75 ft downstream from county highway crossing, 0.2 mi north of Colona, and 1.0 mi upstream from Beaton Creek.

DRAINAGE AREA.--448 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1903 to November 1905, April to June 1906 (gage heights and discharge measurements only), October 1912 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "near Colona" 1904-06, 1922-34. Statistical summary computed for 1986 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09147500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09147500)

REVISED RECORDS.--WSP 1313: 1904. WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,318.80 ft above NGVD of 1929. See WSP 1713 or 1733 for history of changes prior to Sept. 30, 1949.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by Ridgway Reservoir, 7.7 mi upstream, since 1986, total capacity 84,590 acre-ft. Diversions upstream from station for irrigation of about 2,600 acres downstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	41	41	33	31	30	69	121	1,440	258	220	146
2	140	40	38	39	32	31	76	e115	1,390	262	231	156
3	155	36	39	36	32	30	66	e125	1,270	271	268	193
4	156	37	36	31	31	31	58	e110	1,170	270	250	176
5	169	35	37	30	31	31	49	e100	1,130	273	241	150
6	156	34	34	30	34	30	47	e90	1,030	271	236	183
7	152	35	34	32	37	31	46	72	989	263	234	185
8	127	38	32	33	34	33	40	84	968	258	241	169
9	109	49	32	33	33	36	51	90	840	261	232	208
10	123	46	32	32	36	39	73	102	562	292	230	253
11	124	45	32	31	33	43	84	100	485	312	231	121
12	121	40	32	30	32	45	92	101	458	311	230	112
13	118	40	34	31	33	53	99	116	432	312	229	134
14	114	40	32	32	37	62	122	123	418	302	239	116
15	108	40	34	32	32	49	120	130	434	297	234	109
16	105	36	33	33	31	51	92	138	435	296	237	109
17	102	40	34	32	31	47	102	237	391	284	238	105
18	100	41	33	34	32	47	88	252	357	290	228	97
19	98	39	32	35	31	44	72	220	365	290	212	95
20	96	39	34	34	30	41	65	239	380	286	204	89
21	71	42	34	33	31	44	67	229	368	286	198	84
22	37	44	33	31	30	42	70	322	365	294	199	84
23	41	45	36	30	29	58	68	440	355	289	196	78
24	43	41	32	30	29	70	51	477	312	290	193	94
25	45	41	34	30	30	61	74	496	274	292	191	142
26	44	39	37	30	30	61	144	506	239	292	190	170
27	46	34	39	30	30	52	180	562	235	291	194	182
28	46	35	37	30	30	48	190	797	227	291	168	180
29	45	37	33	30	---	42	167	1,390	221	261	138	178
30	42	37	34	30	---	41	132	1,540	241	267	143	179
31	42	---	35	30	---	56	---	1,450	---	229	150	---
TOTAL	3,007	1,186	1,069	987	892	1,379	2,654	10,874	17,781	8,741	6,625	4,277
MEAN	97.0	39.5	34.5	31.8	31.9	44.5	88.5	351	593	282	214	143
MAX	169	49	41	39	37	70	190	1,540	1,440	312	268	253
MIN	37	34	32	30	29	30	40	72	221	229	138	78
AC-FT	5,960	2,350	2,120	1,960	1,770	2,740	5,260	21,570	35,270	17,340	13,140	8,480

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 2003, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	148	103	84.7	74.6	75.5	108	281	501	608	421	285	191						
MAX	353	214	132	105	121	213	683	926	1,066	1,226	598	495						
(WY)	(1998)	(1999)	(1993)	(1986)	(1997)	(1997)	(1997)	(1987)	(1995)	(1995)	(1999)	(1999)						
MIN	51.6	39.5	34.5	31.8	31.9	44.5	62.6	160	184	141	114	52.3						
(WY)	(1990)	(2003)	(2003)	(2003)	(2003)	(2003)	(1990)	(1988)	(2002)	(2002)	(2002)	(1989)						

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1986 - 2003

ANNUAL TOTAL	37,641	59,472		
ANNUAL MEAN	103	163	a241	
HIGHEST ANNUAL MEAN			396	1997
LOWEST ANNUAL MEAN			116	2002
HIGHEST DAILY MEAN	288	May 21	1,540	May 30
LOWEST DAILY MEAN	32	Dec 8	29	Feb 23
ANNUAL SEVEN-DAY MINIMUM	32	Dec 8	30	Feb 22
MAXIMUM PEAK FLOW			1,740	May 30
MAXIMUM PEAK STAGE			4.23	May 30
ANNUAL RUNOFF (AC-FT)	74,660	118,000	174,500	
10 PERCENT EXCEEDS	187	311	568	
50 PERCENT EXCEEDS	95	84	125	
90 PERCENT EXCEEDS	37	31	56	

e Estimated.

a Average discharge for 76 years (water years 1904-1905, 1913-1986), 271 ft<sup>3</sup>/s, 196,300 acre-ft/yr, prior to completion of Ridgway Reservoir.

b Minimum daily discharge for period of record, 12 ft<sup>3</sup>/s, Sep 19, 1956, and May 7, 1967.

c Maximum discharge for period of record, 4,080 ft<sup>3</sup>/s, June 13-14, 1921, gage height unknown.

**09149500 UNCOMPAHGRE RIVER AT DELTA, CO**

LOCATION.--Lat 38°44'31", long 108°04'49", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.13, T.15 S., R.96 W., Delta County, Hydrologic Unit 14020006, on right bank 525 ft downstream from 5th Street Bridge at west edge of Delta and 1.1 mi upstream from mouth.

DRAINAGE AREA.--1,115 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1903 to October 1931 (no winter records in most years), September 1938 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "near Delta" 1907-24. Statistical summary computed for 1939 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09149500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09149500)

REVISED RECORDS.--WSP 1243: 1904. WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,926.49 ft above NGVD of 1929. Feb. 18, 1960 to Mar. 26, 1963, water-stage recorder at site 750 ft upstream at datum 3.43 ft higher. Mar. 27, 1963 to May 12, 1965, water-stage recorder at site 1,050 ft upstream at datum 6.08 ft higher. See WSP 1733 or 1924 for history of changes prior to Feb. 18, 1960.

REMARKS.--Records good except for estimated daily discharges, which are fair. Natural flow of stream affected by water diverted from Gunnison River (see record of diversion through Gunnison tunnel published with station 09128000) and other adjacent basins. Flow regulated by Ridgway Reservoir, since 1986, total capacity 84,590 acre-ft. Diversions for irrigation of about 90,000 acres upstream from station and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	303	308	217	163	137	123	81	97	919	85	117	207
2	284	303	216	149	138	120	59	86	828	84	114	213
3	452	294	210	154	139	118	54	79	630	83	129	208
4	402	290	206	159	134	117	38	83	500	94	138	198
5	367	287	203	156	133	120	30	92	444	86	123	199
6	360	290	203	155	124	118	29	73	334	86	122	287
7	353	279	198	152	121	115	27	66	272	88	129	358
8	350	277	194	151	126	118	28	65	267	73	157	370
9	332	284	188	155	131	119	34	65	275	71	144	427
10	320	295	193	163	123	122	24	76	244	78	133	1,230
11	311	276	188	163	131	126	17	76	151	79	130	1,190
12	304	271	187	162	125	129	15	78	126	83	120	694
13	302	262	184	155	129	132	17	74	119	101	114	709
14	304	263	181	153	140	138	32	73	116	118	109	668
15	290	272	183	154	142	135	34	83	114	110	116	646
16	288	253	182	144	134	127	28	163	109	105	134	619
17	283	248	185	146	124	132	24	138	119	104	146	587
18	277	248	185	139	136	130	23	203	146	101	e150	464
19	275	241	178	146	136	122	27	325	147	96	e155	446
20	270	235	169	147	129	115	30	210	178	109	135	418
21	269	234	178	147	124	117	35	174	185	109	128	389
22	248	237	168	146	125	112	43	149	166	106	150	362
23	294	240	159	144	122	107	76	215	168	98	190	325
24	341	235	171	143	118	121	59	190	131	96	228	304
25	337	233	166	145	119	161	59	195	109	109	214	308
26	339	227	161	144	121	128	64	195	90	115	188	293
27	366	221	157	144	120	131	98	203	85	123	179	273
28	334	212	164	143	120	164	177	200	86	138	189	267
29	348	213	168	140	---	155	161	506	89	129	191	256
30	335	213	165	138	---	136	130	943	90	120	194	258
31	320	---	158	137	---	135	---	892	---	113	202	---
TOTAL	9,958	7,741	5,665	4,637	3,601	3,943	1,553	6,067	7,237	3,090	4,668	13,173
MEAN	321	258	183	150	129	127	51.8	196	241	99.7	151	439
MAX	452	308	217	163	142	164	177	943	919	138	228	1,230
MIN	248	212	157	137	118	107	15	65	85	71	109	198
AC-FT	19,750	15,350	11,240	9,200	7,140	7,820	3,080	12,030	14,350	6,130	9,260	26,130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

MEAN	405	257	170	140	135	166	303	496	548	315	290	391
MAX	844	442	294	223	222	367	1,107	2,542	1,763	1,170	959	944
(WY)	(1998)	(1999)	(1999)	(1999)	(1997)	(1997)	(1985)	(1984)	(1984)	(1983)	(1999)	(1961)
MIN	131	125	111	70.9	66.5	80.7	51.8	92.2	82.3	82.3	93.7	123
(WY)	(1978)	(1950)	(1943)	(1943)	(1943)	(1951)	(2003)	(2002)	(2002)	(2002)	(1956)	(1956)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1939 - 2003

ANNUAL TOTAL	59,713	71,333	
ANNUAL MEAN	164	195	302
HIGHEST ANNUAL MEAN			688
LOWEST ANNUAL MEAN			155
HIGHEST DAILY MEAN	452	1,230	4,520
LOWEST DAILY MEAN	67	15	a15
ANNUAL SEVEN-DAY MINIMUM	70	23	23
MAXIMUM PEAK FLOW		1,530	b5,800
MAXIMUM PEAK STAGE		6.06	8.85
ANNUAL RUNOFF (AC-FT)	118,400	141,500	218,600
10 PERCENT EXCEEDS	290	334	598
50 PERCENT EXCEEDS	151	150	205
90 PERCENT EXCEEDS	75	78	107

e Estimated.

a Minimum daily discharge for period of record, no flow at times in 1908. Minimum daily determined since beginning of diversion through Gunnison Tunnel, 7.0 ft<sup>3</sup>/s, Jul 10-15, 17, 21, 24-28, 1910.

b From rating curve extended above 3,400 ft<sup>3</sup>/s.

## 09149500 UNCOMPAHGRE RIVER AT DELTA, CO—Continued

PERIOD OF RECORD.--October 1958 to September 1980, October 1987 to September 1988, October 1990 to September 1993, October 1994 to September 2003 (discontinued). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09149500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09149500)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO <sub>3</sub> (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat fltrd end lab, mg/L as CaCO <sub>3</sub> (29801)	Chloride, water, fltrd, mg/L (00940)
OCT 16...	1110	289	8.3	1,450	9.0	670	182	51.4	3.54	2	98.3	E121	9.43
NOV 14...	1115	260	8.4	1,780	6.0	770	203	64.8	3.82	2	120	185	14.1
DEC 30...	1055	164	8.4	1,850	3.0	780	206	64.1	4.45	2	126	208	12.8
JAN 28...	1055	145	8.4	1,740	3.5	810	207	69.7	4.12	2	139	215	13.1
FEB 20...	1000	132	8.3	1,980	3.0	810	200	74.6	4.98	3	171	E198	47.6
MAR 13...	0950	124	8.4	1,740	7.5	780	191	72.5	3.85	2	152	201	16.1
MAY 02...	1135	91	8.2	1,440	--	650	181	48.5	4.50	1	83.0	200	10.3
29...	0950	739	7.9	1,070	14.7	460	128	35.4	5.77	1	73.9	161	10.8
JUN 20...	1150	185	8.2	1,500	17.1	670	192	46.9	4.77	1	86.1	215	10.8
JUL 17...	1145	100	8.3	1,750	21.2	770	215	57.6	3.99	2	118	216	12.2
AUG 12...	0950	129	8.2	1,700	18.9	810	229	58.0	3.60	2	116	181	11.5
SEP 08...	1020	363	8.0	1,530	15.7	700	197	49.7	4.63	2	99.5	226	10.7

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Selenium, water, fltrd, ug/L (01145)
OCT 16...	0.7	15.2	611	--	--	--	15
NOV 14...	0.7	15.7	755	1,290	1.75	905	14
DEC 30...	0.71	14.7	772	1,330	1.80	587	13
JAN 28...	0.65	13.3	760	1,340	1.82	523	15
FEB 20...	0.64	14.2	849	--	--	--	19
MAR 13...	0.59	11.0	756	1,320	1.80	443	15
MAY 02...	0.66	13.8	591	1,050	1.43	259	10
29...	0.5	15.4	473	839	1.14	1,670	9
JUN 20...	0.8	16.8	625	1,110	1.51	555	7
JUL 17...	0.9	18.0	752	1,310	1.78	353	7
AUG 12...	0.9	16.4	707	1,250	1.70	436	9
SEP 08...	0.8	17.6	628	1,140	1.56	1,120	10

E -- Estimated laboratory analysis value.

09149500 UNCOMPAHGRE RIVER AT DELTA, CO—Continued

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT					JUN				
02...	1055	282	1,660	12.0	03...	1120	738	940	13.3
NOV					25...	1110	123	1,520	15.7
12...	1140	263	1,790	5.2	AUG				
JAN					13...	0910	119	1,710	17.9
08...	1115	157	1,800	--					
APR									
04...	1040	44	1,520	7.2					

## 09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO

LOCATION.--Lat 38°59'00", long 108°27'00", in NE $\frac{1}{4}$ SW $\frac{1}{4}$  of sec.14, T.2 S., R.1 E., Ute Meridian, Mesa County, Hydrologic Unit 14020005, on right bank 180 ft upstream from bridge on State Highway 141, 0.4 mi downstream from Whitewater Creek, 0.5 mi south of Whitewater, and 8 mi southeast of Grand Junction.

DRAINAGE AREA.--7,928 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1894 to December 1895 (gage heights only), October 1896 to September 1899, October 1901 to October 1906, October 1916 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at Whitewater" 1901-06. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09152500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09152500)

REVISED RECORDS.--WSP 509: Drainage area at former site. WSP 2124: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Datum of gage is 4,628.12 ft above NGVD of 1929. See WSP 1733 or 1924 for history of changes prior to October 1959.

REMARKS.--No estimated daily discharges. Records good. Records show flow that enters Colorado River from Gunnison River basin except for about 60 ft<sup>3</sup>/s diverted downstream from gage during irrigation season. Natural flow of river affected by diversions for irrigation of about 233,000 acres upstream from station, storage reservoirs, and return flow from irrigated lands.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,240	994	752	666	612	595	746	1,810	5,410	879	997	1,160
2	1,190	976	758	653	620	585	746	1,700	5,580	890	970	1,140
3	1,590	948	740	638	618	582	808	1,690	4,970	919	997	1,100
4	1,620	927	727	658	611	578	790	1,820	4,270	964	1,040	987
5	1,360	918	730	678	594	593	722	1,910	3,700	984	1,020	997
6	1,320	900	736	667	598	593	685	1,660	3,110	975	966	1,290
7	1,300	911	735	650	564	596	632	1,450	2,590	1,020	953	1,470
8	1,280	882	722	628	530	583	606	1,400	2,350	988	999	1,510
9	1,260	932	706	624	548	577	547	1,350	2,270	919	1,020	1,480
10	1,220	1,000	693	635	580	590	479	1,330	2,090	910	998	2,600
11	1,200	956	692	652	590	604	482	1,290	1,870	923	980	2,870
12	1,160	905	687	658	588	622	674	1,230	1,730	1,010	961	2,010
13	1,150	878	695	640	611	651	869	1,410	1,650	1,010	956	1,780
14	1,160	869	703	625	622	692	1,080	1,680	1,590	1,020	942	1,760
15	1,150	897	706	628	666	727	1,500	2,130	1,420	1,030	1,040	1,720
16	1,110	859	708	623	647	716	1,470	2,880	1,390	1,000	1,080	1,650
17	1,080	828	717	603	621	729	1,170	3,300	1,350	1,010	1,160	1,540
18	1,060	819	733	599	613	725	1,150	3,730	1,290	1,010	1,160	1,400
19	1,020	837	710	588	620	702	1,140	4,750	1,300	1,000	1,140	1,340
20	995	815	688	593	593	678	998	4,640	1,320	1,020	1,010	1,310
21	979	799	680	609	588	663	894	4,620	1,370	1,050	967	1,250
22	966	808	695	609	577	662	978	4,560	1,220	998	1,000	1,180
23	980	810	673	614	576	642	1,300	4,720	1,140	947	1,080	1,090
24	1,210	811	670	612	578	659	1,340	4,660	1,210	979	1,200	998
25	1,120	810	682	609	588	737	1,170	4,450	942	998	1,210	961
26	1,040	799	705	603	606	785	1,350	4,330	828	1,080	1,140	970
27	1,040	770	662	599	612	737	1,900	4,200	834	1,030	1,060	983
28	1,050	741	661	600	614	763	2,340	4,090	902	1,110	1,070	953
29	1,040	720	700	604	---	819	2,380	4,560	942	1,130	1,090	939
30	1,070	737	691	605	---	811	2,080	5,060	913	1,060	1,100	929
31	1,020	---	675	606	---	821	---	5,420	---	976	1,150	---
TOTAL	35,980	25,856	21,832	19,376	16,785	20,817	33,026	93,830	61,551	30,839	32,456	41,367
MEAN	1,161	862	704	625	599	672	1,101	3,027	2,052	995	1,047	1,379
MAX	1,620	1,000	758	678	666	821	2,380	5,420	5,580	1,130	1,210	2,870
MIN	966	720	661	588	530	577	479	1,230	828	879	942	929
AC-FT	71,370	51,290	43,300	38,430	33,290	41,290	65,510	186,100	122,100	61,170	64,380	82,050

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1897 - 2003, BY WATER YEAR (WY)

	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	1,477	1,452	1,348	1,261	1,260	1,447	3,056	7,321	6,892	2,513	1,393	1,383																																																																																															
MAX	3,479	3,303	3,225	3,515	3,844	4,114	9,184	18,870	19,630	11,950	3,639	4,959																																																																																															
(WY)	(1987)	(1987)	(1987)	(1974)	(1974)	(1997)	(1942)	(1920)	(1957)	(1995)	(1957)	(1929)																																																																																															
MIN	268	497	500	500	500	500	580	698	577	165	153	267																																																																																															
(WY)	(1935)	(1899)	(1899)	(1899)	(1899)	(1903)	(1977)	(1977)	(1934)	(1934)	(1934)	(1934)																																																																																															

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1897 - 2003
ANNUAL TOTAL	358,466	433,715	
ANNUAL MEAN	982	1,188	2,570
HIGHEST ANNUAL MEAN			5,187 1984
LOWEST ANNUAL MEAN			838 1934
HIGHEST DAILY MEAN	1,700	Apr 12	5,580 Jun 2 35,200 May 23, 1920
LOWEST DAILY MEAN	661	Dec 28	479 Apr 10 106 Jul 20, 1934
ANNUAL SEVEN-DAY MINIMUM	678	Dec 22	571 Feb 6 116 Jul 14, 1934
MAXIMUM PEAK FLOW			5,990 Jun 2 a35,700 May 23, 1920
MAXIMUM PEAK STAGE		6.36 Jun 2	14.95 May 23, 1920
ANNUAL RUNOFF (AC-FT)	711,000	860,300	1,862,000
10 PERCENT EXCEEDS	1,210	1,840	6,000
50 PERCENT EXCEEDS	976	961	1,360
90 PERCENT EXCEEDS	746	605	704

a Site and datum then in use, from rating curve extended above 22,000 ft<sup>3</sup>/s.

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1931 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09152500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09152500)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1935 to September 1974, September 1975 to current year.

WATER TEMPERATURE: April 1949 to September 1974, September 1975 to current year.

INSTRUMENTATION.--Water-quality monitor since September 1975, November 1991 water-quality monitor with satellite telemetry.

REMARKS.--Daily record of specific conductance is fair, except for the periods Oct. 1-25, Dec. 6-17, Apr. 26 to May 21, June 4 to July 26, Aug. 8-21, which are good, and July 27 to Aug. 7, Aug. 22 to Sept. 30, which are poor. Daily maximum and minimum specific-conductance data previous to water year 1995 are available in the district office. Daily water temperature data are good.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 3,380 microsiemens/cm Sept. 12, 2002; minimum, 194 microsiemens/cm June 6, 1979.

WATER TEMPERATURE: Maximum, 30.0°C Aug. 13, 1958; minimum, 0.0°C on many days during winter months

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,490 microsiemens/cm, Nov. 10; minimum, 352 microsiemens/cm, May 29.

WATER TEMPERATURE: Maximum, 25.3°C, July 21; minimum, 0.0°C, on several days.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
OCT 18...	1115	1,070	9.4	8.2	1,200	10.5	560	149	45.0	3.73	2	84.0	E155
DEC 17...	1400	715	11.1	8.3	1,260	3.5	540	137	48.4	3.93	2	92.5	E155
FEB 20...	1245	607	10.2	8.3	1,180	7.0	490	118	46.5	4.06	2	88.8	E199
MAR 13...	1200	669	9.5	8.4	1,050	11.5	420	99.8	41.1	3.48	2	78.0	153
APR 25...	1345	1,150	8.2	8.1	642	14.5	250	65.5	19.9	3.02	1	36.3	116
MAY 20...	0845	4,570	7.8	7.8	488	12.4	190	51.4	15.8	2.26	0.8	27.0	84
JUN 11...	1035	1,840	7.7	8.1	724	17.7	290	80.3	22.3	2.58	0.9	36.6	114
JUL 22...	0915	1,010	6.2	8.1	883	22.3	380	106	28.2	3.31	1	48.9	145
AUG 04...	1105	1,040	7.5	8.0	981	21.5	400	112	29.3	3.55	1	54.9	156

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Selenium, water, fltrd, ug/L (01145)
OCT 18...	9.66	0.6	12.3	491	--	--	--	11.6
DEC 17...	11.3	0.49	10.9	501	--	--	--	13.2
FEB 20...	12.6	0.44	11.0	467	--	--	--	16.4
MAR 13...	11.0	0.39	8.0	383	717	0.97	1,290	9.6
APR 25...	6.82	0.26	11.0	190	403	0.55	1,250	4.9
MAY 20...	3.91	0.2	10.7	142	304	0.41	3,750	2.9
JUN 11...	5.98	0.3	12.3	243	472	0.64	2,350	3.7
JUL 22...	7.96	0.4	12.4	296	590	0.80	1,610	4.6
AUG 04...	8.44	0.5	12.9	343	658	0.90	1,850	6.0

E -- Estimated laboratory analysis value.

## GUNNISON RIVER BASIN

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1,290	1,260	1,280	1,460	1,400	1,420	1,440	1,350	1,400	1,260	1,220	1,240
2	1,280	1,240	1,250	1,400	1,370	1,390	1,410	1,270	1,360	1,240	1,210	1,230
3	1,270	1,160	1,200	1,390	1,380	1,380	1,420	1,300	1,370	1,240	1,210	1,220
4	1,460	1,270	1,410	1,380	1,340	1,360	1,390	1,300	1,350	1,230	1,190	1,210
5	1,460	1,400	1,450	1,350	1,330	1,340	1,370	1,270	1,300	1,220	1,180	1,210
6	1,400	1,280	1,330	1,370	1,340	1,350	1,300	1,250	1,280	1,220	1,180	1,200
7	1,280	1,230	1,250	1,370	1,340	1,360	1,300	1,250	1,280	1,240	1,200	1,220
8	1,230	1,220	1,220	1,350	1,300	1,320	1,300	1,250	1,270	1,230	1,200	1,220
9	1,220	1,210	1,220	1,420	1,280	1,340	1,310	1,240	1,280	1,240	1,210	1,220
10	1,220	1,210	1,210	1,490	1,340	1,400	1,310	1,260	1,280	1,250	1,180	1,210
11	1,220	1,200	1,210	1,480	1,400	1,420	1,320	1,250	1,280	1,250	1,190	1,220
12	1,220	1,210	1,210	1,400	1,390	1,400	1,300	1,260	1,280	1,250	1,210	1,230
13	1,210	1,200	1,210	1,390	1,360	1,380	1,300	1,230	1,260	1,250	1,220	1,230
14	1,200	1,200	1,200	1,390	1,310	1,360	1,300	1,240	1,280	1,260	1,210	1,240
15	1,200	1,190	1,190	1,400	1,350	1,380	1,280	1,240	1,260	1,250	1,210	1,230
16	1,200	1,180	1,190	1,390	1,340	1,360	1,270	1,230	1,250	1,250	1,190	1,220
17	1,230	1,190	1,210	1,350	1,320	1,330	1,270	1,240	1,260	1,240	1,200	1,210
18	1,240	1,180	1,220	1,370	1,330	1,350	1,270	1,240	1,250	1,240	1,180	1,210
19	1,240	1,200	1,220	1,440	1,360	1,400	1,270	1,240	1,260	1,240	1,170	1,200
20	1,250	1,150	1,230	1,410	1,360	1,380	1,280	1,240	1,260	1,240	1,160	1,200
21	1,250	1,220	1,230	1,400	1,310	1,370	1,270	1,210	1,250	1,260	1,160	1,210
22	1,240	1,180	1,230	1,420	1,340	1,370	1,280	1,210	1,240	1,250	1,150	1,210
23	1,250	1,230	1,240	1,420	1,280	1,370	1,270	1,230	1,250	1,220	1,160	1,190
24	1,270	1,200	1,240	1,360	1,250	1,320	1,280	1,220	1,250	1,210	1,140	1,180
25	1,330	1,190	1,270	1,360	1,250	1,310	1,270	1,220	1,250	1,200	1,130	1,160
26	1,340	1,310	1,330	1,370	1,190	1,290	1,260	1,230	1,250	1,190	1,150	1,170
27	1,360	1,330	1,350	1,370	1,280	1,320	1,260	1,230	1,240	1,200	1,160	1,180
28	1,400	1,340	1,360	1,380	1,230	1,310	1,230	1,200	1,220	1,210	1,160	1,180
29	1,440	1,400	1,430	1,420	1,340	1,380	1,230	1,200	1,210	1,220	1,160	1,190
30	1,440	1,410	1,420	1,440	1,320	1,370	1,250	1,190	1,220	1,220	1,170	1,190
31	1,460	1,410	1,440	---	---	---	1,260	1,210	1,240	1,200	1,170	1,190
MONTH	1,460	1,150	1,270	1,490	1,190	1,360	1,440	1,190	1,270	1,260	1,130	1,210
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1,220	1,170	1,200	1,200	1,150	1,180	901	844	863	481	455	468
2	1,210	1,170	1,190	1,200	1,120	1,170	850	826	839	505	479	494
3	1,210	1,150	1,180	1,180	1,090	1,150	859	834	843	521	497	507
4	1,230	1,170	1,200	1,180	1,130	1,160	856	807	838	513	489	498
5	1,220	1,180	1,200	1,170	1,090	1,140	837	805	820	540	488	500
6	1,240	1,180	1,210	1,160	1,100	1,140	860	797	824	582	540	560
7	1,220	1,160	1,210	1,160	1,110	1,140	886	844	860	604	571	584
8	1,230	1,150	1,200	1,150	1,110	1,130	895	841	870	614	595	603
9	1,240	1,150	1,210	1,150	1,100	1,130	851	777	816	624	595	613
10	1,290	1,190	1,230	1,150	1,090	1,120	871	777	833	658	614	635
11	1,290	1,160	1,210	1,130	1,070	1,110	903	758	856	683	648	662
12	1,220	1,110	1,180	1,110	1,060	1,090	865	796	839	703	677	691
13	1,220	1,130	1,180	1,080	1,000	1,050	832	719	766	728	661	702
14	1,200	1,140	1,180	1,050	951	1,010	719	657	696	662	552	593
15	1,210	1,170	1,190	994	900	958	657	513	587	635	537	560
16	1,260	1,180	1,210	961	896	926	526	441	467	634	522	564
17	1,260	1,220	1,250	916	847	890	508	455	484	606	463	548
18	1,250	1,180	1,220	903	851	881	528	498	516	515	442	473
19	1,220	1,170	1,200	908	860	887	531	490	506	619	442	501
20	1,240	1,180	1,210	930	884	906	571	505	546	488	418	462
21	1,240	1,200	1,230	932	891	916	642	569	601	477	420	462
22	1,230	1,190	1,210	938	898	923	670	630	649	---	---	---
23	1,200	1,160	1,180	948	914	933	670	647	656	---	---	---
24	1,200	1,150	1,180	954	918	938	655	604	625	441	430	437
25	1,200	1,130	1,160	944	894	917	635	607	620	441	423	435
26	1,170	1,100	1,140	912	862	886	646	562	613	443	431	436
27	1,160	1,070	1,130	916	877	899	610	503	544	448	432	441
28	1,180	1,110	1,140	890	837	864	508	439	466	453	356	427
29	---	---	---	868	816	842	459	430	438	400	352	377
30	---	---	---	890	866	875	458	421	435	401	388	396
31	---	---	---	902	822	848	---	---	---	431	398	418
MONTH	1,290	1,070	1,190	1,200	816	1,000	903	421	677	---	---	---

## 09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	456	431	444	923	869	901	1,080	1,070	1,080	1,100	1,070	1,090
2	465	456	460	916	865	898	1,080	1,060	1,070	1,080	1,060	1,070
3	468	454	461	909	819	872	1,100	1,080	1,090	1,070	1,060	1,060
4	491	453	470	863	819	838	1,100	978	1,040	1,090	1,050	1,080
5	532	489	504	880	781	825	991	946	969	1,100	1,080	1,090
6	569	522	539	846	785	819	994	963	981	1,220	1,020	1,090
7	638	567	596	833	801	818	989	961	975	1,230	1,070	1,130
8	672	637	647	833	817	824	979	944	961	1,140	1,100	1,110
9	704	670	681	817	780	802	1,010	978	998	1,120	1,110	1,120
10	714	665	683	801	782	791	1,010	990	1,000	1,110	1,080	1,090
11	759	714	732	829	787	808	1,010	981	995	1,160	1,100	1,120
12	763	698	725	842	825	836	1,010	955	977	1,210	1,160	1,180
13	755	702	730	851	830	841	1,010	954	966	1,250	1,210	1,230
14	774	733	757	876	847	863	962	943	955	1,270	1,250	1,260
15	790	759	772	872	843	853	960	827	937	1,290	1,260	1,270
16	824	760	792	875	859	868	964	866	940	1,290	1,280	1,280
17	814	743	781	867	848	859	965	941	950	1,290	1,280	1,290
18	828	778	806	865	848	857	994	950	972	1,280	1,270	1,270
19	871	828	854	888	847	867	1,010	992	998	1,270	1,260	1,260
20	885	837	872	866	849	858	1,020	984	1,000	1,260	1,240	1,250
21	948	874	919	885	857	871	1,010	934	979	1,250	1,230	1,240
22	951	918	936	884	831	862	1,010	931	975	1,240	1,220	1,230
23	964	918	943	859	818	844	1,050	997	1,030	1,220	1,210	1,210
24	995	855	927	846	822	835	1,090	988	1,050	1,210	1,190	1,200
25	927	848	888	894	829	849	1,100	1,060	1,080	1,190	1,170	1,180
26	959	910	944	889	791	846	1,100	1,060	1,080	1,190	1,180	1,180
27	977	914	949	935	860	908	1,080	1,050	1,070	1,190	1,170	1,180
28	992	925	963	981	924	939	1,100	1,050	1,080	1,190	1,170	1,180
29	954	863	918	1,060	981	1,020	1,100	1,080	1,090	1,180	1,170	1,180
30	906	860	887	1,100	1,060	1,080	1,100	1,080	1,090	1,180	1,170	1,180
31	---	---	---	1,090	1,070	1,080	1,110	1,080	1,100	---	---	---
MONTH	995	431	753	1,100	780	872	1,110	827	1,020	1,290	1,020	1,180



## GUNNISON RIVER BASIN

09152500 GUNNISON RIVER NEAR GRAND JUNCTION, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.9	13.3	14.4	9.5	7.9	8.5	4.4	2.5	3.4	1.6	0.7	1.1
2	14.3	12.9	13.4	8.8	7.4	8.1	4.8	2.7	3.7	1.4	0.0	0.6
3	13.0	11.5	12.0	7.4	5.6	6.6	5.1	3.7	4.3	1.1	0.0	0.3
4	12.4	10.4	11.4	6.6	5.2	5.9	4.7	3.0	3.7	0.9	0.0	0.3
5	13.6	11.2	12.3	6.3	4.1	5.1	4.6	2.9	3.6	0.7	0.0	0.3
6	14.8	11.9	13.3	6.5	4.2	5.3	3.7	2.3	2.9	2.1	0.1	1.0
7	15.0	12.3	13.7	5.7	4.5	5.1	3.9	2.2	2.9	2.7	0.5	1.5
8	15.1	12.4	13.8	6.3	5.5	5.9	3.8	2.2	2.8	2.7	0.5	1.5
9	15.0	12.4	13.7	7.2	6.3	6.8	3.3	1.5	2.3	2.0	0.2	1.0
10	14.3	11.9	13.2	7.1	6.0	6.4	2.2	0.8	1.5	2.2	0.7	1.6
11	14.2	11.9	13.1	7.0	5.3	6.0	2.0	0.2	1.0	3.3	1.9	2.6
12	13.9	11.7	12.8	6.2	4.7	5.4	2.1	0.7	1.2	4.6	2.7	3.5
13	12.9	10.4	11.7	5.1	4.5	4.7	1.9	0.3	1.0	4.4	2.4	3.3
14	12.4	10.0	11.3	5.8	4.2	5.0	2.3	0.4	1.2	4.2	2.1	3.0
15	12.2	9.7	11.0	6.4	4.9	5.5	2.9	1.0	1.8	4.0	2.1	3.0
16	12.1	9.5	10.8	5.1	3.8	4.5	3.0	1.5	2.2	2.9	1.0	1.9
17	12.1	9.6	10.9	4.9	3.4	4.1	3.5	2.4	2.8	3.0	0.8	1.7
18	12.2	9.5	10.9	5.0	3.1	4.0	3.4	2.1	2.6	2.5	0.0	1.1
19	12.0	9.5	10.8	5.1	3.1	4.0	2.9	1.2	2.0	2.4	0.1	1.1
20	11.1	9.2	10.2	5.1	3.1	4.1	1.5	0.3	0.9	2.3	0.0	1.0
21	11.3	8.9	10.1	5.5	3.4	4.3	1.9	0.3	0.9	2.6	0.2	1.3
22	10.8	9.4	10.2	5.7	3.6	4.6	2.1	0.4	1.1	3.0	0.6	1.8
23	11.0	9.8	10.4	5.8	4.2	4.8	1.2	0.0	0.5	4.0	1.6	2.6
24	10.9	10.1	10.5	5.5	3.9	4.7	0.8	0.0	0.3	3.7	2.0	2.8
25	10.4	9.0	9.8	5.7	3.8	4.9	0.7	0.0	0.1	4.9	2.8	3.7
26	10.2	9.2	9.6	4.5	2.8	3.6	0.6	0.0	0.1	4.4	2.3	3.4
27	10.0	8.6	9.3	3.7	2.1	2.8	0.8	0.0	0.2	4.8	2.5	3.6
28	10.5	9.0	9.8	3.2	1.4	2.2	0.3	0.0	0.1	4.7	3.0	3.7
29	10.4	8.8	9.5	3.3	1.3	2.2	0.8	0.0	0.2	4.8	2.7	3.7
30	9.4	7.9	8.5	3.0	1.5	2.3	2.0	0.2	0.9	4.4	2.8	3.5
31	8.8	7.3	8.0	---	---	---	0.9	0.1	0.4	5.3	2.7	3.9
MONTH	15.9	7.3	11.3	9.5	1.3	4.9	5.1	0.0	1.7	5.3	0.0	2.1
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	5.6	3.5	4.5	6.1	4.2	5.1	10.7	9.2	10.0	12.4	10.1	11.2
2	5.2	4.2	4.7	6.7	3.2	4.9	12.0	9.6	10.5	12.9	9.9	11.2
3	5.3	3.1	4.1	7.5	4.2	5.7	10.2	8.5	9.5	14.0	10.6	12.2
4	3.7	2.4	3.0	6.2	5.3	5.6	9.0	6.9	8.1	13.4	11.6	12.4
5	3.4	1.6	2.3	7.5	4.4	5.8	9.6	7.1	8.2	12.5	10.6	11.6
6	2.5	0.2	1.2	7.2	4.1	5.6	10.9	7.9	9.1	13.5	10.2	11.8
7	1.2	0.0	0.3	9.5	5.6	7.2	10.6	7.6	8.9	14.5	10.8	12.4
8	1.2	0.0	0.3	10.1	6.2	8.1	12.0	7.4	9.5	13.7	11.7	12.5
9	1.1	0.0	0.2	10.8	7.2	8.9	13.6	8.7	11.0	12.7	11.0	11.7
10	0.6	0.0	0.1	10.6	7.5	8.9	15.2	9.9	12.5	12.5	9.4	10.8
11	0.6	0.0	0.2	11.7	8.0	9.6	16.2	11.3	13.8	14.3	9.8	11.9
12	1.9	0.0	0.8	12.0	8.8	10.2	14.3	12.3	13.1	15.9	11.4	13.5
13	2.9	1.5	2.1	12.4	9.1	10.6	14.7	11.0	12.8	16.0	13.0	14.6
14	4.4	2.9	3.7	10.7	9.7	10.2	14.8	11.3	13.0	16.1	12.7	14.3
15	6.3	3.8	4.9	10.8	9.3	10	13.4	10.9	11.8	14.4	13.2	13.7
16	5.8	4.0	4.8	9.7	8.7	9.3	12.0	9.1	10.5	14.5	12.0	13.3
17	6.4	4.2	5.2	10.3	8.5	9.2	12.7	9.2	10.9	14.9	13.8	14.3
18	6.9	4.7	5.6	8.8	7.3	8.2	12.0	10.2	11.3	14.0	12.2	12.9
19	7.1	4.2	5.6	7.9	6.0	6.9	11.9	8.4	10.1	12.7	10.2	11.4
20	7.1	4.3	5.6	8.0	5.8	7.0	13.6	9.3	11.4	14.2	11.3	12.5
21	7.1	4.4	5.7	10.1	6.9	8.3	13.1	11.1	12.2	14.7	12.0	13.2
22	6.2	4.4	5.2	11.8	7.7	9.6	12.8	10.7	11.9	15.1	12.3	13.6
23	6.1	3.5	4.6	12.7	9.0	10.8	11.9	10.1	10.9	16.0	12.9	14.3
24	5.1	2.9	4.0	12.4	10.4	11.2	12.5	8.5	10.5	15.6	13.3	14.3
25	5.2	4.0	4.5	13.1	9.7	11.3	14.8	10.4	12.5	15.3	13.1	14.1
26	5.1	3.7	4.4	11.3	9.5	10.4	15.9	11.8	13.8	15.7	12.6	14.1
27	6.1	4.5	5.1	10.1	7.6	9.1	14.7	12.0	13.3	17.3	14.0	15.5
28	6.4	3.9	5.0	8.7	5.7	7.1	14.0	11.8	12.6	18.0	14.8	16.4
29	---	---	---	8.5	4.8	6.6	12.9	11.2	11.8	18.3	15.4	16.6
30	---	---	---	9.3	5.8	7.7	12.9	10.6	11.5	16.9	15.6	16.3
31	---	---	---	11.2	7.5	8.6	---	---	---	16.0	14.8	15.4
MONTH	7.1	0.0	3.5	13.1	3.2	8.3	16.2	6.9	11.2	18.3	9.4	13.4



## 09152520 CALLOW CREEK AT WHITEWATER, CO

LOCATION.--Lat 38°59'21", long 108°26'53", in NE $\frac{1}{4}$ NE $\frac{1}{4}$  of sec.14, T.2 S., R.1 E., Ute Meridian, Mesa County, Hydrologic Unit 14020005, on right bank 100 ft downstream from box culvert under U.S. Highway 50 at Whitewater, and 8 mi southeast of Grand Junction.

DRAINAGE AREA.--4.17 mi<sup>2</sup>.

PERIOD OF RECORD.--July 2000 to September 2003 (discontinued). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09152520](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09152520)

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 4,680 ft above NGVD of 1929, from topographic map.

REMARKS.--No estimated daily discharges. Records fair except for discharges above 2.3 ft<sup>3</sup>/s, which are poor. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data for Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	1.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.09
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	3.5	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
10	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.3
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	0.00	---
TOTAL	2.25	3.52	0.00	0.00	0.01	0.00	0.00	0.08	0.00	0.00	0.00	2.68
MEAN	0.073	0.12	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.089
MAX	1.4	3.5	0.00	0.00	0.01	0.00	0.00	0.05	0.00	0.00	0.00	2.3
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	4.5	7.0	0.00	0.00	0.02	0.00	0.00	0.2	0.00	0.00	0.00	5.3

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	2000	2001	2002	2003	2000	2001	2002	2003	2000	2001	2002	2003
MEAN	0.14	0.30	0.004	0.000	0.000	0.007	0.021	0.076	0.044	0.085	0.061	0.086
MAX	0.26	0.52	0.011	0.000	0.001	0.022	0.057	0.17	0.12	0.22	0.15	0.14
(WY)	(2001)	(2001)	(2002)	(2001)	(2001)	(2001)	(2002)	(2002)	(2002)	(2001)	(2002)	(2002)
MIN	0.073	0.12	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.022
(WY)	(2003)	(2003)	(2001)	(2001)	(2002)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2000)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 2000 - 2003

ANNUAL TOTAL	26.37	8.54	
ANNUAL MEAN	0.072	0.023	0.072
HIGHEST ANNUAL MEAN			0.11 2001
LOWEST ANNUAL MEAN			0.023 2003
HIGHEST DAILY MEAN	3.5 Nov 9	3.5 Nov 9	7.3 Nov 23, 2001
LOWEST DAILY MEAN	0.00 Jan 1	0.00 Oct 1	a0.00 Jul 22, 2000
ANNUAL SEVEN-DAY MINIMUM	0.00 Jan 1	0.00 Oct 5	0.00 Jul 22, 2000
MAXIMUM PEAK FLOW		46 Nov 9	b111 Jul 14, 2001
MAXIMUM PEAK STAGE		3.19 Nov 9	c3.87 Jul 14, 2001
ANNUAL RUNOFF (AC-FT)	52	17	52
10 PERCENT EXCEEDS	0.16	0.00	0.12
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

a No flow many days each year.

b From rating curve extended above 2.15 ft<sup>3</sup>/s.

c Maximum gage height, 5.24 ft, Aug 5, 2002, discharge unknown.

**09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE**

LOCATION.--Lat 39°07'58", long 109°01'35", in SE¼NW¼ sec.5, T.11 S., R.104 W., Mesa County, Hydrologic Unit 14010005, on right bank 0.5 mi downstream from McDonald Creek, 1.7 mi upstream from Colorado-Utah State line, and 12 mi southwest of Mack.

DRAINAGE AREA.--17,843 mi<sup>2</sup>.

**WATER-DISCHARGE RECORDS**

PERIOD OF RECORD.--May 1951 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09163500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09163500)

REVISED RECORDS.--WRD Colo. 1974: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 4,325 ft above NGVD of 1929, from topographic map. May 1951 to Oct. 1979, water-stage recorder at site 5.7 mi upstream at different datum. Oct. 1979 to Mar. 1995, water stage recorder at site 0.2 mi downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power development, and diversions for irrigation. (Records include all return flow from irrigated areas).

**DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,530	3,040	2,180	1,930	1,820	1,930	1,930	4,280	22,900	4,280	2,750	2,840
2	2,490	2,950	2,190	1,850	1,890	1,860	1,850	3,910	24,500	4,130	2,600	2,820
3	2,930	2,790	e2,250	1,870	1,940	1,800	1,830	3,570	23,900	3,970	2,560	2,730
4	3,540	2,720	e2,350	1,800	1,920	1,780	2,070	3,740	19,500	3,930	2,560	2,500
5	2,980	e2,690	2,180	1,930	1,860	1,770	2,160	4,410	16,600	4,040	2,490	2,580
6	2,760	e2,710	2,130	1,990	1,750	1,840	2,120	4,310	14,200	3,980	2,490	2,830
7	2,700	e2,670	2,170	1,960	1,720	1,810	1,970	3,800	11,900	3,790	2,440	3,840
8	2,620	2,730	2,130	1,920	1,560	1,920	1,680	3,450	10,600	3,630	2,410	3,760
9	2,520	3,790	e2,030	1,840	1,530	1,850	1,630	3,440	9,630	3,340	2,430	4,000
10	2,450	3,570	e2,010	1,840	1,520	1,850	1,420	3,970	9,480	3,030	2,440	6,030
11	2,370	3,120	1,840	1,900	1,610	1,870	1,350	3,590	9,460	2,930	2,370	6,860
12	2,300	2,860	1,920	1,970	1,750	1,930	1,380	3,620	9,060	2,830	2,260	5,530
13	2,240	2,740	1,900	1,980	1,840	2,020	1,670	3,400	9,010	2,740	2,220	4,670
14	2,260	2,630	1,940	1,940	1,940	2,140	1,970	3,470	8,890	2,750	2,180	4,330
15	2,240	2,650	2,010	1,890	2,200	2,170	2,370	3,930	8,320	2,730	2,210	4,160
16	2,210	2,650	1,940	1,890	2,140	2,330	3,030	5,790	8,230	2,620	2,580	3,960
17	2,110	2,600	1,950	1,860	2,010	2,350	2,880	7,530	8,280	2,550	2,730	3,760
18	2,110	2,480	1,970	1,790	1,900	2,230	2,540	9,510	7,590	2,650	2,680	3,530
19	2,110	2,470	2,050	1,840	1,880	2,130	2,440	11,900	7,280	2,600	2,860	3,390
20	2,090	2,400	2,010	1,760	1,830	2,110	2,340	12,400	7,200	2,660	3,100	3,560
21	2,060	2,210	1,890	1,780	1,760	2,010	2,050	12,000	7,330	2,670	2,990	3,520
22	2,070	2,230	1,850	1,830	1,730	1,980	1,910	12,100	6,970	2,590	2,680	3,470
23	2,090	2,280	1,930	1,860	1,780	1,940	2,020	12,800	6,500	2,480	2,830	3,320
24	2,320	2,260	1,790	1,880	1,770	1,980	2,510	14,000	6,300	2,590	3,350	3,140
25	2,690	2,250	1,800	1,900	1,750	2,210	2,650	14,600	5,830	2,480	3,050	3,000
26	2,600	e2,250	1,780	1,880	1,800	2,320	2,510	15,600	5,130	2,400	2,980	2,970
27	2,430	e2,260	1,800	1,880	1,910	2,270	2,890	15,700	4,690	2,460	2,860	3,000
28	2,470	e2,070	1,740	1,860	1,900	2,170	3,840	16,800	4,630	3,020	2,830	3,060
29	2,570	e1,930	1,770	1,850	---	2,180	4,550	19,000	4,620	3,290	2,890	3,000
30	2,600	e2,080	1,920	1,860	---	2,130	4,670	20,900	4,500	3,070	2,850	2,960
31	2,630	---	1,950	1,830	---	2,040	---	22,800	---	2,810	2,800	---
TOTAL	76,090	78,080	61,370	58,160	51,010	62,920	70,230	280,320	303,030	95,040	82,470	109,120
MEAN	2,455	2,603	1,980	1,876	1,822	2,030	2,341	9,043	10,100	3,066	2,660	3,637
MAX	3,540	3,790	2,350	1,990	2,200	2,350	4,670	22,800	24,500	4,280	3,350	6,860
MIN	2,060	1,930	1,740	1,760	1,520	1,770	1,350	3,400	4,500	2,400	2,180	2,500
AC-FT	150,900	154,900	121,700	115,400	101,200	124,800	139,300	556,000	601,100	188,500	163,600	216,400

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)**

MEAN	3,988	4,002	3,570	3,347	3,407	3,845	5,787	13,920	16,820	7,637	3,898	3,682
MAX	7,672	6,925	5,993	6,129	5,996	7,486	15,600	37,960	43,830	29,650	10,190	7,174
(WY)	(1987)	(1987)	(1986)	(1985)	(1985)	(1986)	(1985)	(1984)	(1957)	(1995)	(1983)	(1997)
MIN	1,916	2,363	1,980	1,871	1,815	1,984	1,631	2,283	2,431	1,662	1,350	1,361
(WY)	(1957)	(1978)	(2003)	(1964)	(1964)	(1964)	(1977)	(1977)	(2002)	(1977)	(1977)	(1956)

**SUMMARY STATISTICS**

**FOR 2002 CALENDAR YEAR**

**FOR 2003 WATER YEAR**

**WATER YEARS 1951 - 2003**

ANNUAL TOTAL	826,210	1,327,840	
ANNUAL MEAN	2,264	3,638	6,162
HIGHEST ANNUAL MEAN			13,470
LOWEST ANNUAL MEAN			2,417
HIGHEST DAILY MEAN	4,470	Jun 2	24,500
LOWEST DAILY MEAN	1,280	Aug 19	1,350
ANNUAL SEVEN-DAY MINIMUM	1,320	Aug 14	1,590
MAXIMUM PEAK FLOW			26,100
MAXIMUM PEAK STAGE			10.67
ANNUAL RUNOFF (AC-FT)	1,639,000	2,634,000	4,464,000
10 PERCENT EXCEEDS	2,960	7,060	13,300
50 PERCENT EXCEEDS	2,240	2,480	3,920
90 PERCENT EXCEEDS	1,570	1,830	2,240

e Estimated.

a At site 0.2 mi downstream, at present datum.

b From high-water mark.

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE—Continued  
(National Water-Quality Assessment Program station)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1969 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09163500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09163500)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1979 to current year.

WATER TEMPERATURE: October 1979 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1979.

REMARKS.-- Daily records of specific conductance are excellent, except May 20 to June 10, which are good, Mar. 27 to Apr. 9, which are fair, and Oct. 1-2, Oct. 30 to Dec. 4, and June 11 to July 14, which are poor. Daily records of water temperature are excellent. October 1979, water-quality data collection was moved 5.5 mi upstream to this site from previous site 09163530. Water-quality records for this site are considered to be equivalent to data obtained at old site. Data from the old site are stored with this station. Prior to October 1995, unpublished maximum and minimum specific conductance data available in district office.

Note: Suspended Sediment Discharge table: a sampler code of 3009 is a D-74 suspended sediment sampler; a code of 3039 is a D-77 water-quality sampler; a code of 3045 is a DH-81 depth-integrating sampler; a code of 3053 and 3054 is a D-95 depth-integrating sampler. Suspended sediment concentrations associated with a sampler type coded 3039 or 3053 were determined from a subsample split of a composite sample.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum 1,940 microsiemens/cm, Aug. 13, 1981; minimum, 277 microsiemens/cm, June 11, 1985.

WATER TEMPERATURE: Maximum, 27.6°C, July 19, 2003; minimum, -0.3°C on several days in Dec. 1996 and Jan. 1997.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,680 microsiemens/cm, Feb. 13; minimum, 332 microsiemens/cm, June 3.

WATER TEMPERATURE: Maximum, 27.6°C, July 19; minimum, 0.0°C, Dec. 27, 28, 29, Jan. 1, 4.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO <sub>3</sub> (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, water, tit field, mg/L as CaCO <sub>3</sub> (39086)
OCT 29...	1020	2,580	10.0	8.4	1,510	9.4	520	141	41.3	4.55	3	133	150
DEC 04...	1020	2,380	11.7	8.5	1,470	3.3	460	121	39.2	3.99	3	147	170
FEB 25...	0930	1,730	10.5	8.3	1,480	5.1	420	108	35.7	4.41	3	156	166
MAR 27...	0955	2,310	9.4	8.3	1,240	9.5	360	90.8	31.5	3.86	3	124	148
APR 10...	0950	1,410	10.2	8.5	1,260	11.5	370	92.9	33.0	4.37	3	132	137
MAY 20...	0830	12,500	7.6	7.7	485	12.6	170	47.9	12.6	2.39	0.9	27.5	91
JUN 11...	0930	9,720	8.6	8.0	537	15.9	190	54.4	12.2	1.78	1	36.5	97
JUL 15...	0835	2,730	6.6	8.2	1,060	23.6	350	96.2	26.8	3.37	2	82.8	132
SEP 10...	0845	6,040	8.1	8.2	1,050	14.8	350	98.8	24.7	5.81	2	78.6	129

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
OCT 29...	173	5	126	0.4	10.7	428	980	1.33	6,820	0.61	<0.04	1.04	0.009
DEC 04...	190	8	152	0.4	8.4	364	941	1.28	6,050	0.28	<0.04	0.82	0.015
FEB 25...	188	7	182	0.35	7.8	323	920	1.25	4,300	0.40	0.06	0.78	E.007
MAR 27...	181	--	137	0.32	7.8	276	761	1.04	4,750	--	--	--	--
APR 10...	150	8	144	0.35	3.8	303	797	1.08	3,030	0.33	<0.04	0.35	0.016
MAY 20...	111	--	24.4	0.2	8.9	104	285	0.39	9,630	3.8	0.26	0.55	0.014
JUN 11...	118	--	35.4	0.2	9.1	108	318	0.43	8,330	0.52	<0.04	0.41	0.009
JUL 15...	161	--	84.7	0.3	7.4	270	652	0.89	4,810	0.48	<0.04	0.47	E.004
SEP 10...	157	--	75.5	0.4	10.1	290	665	0.90	10,900	11	0.05	0.87	0.018

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Selenium, water, fltrd, ug/L (01145)
OCT 29...	E.01	0.26	8.5
DEC 04...	<0.02	0.038	8.2
FEB 25...	E.01	0.055	7.2
MAR 27...	--	--	5.0
APR 10...	<0.02	0.039	6.9
MAY 20...	<0.02	1.63	2.5
JUN 11...	E.02	0.196	1.8
JUL 15...	E.01	0.121	4.4
SEP 10...	0.02	6.49	5.1

< -- Actual value is known to be less than the value shown.  
 E -- Estimated laboratory analysis value.

## 09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	2,6-Diethyl-aniline water fltrd 0.7u GF ug/L (82660)	CIAT, water, fltrd, ug/L (04040)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd 0.7u GF ug/L (82674)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd 0.7u GF ug/L (82687)
OCT 29...	<0.006	<0.006	<0.006	<0.004	<0.005	E.005	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
DEC 04...	<0.006	<0.006	<0.006	<0.004	<0.005	E.005	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
FEB 25...	<0.006	<0.006	<0.006	<0.004	<0.005	<0.007	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
APR 10...	<0.006	<0.006	<0.006	<0.004	<0.005	<0.007	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
MAY 20...	<0.006	<0.006	0.008	E.004	<0.005	E.004	<0.050	<0.010	<0.002	E.019	E.055	<0.005	<0.006
JUN 11...	<0.006	<0.006	<0.006	E.004	<0.005	E.004	<0.050	<0.010	<0.002	<0.041	E.009	<0.005	<0.006
JUL 15...	<0.006	E.004	<0.006	<0.004	<0.005	0.016	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
SEP 10...	<0.006	<0.006	<0.006	<0.004	<0.005	E.005	<0.050	<0.010	<0.002	<0.041	<0.020	--	<0.006

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cyana-zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF (82682)	Desulf-inyl fipronil, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Diel-drin, water, fltrd, ug/L (39381)	Disul-foton, water, fltrd 0.7u GF (82677)	EPTC, water, fltrd 0.7u GF (82668)	Ethal-flur-alin, water, fltrd 0.7u GF (82663)	Etho-prop, water, fltrd 0.7u GF (82672)	Desulf-inyl-fipronil amide, wat flt ug/L (62169)	Fipronil sulfide water, fltrd, ug/L (62167)	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)
OCT 29...	<0.018	0.005	<0.004	E.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
DEC 04...	<0.018	<0.003	<0.004	<0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
FEB 25...	<0.018	<0.003	<0.004	<0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
APR 10...	<0.018	0.008	<0.004	<0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
MAY 20...	<0.018	E.002	<0.004	<0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
JUN 11...	<0.018	<0.003	<0.004	<0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
JUL 15...	<0.018	E.003	<0.004	<0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
SEP 10...	<0.018	0.005	<0.004	--	<0.005	--	<0.002	<0.009	--	<0.009	<0.005	<0.005	<0.007

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF (82666)	Malathion, water, fltrd, ug/L (39532)	Methyl para-thion, water, fltrd 0.7u GF (82667)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF (82671)	Naprop-amide, water, fltrd 0.7u GF (82684)	p,p'-DDE, water, fltrd, ug/L (34653)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF (82669)	Pendi-methalin, water, fltrd 0.7u GF (82683)
OCT 29...	<0.003	<0.004	<0.035	<0.027	<0.006	E.004	<0.006	<0.002	<0.007	<0.003	<0.010	<0.004	<0.022
DEC 04...	<0.003	<0.004	<0.035	<0.027	<0.006	<0.013	<0.006	<0.002	<0.007	<0.003	<0.010	<0.004	<0.022
FEB 25...	<0.003	<0.004	<0.035	<0.027	<0.006	<0.013	<0.006	<0.002	<0.007	<0.003	<0.010	<0.004	<0.022
APR 10...	<0.003	<0.004	<0.035	<0.027	<0.006	<0.013	<0.006	<0.002	<0.007	<0.003	<0.010	<0.004	<0.022
MAY 20...	<0.003	<0.004	<0.035	<0.027	<0.006	E.005	<0.006	<0.002	<0.007	<0.003	<0.010	<0.004	<0.022
JUN 11...	<0.003	<0.004	<0.035	<0.027	<0.006	E.004	<0.006	<0.002	<0.007	<0.003	<0.010	<0.004	<0.022
JUL 15...	<0.003	<0.004	<0.035	<0.027	<0.006	E.007	<0.006	<0.002	<0.007	<0.003	<0.010	<0.004	<0.022
SEP 10...	--	<0.004	<0.035	--	--	E.008	<0.006	<0.002	<0.007	<0.003	--	<0.004	<0.022

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phorate water fltrd 0.7u GF ug/L (82664)	Prome- ton, water, fltrd, ug/L (04037)	Pron- amide, water, fltrd 0.7u GF ug/L (82676)	Pro- panil, water, fltrd, ug/L (04024)	Pro- panil, water, fltrd 0.7u GF ug/L (82679)	Propar- gite, water, fltrd 0.7u GF ug/L (82685)	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)
OCT 29...	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02	<0.034	<0.02	<0.005	<0.002	<0.009
DEC 04...	<0.011	E.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02	<0.034	<0.02	<0.005	<0.002	<0.009
FEB 25...	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02	<0.034	<0.02	<0.005	<0.002	<0.009
APR 10...	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02	<0.034	<0.02	<0.005	<0.002	<0.009
MAY 20...	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02	<0.034	<0.02	<0.005	<0.002	<0.009
JUN 11...	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02	<0.034	<0.02	<0.005	<0.002	<0.009
JUL 15...	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02	<0.034	<0.02	<0.005	<0.002	<0.009
SEP 10...	--	M	<0.004	<0.010	<0.011	--	<0.005	<0.02	<0.034	--	<0.005	<0.002	<0.009

< -- Actual value is known to be less than the value shown.  
 E -- Estimated laboratory analysis value.  
 M -- Presence of material verified but not quantified.

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Temper- ature, water, deg C (00010)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)	Sus- pended sedi- ment load, tons/d (80155)	Sampler type, code (84164)
OCT 29...	0950	2,570	--	88	362	2,510	3009
29...	1020	2,580	9.4	94	572	3,980	3039
DEC 04...	0935	2,380	--	--	46	296	3009
04...	1020	2,380	3.3	--	27	175	3053
FEB 25...	0925	1,730	--	--	36	170	3054
25...	0930	1,730	5.1	--	35	163	3053
APR 10...	0930	1,410	11.5	--	16	62	3045
10...	0950	1,410	11.5	--	13	51	3045
MAY 20...	0830	12,500	12.6	78	2,630	88,800	3053
20...	0835	12,500	--	75	2,870	96,900	3054
JUN 11...	0930	9,720	15.9	78	217	5,690	3053
11...	0935	9,720	--	69	240	6,300	3054
JUL 15...	0740	2,730	--	--	71	524	3053
15...	0835	2,730	23.6	--	70	512	3053
SEP 10...	0845	6,040	14.8	89	8,950	146,000	3053
10...	0850	6,040	--	90	9,120	149,000	3053



## COLORADO RIVER MAIN STEM

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1,280	1,220	1,240	1,520	1,490	1,500	1,580	1,510	1,560	1,570	1,540	1,550
2	1,280	1,220	1,260	1,520	1,440	1,470	1,610	1,530	1,580	1,560	1,500	1,540
3	---	---	---	1,450	1,430	1,440	1,540	1,460	1,500	1,530	1,490	1,510
4	---	---	---	1,460	1,440	1,450	1,490	1,450	1,470	1,590	1,520	1,550
5	---	---	---	1,460	1,450	1,460	1,450	1,440	1,450	1,550	1,520	1,540
6	---	---	---	1,450	1,440	1,440	1,450	1,430	1,440	1,530	1,510	1,520
7	---	---	---	1,470	1,430	1,450	1,480	1,440	1,460	1,540	1,490	1,520
8	---	---	---	1,500	1,450	1,480	1,510	1,480	1,490	1,500	1,460	1,480
9	---	---	---	1,500	1,360	1,450	1,490	1,480	1,480	1,520	1,490	1,500
10	---	---	---	1,500	1,360	1,410	1,510	1,480	1,490	1,520	1,500	1,510
11	---	---	---	1,490	1,400	1,470	1,560	1,490	1,520	1,550	1,510	1,530
12	---	---	---	1,530	1,450	1,470	1,540	1,490	1,520	1,580	1,480	1,550
13	---	---	---	1,480	1,440	1,460	1,580	1,490	1,540	1,530	1,480	1,510
14	---	---	---	1,500	1,480	1,490	1,560	1,520	1,540	1,540	1,520	1,530
15	---	---	---	1,560	1,480	1,520	1,560	1,520	1,540	1,540	1,520	1,530
16	---	---	---	1,520	1,490	1,510	1,560	1,530	1,550	1,530	1,490	1,510
17	---	1,480	---	1,510	1,470	1,480	1,540	1,520	1,530	1,520	1,490	1,500
18	1,520	1,500	1,510	1,520	1,500	1,510	1,540	1,520	1,530	1,520	1,500	1,510
19	1,540	1,520	1,530	1,520	1,490	1,500	1,540	1,510	1,530	1,510	1,470	1,490
20	1,540	1,520	1,530	1,560	1,520	1,540	1,540	1,500	1,520	1,550	1,490	1,520
21	1,560	1,520	1,540	1,590	1,560	1,570	1,540	1,500	1,530	1,540	1,490	1,510
22	1,560	1,540	1,550	1,600	1,560	1,580	1,520	1,500	1,510	1,530	1,470	1,490
23	1,560	1,540	1,550	1,630	1,590	1,620	1,530	1,490	1,500	1,540	1,500	1,520
24	1,640	1,540	1,570	1,640	1,610	1,620	1,600	1,510	1,560	1,520	1,480	1,500
25	1,600	1,520	1,540	1,640	1,590	1,620	1,590	1,540	1,570	1,510	1,480	1,490
26	1,530	1,500	1,510	1,600	1,560	1,580	1,560	1,530	1,540	1,480	1,460	1,470
27	1,550	1,520	1,540	1,580	1,540	1,560	1,610	1,550	1,580	1,460	1,440	1,450
28	1,530	1,520	1,520	1,560	1,540	1,550	1,620	1,580	1,610	1,470	1,450	1,460
29	1,540	1,510	1,520	1,550	1,520	1,530	1,620	1,580	1,600	1,470	1,450	1,460
30	1,550	1,510	1,530	1,530	1,510	1,530	1,630	1,580	1,600	1,480	1,440	1,460
31	1,580	1,510	1,540	---	---	---	1,610	1,550	1,580	1,480	1,460	1,470
MONTH	---	---	---	1,640	1,360	1,510	1,630	1,430	1,530	1,590	1,440	1,510
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1,480	1,470	1,470	1,440	1,380	1,410	1,230	1,190	1,220	762	744	752
2	1,470	1,460	1,460	1,390	1,370	1,380	1,290	1,220	1,250	767	756	762
3	1,510	1,460	1,490	1,380	1,340	1,370	1,250	1,220	1,240	785	766	777
4	1,510	1,460	1,470	1,400	1,350	1,380	1,370	1,230	1,270	915	783	800
5	1,480	1,450	1,470	1,380	1,350	1,370	1,250	1,220	1,230	896	779	807
6	1,490	1,470	1,480	1,370	1,340	1,360	1,250	1,210	1,240	807	768	790
7	1,500	1,460	1,470	1,360	1,340	1,350	1,210	1,170	1,180	832	783	805
8	1,560	1,480	1,500	1,390	1,360	1,370	1,240	1,170	1,190	783	712	753
9	1,580	1,540	1,560	1,430	1,310	1,360	1,260	1,220	1,240	831	686	758
10	1,600	1,520	1,560	1,360	1,270	1,340	1,350	1,240	1,280	838	781	807
11	1,630	1,570	1,590	1,350	1,320	1,340	1,310	1,280	1,290	874	798	828
12	1,660	1,620	1,640	1,390	1,340	1,370	1,340	1,260	1,310	914	808	892
13	1,680	1,600	1,640	1,360	1,310	1,340	1,260	1,150	1,220	896	786	864
14	1,600	1,520	1,550	1,380	1,330	1,350	1,150	1,030	1,100	818	714	755
15	1,520	1,430	1,500	1,350	1,260	1,310	1,120	1,010	1,070	790	699	735
16	1,430	1,380	1,400	1,270	1,230	1,240	1,040	800	912	843	750	792
17	1,430	1,400	1,410	1,250	1,190	1,210	818	791	803	753	518	657
18	1,440	1,390	1,410	1,220	1,180	1,210	850	811	832	575	411	505
19	1,440	1,440	1,440	1,220	1,170	1,200	944	811	855	543	491	518
20	1,460	1,440	1,450	1,230	1,190	1,200	880	841	860	529	470	486
21	1,470	1,460	1,460	1,240	1,220	1,230	935	880	904	479	455	465
22	1,500	1,460	1,480	1,260	1,230	1,250	971	934	944	472	452	461
23	1,500	1,480	1,490	1,360	1,250	1,300	1,030	971	1,000	465	434	450
24	1,500	1,490	1,490	1,370	1,340	1,350	1,030	991	1,000	449	419	431
25	1,510	1,470	1,490	1,430	1,320	1,360	1,020	988	1,000	423	403	413
26	1,500	1,460	1,480	1,330	1,260	1,290	1,030	1,010	1,020	406	389	398
27	1,480	1,460	1,460	1,260	1,210	1,220	1,020	941	997	399	389	395
28	1,470	1,440	1,460	1,230	1,190	1,210	941	850	890	396	365	383
29	---	---	---	1,230	1,190	1,200	859	782	806	379	345	359
30	---	---	---	1,230	1,200	1,210	783	733	751	350	339	345
31	---	---	---	1,240	1,180	1,220	---	---	---	347	341	344
MONTH	1,680	1,380	1,490	1,440	1,170	1,300	1,370	733	1,060	915	339	622

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED  
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	347	336	341	839	796	815	1,140	1,110	1,120	1,240	1,210	1,230
2	346	334	338	910	839	881	1,180	1,140	1,160	1,260	1,230	1,250
3	348	332	339	921	887	904	1,210	1,180	1,190	1,260	1,240	1,250
4	375	348	364	927	879	904	1,220	1,200	1,210	1,270	1,250	1,260
5	402	374	392	952	862	922	1,220	1,200	1,200	1,280	1,260	1,270
6	444	399	424	973	938	957	1,230	1,200	1,220	1,290	1,230	1,280
7	492	444	468	971	937	956	1,220	1,190	1,200	1,400	1,160	1,260
8	532	492	515	980	953	964	1,210	1,170	1,200	1,320	1,220	1,260
9	556	532	544	1,000	964	986	1,190	1,140	1,170	1,240	1,190	1,210
10	562	552	557	1,020	996	1,010	1,200	1,170	1,190	1,240	1,010	1,150
11	554	539	545	1,010	996	1,000	1,190	1,170	1,180	1,220	1,110	1,160
12	554	544	549	1,000	979	991	1,190	1,170	1,180	1,240	1,160	1,200
13	553	545	548	1,020	981	991	1,210	1,170	1,190	1,170	1,130	1,150
14	557	543	549	1,050	1,010	1,040	1,170	1,140	1,160	1,140	1,130	1,140
15	574	557	566	1,080	1,050	1,060	1,140	1,120	1,140	1,170	1,140	1,160
16	590	574	585	1,080	1,060	1,070	1,120	1,080	1,100	1,170	1,150	1,160
17	590	577	584	1,090	1,060	1,080	1,080	1,040	1,050	1,190	1,170	1,180
18	613	581	597	1,110	1,070	1,090	1,050	1,040	1,040	1,210	1,180	1,200
19	650	613	637	1,120	1,100	1,120	1,050	1,030	1,040	1,220	1,200	1,210
20	696	650	670	1,120	1,100	1,110	1,030	998	1,020	1,230	1,220	1,220
21	709	670	685	1,130	1,100	1,110	1,040	986	1,010	1,220	1,210	1,220
22	710	673	695	1,120	1,100	1,110	1,020	992	1,010	1,210	1,200	1,200
23	731	707	720	1,150	1,100	1,120	998	959	985	1,210	1,190	1,200
24	758	725	737	1,150	1,140	1,140	---	967	---	1,210	1,190	1,200
25	777	758	767	1,150	1,130	1,140	---	---	---	1,230	1,200	1,220
26	807	758	779	1,150	1,130	1,140	---	---	---	1,240	1,220	1,230
27	855	807	836	1,190	1,140	1,170	---	1,220	---	1,240	1,230	1,240
28	866	830	848	1,200	1,150	1,180	1,250	1,220	1,230	1,230	1,210	1,220
29	833	798	815	1,150	1,100	1,130	1,230	1,220	1,220	1,220	1,200	1,210
30	808	792	798	1,100	1,050	1,080	1,240	1,220	1,230	1,210	1,190	1,200
31	---	---	---	1,170	1,080	1,120	1,230	1,210	1,220	---	---	---
MONTH	866	332	593	1,200	796	1,040	---	---	---	1,400	1,010	1,210

## COLORADO RIVER MAIN STEM

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.8	14.1	14.9	9.8	8.7	9.2	3.9	2.5	3.1	1.0	0.0	0.5
2	14.9	13.9	14.4	8.9	7.2	8.2	4.5	2.9	3.6	1.8	0.6	1.1
3	13.9	12.8	13.1	7.2	6.0	6.6	4.5	3.3	3.9	1.3	0.2	0.7
4	13.2	12.0	12.7	6.9	5.8	6.2	4.2	3.1	3.6	1.3	0.0	0.5
5	14.3	12.2	13.2	6.5	4.9	5.6	4.6	3.1	3.7	1.0	0.2	0.6
6	14.8	12.5	13.6	6.5	4.8	5.6	4.0	3.1	3.5	1.8	0.2	1.0
7	15.3	13.0	14.1	6.3	4.8	5.6	3.8	2.7	3.2	2.0	0.8	1.4
8	15.6	13.4	14.5	6.2	5.5	5.9	3.7	2.6	3.1	1.7	0.5	1.1
9	15.5	13.5	14.5	6.8	6.0	6.4	3.1	2.1	2.6	1.5	0.3	0.9
10	15.3	13.3	14.3	6.4	5.6	6.0	2.4	1.5	1.9	2.5	1.4	1.8
11	15.0	13.3	14.2	6.6	5.5	6.0	2.1	0.8	1.4	3.5	2.4	2.8
12	14.6	12.7	13.7	5.9	4.9	5.4	2.5	1.3	1.9	3.2	2.4	2.8
13	13.5	11.6	12.7	5.1	4.3	4.7	2.4	1.1	1.7	3.4	2.1	2.7
14	12.8	11.0	12.0	5.7	4.2	4.9	2.2	1.1	1.7	3.3	2.1	2.7
15	12.5	10.6	11.5	6.1	4.8	5.4	2.3	1.4	1.8	4.2	2.8	3.3
16	12.5	10.4	11.4	5.3	4.2	4.7	2.7	1.4	2.0	3.6	2.1	2.7
17	12.5	10.5	11.5	4.7	3.7	4.2	3.7	2.6	3.1	2.7	1.5	2.1
18	12.5	10.7	11.6	4.7	3.4	4.0	3.4	2.7	3.1	2.5	1.1	1.8
19	12.2	10.5	11.4	4.8	3.4	4.0	2.9	2.0	2.4	2.2	0.9	1.6
20	11.8	10.1	11.0	4.9	3.4	4.1	2.1	1.4	1.8	2.1	0.7	1.4
21	11.6	9.8	10.7	5.1	3.5	4.3	1.8	1.0	1.3	2.4	0.8	1.6
22	11.4	10.0	10.6	5.3	3.8	4.5	1.7	0.7	1.2	2.9	0.9	1.9
23	11.9	10.7	11.2	5.9	4.4	5.1	1.2	0.1	0.6	3.9	2.0	2.8
24	11.7	10.5	11.1	5.9	4.6	5.2	1.0	0.2	0.6	3.8	2.7	3.3
25	11.4	9.7	10.6	6.0	5.0	5.5	1.6	0.6	1.0	4.8	3.0	3.8
26	10.8	9.5	10.1	5.0	3.8	4.3	1.1	0.2	0.6	5.0	3.4	4.2
27	10.5	9.1	9.6	3.8	2.6	3.2	0.8	0.0	0.3	5.1	3.5	4.3
28	10.6	9.2	9.9	3.2	1.9	2.6	0.7	0.0	0.3	5.0	3.8	4.4
29	10.6	9.0	9.8	3.1	1.8	2.4	0.9	0.0	0.3	5.0	3.7	4.4
30	10.3	8.6	9.4	2.9	1.8	2.4	0.7	0.1	0.5	4.9	3.5	4.2
31	9.8	8.2	9.1	---	---	---	0.8	0.1	0.4	5.6	3.7	4.6
MONTH	15.8	8.2	12.0	9.8	1.8	5.1	4.6	0.0	1.9	5.6	0.0	2.4
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	5.8	4.4	5.1	6.8	5.7	6.1	12.6	9.8	11.2	14.1	12.4	13.2
2	5.5	4.4	4.9	6.8	4.7	5.7	12.0	9.8	10.7	14.8	12.4	13.5
3	5.1	3.5	4.3	7.2	4.9	6.0	10.4	8.9	9.7	14.7	13.4	14.1
4	4.7	3.3	4.1	6.5	5.6	5.9	10.9	8.4	9.7	14.2	12.6	13.5
5	4.1	2.7	3.4	6.8	4.7	5.8	9.9	8.2	9.0	14.2	12.9	13.5
6	3.3	1.8	2.5	7.8	5.3	6.4	10.7	8.2	9.3	14.1	12.2	13.2
7	2.4	0.8	1.6	8.6	5.8	7.2	11.8	8.8	10.2	14.5	13.1	13.7
8	1.8	0.1	1.0	9.4	6.6	7.9	12.2	8.8	10.5	14.2	12.3	13.2
9	1.8	0.3	1.1	9.4	7.0	8.1	13.3	9.9	11.6	13.8	12.5	13.2
10	1.5	0.3	0.9	9.6	7.4	8.5	14.5	11.3	12.9	12.5	10.9	11.8
11	1.9	0.2	1.0	10.7	8.1	9.3	15.7	12.3	14.0	14.0	11.3	12.6
12	2.1	0.4	1.2	11.7	9.1	10.3	15.1	12.8	14.1	15.6	12.4	14.0
13	3.1	1.8	2.3	12.2	9.4	10.8	15.8	12.8	14.3	16.4	14.4	15.3
14	3.8	2.6	3.2	11.9	10.0	11.0	15.2	13.6	14.4	17.0	14.9	16.0
15	5.3	3.4	4.2	11.2	9.5	10.4	14.7	11.8	12.9	16.7	15.7	16.3
16	5.3	4.1	4.7	10.4	9.8	10.1	13.8	10.8	12.2	17.4	14.8	16.1
17	6.2	4.4	5.2	10.1	9.1	9.6	13.7	11.7	12.6	17.2	16.1	16.7
18	7.0	5.1	6.0	9.6	8.2	8.8	13.4	10.9	12.0	16.7	14.9	15.8
19	7.3	5.4	6.3	8.9	7.6	8.2	12.9	10.7	11.8	15.0	13.2	14.2
20	7.1	5.0	6.1	8.8	7.2	8.0	14.5	11.2	12.7	14.5	12.5	13.6
21	7.2	5.1	6.2	10.4	7.2	8.7	13.9	12.2	13.1	15.3	13.4	14.4
22	6.7	5.2	6.0	11.3	8.1	9.6	13.9	12.2	12.9	15.9	13.9	15.0
23	5.9	4.0	5.0	12.5	9.3	10.9	12.6	11.2	11.7	16.3	14.5	15.5
24	6.0	4.1	5.0	12.4	10.9	11.7	14.0	10.4	12.0	16.2	14.9	15.6
25	5.9	5.0	5.4	13.3	10.3	11.7	15.2	12.3	13.7	15.5	14.6	15.1
26	5.7	4.9	5.3	12.0	10.6	11.2	16.1	13.5	14.7	15.5	14.2	14.9
27	6.1	4.5	5.3	10.6	8.7	9.7	16.3	13.8	15.1	16.3	14.4	15.3
28	6.8	5.2	5.9	9.7	7.2	8.3	15.8	14.1	15.1	16.7	15.1	15.9
29	---	---	---	9.8	6.8	8.1	15.0	13.4	14.3	16.3	15.3	15.9
30	---	---	---	10.7	7.1	8.8	14.3	12.9	13.6	16.3	15.2	15.6
31	---	---	---	---	8.2	---	---	---	---	15.9	14.6	15.2
MONTH	7.3	0.1	4.0	---	4.7	---	16.3	8.2	12.4	17.4	10.9	14.6

09163500 COLORADO RIVER NEAR COLORADO-UTAH STATE LINE—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.8	14.4	15.1	23.2	21.2	22.1	25.8	23.2	24.4	23.2	20.6	21.9
2	15.4	14.3	14.8	23.3	21.0	22.1	25.4	23.5	24.6	22.4	20.8	21.4
3	14.9	13.5	14.3	23.5	21.0	22.2	24.9	23.0	23.9	22.8	19.7	21.1
4	15.5	14.0	14.8	23.9	21.2	22.4	25.7	22.9	24.2	22.9	20.7	21.8
5	15.9	14.5	15.2	24.2	21.9	22.9	25.7	23.1	24.5	22.7	19.8	21.6
6	16.3	14.5	15.4	24.3	21.9	23.0	25.5	23.2	24.5	21.2	19.5	20.2
7	16.4	14.8	15.6	24.0	21.6	22.7	24.9	23.2	24.0	20.6	18.1	19.4
8	16.8	14.5	15.8	24.0	21.5	22.7	25.2	22.1	23.5	20.8	19.2	19.9
9	17.5	15.6	16.7	24.8	21.6	23.1	25.8	23.1	24.4	19.8	18.0	18.9
10	18.1	15.9	17.1	25.4	22.0	23.6	26.6	23.6	24.9	18.0	14.0	16.1
11	18.2	15.8	17.1	24.8	22.2	23.6	26.7	24.0	25.3	16.7	14.7	15.7
12	18.1	16.3	17.3	25.3	22.4	23.8	26.6	24.2	25.3	17.0	15.4	16.2
13	18.4	16.4	17.4	25.4	22.8	24.1	26.2	23.8	25.1	17.3	16.0	16.6
14	19.0	16.6	17.8	26.3	23.2	24.6	26.9	24.4	25.6	16.9	14.8	15.9
15	19.5	17.0	18.3	25.8	23.6	24.8	25.9	23.1	24.3	17.2	14.9	16.1
16	19.6	17.6	18.8	25.8	23.0	24.3	24.9	23.1	23.7	17.7	15.7	16.6
17	19.3	17.1	18.4	26.6	23.2	24.8	24.2	21.4	22.8	17.5	15.6	16.5
18	19.4	17.3	18.4	27.5	24.3	25.8	23.8	22.2	23.0	16.3	14.2	15.2
19	19.4	17.7	18.5	27.6	24.9	26.2	23.7	21.3	22.5	16.1	14.0	15.1
20	18.3	17.0	17.4	27.1	24.8	25.9	24.2	21.5	22.8	16.5	14.2	15.3
21	18.2	16.1	17.2	27.1	24.2	25.5	24.4	22.1	23.2	17.0	14.7	15.7
22	19.0	16.9	18.0	27.5	25.1	26.2	24.4	21.9	23.1	17.1	14.8	15.9
23	19.2	17.7	18.5	26.4	24.6	25.5	24.7	22.0	23.3	17.5	15.1	16.2
24	19.0	17.2	17.7	26.8	24.0	25.2	24.2	22.6	23.3	17.9	15.4	16.5
25	18.7	16.8	17.7	26.2	24.1	25.2	24.8	22.5	23.6	17.8	15.3	16.5
26	20.1	17.8	18.9	27.3	24.9	26.0	25.0	22.5	23.8	17.9	15.3	16.5
27	21.1	18.9	20.0	26.4	24.3	25.4	24.2	22.7	23.2	18.4	15.6	16.9
28	21.9	19.7	20.8	27.3	24.4	25.6	23.9	21.2	22.5	18.5	16.1	17.3
29	22.8	20.4	21.5	26.6	24.5	25.5	24.3	21.7	22.9	18.5	16.1	17.3
30	22.8	20.8	21.9	26.7	23.9	25.3	23.7	21.7	22.7	18.7	16.3	17.4
31	---	---	---	25.8	24.1	24.9	23.6	21.1	22.3	---	---	---
MONTH	22.8	13.5	17.5	27.6	21.0	24.4	26.9	21.1	23.8	23.2	14.0	17.6

## 09165000 DOLORES RIVER BELOW RICO, CO

LOCATION.--Lat 37°38'20", long 108°03'35", Dolores County, Hydrologic Unit 14030002, on left bank at upstream side of Montelores bridge northwest of State Highway 145, at Dolores-Montezuma County line, 0.5 mi upstream from Ryman Creek, and 4.0 mi southwest of Rico.

DRAINAGE AREA.--105 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1951 to September 1996, October 1998 to September 2003 (discontinued). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09165000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09165000)

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,422.23 ft above NGVD of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No diversion upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood since at least 1885 occurred Oct. 5, 1911.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	23	e11	e11	e11	e9.1	e46	268	737	62	36	61
2	36	23	e11	e11	e11	e8.7	e47	269	731	62	32	53
3	49	17	e10	e11	e11	e8.4	e49	298	667	59	32	46
4	40	23	e10	e11	e11	e8.8	e52	306	605	55	34	44
5	44	19	e10	e11	e11	e10	e58	216	536	50	25	45
6	41	20	e10	e11	e11	e11	e64	182	445	46	22	63
7	41	20	e10	e11	e10	e13	e65	171	383	42	25	69
8	40	22	e10	e11	e10	e14	e65	160	352	40	31	53
9	39	25	e10	e11	e10	e14	e64	138	338	38	23	152
10	37	26	e11	e11	e9.9	e15	e64	133	317	36	21	411
11	35	23	e11	e11	e9.8	e18	e68	145	289	33	24	270
12	33	23	e11	e11	e9.8	e24	e74	225	252	32	24	224
13	31	27	e11	e11	e9.2	e26	e81	306	216	30	44	216
14	30	21	e11	e10	e9.2	e30	e90	363	190	28	114	178
15	28	19	e11	e10	e9.2	e34	e97	413	183	28	65	142
16	26	19	e11	e9.9	e9.2	e44	e97	449	176	30	66	120
17	25	22	e11	e9.5	e9.7	e48	e97	544	151	35	66	106
18	27	19	e11	e9.4	e9.8	e47	e101	528	141	39	57	93
19	23	17	e11	e9.1	e9.8	e39	e108	521	141	31	57	83
20	22	14	e11	e9.1	e9.8	e37	e119	561	147	29	42	74
21	22	12	e11	e9.2	e9.8	e35	e125	647	120	27	37	68
22	23	12	e11	e9.6	e9.1	e37	e126	757	114	29	35	61
23	25	13	e11	e9.8	e8.6	e40	111	782	110	31	50	57
24	27	13	e11	e9.9	e8.8	e52	105	740	100	28	55	52
25	23	11	e11	e9.9	e8.8	e63	136	727	89	25	85	49
26	24	e12	e11	e9.9	e8.8	e66	202	763	84	25	59	45
27	25	14	e11	e10	e9.2	e66	270	822	81	29	56	43
28	21	11	e11	e10	e9.2	e64	308	890	77	36	101	41
29	24	9.1	e11	e10	---	e59	289	863	72	91	98	39
30	23	e10	e11	e10	---	e56	263	799	69	41	92	37
31	24	---	e11	e10	---	e50	---	794	---	33	79	---
TOTAL	939	539.1	334	318.3	273.7	1,047.0	3,441	14,780	7,913	1,200	1,587	2,995
MEAN	30.3	18.0	10.8	10.3	9.78	33.8	115	477	264	38.7	51.2	99.8
MAX	49	27	11	11	11	66	308	890	737	91	114	411
MIN	21	9.1	10	9.1	8.6	8.4	46	133	69	25	21	37
AC-FT	1,860	1,070	662	631	543	2,080	6,830	29,320	15,700	2,380	3,150	5,940

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2003, BY WATER YEAR (WY)

MEAN	43.2	28.9	21.6	18.6	18.3	31.2	128	451	535	164	81.1	62.3
MAX	133	65.9	42.6	37.7	33.7	72.2	242	1,015	1,288	646	267	224
(WY)	(1973)	(1987)	(1958)	(1958)	(1984)	(1972)	(1962)	(1958)	(1957)	(1957)	(1999)	(1982)
MIN	14.5	12.1	7.81	7.74	7.49	11.0	42.9	98.9	36.3	16.7	14.2	17.1
(WY)	(1957)	(1957)	(1990)	(1990)	(1994)	(1964)	(1975)	(1977)	(2002)	(2002)	(2002)	(1956)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1952 - 2003

ANNUAL TOTAL	13,362.2	35,367.1	
ANNUAL MEAN	36.6	96.9	132
HIGHEST ANNUAL MEAN			230
LOWEST ANNUAL MEAN			37.8
HIGHEST DAILY MEAN	e152	Apr 6	890
LOWEST DAILY MEAN	e7.4	Mar 8	8.4
ANNUAL SEVEN-DAY MINIMUM	9.8	Aug 13	e8.9
MAXIMUM PEAK FLOW			1,000
MAXIMUM PEAK STAGE			4.90
ANNUAL RUNOFF (AC-FT)	26,500	70,150	95,800
10 PERCENT EXCEEDS	108	270	390
50 PERCENT EXCEEDS	22	34	39
90 PERCENT EXCEEDS	11	10	15

e Estimated.

a From rating curve extended above 1620 ft<sup>3</sup>/s.

b Maximum gage height, 6.15 ft, Jun 10, 1952. .

09166500 DOLORES RIVER AT DOLORES, CO

LOCATION.--Lat 37°28'21", long 108°29'49", in SW¼SW¼ sec.10, T.37 N., R.15 W., Montezuma County, Hydrologic Unit 14030002, on left bank 0.30 mi upstream from bridge on State Highway 184 in Dolores and 0.8 mi upstream from Lost Canyon Creek.

DRAINAGE AREA.--504 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1895 to October 1903, August 1910 to November 1912, October 1921 to current year. Monthly discharge only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09166500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09166500)

REVISED RECORDS.--WSP 859: 1937. WRD Colo. 1972: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,940 ft above NGVD of 1929, from topographic map. See WSP 1713 or 1733 for history of changes prior to Oct. 7, 1952. Oct. 7, 1952 to Nov. 16, 1983, at site 0.4 mi downstream at different datum.

REMARKS.--Records good except for Sep. 15-30 and estimated daily discharges, which are poor. Diversions for irrigation of about 2,000 acres upstream from station. Flow partly regulated by Ground Hog Reservoir, capacity, 21,710 acre-ft. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	67	e69	e22	e28	e29	146	931	1,430	152	127	218
2	74	64	e62	e24	e35	e19	176	894	1,430	148	120	184
3	117	61	e68	e34	e34	e18	158	893	1,270	150	126	171
4	112	55	e71	e38	e25	e38	133	995	1,120	143	116	158
5	97	55	e60	e25	e28	e40	136	792	986	137	103	168
6	99	48	e59	e27	e24	e42	132	661	833	126	83	185
7	94	51	e55	e37	e17	e46	118	602	720	118	74	242
8	90	61	e36	e35	e19	46	104	576	659	115	83	203
9	85	97	e29	e40	e22	47	139	518	638	110	88	254
10	81	96	e33	e44	e28	54	212	472	603	99	77	1,210
11	77	76	e28	e27	e28	64	328	444	578	136	78	800
12	71	59	e25	e16	e57	75	445	560	522	135	79	594
13	70	61	e34	e25	e69	87	485	787	453	134	99	523
14	68	70	e40	e36	e69	106	633	854	404	127	242	449
15	65	68	e24	e41	e52	111	729	1,120	382	124	209	372
16	58	50	e39	e34	e35	124	539	1,080	377	125	171	316
17	58	e47	e53	e32	e33	121	580	1,490	338	135	182	270
18	59	e47	e47	e20	e43	99	593	1,450	310	140	166	236
19	57	e51	e35	e12	e39	92	480	1,420	297	138	159	209
20	54	e46	e28	e21	e38	87	436	1,410	325	140	137	186
21	52	e46	e22	e30	e39	e97	539	1,500	278	134	131	169
22	52	e50	e20	e37	e23	90	641	1,680	257	137	137	155
23	63	e55	e20	e35	e19	107	543	1,750	248	138	123	139
24	73	58	e23	e35	e21	133	448	1,580	229	95	169	129
25	70	67	e23	e34	44	136	592	1,490	209	80	193	119
26	65	56	e24	e34	49	139	892	e1,620	196	74	177	110
27	74	79	e24	e26	48	134	1,070	e1,730	193	75	158	103
28	70	e74	e21	e28	e45	104	e1,020	1,880	185	99	227	96
29	70	e72	e20	e37	---	87	e934	1,820	176	169	295	87
30	68	e72	e20	e34	---	98	e941	1,660	171	180	265	78
31	65	---	e21	e29	---	e123	---	1,590	---	131	287	---
TOTAL	2,279	1,859	1,133	949	1,011	2,593	14,322	36,249	15,817	3,944	4,681	8,133
MEAN	73.5	62.0	36.5	30.6	36.1	83.6	477	1,169	527	127	151	271
MAX	117	97	71	44	69	139	1,070	1,880	1,430	180	295	1,210
MIN	52	46	20	12	17	18	104	444	171	74	74	78
AC-FT	4,520	3,690	2,250	1,880	2,010	5,140	28,410	71,900	31,370	7,820	9,280	16,130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1896 - 2003, BY WATER YEAR (WY)

MEAN	133	83.7	58.7	52.2	56.2	129	741	1,732	1,344	403	237	182
MAX	1,247	453	199	151	140	458	1,955	3,625	3,470	1,490	650	1,354
(WY)	(1942)	(1942)	(1987)	(1987)	(1987)	(1997)	(1942)	(1922)	(1957)	(1957)	(1999)	(1927)
MIN	26.0	20.0	19.8	19.3	20.0	25.0	158	235	67.2	55.4	29.0	33.5
(WY)	(1902)	(1902)	(1990)	(1990)	(1902)	(1899)	(1977)	(1977)	(2002)	(1934)	(1900)	(1899)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1896 - 2003

ANNUAL TOTAL	36,875	92,970										
ANNUAL MEAN	101	255								430		
HIGHEST ANNUAL MEAN										790	1942	
LOWEST ANNUAL MEAN										87.0	1977	
HIGHEST DAILY MEAN	444	Apr 15					1,880	May 28		6,950	May 5, 1922	
LOWEST DAILY MEAN	12	Aug 28					e12	Jan 19		8.0	Aug 16, 1896	
ANNUAL SEVEN-DAY MINIMUM	16	Aug 23					22	Dec 26		12	Aug 10, 1896	
MAXIMUM PEAK FLOW							2,140	May 28		a10,000	Oct 5, 1911	
MAXIMUM PEAK STAGE							4.79	May 28		10.20	Oct 5, 1911	
ANNUAL RUNOFF (AC-FT)	73,140						184,400			311,800		
10 PERCENT EXCEEDS	297						789			1,390		
50 PERCENT EXCEEDS	53						99			120		
90 PERCENT EXCEEDS	24						28			40		

e Estimated.

a Site and datum then in use, from rating curve extended above 2800 ft<sup>3</sup>/s.

**09166950 LOST CANYON CREEK NEAR DOLORES, CO**

LOCATION.--Lat 37°26'46", long 108°28'07", in SE¼SE¼ sec.23, T.37N., R.15W., Montezuma County, Hydrologic Unit 14030002, on right bank 2.5 mi southeast of Dolores and 3.0 mi upstream from mouth.

DRAINAGE AREA.--71.3 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1984 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09166950](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09166950)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,030 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Several small storage reservoirs and diversions for irrigation of about 4,700 acres in the San Juan River basin and one diversion for irrigation of about 10 acres in Lost Canyon in the Dolores River basin. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.47	e1.2	12	21	0.66	0.00	0.21	0.00
2	0.00	0.00	0.00	0.00	0.60	e1.1	16	11	0.49	0.00	0.20	0.00
3	0.04	0.00	0.00	0.00	0.64	e1.2	12	5.8	0.37	0.00	0.22	0.00
4	0.00	0.00	0.00	0.00	0.58	1.2	9.3	4.6	0.26	0.00	0.14	0.00
5	0.00	0.00	0.00	0.00	0.56	1.4	8.4	3.2	0.17	0.00	0.07	0.00
6	0.00	0.00	0.00	0.00	0.51	1.3	7.3	2.5	0.11	0.00	0.01	0.00
7	0.00	0.00	0.00	0.00	0.44	1.4	6.5	2.1	0.07	0.00	0.00	0.00
8	0.00	0.00	0.00	e0.00	0.31	1.5	5.3	1.9	0.03	0.00	0.00	e0.00
9	0.00	0.01	0.00	e0.00	0.22	1.8	6.8	1.8	0.02	0.00	0.00	0.80
10	0.00	0.00	0.00	e0.00	0.20	2.1	12	1.7	0.01	0.00	0.00	0.04
11	0.00	0.00	0.00	0.00	0.22	2.7	18	1.6	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.23	3.4	22	1.5	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.76	4.8	20	1.4	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	e1.2	5.8	98	1.5	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	e1.5	7.1	111	1.7	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	e1.6	9.0	40	2.0	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	e1.8	11	39	2.1	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	e1.9	10	48	2.3	0.00	0.02	0.00	0.00
19	0.00	0.00	0.00	0.00	e1.8	10	14	2.2	0.00	0.23	0.00	e0.00
20	0.00	0.00	0.00	0.00	1.6	8.7	6.9	2.0	0.00	0.27	0.00	0.00
21	0.00	0.00	0.00	0.00	1.4	8.5	25	1.8	0.00	0.28	0.00	0.00
22	0.00	0.00	0.00	0.00	1.3	11	41	1.8	0.00	0.29	0.00	0.00
23	0.00	0.00	0.00	0.00	1.2	15	19	1.7	0.00	0.18	0.00	0.00
24	0.00	0.00	0.00	0.00	1.1	20	6.3	1.6	0.00	0.08	0.00	0.00
25	0.00	0.00	0.00	0.00	1.2	22	13	1.6	0.00	0.09	0.00	0.00
26	0.00	0.00	0.00	0.26	1.2	25	52	1.5	0.00	0.12	0.00	0.00
27	0.00	0.00	0.00	0.25	1.2	22	96	1.3	0.00	0.35	0.00	0.00
28	0.00	0.00	0.00	0.28	e1.2	15	80	1.2	0.00	0.59	0.00	0.00
29	0.00	0.00	0.00	0.30	---	12	75	2.0	0.00	0.63	0.00	0.00
30	0.00	0.00	0.00	0.38	---	8.7	29	1.2	0.00	0.27	0.00	0.00
31	0.00	---	0.00	0.43	---	e8.0	---	0.84	---	0.24	0.00	---
TOTAL	0.04	0.01	0.00	1.90	26.94	253.9	948.8	90.44	2.19	3.64	0.85	0.84
MEAN	0.001	0.000	0.000	0.061	0.96	8.19	31.6	2.92	0.073	0.12	0.027	0.028
MAX	0.04	0.01	0.00	0.43	1.9	25	111	21	0.66	0.63	0.22	0.80
MIN	0.00	0.00	0.00	0.00	0.20	1.1	5.3	0.84	0.00	0.00	0.00	0.00
AC-FT	0.08	0.02	0.00	3.8	53	504	1,880	179	4.3	7.2	1.7	1.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

	2.09	3.97	1.94	1.42	2.19	31.1	105	98.3	8.95	0.23	0.59	1.00
MAX	17.7	45.2	14.8	5.00	6.85	110	265	293	91.2	0.96	7.00	6.05
(WY)	(1987)	(1987)	(1987)	(1987)	(1997)	(1997)	(1987)	(1993)	(1995)	(1999)	(1999)	(1999)
MIN	0.000	0.000	0.000	0.000	0.000	0.69	0.79	0.13	0.000	0.000	0.000	0.000
(WY)	(1990)	(1990)	(1990)	(1990)	(1990)	(2002)	(2002)	(2002)	(2002)	(2002)	(1990)	(1984)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1984 - 2003

ANNUAL TOTAL	63.74		1,329.55		21.0	
ANNUAL MEAN	0.17		3.64		49.9 1993	
HIGHEST ANNUAL MEAN					0.17 2002	
LOWEST ANNUAL MEAN					555 Apr 2, 1986	
HIGHEST DAILY MEAN	1.3	Apr 17	111	Apr 15	a0.00	Jul 11, 1984
LOWEST DAILY MEAN	0.00	Jan 1	0.00	Oct 1	a0.00	Aug 30, 1984
ANNUAL SEVEN-DAY MINIMUM	0.00	May 18	0.00	Oct 4	744	Apr 2, 1986
MAXIMUM PEAK FLOW			169	Apr 27	7.23	Apr 2, 1986
MAXIMUM PEAK STAGE			4.36	Apr 27		
ANNUAL RUNOFF (AC-FT)	126		2,640		15,240	
10 PERCENT EXCEEDS	0.67		9.1		68	
50 PERCENT EXCEEDS	0.00		0.00		0.90	
90 PERCENT EXCEEDS	0.00		0.00		0.00	

e Estimated.

a No flow many days each year.

## 09168730 DOLORES RIVER NEAR SLICK ROCK, CO

LOCATION.--Lat 38°02'40", long 108°54'17", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.25, T.44 N., R.19 W., San Miguel County, Hydrologic Unit 14030002, on left bank 15 ft downstream from county road S-8 bridge, 0.7 mi upstream from Summit Canyon, 1.2 mi northwest of Slick Rock Post Office, and 2 mi downstream from Colo. Hwy. 141 at Slick Rock Bridge.

DRAINAGE AREA.--1,432 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1997 to June 1999 (seasonal records only), October 1999 to September 2000, October 2000 to June 2003 (seasonal records only), discontinued. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09168730](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09168730)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,400 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for several hundred acres upstream for irrigation and municipal water supply for city of Dove Creek. Also diversions upstream from station for irrigation in the San Juan River basin amount to about 74,760 acres. Flow regulated since Mar. 19, 1984, by McPhee Reservoir, capacity 381,000 acre-ft. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,740 ft<sup>3</sup>/s, May 7, 1998, gage height, 10.18 ft; minimum daily, 1.0 ft<sup>3</sup>/s, June 11, 2002.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major flows occurred in Oct. 1911, Sept. 1970, and Apr. 1973. Minimum flow not determined.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 474 ft<sup>3</sup>/s, Apr. 12, gage height, 5.83 ft; minimum daily, 1.8 ft<sup>3</sup>/s, June 22.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	18	72	39	40	---	---	---
2	---	---	---	---	---	17	154	39	26	---	---	---
3	---	---	---	---	---	e17	147	38	21	---	---	---
4	---	---	---	---	---	e13	112	35	18	---	---	---
5	---	---	---	---	---	e12	90	36	14	---	---	---
6	---	---	---	---	---	e13	99	32	10	---	---	---
7	---	---	---	---	---	e12	90	26	7.9	---	---	---
8	---	---	---	---	---	e12	75	21	6.4	---	---	---
9	---	---	---	---	---	e12	67	19	6.6	---	---	---
10	---	---	---	---	---	e13	173	17	7.7	---	---	---
11	---	---	---	---	---	e18	280	15	5.7	---	---	---
12	---	---	---	---	---	18	286	16	4.9	---	---	---
13	---	---	---	---	---	42	183	15	4.2	---	---	---
14	---	---	---	---	---	52	166	22	4.4	---	---	---
15	---	---	---	---	---	50	127	35	6.0	---	---	---
16	---	---	---	---	---	48	117	43	6.0	---	---	---
17	---	---	---	---	---	59	97	41	4.7	---	---	---
18	---	---	---	---	---	78	83	49	4.1	---	---	---
19	---	---	---	---	---	57	71	48	4.3	---	---	---
20	---	---	---	---	---	41	60	45	3.8	---	---	---
21	---	---	---	---	---	33	52	42	2.7	---	---	---
22	---	---	---	---	---	29	47	43	1.8	---	---	---
23	---	---	---	---	---	32	49	41	4.2	---	---	---
24	---	---	---	---	---	40	47	42	21	---	---	---
25	---	---	---	---	---	80	43	40	22	---	---	---
26	---	---	---	---	---	105	39	39	23	---	---	---
27	---	---	---	---	---	115	43	36	23	---	---	---
28	---	---	---	---	---	99	50	35	24	---	---	---
29	---	---	---	---	---	76	47	34	22	---	---	---
30	---	---	---	---	---	e63	40	34	23	---	---	---
31	---	---	---	---	---	e56	---	30	---	---	---	---
TOTAL	---	---	---	---	---	1,330	3,006	1,047	372.4	---	---	---
MEAN	---	---	---	---	---	42.9	100	33.8	12.4	---	---	---
MAX	---	---	---	---	---	115	286	49	40	---	---	---
MIN	---	---	---	---	---	12	39	15	1.8	---	---	---
AC-FT	---	---	---	---	---	2,640	5,960	2,080	739	---	---	---

e Estimated.



## 09169500 DOLORES RIVER AT BEDROCK, CO

LOCATION.--Lat 38°18'37", long 108°53'05", in NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.20, T.47 N., R.18 W., Montrose County, Hydrologic Unit 14030002, on right bank at upstream side of bridge, 0.4 mi southeast of Bedrock, and 3.1 mi upstream from East Paradox Creek.

DRAINAGE AREA.--2,024 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1917 to September 1922 (monthly discharge only for some periods, published in WSP 1313), August 1971 to current year. Statistical summary computed for 1985 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09169500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09169500)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,940 ft above NGVD of 1929, from topographic map. Prior to Aug. 1, 1971, nonrecording gage at different datum.

REMARKS.--Records fair except those for Apr. 13-23 and estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 5,000 acres upstream from station, and about 74,760 acres in the San Juan River basin. Flow regulated since Mar. 19, 1984, by McPhee Reservoir, capacity 381,000 acre-ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 6, 1970, reached a stage of 7.15 ft, present datum, from floodmarks (discharge not determined).

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	22	e19	e22	24	36	60	51	37	18	32	44
2	8.0	18	e19	e22	23	32	71	47	40	17	31	21
3	25	17	e19	e22	e23	29	161	46	33	18	101	14
4	80	17	e19	e22	e23	28	148	45	26	17	122	12
5	64	15	e20	e22	e23	24	116	43	22	17	33	64
6	29	15	e20	e22	e23	24	93	42	19	18	19	47
7	21	15	e20	e22	e22	25	102	40	16	18	17	84
8	17	15	e19	e22	e22	24	93	35	15	17	14	40
9	14	124	e17	e22	e23	24	79	32	13	16	11	61
10	12	271	e18	22	e23	24	72	29	12	16	13	1,140
11	11	56	e19	e22	e25	25	203	28	11	16	8.4	655
12	9.6	34	e19	e22	e29	30	316	26	12	16	9.7	103
13	9.3	28	e19	e22	36	31	323	24	12	16	9.8	50
14	9.7	26	e20	e22	79	40	216	23	12	16	24	31
15	10	23	e21	e22	143	59	209	34	11	16	28	23
16	10	e22	e21	e22	93	57	167	45	10	16	105	19
17	10	e21	e21	e22	68	62	153	50	10	16	282	15
18	10	e23	e22	e23	60	61	116	50	11	16	93	13
19	10	22	e22	e23	48	80	106	58	13	15	48	12
20	9.6	21	e22	e23	39	69	89	54	14	16	107	12
21	10	21	e22	e23	32	56	75	51	12	19	34	12
22	11	21	e22	e23	29	44	70	46	9.5	16	43	12
23	11	22	e22	e23	25	39	61	46	7.9	15	30	12
24	12	22	22	e23	24	39	61	45	6.4	16	33	13
25	22	22	22	21	27	43	62	47	6.4	30	24	13
26	33	e22	e22	e21	28	79	60	44	12	26	28	13
27	46	e19	e22	21	29	115	52	41	19	19	19	13
28	145	e19	e22	e21	34	125	52	e39	19	19	17	13
29	61	e19	e22	e21	---	105	61	36	18	32	16	13
30	31	e19	e22	e22	---	83	61	36	19	33	14	13
31	32	---	e22	23	---	69	---	37	---	39	14	---
TOTAL	790.6	1,011	638	685	1,077	1,581	3,508	1,270	478.2	595	1,379.9	2,587
MEAN	25.5	33.7	20.6	22.1	38.5	51.0	117	41.0	15.9	19.2	44.5	86.2
MAX	145	271	22	23	143	125	323	58	40	39	282	1,140
MIN	7.4	15	17	21	22	24	52	23	6.4	15	8.4	12
AC-FT	1,570	2,010	1,270	1,360	2,140	3,140	6,960	2,520	949	1,180	2,740	5,130

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)

	84.1	80.8	65.7	65.1	74.4	220	828	1,186	620	135	94.2	96.2
MEAN	84.1	80.8	65.7	65.1	74.4	220	828	1,186	620	135	94.2	96.2
MAX	257	399	254	198	181	774	2,551	3,243	1,794	626	242	332
(WY)	(1987)	(1987)	(1987)	(1985)	(1987)	(1985)	(1993)	(1993)	(1995)	(1995)	(1987)	(1999)
MIN	25.5	33.7	20.6	22.1	38.5	40.5	27.6	18.4	3.69	2.25	2.22	42.5
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(1990)	(2002)	(2002)	(2002)	(2002)	(2000)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1985 - 2003

ANNUAL TOTAL	9,126.4		15,600.7	
ANNUAL MEAN	25.0		42.7	
HIGHEST ANNUAL MEAN				a296
LOWEST ANNUAL MEAN				724
HIGHEST DAILY MEAN	388	Sep 12	1,140	28.8
LOWEST DAILY MEAN	1.4	Aug 19	6.4	1993
ANNUAL SEVEN-DAY MINIMUM	1.7	Jul 9	9.7	2002
MAXIMUM PEAK FLOW			3,290	4,690
MAXIMUM PEAK STAGE			7.56	b1.4
ANNUAL RUNOFF (AC-FT)	18,100		30,940	1.7
10 PERCENT EXCEEDS	40		80	214,600
50 PERCENT EXCEEDS	21		23	945
90 PERCENT EXCEEDS	2.1		12	71
				33

e Estimated.

a Average discharge for 17 years (water years 1918-22, 1972-83), 497 ft<sup>3</sup>/s; 36,0100 acre-ft/yr, prior to completion of McPhee Reservoir.

b Minimum daily discharge for period of record, no flow, Sep 13, 1974, Aug 15-18, 1978.

c Maximum discharge and stage for period of record, 9,280 ft<sup>3</sup>/s, Apr 30, 1973, gage height, 12.09 ft, from floodmarks.

## 09169500 DOLORES RIVER AT BEDROCK, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1979 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09169500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09169500)

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1979 to current year.

WATER TEMPERATURE: November 1979 to current year.

INSTRUMENTATION.--Water-quality monitor since November 1979 and water-quality monitor with satellite telemetry since July 1991 to current year.

REMARKS.-- Specific conductance record is good except Oct. 8, Feb. 24, 25, Apr. 1, 2 and Sept. 14 which are fair and May 21-28 and Sept. 15, 16 which are poor. Water temperature record is good except Aug. 28 to Sept. 30 which are poor. Daily data that are not published are due to probes being isolated.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 10,400 microsiemens/cm Sept. 8, 2002; minimum, 140 microsiemens/cm May 25, 1983.

WATER TEMPERATURE: Maximum, 33.5°C Aug. 7, 1981; minimum, -0.5°C Dec. 3-8, 1982.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 3,010 microsiemens/cm, June 27; minimum, 240 microsiemens/cm, Sept. 9.

WATER TEMPERATURE: Maximum, 32.1°C, July 18; minimum, -0.3°C, Dec. 19.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)
NOV													
19...	0945	22	8.5	1,340	0.7	250	69.1	18.6	6.62	5	176	E149	284
DEC													
12...	1015	38	8.5	1,320	0.0	230	61.9	18.7	6.30	5	159	E146	280
FEB													
13...	0930	31	8.4	1,280	0.7	210	55.9	18.1	6.15	5	173	158	283
APR													
02...	0845	55	8.4	698	8.8	170	45.8	12.8	3.92	3	80.2	117	108
23...	0945	59	8.4	776	9.9	210	54.1	17.2	4.65	3	84.8	119	102
MAY													
28...	0845	40	8.3	998	20.0	240	61.4	20.0	4.89	3	102	120	133
JUN													
19...	0845	12	8.5	1,980	19.3	370	90.7	35.6	10.7	6	286	149	397
JUL													
09...	0845	16	8.5	1,090	20.2	170	41.0	15.8	6.79	5	141	125	225
AUG													
21...	1145	30	7.7	2,490	23.0	1,700	600	43.0	14.1	1	96.7	81	69.5

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)
NOV						
19...	<0.17	4.9	103	--	--	--
DEC						
12...	0.17	5.7	66.5	--	--	--
FEB						
13...	0.14	5.1	63.4	699	0.95	59.3
APR						
02...	0.14	5.8	59.9	387	0.53	57.6
23...	0.15	6.5	111	452	0.61	71.7
MAY						
28...	0.2	6.3	169	568	0.77	61.1
JUN						
19...	0.2	3.8	203	1,120	1.52	37.1
JUL						
09...	0.2	1.2	57.5	563	0.77	24.5
AUG						
21...	0.4	9.3	1,380	2,260	3.07	183

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## DOLORES RIVER BASIN

09169500 DOLORES RIVER AT BEDROCK, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1,520	1,460	1,490	---	---	---	1,600	1,020	1,250	1,460	1,030	1,250
2	1,660	1,440	1,520	---	---	---	2,040	1,050	1,500	1,380	1,130	1,270
3	2,980	1,490	1,930	---	---	---	1,620	1,060	1,200	1,740	1,050	1,420
4	3,000	1,010	2,310	---	---	---	1,630	1,050	1,230	1,430	918	1,220
5	2,110	881	1,310	---	---	---	1,130	935	1,030	1,400	1,140	1,280
6	2,290	2,110	2,210	---	---	---	1,480	936	1,250	1,440	1,220	1,330
7	2,260	2,160	2,210	---	---	---	1,460	951	1,230	1,360	1,070	1,240
8	2,290	2,140	2,200	---	---	---	1,440	951	1,240	1,430	1,090	1,250
9	2,170	2,030	2,110	---	---	---	1,550	990	1,220	1,310	1,030	1,170
10	2,040	1,950	2,010	---	---	---	1,540	1,070	1,250	1,440	1,170	1,300
11	1,950	1,830	1,880	---	---	---	1,900	1,170	1,400	1,340	1,110	1,190
12	1,840	1,730	1,780	---	---	---	1,480	1,030	1,210	1,170	1,100	1,140
13	1,730	1,610	1,670	---	---	---	1,430	1,030	1,160	1,100	862	1,030
14	1,620	1,510	1,570	---	---	---	1,570	1,070	1,290	1,190	934	1,050
15	1,520	1,400	1,470	---	---	---	1,490	1,170	1,320	1,340	938	1,110
16	1,400	1,300	1,340	---	---	---	1,400	1,150	1,250	1,260	823	1,110
17	1,360	1,260	1,310	---	---	---	1,340	1,180	1,270	1,370	886	1,100
18	1,260	1,190	1,230	---	---	---	1,380	984	1,220	1,500	821	1,080
19	1,190	1,110	1,150	---	---	---	1,170	913	1,040	1,390	876	1,070
20	1,120	1,070	1,090	1,140	1,080	1,100	1,670	1,070	1,330	1,480	1,020	1,180
21	1,100	1,040	1,070	1,120	1,070	1,090	1,380	878	1,130	1,510	1,030	1,190
22	1,140	1,080	1,100	1,120	1,080	1,090	1,540	967	1,260	1,580	999	1,210
23	1,140	1,120	1,130	1,140	1,090	1,110	1,350	912	1,220	1,290	1,130	1,220
24	1,150	1,090	1,120	1,160	1,070	1,120	1,380	1,020	1,220	1,370	1,050	1,210
25	1,530	1,130	1,320	1,140	1,060	1,100	1,340	1,120	1,230	1,290	967	1,120
26	1,330	1,040	1,160	1,120	1,060	1,080	1,500	1,210	1,330	1,280	989	1,170
27	---	---	---	1,120	1,020	1,090	1,450	984	1,250	1,310	1,030	1,190
28	---	---	---	1,270	887	1,030	1,510	984	1,270	1,280	1,040	1,150
29	---	---	---	1,380	836	1,060	1,500	1,170	1,370	1,180	951	1,080
30	---	---	---	1,390	1,070	1,190	1,460	1,160	1,300	1,310	950	1,140
31	---	---	---	---	---	---	1,350	1,040	1,260	1,320	1,070	1,180
MONTH	---	---	---	---	---	---	2,040	878	1,250	1,740	821	1,180
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	1,290	1,010	1,100	1,300	1,170	1,220	721	682	704	934	830	880
2	1,260	1,060	1,140	1,260	1,080	1,140	720	623	671	921	859	882
3	1,230	1,070	1,170	1,210	1,100	1,150	633	447	511	895	866	879
4	1,370	987	1,150	1,220	1,100	1,160	520	455	486	890	862	875
5	1,340	973	1,210	1,230	1,090	1,180	487	459	474	946	866	919
6	1,310	367	876	1,320	1,120	1,220	517	468	495	948	892	919
7	1,480	629	1,100	1,270	1,070	1,180	521	499	513	932	897	914
8	1,370	1,070	1,270	1,250	1,090	1,170	545	487	519	994	906	954
9	1,560	1,290	1,390	1,200	1,140	1,180	588	530	548	1,040	941	986
10	1,580	1,230	1,430	1,200	1,100	1,150	579	540	562	1,030	968	1,000
11	1,720	1,200	1,370	1,190	1,110	1,150	---	---	---	1,070	990	1,030
12	1,450	1,250	1,350	1,160	952	1,080	---	---	---	1,130	1,060	1,090
13	1,410	1,190	1,280	1,040	902	988	---	---	---	1,160	1,090	1,120
14	1,250	544	773	1,020	805	960	---	---	---	1,200	1,120	1,160
15	1,410	639	813	1,170	767	961	---	---	---	1,180	969	1,100
16	1,760	651	1,490	1,460	779	1,090	---	---	---	2,000	1,040	1,310
17	1,650	1,530	1,580	1,220	1,120	1,190	---	---	---	1,040	855	941
18	1,530	1,400	1,480	1,160	955	1,100	---	---	---	949	777	873
19	1,450	1,350	1,420	1,090	884	974	---	---	---	927	724	800
20	1,350	1,140	1,240	943	850	898	---	---	---	746	696	720
21	1,180	1,120	1,150	994	912	945	---	---	---	755	694	725
22	1,170	1,080	1,120	1,020	961	987	---	---	---	728	665	700
23	1,150	1,080	1,110	1,030	987	1,010	---	---	---	748	702	726
24	1,190	1,110	1,140	1,040	997	1,020	760	693	738	756	707	731
25	1,280	1,170	1,200	1,020	999	1,010	806	733	764	780	730	755
26	1,340	1,060	1,180	1,020	831	956	854	786	810	940	745	803
27	1,510	1,260	1,370	892	742	796	837	786	808	916	783	816
28	1,360	1,150	1,260	742	588	634	866	792	830	1,050	916	987
29	---	---	---	605	548	583	850	816	830	1,100	965	1,060
30	---	---	---	608	578	595	898	799	841	1,120	1,030	1,090
31	---	---	---	690	607	653	---	---	---	1,410	1,040	1,180
MONTH	1,760	367	1,220	1,460	548	1,010	---	---	---	2,000	665	933

## 09169500 DOLORS RIVER AT BEDROCK, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1,130	1,060	1,110	1,340	1,080	1,220	---	---	---	1,250	584	906
2	1,180	1,020	1,080	1,230	1,060	1,160	---	---	---	644	571	603
3	1,080	963	1,040	1,250	1,020	1,160	---	---	---	815	586	699
4	1,210	1,020	1,120	1,190	1,030	1,110	---	---	---	1,890	815	1,610
5	1,300	1,120	1,200	1,200	1,010	1,120	---	---	---	1,850	415	962
6	2,140	1,270	1,530	1,170	1,000	1,080	---	---	---	1,690	570	894
7	2,890	2,140	2,690	1,160	981	1,070	---	---	---	1,120	412	600
8	2,540	1,740	2,100	1,150	946	1,060	---	---	---	559	351	414
9	1,760	1,650	1,730	1,130	964	1,050	---	---	---	939	240	489
10	1,770	1,620	1,710	1,160	974	1,080	---	---	---	1,280	364	719
11	1,800	1,620	1,710	1,180	994	1,090	---	---	---	1,200	1,010	1,100
12	1,880	1,660	1,750	1,170	1,000	1,080	---	---	---	1,400	1,200	1,290
13	1,900	1,790	1,850	1,170	993	1,080	---	---	---	1,480	1,400	1,450
14	1,860	1,610	1,710	1,150	988	1,060	---	---	---	1,460	1,410	1,450
15	1,770	1,690	1,720	1,150	990	1,070	---	---	---	1,480	1,360	1,410
16	1,870	1,770	1,830	1,180	1,000	1,090	---	---	---	1,530	1,440	1,470
17	1,950	1,780	1,870	1,170	997	1,080	---	---	---	---	---	---
18	1,970	1,780	1,910	1,210	997	1,100	---	---	---	---	---	---
19	1,990	1,730	1,880	1,190	1,010	1,110	---	---	---	---	---	---
20	2,010	1,830	1,920	1,240	1,050	1,130	---	---	---	---	---	---
21	2,330	1,790	2,010	1,200	1,050	1,120	---	---	---	---	---	---
22	2,440	1,830	2,010	1,250	1,090	1,190	---	---	---	---	---	---
23	2,450	1,780	2,070	1,170	1,020	1,120	---	---	---	---	---	---
24	---	---	---	1,230	1,020	1,130	---	---	---	---	---	---
25	---	---	---	1,650	1,040	1,400	---	---	---	---	---	---
26	---	---	---	2,030	1,060	1,280	---	---	---	---	---	---
27	3,010	1,610	2,400	1,070	839	934	---	---	---	---	---	---
28	1,700	1,420	1,530	2,080	988	1,240	---	---	---	---	---	---
29	1,520	1,280	1,400	2,210	1,000	1,630	1,850	678	1,320	---	---	---
30	1,390	1,220	1,310	1,680	796	1,070	1,800	1,310	1,540	---	---	---
31	---	---	---	1,140	795	865	1,680	1,250	1,490	---	---	---
MONTH	---	---	---	2,210	795	1,130	---	---	---	---	---	---

## DOLORES RIVER BASIN

09169500 DOLORES RIVER AT BEDROCK, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.9	11.0	14.0	---	---	---	3.4	-0.1	1.5	0.2	-0.2	-0.1
2	15.0	11.6	13.1	---	---	---	3.8	0.0	1.8	0.2	-0.2	-0.1
3	13.3	10.9	11.7	---	---	---	3.4	0.8	1.9	0.2	-0.2	-0.1
4	13.5	8.9	11.1	---	---	---	3.0	-0.2	1.1	0.2	-0.2	-0.1
5	15.5	10.4	12.5	---	---	---	2.8	-0.1	1.0	0.0	-0.2	-0.2
6	15.3	10.4	12.8	---	---	---	1.6	-0.2	0.5	0.5	-0.2	-0.1
7	16.2	11.6	13.8	---	---	---	1.7	-0.2	0.5	0.4	-0.2	-0.1
8	17.7	11.4	14.1	---	---	---	2.5	-0.2	0.8	0.3	-0.2	-0.1
9	17.7	10.7	13.9	---	---	---	1.5	-0.2	0.3	0.1	-0.2	-0.1
10	17.5	10.6	13.6	---	---	---	0.6	-0.2	0.0	0.5	-0.2	0.1
11	16.4	11.1	13.3	---	---	---	0.6	-0.2	0.0	0.9	-0.2	0.2
12	16.9	10.3	12.9	---	---	---	0.9	-0.2	0.1	1.7	-0.2	0.4
13	16.4	8.8	12.1	---	---	---	0.5	-0.2	0.0	1.8	-0.2	0.5
14	15.9	9.1	11.9	---	---	---	0.6	-0.2	0.0	1.9	-0.2	0.5
15	15.5	8.2	11.3	---	---	---	0.9	-0.2	0.1	3.1	-0.2	1.0
16	15.1	7.8	11.0	---	---	---	1.1	-0.2	0.3	2.1	-0.2	0.6
17	14.5	8.1	10.9	---	---	---	2.7	0.1	1.2	1.7	-0.2	0.4
18	15.4	8.7	11.5	---	---	---	1.4	-0.2	0.5	1.0	-0.2	0.1
19	14.8	8.1	11.0	4.4	---	---	1.0	-0.3	0.1	1.1	-0.2	0.2
20	13.3	7.6	10.2	5.0	0.4	2.6	0.0	-0.2	-0.1	1.3	-0.2	0.3
21	13.7	7.2	10.1	5.5	1.0	3.0	0.7	-0.2	0.0	1.9	-0.2	0.5
22	13.5	9.1	10.9	5.5	1.1	3.1	0.5	-0.2	-0.1	2.3	-0.2	0.7
23	11.9	9.5	10.6	5.2	1.4	3.1	0.2	-0.2	-0.1	3.3	-0.2	1.2
24	11.6	8.8	9.8	5.3	1.0	3.2	0.2	-0.2	-0.1	3.1	-0.2	1.4
25	11.9	7.0	9.4	6.3	3.0	4.1	0.2	-0.2	-0.1	3.4	0.0	1.5
26	10.3	7.9	8.7	4.5	0.7	2.5	0.2	-0.2	-0.1	3.7	-0.2	1.4
27	11.9	7.5	9.2	2.8	-0.1	1.0	0.4	-0.2	-0.1	4.0	-0.2	1.7
28	---	7.5	---	1.9	-0.1	0.6	0.3	-0.2	-0.1	4.2	-0.1	1.9
29	---	---	---	1.8	-0.2	0.5	0.3	-0.2	-0.1	3.7	-0.1	1.7
30	---	---	---	0.7	-0.2	0.1	0.4	-0.2	-0.1	3.5	-0.1	1.6
31	---	---	---	---	---	---	0.0	-0.2	-0.2	4.9	-0.1	2.2
MONTH	---	---	---	---	---	---	3.8	-0.3	0.3	4.9	-0.2	0.6
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	4.3	0.8	2.7	6.2	2.3	4.2	14.6	8.9	11.5	16.7	10.7	13.5
2	4.4	2.1	3.1	7.6	2.8	4.7	11.3	8.5	9.7	17.3	11.6	14.2
3	5.0	0.5	2.5	8.3	2.1	5.0	9.6	6.5	8.1	17.0	12.3	14.2
4	4.2	-0.1	1.7	5.6	3.6	4.4	9.8	5.3	7.8	16.3	11.0	13.3
5	1.9	-0.2	0.6	7.9	2.3	4.7	9.1	6.3	7.8	17.9	11.8	14.3
6	1.6	-0.2	0.2	9.2	2.2	5.6	9.4	6.6	8.0	17.9	11.7	14.6
7	1.4	-0.2	0.2	10.9	4.0	7.3	10.1	7.1	8.7	16.1	12.6	14.0
8	1.3	-0.2	0.1	11.6	4.6	8.0	11.4	7.0	9.3	14.3	10.7	12.4
9	1.3	-0.2	0.1	12.0	5.0	8.5	15.1	8.3	11.0	13.0	10.2	11.4
10	1.3	-0.2	0.2	12.4	5.9	9.0	16.4	9.5	12.8	13.8	7.7	10.7
11	0.6	-0.2	0.0	13.1	6.3	9.5	15.5	10.8	13.3	17.8	8.9	13.3
12	1.2	-0.2	0.4	13.9	7.0	10.3	---	11.4	---	19.7	11.4	15.6
13	1.4	0.3	0.9	14.2	7.0	10.5	---	---	---	18.3	13.0	15.7
14	6.2	0.7	3.2	10.7	7.9	9.3	---	---	---	18.4	12.9	15.9
15	3.6	1.6	2.6	11.0	6.9	9.0	---	---	---	16.1	13.5	14.6
16	5.3	2.3	3.5	9.2	7.9	8.6	---	---	---	21.9	12.2	16.7
17	6.4	3.5	4.8	11.2	7.2	8.8	---	---	---	20.1	16.3	18.3
18	6.7	4.7	5.4	9.1	6.5	7.6	---	---	---	18.7	15.6	17.0
19	7.4	2.7	4.9	8.4	6.0	7.2	---	---	---	21.1	14.1	17.4
20	7.5	2.9	4.9	9.5	5.7	7.6	---	---	---	22.2	15.5	18.7
21	7.4	2.3	4.9	11.4	6.6	8.5	---	---	---	23.1	15.7	19.1
22	6.0	2.3	4.0	13.5	6.0	9.4	14.1	---	---	24.4	16.5	20.2
23	6.4	0.4	3.2	14.4	7.3	10.7	13.4	9.8	11.3	23.0	17.8	20.4
24	5.1	1.1	3.2	11.8	8.9	10.4	16.9	9.1	12.6	23.1	17.8	20.3
25	5.3	3.5	4.0	15.0	7.6	11.0	18.3	11.4	14.5	22.1	17.7	19.8
26	6.7	3.1	4.6	12.6	8.5	10.5	18.6	12.1	15.0	25.3	17.2	20.9
27	5.5	3.5	4.6	10.2	6.0	8.5	18.7	11.7	15.0	26.6	18.9	22.5
28	5.1	2.5	4.0	8.9	4.0	6.2	17.2	12.1	14.5	26.9	19.7	23.2
29	---	---	---	9.6	3.5	6.7	14.0	11.9	12.9	28.1	20.6	24.0
30	---	---	---	11.6	4.8	8.2	16.5	10.2	13.0	26.6	20.9	23.4
31	---	---	---	14.4	7.1	10.6	---	---	---	25.3	19.7	22.0
MONTH	7.5	-0.2	2.7	15.0	2.1	8.1	---	---	---	28.1	7.7	17.1

## 09169500 DOLORS RIVER AT BEDROCK, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	26.0	19.7	22.6	27.0	18.8	22.7	---	---	---	25.5	17.5	21.3
2	25.2	18.9	21.7	27.7	18.8	23.0	---	---	---	23.9	18.0	21.0
3	26.1	18.1	21.8	27.8	19.5	23.4	---	---	---	25.8	19.3	22.4
4	25.1	17.4	21.3	28.7	19.2	23.7	---	---	---	24.4	18.4	21.5
5	24.5	17.8	21.1	26.7	19.9	23.4	---	---	---	21.3	15.2	18.8
6	23.7	16.9	20.3	26.9	19.8	23.2	---	---	---	19.7	17.3	18.5
7	24.1	16.6	20.0	27.4	18.9	23.0	---	---	---	21.5	15.4	18.2
8	25.8	16.4	20.7	28.2	19.4	23.6	---	---	---	21.8	16.9	19.2
9	24.4	17.9	20.9	28.9	20.0	24.1	---	---	---	18.7	15.2	16.9
10	24.8	18.7	21.5	29.5	19.4	24.2	---	---	---	16.1	12.8	14.8
11	26.1	16.3	20.8	29.0	20.3	24.5	---	---	---	16.3	12.2	14.0
12	24.3	17.0	20.5	28.3	20.5	24.3	---	---	---	19.0	13.3	16.0
13	24.0	17.1	20.6	28.0	20.2	24.1	---	---	---	19.9	15.0	17.0
14	27.7	17.7	22.3	29.3	21.0	24.9	---	---	---	19.4	12.8	15.9
15	27.7	18.2	22.7	27.9	22.0	24.8	---	---	---	20.0	13.1	16.5
16	27.7	19.5	23.1	30.2	22.0	25.4	---	---	---	20.5	14.4	17.4
17	25.3	18.8	21.5	30.9	22.5	26.4	---	---	---	20.7	15.2	17.4
18	25.2	17.6	21.1	32.1	24.0	27.6	---	---	---	19.3	12.1	15.3
19	23.8	18.6	20.9	31.3	24.2	26.9	---	---	---	19.5	12.4	15.6
20	23.9	17.9	20.2	29.5	22.9	26.0	---	---	---	20.4	13.4	16.4
21	24.6	16.3	20.0	29.6	23.1	26.2	---	---	---	20.5	13.0	16.4
22	25.4	16.1	20.4	30.6	22.9	26.1	---	---	---	21.0	13.5	16.9
23	24.1	15.6	19.6	28.6	22.7	25.3	---	---	---	21.3	14.0	17.3
24	19.5	14.3	17.2	30.1	22.2	25.4	---	---	---	21.0	13.8	17.1
25	26.7	13.3	19.3	30.5	22.5	26.3	---	---	---	21.2	14.1	17.4
26	26.6	14.9	20.8	30.5	23.8	26.9	---	---	---	21.2	13.8	17.2
27	27.1	17.7	22.1	31.6	23.4	26.8	---	---	---	21.7	14.4	17.7
28	26.7	18.2	22.3	31.2	23.1	26.5	27.4	---	---	21.4	15.0	17.9
29	27.4	18.7	22.8	29.4	22.4	25.5	27.2	18.9	22.8	21.4	14.4	17.5
30	26.9	19.4	22.8	30.0	22.6	26.0	26.5	19.2	22.4	21.4	14.8	17.7
31	---	---	---	28.5	22.9	25.5	26.9	17.9	22.2	---	---	---
MONTH	27.7	13.3	21.1	32.1	18.8	25.0	---	---	---	25.8	12.1	17.6

## 09170800 WEST PARADOX CREEK ABOVE BEDROCK, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°19'54", long 108°53'59", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.18, T.47 N., R.18 W., Montrose County. Site is 1,000 ft downstream from former surface water station, 1.3 mi northwest of Bedrock, and 2.6 mi upstream from mouth.

DRAINAGE AREA.-- 53.3 mi<sup>2</sup>.

PERIOD OF RECORD.--Chemical analyses: August 1987 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09170800](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09170800)

REMARKS.--Natural flow affected by water imported from Rock Creek through Buckeye Reservoir. Diversion for irrigation of about 2,500 acres.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alka- linity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chlor- ide, water, fltrd, mg/L (00940)	Fluor- ide, water, fltrd, mg/L (00950)
DEC 12...	0900	8.5	771	0.4	390	84.0	43.1	2.24	0.4	19.3	E164	15.5	0.33
FEB 13...	0800	8.4	996	3.8	510	105	59.7	2.62	0.5	26.7	235	25.1	0.35
APR 02...	0800	8.3	1,010	7.6	540	114	61.9	3.00	0.6	29.5	214	23.9	0.34
23...	0845	8.5	1,100	5.7	590	122	69.7	3.19	0.6	33.1	251	26.6	0.38
MAY 28...	0800	8.1	925	14.7	450	94.8	52.0	3.58	0.5	23.9	229	20.1	0.4
JUN 19...	0815	8.1	783	16.2	410	83.5	47.8	3.57	0.5	21.9	206	15.0	0.3
JUL 09...	0730	8.0	732	13.7	340	75.2	36.5	7.41	0.4	16.6	198	13.8	0.3
AUG 21...	0930	8.2	828	22.0	410	89.1	45.6	12.4	0.4	19.7	231	19.3	0.3

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of consti- tuents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)
DEC 12...	10.6	198	--	--
FEB 13...	11.6	295	668	0.91
APR 02...	10.6	310	682	0.93
23...	9.7	349	765	1.04
MAY 28...	8.7	255	596	0.81
JUN 19...	7.0	194	496	0.68
JUL 09...	11.0	168	448	0.61
AUG 21...	11.9	187	524	0.71

E -- Estimated laboratory analysis value.

**09171100 DOLORES RIVER NEAR BEDROCK, CO**

LOCATION.--Lat 38°21'25", long 108°49'58", in NE¼SE¼ sec.3, T.47 N., R.18 W., Montrose County, Hydrologic Unit 14030002, on right bank 2.5 mi downstream from West Paradox Creek and 4.2 mi northeast of Bedrock.

DRAINAGE AREA.--2,145 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1971 to current year. Statistical summary computed for 1985 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09171100](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09171100)

REVISED RECORDS.--WDR CO-90-2: 1989.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,910 ft above NGVD of 1929, from topographic map. Prior to Feb. 17, 1972, at site 200 ft downstream at datum 1.98 ft lower. From Feb. 17, 1972 to Aug. 16, 2000 at site 600 ft downstream at datum 3.00 ft lower.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 80,000 acres, of which about 74,760 acres are in the San Juan River basin. Flow regulated by McPhee Reservoir, capacity 381,000 acre-ft, since Mar. 19, 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 6, 1970, reached a stage of 11.25 ft, site and datum then in use (discharge, 5,710 ft<sup>3</sup>/s), by slope-area measurement at site 800 ft upstream.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.6	25	21	e22	e24	38	55	54	38	17	43	30
2	9.0	21	20	e23	e24	36	55	50	39	17	27	21
3	20	19	e20	e22	e24	34	118	48	36	17	99	14
4	44	19	e20	e22	e24	34	122	48	28	17	127	11
5	58	18	20	e22	e24	32	99	47	25	17	43	37
6	29	17	20	e22	23	30	82	44	22	17	24	44
7	21	17	e20	e22	22	31	85	43	19	17	16	61
8	18	18	19	e22	22	30	81	38	17	17	15	47
9	16	59	18	e22	23	30	71	36	16	16	11	37
10	14	224	18	e22	23	29	64	33	15	15	12	877
11	12	60	e19	e22	25	30	141	31	13	15	9.4	1,030
12	11	36	e19	e22	29	35	255	30	13	15	9.6	120
13	11	31	19	e22	33	36	289	28	13	16	11	50
14	11	27	e20	e22	62	40	213	27	13	16	24	29
15	11	24	e21	e22	90	54	201	35	12	16	32	21
16	12	22	21	e23	77	59	157	45	11	15	39	18
17	12	21	e21	e23	61	61	143	52	11	15	304	15
18	12	22	e22	e23	53	59	119	53	11	14	81	12
19	12	22	22	24	46	72	104	59	13	14	29	11
20	12	22	e23	23	41	66	91	57	13	14	65	15
21	12	21	e22	23	36	54	80	55	12	19	27	15
22	13	21	e22	e23	33	45	72	48	9.8	18	29	13
23	14	22	e22	e23	30	42	64	47	8.2	15	25	13
24	15	22	e22	e23	29	40	63	46	6.7	16	30	13
25	21	22	21	e21	32	41	64	48	6.3	29	17	12
26	31	21	e22	e21	33	59	61	46	8.3	29	22	12
27	27	20	e22	e21	34	88	56	41	17	21	17	14
28	107	19	e22	e21	37	98	53	39	18	20	16	20
29	58	20	e22	e21	---	89	61	36	17	26	15	17
30	31	20	e22	e22	---	72	62	37	18	43	13	16
31	32	---	e22	e23	---	61	---	37	---	35	12	---
TOTAL	714.6	932	644	689	1,014	1,525	3,181	1,338	499.3	588	1,244.0	2,645
MEAN	23.1	31.1	20.8	22.2	36.2	49.2	106	43.2	16.6	19.0	40.1	88.2
MAX	107	224	23	24	90	98	289	59	39	43	304	1,030
MIN	8.6	17	18	21	22	29	53	27	6.3	14	9.4	11
AC-FT	1,420	1,850	1,280	1,370	2,010	3,020	6,310	2,650	990	1,170	2,470	5,250

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)

MEAN	89.9	87.7	70.2	71.9	83.9	230	843	1,192	628	139	96.8	104
MAX	269	430	262	208	207	811	2,552	3,219	1,766	677	274	379
(WY)	(1987)	(1987)	(1987)	(1985)	(1987)	(1985)	(1985)	(1993)	(1995)	(1995)	(1987)	(1999)
MIN	23.1	31.1	20.8	22.2	36.2	35.1	27.3	15.5	4.51	1.91	1.73	40.4
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(1990)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1985 - 2003

ANNUAL TOTAL	8,547.4	15,013.9	
ANNUAL MEAN	23.4	41.1	a304
HIGHEST ANNUAL MEAN			711
LOWEST ANNUAL MEAN			26.7
HIGHEST DAILY MEAN	316	Sep 12	4,550
LOWEST DAILY MEAN	1.1	Aug 19	b1.1
ANNUAL SEVEN-DAY MINIMUM	1.3	Jul 11	1.3
MAXIMUM PEAK FLOW			c3,280
MAXIMUM PEAK STAGE			f7.54
ANNUAL RUNOFF (AC-FT)	16,950	29,780	d5,260
10 PERCENT EXCEEDS	41	65	10.82
50 PERCENT EXCEEDS	20	23	987
90 PERCENT EXCEEDS	1.7	13	76
			34

e Estimated.

a Average discharge for 12 years (water years 1972-83), 502 ft<sup>3</sup>/s; 363,700 acre-ft/yr, prior to completion of McPhee Dam.

b Minimum daily discharge for period of record, 0.12 ft<sup>3</sup>/s, Jul 17-18, 1977.

c Based on slope area measurement of peak flow.

d Maximum discharge and stage for period of record, 9,500 ft<sup>3</sup>/s, Apr 30, 1973, gage height, 12.88 ft site and datum then in use, from floodmarks.

f From floodmarks.



## WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1987 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09171100](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09171100)

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1987 to current year.

WATER TEMPERATURE: December 1987 to current year.

INSTRUMENTATION.--Water-quality monitor since December 1987.

REMARKS.--Daily specific conductance record is good except Oct. 6, 7, Nov. 10, 11, Feb. 23, 24, Mar. 18, 24, 25, 29, 30, Apr. 6, 7, 18, 29, May 3, 12, 13, 18-20, 23, June 1, 2, July 28, 29 which are fair and Oct. 8, Nov. 12, Feb. 25, Mar. 31 to Apr. 2, Apr. 8, 9, 19, 20, May 4-6, 24-27, June 3 and Aug. 1-3 which are poor. Daily water temperature record is good. Daily data that are not published are due to probes being isolated by sediment and severe fouling.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 57,700 microsiemens/cm, June 22, 1990 (may have been higher June 19-22, 1990 when probe was out of water); minimum recorded, 256 microsiemens/cm, June 23, 1995 (may have been lower during period of missing record Apr. 3-20, 1993).

WATER TEMPERATURE: Maximum, 34.6°C, July 19, 2003; minimum, -1.0°C, Dec. 23, 1995 (temperatures published as 0.0°C may have been lower during water years 1988-95).

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 18,200 microsiemens/cm, Feb. 6; minimum, 423 microsiemens/cm, Apr. 14.

WATER TEMPERATURE: Maximum, 34.6°C, July 19; minimum, -0.3°C, Jan. 2, Feb. 11.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	
NOV	19...	1215	22	8.4	2.470	2.6	310	82.4	25.5	15.2	9	380	E141	609
DEC	12...	1245	34	8.5	3,530	0.0	340	83.7	32.4	24.9	14	604	E165	972
FEB	13...	1200	38	8.3	2,850	2.6	280	66.2	28.5	21.2	12	462	164	765
APR	02...	1100	50	8.2	3,110	9.2	260	60.1	26.9	24.9	15	545	125	828
	23...	1245	65	8.3	2,720	13.6	280	65.7	28.1	24.5	12	451	127	700
MAY	28...	1145	38	8.3	2,750	24.4	290	69.1	27.7	20.6	11	416	128	668
JUN	19...	1045	12	8.4	9,430	19.3	560	111	68.3	83.2	33	1,780	163	2,800
JUL	09...	1100	15	8.4	2,050	23.2	190	43.1	20.7	16.9	10	317	128	504
AUG	22...	1130	23	8.0	2,610	23.0	1,500	519	37.4	15.2	1	123	73	143

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)
NOV	19...	<0.17	5.0	151	--	--
DEC	12...	0.18	5.1	124	--	--
FEB	13...	0.16	4.8	113	1,560	2.12
APR	02...	0.14	5.8	119	1,680	2.29
	23...	0.15	6.6	149	1,500	2.04
MAY	28...	0.2	6.3	209	1,490	2.03
JUN	19...	0.3	3.6	342	5,280	7.18
JUL	09...	0.2	1.2	79.2	1,060	1.44
AUG	22...	0.3	9.0	1,280	2,170	2.95

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## 09171100 DOLORES RIVER NEAR BEDROCK, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	4,150	3,440	3,640	2,390	2,230	2,300	2,440	1,920	2,210	5,940	3,080	3,980
2	4,530	4,070	4,250	2,580	2,390	2,490	3,450	2,180	2,690	8,910	3,270	5,090
3	4,380	2,050	3,280	2,560	2,310	2,420	2,750	1,850	2,140	6,220	3,100	4,210
4	3,940	1,750	2,840	2,380	2,300	2,340	2,450	1,820	2,120	6,680	3,070	4,280
5	2,860	1,080	1,410	2,520	2,300	2,390	3,780	1,840	2,410	6,710	3,260	4,830
6	2,750	1,480	2,330	2,580	2,420	2,500	3,780	2,000	2,360	5,090	3,510	4,250
7	3,000	2,750	2,870	2,640	2,450	2,530	5,020	2,020	2,510	9,150	2,630	4,750
8	3,130	3,000	3,080	3,020	2,620	2,690	4,580	2,240	2,820	7,890	2,290	4,020
9	3,400	3,110	3,230	3,040	1,010	2,390	6,600	2,520	3,300	9,950	2,530	5,060
10	3,580	3,340	3,440	1,180	521	701	6,770	1,930	3,160	5,620	3,550	4,420
11	3,720	3,560	3,600	803	553	667	4,820	1,700	2,570	4,350	2,290	3,270
12	3,760	3,500	3,630	1,300	803	1,020	5,640	1,800	2,960	5,370	2,290	3,120
13	3,740	3,500	3,630	1,410	1,280	1,320	7,500	1,770	3,090	10,100	2,020	3,670
14	3,740	3,450	3,570	1,720	1,410	1,550	6,180	1,890	3,040	13,200	2,130	3,380
15	3,500	3,270	3,350	2,070	1,710	1,910	4,440	2,140	3,030	9,470	2,010	3,260
16	3,290	3,090	3,180	2,520	2,060	2,210	6,780	2,210	3,450	13,200	2,340	4,380
17	3,180	2,930	3,030	2,810	2,520	2,710	3,790	2,260	2,840	13,500	2,220	3,790
18	3,030	2,940	2,990	2,800	2,440	2,570	4,370	2,070	2,970	12,300	1,890	3,520
19	2,970	2,800	2,890	2,580	2,380	2,530	12,600	2,080	3,730	9,960	1,690	3,700
20	3,020	2,840	2,920	2,540	2,400	2,460	8,120	1,990	3,410	10,200	1,900	3,590
21	3,010	2,810	2,880	2,600	2,450	2,520	3,740	2,520	3,180	11,600	2,030	3,850
22	2,870	2,760	2,820	2,670	2,510	2,590	4,220	2,340	3,330	9,560	1,690	3,330
23	3,060	2,820	2,890	2,720	2,410	2,620	7,260	2,830	4,170	6,440	2,110	3,270
24	2,980	2,780	2,900	2,600	2,420	2,500	3,800	2,890	3,300	5,160	1,970	2,940
25	2,780	2,140	2,400	2,500	2,340	2,430	5,090	3,480	4,290	5,430	2,240	3,390
26	2,460	1,860	2,220	2,420	2,200	2,320	7,190	2,420	3,920	6,350	2,830	3,870
27	2,210	1,810	2,040	3,480	2,280	2,540	6,060	2,760	4,090	4,650	3,010	3,620
28	1,870	1,210	1,560	5,150	1,900	2,610	6,250	3,400	4,560	4,980	2,600	3,780
29	2,140	1,410	1,950	5,210	1,610	2,410	5,430	3,480	4,370	4,770	2,490	3,670
30	2,340	2,140	2,250	4,670	1,820	2,570	4,510	2,730	3,620	5,310	2,610	3,900
31	2,260	1,860	2,060	---	---	---	6,600	2,910	4,230	4,930	3,040	3,860
MONTH	4,530	1,080	2,880	5,210	521	2,230	12,600	1,700	3,220	13,500	1,690	3,870
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	4,840	2,900	4,030	4,680	3,510	4,120	3,000	2,370	2,750	2,680	2,250	2,490
2	5,420	3,060	4,340	5,280	4,120	4,740	3,120	2,120	2,770	3,060	2,670	2,860
3	5,540	3,600	4,370	6,390	4,430	5,270	2,120	699	994	3,070	2,730	2,900
4	10,700	2,900	5,300	6,380	4,660	5,460	890	699	802	3,000	2,640	2,890
5	13,300	2,390	4,560	6,530	4,850	5,580	1,150	864	985	3,130	2,590	2,890
6	18,200	2,730	5,230	7,120	4,640	5,960	1,630	1,150	1,330	3,550	2,800	3,190
7	15,300	2,980	4,630	7,010	4,700	5,710	1,620	1,120	1,340	3,460	2,770	3,080
8	13,600	3,020	5,300	6,220	5,240	5,710	1,650	1,260	1,390	3,930	3,340	3,560
9	14,200	2,840	5,670	5,710	5,150	5,510	1,930	1,650	1,810	4,060	3,870	3,960
10	13,400	2,890	5,450	5,970	5,250	5,530	2,240	1,930	2,090	4,510	4,050	4,370
11	15,400	2,300	4,840	5,720	4,740	5,400	2,000	572	1,160	4,620	4,220	4,430
12	14,800	2,070	4,450	4,920	3,320	4,330	617	514	560	4,860	4,540	4,660
13	4,890	2,790	3,900	4,170	2,920	3,730	586	466	519	5,430	4,790	5,110
14	3,630	1,040	1,700	4,220	2,190	3,370	516	423	492	5,390	5,040	5,170
15	2,040	906	1,540	2,470	1,700	2,050	510	468	487	6,610	2,890	4,870
16	2,500	912	1,730	2,730	1,500	1,990	711	492	618	3,330	2,640	2,830
17	2,740	2,330	2,490	2,810	2,260	2,440	878	669	772	3,320	2,040	2,350
18	2,890	2,650	2,770	2,550	2,410	2,500	1,240	878	1,040	2,380	2,070	2,190
19	3,310	2,600	2,980	2,520	1,600	1,870	1,440	1,240	1,330	2,210	1,650	1,880
20	3,440	3,100	3,250	2,590	1,580	2,050	1,830	1,440	1,640	1,800	1,650	1,710
21	4,120	3,410	3,760	3,110	2,580	2,850	---	---	---	1,940	1,720	1,850
22	4,960	4,070	4,370	4,140	3,110	3,750	---	---	---	2,180	1,890	2,080
23	6,140	4,020	4,700	4,620	4,010	4,320	2,900	2,580	2,730	2,330	1,980	2,150
24	6,090	4,400	5,120	4,760	4,000	4,500	2,790	2,480	2,650	2,360	2,000	2,180
25	6,200	4,450	5,270	4,020	3,620	3,900	2,620	2,410	2,500	2,340	2,070	2,200
26	5,800	4,670	5,070	3,620	1,560	2,680	2,600	2,460	2,510	2,520	2,070	2,320
27	5,940	4,260	5,080	1,570	1,240	1,350	2,860	2,460	2,710	2,880	2,440	2,700
28	6,040	3,840	4,670	1,240	1,030	1,090	3,100	2,480	2,900	3,010	2,600	2,790
29	---	---	---	1,290	1,060	1,130	2,480	2,020	2,260	3,500	2,830	3,100
30	---	---	---	1,820	1,290	1,530	2,250	1,940	2,120	4,540	2,950	3,280
31	---	---	---	2,370	1,820	2,130	---	---	---	3,430	3,040	3,170
MONTH	18,200	906	4,160	7,120	1,030	3,630	---	---	---	6,610	1,650	3,070

## DOLORES RIVER BASIN

09171100 DOLORES RIVER NEAR BEDROCK, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3,550	2,840	3,250	2,820	2,410	2,580	3,960	1,170	2,440	2,570	1,150	1,760
2	3,870	2,360	3,440	2,710	2,280	2,490	3,650	2,620	3,120	1,150	958	1,020
3	4,060	2,360	3,220	2,620	2,250	2,440	3,220	1,980	2,520	1,290	1,080	1,190
4	5,170	4,060	4,680	2,590	2,190	2,380	---	---	---	2,330	1,290	1,600
5	5,710	5,090	5,400	2,500	2,160	2,340	---	---	---	2,810	1,200	2,010
6	7,170	5,660	6,520	2,430	2,120	2,280	---	---	---	1,790	1,100	1,390
7	9,410	6,830	8,090	2,370	2,030	2,200	---	---	---	2,010	1,030	1,450
8	10,200	8,980	9,390	2,420	2,030	2,210	---	---	---	1,040	943	994
9	10,400	9,560	9,950	2,410	2,000	2,200	---	---	---	1,360	952	1,130
10	10,800	9,480	10,100	2,420	2,080	2,240	---	---	---	1,230	529	876
11	12,000	10,500	11,000	2,420	2,130	2,270	---	---	---	---	---	---
12	11,800	10,000	10,800	2,300	2,070	2,200	---	---	---	---	---	---
13	10,900	9,650	10,200	2,280	2,030	2,160	---	---	---	---	---	---
14	11,300	9,520	10,300	2,260	2,080	2,180	---	---	---	---	---	---
15	11,800	9,900	10,600	2,250	2,010	2,140	---	---	---	---	---	---
16	12,400	10,500	11,200	2,290	1,960	2,110	---	---	---	---	---	---
17	11,900	10,700	11,200	2,260	2,000	2,130	---	---	---	---	---	---
18	11,400	10,200	10,700	2,310	2,040	2,170	---	---	---	---	---	---
19	10,400	6,610	8,980	2,360	2,080	2,200	---	---	---	---	---	---
20	7,770	6,630	7,410	2,300	2,050	2,170	---	---	---	---	---	---
21	8,750	6,340	7,150	2,110	1,810	1,960	---	---	---	---	---	---
22	10,400	8,270	8,990	2,240	1,850	1,990	---	---	---	---	---	---
23	12,900	9,500	10,500	2,210	2,020	2,090	3,510	2,040	2,750	---	---	---
24	13,200	12,000	12,500	2,200	1,880	2,030	2,360	1,580	1,980	---	---	---
25	12,200	10,800	11,500	2,490	1,620	1,950	2,380	1,700	1,920	---	---	---
26	11,500	4,780	9,500	2,200	1,510	1,910	2,120	1,630	1,830	---	---	---
27	4,780	3,200	3,730	1,740	1,500	1,640	2,010	1,420	1,620	---	---	---
28	4,470	3,020	3,540	1,760	1,520	1,630	2,690	2,000	2,430	---	---	---
29	3,020	2,760	2,880	3,970	1,740	2,570	2,870	1,530	2,010	---	---	---
30	2,860	2,440	2,610	2,150	1,280	1,640	2,630	1,610	2,330	---	---	---
31	---	---	---	1,500	1,230	1,290	2,680	2,060	2,400	---	---	---
MONTH	13,200	2,360	7,980	3,970	1,230	2,120	---	---	---	---	---	---

## 09171100 DOLORS RIVER NEAR BEDROCK, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	19.2	9.6	14.3	12.1	5.9	8.7	5.3	-0.1	2.2	0.0	-0.2	-0.1
2	14.8	11.0	12.9	12.2	6.0	8.8	5.3	-0.1	2.0	-0.1	-0.3	-0.1
3	13.5	9.7	11.5	10.2	2.2	6.0	5.8	0.8	2.7	0.2	-0.2	-0.1
4	16.9	7.8	11.9	8.9	3.0	5.5	4.5	-0.1	1.5	1.2	-0.2	0.1
5	16.7	9.7	12.7	9.4	0.5	4.6	4.5	-0.1	1.5	-0.1	-0.2	-0.1
6	18.7	8.9	13.4	9.5	0.4	4.6	3.1	-0.1	0.8	4.9	-0.1	1.3
7	20.1	9.3	14.2	6.5	0.4	3.7	3.2	-0.1	0.8	3.1	-0.1	0.5
8	20.1	9.6	14.4	6.5	3.7	5.2	4.0	-0.1	1.0	2.1	-0.2	0.3
9	20.1	9.0	14.3	9.5	6.2	7.4	1.5	-0.1	0.3	1.5	-0.1	0.3
10	19.3	8.6	13.9	7.7	5.3	6.1	0.5	-0.2	0.0	4.3	0.6	2.3
11	16.5	9.7	13.2	8.2	4.3	5.9	0.1	-0.1	0.0	4.0	0.1	1.9
12	18.1	8.4	12.9	7.6	1.8	4.4	0.1	-0.1	-0.1	4.2	-0.1	1.3
13	17.6	6.2	11.9	5.1	2.2	3.5	0.1	-0.2	-0.1	5.3	-0.1	1.3
14	17.8	7.2	12.2	7.6	2.0	4.2	0.0	-0.2	-0.1	4.4	-0.1	1.3
15	17.5	6.0	11.5	7.8	2.1	4.3	1.5	-0.1	0.2	6.4	-0.1	1.9
16	17.1	5.7	11.2	6.4	0.2	3.0	2.7	-0.1	1.0	4.2	-0.1	1.0
17	16.9	5.9	11.3	5.5	0.2	2.6	4.1	0.6	2.2	4.3	-0.1	1.0
18	17.4	7.1	12.0	6.8	-0.1	2.7	4.2	-0.1	1.3	3.4	-0.1	0.7
19	16.8	6.0	11.2	6.3	-0.1	2.6	1.7	-0.2	0.3	3.1	-0.1	0.6
20	15.2	5.6	10.4	7.4	-0.1	3.1	0.2	-0.2	0.0	3.5	-0.1	0.7
21	15.4	5.4	10.4	7.9	0.4	3.7	1.5	-0.1	0.3	4.4	-0.1	1.1
22	14.3	7.7	10.9	8.0	0.4	3.8	0.8	-0.1	0.0	5.3	-0.2	1.5
23	13.2	8.9	10.8	7.3	1.0	3.7	0.0	-0.2	-0.1	6.9	-0.2	2.2
24	13.5	7.6	10.1	7.6	0.3	3.8	1.1	-0.1	0.1	6.7	-0.1	2.5
25	14.0	5.9	9.7	7.9	2.6	4.6	2.4	-0.2	0.6	6.4	-0.2	2.5
26	9.8	7.5	8.5	6.4	-0.1	2.6	0.0	-0.1	-0.1	6.7	-0.1	2.2
27	14.5	7.1	10.0	3.8	-0.1	1.2	0.0	-0.2	-0.1	7.1	-0.1	2.7
28	10.8	7.8	9.0	3.7	-0.1	1.0	-0.1	-0.2	-0.1	7.3	-0.1	2.9
29	10.5	6.6	8.2	3.9	-0.1	1.0	0.2	-0.1	-0.1	7.1	-0.1	2.6
30	11.9	5.0	7.7	0.9	-0.1	0.2	1.4	-0.1	0.1	6.0	-0.1	2.2
31	10.7	4.9	7.9	---	---	---	-0.1	-0.2	-0.1	8.1	-0.1	3.2
MONTH	20.1	4.9	11.4	12.2	-0.1	4.1	5.8	-0.2	0.6	8.1	-0.3	1.3
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	7.6	0.6	3.9	8.0	2.3	4.5	16.3	7.3	11.4	17.9	9.0	13.3
2	6.5	2.3	4.1	10.8	2.8	5.7	12.1	7.2	9.3	19.4	10.2	14.4
3	7.6	0.3	3.5	11.2	1.5	5.8	11.4	6.2	8.2	18.4	11.2	14.1
4	6.2	-0.2	2.3	5.7	3.7	4.7	11.2	5.0	8.1	18.9	10.5	14.0
5	3.5	-0.2	1.2	12.4	1.9	6.1	10.9	6.1	8.2	19.9	11.4	14.6
6	3.6	-0.1	0.8	11.5	1.6	6.0	13.1	5.7	8.6	20.2	10.1	14.4
7	1.3	-0.2	0.2	13.6	2.9	7.7	13.6	6.4	9.3	17.0	11.9	13.7
8	1.8	-0.1	0.2	15.0	3.2	8.5	15.8	5.5	10.0	15.9	10.1	12.4
9	1.6	-0.2	0.2	15.7	3.6	8.9	17.8	6.2	11.5	14.1	9.4	11.4
10	2.9	-0.2	0.6	15.5	4.7	9.4	19.0	7.8	13.0	18.4	6.6	11.9
11	0.6	-0.3	0.0	17.1	5.0	10.2	17.3	9.1	13.3	21.5	7.2	14.0
12	3.9	-0.1	1.2	16.7	5.8	10.6	15.3	10.7	13.0	22.4	9.2	15.7
13	3.4	1.8	2.5	16.9	5.7	10.8	15.4	9.3	12.3	21.3	10.9	15.6
14	7.4	1.5	3.9	12.2	6.8	9.4	15.7	10.6	12.7	19.7	11.4	15.7
15	5.2	2.1	3.7	12.5	5.8	9.2	11.7	9.7	10.9	17.2	12.9	14.5
16	7.1	1.2	3.6	10.4	8.3	9.1	16.1	7.4	11.5	25.4	11.5	17.8
17	8.3	3.7	5.7	11.5	7.3	9.0	14.7	9.2	11.7	21.2	15.1	18.3
18	9.4	4.7	6.3	10.6	6.3	8.1	14.6	9.6	11.4	20.9	15.2	17.3
19	9.6	2.1	5.3	10.0	5.2	7.3	13.7	7.7	10.6	24.1	13.2	18.1
20	9.9	2.8	5.5	10.3	4.8	7.6	18.2	7.5	12.4	23.8	13.8	18.5
21	10.2	1.7	5.4	14.0	6.2	9.4	16.1	10.0	12.9	26.3	14.0	19.6
22	7.7	1.4	3.9	16.3	4.8	9.9	16.6	10.4	12.7	27.1	14.8	20.5
23	8.7	-0.2	3.6	17.2	6.3	11.2	15.9	8.0	11.5	25.4	16.0	20.4
24	7.7	0.5	4.0	13.5	8.1	10.3	20.0	7.4	13.1	25.8	16.3	20.5
25	6.2	3.5	4.6	17.8	6.4	11.4	20.2	9.9	14.7	24.2	16.4	19.7
26	9.2	2.8	5.4	14.3	7.4	10.5	20.6	11.2	15.5	27.7	15.7	21.3
27	7.0	4.0	5.3	10.4	5.9	8.6	20.6	10.4	15.3	29.1	17.2	22.6
28	6.4	2.6	4.2	11.1	3.6	6.5	19.2	11.1	14.8	30.7	17.8	23.6
29	---	---	---	11.7	3.1	6.9	14.8	11.3	13.0	31.0	19.0	24.0
30	---	---	---	14.3	3.8	8.6	17.5	8.8	13.0	29.5	19.6	23.2
31	---	---	---	17.2	5.7	10.9	---	---	---	28.9	18.6	22.2
MONTH	10.2	-0.3	3.3	17.8	1.5	8.5	20.6	5.0	11.8	31.0	6.6	17.3

## DOLORES RIVER BASIN

09171100 DOLORES RIVER NEAR BEDROCK, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	28.5	18.7	23.0	28.7	16.7	22.5	29.4	21.5	24.8	27.1	15.8	21.1
2	27.9	17.7	22.2	30.5	16.1	22.8	29.1	20.4	23.3	26.0	16.8	21.2
3	28.6	15.7	21.8	30.1	16.4	23.0	27.4	21.0	23.9	29.1	18.7	23.1
4	27.8	15.2	21.2	32.1	16.0	23.6	28.7	21.0	24.6	25.7	16.8	20.9
5	27.6	16.2	21.2	30.7	16.6	22.8	---	21.7	---	24.8	17.8	20.3
6	24.4	14.5	19.7	28.0	17.0	22.1	---	---	---	20.9	17.1	18.7
7	25.9	14.3	19.8	29.9	15.9	22.7	---	---	---	22.0	15.2	18.4
8	28.4	14.2	20.9	29.8	16.1	22.9	---	---	---	21.8	16.4	19.1
9	25.2	15.4	20.3	30.8	16.5	23.4	---	---	---	18.9	16.0	17.4
10	25.9	16.5	20.5	31.8	15.8	23.6	---	---	---	16.7	14.8	15.7
11	28.0	13.4	20.5	31.7	16.7	24.1	---	---	---	---	---	---
12	27.1	14.2	20.3	30.0	17.4	23.8	---	---	---	---	---	---
13	27.2	14.9	20.9	30.7	17.0	23.8	---	---	---	---	---	---
14	30.0	15.6	22.5	32.4	17.6	24.3	---	---	---	---	---	---
15	31.6	15.6	23.2	30.7	19.0	24.0	---	---	---	---	---	---
16	28.9	17.2	22.3	33.1	19.7	24.6	---	---	---	---	---	---
17	26.7	16.4	20.7	33.5	20.3	26.0	---	---	---	---	---	---
18	27.0	16.0	20.8	34.5	20.9	26.7	---	---	---	---	---	---
19	24.9	16.7	20.1	34.6	21.0	25.8	---	---	---	---	---	---
20	24.7	15.6	19.4	32.7	20.6	25.9	---	---	---	---	---	---
21	26.0	14.6	19.8	31.9	21.1	26.3	---	---	---	---	---	---
22	26.1	14.7	20.0	33.8	20.5	25.5	28.0	---	---	---	---	---
23	24.4	14.4	18.8	30.4	20.0	24.4	29.2	20.2	23.0	---	---	---
24	19.5	12.7	16.2	33.5	20.0	25.5	29.1	19.5	23.6	---	---	---
25	28.9	12.2	19.6	32.6	20.4	25.9	28.5	19.3	23.9	---	---	---
26	29.4	13.4	21.2	33.3	21.8	26.3	30.6	18.6	24.0	18.7	---	---
27	30.8	15.0	22.5	33.4	21.3	26.1	25.3	19.9	22.4	19.2	15.1	17.4
28	28.3	15.7	22.0	33.5	21.0	26.1	29.6	18.9	23.7	19.3	15.4	17.6
29	30.7	15.7	22.7	32.4	21.4	25.7	29.7	18.0	22.9	18.9	15.2	17.3
30	30.0	16.3	22.8	32.4	21.8	26.5	29.4	18.2	22.8	22.6	15.4	18.2
31	---	---	---	32.1	21.5	25.4	29.3	15.9	22.1	---	---	---
MONTH	31.6	12.2	20.9	34.6	15.8	24.6	---	---	---	---	---	---

## 09172500 SAN MIGUEL RIVER NEAR PLACERVILLE, CO

LOCATION.--Lat 38°02'33", long 108°07'54", in NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.25, T.44 N., R.12 W., San Miguel County, Hydrologic Unit 14030003, on right bank 1.5 mi downstream from Specie Creek in vicinity of mile marker 88.68 on State Highway 145 and 4.5 mi northwest of Placerville.

DRAINAGE AREA.--310 mi<sup>2</sup>.

PERIOD OF RECORD.--January to December 1909, September 1910 to November 1912, April 1930 to September 1934, April 1942 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at Placerville," 1910-12. Statistical summary computed for 1911 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09172500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09172500)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,030 ft above NGVD of 1929, from topographic map. See WSP 1713 or 1733 for history of changes prior to Oct. 21, 1958. Oct. 22, 1958 to Mar. 4, 1986, gage located 0.8 mi upstream from present site, at different datum. Mar. 5, 1986, gage moved to present site, at present datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 1,700 acres upstream from station. One diversion from Fall Creek for irrigation of about 2,000 acres in Beaver and Saltado Creek basins. One small ditch diverts water from Leopard Creek to Uncompahgre River Basin. Slight regulation by Lake Hope and Trout lake operated by the City of Telluride, Public Service Company of Colorado, Pacific Light and Power Company, and Tri State Power Company, combined capacity, 5,040 acre-feet. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	82	e60	e44	e47	49	88	244	1,100	263	127	144
2	102	77	e57	e45	e49	46	99	255	1,170	268	105	132
3	120	67	e57	e44	e48	49	93	292	1,080	264	101	128
4	111	70	e55	e43	e48	52	80	316	998	253	106	120
5	108	71	e55	e44	e47	49	79	287	1,010	235	96	105
6	100	75	e52	e43	e48	52	79	253	884	201	89	143
7	101	70	e49	e44	e48	50	77	215	766	190	91	140
8	102	73	e46	e46	e49	49	74	206	700	187	96	136
9	100	88	e44	e45	e52	47	82	191	764	162	80	266
10	97	79	e40	e44	e56	51	114	173	756	150	72	572
11	95	e74	e38	e46	e61	57	160	166	749	144	83	340
12	91	e70	e40	e44	e62	62	188	180	684	135	81	302
13	85	e70	e42	e43	e63	70	214	233	580	116	90	335
14	87	e70	e40	e44	e62	75	278	262	497	121	334	318
15	87	e70	e41	e45	e60	69	253	341	548	110	170	250
16	86	e65	e43	e45	e58	69	191	291	522	110	157	208
17	85	e65	e45	e44	e57	67	222	429	435	114	181	200
18	83	e64	e46	e43	53	68	204	479	392	111	169	181
19	78	e64	e45	e42	55	63	210	481	403	100	149	161
20	74	e67	e45	e43	52	63	199	495	412	92	129	148
21	76	e70	e48	e42	53	65	238	598	381	86	119	141
22	81	e72	e47	e42	53	57	267	704	407	95	121	135
23	88	e72	e46	e41	e52	63	215	874	412	94	130	127
24	87	66	e46	e42	51	77	191	912	372	97	147	119
25	86	66	e45	e43	50	84	234	827	310	99	183	123
26	84	e62	e46	e44	50	83	246	798	316	87	149	126
27	82	e58	e43	e44	50	83	254	1,030	317	78	143	136
28	83	e58	e44	e46	50	71	271	1,220	305	89	166	133
29	79	e58	e45	e46	---	65	269	1,300	277	174	167	130
30	78	e59	e46	e45	---	59	269	1,360	271	113	166	128
31	82	---	e46	e47	---	e73	---	1,300	---	104	160	---
TOTAL	2,799	2,072	1,442	1,363	1,484	1,937	5,438	16,712	17,818	4,442	4,157	5,627
MEAN	90.3	69.1	46.5	44.0	53.0	62.5	181	539	594	143	134	188
MAX	120	88	60	47	63	84	278	1,360	1,170	268	334	572
MIN	74	58	38	41	47	46	74	166	271	78	72	105
AC-FT	5,550	4,110	2,860	2,700	2,940	3,840	10,790	33,150	35,340	8,810	8,250	11,160

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1911 - 2003, BY WATER YEAR (WY)

MEAN	113	83.8	68.7	63.2	63.0	76.9	233	568	781	439	214	144
MAX	399	138	104	101	94.2	148	593	1,515	1,528	1,197	527	391
(WY)	(1912)	(1985)	(1987)	(1998)	(1987)	(1997)	(1942)	(1958)	(1983)	(1983)	(1999)	(1999)
MIN	50.9	51.4	40.8	38.3	37.1	46.4	79.6	136	150	63.8	56.7	63.8
(WY)	(1957)	(1990)	(1977)	(1977)	(1990)	(1980)	(1951)	(1977)	(2002)	(2002)	(2002)	(1956)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1911 - 2003

ANNUAL TOTAL	33,243	65,291	
ANNUAL MEAN	91.1	179	237
HIGHEST ANNUAL MEAN			414
LOWEST ANNUAL MEAN			88.8
HIGHEST DAILY MEAN	354	Sep 11	1,360
LOWEST DAILY MEAN	38	Aug 26	e38
ANNUAL SEVEN-DAY MINIMUM	41	Dec 10	41
MAXIMUM PEAK FLOW			1,680
MAXIMUM PEAK STAGE			4.84
ANNUAL RUNOFF (AC-FT)	65,940	129,500	171,400
10 PERCENT EXCEEDS	172	405	634
50 PERCENT EXCEEDS	70	88	104
90 PERCENT EXCEEDS	46	45	56

e Estimated.

a Maximum discharge for period of record, 10,000 ft<sup>3</sup>/s, Sep 5, 1909, gage height not determined; result of failure of Trout and Middle Reservoir Dams.

b Maximum gage height for statistical period of record, 8.58 ft, May 24, 1984, site and datum then in use.

## 09174600 SAN MIGUEL RIVER AT BROOKS BRIDGE NEAR NUCLA, CO

LOCATION.--Lat 38°14'39", long 108°30'05", in NE¼NE¼ sec.15, T.46 N., R.15 W., Montrose County, Hydrologic Unit 14030003, on right bank at downstream side of Brooks Bridge, 0.5 mi upstream from Tri-State Power Plant, 3 mi upstream from Naturita Creek, and 4.4 mi northeast of Naturita

DRAINAGE AREA.--736 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1995 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09174600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09174600)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,570 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of several thousand acres upstream from station and diversions upstream for an additional several thousand acres downstream from the gage. One small ditch diverts water from Leopard Creek to Uncompahgre River basin. Slight regulation by Lake Hope and Trout Lake (combined capacity, 5,040 acre-ft) operated by the City of Telluride, Public Service of Colorado, Pacific Light and Power Company, and Tri State Power Company. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	91	84	e65	60	58	219	333	950	169	32	63
2	43	92	64	e64	61	50	307	307	979	175	27	57
3	75	84	e66	e60	58	47	314	299	893	164	24	49
4	66	75	64	e65	48	59	230	314	823	150	21	44
5	55	83	e62	e81	41	56	209	307	784	134	21	81
6	44	79	e62	77	39	53	210	259	666	108	19	153
7	39	81	e62	e75	e36	61	200	203	577	90	15	101
8	43	85	55	e74	e29	60	175	179	543	83	14	78
9	45	107	49	e72	e32	58	206	170	596	70	12	136
10	44	110	e41	e80	50	61	325	143	571	55	e8.8	594
11	39	92	e48	e78	61	68	533	117	577	45	e6.5	438
12	38	92	e52	e67	71	82	666	114	528	39	e6.9	359
13	33	87	e54	e61	91	111	681	158	452	22	e7.4	359
14	93	98	e54	e60	100	158	839	192	378	16	e60	352
15	101	92	e54	e59	94	136	769	280	395	17	115	307
16	99	85	e62	e58	72	147	508	328	407	11	72	245
17	97	76	e75	e56	71	131	549	396	334	12	85	228
18	96	83	72	e55	70	120	525	457	298	10	88	208
19	94	76	e54	e53	63	101	415	463	293	10	64	183
20	87	66	36	e56	62	84	370	453	313	8.0	36	111
21	84	42	e41	e60	58	57	361	499	282	6.6	22	108
22	90	29	e41	e62	58	42	399	632	297	5.7	17	100
23	101	34	38	e64	50	46	356	758	304	7.8	23	95
24	101	34	e36	e64	52	121	276	825	276	11	43	91
25	98	33	e36	e63	63	133	265	764	235	13	73	84
26	108	38	e36	e61	61	151	353	742	226	13	63	78
27	101	45	e36	e60	59	202	388	862	228	9.8	43	e60
28	93	56	e35	e59	61	151	391	1,070	218	11	52	e66
29	100	71	e54	57	---	126	377	1,120	193	63	72	e62
30	87	72	e65	57	---	114	362	1,100	187	68	72	e60
31	93	---	e69	e58	---	134	---	1,030	---	32	95	---
TOTAL	2,323	2,188	1,657	1,981	1,671	2,978	11,778	14,874	13,803	1,628.9	1,309.6	4,950
MEAN	74.9	72.9	53.5	63.9	59.7	96.1	393	480	460	52.5	42.2	165
MAX	108	110	84	81	100	202	839	1,120	979	175	115	594
MIN	33	29	35	53	29	42	175	114	187	5.7	6.5	44
AC-FT	4,610	4,340	3,290	3,930	3,310	5,910	23,360	29,500	27,380	3,230	2,600	9,820

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

	1995	1996	1997	1998	1999	2000	2001	2002	2003			
MEAN	124	94.0	82.0	79.6	80.9	172	560	696	326	169	106	
MAX	208	129	106	106	108	486	1,127	1,317	1,631	1,059	539	267
(WY)	(1998)	(1998)	(1998)	(1998)	(1997)	(1997)	(1997)	(1995)	(1995)	(1995)	(1999)	(1999)
MIN	60.0	52.8	50.1	38.1	58.5	74.8	160	76.4	47.5	5.86	6.62	11.4
(WY)	(2002)	(2002)	(2002)	(2002)	(2001)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2001)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1995 - 2003

ANNUAL TOTAL	22,723.0	61,141.5	
ANNUAL MEAN	62.3	168	247
HIGHEST ANNUAL MEAN			499
LOWEST ANNUAL MEAN			59.1
HIGHEST DAILY MEAN	360	Apr 2	1,120
LOWEST DAILY MEAN	2.9	Jul 1	5.7
ANNUAL SEVEN-DAY MINIMUM	3.8	Jun 27	8.4
MAXIMUM PEAK FLOW			1,270
MAXIMUM PEAK STAGE			4.50
ANNUAL RUNOFF (AC-FT)	45,070	121,300	178,700
10 PERCENT EXCEEDS	110	444	714
50 PERCENT EXCEEDS	52	78	103
90 PERCENT EXCEEDS	5.5	33	30

e Estimated.

a Also occurred Jun 18, 1995.

b Maximum gage height, 6.32 ft, Jun 17, 1995.

**09177000 SAN MIGUEL RIVER AT URAVAN, CO**

LOCATION.--Lat 38°21'26", long 108°42'44", in SW¼NE¼ sec.2, T.47 N., R.17 W., Montrose County, Hydrologic Unit 14030003, on right bank 20 ft downstream from bridge on State Highway 141, 400 ft downstream from Tabeguache Creek, and 1.5 mi southeast of Uravan.

DRAINAGE AREA.--1,499 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1954 to September 1962, October 1973 to September 1994, August 1996 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09177000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09177000)

REVISED RECORDS.--WRD Colo. 1974: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,000 ft above NGVD of 1929, from topographic map. Prior to Sept. 3, 1959, at site 0.5 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation of about 28,000 acres upstream from station, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 6, 1970, reached a stage of 12.6 ft, from floodmarks, discharge, 8,910 ft<sup>3</sup>/s, by slope-area measurement at site 5.5 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	97	85	e66	67	74	207	464	1,050	197	38	109
2	66	95	e65	e64	69	68	316	431	1,070	191	56	93
3	253	90	e66	60	66	59	331	426	970	185	85	86
4	121	82	e65	64	55	65	e266	443	884	171	44	81
5	92	84	62	81	50	71	e224	436	839	159	41	72
6	83	84	e62	80	39	65	220	375	729	138	31	348
7	75	84	62	78	36	67	214	313	645	116	26	185
8	73	88	57	74	30	71	193	271	597	102	27	116
9	76	165	48	72	33	72	201	259	627	97	31	179
10	77	183	41	81	50	75	316	231	612	83	28	1,170
11	73	107	e48	e79	52	91	548	199	609	70	21	442
12	74	98	e52	e69	64	130	741	191	572	63	19	321
13	72	90	e54	61	88	168	760	235	509	56	19	305
14	94	99	55	60	132	207	983	291	437	40	78	301
15	104	95	e53	e59	147	177	890	408	429	34	174	279
16	101	91	e62	e57	102	176	618	524	446	34	198	225
17	98	76	75	56	90	166	623	554	384	28	163	207
18	96	89	71	e55	88	147	611	642	338	27	120	194
19	95	82	54	53	80	128	496	686	328	28	101	176
20	89	77	e36	56	74	111	433	642	356	87	79	131
21	86	64	e41	60	70	89	425	655	325	34	75	120
22	88	56	e41	63	68	81	476	760	323	27	53	103
23	111	51	39	64	63	67	442	894	330	24	62	95
24	118	55	36	e63	58	126	355	968	307	26	70	85
25	104	54	e36	e63	71	163	336	916	273	25	87	78
26	137	52	e36	62	73	169	457	880	253	72	118	83
27	237	48	e35	59	73	221	533	954	251	35	91	71
28	116	60	35	e59	75	181	555	1,150	242	29	89	84
29	109	70	56	e59	---	149	547	1,210	218	34	113	80
30	98	71	e65	61	---	e131	499	1,210	209	103	169	76
31	96	---	68	65	---	e124	---	1,130	---	61	141	---
TOTAL	3,174	2,537	1,661	2,003	1,963	3,689	13,816	18,748	15,162	2,376	2,447	5,895
MEAN	102	84.6	53.6	64.6	70.1	119	461	605	505	76.6	78.9	196
MAX	253	183	85	81	147	221	983	1,210	1,070	197	198	1,170
MIN	62	48	35	53	30	59	193	191	209	24	19	71
AC-FT	6,300	5,030	3,290	3,970	3,890	7,320	27,400	37,190	30,070	4,710	4,850	11,690

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2003, BY WATER YEAR (WY)

MEAN	138	117	94.4	88.2	105	192	823	1,146	962	412	190	130
MAX	333	385	188	139	226	612	2,154	3,420	2,361	1,306	646	416
(WY)	(1987)	(1987)	(1987)	(1985)	(1958)	(1997)	(1985)	(1984)	(1957)	(1957)	(1999)	(1982)
MIN	30.6	60.9	49.6	49.9	54.1	66.8	110	86.6	87.2	9.15	11.2	16.8
(WY)	(1957)	(1956)	(1977)	(1977)	(1990)	(1977)	(1977)	(1977)	(2002)	(2002)	(2002)	(1956)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1954 - 2003

ANNUAL TOTAL	29,127.8	73,471		
ANNUAL MEAN	79.8	201		367
HIGHEST ANNUAL MEAN				758
LOWEST ANNUAL MEAN				78.4
HIGHEST DAILY MEAN	474	Sep 13	1,210	May 29
LOWEST DAILY MEAN	3.2	Aug 29	19	Aug 12
ANNUAL SEVEN-DAY MINIMUM	4.2	Jul 11	24	Aug 7
MAXIMUM PEAK FLOW			2,130	Sep 10
MAXIMUM PEAK STAGE			6.33	Sep 10
ANNUAL RUNOFF (AC-FT)	57,770	145,700		266,100
10 PERCENT EXCEEDS	158	550		1,040
50 PERCENT EXCEEDS	67	89		132
90 PERCENT EXCEEDS	6.9	41		57

e Estimated.

a From rating curve extended above 4,100 ft<sup>3</sup>/s.



## 404417108524900 GREEN RIVER ABOVE GATES OF LODORE, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 40°44'17", long 108°52'49", in NE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.17, T.9 N., R.102 W., Moffat County. Hydrologic Unit 14040106, in Dinosaur National Monument, 0.83 mi upstream from the Lodore Ranger Station, and 18 mi west of Greystone.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--May 1998 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=404417108524900](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=404417108524900)

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 2002 to current year.

INSTRUMENTATION.--Water-temperature sensor with satellite telemetry since June 2002.

REMARKS.--Daily record of water temperature is excellent. Natural flow regulated by Flaming Gorge Reservoir. Upstream diversions for an unknown amount of irrigation.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 26.1°C, July 13, 2002; minimum, 0.0°C, on many days in 2003.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 25.6°C, July 23; minimum, 0.0°C, on many days.

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	23.7	18.0	21.0	21.6	16.8	19.5	21.0	14.4	17.7
2	---	---	---	23.4	17.7	20.7	20.2	17.8	18.8	21.5	15.0	18.4
3	---	---	---	21.2	18.2	19.6	22.2	16.6	18.9	19.5	15.5	17.3
4	---	---	---	23.0	17.4	20.2	22.7	17.0	19.9	20.1	14.3	17.2
5	---	---	---	22.9	18.0	20.8	22.1	17.7	19.9	20.5	15.6	18.1
6	---	---	---	25.0	17.8	21.3	21.9	18.1	19.9	19.9	16.2	18.0
7	---	---	---	24.8	18.3	21.6	20.3	16.8	18.5	18.5	16.1	17.3
8	---	---	---	25.3	19.1	22.2	22.2	16.6	19.1	18.1	15.4	16.6
9	---	---	---	25.3	18.9	22.2	21.8	14.3	18.0	19.3	13.6	16.4
10	---	---	---	25.6	18.9	22.3	21.9	14.3	18.2	19.8	14.0	17.1
11	---	---	---	25.3	18.1	21.8	22.1	15.5	19.0	18.5	15.0	16.3
12	---	---	---	25.7	18.2	22.1	21.2	16.2	18.7	15.8	13.9	14.8
13	---	---	---	26.1	19.0	22.6	21.5	14.7	18.2	18.3	13.0	15.7
14	---	---	---	25.8	19.5	22.7	22.4	15.9	19.1	19.8	13.5	16.7
15	---	---	---	25.8	18.8	22.1	22.9	15.5	19.2	19.3	14.3	17.1
16	---	---	---	25.7	18.7	22.0	21.8	16.1	19.0	19.4	14.2	16.9
17	---	---	---	25.1	19.1	22.0	21.0	15.1	18.2	17.0	14.1	15.8
18	---	---	---	24.5	19.0	21.8	21.3	15.5	18.3	15.6	13.3	14.4
19	21.3	---	---	22.8	18.8	20.7	21.3	15.3	18.3	16.0	11.3	13.9
20	22.8	16.9	19.8	20.8	17.6	19.1	21.9	17.4	19.5	17.5	11.8	14.9
21	20.5	16.4	18.6	23.7	16.6	20.0	21.9	16.8	19.3	17.0	12.5	14.8
22	21.0	16.2	18.6	23.5	17.9	21.1	21.9	15.9	19.0	17.4	11.0	14.3
23	22.9	15.9	19.4	22.4	18.9	20.6	20.8	15.6	18.3	17.9	11.8	15.0
24	24.1	17.2	20.8	21.5	16.3	19.1	21.8	15.7	18.7	16.6	12.3	14.7
25	24.0	18.3	21.3	20.7	17.2	19.1	21.1	15.3	18.5	15.2	12.7	14.0
26	22.2	18.6	20.7	20.7	16.9	19.0	21.2	15.0	18.2	16.8	11.7	14.2
27	22.0	16.8	19.6	19.5	16.1	18.0	21.5	15.7	18.5	16.4	11.3	14.1
28	23.3	17.4	20.4	21.1	14.8	17.9	21.5	15.1	18.3	16.2	12.3	14.4
29	23.5	17.7	20.6	23.4	15.6	19.3	19.3	15.2	16.7	15.3	12.4	13.8
30	23.5	17.2	20.5	24.4	17.1	20.8	19.4	13.1	16.3	15.6	11.7	13.5
31	---	---	---	23.5	18.2	21.0	19.9	14.9	17.5	---	---	---
MONTH	---	---	---	26.1	14.8	20.8	22.9	13.1	18.6	21.5	11.0	15.8

404417108524900 GREEN RIVER ABOVE GATES OF LODORE, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.0	11.6	13.3	5.2	1.8	3.5	5.1	1.7	3.5	2.4	0.1	1.1
2	13.6	10.1	11.9	4.9	2.2	3.7	4.8	2.0	3.6	1.1	0.0	0.5
3	12.7	10.4	11.4	4.9	0.8	3.1	4.5	1.6	3.3	2.3	0.0	1.2
4	12.8	9.6	11.1	5.1	1.3	3.3	4.5	2.5	3.7	2.2	0.2	1.3
5	14.6	10.5	12.3	6.0	1.9	4.1	5.0	3.0	4.1	2.1	0.2	1.2
6	14.4	9.6	12.1	6.8	2.6	4.9	5.3	3.3	4.4	3.2	0.7	2.0
7	15.5	10.2	12.9	7.0	3.2	5.1	4.0	2.0	3.1	2.7	0.1	1.4
8	15.6	10.5	13.2	7.2	4.2	5.7	3.5	0.8	2.3	1.1	0.0	0.5
9	15.1	10.2	12.9	6.9	4.6	6.0	2.9	0.1	1.8	0.5	0.0	0.2
10	13.8	10.0	12.3	5.6	3.3	4.4	2.0	0.0	1.1	0.3	0.1	0.1
11	12.6	10.1	11.3	6.1	3.2	4.6	2.3	0.0	1.1	1.5	0.0	0.6
12	11.8	7.2	9.6	5.6	1.7	3.9	3.8	1.5	2.6	2.6	0.0	1.2
13	11.9	6.6	9.4	5.4	3.8	4.8	3.5	1.0	2.5	2.6	0.2	1.6
14	12.2	7.1	9.8	5.7	3.9	4.7	3.2	1.0	2.4	2.2	0.1	1.4
15	12.5	7.4	10.1	5.6	2.8	4.3	4.2	2.0	2.9	2.0	0.5	1.3
16	12.8	7.9	10.4	4.6	2.1	3.5	2.7	0.4	1.8	2.1	0.0	0.9
17	12.6	7.6	10.3	3.6	1.8	2.8	3.9	2.4	3.0	3.0	0.1	1.6
18	12.6	7.6	10.3	4.9	1.8	3.4	2.5	0.6	1.6	2.1	0.1	1.1
19	12.1	7.1	9.8	5.5	2.3	4.1	0.7	0.0	0.3	2.3	0.1	1.2
20	12.0	7.1	9.7	6.3	2.8	4.7	0.7	0.0	0.3	2.5	0.1	1.3
21	11.9	7.3	9.8	6.5	3.0	5.0	0.6	0.0	0.2	2.9	0.0	1.5
22	11.0	7.1	9.2	6.5	3.1	5.0	1.6	0.0	0.6	3.7	0.1	2.1
23	10.2	7.4	8.4	7.1	3.5	5.5	0.8	0.0	0.2	5.4	2.6	4.0
24	8.6	6.6	7.6	6.5	3.2	4.8	0.3	0.0	0.1	4.7	2.5	3.8
25	10.0	5.5	7.7	3.7	1.6	2.7	0.2	0.0	0.1	5.3	2.6	4.0
26	8.7	5.8	7.6	2.7	0.0	1.3	0.2	0.0	0.1	4.4	2.5	3.7
27	10.1	6.4	8.3	2.7	0.0	1.2	0.5	0.0	0.2	5.0	2.0	3.7
28	8.9	6.4	7.7	3.2	0.0	1.8	1.4	0.1	0.7	5.6	3.8	4.7
29	6.8	4.3	5.7	3.6	0.3	2.2	2.1	0.3	1.2	4.9	2.1	3.7
30	5.0	2.8	3.9	3.7	0.7	2.4	1.8	0.0	0.8	5.1	1.9	3.6
31	5.5	2.4	3.8	---	---	---	1.4	0.1	0.7	6.8	3.7	5.1
MONTH	15.6	2.4	9.8	7.2	0.0	3.9	5.3	0.0	1.8	6.8	0.0	2.0
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	5.8	3.3	4.8	5.2	3.0	4.1	13.1	8.0	10.4	11.6	7.5	9.7
2	4.8	1.8	3.3	5.8	1.3	3.7	10.0	6.5	8.3	13.3	8.1	10.6
3	3.6	0.7	2.1	6.5	2.2	4.5	6.5	4.0	5.3	14.8	9.4	12.2
4	3.3	0.5	2.1	5.6	3.1	4.2	7.7	2.2	5.0	13.1	10.1	11.5
5	2.5	0.0	1.2	5.7	1.4	3.5	7.8	3.7	5.9	11.6	8.1	9.9
6	1.1	0.0	0.3	5.3	1.6	3.5	7.5	3.3	5.6	13.8	6.5	10.1
7	0.4	0.0	0.1	7.1	1.9	4.6	9.7	3.7	6.6	12.0	9.1	10.5
8	0.3	0.0	0.1	7.9	3.1	5.6	11.2	4.2	7.6	11.8	8.1	9.8
9	0.8	0.0	0.3	7.7	3.6	5.9	12.6	6.0	9.4	10.7	8.7	9.8
10	1.7	0.0	0.7	7.7	4.0	5.9	13.6	6.7	10.3	11.9	7.5	9.3
11	2.9	0.0	1.3	9.1	4.5	6.9	14.0	7.8	11.0	13.4	8.1	10.8
12	3.3	0.2	2.0	9.3	5.1	7.5	12.3	8.1	10.3	15.7	8.9	12.3
13	3.5	2.0	2.8	10.4	5.0	7.9	13.8	7.5	10.5	15.6	10.8	13.4
14	7.1	3.1	4.8	10.3	6.0	8.3	13.1	8.3	10.9	17.9	11.2	14.6
15	6.0	4.0	5.1	10.2	5.9	8.3	12.4	8.6	10.3	16.6	13.0	14.1
16	4.8	2.3	3.1	8.8	6.1	7.3	12.5	6.0	9.2	17.8	11.5	14.4
17	4.1	0.7	2.5	6.1	4.6	5.6	12.7	7.2	10.1	15.8	12.4	14.4
18	4.6	1.7	3.2	4.6	2.8	3.5	11.3	8.4	9.9	17.2	12.3	14.5
19	5.2	1.3	3.4	4.7	2.2	3.4	9.7	7.6	8.7	14.5	8.9	11.9
20	5.2	1.6	3.4	5.7	2.5	4.1	11.8	6.2	9.1	12.2	10.1	11.0
21	4.6	2.0	3.4	8.6	3.1	5.8	12.0	6.7	9.6	11.0	9.8	10.4
22	3.4	1.0	2.5	9.7	5.5	7.6	11.4	8.7	10.2	12.0	10.3	11.0
23	2.5	0.1	1.1	9.7	6.3	8.0	10.2	7.6	8.7	12.6	10.2	11.3
24	0.3	0.0	0.2	8.5	5.9	7.3	13.2	6.1	9.4	12.1	11.0	11.5
25	2.7	0.1	1.3	9.1	3.9	6.6	15.1	8.4	11.9	12.4	10.6	11.6
26	4.0	1.8	2.9	8.5	5.2	6.8	15.7	10.3	12.8	12.6	10.3	11.5
27	5.7	2.5	4.0	5.6	2.5	3.4	14.4	8.7	11.8	13.4	10.7	12.0
28	5.3	2.5	3.8	5.7	1.8	3.4	13.8	10.0	12.2	13.9	11.5	12.6
29	---	---	---	8.2	1.9	4.8	13.7	9.2	11.6	13.1	12.1	12.5
30	---	---	---	9.6	3.5	6.6	12.4	8.5	10.2	14.9	11.5	12.9
31	---	---	---	---	5.7	---	---	---	---	14.6	12.3	13.4
MONTH	7.1	0.0	2.4	---	1.3	---	15.7	2.2	9.4	17.9	6.5	11.8

## GREEN RIVER BASIN

404417108524900 GREEN RIVER ABOVE GATES OF LODORE, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.4	12.4	13.8	23.2	17.9	20.7	23.4	17.4	20.4	20.9	15.8	18.5
2	15.7	13.0	14.3	23.6	17.0	20.4	22.6	18.9	21.0	20.5	16.1	18.3
3	16.6	12.5	14.5	23.9	17.5	20.7	21.2	18.3	19.7	21.2	15.8	18.4
4	17.0	13.0	15.3	23.7	17.2	20.3	22.0	17.3	19.6	21.3	16.5	19.0
5	18.0	13.0	15.4	23.1	16.8	20.0	21.6	16.2	19.2	20.1	16.7	18.1
6	17.5	13.1	15.3	23.3	16.7	20.0	22.0	17.3	19.8	17.5	15.2	16.5
7	18.8	12.1	15.3	22.4	17.2	19.9	20.6	17.8	18.7	19.1	14.8	16.9
8	20.7	14.0	17.3	22.3	16.9	19.6	21.8	16.4	19.1	18.0	15.2	16.8
9	18.9	16.1	17.4	23.6	15.7	19.6	23.1	18.1	20.6	17.3	14.2	15.8
10	18.0	14.3	16.3	24.9	17.5	21.2	22.0	17.5	19.9	15.6	13.0	14.1
11	16.5	14.4	15.7	22.6	17.6	20.7	23.3	17.4	20.2	16.3	11.8	13.8
12	17.6	13.5	15.4	23.7	17.8	20.8	---	18.0	---	17.6	13.2	15.3
13	17.6	13.6	16.0	22.9	17.4	20.3	23.0	18.1	20.6	16.7	11.8	14.4
14	21.2	13.7	17.4	23.9	17.0	20.7	23.6	17.8	20.7	16.4	11.2	14.0
15	21.9	16.4	19.4	23.1	18.4	20.9	22.4	17.4	20.0	16.9	12.1	14.6
16	20.6	17.2	19.0	24.4	18.6	21.5	23.2	17.9	20.4	16.1	13.7	15.1
17	21.9	15.6	18.7	23.8	19.1	21.5	22.0	17.8	19.7	15.5	10.4	13.1
18	22.5	16.8	19.6	24.7	17.8	21.1	20.3	16.5	18.6	14.1	8.3	11.1
19	20.9	16.6	18.9	24.0	18.5	21.5	21.6	16.2	19.1	14.6	9.4	11.7
20	19.2	16.6	17.8	24.9	19.0	22.0	22.0	16.9	19.6	15.3	10.8	13.1
21	18.2	15.0	16.6	24.0	18.6	21.5	21.5	17.6	19.8	15.4	10.7	13.2
22	19.8	14.1	16.6	25.1	18.9	22.2	23.2	18.3	20.7	16.1	10.8	13.6
23	18.0	14.2	16.0	25.6	19.5	22.5	23.4	19.2	21.1	16.0	11.6	14.0
24	14.7	11.3	13.2	24.8	19.6	22.1	20.8	18.0	19.5	15.9	11.2	13.8
25	16.8	11.8	14.2	24.4	19.7	22.1	21.3	17.2	19.2	15.9	10.9	13.6
26	20.4	12.8	16.6	25.4	20.0	22.3	21.5	17.0	19.3	16.3	11.7	14.1
27	22.4	15.5	19.0	24.3	19.3	21.7	20.6	17.1	18.5	17.1	12.3	14.7
28	23.0	16.5	19.8	23.6	18.4	21.2	20.4	15.3	17.8	17.4	12.3	15.0
29	23.8	16.9	20.4	24.4	19.0	21.5	19.4	15.9	17.9	18.3	12.4	15.4
30	23.5	17.8	20.8	24.6	18.0	21.3	18.2	15.8	17.2	18.1	13.1	15.8
31	---	---	---	22.7	17.8	20.3	20.4	15.0	17.6	---	---	---
MONTH	23.8	11.3	16.9	25.6	15.7	21.0	---	15.0	---	21.3	8.3	15.1

**09237450 YAMPA RIVER ABOVE STAGECOACH RESERVOIR, CO**

LOCATION.--Lat 40°16'09", long 106°52'49", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.36, T.4 N., R.85 W., Routt County, Hydrologic Unit 14050001, on left bank 1.4 mi downstream from Jack Creek and 4.0 mi east of Oak Creek.

DRAINAGE AREA.--208 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1988 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09237450](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09237450)

REVISED RECORDS.--WDR CO-00-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 7,240 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 12,000 acres upstream from station. Natural flow of stream affected by 2 diversions for irrigation to Egeria Creek into Colorado River basin and by storage in Stillwater, Yampa and YamColo Reservoirs (total capacity 15,820 acre-ft). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	34	e24	e32	e36	25	79	112	201	79	74	52
2	22	33	e24	e32	e38	27	125	105	225	74	70	47
3	54	31	e25	e31	e35	e23	112	92	159	68	63	46
4	44	36	e26	e32	e34	e25	62	107	145	68	69	42
5	34	35	e27	e32	e34	e24	52	115	136	66	59	41
6	29	40	e24	e31	e34	e23	52	105	131	69	54	51
7	26	36	e26	e31	e30	33	43	95	138	76	59	71
8	23	32	e25	e30	e30	32	39	94	128	76	66	74
9	22	37	30	e32	e29	30	57	108	130	70	60	49
10	21	36	34	e32	e28	e35	96	121	142	73	58	62
11	21	40	e31	e34	e28	e38	138	100	152	71	58	77
12	21	43	e32	e32	e26	39	135	90	137	67	57	60
13	20	43	e34	32	e31	e50	123	90	117	68	53	52
14	23	35	e32	36	e34	e57	130	99	112	68	51	46
15	23	41	e34	e36	e32	66	121	114	98	66	49	44
16	24	44	e32	e34	e29	76	109	124	94	70	47	39
17	23	33	e34	e35	e30	67	92	126	95	74	58	38
18	23	33	e34	e35	e29	52	89	125	96	74	73	38
19	25	43	e32	e36	e27	e64	89	118	95	74	58	39
20	25	33	e32	e35	e28	56	78	104	101	77	52	39
21	24	41	e32	e35	e28	53	74	101	103	76	48	37
22	26	41	e34	e33	e28	53	79	98	98	67	56	36
23	31	38	e35	e32	e28	65	95	95	97	62	72	33
24	32	35	e35	e32	e30	76	107	97	90	66	80	31
25	30	35	e35	e33	33	61	182	91	89	67	67	31
26	29	37	e34	e33	30	61	211	85	89	71	59	31
27	28	27	e34	e32	31	60	166	88	87	70	55	35
28	28	e26	e32	e33	29	49	134	99	82	68	64	35
29	29	e25	e32	e34	---	42	121	105	81	73	53	35
30	29	e23	e32	e36	---	42	126	122	80	74	54	35
31	31	---	e30	e35	---	48	---	124	---	73	60	---
TOTAL	842	1,066	957	1,028	859	1,452	3,116	3,249	3,528	2,195	1,856	1,346
MEAN	27.2	35.5	30.9	33.2	30.7	46.8	104	105	118	70.8	59.9	44.9
MAX	54	44	35	36	38	76	211	126	225	79	80	77
MIN	20	23	24	30	26	23	39	85	80	62	47	31
AC-FT	1,670	2,110	1,900	2,040	1,700	2,880	6,180	6,440	7,000	4,350	3,680	2,670

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

	50.3	51.4	42.7	41.5	42.0	61.9	113	120	115	99.2	73.0	51.3
MEAN	50.3	51.4	42.7	41.5	42.0	61.9	113	120	115	99.2	73.0	51.3
MAX	116	85.1	71.1	74.2	75.4	113	259	278	348	167	153	135
(WY)	(1998)	(1998)	(1996)	(1996)	(1996)	(1998)	(1996)	(1996)	(1997)	(1995)	(1997)	(1997)
MIN	27.2	32.0	29.2	21.4	29.4	38.7	48.7	13.9	12.3	17.3	25.3	17.4
(WY)	(2003)	(1995)	(1990)	(1990)	(1991)	(1992)	(1995)	(2002)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1989 - 2003

ANNUAL TOTAL	11,461.0	21,494	
ANNUAL MEAN	31.4	58.9	
HIGHEST ANNUAL MEAN			71.9
LOWEST ANNUAL MEAN			135
HIGHEST DAILY MEAN	116	Apr 1	33.2
LOWEST DAILY MEAN	5.3	May 10	582
ANNUAL SEVEN-DAY MINIMUM	8.9	May 8	225
MAXIMUM PEAK FLOW			20
MAXIMUM PEAK STAGE			Oct 13
ANNUAL RUNOFF (AC-FT)	22,730		22
10 PERCENT EXCEEDS	48		Oct 8
50 PERCENT EXCEEDS	30		273
90 PERCENT EXCEEDS	12		Jun 1
			765
			Jun 1
			52,090
			c5.96
			Mar 26, 1998
			Mar 26, 1998
			133
			53
			31

e Estimated.

a Also occurred May 11, 2002.

b Maximum gage height, 6.09 ft, Mar 14, backwater from ice.

c Maximum gage height, 7.31 ft, Dec 4, 1997, backwater from ice.

## 09237500 YAMPA RIVER BELOW STAGECOACH RESERVOIR, CO

LOCATION (REVISED).--Lat 40°17'07", long 106°49'51", in SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.29, T.4 N., R.84 W., Routt County, Hydrologic Unit 14050001, on left bank, 50 ft downstream from Stagecoach Reservoir, 1.1 mi upstream from Morrison Creek, and 6.5 mi east of Oak Creek.

DRAINAGE AREA.--228 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1939 to September 1944, monthly discharge only for some periods, published in WSP 1313; October 1956 to September 1972; October 1984 to current year. Prior to October 1990, published as Yampa River near Oak Creek. Statistical summary computed for 1989 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09237500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09237500)

REVISED RECORDS.--WDR CO-00-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,050 ft above NGVD of 1929, from topographic map. Sept. 1939 to Nov. 15, 1939, nonrecording gage, Nov. 16, 1939 to Sept. 1944 and Oct. 1956 to Sept. 1972, water-stage recorder at site 0.2 mi upstream, at different datum. Oct. 1984 to July 15, 2003, water-stage recorder at site 0.3 mi downstream, at different datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated since Dec. 20, 1988, by Stagecoach Reservoir (capacity 33,275 acre-ft), 50 ft upstream. Diversions for irrigation of about 12,000 acres upstream from station. Natural flow of stream affected by 2 diversions for irrigation to Egeria Creek into Colorado River basin and by storage in Stillwater, Yampa and YamColo Reservoirs (total capacity 15,820 acre-ft). Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e31	e56	37	31	33	32	41	78	123	88	64	59
2	e32	87	35	34	28	29	40	93	164	90	64	61
3	e31	76	30	28	28	34	42	98	164	97	64	58
4	e30	61	30	28	31	29	42	97	146	89	64	59
5	e30	46	30	28	28	29	43	79	129	79	62	49
6	e30	49	29	28	26	28	42	89	116	80	63	44
7	e30	48	31	28	21	29	41	90	115	79	63	43
8	e30	55	30	28	28	29	41	90	111	76	64	43
9	e30	75	30	28	28	29	41	90	109	71	61	43
10	e30	50	30	28	28	29	41	87	107	66	60	42
11	e30	49	30	28	28	29	40	87	110	66	64	41
12	e29	49	30	28	28	29	41	89	113	62	64	41
13	e29	48	29	29	28	29	40	89	112	62	64	40
14	e29	46	28	28	28	29	39	89	110	65	64	39
15	e29	40	28	28	28	30	39	89	107	e65	63	39
16	e29	39	28	28	28	29	39	89	102	63	60	38
17	e29	39	28	28	28	30	39	87	98	63	60	38
18	e29	38	28	28	28	30	39	87	96	63	59	38
19	e29	36	28	28	29	31	38	89	95	60	63	38
20	e29	35	27	28	29	35	37	89	95	60	63	36
21	e29	33	27	28	29	38	38	89	95	63	47	44
22	e29	35	27	28	29	39	38	90	94	63	51	62
23	e29	34	27	28	29	39	38	90	97	57	40	55
24	e29	34	27	28	29	40	37	90	98	56	49	37
25	e29	33	27	28	29	40	41	91	93	62	50	37
26	e29	34	27	28	29	41	38	91	86	59	50	57
27	e29	34	27	28	29	41	38	91	91	60	50	75
28	e29	32	27	28	29	41	44	91	86	62	54	74
29	e29	30	27	28	---	39	50	92	86	62	58	71
30	e29	34	27	28	---	38	55	96	90	62	58	73
31	e30	---	27	28	---	43	---	103	---	63	58	---
TOTAL	915	1,355	893	878	793	1,037	1,222	2,789	3,238	2,113	1,818	1,474
MEAN	29.5	45.2	28.8	28.3	28.3	33.5	40.7	90.0	108	68.2	58.6	49.1
MAX	32	87	37	34	33	43	55	103	164	97	64	75
MIN	29	30	27	28	21	28	37	78	86	56	40	36
AC-FT	1,810	2,690	1,770	1,740	1,570	2,060	2,420	5,530	6,420	4,190	3,610	2,920

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2003, BY WATER YEAR (WY)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	62.0	60.2	57.5	59.9	59.6	60.5	69.6	107	111	87.5	79.9	71.1			
MAX	110	94.7	93.3	89.8	84.8	90.3	166	303	377	172	156	135			
(WY)	(1998)	(1996)	(1996)	(1998)	(1997)	(2000)	(1996)	(1996)	(1997)	(1995)	(1997)	(1997)			
MIN	25.8	37.3	27.0	28.3	28.3	18.0	32.3	12.4	12.8	22.3	34.4	31.8			
(WY)	(1991)	(1991)	(2001)	(2003)	(2003)	(1989)	(1989)	(1989)	(1989)	(1989)	(1989)	(1990)			

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1989 - 2003

ANNUAL TOTAL	14,035	18,525	
ANNUAL MEAN	38.5	50.8	
HIGHEST ANNUAL MEAN			a73.9
LOWEST ANNUAL MEAN			134
HIGHEST DAILY MEAN	87	Nov 2	164
LOWEST DAILY MEAN	13	May 18	21
ANNUAL SEVEN-DAY MINIMUM	16	Jun 1	27
MAXIMUM PEAK FLOW			f2.70
MAXIMUM PEAK STAGE			Jun 2
ANNUAL RUNOFF (AC-FT)	27,840	36,740	53,570
10 PERCENT EXCEEDS	54	91	114
50 PERCENT EXCEEDS	42	39	64
90 PERCENT EXCEEDS	19	28	34

e Estimated.

a Average discharge for 25 years (water years 1940-44, 1957-72, 1985-88), 89.4 ft<sup>3</sup>/s; 64,770 acre-ft/yr, prior to completion of Stagecoach Reservoir.

b Maximum daily discharge for period of record, 1,020 ft<sup>3</sup>/s, Apr 16, 1962.

c Minimum daily discharge for period of record, 8.9 ft<sup>3</sup>/s, May 22, 1963.

d Maximum discharge and stage for period of record, 1,400 ft<sup>3</sup>/s, Apr 16, 1962, gage height, 7.56 ft, from rating curve extended above 570 ft<sup>3</sup>/s, site and datum then in use.

f Maximum gage height, 3.64 ft, Oct 31, backwater from beaver dam.

g Maximum gage height, 8.08 ft, Mar 8, 1987, backwater from ice.





## 09239500 YAMPA RIVER AT STEAMBOAT SPRINGS, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1990 to September 1993, October 1996 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09239500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09239500)

PERIOD OF DAILY RECORD.--WATER TEMPERATURE: July 2002 to current year.

INSTRUMENTATION.--Water-temperature sensor with satellite telemetry since July 2002.

REMARKS.--Daily record of water temperature is excellent. Interruptions in daily record are due to instrument malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 27.2°C, Aug. 13, 2003; minimum, 0.0°C, on several days in 2003.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 27.2°C, Aug. 13; minimum, 0.0°C, on several days.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, water fltrd end lab, mg/L as CaCO3 (29801)
OCT 30...	0830	57	10.1	8.2	255	3.6	110	29.1	9.65	1.59	0.4	8.90	100
FEB 18...	1115	91	11.4	8.3	309	0.3	140	34.4	12.0	1.95	0.4	11.2	145
MAY 29...	0750	4,310	9.7	7.3	47	6.5	20	5.46	1.46	0.76	0.2	1.76	21
AUG 13...	1115	80	7.5	8.7	271	22.6	120	31.7	10.8	1.90	0.4	9.60	104

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT 30...	4.87	<0.2	10.3	24.4	149	0.20	22.9	0.36	0.34	<0.015	E.021	E.002	E.004
FEB 18...	5.89	0.18	9.0	31.8	194	0.26	47.6	0.24	0.35	<0.015	0.115	0.003	<0.007
MAY 29...	0.95	<0.2	7.5	4.5	35	0.05	413	0.21	0.38	<0.015	0.054	E.002	E.006
AUG 13...	3.93	<0.2	9.7	30.4	160	0.22	34.7	0.35	0.40	<0.015	<0.022	<0.002	0.033

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Cadmium, water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury, water, fltrd, ug/L (71890)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)
OCT 30...	0.015	0.027	E9	E3	<0.2	<1.2	150	<1	13.1	24.5	<0.02	<3	<0.3
FEB 18...	0.009	0.025	E5	E7	E.1	<1.2	280	<1	66.0	98.2	<0.02	<3	<0.3
MAY 29...	0.014	0.080	180	167	<0.2	E.6	1,220	<1	11.5	54.5	<0.02	<3	<0.3
AUG 13...	0.051	0.069	33	93	<0.2	2.1	220	<1	15.0	40.7	<0.02	<3	<0.3



## GREEN RIVER BASIN

09239500 YAMPA RIVER AT STEAMBOAT SPRINGS, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Zinc, water, fltrd, ug/L (01090)
OCT 30...	<24
FEB 18...	<24
MAY 29...	4
AUG 13...	<3

< -- Actual value is  
known to be less  
than the value  
shown.  
E -- Estimated  
laboratory analysis  
value.

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Date	Time	Instan- taneous dis- charge, cfs (00061)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
OCT 28...	1140	58	246	5.8	JUN 26...	1035	630	98	10.7
JAN 13...	1420	60	277	0.2	AUG 04...	1450	98	249	22.7
MAR 26...	1220	140	305	3.8	SEP 09...	1525	103	286	16.7
MAY 08...	1450	577	198	7.2					

## 09239500 YAMPA RIVER AT STEAMBOAT SPRINGS, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	---	---	---	24.9	17.5	20.8	21.0	13.8	17.3
2	---	---	---	---	---	---	22.2	17.6	19.7	22.0	13.8	17.6
3	---	---	---	---	---	---	22.3	17.8	19.8	20.0	14.6	17.4
4	---	---	---	---	---	---	25.2	16.7	20.8	21.8	14.6	17.8
5	---	---	---	---	---	---	24.3	19.2	21.1	20.7	14.3	17.4
6	---	---	---	---	---	---	24.1	17.2	19.9	18.1	14.4	16.5
7	---	---	---	---	---	---	20.7	17.1	18.9	18.1	14.7	16.2
8	---	---	---	---	---	---	21.4	16.1	18.9	20.4	14.8	17.4
9	---	---	---	---	---	---	23.8	15.7	19.3	18.9	16.2	17.4
10	---	---	---	---	---	---	24.5	15.2	19.4	19.3	15.8	17.3
11	---	---	---	---	---	---	25.0	15.5	19.8	18.3	15.7	16.9
12	---	---	---	---	---	---	24.8	16.1	20.1	18.3	15.5	16.5
13	---	---	---	---	---	---	23.9	16.1	19.6	17.5	14.2	15.8
14	---	---	---	---	---	---	24.4	15.2	19.4	19.3	13.2	16.1
15	---	---	---	---	---	---	25.0	15.4	19.8	19.6	14.1	16.8
16	---	---	---	---	---	---	24.9	15.7	20.0	18.8	14.3	16.5
17	---	---	---	---	---	---	23.9	15.6	19.5	16.2	14.1	15.2
18	---	---	---	---	---	---	22.4	15.9	18.7	14.9	12.6	13.8
19	---	---	---	---	---	---	22.0	15.3	18.7	14.0	11.6	12.7
20	---	---	---	---	---	---	22.5	17.1	19.1	17.0	11.1	13.8
21	---	---	---	---	---	---	19.7	16.5	18.1	17.2	12.1	14.4
22	---	---	---	---	---	---	19.1	14.1	16.9	16.5	10.8	13.6
23	---	---	---	---	---	---	21.8	14.9	18.1	16.7	10.9	13.6
24	---	---	---	---	---	---	24.0	16.3	19.7	17.1	11.1	13.9
25	---	---	---	21.5	---	---	23.1	15.1	18.9	15.8	12.1	13.8
26	---	---	---	24.6	17.6	20.5	24.0	15.4	19.4	16.8	11.9	14.0
27	---	---	---	22.6	17.5	19.9	22.1	16.3	19.2	16.0	11.0	13.3
28	---	---	---	24.3	17.2	20.4	19.4	15.7	17.6	14.9	10.5	12.6
29	---	---	---	25.3	16.8	20.8	18.3	14.8	16.3	13.5	11.2	12.3
30	---	---	---	26.5	17.8	21.7	19.8	13.1	16.6	14.9	10.0	12.2
31	---	---	---	25.7	17.8	21.4	20.1	14.5	17.4	---	---	---
MONTH	---	---	---	---	---	---	25.2	13.1	19.1	22.0	10.0	15.3

## GREEN RIVER BASIN

09239500 YAMPA RIVER AT STEAMBOAT SPRINGS, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.1	10.0	12.4	---	---	---	---	---	---	0.3	0.2	0.2
2	14.7	10.1	12.3	---	---	---	---	---	---	0.4	0.2	0.3
3	12.1	9.5	10.6	---	---	---	3.0	1.0	2.0	0.4	0.2	0.3
4	11.3	8.5	9.8	---	---	---	3.1	2.0	2.5	0.4	0.2	0.3
5	11.3	9.3	10.1	---	---	---	3.8	2.5	3.2	0.3	0.2	0.3
6	12.3	8.7	10.3	---	---	---	3.3	1.7	2.5	0.4	0.2	0.2
7	14.1	8.4	11.1	---	---	---	2.2	0.7	1.3	0.3	0.2	0.2
8	13.9	8.7	11.1	---	---	---	1.4	0.3	0.8	0.4	0.2	0.2
9	13.3	8.1	10.6	---	---	---	0.9	0.3	0.7	0.4	0.1	0.2
10	12.8	7.7	10.3	---	---	---	0.8	0.5	0.6	0.3	0.2	0.2
11	10.9	9.0	10	---	---	---	0.9	0.4	0.6	0.3	0.2	0.3
12	11.1	6.1	8.5	---	---	---	0.5	0.3	0.4	0.3	0.2	0.3
13	11.0	5.0	7.9	---	---	---	2.0	0.3	1.2	0.3	0.2	0.2
14	11.1	5.3	7.9	---	---	---	1.6	0.5	0.8	0.3	0.1	0.2
15	10.8	5.3	7.9	---	---	---	0.8	0.5	0.6	0.3	0.1	0.2
16	10.7	5.5	7.9	---	---	---	1.1	0.5	0.7	0.4	0.1	0.2
17	11.0	5.2	7.9	---	---	---	0.8	0.2	0.5	0.3	0.1	0.2
18	11.0	5.3	7.9	---	---	---	0.6	0.2	0.3	0.4	0.1	0.2
19	10.7	5.2	7.8	---	---	---	0.3	0.2	0.2	0.4	0.2	0.3
20	10.0	4.7	7.2	---	---	---	0.3	0.1	0.2	0.4	0.2	0.3
21	10.1	4.5	7.1	---	---	---	0.3	0.2	0.2	0.4	0.3	0.3
22	8.5	4.7	6.6	---	---	---	0.3	0.2	0.2	0.5	0.3	0.4
23	8.4	6.6	7.4	---	---	---	0.3	0.1	0.2	0.4	0.2	0.3
24	9.6	6.3	7.6	---	---	---	0.3	0.2	0.2	0.3	0.1	0.3
25	8.4	5.9	7.1	---	---	---	0.3	0.2	0.2	0.3	0.2	0.2
26	8.9	4.9	6.9	---	---	---	0.3	0.2	0.2	0.5	0.2	0.3
27	---	---	---	---	---	---	0.3	0.2	0.2	1.0	0.2	0.5
28	---	---	---	---	---	---	0.3	0.2	0.2	0.5	0.1	0.4
29	---	---	---	---	---	---	0.3	0.2	0.2	0.6	0.1	0.2
30	---	---	---	---	---	---	0.3	0.2	0.2	0.3	0.1	0.2
31	---	---	---	---	---	---	0.3	0.2	0.2	0.9	0.1	0.3
MONTH	---	---	---	---	---	---	---	---	---	1.0	0.1	0.3
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	2.1	0.2	1.1	4.2	0.1	1.8	9.1	3.7	6.6	7.9	5.4	6.4
2	2.3	0.6	1.5	2.5	0.1	0.9	7.2	2.5	5.1	10.1	5.0	7.2
3	2.0	0.1	0.7	3.4	0.1	1.4	4.8	1.3	2.8	9.6	5.4	7.6
4	1.7	0.0	0.4	1.9	0.2	0.9	7.6	0.6	4.1	8.2	6.6	7.3
5	0.8	0.0	0.2	4.2	0.1	1.6	6.6	2.2	4.4	8.2	5.5	6.7
6	0.5	0.0	0.2	3.3	1.3	2.1	6.2	1.9	4.3	10.3	5.3	7.6
7	0.4	0.0	0.1	3.8	1.2	2.4	6.0	2.6	4.3	9.3	5.4	7.2
8	0.3	0.0	0.1	6.8	1.2	3.7	9.0	1.6	5.4	8.5	6.2	7.3
9	0.1	0.1	0.1	6.3	1.1	3.6	10.3	3.0	6.9	8.6	5.8	6.9
10	0.1	0.1	0.1	7.2	2.3	4.3	10.3	2.8	6.8	8.4	5.4	6.7
11	0.2	0.1	0.1	7.6	2.6	4.7	9.7	2.8	6.2	9.9	5.2	7.5
12	0.3	0.1	0.1	8.4	3.6	5.5	8.4	2.9	5.8	12.9	5.1	8.7
13	0.2	0.1	0.1	7.7	2.4	4.7	10.3	2.6	6.2	13.1	6.9	9.7
14	0.3	0.1	0.2	5.8	2.2	3.9	9.3	3.4	6.3	13.6	6.6	9.8
15	0.3	0.1	0.1	7.6	2.5	4.8	6.4	3.7	4.8	10.7	7.3	8.9
16	0.3	0.0	0.1	4.8	3.0	3.9	9.0	2.9	5.4	12.0	7.6	9.2
17	0.3	0.1	0.1	3.6	2.3	2.9	8.2	3.6	5.9	10.2	6.9	8.4
18	0.3	0.0	0.1	5.3	1.5	3.3	7.2	4.1	5.4	8.4	7.1	7.8
19	0.4	0.0	0.2	6.6	2.0	4.2	7.7	3.7	5.4	10.6	6.0	7.8
20	0.4	0.0	0.2	6.3	2.1	4.3	11.1	3.4	6.9	10.9	5.2	7.5
21	0.4	0.0	0.1	5.6	2.9	4.1	10.2	4.3	7.3	10.7	5.7	7.7
22	0.3	0.1	0.1	6.2	3.0	4.5	9.0	5.4	7.1	11.1	5.8	7.9
23	0.3	0.1	0.1	7.5	2.3	4.9	6.9	1.8	3.8	11.1	6.0	8.0
24	0.2	0.0	0.1	5.1	2.7	4.0	6.8	1.3	3.8	11.1	6.0	8.1
25	0.2	0.1	0.1	7.4	1.9	4.8	10.6	3.0	6.4	10.4	6.1	7.7
26	1.2	0.1	0.6	5.6	3.3	4.4	11.4	4.5	8.0	11.0	6.2	8.0
27	3.0	1.0	1.8	4.3	1.6	2.9	10.7	6.0	8.5	11.0	6.4	8.2
28	3.3	0.4	1.7	5.9	1.3	3.4	10.4	5.5	7.9	11.4	6.5	8.3
29	---	---	---	3.3	1.2	2.3	9.4	6.6	8.1	10.9	6.2	7.8
30	---	---	---	---	---	---	8.8	6.2	7.3	11.0	6.4	8.0
31	---	---	---	---	---	---	---	---	---	11.3	6.8	8.3
MONTH	3.3	0.0	0.4	---	---	---	11.4	0.6	5.9	13.6	5.0	7.9

## 09239500 YAMPA RIVER AT STEAMBOAT SPRINGS, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	10.1	6.7	7.9	18.1	12.4	15.4	25.0	18.4	21.3	21.4	15.3	18.1
2	10.0	5.7	7.4	18.5	12.2	15.5	25.0	19.1	22.1	21.0	16.5	18.6
3	10.4	5.7	7.6	18.5	12.3	15.6	23.4	19.8	21.8	21.8	16.5	18.6
4	11.2	6.9	8.6	19.1	13.1	16.2	23.9	18.7	21.2	21.9	16.1	18.6
5	10.5	7.2	8.6	19.0	12.7	16.1	24.7	18.6	21.5	19.1	16.2	17.6
6	10.9	7.2	8.7	18.2	12.9	16.0	23.9	18.9	21.6	19.6	16.3	17.7
7	11.5	7.6	9.1	19.6	13.4	16.7	22.0	19.1	20.5	17.8	16.0	16.8
8	12.2	7.3	9.3	19.3	13.4	16.7	24.4	18.2	21.0	18.6	14.4	16.6
9	11.5	7.9	9.4	19.2	13.3	16.7	25.5	19.1	22.1	17.7	15.4	16.5
10	11.8	8.1	9.7	19.8	13.8	17.2	26.1	19.1	22.4	16.3	13.5	14.8
11	12.0	8.0	9.5	19.7	14.6	17.6	26.2	19.8	22.3	15.6	13.0	14.2
12	11.2	7.6	9.4	21.7	14.9	18.3	26.2	18.9	22.0	17.3	13.5	15.5
13	12.6	8.5	10.2	21.1	15.9	18.7	27.2	19.3	22.7	17.8	14.0	15.8
14	13.5	8.6	10.7	22.8	15.6	19.2	26.7	19.5	22.5	16.7	12.0	14.6
15	14.2	9.0	11.2	23.4	17.3	20.2	25.2	17.6	21.0	17.2	12.4	14.9
16	12.9	9.7	11.2	25.7	18.0	21.5	25.0	19.2	21.1	17.3	13.5	15.3
17	14.2	9.5	11.7	25.4	19.1	22.0	22.4	18.3	19.8	16.0	12.6	14.3
18	15.0	10.2	12.3	26.4	19.0	22.5	22.0	18.1	19.6	16.4	11.4	13.6
19	14.5	10.9	12.5	26.5	19.6	22.6	23.5	17.6	20.2	16.6	11.1	13.8
20	13.5	10.9	12.1	25.4	19.1	22.0	24.1	17.8	20.7	16.6	11.8	14.0
21	14.7	10.2	12.3	25.4	19.0	22.3	23.9	18.2	20.6	16.7	11.3	13.9
22	15.9	10.7	13.1	27.0	19.7	23.4	23.1	18.5	20.5	17.0	11.3	14.0
23	16.3	10.6	13.3	25.8	19.5	22.9	23.9	18.5	20.2	16.8	12.0	14.3
24	14.9	11.7	13.2	25.2	19.6	22.5	23.4	17.7	20.3	16.8	11.9	14.3
25	13.0	9.7	11.3	25.3	19.2	22.3	24.4	18.9	20.6	16.8	11.6	14.2
26	15.2	8.9	11.9	26.0	19.7	22.6	23.9	17.0	20.0	17.0	11.8	14.3
27	16.0	9.4	12.6	25.5	19.3	22.2	21.3	18.3	19.6	17.0	12.1	14.5
28	17.3	10.2	13.6	24.7	19.6	22.1	23.6	17.1	19.9	16.9	12.5	14.7
29	17.5	11.3	14.5	24.8	19.9	21.6	20.0	17.3	18.8	16.8	12.6	14.8
30	17.8	11.5	14.7	25.0	18.4	21.5	20.2	16.5	17.9	17.1	13.4	15.2
31	---	---	---	23.0	19.1	21.0	19.4	16.1	17.6	---	---	---
MONTH	17.8	5.7	10.9	27.0	12.2	19.7	27.2	16.1	20.8	21.9	11.1	15.5

## 09240900 ELK RIVER ABOVE CLARK, CO

LOCATION.--Lat 40°44'36", long 106°51'17", in SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.18, T.9 N., R.84 W., Routt County, Hydrologic Unit 14050001, on right bank 0.7 mi downstream from Coulton Creek, 1.5 mi upstream from Willow Creek, and 4.2 mi northeast of Clark.

DRAINAGE AREA.--122 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1987 to September 1993. April 1998 to current year (seasonal records only). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09240900](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09240900)

REVISED RECORDS.--WDR CO-92-2: 1991.

GAGE.--Water-stage recorder. Elevation of gage is 7,520 ft above NGVD of 1929, from topographic map. Prior to Apr. 1998 at site 90 ft upstream at same datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

AVERAGE DISCHARGE.--5 years (water years 1988-93), 200 ft<sup>3</sup>/s; 144,700 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (occurred during period of seasonal record), 3,090 ft<sup>3</sup>/s, June 1, 2003, gage height, 5.03 ft; maximum gage height 6.13 ft, June 16, 1993 (at site then in use); minimum daily, 17 ft<sup>3</sup>/s, Nov. 9, 10, and 13, 1987.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 3,090 ft<sup>3</sup>/s, June 1, gage height, 5.03 ft; minimum daily, 44 ft<sup>3</sup>/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	62	289	2,570	534	e99	57
2	---	---	---	---	---	---	76	259	1,960	519	e92	54
3	---	---	---	---	---	---	71	285	1,600	488	e88	54
4	---	---	---	---	---	---	64	295	1,370	458	e93	54
5	---	---	---	---	---	---	60	263	1,180	429	e84	51
6	---	---	---	---	---	---	59	227	1,040	400	e78	62
7	---	---	---	---	---	---	56	227	924	374	e84	65
8	---	---	---	---	---	---	55	220	905	352	e82	62
9	---	---	---	---	---	---	63	205	1,040	330	e77	57
10	---	---	---	---	---	---	86	198	1,310	305	e77	85
11	---	---	---	---	---	---	121	186	1,560	284	e76	102
12	---	---	---	---	---	---	156	217	1,300	266	e77	89
13	---	---	---	---	---	---	189	311	1,110	251	77	76
14	---	---	---	---	---	---	261	428	1,160	247	75	65
15	---	---	---	---	---	---	283	590	1,200	e220	67	60
16	---	---	---	---	---	---	216	823	1,170	e210	64	56
17	---	---	---	---	---	---	185	1,160	1,010	e210	87	55
18	---	---	---	---	---	---	179	1,200	974	e204	109	65
19	---	---	---	---	---	---	156	1,120	1,010	e200	93	69
20	---	---	---	---	---	---	160	1,090	1,020	e195	75	63
21	---	---	---	---	---	---	188	1,180	901	e190	69	57
22	---	---	---	---	---	---	212	1,280	839	e188	66	54
23	---	---	---	---	---	---	201	1,510	854	e168	80	52
24	---	---	---	---	---	---	176	1,800	775	e150	78	50
25	---	---	---	---	---	---	176	1,860	698	e153	102	48
26	---	---	---	---	---	---	238	1,700	570	e136	89	47
27	---	---	---	---	---	---	294	2,070	552	e134	73	46
28	---	---	---	---	---	---	339	2,260	577	e123	67	45
29	---	---	---	---	---	---	374	2,360	567	e133	61	45
30	---	---	---	---	---	---	356	2,320	549	e122	60	44
31	---	---	---	---	---	---	---	2,210	---	e107	61	---
TOTAL	---	---	---	---	---	---	5,112	30,143	32,295	8,080	2,460	1,789
MEAN	---	---	---	---	---	---	170	972	1,076	261	79.4	59.6
MAX	---	---	---	---	---	---	374	2,360	2,570	534	109	102
MIN	---	---	---	---	---	---	55	186	549	107	60	44
AC-FT	---	---	---	---	---	---	10,140	59,790	64,060	16,030	4,880	3,550

e Estimated.

**09241000 ELK RIVER AT CLARK, CO**

LOCATION.--Lat 40°43'03", long 106°54'55", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.27, T.9 N., R.85 W., Routt County, Hydrologic Unit 14050001, on left bank 15 ft downstream from bridge on State Highway 129, 0.8 mi north of Clark, and 2.0 mi upstream from Cottonwood Gulch.

DRAINAGE AREA.--216 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1910 to September 1922 (published as "near Clark"), April 1930 to September 1991. Monthly discharge only for some periods, published in WSP 1313. April 1998 to current year (seasonal records only). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09241000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09241000)

REVISED RECORDS.--WSP 1733: 1956. WDR CO-88-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,267.75 ft above NGVD of 1929 (State Highway bench mark). May 1910 to Sept. 1922, nonrecording gage at site 30 ft upstream at datum 0.15 ft lower. Apr. 23, 1930 to Sept. 27, 1934, water-stage recorder at present site at datum 0.15 ft lower.

REMARKS.--No estimated daily discharges. Records fair. Diversions upstram from station for irrigation of about 230 acres upstream from and about 460 acres downstream from station. Natural flow of stream affected by storage in Lester Creek Reservoir (known also as Pearl Lake), capacity, 5,660 acre-ft, since 1963, and Steamboat Lake, capacity, 23,060 acre-ft, since 1968. Several measurements for specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report

AVERAGE DISCHARGE.--73 years (water years 1910-22, 1930-91), 333 ft<sup>3</sup>/s; 241,300 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,910 ft<sup>3</sup>/s, May 23, 1984 gage height, 6.12 ft; minimum daily determined, 22 ft<sup>3</sup>/s, Dec. 12, 1963, but a lesser discharge may have occurred during periods of no gage height record prior to 1939.

EXTREMES FOR CURRENT YEAR (seasonal only).--Maximum discharge, 4,090 ft<sup>3</sup>/s, June 1, gage height, 5.71 ft; minimum daily, 50 ft<sup>3</sup>/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	87	657	3,430	635	119	63
2	---	---	---	---	---	---	112	586	2,650	615	111	59
3	---	---	---	---	---	---	106	668	2,130	568	107	59
4	---	---	---	---	---	---	93	681	1,840	524	112	60
5	---	---	---	---	---	---	88	614	1,610	481	103	57
6	---	---	---	---	---	---	86	525	1,410	440	96	67
7	---	---	---	---	---	---	81	537	1,280	408	92	71
8	---	---	---	---	---	---	79	540	1,250	377	90	70
9	---	---	---	---	---	---	88	503	1,300	350	119	63
10	---	---	---	---	---	---	125	479	1,410	323	119	85
11	---	---	---	---	---	---	183	444	1,650	301	116	113
12	---	---	---	---	---	---	243	502	1,410	282	118	96
13	---	---	---	---	---	---	314	683	1,240	268	120	81
14	---	---	---	---	---	---	452	881	1,280	252	120	70
15	---	---	---	---	---	---	512	1,170	1,310	236	109	66
16	---	---	---	---	---	---	430	1,460	1,290	223	106	62
17	---	---	---	---	---	---	435	1,910	1,140	223	128	60
18	---	---	---	---	---	---	422	1,890	1,110	220	155	68
19	---	---	---	---	---	---	373	1,750	1,140	265	141	74
20	---	---	---	---	---	---	387	1,670	1,150	249	116	68
21	---	---	---	---	---	---	464	1,750	1,050	239	83	63
22	---	---	---	---	---	---	523	1,850	991	207	109	59
23	---	---	---	---	---	---	496	2,070	1,000	184	127	58
24	---	---	---	---	---	---	425	2,320	941	168	124	56
25	---	---	---	---	---	---	426	2,350	865	161	151	54
26	---	---	---	---	---	---	572	2,150	704	155	142	53
27	---	---	---	---	---	---	714	2,610	670	153	113	51
28	---	---	---	---	---	---	829	2,910	695	142	95	51
29	---	---	---	---	---	---	913	3,100	686	152	88	51
30	---	---	---	---	---	---	836	3,050	657	141	71	50
31	---	---	---	---	---	---	---	2,900	---	125	67	---
TOTAL	---	---	---	---	---	---	10,894	45,210	39,289	9,067	3,467	1,958
MEAN	---	---	---	---	---	---	363	1,458	1,310	292	112	65.3
MAX	---	---	---	---	---	---	913	3,100	3,430	635	155	113
MIN	---	---	---	---	---	---	79	444	657	125	67	50
AC-FT	---	---	---	---	---	---	21,610	89,670	77,930	17,980	6,880	3,880

## 09242500 ELK RIVER NEAR MILNER, CO

LOCATION.--Lat 40°30'53", long 106°57'12", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.5, T.6 N., R.85 W., Routt County, Hydrologic Unit 14050001, on left bank 30 ft downstream from bridge on County Road 44, 2.5 mi upstream from mouth, and 3.2 mi east of Milner.

DRAINAGE AREA.--460 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1904 to September 1927 (published as "near Trull"). April 1990 to current year. Records for 1910-27 furnished by State Engineer of Colorado. Monthly discharge only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09242500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09242500)

REVISED RECORDS.--WDR CO-98-2:1997 (M). WDR CO-00-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,590 ft above NGVD of 1929, from topographic map. May 1904 to Sept. 1909, nonrecording gage, at different datum, Oct. 1910 to Sept. 1927, water-stage recorder at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. During high flows, channel overflow may occur and cause some streamflow to bypass gage. Diversions upstream from station for irrigation of about 6,500 acres upstream from and about 1,000 acres downstream from station. Natural flow of stream affected by storage in Lester Creek Reservoir (known also as Pearl lake), capacity, 5,660 acre-ft, since 1963, and Steamboat lake, capacity, 23,060 acre-ft, since 1968. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	91	e104	e52	e76	e71	252	1,090	4,960	933	136	68
2	80	96	e103	e54	e79	e71	377	923	4,410	880	124	62
3	124	81	101	e54	e77	e72	360	963	3,730	769	125	57
4	137	72	90	e50	e76	e71	240	1,030	3,150	669	131	56
5	121	91	82	e53	e77	e71	219	987	2,710	616	129	56
6	115	83	84	e53	e72	e70	218	830	2,350	552	116	55
7	112	81	e92	e50	e68	e70	194	814	2,090	498	107	66
8	120	94	91	e48	e77	e76	180	839	1,960	455	107	77
9	125	102	91	e49	e75	e75	225	830	2,220	416	114	71
10	115	98	e85	e52	e70	e83	324	798	2,420	367	127	83
11	112	97	e81	e58	e72	e86	448	731	3,050	330	123	139
12	104	94	e75	e58	e71	e99	548	716	2,680	306	122	120
13	93	97	e75	e57	e75	e108	641	951	2,170	280	124	98
14	90	95	e68	e57	e80	e114	852	1,170	2,170	264	126	83
15	92	91	e75	e56	e78	e126	1,000	1,640	2,270	255	116	73
16	88	83	e69	e53	e72	e132	795	1,960	2,290	244	111	60
17	86	86	e72	e54	e72	e134	724	2,560	1,910	234	120	53
18	83	92	e61	e55	e69	e142	715	2,820	1,780	229	169	64
19	80	96	e52	e53	e72	e158	609	2,550	1,860	252	175	82
20	78	89	e50	e56	e72	122	576	2,430	1,890	263	137	79
21	77	90	e54	e58	e77	128	658	2,540	1,690	276	108	80
22	76	86	e51	e61	e72	131	768	2,740	1,550	227	106	72
23	86	88	e47	e60	e74	148	864	3,010	1,580	198	127	69
24	90	94	e51	e61	e78	227	746	3,600	1,470	184	129	65
25	93	85	e49	e67	e77	200	892	3,900	1,250	174	146	61
26	90	63	e50	e66	e72	210	1,100	3,580	1,010	170	170	57
27	85	78	e52	e66	e74	208	1,180	3,900	996	165	141	62
28	85	e95	e47	e66	e74	169	1,240	4,340	1,060	157	111	62
29	89	e102	e47	e70	---	149	1,330	4,640	1,060	165	106	62
30	88	e104	e49	e75	---	155	1,320	4,640	977	165	97	63
31	85	---	e43	e76	---	160	---	4,540	---	141	85	---
TOTAL	2,984	2,694	2,141	1,798	2,078	3,836	19,595	68,062	64,713	10,834	3,865	2,155
MEAN	96.3	89.8	69.1	58.0	74.2	124	653	2,196	2,157	349	125	71.8
MAX	137	104	104	76	80	227	1,330	4,640	4,960	933	175	139
MIN	76	63	43	48	68	70	180	716	977	141	85	53
AC-FT	5,920	5,340	4,250	3,570	4,120	7,610	38,870	135,000	128,400	21,490	7,670	4,270

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 2003, BY WATER YEAR (WY)

MEAN	141	110	91.6	87.0	90.0	167	727	2,096	2,165	659	164	112
MAX	424	234	154	135	145	320	1,214	3,977	3,824	1,940	445	518
(WY)	(1919)	(1919)	(1998)	(1998)	(1921)	(1916)	(1919)	(1920)	(1917)	(1917)	(1912)	(1997)
MIN	58.9	58.0	48.8	51.5	45.9	52.0	377	940	749	88.2	30.3	33.1
(WY)	(1993)	(1991)	(1993)	(1992)	(1991)	(1991)	(1995)	(1990)	(2002)	(2002)	(2002)	(1994)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1905 - 2003	
ANNUAL TOTAL	85,074.2		184,755			
ANNUAL MEAN	233		506		557	
HIGHEST ANNUAL MEAN					886	
LOWEST ANNUAL MEAN					230	
HIGHEST DAILY MEAN	1,900	May 31	4,960	Jun 1	5,350	Jun 15, 1921
LOWEST DAILY MEAN	3.7	Sep 5	e43	Dec 31	3.7	Sep 5, 2002
ANNUAL SEVEN-DAY MINIMUM	5.3	Sep 1	48	Dec 25	5.3	Sep 1, 2002
MAXIMUM PEAK FLOW			5,170	Jun 1	a5,740	Jun 3, 1997
MAXIMUM PEAK STAGE			7.04	Jun 1	b7.18	Jun 3, 1997
ANNUAL RUNOFF (AC-FT)	168,700		366,500		403,500	
10 PERCENT EXCEEDS	740		1,730		1,910	
50 PERCENT EXCEEDS	81		104		130	
90 PERCENT EXCEEDS	43		57		63	

e Estimated.

a Peak discharge includes 370 ft<sup>3</sup>/s overflow that bypassed the main channel.

b Gage height reflects the discharge flowing in the main channel (5,370 ft<sup>3</sup>/s).

## 09246200 ELKHEAD CREEK ABOVE LONG GULCH NEAR HAYDEN, CO

LOCATION.--Lat 40°35'30", long 107°19'13", in NW¼SE¼ sec.1, T.7 N., R.89 W., Routt County, Hydrologic Unit 14050001, on left bank 0.3 mi upstream from Long Gulch, and 9.0 mi northwest of Hayden.

DRAINAGE AREA.--171 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1995 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09246200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09246200)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage 6,405 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow affected by diversions for irrigation of several hundred acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	3.7	4.0	e5.8	e9.0	e11	138	428	416	15	1.5	0.60
2	2.1	5.0	4.1	e6.3	e9.9	e10	141	339	315	13	1.1	0.36
3	3.3	3.1	4.8	e6.6	e11	e11	114	421	227	11	0.66	0.32
4	5.8	2.0	4.4	e6.7	e10	e11	59	489	183	10	0.69	0.40
5	5.6	2.8	4.2	e6.8	e9.5	e11	52	457	151	8.0	0.69	0.29
6	4.1	3.2	4.1	e6.8	e8.7	e11	46	336	130	7.4	0.49	0.26
7	3.3	3.2	4.3	e6.6	e8.3	e12	35	343	120	7.3	0.39	0.58
8	2.9	4.5	6.2	e6.6	e8.3	e12	31	344	106	5.8	0.34	2.1
9	2.4	4.9	5.6	e6.7	e9.6	e13	58	354	96	5.0	0.24	3.2
10	1.9	5.4	3.9	e6.9	e11	e17	130	317	93	4.9	0.11	3.5
11	1.6	3.7	2.9	e7.2	e12	e24	191	275	102	4.5	0.07	6.9
12	1.4	4.3	2.9	e7.3	e10	e27	261	282	93	4.8	0.05	7.8
13	1.2	4.8	3.3	e7.3	e11	e25	305	485	78	4.7	0.04	4.6
14	1.1	6.2	3.1	e7.3	e15	e28	399	631	69	4.3	0.02	2.9
15	1.1	5.0	3.7	e7.2	e16	e27	443	916	62	5.6	0.01	2.1
16	1.2	4.5	3.6	e7.1	e15	38	311	932	52	5.1	0.01	1.6
17	1.1	4.7	3.6	e7.1	e19	37	e260	1,030	53	4.5	0.01	1.2
18	1.3	7.1	4.8	e7.1	e20	32	e240	946	47	3.9	0.02	1.0
19	1.9	4.5	5.7	e7.2	e14	28	e200	770	44	3.3	0.01	0.93
20	1.7	4.5	e4.9	e7.6	e12	34	e170	676	47	3.1	0.01	0.81
21	1.7	4.6	e5.2	e7.9	e11	39	251	651	49	2.9	0.01	0.87
22	1.7	4.7	e5.0	e8.0	e11	48	333	641	42	2.4	0.61	0.86
23	2.6	5.0	e5.2	e8.1	e11	68	422	631	37	1.9	1.2	0.83
24	3.9	7.5	e5.5	e8.5	e11	109	278	667	35	1.6	2.4	0.79
25	6.0	5.0	e5.7	e8.2	e11	62	598	641	32	1.3	2.3	0.73
26	5.7	4.3	e5.7	e8.0	e11	59	767	571	31	1.1	2.7	0.83
27	4.6	3.1	e5.6	e8.0	e11	64	627	543	29	1.1	1.7	0.79
28	4.2	3.7	e5.5	e7.9	e11	33	578	518	25	1.0	1.2	0.75
29	4.0	3.4	e5.6	e8.0	---	29	643	483	22	1.2	0.85	0.79
30	4.2	4.0	e5.7	e8.0	---	26	639	438	19	0.79	0.58	0.74
31	4.5	---	e5.5	e8.4	---	36	---	400	---	0.87	0.53	---
TOTAL	89.5	132.4	144.3	227.2	327.3	992	8,720	16,955	2,805	147.36	20.54	49.43
MEAN	2.89	4.41	4.65	7.33	11.7	32.0	291	547	93.5	4.75	0.66	1.65
MAX	6.0	7.5	6.2	8.5	20	109	767	1,030	416	15	2.7	7.8
MIN	1.1	2.0	2.9	5.8	8.3	10	31	275	19	0.79	0.01	0.26
AC-FT	178	263	286	451	649	1,970	17,300	33,630	5,560	292	41	98

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
MEAN	10.8	12.5	12.2	13.5	15.7	69.2	349	629	139	13.1	4.34	7.03
MAX	39.5	33.2	34.0	34.5	39.3	151	493	1,189	337	42.5	13.5	37.6
(WY)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1997)	(1997)	(1998)	(1997)	(1997)
MIN	2.66	4.41	4.65	5.66	6.74	18.1	162	78.9	5.24	0.032	0.000	0.004
(WY)	(2002)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1995 - 2003

ANNUAL TOTAL	8,742.60	30,610.03	
ANNUAL MEAN	24.0	83.9	107
HIGHEST ANNUAL MEAN			187
LOWEST ANNUAL MEAN			24.0
HIGHEST DAILY MEAN	267	Apr 16	1,860
LOWEST DAILY MEAN	0.00	Jul 8	a0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 16	0.00
MAXIMUM PEAK FLOW			b2,760
MAXIMUM PEAK STAGE			7.86
ANNUAL RUNOFF (AC-FT)	17,340	60,710	77,280
10 PERCENT EXCEEDS	96	341	352
50 PERCENT EXCEEDS	5.0	6.9	12
90 PERCENT EXCEEDS	0.00	0.80	1.4

e Estimated.

a Also occurred Jul 9 and Jul 16 to Sep 29, 2002.

b From rating extended above 1,120 ft<sup>3</sup>/s.



## 09246200 ELKHEAD CREEK ABOVE LONG GULCH, NEAR HAYDEN, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1995 to September 2003 (discontinued). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09246200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09246200)

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August 1995 to September 1999, April 2001 to September 2003 (discontinued).

WATER TEMPERATURE: September 1995 to September 1999, April 2001 to September 2003 (discontinued).

INSTRUMENTATION.--Water-quality monitor with satellite telemetry August 1995 to September 1999. April 2001 to September 2003.

REMARKS.--Daily specific-conductance records are good except for Oct. 1-22 and Apr. 9-18, which are fair, and Apr. 19-24 and July 14-18, which are poor.

Daily water-temperature records are excellent except for Nov. 17 to Mar. 23, which are good.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,120 microsiemens/cm, Mar. 19, 1999; minimum, 86 microsiemens/cm, May 21, 1999.

WATER TEMPERATURE: Maximum, 30.3°C, July 26, 2003; minimum, 0.0°C, on many days during winter months.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 650 microsiemens/cm, Oct. 1; minimum, 99 microsiemens/cm, May 17.

WATER TEMPERATURE: Maximum, 30.3°C, July 26; minimum, 0.0°C, on many days.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
OCT 22...	1030	1.6	--	9.9	8.4	423	4.4	170	41.8	16.9	2.32	0.8	24.6
NOV 18...	1005	7.6	3.7	11.9	8.2	343	0.1	150	39.0	13.7	1.69	0.6	17.3
JAN 22...	1548	7.5	--	11.5	8.1	330	0.0	140	36.4	12.8	1.41	0.6	16.7
FEB 19...	1356	14	--	10.8	7.6	380	0.0	160	41.2	15.0	1.55	0.7	20.8
MAR 05...	1430	11	4.0	10.7	8.0	391	0.0	170	41.1	15.2	1.50	0.7	21.4
APR 08...	1215	33	32	11.1	8.3	589	5.2	220	50.8	22.5	2.12	1	37.5
APR 23...	1048	422	310	11.4	8.1	188	1.0	72	17.8	6.72	1.38	0.4	8.07
JUL 18...	1130	3.8	6.5	7.5	8.5	424	24.8	160	37.7	16.7	2.45	0.8	24.6
JUL 29...	1035	1.1	--	7.3	8.5	396	23.9	160	35.3	17.0	2.67	0.9	27.3
SEP 11...	1330	7.5	15	8.3	8.5	393	13.3	150	33.9	16.3	2.64	0.9	24.1

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT 22...	E150	2.64	<0.2	10.6	76.1	--	--	--	0.28	<0.04	<0.06	<0.008	<0.02
NOV 18...	133	2.77	<0.2	13.6	54.2	222	0.30	4.55	0.14	<0.04	<0.06	<0.008	<0.02
JAN 22...	127	1.27	<0.17	15.2	48.9	209	0.28	4.26	0.16	<0.04	0.12	<0.008	<0.02
FEB 19...	E145	1.53	0.12	14.7	73.9	--	--	--	0.15	<0.04	0.14	<0.008	<0.02
MAR 05...	155	2.15	0.14	15.1	78.1	269	0.37	8.15	0.21	E.02	0.21	<0.008	<0.02
APR 08...	109	3.62	0.15	9.9	177	371	0.51	33.1	0.36	<0.04	0.59	E.004	<0.02
APR 23...	46	1.44	0.10	8.5	34.7	113	0.15	129	1.2	<0.04	1.54	E.005	<0.02
JUL 18...	155	2.41	0.2	9.3	64.7	251	0.34	2.57	0.68	<0.04	<0.06	<0.008	<0.02
JUL 29...	139	4.28	0.2	5.0	59.0	234	0.32	0.70	0.63	<0.04	<0.06	<0.008	<0.02
SEP 11...	141	3.66	0.2	6.0	56.8	228	0.31	4.59	0.43	<0.04	<0.06	<0.008	<0.18

## 09246200 ELKHEAD CREEK ABOVE LONG GULCH, NEAR HAYDEN, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)
OCT 22...	0.014	--	--	--	--
NOV 18...	0.013	2.9	3.7	E2	E5
JAN 22...	0.005	--	--	--	--
FEB 19...	0.009	--	--	--	--
MAR 05...	0.009	2.7	3.8	E4	E5
APR 08...	0.048	--	--	--	--
APR 23...	0.40	7.2	15.0	--	--
JUL 18...	0.033	--	--	E4	E6
JUL 29...	0.044	--	--	--	--
SEP 11...	0.034	5.5	6.5	E14	E16

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Aluminum, water, unfltrd recover-able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, unfltrd recover-able, ug/L (01007)	Beryllium, water, unfltrd recover-able, ug/L (01012)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, unfltrd recover-able, ug/L (01042)
NOV 18...	50	<2	<2	51.1	47.7	<2	<0.2	<0.2	<0.8	<0.8	<3.4	1.2	1.3
JUL 18...	130	<2	E1	60.0	62.6	<0.5	<0.2	<0.2	<0.8	<0.8	<3.4	1.8	1.4

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Lithium water unfltrd recover-able, ug/L (01132)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover-able, ug/L (71900)	Molybdenum, water, unfltrd recover-able, ug/L (01062)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)
NOV 18...	21	180	<1	<1	7	5.2	8.5	<0.02	<0.02	E1	E1.4	<3	<3
JUL 18...	20	200	<1	M	13	5.5	39.5	<0.02	<0.02	4	2.6	<3	<3

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)
NOV 18...	<0.3	<0.3	<24	<25
JUL 18...	<0.3	<0.3	<3	E3

&lt; -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

## 09246200 ELKHEAD CREEK ABOVE LONG GULCH, NEAR HAYDEN, CO—Continued

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diameter percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
MAR 05...	1430	11	0.0	--	6	0.18
APR 08...	1215	33	5.2	100	39	3.5
23...	1048	422	1.0	99	553	630
JUL 18...	1130	3.8	24.8	--	9	0.09
SEP 11...	1330	7.5	13.3	--	15	0.31

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	650	429	523	323	312	319	383	364	376	333	326	329
2	429	356	382	321	312	314	364	335	353	332	325	328
3	384	355	364	327	311	321	341	330	338	325	320	322
4	390	330	368	335	322	331	330	313	322	323	319	321
5	330	309	315	342	331	337	319	311	315	321	319	319
6	311	303	308	338	327	332	320	311	315	320	319	319
7	303	283	292	337	327	332	---	---	---	322	319	320
8	285	278	281	346	332	338	346	331	341	324	320	321
9	296	285	292	342	339	341	355	345	352	328	322	326
10	305	296	300	342	328	337	371	355	365	329	326	328
11	313	305	309	333	321	329	383	371	379	328	323	326
12	319	310	315	333	317	325	387	379	382	324	319	321
13	327	317	322	317	308	314	387	377	382	320	317	319
14	333	325	329	312	308	310	384	380	382	318	316	317
15	342	332	337	316	310	314	382	361	371	318	316	317
16	348	340	344	337	315	328	368	353	363	319	317	318
17	355	347	351	347	329	340	353	340	344	321	317	319
18	363	353	358	342	334	338	341	330	338	322	318	320
19	376	362	369	342	335	340	333	329	331	324	322	323
20	389	374	382	335	325	330	333	328	330	325	324	325
21	398	389	393	326	319	323	330	326	327	325	324	325
22	419	373	402	325	313	318	326	318	321	326	323	325
23	411	406	410	317	309	312	323	319	322	323	320	322
24	412	385	404	311	298	304	325	321	323	322	319	320
25	385	364	373	305	298	302	322	320	321	320	318	319
26	364	351	359	337	315	326	322	319	320	320	317	318
27	351	333	342	352	337	346	321	319	320	319	315	318
28	333	318	324	356	344	353	321	320	321	325	319	321
29	318	314	316	371	356	366	323	321	322	326	321	324
30	314	311	312	383	371	379	325	322	323	326	320	324
31	318	311	314	---	---	---	327	322	325	320	307	313
MONTH	650	278	348	383	298	330	---	---	---	333	307	322



## 09246200 ELKHEAD CREEK ABOVE LONG GULCH, NEAR HAYDEN, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.4	7.3	11.1	2.5	0.6	1.7	0.9	0.0	0.2	0.0	0.0	0.0
2	13.8	9.6	11.7	2.6	0.7	1.5	1.9	0.0	0.5	0.0	0.0	0.0
3	11.7	9.2	10.3	3.1	0.0	1.1	1.6	0.0	0.4	0.0	0.0	0.0
4	10.5	7.6	9.1	3.3	0.0	1.3	0.8	0.0	0.2	0.0	0.0	0.0
5	11.8	8.6	10.1	3.8	0.0	1.6	0.9	0.0	0.2	0.0	0.0	0.0
6	13.0	8.2	10.6	4.0	0.0	1.7	1.4	0.0	0.3	0.0	0.0	0.0
7	13.9	7.4	10.8	3.2	0.0	1.6	1.1	0.0	0.2	0.0	0.0	0.0
8	14.2	8.1	11.3	2.9	1.3	2.0	0.8	0.0	0.1	0.0	0.0	0.0
9	13.7	7.6	10.7	2.7	1.4	2.3	0.7	0.0	0.1	0.0	0.0	0.0
10	13.5	7.2	10.2	1.5	0.1	0.8	0.5	0.0	0.1	0.0	0.0	0.0
11	10.2	7.4	9.3	2.5	0.0	0.9	0.5	0.0	0.1	0.0	0.0	0.0
12	11.0	4.1	7.3	2.6	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
13	10.9	3.1	6.6	1.3	0.0	0.6	0.2	0.0	0.0	0.0	0.0	0.0
14	11.0	3.1	6.6	2.6	0.0	1.2	0.2	0.0	0.0	0.0	0.0	0.0
15	11.0	3.4	6.9	1.9	0.0	0.8	0.2	0.0	0.0	0.0	0.0	0.0
16	10.3	3.9	6.8	1.4	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.0
17	10.9	3.3	6.7	0.9	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
18	10.9	3.5	6.8	1.8	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
19	10.1	3.7	6.6	2.2	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
20	9.5	3.3	6.1	2.9	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
21	9.6	3.2	6.0	2.8	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
22	7.1	3.0	5.2	2.9	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0
23	6.9	4.6	5.9	3.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0
24	8.9	5.2	6.8	2.2	0.6	1.4	0.0	0.0	0.0	0.0	0.0	0.0
25	7.9	4.0	6.1	0.8	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
26	7.4	3.7	5.8	0.9	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
27	9.8	5.1	7.3	0.8	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
28	7.6	4.9	6.3	1.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
29	6.5	4.1	5.2	1.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
30	4.4	2.2	3.3	1.8	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
31	2.8	0.4	1.9	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	15.4	0.4	7.6	4.0	0.0	1.0	1.9	0.0	0.1	0.0	0.0	0.0
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	0.0	0.0	0.0	0.0	0.0	0.0	10.2	3.8	7.1	6.2	3.5	4.7
2	0.0	0.0	0.0	0.0	0.0	0.0	6.7	2.4	4.8	8.3	3.4	5.7
3	0.0	0.0	0.0	0.0	0.0	0.0	5.8	2.6	3.6	8.5	5.6	7.1
4	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.3	3.3	7.2	3.8	5.4
5	0.0	0.0	0.0	0.0	0.0	0.0	5.8	2.2	4.1	6.9	3.0	4.9
6	0.0	0.0	0.0	0.0	0.0	0.0	6.1	2.4	4.2	9.9	3.7	6.6
7	0.0	0.0	0.0	0.0	0.0	0.0	5.6	1.9	3.8	8.3	5.4	6.2
8	0.0	0.0	0.0	0.0	0.0	0.0	11.1	1.6	6.0	6.0	4.4	5.3
9	0.0	0.0	0.0	0.0	0.0	0.0	13.2	4.6	8.7	6.4	3.4	4.8
10	0.0	0.0	0.0	0.0	0.0	0.0	11.7	5.2	8.9	6.9	4.5	5.6
11	0.0	0.0	0.0	0.0	0.0	0.0	10.6	3.9	7.3	9.5	3.4	6.4
12	0.0	0.0	0.0	0.0	0.0	0.0	9.5	2.7	5.6	12.3	5.1	8.8
13	0.0	0.0	0.0	0.0	0.0	0.0	9.0	1.5	5.3	11.5	7.5	9.6
14	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.9	5.0	12.4	5.5	8.9
15	0.0	0.0	0.0	0.0	0.0	0.0	7.1	1.4	2.9	11.4	6.1	8.2
16	0.0	0.0	0.0	0.0	0.0	0.0	7.5	0.7	3.8	11.0	5.0	7.9
17	0.0	0.0	0.0	0.0	0.0	0.0	7.0	2.8	5.2	10.1	5.6	8.2
18	0.0	0.0	0.0	0.0	0.0	0.0	6.3	3.1	4.2	9.1	5.9	7.4
19	0.0	0.0	0.0	0.0	0.0	0.0	10.4	1.8	4.8	10.0	4.4	7.3
20	0.0	0.0	0.0	0.1	0.0	0.0	16.0	3.0	7.4	11.0	4.9	8.1
21	0.0	0.0	0.0	1.1	0.0	0.2	8.0	3.7	6.1	12.0	5.8	9.0
22	0.0	0.0	0.0	1.5	0.0	0.3	7.8	4.6	6.3	13.2	6.8	10.1
23	0.0	0.0	0.0	2.8	0.0	1.1	6.8	0.0	1.9	14.2	7.4	10.9
24	0.0	0.0	0.0	4.0	0.1	1.9	7.2	0.0	2.9	14.5	8.3	11.6
25	0.0	0.0	0.0	7.5	0.1	3.9	8.5	1.7	5.0	13.8	8.8	11.6
26	0.0	0.0	0.0	5.4	2.5	4.0	10.9	2.4	6.1	14.7	8.3	11.7
27	0.0	0.0	0.0	5.0	0.3	2.3	8.5	2.6	5.9	16.0	10.4	13.4
28	0.0	0.0	0.0	5.5	0.0	2.4	8.4	3.6	6.4	16.7	10.9	13.9
29	---	---	---	---	0.0	---	8.0	3.5	6.0	15.8	11.8	14.1
30	---	---	---	8.7	0.6	4.5	6.9	3.1	4.7	16.2	12.0	14.2
31	---	---	---	---	3.1	---	---	---	---	16.9	12.6	14.9
MONTH	0.0	0.0	0.0	---	0.0	---	16.0	0.0	5.2	16.9	3.0	8.8

## 09246200 ELKHEAD CREEK ABOVE LONG GULCH, NEAR HAYDEN, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.7	12.5	14.2	25.5	17.4	21.6	26.9	17.6	22.1	24.6	13.3	18.9
2	15.8	11.2	13.5	27.1	15.5	21.3	29.0	17.9	22.9	24.4	14.4	19.0
3	16.4	10.5	13.5	27.4	16.5	22.0	25.7	19.1	22.3	25.0	14.1	19.0
4	17.1	10.8	14.1	27.8	17.0	22.3	26.3	18.2	22.2	25.3	14.6	19.5
5	16.4	10.9	13.7	27.0	16.5	21.8	28.9	17.4	22.9	21.6	13.9	18.1
6	16.1	10.6	13.4	25.7	16.2	21.1	27.4	17.9	22.8	24.2	16.2	19.0
7	17.0	10.1	13.6	27.6	17.2	22.0	25.4	18.3	21.9	21.6	15.9	17.7
8	18.6	10.5	14.6	25.9	16.8	21.3	28.7	17.9	23.0	20.9	13.8	17.2
9	17.4	12.9	15.3	26.7	14.9	20.9	29.7	18.5	23.6	19.9	13.8	16.8
10	19.5	13.3	16.4	27.5	15.9	21.8	28.7	16.9	22.8	16.8	12.9	14.6
11	19.1	14.1	16.5	25.0	16.4	21.2	27.1	18.2	21.5	15.0	11.4	13.0
12	19.3	12.9	16.0	26.9	16.4	21.8	28.5	17.2	21.7	18.2	11.4	14.6
13	20.4	13.4	16.8	25.8	17.1	21.9	28.6	17.7	22.2	18.1	11.8	14.9
14	22.8	14.5	18.6	---	17.3	---	---	---	---	16.9	9.5	13.4
15	24.4	15.4	19.9	25.6	18.5	22.2	---	---	---	17.7	9.6	13.7
16	24.6	17.8	20.6	28.8	18.6	23.5	---	---	---	17.9	12.3	14.9
17	23.6	15.7	19.6	30.0	20.1	24.7	---	---	---	14.9	10.4	13.2
18	25.2	16.6	20.7	30.0	---	---	---	---	---	17.0	8.4	12.1
19	23.2	17.0	20.1	29.9	20.9	24.9	---	---	---	16.9	7.7	12.1
20	20.5	15.9	17.9	29.3	20.1	24.5	---	---	---	16.6	8.5	12.1
21	20.0	14.0	17.3	29.5	20.2	24.9	---	---	---	17.0	7.5	12.2
22	22.5	15.2	18.7	28.8	20.7	24.8	---	---	---	18.3	7.9	13.0
23	23.4	14.9	19.0	27.4	19.6	23.4	27.6	19.2	22.8	18.0	8.6	13.2
24	20.2	15.9	17.8	29.2	19.5	23.6	27.1	18.8	22.8	18.6	8.6	13.5
25	19.2	14.2	16.6	29.1	20.0	24.4	25.2	19.7	22.0	17.7	8.3	13.1
26	23.0	12.7	17.8	30.3	20.8	25.0	25.4	17.6	21.2	17.9	8.9	13.4
27	24.3	14.4	19.4	27.7	20.2	23.9	23.2	18.5	20.9	18.5	9.6	13.8
28	25.6	15.6	20.6	27.7	19.3	23.6	26.0	16.7	21.1	18.5	9.6	13.9
29	26.6	16.9	21.7	29.1	20.2	23.7	25.3	15.7	20.3	18.7	9.7	14.2
30	26.6	16.9	21.9	28.6	18.7	23.4	24.7	16.7	19.9	18.8	11.0	14.6
31	---	---	---	24.5	17.7	21.3	22.6	16.2	19.1	---	---	---
MONTH	26.6	10.1	17.3	---	---	---	---	---	---	25.3	7.5	15.0

## 403318107230100 ELKHEAD CREEK BELOW ELKHEAD RESERVOIR, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 40°33'18", long 107°23'01", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ , sec.16, T.7 N., R.89 W., Moffat County, Hydrologic Unit 14050001, 300 ft downstream from Elkhead Dam, and 11 mi northeast of Craig.

PERIOD OF RECORD.--April to June 1997, April 2002 to April 2003 (discontinued). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=403318107230100](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=403318107230100)

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diameter percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
APR							
08...	1050	39	384	3.9	100	98	10
23...	1250	462	355	6.0	100	21	26

## 09246400 ELKHEAD CREEK BELOW MAYNARD GULCH NEAR CRAIG, CO

LOCATION.--Lat 40°32'31", long 107°23'50", in SW¼SE¼ sec.20, T.7 N., R.89 W., Moffat County, Hydrologic Unit 14050001, on left bank 2.0 mi downstream from Maynard Gulch, and 8.5 mi northeast of Craig.

DRAINAGE AREA.--212 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1995 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09246400](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09246400)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,280 ft above NGVD of 1929, from topographic map.

REMARKS.--Record good except for estimated daily discharges, which are poor. Natural flow affected by diversions for irrigation of several hundred acres upstream from station and storage in Elkhead Reservoir.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.4	1.3	e3.0	e1.1	e1.8	67	502	370	16	1.9	1.8
2	0.95	1.4	1.2	3.1	e1.3	e1.9	176	404	393	11	1.6	1.7
3	1.3	1.1	1.4	2.7	e1.1	e2.2	178	396	292	10	1.8	1.8
4	1.4	1.1	1.4	2.3	e1.0	e2.4	101	482	230	8.8	2.2	1.6
5	1.3	1.2	1.4	2.2	e1.3	e2.5	68	492	187	7.0	1.8	1.6
6	0.88	1.2	1.4	2.0	e2.2	e2.4	57	408	154	5.9	1.7	1.8
7	0.61	1.4	1.4	1.6	e1.9	e2.4	47	358	133	3.9	1.7	2.9
8	0.54	1.4	1.3	1.8	e2.0	e2.1	38	364	114	3.3	1.6	1.7
9	0.49	1.1	1.2	e2.0	e1.8	e1.8	37	380	98	3.4	1.6	1.9
10	0.46	1.0	1.0	e3.1	e2.0	1.2	83	369	92	2.0	1.6	2.9
11	0.39	1.0	1.0	e3.1	e2.0	1.5	178	322	99	2.7	1.5	2.4
12	0.36	1.0	1.3	e3.1	e2.0	1.3	264	295	100	2.4	1.7	1.5
13	0.31	1.1	1.4	e3.1	e2.0	1.5	313	405	82	2.8	1.9	1.1
14	0.33	1.1	1.4	e3.3	e2.0	1.3	424	526	70	2.2	2.0	0.62
15	0.30	1.2	1.4	e3.2	e1.8	1.5	516	818	62	1.5	2.2	0.50
16	0.34	1.0	1.4	e3.2	e1.9	1.3	385	940	52	1.5	2.5	0.69
17	0.36	1.0	1.2	e3.2	e2.1	1.5	284	969	46	1.6	3.2	0.94
18	0.36	1.0	1.4	e3.2	e1.9	1.6	259	998	45	2.1	3.6	1.6
19	0.34	1.0	1.3	e3.3	e1.9	1.4	223	825	43	2.0	2.9	1.1
20	0.27	1.0	1.2	e4.6	e2.0	1.4	188	700	44	2.5	2.6	1.2
21	0.28	1.0	1.0	e6.2	e2.1	1.4	215	662	48	2.0	2.5	1.2
22	0.40	1.0	1.1	e6.1	e1.9	1.3	300	634	45	1.5	2.7	1.8
23	1.3	1.3	1.5	e6.2	e1.9	1.1	425	632	40	1.4	3.7	1.7
24	1.3	1.0	1.7	e4.2	e1.7	2.3	360	665	35	1.4	2.6	1.6
25	1.2	1.2	1.9	e3.6	e1.7	1.2	444	645	32	1.4	2.6	1.6
26	1.3	1.4	2.1	e3.2	e1.7	1.2	894	591	29	1.4	2.5	1.3
27	1.2	1.4	2.1	e2.7	e1.7	3.5	803	538	27	1.5	2.5	1.4
28	1.2	1.4	2.3	e2.4	e1.8	28	582	507	25	1.7	2.5	1.8
29	1.4	1.4	2.3	e1.4	---	31	613	469	22	3.9	2.1	0.91
30	1.4	1.4	2.2	e1.2	---	28	655	436	18	1.7	2.2	0.76
31	1.4	---	3.0	e1.4	---	26	---	399	---	1.7	2.3	---
TOTAL	24.97	35.2	47.2	95.7	49.8	160.0	9,177	17,131	3,027	112.2	69.8	45.42
MEAN	0.81	1.17	1.52	3.09	1.78	5.16	306	553	101	3.62	2.25	1.51
MAX	1.4	1.4	3.0	6.2	2.2	31	894	998	393	16	3.7	2.9
MIN	0.27	1.0	1.0	1.2	1.0	1.1	37	295	18	1.4	1.5	0.50
AC-FT	50	70	94	190	99	317	18,200	33,980	6,000	223	138	90

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	
MEAN	10.1	11.8	10.5	12.3	14.0	68.8	368	635	139	12.8	5.99	7.13
MAX	39.3	33.2	29.8	29.6	32.0	169	503	1,224	362	39.3	13.6	32.0
(WY)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1997)	(1997)	(1998)	(1997)	(1997)
MIN	0.81	1.17	1.52	3.09	1.78	5.16	148	78.0	5.31	1.97	1.46	1.05
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2001)	(2001)	(2001)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1995 - 2003

ANNUAL TOTAL	9,116.68	29,975.29	
ANNUAL MEAN	25.0	82.1	108
HIGHEST ANNUAL MEAN			192 1997
LOWEST ANNUAL MEAN			25.1 2002
HIGHEST DAILY MEAN	247 Apr 16	998 May 18	1,870 May 4, 1998
LOWEST DAILY MEAN	0.27 Oct 20	0.27 Oct 20	0.15 Sep 3, 2001
ANNUAL SEVEN-DAY MINIMUM	0.32 Oct 15	0.32 Oct 15	0.28 Aug 30, 2001
MAXIMUM PEAK FLOW		1,160 May 16	2,430 May 8, 1997
MAXIMUM PEAK STAGE		4.88 May 16	a6.83 May 8, 1997
ANNUAL RUNOFF (AC-FT)	18,080	59,460	78,560
10 PERCENT EXCEEDS	89	382	379
50 PERCENT EXCEEDS	7.0	2.0	14
90 PERCENT EXCEEDS	1.0	1.0	1.6

e Estimated.

a Maximum gage height, 8.00 ft, Dec 29, 1996, backwater from ice.



## 09246400 ELKHEAD CREEK BELOW MAYNARD GULCH, NEAR CRAIG, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1995 to September 2003 (discontinued). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09246400](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09246400)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: August 1995 to September 1999, March 2001 to September 2003 (discontinued).

WATER TEMPERATURE: August 1995 to September 1999, March 2001 to September 2003 (discontinued).

INSTRUMENTATION.--Water-quality monitor with satellite telemetry, August 1995 to September 1999, March 2001 to September 2003.

REMARKS.--Published daily specific-conductance records are good except for for the period Mar. 28 to Apr. 24, which is fair. Published daily water-temperature records are excellent. Periods of missing or deleted record are due to the sensor being out of water or instrumentation failure.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 588 microsiemens/cm, Apr. 11, 1998; minimum recorded, 113 microsiemens/cm, June 12, 2003.

WATER TEMPERATURE: Maximum recorded, 31.8°C, July 18,2003; minimum, 0.0°C on many days during winter period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 434 microsiemens/cm, Feb. 11; minimum, 113 microsiemens/cm, June 12.

WATER TEMPERATURE: Maximum, 31.8°C, July 18; minimum, 0.0°C, on many days.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd lab, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)
OCT 29...	1200	1.4	--	9.6	8.6	371	6.9	140	33.7	12.7	1.49	0.8	22.6
NOV 18...	1310	1.0	3.8	10.8	8.2	367	4.2	150	35.8	13.6	1.48	0.8	23.5
JAN 22...	1240	5.6	--	11.8	8.1	403	0.0	160	38.4	15.1	1.52	1	28.8
FEB 26...	1507	1.7	--	11.2	8.1	429	0.0	160	39.7	14.9	1.40	1	28.3
MAR 20...	1030	1.4	3.7	10.6	8.3	401	5.4	150	37.0	14.5	1.29	1	30.1
APR 08...	1014	40	10	11.9	8.3	379	2.4	140	35.4	13.5	1.65	0.9	24.8
23...	1355	466	54	10.0	8.2	354	6.2	130	31.3	12.2	2.03	0.8	20.8
JUN 17...	1120	45	19	7.8	8.0	161	18.1	66	17.2	5.57	1.04	0.4	6.88
JUL 22...	1250	1.7	--	6.9	8.6	272	28.3	110	27.0	9.30	1.73	0.7	17.3
AUG 12...	1610	1.7	20	6.8	8.8	262	30.4	100	26.2	9.37	1.63	0.7	16.7

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT 29...	118	4.53	<0.2	5.5	63.9	215	0.29	0.81	0.40	<0.04	<0.06	<0.008	<0.02
NOV 18...	120	4.65	0.2	6.2	67.2	225	0.31	0.61	0.28	<0.04	<0.06	<0.008	<0.02
JAN 22...	135	4.14	0.19	6.9	71.5	247	0.34	3.76	0.34	<0.04	<0.06	<0.008	<0.02
FEB 26...	E167	4.98	0.21	6.7	75.3	--	--	--	0.31	<0.04	<0.06	<0.008	<0.02
MAR 20...	125	6.43	0.18	4.6	74.8	244	0.33	0.92	0.29	<0.04	<0.06	<0.008	<0.02
APR 08...	108	3.55	0.15	8.0	81.6	234	0.32	25.3	0.36	<0.04	0.15	<0.008	<0.02
23...	87	2.97	0.14	8.2	77.6	210	0.29	264	0.51	<0.04	0.63	E.006	<0.02
JUN 17...	57	1.49	<0.2	10.9	18.6	97	0.13	11.8	0.43	<0.04	0.19	E.005	<0.02
JUL 22...	94	3.66	<0.2	9.7	40.9	166	0.23	0.76	0.60	E.03	<0.06	E.004	<0.02
AUG 12...	91	2.95	<0.2	10.2	36.9	159	0.22	0.73	0.58	<0.04	<0.06	<0.008	<0.02

09246400 ELKHEAD CREEK BELOW MAYNARD GULCH, NEAR CRAIG, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)
OCT 29...	0.018	--	--	--	--
NOV 18...	0.012	6.3	6.7	E2	E10
JAN 22...	0.004	--	--	--	--
FEB 26...	0.011	--	--	--	--
MAR 20...	0.012	4.7	4.3	E2	E7
APR 08...	0.020	--	--	--	--
APR 23...	0.071	6.0	7.6	--	--
JUN 17...	0.047	--	--	21	29
JUL 22...	0.036	--	--	--	--
AUG 12...	0.039	7.1	8.4	87	103

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Aluminum, water, unfltrd recover-able, ug/L (01105)	Arsenic water, fltrd, ug/L (01000)	Arsenic water unfltrd ug/L (01002)	Barium, water, fltrd, ug/L (01005)	Barium, water, unfltrd recover-able, ug/L (01007)	Beryllium, water, unfltrd recover-able, ug/L (01012)	Cadmium water, fltrd, ug/L (01025)	Cadmium water, unfltrd ug/L (01027)	Chromium, water, fltrd, ug/L (01030)	Chromium, water, unfltrd recover-able, ug/L (01034)	Cobalt water, unfltrd recover-able, ug/L (01037)	Copper, water, fltrd, ug/L (01040)	Copper, water, unfltrd recover-able, ug/L (01042)
NOV 18...	60	<2	<2	48.6	44.7	<2	E.2	E.2	<0.8	<0.8	<3.4	1.3	1.5
JUN 17...	430	<2	2	34.0	36.7	<2	<0.2	<0.2	<0.8	<1.6	<3.4	1.9	2.7

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Lead, water, unfltrd recover-able, ug/L (01051)	Lithium water unfltrd recover-able, ug/L (01132)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury water, fltrd, ug/L (71890)	Mercury water, unfltrd recover-able, ug/L (71900)	Molybdenum, water, unfltrd recover-able, ug/L (01062)	Nickel, water, unfltrd recover-able, ug/L (01067)	Selenium, water, fltrd, ug/L (01145)	Selenium, water, unfltrd ug/L (01147)
NOV 18...	12	180	<1	<1	E7	21.8	29.9	<0.02	<0.02	E1	E1.4	<3	<3
JUN 17...	50	530	<1	<1	9	5.5	21.5	<0.02	<0.02	<2	2.3	<3	<3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silver, water, fltrd, ug/L (01075)	Silver, water, unfltrd recover-able, ug/L (01077)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover-able, ug/L (01092)
NOV 18...	<0.3	<0.3	<24	<25
JUN 17...	<0.3	<0.3	E2	<25

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## GREEN RIVER BASIN

09246400 ELKHEAD CREEK BELOW MAYNARD GULCH, NEAR CRAIG, CO—Continued

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diameter percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
MAR 20...	1030	1.4	5.4	--	4	0.01
APR 08...	1014	40	2.4	86	20	2.2
23...	1355	466	6.2	100	47	59
JUN 17...	1120	45	18.1	--	15	1.8
AUG 12...	1610	1.7	30.4	--	18	0.08

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	382	372	376	360	346	351	412	388	402	384	374	379
2	394	367	375	358	347	352	399	372	384	381	372	376
3	370	361	365	359	346	354	382	362	373	377	371	374
4	363	356	359	364	353	359	375	355	366	375	369	371
5	375	356	364	372	358	362	365	349	357	374	370	372
6	367	354	359	374	359	365	366	350	358	376	370	372
7	368	354	360	377	361	367	374	356	365	383	373	376
8	368	356	361	366	352	359	387	362	375	395	380	386
9	375	358	365	355	340	347	401	379	391	400	382	392
10	395	363	371	347	335	340	418	397	406	396	388	391
11	396	371	377	350	338	345	430	400	412	400	389	394
12	382	370	374	363	349	358	420	402	411	403	395	399
13	386	372	377	368	360	364	423	397	413	401	393	396
14	388	375	380	365	357	361	427	400	415	395	387	391
15	393	377	383	362	347	353	424	394	408	393	388	390
16	396	378	384	361	353	357	425	386	405	394	385	390
17	393	375	382	366	358	361	406	380	392	396	389	393
18	386	372	378	369	358	363	395	376	382	402	394	399
19	389	369	374	374	363	366	383	369	374	405	396	401
20	380	367	371	368	361	365	388	372	379	404	395	401
21	379	363	368	368	355	359	382	368	373	403	395	399
22	377	364	368	359	348	354	378	369	373	402	394	398
23	373	360	364	361	345	350	395	376	385	399	390	395
24	369	350	360	365	338	343	388	380	384	394	383	388
25	357	349	353	356	339	345	387	380	383	390	379	384
26	355	346	350	380	354	367	388	381	385	383	375	379
27	356	344	350	395	374	387	391	385	388	387	376	380
28	361	341	349	411	393	401	394	382	389	390	382	385
29	356	339	347	421	405	410	392	383	386	393	383	388
30	358	346	350	416	403	411	388	378	382	395	388	392
31	364	345	351	---	---	---	386	380	383	398	388	394
MONTH	396	339	366	421	335	363	430	349	386	405	369	388

## 09246400 ELKHEAD CREEK BELOW MAYNARD GULCH, NEAR CRAIG, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	395	386	391	398	388	393	342	308	321	303	292	297
2	395	387	392	396	390	392	370	316	337	293	285	288
3	395	385	390	396	389	392	369	349	361	293	280	284
4	399	389	393	400	392	395	374	364	369	282	272	276
5	404	392	397	400	393	396	380	370	375	272	263	268
6	413	400	406	397	388	393	384	374	380	264	260	261
7	427	408	417	394	386	389	392	382	387	262	249	255
8	427	415	422	393	384	388	398	387	392	260	248	251
9	426	421	424	393	386	390	401	386	395	255	250	252
10	432	426	428	391	378	385	403	387	395	251	245	249
11	434	429	431	383	368	375	412	392	403	248	244	246
12	430	421	425	368	354	361	409	397	403	248	241	243
13	422	413	417	357	349	353	415	405	410	241	238	240
14	414	401	407	364	351	358	413	348	374	239	234	236
15	401	391	394	368	352	361	349	336	339	245	234	237
16	396	389	392	---	---	---	340	331	337	237	230	233
17	397	390	393	---	---	---	339	326	331	244	214	228
18	398	392	394	---	---	---	338	331	334	219	191	204
19	404	394	398	---	---	---	336	331	334	194	178	185
20	409	400	405	---	---	---	331	317	325	183	170	177
21	409	401	405	---	---	---	320	314	316	173	159	166
22	405	400	403	---	---	---	322	314	317	160	150	154
23	407	399	403	---	---	---	320	314	317	150	139	144
24	403	398	400	---	---	---	350	318	333	140	131	134
25	405	400	402	---	---	---	333	308	322	133	129	131
26	405	400	403	---	---	---	347	315	330	130	125	126
27	405	396	400	---	---	---	337	318	328	126	121	123
28	400	394	396	---	---	---	320	296	312	121	117	119
29	---	---	---	322	309	314	312	291	304	120	116	117
30	---	---	---	---	---	---	304	289	299	118	116	117
31	---	---	---	---	---	---	---	---	---	118	115	116
MONTH	434	385	405	---	---	---	415	289	349	303	115	205
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	119	115	117	219	202	210	309	290	296	263	254	258
2	119	115	117	234	219	226	322	304	311	263	256	260
3	118	114	116	236	219	226	322	311	316	265	255	261
4	117	114	116	248	236	241	316	302	308	268	257	262
5	121	117	120	248	237	243	311	297	304	268	260	265
6	124	121	123	250	237	245	310	294	302	271	262	268
7	128	124	126	259	243	250	308	293	299	269	257	263
8	131	124	127	261	256	258	303	288	296	264	258	261
9	136	126	128	279	257	265	301	286	294	266	257	262
10	132	121	126	287	273	280	303	287	294	265	250	256
11	124	117	121	282	273	277	306	290	297	259	252	254
12	123	113	120	290	271	282	303	268	289	267	256	261
13	---	---	---	293	283	288	279	257	265	266	257	260
14	---	---	---	291	279	283	279	257	268	274	257	263
15	---	---	---	298	282	290	274	263	268	283	264	271
16	---	---	---	306	291	295	277	265	271	290	278	282
17	---	---	---	295	271	277	280	265	270	302	279	287
18	171	162	168	291	275	281	273	264	269	291	281	285
19	178	171	175	298	284	287	273	265	267	294	286	288
20	179	174	177	298	279	282	276	264	269	296	288	292
21	174	169	171	292	279	283	279	267	271	297	289	292
22	174	170	172	297	271	282	286	273	278	295	285	290
23	176	172	174	297	279	287	279	268	271	294	286	290
24	177	173	175	306	284	292	278	268	273	295	287	291
25	180	174	178	307	285	293	280	270	274	297	287	290
26	183	176	180	309	290	295	284	273	278	301	291	294
27	185	178	182	304	291	296	---	---	---	298	291	294
28	190	182	187	305	291	296	---	---	---	302	292	295
29	198	188	193	301	277	287	283	278	281	300	295	297
30	207	194	202	291	277	282	284	278	281	309	296	301
31	---	---	---	299	279	286	279	252	258	---	---	---
MONTH	---	---	---	309	202	273	---	---	---	309	250	276

## 09246400 ELKHEAD CREEK BELOW MAYNARD GULCH, NEAR CRAIG, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.7	8.0	12.3	4.5	1.5	2.8	2.4	1.0	1.5	0.0	0.0	0.0
2	15.3	9.3	12.1	4.3	1.3	2.4	4.5	0.9	2.1	0.0	0.0	0.0
3	12.6	9.1	10.7	5.2	0.5	2.4	4.3	0.7	2.0	0.0	0.0	0.0
4	12.7	8.1	10	4.8	1.0	2.5	2.7	1.2	1.8	0.0	0.0	0.0
5	13.8	9.0	10.8	6.5	0.9	3.2	3.6	1.2	2.1	0.0	0.0	0.0
6	15.5	8.5	11.6	7.4	0.9	3.5	4.1	1.0	2.1	0.0	0.0	0.0
7	17.5	7.6	12.1	6.2	1.0	3.3	3.6	0.5	1.7	0.0	0.0	0.0
8	17.6	8.0	12.4	5.8	2.3	3.8	3.6	0.3	1.6	0.0	0.0	0.0
9	16.7	7.4	11.7	3.8	2.1	3.3	3.4	0.2	1.5	0.0	0.0	0.0
10	15.9	7.0	11.3	3.7	1.0	2.1	3.0	0.2	1.3	0.0	0.0	0.0
11	10.8	7.6	9.6	4.0	0.8	2.0	2.7	0.3	1.2	0.0	0.0	0.0
12	13.5	3.9	8.2	5.2	0.5	2.4	1.4	0.3	0.7	0.0	0.0	0.0
13	13.0	3.2	7.6	3.6	1.3	2.2	2.4	0.0	0.8	0.0	0.0	0.0
14	13.2	3.3	7.8	5.2	1.3	2.8	2.3	0.0	0.7	0.0	0.0	0.0
15	13.1	3.7	7.9	3.8	0.7	2.0	2.0	0.0	0.7	0.0	0.0	0.0
16	12.4	4.1	7.8	3.8	0.4	1.7	1.6	0.0	0.6	0.0	0.0	0.0
17	13.0	3.7	7.9	3.3	0.5	1.7	0.7	0.0	0.3	0.0	0.0	0.0
18	13.1	3.8	8.0	4.7	0.5	2.1	0.9	0.0	0.2	0.0	0.0	0.0
19	12.7	3.5	7.6	5.3	1.1	2.9	0.7	0.0	0.1	0.0	0.0	0.0
20	12.1	3.3	7.3	6.8	1.5	3.4	0.3	0.0	0.1	0.0	0.0	0.0
21	11.7	3.1	7.1	7.0	1.2	3.4	0.1	0.0	0.0	0.0	0.0	0.0
22	8.5	3.1	6.1	7.0	1.2	3.4	0.1	0.0	0.0	0.0	0.0	0.0
23	8.7	4.9	6.7	6.7	1.4	3.6	0.1	0.0	0.0	0.0	0.0	0.0
24	11.1	5.5	7.3	4.4	1.7	2.8	0.0	0.0	0.0	0.0	0.0	0.0
25	10.1	4.3	6.7	3.4	0.5	1.7	0.0	0.0	0.0	0.0	0.0	0.0
26	9.5	4.0	6.7	3.3	0.2	1.4	0.0	0.0	0.0	0.0	0.0	0.0
27	10.3	5.4	7.5	2.9	0.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0
28	9.2	4.4	6.3	3.3	0.2	1.3	0.0	0.0	0.0	0.0	0.0	0.0
29	7.3	3.6	5.3	3.7	0.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0
30	5.9	2.3	3.7	4.0	0.3	1.6	0.0	0.0	0.0	0.0	0.0	0.0
31	5.1	1.3	3.0	---	---	---	0.0	0.0	0.0	0.0	0.0	0.0
MONTH	17.7	1.3	8.4	7.4	0.2	2.5	4.5	0.0	0.7	0.0	0.0	0.0
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	0.0	0.0	0.0	0.0	0.0	0.0	9.5	2.7	5.8	8.8	6.9	7.5
2	0.0	0.0	0.0	0.0	0.0	0.0	6.7	3.3	4.5	9.5	7.2	8.0
3	0.0	0.0	0.0	0.0	0.0	0.0	4.7	2.6	3.4	9.2	6.9	7.6
4	0.0	0.0	0.0	0.0	0.0	0.0	6.0	1.8	3.6	8.1	6.8	7.3
5	0.0	0.0	0.0	0.0	0.0	0.0	5.8	2.0	3.5	8.6	6.8	7.4
6	0.0	0.0	0.0	0.0	0.0	0.0	6.7	2.2	3.9	10.0	6.9	7.9
7	0.0	0.0	0.0	0.0	0.0	0.0	6.9	1.9	4.0	8.4	6.8	7.5
8	0.0	0.0	0.0	0.0	0.0	0.0	10.8	0.9	5.3	8.7	7.0	7.6
9	0.0	0.0	0.0	0.0	0.0	0.0	11.7	1.7	6.2	9.0	6.9	7.5
10	0.0	0.0	0.0	0.0	0.0	0.0	9.7	2.2	5.8	8.5	6.9	7.4
11	0.0	0.0	0.0	0.0	0.0	0.0	9.0	4.8	6.8	9.8	6.6	7.8
12	0.0	0.0	0.0	0.1	0.0	0.0	7.4	4.0	5.4	10.9	6.6	8.1
13	0.0	0.0	0.0	0.5	0.0	0.1	7.3	3.8	5.2	10.7	7.1	8.8
14	0.0	0.0	0.0	1.1	0.0	0.3	6.9	4.3	5.3	11.4	8.4	9.9
15	0.0	0.0	0.0	2.4	0.0	0.6	6.0	4.7	5.2	10.6	8.7	9.6
16	0.0	0.0	0.0	1.8	0.0	0.6	8.0	5.0	6.3	11.1	8.5	10
17	0.0	0.0	0.0	1.4	0.0	0.5	8.1	5.3	7.1	11.1	7.6	9.1
18	0.0	0.0	0.0	4.2	0.0	1.6	6.3	5.3	5.8	11.0	8.6	9.7
19	0.0	0.0	0.0	5.9	0.3	2.6	7.9	5.2	6.3	11.3	9.5	10.3
20	0.0	0.0	0.0	4.9	0.6	2.2	9.8	5.3	7.1	11.5	9.4	10.3
21	0.0	0.0	0.0	6.6	0.4	2.8	8.9	5.9	7.2	11.6	9.3	10.4
22	0.0	0.0	0.0	7.1	1.0	3.3	8.4	6.1	6.8	12.2	9.3	10.6
23	0.0	0.0	0.0	9.2	1.0	4.3	6.4	5.3	6.0	13.9	10.2	11.9
24	0.0	0.0	0.0	7.3	1.9	4.1	8.7	5.8	6.8	14.3	12.0	13.1
25	0.0	0.0	0.0	11.9	1.0	5.6	9.0	6.3	7.5	14.2	12.3	13.1
26	0.0	0.0	0.0	7.2	2.1	3.7	8.1	6.0	6.9	14.9	12.5	13.5
27	0.0	0.0	0.0	8.8	1.1	4.0	8.6	5.9	6.9	16.2	12.9	14.7
28	0.0	0.0	0.0	7.3	1.5	4.2	8.3	6.4	7.1	17.1	15.0	16.2
29	---	---	---	6.4	0.9	3.6	8.1	6.6	7.2	17.1	14.4	16.1
30	---	---	---	---	1.0	---	8.4	6.8	7.3	17.6	14.1	15.3
31	---	---	---	---	2.1	---	---	---	---	17.6	14.3	15.5
MONTH	0.0	0.0	0.0	---	0.0	---	11.7	0.9	5.9	17.6	6.6	10.3

## 09246400 ELKHEAD CREEK BELOW MAYNARD GULCH, NEAR CRAIG, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.9	14.3	16.3	23.2	19.4	21.3	29.1	18.8	23.4	25.1	15.2	19.8
2	17.4	13.9	15.2	26.3	17.7	21.6	30.1	19.3	23.9	24.6	16.3	19.8
3	18.1	14.4	15.9	26.6	18.5	22.3	25.9	20.1	22.9	24.5	16.2	19.8
4	18.1	14.1	15.8	27.1	18.3	22.4	27.7	19.2	23.1	25.8	15.9	20.4
5	18.7	14.6	16.6	27.2	18.5	22.6	30.1	18.8	23.9	22.1	16.4	19.3
6	18.9	14.7	16.5	25.8	18.3	22.2	27.3	19.4	23.4	23.5	17.5	19.4
7	19.2	14.4	16.4	27.6	18.1	22.5	25.3	19.6	22.3	22.3	17.3	18.9
8	20.2	14.2	16.8	26.7	18.5	22.3	28.5	18.6	23.1	21.9	15.7	18.2
9	18.4	13.9	15.7	27.2	17.2	22.2	29.3	20.0	24.2	21.9	14.5	17.4
10	18.9	12.6	15.6	28.5	17.7	23.0	30.4	19.2	24.4	17.0	13.4	15.1
11	19.2	13.6	15.7	26.2	18.5	22.4	29.3	20.4	23.8	15.5	12.9	13.9
12	---	---	---	29.0	18.1	23.1	30.3	18.6	23.6	20.8	12.2	15.9
13	---	---	---	28.2	18.9	23.3	30.1	19.7	24.1	20.8	12.1	15.7
14	---	---	---	30.0	18.8	24.1	30.2	20.3	24.1	20.3	10.1	14.7
15	---	---	---	26.1	19.5	23.0	26.8	16.9	21.7	20.1	10.2	14.9
16	---	---	---	30.3	19.6	24.3	24.5	19.1	21.3	19.7	12.5	15.8
17	---	---	---	31.5	20.9	25.2	23.9	18.1	20.0	15.2	10.8	13.4
18	23.0	17.8	20.8	31.8	20.9	25.4	23.3	16.9	19.3	18.2	9.1	12.8
19	21.8	17.0	19.5	31.1	20.4	24.8	26.7	16.0	20.9	18.5	8.9	13.1
20	19.4	16.0	17.7	31.0	20.3	24.4	27.5	17.0	21.8	17.6	9.7	13.2
21	20.2	14.9	17.5	31.2	20.6	25.2	27.6	17.8	22.1	18.3	8.6	13.1
22	21.3	15.5	18.2	31.0	20.7	25.3	26.3	19.4	22.2	19.7	9.2	13.9
23	20.8	15.3	18.5	29.2	20.6	24.6	27.7	19.9	23.0	19.2	9.8	14.3
24	19.2	14.9	16.8	30.9	20.1	24.4	28.7	19.3	23.2	20.0	9.8	14.5
25	18.4	14.5	16.6	31.0	20.6	25.1	26.1	18.9	22.0	18.9	9.9	14.3
26	21.3	14.6	18.1	30.9	21.0	25.2	26.6	17.6	21.3	18.9	10.4	14.5
27	21.7	16.1	19.3	29.7	20.6	24.6	---	18.5	---	19.6	10.8	14.8
28	22.6	16.8	20.1	29.2	20.4	24.5	26.9	---	---	19.7	11.0	15.0
29	23.6	18.1	21.2	28.2	21.1	23.8	25.1	17.1	20.7	19.3	11.1	15.1
30	24.5	19.0	21.7	29.3	19.4	23.9	24.9	17.4	20.2	19.2	12.3	15.4
31	---	---	---	26.6	19.3	22.5	23.5	17.2	19.7	---	---	---
MONTH	---	---	---	31.8	17.2	23.6	---	---	---	25.8	8.6	15.9

## 09246920 FORTIFICATION CREEK NEAR FORTIFICATION, CO

LOCATION.--Lat 40°44'38", long 107°32'25", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.18, T.9 N., R.90 W., Moffat County, Hydrologic Unit 14050001, on right bank 10 ft downstream from County Road 108, and 4.5 mi south of Fortification.

DRAINAGE AREA.--40 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1984 to September 1991, September 2002 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09246920](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09246920)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,520 ft above NGVD of 1929, from topographic map. Prior to Sept. 5, 2002 at site 30 ft downstream at datum 3.00 ft lower.

REMARKS.--Records fair except for estimated daily discharges, and July 18 to Sept. 30, which are poor. Natural flow of stream affected by diversions for irrigation of hay fields above station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	1.1	2.0	2.0	2.5	3.0	12	26	63	7.5	0.07	0.01
2	0.07	1.2	2.6	2.1	4.8	3.1	13	e26	48	8.7	0.05	0.00
3	0.02	1.2	4.1	2.1	8.0	2.9	11	e26	36	8.1	0.04	0.00
4	0.00	1.1	2.1	2.1	2.5	2.7	5.6	e26	30	8.3	0.03	0.01
5	0.00	1.5	2.0	2.1	2.6	2.6	5.0	e26	25	7.3	0.02	0.01
6	0.00	1.4	2.7	2.2	2.4	2.6	4.3	e26	23	6.0	0.01	0.01
7	0.00	1.3	4.5	2.1	2.4	2.5	3.6	e26	20	5.5	0.00	0.01
8	0.00	1.2	5.8	2.1	2.1	2.4	3.7	24	19	5.1	0.00	0.01
9	0.00	1.3	5.2	2.0	2.0	2.7	4.5	23	19	4.5	0.01	0.01
10	0.01	1.1	3.8	1.9	2.2	3.2	10	23	21	5.2	0.01	0.01
11	0.01	0.98	2.3	1.9	2.3	8.3	16	21	22	2.0	0.01	0.02
12	0.02	e1.8	2.4	1.9	2.2	15	19	20	19	1.4	0.01	0.01
13	0.02	e1.7	2.7	2.0	2.0	43	18	36	16	1.8	0.02	0.01
14	0.02	e1.6	2.9	2.0	3.2	68	23	47	15	1.4	0.02	0.01
15	0.02	2.1	2.8	2.0	e3.3	67	23	63	16	1.2	0.01	0.02
16	0.02	1.9	2.3	2.0	e3.3	41	16	60	20	0.97	0.01	0.02
17	0.16	3.3	2.2	2.1	3.4	32	15	75	22	0.89	0.01	0.03
18	0.21	3.9	2.3	2.0	2.7	16	15	74	17	0.83	0.02	0.03
19	0.26	2.6	2.2	1.9	2.7	12	13	72	16	0.72	0.02	0.04
20	0.39	3.0	2.2	1.8	3.2	13	12	61	15	0.46	0.03	0.04
21	0.46	3.3	2.3	1.7	2.9	17	12	60	14	0.49	0.02	0.04
22	0.54	2.8	2.4	1.7	2.8	22	14	61	13	0.39	0.04	0.04
23	0.96	2.2	2.3	1.7	2.9	20	18	66	12	0.35	0.06	0.04
24	1.3	2.3	2.2	1.7	3.3	15	48	73	14	0.32	0.02	0.04
25	1.2	3.1	2.1	1.7	3.3	6.7	68	72	13	0.30	0.01	0.03
26	1.1	1.0	2.0	1.8	3.3	6.3	77	63	13	0.23	0.01	0.03
27	1.2	1.0	2.0	2.0	3.1	7.1	51	62	12	0.19	0.00	0.03
28	1.1	1.6	2.0	2.0	3.0	6.7	38	71	11	0.13	0.00	0.03
29	1.1	1.8	2.0	2.0	---	5.3	38	72	9.7	0.12	0.01	0.02
30	1.1	3.5	2.0	2.1	---	3.9	33	67	8.3	0.10	0.01	0.01
31	1.0	---	2.0	2.2	---	8.6	---	64	---	0.08	0.01	---
TOTAL	12.29	57.88	82.4	60.9	84.4	461.6	639.7	1,512	602.0	80.57	0.59	0.62
MEAN	0.40	1.93	2.66	1.96	3.01	14.9	21.3	48.8	20.1	2.60	0.019	0.021
MAX	1.3	3.9	5.8	2.2	8.0	68	77	75	63	8.7	0.07	0.04
MIN	0.00	0.98	2.0	1.7	2.0	2.4	3.6	20	8.3	0.08	0.00	0.00
AC-FT	24	115	163	121	167	916	1,270	3,000	1,190	160	1.2	1.2

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)

	1985	1985	1985	1985	1986	1986	1985	1986	1986	1986	1985	1986
MEAN	2.70	2.60	2.09	2.26	5.60	17.4	34.7	40.8	18.9	2.09	0.36	0.66
MAX	7.48	4.90	4.45	4.64	26.3	33.4	87.0	78.5	58.3	6.41	0.94	1.81
(WY)	(1985)	(1985)	(1985)	(1985)	(1986)	(1986)	(1985)	(1986)	(1986)	(1986)	(1985)	(1986)
MIN	0.40	1.31	1.12	1.29	1.44	2.84	13.4	9.69	6.97	0.074	0.000	0.000
(WY)	(2003)	(1991)	(1988)	(1988)	(1989)	(1988)	(1991)	(1989)	(1987)	(1988)	(1988)	(1990)

## SUMMARY STATISTICS

ANNUAL TOTAL  
ANNUAL MEAN  
HIGHEST ANNUAL MEAN  
LOWEST ANNUAL MEAN  
HIGHEST DAILY MEAN  
LOWEST DAILY MEAN  
ANNUAL SEVEN-DAY MINIMUM  
MAXIMUM PEAK FLOW  
MAXIMUM PEAK STAGE  
ANNUAL RUNOFF (AC-FT)  
10 PERCENT EXCEEDS  
50 PERCENT EXCEEDS  
90 PERCENT EXCEEDS

## FOR 2003 WATER YEAR

3,594.95  
9.85  
77 Apr 26  
0.00 Oct 1  
0.00 Oct 4  
161 Apr 25  
3.81 Apr 25  
7,130  
26  
2.2  
0.01

## WATER YEARS 1985 - 2003

10.8  
21.6 1986  
3.64 1989  
208 Mar 25, 1985  
a0.00 Jul 12, 1988  
0.00 Jul 12, 1988  
465 Mar 25, 1985  
4.64 Mar 25, 1985  
7,860  
34  
2.3  
0.14

e Estimated.

a No flow many days, most years.

## 09247600 YAMPA RIVER BELOW CRAIG, CO

LOCATION.--Lat 40°28'51", long 107°36'49", in SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.16, T.6 N., R.91 W., Moffat County, Hydrologic Unit 14050001, on left bank 0.5 mi downstream from state highway 13-789 bridge, and 3.3 mi southwest of Craig.

DRAINAGE AREA.--1,750 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1975 to September 1980 (discharge measurements only). October 1984 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09247600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09247600)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,100 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions for irrigation, power plants at Hayden and Craig, transbasin diversions, storage reservoirs, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	140	e199	e115	e155	e169	723	3,570	10,600	1,580	220	125
2	94	143	e200	e119	e151	e172	1,400	3,050	11,800	1,450	216	108
3	117	168	e198	e124	e148	e184	1,700	2,800	11,000	1,360	187	80
4	172	137	e196	e127	e146	e195	1,280	2,920	8,490	1,230	137	76
5	216	121	e195	e122	e137	e200	908	3,140	6,980	1,120	121	75
6	183	148	180	e122	e133	e200	801	2,970	5,780	1,000	125	65
7	166	150	161	e119	e141	e210	741	2,530	5,150	913	111	95
8	161	148	154	e117	e149	e210	648	2,530	4,680	836	83	110
9	179	166	e150	e121	e147	e215	613	2,620	4,690	745	70	143
10	194	194	149	e126	e140	e215	889	2,730	4,780	689	89	175
11	173	196	154	e133	e136	228	1,480	2,490	5,320	609	84	205
12	176	181	e142	e131	e135	339	1,990	2,230	5,460	572	90	287
13	175	169	141	e129	e138	469	2,250	2,380	4,700	565	96	266
14	145	184	140	e132	e153	651	2,820	2,990	4,400	515	88	261
15	137	196	154	e135	e162	821	3,330	3,970	4,420	492	83	236
16	140	175	154	e131	e166	858	3,290	4,880	4,320	454	79	180
17	128	152	e148	e139	e180	795	2,660	5,770	3,970	421	87	161
18	129	172	e138	e134	e192	678	2,320	6,590	3,640	418	102	130
19	130	172	130	e132	e209	556	2,220	6,640	3,500	419	144	148
20	126	188	e119	e139	e192	525	1,880	6,140	3,550	441	182	168
21	118	195	105	e135	e177	500	1,810	6,410	3,360	463	154	157
22	109	183	e111	e135	e163	536	2,040	6,220	2,970	468	131	144
23	114	186	e113	e141	e163	566	2,510	6,660	2,860	401	147	125
24	133	198	e109	e148	e178	910	2,890	7,390	2,680	356	138	122
25	155	219	89	e153	e171	994	3,880	8,360	2,400	315	133	136
26	154	164	e101	e150	e151	815	4,960	8,920	2,150	287	136	128
27	141	142	e101	e147	e161	776	4,830	8,250	1,910	266	170	121
28	121	129	e102	e145	e167	699	4,040	8,800	1,880	244	173	128
29	134	e156	e105	e148	---	565	3,930	9,850	1,820	229	137	140
30	145	e190	e113	e153	---	479	3,940	10,700	1,690	250	113	137
31	147	---	e108	e155	---	481	---	10,900	---	269	118	---
TOTAL	4,507	5,062	4,359	4,157	4,441	15,211	68,773	165,400	140,950	19,377	3,944	4,432
MEAN	145	169	141	134	159	491	2,292	5,335	4,698	625	127	148
MAX	216	219	200	155	209	994	4,960	10,900	11,800	1,580	220	287
MIN	94	121	89	115	133	169	613	2,230	1,690	229	70	65
AC-FT	8,940	10,040	8,650	8,250	8,810	30,170	136,400	328,100	279,600	38,430	7,820	8,790

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)

MEAN	312	298	233	229	283	762	2,340	4,862	4,015	948	259	228
MAX	884	506	407	371	841	1,718	4,835	7,524	8,471	3,683	712	1,011
(WY)	(1998)	(1998)	(1985)	(1998)	(1986)	(1986)	(1985)	(1985)	(1995)	(1995)	(1997)	(1997)
MIN	143	165	141	114	111	229	931	1,961	1,139	47.5	25.2	50.6
(WY)	(2002)	(1995)	(2003)	(1989)	(1989)	(1988)	(1995)	(2002)	(2002)	(2002)	(2002)	(1994)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1985 - 2003	
ANNUAL TOTAL	169,318.16		440,613			
ANNUAL MEAN	464		1,207		1,233	
HIGHEST ANNUAL MEAN					1,925	1997
LOWEST ANNUAL MEAN					468	2002
HIGHEST DAILY MEAN	3,290	Jun 1	11,800	Jun 2	12,000	Jun 4, 1997
LOWEST DAILY MEAN	0.41	Sep 6	65	Sep 6	0.41	Sep 6, 2002
ANNUAL SEVEN-DAY MINIMUM	8.9	Sep 1	86	Aug 8	8.9	Sep 1, 2002
MAXIMUM PEAK FLOW			12,500	Jun 3	12,900	Jun 4, 1997
MAXIMUM PEAK STAGE			9.87	Jun 3	10.78	Jun 4, 1997
ANNUAL RUNOFF (AC-FT)	335,800		874,000		892,900	
10 PERCENT EXCEEDS	1,630		3,970		4,030	
50 PERCENT EXCEEDS	170		181		340	
90 PERCENT EXCEEDS	30		116		140	

e Estimated.



09247600 YAMPA RIVER BELOW CRAIG, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1975 to September 1980, October 1990 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09247600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09247600)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
OCT 30...	1300	150	10.2	8.4	352	4.1	120	30.7	10.6	2.20	1	25.5	E110
FEB 19...	1023	216	10.8	8.0	402	0.1	140	35.7	13.2	2.61	1	27.4	E139
MAY 21...	0925	5,840	9.3	7.8	146	9.0	56	14.3	4.96	1.19	0.3	5.70	42
AUG 19...	1530	147	7.9	8.7	355	22.0	130	31.1	12.2	2.46	1	25.3	108

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)
OCT 30...	11.7	0.2	2.2	50.1	--	--	--	0.25	<0.04	<0.06	<0.008	E.01	0.023
FEB 19...	14.1	0.24	7.4	65.6	--	--	--	0.33	<0.04	0.31	<0.008	<0.02	0.036
MAY 21...	2.11	<0.2	9.2	21.6	86	0.12	1,360	0.67	<0.04	0.37	E.004	<0.02	0.21
AUG 19...	9.89	0.2	1.5	53.2	201	0.27	79.7	0.42	<0.04	<0.06	<0.008	<0.02	0.033

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	E coli, m-TEC MF, water, col/ 100 mL (31633)	Fecal coliform, M-FC col/ 100 mL (31625)	Cadmium, water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury, water, fltrd, ug/L (71890)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 30...	E3	E6	<0.2	<1.2	160	<1	13.4	22.0	<0.02	<3	<0.3	<24
FEB 19...	E6	E4	<0.2	E.6	160	<1	28.1	32.8	<0.02	<3	<0.3	<24
MAY 21...	25	31	<0.2	E.8	3,430	<1	9.4	120	<0.02	<3	<0.3	<24
AUG 19...	24	22	<0.2	<1.2	130	<1	7.7	38.7	<0.02	<3	<0.3	<3

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 06...	1020	141	365	1.3	AUG 05...	1350	128	327	24.8
MAR 11...	1315	215	585	0.6	SEP 04...	1300	69	446	22.7
APR 08...	1430	622	635	8.0					
30...	1100	3,910	296	8.5					

## 09251000 YAMPA RIVER NEAR MAYBELL, CO

LOCATION.--Lat 40°30'10", long 108°01'45", in SE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.2, T.6 N., R.95 W., Moffat County, Hydrologic Unit 14050002, on left bank 60 ft downstream from bridge on U.S. Highway 40, 2.0 mi downstream from Lay Creek, and 3.0 mi east of Maybell.

DRAINAGE AREA.--3,410 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1904 to October 1905, June 1910 to November 1912, April 1916 to current year. Monthly discharge only for some periods, published in WSP 1313. No winter records prior to 1917. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09251000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09251000)

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,900.23 ft above NGVD of 1929. See WSP 1733 for history of changes prior to Mar. 9, 1937.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transbasin diversions, numerous storage reservoirs, and diversions upstream from station for irrigation of about 65,000 acres upstream from, and about 800 acres downstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	181	e244	e183	e217	e203	588	4,600	12,100	1,650	215	87
2	110	202	e253	e180	e211	e203	903	3,800	12,700	1,520	170	87
3	160	190	e256	e178	e201	e218	1,580	3,270	12,900	1,410	157	99
4	149	210	e253	e183	e193	e225	1,720	3,310	10,600	1,290	156	81
5	204	200	e251	e175	e189	e250	1,160	3,670	8,760	1,130	117	65
6	290	167	e241	e178	e184	e300	963	3,600	7,420	1,040	94	55
7	256	186	e236	e182	e197	e350	872	3,050	6,390	907	95	69
8	215	204	233	e183	e203	e400	785	2,860	5,680	821	86	82
9	187	207	e217	e186	e198	e450	692	2,930	5,200	734	63	121
10	184	228	e198	e188	e187	514	705	3,020	5,420	644	57	139
11	216	259	e198	e193	e182	707	1,060	2,910	5,710	576	43	164
12	196	267	e210	e192	e178	999	1,730	2,600	6,340	501	52	204
13	192	245	e200	e195	e187	998	2,240	2,470	5,740	478	66	269
14	199	236	e186	e197	e198	1,150	2,590	3,240	4,880	454	70	259
15	175	262	e183	e197	e210	1,360	3,280	4,420	4,790	392	67	256
16	153	277	e186	e190	e216	1,370	3,540	5,990	4,720	373	61	234
17	159	232	e211	e200	e224	1,180	3,010	7,170	4,560	348	62	183
18	156	212	e210	e187	e237	1,030	2,520	8,460	3,970	326	60	163
19	141	233	e200	e187	e249	847	2,360	8,950	3,710	321	67	141
20	145	261	e170	e197	e237	712	2,100	8,230	3,730	339	95	125
21	140	251	e150	e201	e222	665	1,840	7,970	3,760	360	126	151
22	137	274	e155	e206	e210	650	1,950	8,070	3,340	369	133	160
23	134	261	e160	e203	e209	666	2,350	8,400	2,980	370	130	151
24	138	265	e150	e200	e215	748	3,080	8,970	2,890	325	112	174
25	144	300	e130	e205	e219	1,180	3,560	9,730	2,680	279	117	149
26	185	266	e150	e198	e203	1,010	4,700	10,200	2,420	256	115	152
27	186	185	e164	e208	e193	926	5,300	10,100	2,050	230	109	154
28	179	185	e162	e205	e198	875	4,860	10,300	1,880	217	113	136
29	155	189	e173	e205	---	761	4,520	11,000	1,880	207	138	145
30	156	212	e175	e211	---	648	4,690	11,700	1,790	195	122	151
31	173	---	e178	e216	---	586	---	12,100	---	202	102	---
TOTAL	5,305	6,847	6,083	6,009	5,767	22,181	71,248	197,090	160,990	18,264	3,170	4,406
MEAN	171	228	196	194	206	716	2,375	6,358	5,366	589	102	147
MAX	290	300	256	216	249	1,370	5,300	12,100	12,900	1,650	215	269
MIN	91	167	130	175	178	203	588	2,470	1,790	195	43	55
AC-FT	10,520	13,580	12,070	11,920	11,440	44,000	141,300	390,900	319,300	36,230	6,290	8,740

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2003, BY WATER YEAR (WY)

MEAN	347	352	296	278	333	716	2,594	6,235	5,476	1,373	376	245
MAX	1,174	768	624	610	1,071	2,063	6,496	14,000	12,810	5,819	1,052	1,366
(WY)	(1998)	(1998)	(1948)	(1948)	(1986)	(1986)	(1962)	(1984)	(1917)	(1957)	(1957)	(1997)
MIN	117	184	137	115	160	221	735	1,850	548	20.4	12.7	27.8
(WY)	(1964)	(1977)	(1964)	(1934)	(1964)	(1964)	(1944)	(1977)	(1934)	(1934)	(2002)	(1934)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1916 - 2003

ANNUAL TOTAL	183,174.1	507,360		
ANNUAL MEAN	502	1,390	1,553	
HIGHEST ANNUAL MEAN			3,025	1984
LOWEST ANNUAL MEAN			477	1977
HIGHEST DAILY MEAN	3,420	Jun 1	12,900	Jun 3
LOWEST DAILY MEAN	1.8	Aug 31	43	Aug 11
ANNUAL SEVEN-DAY MINIMUM	2.6	Aug 28	59	Aug 10
MAXIMUM PEAK FLOW			13,200	Jun 3
MAXIMUM PEAK STAGE			9.60	Jun 3
ANNUAL RUNOFF (AC-FT)	363,300	1,006,000	1,125,000	
10 PERCENT EXCEEDS	1,720	4,640	5,250	
50 PERCENT EXCEEDS	220	218	400	
90 PERCENT EXCEEDS	11	128	174	

e Estimated.

09251000 YAMPA RIVER NEAR MAYBELL, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1950 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09251000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09251000)

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1950 to August 1973, July 1975 to current year.

pH: November 1998 to current year.

WATER TEMPERATURE: November 1950 to August 1973, July 1975 to current year.

SUSPENDED-SEDIMENT DISCHARGE: December 1950 to May 1958, October 1975 to September 1976, October 1977 to September 1978, October 24, 1981 to September 1982.

INSTRUMENTATION.--Water-quality monitor, July 1975 to October 1997; water-quality monitor with satellite telemetry, October 1997 to current year.

REMARKS.--Specific-conductance record is excellent except Mar. 15-25, which is good, pH record is excellent except Oct. 1 to Dec. 23 and June 11 to Sept. 30, which is good, and Dec. 24-26, which is fair, and water-temperature record is excellent. Unpublished maximum and minimum specific-conductance data for period of daily record available in district office.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,630 microsiemens/cm, July 21, 2002; minimum, 78 microsiemens/cm, June 1-2, 1994.

pH: Maximum, 9.2 units, July 19, 2003; minimum, 7.6 units, August 8, 2001 and June 1, 2002.

WATER TEMPERATURE: Maximum, 33.0°C, Aug. 29, 1976; minimum, 0.0°C, on many days during winter months.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 992 microsiemens/cm, Mar. 26; minimum, 106 microsiemens/cm, June 13.

pH: Maximum, 9.2 units, July 19; minimum, 7.9 units, on many days.

WATER TEMPERATURE: Maximum, 29.5°C, Aug. 13; minimum, 0.0°C, on many days.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Residue on evap. at 180degC wat flt mg/L (70300)	Selen- ium, water, fltrd, ug/L (01145)
OCT								
17...	1030	160	9.7	8.6	467	7.9	279	0.6
DEC								
23...	1200	124	11.2	8.4	598	0.0	389	--
FEB								
27...	1240	234	11.4	8.5	614	0.1	398	--
MAR								
25...	1400	1,220	10.0	8.4	900	8.1	631	--
APR								
09...	1030	686	10.1	8.7	710	7.1	482	--
MAY								
07...	1130	3,010	9.1	8.3	345	8.9	229	--
JUN								
10...	1046	5,250	9.7	8.0	118	13.1	78	--
JUL								
23...	1115	372	7.6	8.6	351	24.7	214	--
AUG								
22...	0844	136	7.7	8.3	587	20.4	360	--

## 09251000 YAMPA RIVER NEAR MAYBELL, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	637	620	628	546	526	540	586	549	570	640	627	635
2	635	609	617	542	528	536	586	557	578	627	616	622
3	616	606	610	538	523	533	561	543	555	638	621	632
4	673	615	646	536	520	529	543	517	534	625	601	613
5	669	590	629	540	526	531	517	486	494	608	597	602
6	590	571	576	543	522	532	491	475	483	604	586	595
7	573	565	569	548	520	533	503	478	491	587	579	584
8	565	524	544	549	521	536	510	492	500	587	576	582
9	524	508	514	551	538	544	531	509	520	604	580	593
10	517	510	513	550	530	538	558	531	544	608	601	604
11	517	500	508	543	528	534	585	555	568	609	603	605
12	503	490	497	543	529	537	568	539	548	614	604	608
13	491	477	483	534	528	531	581	546	568	623	614	618
14	479	472	475	532	503	513	599	572	585	626	617	622
15	480	475	478	507	499	503	601	572	590	619	610	614
16	479	467	473	503	491	497	623	574	592	613	603	608
17	471	461	466	530	493	515	602	568	585	609	602	605
18	475	463	470	531	516	524	584	563	577	617	604	609
19	488	475	483	524	502	512	584	559	570	623	614	618
20	490	481	487	529	503	516	606	584	598	617	607	612
21	502	487	495	548	520	535	619	585	599	645	617	631
22	510	501	507	539	525	532	598	571	582	645	620	633
23	511	507	509	532	523	527	634	597	620	626	613	618
24	514	509	512	525	508	519	687	634	678	629	618	624
25	520	513	515	509	493	505	695	670	680	618	595	606
26	543	520	531	537	506	518	725	695	708	597	583	590
27	544	537	540	554	521	530	749	708	726	600	584	588
28	550	539	545	569	541	552	735	666	688	612	599	607
29	545	534	539	568	530	551	698	664	686	599	592	595
30	541	527	534	562	518	534	687	649	672	607	598	602
31	528	519	523	---	---	---	649	635	642	635	604	618
MONTH	673	461	530	569	491	528	749	475	591	645	576	609
DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	723	635	656	711	663	693	847	814	829	282	271	276
2	731	666	700	708	670	692	825	778	795	301	279	290
3	746	635	673	670	641	662	883	736	817	316	300	307
4	873	746	784	675	622	649	736	577	641	318	300	310
5	873	657	741	681	620	655	583	559	567	307	284	295
6	708	665	690	688	656	675	623	581	600	327	296	310
7	690	627	647	683	644	662	673	622	649	346	327	337
8	690	632	660	712	680	703	695	669	680	351	335	344
9	696	657	677	711	614	659	695	669	682	349	334	341
10	696	676	686	700	633	656	701	664	685	366	349	359
11	707	678	693	666	554	636	686	638	664	399	366	386
12	693	678	686	644	554	607	638	544	597	399	384	391
13	689	672	681	678	605	650	544	449	480	393	371	385
14	675	564	632	698	656	674	449	394	416	376	312	349
15	663	568	591	716	634	671	394	343	369	312	264	284
16	612	579	598	707	633	677	346	322	333	264	229	241
17	752	608	678	702	631	681	364	323	337	235	210	220
18	752	687	710	729	672	695	367	354	363	210	180	190
19	718	658	694	805	729	765	366	353	361	180	170	174
20	695	648	676	855	805	825	373	357	363	173	167	170
21	685	649	671	867	837	849	389	372	382	171	162	167
22	680	649	667	910	867	888	382	370	378	166	153	158
23	694	645	672	916	907	912	370	347	358	159	146	151
24	705	662	686	908	890	896	391	344	359	150	139	143
25	703	678	687	974	892	926	630	391	442	143	135	139
26	697	668	683	992	929	961	630	419	519	137	131	134
27	700	643	667	938	807	865	419	347	389	135	125	130
28	700	642	665	859	807	840	347	322	329	132	120	126
29	---	---	---	885	848	860	326	304	311	135	118	126
30	---	---	---	891	872	882	305	277	287	134	121	128
31	---	---	---	885	847	859	---	---	---	130	118	124
MONTH	873	564	677	992	554	752	883	277	499	399	118	241



09251000 YAMPA RIVER NEAR MAYBELL, CO—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	8.5	8.1	8.3	8.5	8.4	8.4	8.6	8.2	8.5	8.0	8.0	8.0
2	8.5	8.1	8.3	8.5	8.4	8.4	8.5	8.3	8.4	8.1	8.0	8.0
3	8.4	8.2	8.3	8.6	8.4	8.5	8.5	8.2	8.3	8.0	8.0	8.0
4	8.4	8.3	8.3	8.6	8.4	8.5	8.5	8.2	8.4	8.0	8.0	8.0
5	8.4	8.2	8.3	8.6	8.1	8.5	8.5	8.4	8.4	8.0	7.9	8.0
6	8.5	8.4	8.4	8.8	8.1	8.5	8.4	8.3	8.3	8.0	7.9	7.9
7	8.5	8.3	8.4	8.6	8.2	8.5	8.4	8.2	8.3	8.0	7.9	7.9
8	8.5	8.4	8.4	8.5	8.3	8.4	8.4	8.1	8.3	8.0	7.9	7.9
9	8.6	8.3	8.4	8.4	8.2	8.4	8.5	8.0	8.2	8.0	7.9	7.9
10	8.5	8.3	8.4	8.4	8.3	8.4	8.2	8.0	8.1	7.9	7.9	7.9
11	8.5	8.3	8.4	8.5	8.2	8.4	8.4	8.0	8.1	7.9	7.9	7.9
12	8.4	8.3	8.3	8.5	8.3	8.4	8.5	8.3	8.5	8.0	7.9	7.9
13	8.5	8.3	8.3	8.4	8.3	8.4	8.5	8.2	8.4	8.0	7.9	7.9
14	8.5	8.3	8.3	8.6	8.3	8.4	8.5	8.2	8.3	8.0	7.9	7.9
15	8.4	8.3	8.3	8.7	8.3	8.4	8.5	8.1	8.3	8.0	7.9	7.9
16	8.4	8.2	8.3	8.6	8.4	8.5	8.4	8.1	8.3	8.0	7.9	7.9
17	8.4	8.2	8.3	8.6	8.4	8.5	8.4	8.3	8.3	8.1	7.9	8.0
18	8.5	8.3	8.4	8.6	8.3	8.5	8.5	8.2	8.3	8.1	7.9	8.0
19	8.5	8.3	8.4	8.6	8.4	8.5	8.4	8.1	8.2	8.1	7.9	8.0
20	8.5	8.3	8.4	8.6	8.4	8.4	8.2	8.0	8.1	8.1	7.9	8.0
21	8.5	8.3	8.4	8.5	8.0	8.1	8.3	8.0	8.2	8.1	7.9	8.0
22	8.4	8.2	8.4	8.6	8.3	8.5	8.5	8.1	8.3	8.1	7.9	8.0
23	8.5	8.2	8.4	8.6	8.4	8.5	8.1	8.0	8.1	8.1	8.0	8.0
24	8.5	8.3	8.4	8.5	8.1	8.3	8.4	8.0	8.3	8.1	8.0	8.0
25	8.5	8.3	8.4	8.5	8.2	8.4	8.5	8.2	8.4	8.2	8.0	8.1
26	8.5	8.4	8.4	8.6	8.1	8.5	8.3	8.1	8.2	8.2	8.0	8.1
27	8.6	8.4	8.4	8.6	8.0	8.3	8.1	8.0	8.0	8.2	8.0	8.1
28	8.6	8.4	8.5	8.6	7.9	8.0	8.1	8.0	8.1	8.2	8.0	8.1
29	8.6	8.4	8.5	8.6	8.2	8.3	8.1	8.0	8.1	8.2	8.1	8.1
30	8.5	8.4	8.5	8.5	8.0	8.4	8.1	8.0	8.1	8.2	8.1	8.1
31	8.5	8.4	8.4	---	---	---	8.1	8.0	8.0	8.2	8.1	8.1
MAX	8.6	8.4	8.5	8.8	8.4	8.5	8.6	8.4	8.5	8.2	8.1	8.1
MIN	8.4	8.1	8.3	8.4	7.9	8.0	8.1	8.0	8.0	7.9	7.9	7.9
	FEBRUARY			MARCH			APRIL			MAY		
1	8.2	8.1	8.1	---	---	---	8.8	8.6	8.7	8.3	8.3	8.3
2	8.1	8.0	8.1	---	---	---	8.8	8.7	8.8	8.6	8.3	8.3
3	---	---	---	---	---	---	8.8	8.3	8.3	8.3	8.3	8.3
4	---	---	---	---	---	---	8.3	8.2	8.3	8.4	8.3	8.4
5	---	---	---	---	---	---	8.3	8.2	8.3	8.4	8.3	8.4
6	---	---	---	---	---	---	8.4	8.3	8.4	8.4	8.3	8.3
7	---	---	---	---	---	---	8.6	8.4	8.5	8.4	8.3	8.4
8	---	---	---	---	---	---	8.7	8.5	8.6	8.4	8.4	8.4
9	---	---	---	---	---	---	8.9	8.6	8.7	8.4	8.4	8.4
10	---	---	---	---	---	---	9.0	8.9	8.9	8.4	8.4	8.4
11	---	---	---	---	---	---	9.0	8.8	8.9	8.5	8.4	8.4
12	---	---	---	---	---	---	8.9	8.4	8.5	8.5	8.4	8.5
13	---	---	---	---	---	---	8.4	8.3	8.3	8.5	8.4	8.5
14	---	---	---	---	---	---	8.3	8.2	8.3	8.5	8.4	8.5
15	---	---	---	---	---	---	8.2	8.2	8.2	8.4	8.3	8.3
16	---	---	---	---	---	---	8.2	8.2	8.2	8.3	8.2	8.3
17	---	---	---	---	---	---	8.3	8.2	8.3	8.3	8.2	8.3
18	---	---	---	---	---	---	8.3	8.3	8.3	8.3	8.3	8.3
19	---	---	---	---	---	---	8.4	8.3	8.4	8.4	8.3	8.3
20	---	---	---	---	---	---	8.4	8.4	8.4	8.4	8.3	8.3
21	---	---	---	---	---	---	8.4	8.4	8.4	8.4	8.3	8.3
22	---	---	---	---	---	---	8.4	8.4	8.4	8.4	8.3	8.3
23	---	---	---	---	---	---	8.4	8.4	8.4	8.4	8.3	8.3
24	---	---	---	---	---	---	8.4	8.3	8.4	8.4	8.3	8.4
25	---	---	---	---	---	---	8.4	8.3	8.3	8.4	8.3	8.3
26	---	---	---	8.4	8.3	8.3	8.3	8.1	8.2	8.4	8.3	8.3
27	---	---	---	8.5	8.4	8.4	8.2	8.1	8.2	8.3	8.2	8.3
28	---	---	---	8.5	8.5	8.5	8.3	8.2	8.2	8.4	8.2	8.3
29	---	---	---	8.6	8.5	8.5	8.3	8.3	8.3	8.3	8.2	8.2
30	---	---	---	8.6	8.5	8.6	8.3	8.3	8.3	8.3	8.2	8.2
31	---	---	---	---	---	---	---	---	---	8.3	8.1	8.2
MAX	---	---	---	---	---	---	9.0	8.9	8.9	8.6	8.4	8.5
MIN	---	---	---	---	---	---	8.2	8.1	8.2	8.3	8.1	8.2

## 09251000 YAMPA RIVER NEAR MAYBELL, CO—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEDIAN	JUNE			JULY			AUGUST			SEPTEMBER		
				MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN	MAX	MIN	MEDIAN
1	8.2	8.1	8.1	8.3	8.1	8.2	8.9	8.6	8.7	8.9	8.4	8.6			
2	8.3	8.1	8.2	8.3	8.1	8.2	8.9	8.5	8.7	8.9	8.4	8.6			
3	8.2	8.0	8.1	8.4	8.1	8.2	8.9	8.5	8.7	8.9	8.4	8.6			
4	8.1	8.0	8.1	8.4	8.2	8.3	8.9	8.5	8.7	8.9	8.4	8.6			
5	8.1	8.1	8.1	8.4	8.1	8.3	8.9	8.4	8.6	8.8	8.4	8.6			
6	8.1	8.1	8.1	8.4	8.2	8.3	8.9	8.4	8.6	8.9	8.4	8.6			
7	8.1	8.1	8.1	8.5	8.2	8.3	8.9	8.3	8.5	8.8	8.3	8.6			
8	8.1	8.1	8.1	8.5	8.2	8.4	8.9	8.3	8.6	8.9	8.4	8.6			
9	8.2	8.1	8.1	8.6	8.3	8.4	8.9	8.3	8.6	8.9	8.4	8.6			
10	8.2	7.9	8.1	8.6	8.4	8.5	8.9	8.3	8.6	8.8	8.5	8.6			
11	8.1	8.1	8.1	8.7	8.4	8.5	8.9	8.3	8.6	8.8	8.5	8.7			
12	8.1	8.0	8.0	8.7	8.4	8.5	8.9	8.3	8.5	8.8	8.6	8.7			
13	8.1	7.9	8.0	8.7	8.4	8.6	8.9	8.3	8.6	8.8	8.6	8.7			
14	8.1	8.0	8.0	8.7	8.5	8.6	8.9	8.3	8.6	8.8	8.6	8.7			
15	8.1	8.0	8.0	8.7	8.5	8.6	8.9	8.3	8.6	8.8	8.6	8.7			
16	8.1	8.0	8.0	8.8	8.5	8.6	8.9	8.3	8.6	8.8	8.6	8.7			
17	8.1	8.0	8.0	8.8	8.5	8.7	8.9	8.3	8.5	8.8	8.5	8.6			
18	8.1	8.0	8.0	8.9	8.5	8.7	8.9	8.3	8.6	8.8	8.5	8.6			
19	8.1	8.0	8.1	9.2	8.5	8.7	8.9	8.3	8.6	8.8	8.5	8.7			
20	8.1	8.0	8.1	8.9	8.6	8.8	8.9	8.3	8.5	8.8	8.5	8.7			
21	8.1	8.0	8.1	8.9	8.6	8.8	8.8	8.4	8.6	8.9	8.6	8.7			
22	8.1	8.1	8.1	9.0	8.7	8.8	8.9	8.4	8.6	8.9	8.6	8.8			
23	8.1	8.1	8.1	---	---	---	9.0	8.5	8.7	8.9	8.7	8.8			
24	8.1	8.1	8.1	---	---	---	9.1	8.4	8.7	8.9	8.7	8.8			
25	8.1	8.1	8.1	9.0	8.6	8.8	9.0	8.4	8.6	8.9	8.8	8.8			
26	8.2	8.1	8.1	9.1	8.7	8.8	9.0	8.4	8.7	9.0	8.7	8.8			
27	8.2	8.1	8.1	9.0	8.6	8.8	9.0	8.5	8.7	9.0	8.8	8.8			
28	8.2	8.1	8.2	9.0	8.6	8.8	9.0	8.5	8.7	9.0	8.7	8.8			
29	8.3	8.1	8.2	9.0	8.6	8.8	8.8	8.5	8.6	9.0	8.8	8.8			
30	8.3	8.1	8.2	8.9	8.5	8.7	8.8	8.4	8.6	8.9	8.8	8.8			
31	---	---	---	8.9	8.6	8.7	8.9	8.4	8.6	---	---	---			
MAX	8.3	8.1	8.2	---	---	---	9.1	8.6	8.7	9.0	8.8	8.8			
MIN	8.1	7.9	8.0	---	---	---	8.8	8.3	8.5	8.8	8.3	8.6			

## 09251000 YAMPA RIVER NEAR MAYBELL, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	16.4	10.2	12.9	3.9	1.8	2.6	0.8	0.0	0.2	0.1	0.0	0.0
2	14.9	10.5	12.2	4.3	1.8	2.5	1.3	0.0	0.3	0.1	0.0	0.0
3	12.3	9.9	11.2	4.1	0.2	1.9	0.9	0.0	0.2	0.1	0.0	0.0
4	12.2	9.5	10.5	3.5	0.2	1.6	0.8	0.0	0.2	0.1	0.0	0.0
5	13.1	9.6	11.1	4.1	0.3	1.9	1.7	0.0	0.5	0.0	0.0	0.0
6	13.5	10.0	11.6	5.2	1.0	2.6	1.8	0.0	0.4	0.0	0.0	0.0
7	14.4	10.1	12.0	4.7	1.4	2.9	1.7	0.0	0.4	0.0	0.0	0.0
8	15.0	10.7	12.4	5.3	2.9	3.8	1.4	0.0	0.3	0.0	0.0	0.0
9	14.9	10.4	12.1	4.2	2.4	3.6	1.0	0.0	0.2	0.0	0.0	0.0
10	14.3	10.1	11.7	3.4	1.3	2.1	1.1	0.1	0.3	0.0	0.0	0.0
11	11.7	9.7	11.1	4.0	1.1	2.1	0.9	0.0	0.2	0.0	0.0	0.0
12	11.7	7.3	9.1	3.5	0.7	2.0	0.4	0.0	0.1	0.0	0.0	0.0
13	11.0	6.4	8.2	2.8	1.8	2.2	0.6	0.0	0.1	0.0	0.0	0.0
14	10.9	6.3	8.1	3.4	0.7	1.8	0.7	0.0	0.2	0.1	0.0	0.0
15	11.2	6.4	8.3	2.8	0.5	1.6	0.8	0.0	0.1	0.1	0.0	0.0
16	11.6	6.7	8.6	1.9	0.0	0.7	1.6	0.0	0.3	0.1	0.0	0.0
17	11.6	6.8	8.3	1.5	0.0	0.6	0.5	0.0	0.1	0.2	0.0	0.0
18	11.5	6.5	8.3	2.8	0.0	0.9	0.1	0.0	0.0	0.1	0.0	0.0
19	11.3	5.9	7.9	3.2	0.3	1.4	0.7	0.0	0.1	0.1	0.0	0.0
20	10.8	5.6	7.5	3.7	0.8	1.9	1.1	0.0	0.2	0.1	0.0	0.0
21	10.6	5.6	7.4	4.0	1.3	2.3	0.4	0.0	0.1	0.2	0.0	0.0
22	9.6	5.2	7.0	4.3	1.3	2.5	0.3	0.0	0.1	0.2	0.0	0.0
23	8.3	6.4	7.1	4.7	2.0	3.0	0.3	0.0	0.1	0.2	0.0	0.1
24	9.4	6.0	7.4	4.4	2.4	3.2	0.2	0.0	0.0	0.2	0.0	0.0
25	9.7	6.0	7.5	2.6	0.0	1.3	0.2	0.0	0.0	0.2	0.0	0.1
26	8.2	6.1	7.0	1.4	0.0	0.2	0.2	0.0	0.0	0.2	0.0	0.1
27	10.4	6.5	8.0	1.5	0.0	0.3	0.3	0.0	0.1	0.2	0.0	0.1
28	8.9	6.3	7.4	1.1	0.0	0.3	0.2	0.0	0.0	0.2	0.0	0.1
29	6.5	4.2	5.9	0.8	0.0	0.1	0.2	0.0	0.0	0.2	0.0	0.1
30	5.0	2.5	3.9	0.8	0.0	0.1	0.1	0.0	0.0	0.2	0.0	0.1
31	4.6	2.4	3.3	---	---	---	0.0	0.0	0.0	0.3	0.0	0.1
MONTH	16.4	2.4	8.9	5.3	0.0	1.8	1.8	0.0	0.2	0.3	0.0	0.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	0.3	0.0	0.1	0.2	0.0	0.1	10.7	7.6	9.3	9.7	8.4	9.0
2	0.1	0.0	0.0	0.2	0.0	0.1	9.9	8.0	8.9	9.8	7.9	8.8
3	0.2	0.0	0.0	0.3	0.0	0.1	8.3	6.0	7.3	10.2	8.1	9.1
4	0.1	0.0	0.0	0.1	0.0	0.0	6.7	5.0	5.8	10.1	8.5	9.2
5	0.1	0.0	0.0	0.2	0.0	0.1	6.0	4.7	5.4	9.8	8.2	8.9
6	0.2	0.0	0.0	0.3	0.0	0.1	6.0	3.7	4.9	10.4	7.8	9.1
7	0.2	0.0	0.0	0.3	0.0	0.1	6.6	3.9	5.4	9.9	8.7	9.3
8	0.2	0.0	0.1	0.4	0.0	0.1	9.1	4.7	6.9	9.4	8.3	8.8
9	0.1	0.0	0.0	0.3	0.0	0.1	11.2	6.7	9.1	9.2	7.6	8.4
10	0.1	0.0	0.0	0.9	0.0	0.3	12.7	8.2	10.6	8.7	7.9	8.2
11	0.1	0.0	0.0	1.5	0.0	0.5	13.8	9.9	12.0	9.7	7.1	8.3
12	0.2	0.0	0.0	2.3	0.0	0.8	12.8	10.5	11.6	12.1	7.8	10.0
13	0.2	0.0	0.0	3.0	0.0	1.3	11.6	9.3	10.5	14.2	10.6	12.4
14	0.3	0.0	0.1	3.6	0.1	2.0	10.9	9.1	10.2	15.5	12.6	14.0
15	0.2	0.0	0.0	4.3	0.9	2.8	10.3	8.2	9.1	14.9	12.8	13.6
16	0.1	0.0	0.0	4.4	3.2	3.8	9.2	7.0	8.0	13.8	11.9	12.8
17	0.1	0.0	0.0	3.8	2.7	3.2	8.9	6.9	8.0	12.7	11.6	12.1
18	0.1	0.0	0.0	3.1	1.6	2.5	9.1	7.4	8.1	11.6	10.4	11.2
19	0.2	0.0	0.0	3.7	1.5	2.7	7.9	6.7	7.3	10.4	8.9	9.4
20	0.2	0.0	0.0	4.6	2.3	3.6	9.2	5.6	7.5	10.8	8.5	9.6
21	0.2	0.0	0.0	6.7	3.4	5.2	10.3	7.7	9.0	11.3	9.4	10.4
22	0.2	0.0	0.0	8.6	5.4	7.1	10.4	9.0	9.6	12.2	10.0	11.1
23	0.2	0.0	0.0	9.0	6.5	7.8	9.8	7.4	8.5	13.0	10.9	11.9
24	0.2	0.0	0.0	8.2	6.0	7.2	8.0	6.4	7.2	13.2	11.2	12.2
25	0.1	0.0	0.0	8.6	5.4	7.0	8.8	5.4	7.1	13.0	11.4	12.3
26	0.1	0.0	0.0	7.5	5.5	6.7	10.5	7.9	9.2	12.9	11.3	12.2
27	0.2	0.0	0.1	5.5	3.3	4.0	10.8	9.2	10	14.0	11.8	12.9
28	0.2	0.0	0.1	4.4	1.8	3.2	11.2	9.4	10.2	14.4	12.3	13.4
29	---	---	---	4.7	2.3	3.7	11.2	9.3	10.2	14.5	13.0	13.8
30	---	---	---	6.9	2.8	4.9	10.5	9.5	10	14.0	12.9	13.5
31	---	---	---	---	5.0	---	---	---	---	13.9	12.7	13.4
MONTH	0.3	0.0	0.0	---	0.0	---	13.8	3.7	8.6	15.5	7.1	10.9



## GREEN RIVER BASIN

09251000 YAMPA RIVER NEAR MAYBELL, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.4	13.0	13.7	21.4	18.7	20.1	26.7	20.6	23.3	24.6	15.5	19.8
2	13.7	12.4	13.0	21.8	17.9	19.9	27.5	20.7	23.5	24.2	16.1	19.5
3	13.9	12.4	13.1	22.4	18.6	20.5	24.5	21.3	22.7	25.2	16.7	20.3
4	13.4	12.2	12.9	22.9	19.0	21.0	26.0	20.2	22.6	25.4	16.2	20.4
5	13.6	11.8	12.8	22.9	18.7	20.9	27.4	18.7	22.6	20.1	16.0	18.3
6	13.3	11.4	12.2	22.9	18.6	20.9	27.4	18.3	22.4	22.3	15.8	18.8
7	13.2	11.0	12.1	22.7	18.7	20.9	24.3	19.3	21.4	22.3	16.9	18.9
8	14.1	11.7	12.9	22.8	18.8	21.1	26.4	18.0	21.9	20.4	15.4	17.8
9	13.9	12.9	13.4	23.0	18.2	20.8	28.2	18.3	23.0	20.9	15.0	17.3
10	14.5	12.8	13.7	24.0	19.3	21.8	29.4	19.0	23.8	17.0	14.3	15.2
11	14.6	13.4	14.1	23.4	20.2	22.0	28.8	20.2	23.7	17.5	13.6	15.2
12	14.2	12.1	13.1	24.8	19.9	22.3	27.9	18.9	22.8	18.9	13.6	15.8
13	13.6	11.7	12.7	23.8	20.3	22.3	29.5	19.5	23.7	17.5	13.5	15.3
14	15.3	12.6	13.9	25.0	20.2	22.9	29.2	20.4	24.2	17.5	12.4	14.7
15	16.2	14.3	15.3	24.4	21.4	22.9	26.0	18.5	22.4	17.7	12.5	14.8
16	16.2	15.0	15.5	25.7	21.1	23.5	26.0	19.3	21.8	17.4	14.1	15.4
17	16.4	14.7	15.5	26.1	22.0	24.0	24.3	18.4	20.6	14.6	11.6	13.8
18	17.0	14.5	15.7	27.5	22.7	24.8	24.3	17.7	20.8	15.9	9.6	12.4
19	17.5	15.2	16.2	28.0	22.5	24.7	25.4	16.5	21.3	16.5	9.9	12.7
20	16.0	14.7	15.3	27.7	22.6	24.9	25.7	16.7	21.1	17.8	10.1	13.4
21	15.3	13.7	14.6	27.0	22.6	24.8	25.2	18.3	21.2	17.3	10.5	13.5
22	15.9	13.4	14.6	27.6	23.1	25.3	25.4	19.9	22.3	17.8	11.2	14.0
23	16.6	14.2	15.5	27.5	23.0	25.0	27.1	20.2	23.0	18.3	11.4	14.3
24	15.6	14.7	15.1	27.2	22.2	24.3	27.2	19.7	22.7	18.2	12.2	14.7
25	15.9	13.7	14.8	27.7	22.8	24.8	26.3	20.3	22.4	18.3	11.4	14.3
26	17.9	14.5	16.2	28.1	22.8	25.0	26.9	18.4	22.3	18.7	11.5	14.6
27	19.2	15.4	17.3	26.8	22.8	24.6	23.5	19.4	21.3	19.2	12.8	15.4
28	20.3	16.5	18.4	27.8	21.6	24.2	25.6	17.8	21.3	19.7	12.4	15.5
29	21.3	17.7	19.5	28.2	22.6	24.8	25.1	17.7	20.8	19.1	12.4	15.4
30	21.4	18.3	20.0	28.1	21.3	24.1	23.8	18.0	20.1	19.0	13.1	15.5
31	---	---	---	25.3	20.9	22.8	25.4	16.8	20.4	---	---	---
MONTH	21.4	11.0	14.8	28.2	17.9	23.0	29.5	16.5	22.2	25.4	9.6	15.9

**09251100 YAMPA RIVER ABOVE LITTLE SNAKE RIVER, NEAR MAYBELL, CO**

LOCATION.--Lat 40°27'39", long 108°25'30", in NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.20, T.6 N., R.98 W., Moffat County, Hydrologic Unit 14050002, attached to center pier of Moffat County Road 25 bridge, 1 mi upstream from the mouth of Little Snake River and 18 mi west of Maybell.

DRAINAGE AREA.--3,837 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1996 to September 2003 (discontinued). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09251100](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09251100)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,640 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor, and the period July 5-19, which is fair. Natural flow of stream affected by transbasin diversions, numerous storage reservoirs and diversions for irrigation of about 65,800 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	191	236	e184	e220	205	621	4,630	12,200	1,870	201	144
2	123	197	e262	e183	e216	204	679	4,040	12,300	1,740	221	127
3	132	204	e260	e187	e209	224	1,310	3,420	13,200	1,580	187	122
4	164	194	e256	e189	e205	215	1,750	3,230	11,900	1,460	177	136
5	156	205	e257	e181	e196	231	1,530	3,520	9,470	1,280	180	128
6	188	205	252	e190	e191	254	1,100	3,630	7,980	1,140	149	104
7	223	177	e243	e192	e202	265	953	3,310	6,870	998	134	90
8	205	192	e235	e193	e207	281	899	2,930	6,120	824	127	91
9	183	213	e233	e195	e204	330	793	2,940	5,460	711	126	128
10	164	211	224	e197	e191	449	708	3,010	5,580	634	104	175
11	164	222	e200	e203	e186	511	830	3,050	5,720	598	91	232
12	183	242	205	e199	e184	789	1,510	2,750	6,460	e560	79	247
13	173	245	e210	e200	200	888	2,120	2,490	6,420	e500	71	278
14	171	234	e190	e201	191	1,090	2,390	2,770	5,340	e440	88	327
15	176	230	e180	e200	e217	1,260	2,950	3,730	5,080	420	103	320
16	166	243	183	e198	e224	1,360	3,430	5,140	5,070	385	95	312
17	150	249	216	e204	e232	1,360	3,280	6,210	4,940	361	106	289
18	151	221	202	e193	e245	1,160	2,730	7,570	4,450	344	105	244
19	150	215	200	e192	e235	984	2,440	8,410	e4,050	308	106	218
20	136	223	e169	e201	e230	816	2,350	8,140	e4,050	306	104	197
21	140	237	e165	e207	226	710	2,030	7,860	e4,200	328	104	164
22	141	233	e160	e210	213	677	1,960	8,010	e3,700	344	149	187
23	152	243	e170	e208	210	673	2,210	8,300	e3,470	347	172	205
24	151	239	e140	e206	218	711	2,780	8,850	3,220	339	163	196
25	159	248	e150	e210	223	923	3,130	9,570	3,030	306	149	200
26	158	256	e169	e208	206	1,240	4,080	10,100	2,720	280	143	170
27	185	e190	e167	e212	196	981	5,050	10,100	2,440	266	133	162
28	187	e170	e178	e210	200	929	5,040	10,100	2,120	238	136	178
29	189	e190	e181	e211	---	861	4,510	10,700	2,080	213	130	160
30	172	e240	e186	216	---	e736	4,530	11,600	2,020	204	163	166
31	172	---	e186	e220	---	e668	---	12,200	---	196	154	---
TOTAL	5,065	6,559	6,265	6,200	5,877	21,985	69,693	192,310	171,660	19,520	4,150	5,697
MEAN	163	219	202	200	210	709	2,323	6,204	5,722	630	134	190
MAX	223	256	262	220	245	1,360	5,050	12,200	13,200	1,870	221	327
MIN	101	170	140	181	184	204	621	2,490	2,020	196	71	90
AC-FT	10,050	13,010	12,430	12,300	11,660	43,610	138,200	381,400	340,500	38,720	8,230	11,300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
MEAN	412	398	321	348	368	951	2,670	6,105	5,051	1,008	335	343
MAX	1,250	758	494	532	546	1,908	4,258	9,419	9,348	2,004	921	1,448
(WY)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1998)	(1997)	(1997)	(1998)	(1997)	(1997)
MIN	163	219	202	200	210	378	1,500	1,949	1,184	39.5	24.1	53.1
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1996 - 2003

ANNUAL TOTAL	188,410.00	514,981		
ANNUAL MEAN	516	1,411	1,505	
HIGHEST ANNUAL MEAN			2,458	1997
LOWEST ANNUAL MEAN			525	2002
HIGHEST DAILY MEAN	3,100	Jun 2	13,200	Jun 3
LOWEST DAILY MEAN	0.00	Jul 14	71	Aug 13
ANNUAL SEVEN-DAY MINIMUM	0.73	Jul 13	90	Aug 10
MAXIMUM PEAK FLOW			16,100	Jun 3
MAXIMUM PEAK STAGE			10.56	Jun 3
ANNUAL RUNOFF (AC-FT)	373,700	1,021,000	1,090,000	
10 PERCENT EXCEEDS	1,760	4,570	4,920	
50 PERCENT EXCEEDS	235	224	425	
90 PERCENT EXCEEDS	18	149	162	

e Estimated.

a Also occurred Jul 15-18, 2002.

## 09253000 LITTLE SNAKE RIVER NEAR SLATER, CO

LOCATION.--Lat 40°59'58", long 107°08'34", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.15, T.12 N., R.87 W., Routt County, Hydrologic Unit 14050003, on left bank just downstream from highway bridge at Focus Ranch, 0.2 mi downstream from Spring Creek, and 12 mi east of Slater.

DRAINAGE AREA.--285 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1942 to September 1947, October 1950 to September 1999, April 2001 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09253000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09253000)

REVISED RECORDS.--WSP 1733: 1960.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,831.00 ft above NGVD of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 2,000 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	23	e26	e29	e33	e28	51	387	2,000	164	27	22
2	22	26	e28	e28	e33	e34	67	332	1,650	162	25	20
3	28	25	e32	e29	e32	e33	66	367	1,270	150	24	19
4	23	20	32	e28	e32	e32	54	420	1,030	137	27	19
5	18	22	29	e28	e32	e30	49	389	860	127	27	19
6	15	19	28	e27	e33	e29	47	326	756	118	24	21
7	14	19	25	e26	e33	e28	47	338	697	111	22	27
8	15	21	24	e26	e34	e33	45	346	559	103	21	27
9	12	27	24	e26	e34	e31	51	325	541	92	21	26
10	9.3	27	26	e26	e32	e35	80	301	550	87	19	31
11	7.8	32	31	e27	e34	e40	124	254	572	80	19	57
12	8.2	27	e32	e28	e33	e44	146	279	501	74	21	48
13	6.8	26	e32	e27	e33	e50	194	437	479	67	22	33
14	6.7	25	e31	e26	e47	e53	291	613	477	63	21	26
15	8.4	29	e32	e26	e40	e54	299	838	419	59	19	23
16	11	28	e32	e25	e36	e49	222	966	394	58	17	21
17	12	32	e32	e26	e34	e49	221	1,150	359	53	20	20
18	13	32	e32	e25	e32	e44	214	1,170	333	50	37	24
19	11	27	e31	e26	e30	43	153	1,140	315	51	36	27
20	13	27	e30	e26	e29	44	187	1,040	323	49	25	25
21	15	26	e30	e26	e29	39	262	1,050	298	51	21	22
22	16	26	e30	e27	e29	40	297	1,080	271	43	20	20
23	22	26	e30	e27	e30	42	302	1,170	256	38	37	19
24	22	25	e30	e28	e30	44	245	1,340	225	36	35	18
25	22	28	e29	e28	e31	47	291	1,430	226	35	27	17
26	21	e26	e29	e28	e31	44	421	1,370	206	34	25	16
27	22	e27	e29	e29	e32	48	428	1,570	182	34	23	17
28	22	e27	e29	e31	e30	64	454	1,700	168	33	21	16
29	24	e26	e29	e32	---	139	518	1,750	159	31	19	16
30	19	e25	e28	e33	---	46	523	1,900	149	33	20	16
31	24	---	e27	e34	---	43	---	1,960	---	30	22	---
TOTAL	503.2	776	909	858	918	1,379	6,349	27,738	16,225	2,253	744	712
MEAN	16.2	25.9	29.3	27.7	32.8	44.5	212	895	541	72.7	24.0	23.7
MAX	28	32	32	34	47	139	523	1,960	2,000	164	37	57
MIN	6.7	19	24	25	29	28	45	254	149	30	17	16
AC-FT	998	1,540	1,800	1,700	1,820	2,740	12,590	55,020	32,180	4,470	1,480	1,410

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2003, BY WATER YEAR (WY)

MEAN	38.9	36.1	32.4	31.8	32.7	51.1	262	1,073	925	157	39.0	29.1
MAX	91.8	77.8	59.4	74.5	59.5	139	842	2,122	2,231	519	97.3	80.5
(WY)	(1962)	(1962)	(1983)	(1983)	(1962)	(1989)	(1974)	(1984)	(1983)	(1983)	(1945)	(1997)
MIN	16.2	18.4	14.8	16.3	20.4	23.8	77.6	379	178	26.9	12.9	11.0
(WY)	(2003)	(1959)	(1977)	(1945)	(1945)	(1977)	(1973)	(2002)	(1987)	(2002)	(2002)	(1944)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1944 - 2003

ANNUAL TOTAL	31,221.8	59,364.2	
ANNUAL MEAN	85.5	163	228
HIGHEST ANNUAL MEAN			423
LOWEST ANNUAL MEAN			86.4
HIGHEST DAILY MEAN	504	2,000	3,960
LOWEST DAILY MEAN	3.9	6.7	3.9
ANNUAL SEVEN-DAY MINIMUM	7.7	8.3	6.2
MAXIMUM PEAK FLOW		2,490	4,780
MAXIMUM PEAK STAGE		7.15	a8.78
ANNUAL RUNOFF (AC-FT)	61,930	117,700	165,100
10 PERCENT EXCEEDS	329	432	815
50 PERCENT EXCEEDS	30	32	40
90 PERCENT EXCEEDS	11	19	21

e Estimated.

a Maximum gage height, 9.95 ft, Apr 25, 1974.

**09255000 SLATER FORK NEAR SLATER, CO**

LOCATION.--Lat 40°58'57", long 107°22'56", in SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.21, T.12 N., R.89 W., Moffat County, Hydrologic Unit 14050003, on right bank 15 ft downstream from highway bridge, 1.0 mi upstream from mouth, and 1.5 mi south of Slater.

DRAINAGE AREA.--161 mi<sup>2</sup>.

PERIOD OF RECORD.--May to October, December 1910, March to October 1911, and April to May 1912 (published as Slater Creek), July 1931 to current year. Monthly discharge only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09255000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09255000)

REVISED RECORDS.--WSP 618: 1910-11. WSP 764: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,600 ft above NGVD of 1929, from river-profile map. May 28, 1910 to May 25, 1912, nonrecording gage at site 1.5 mi upstream at different datum. July 9, 1931 to May 6, 1932, nonrecording gage at site 0.2 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 500 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	13	15	11	e12	17	39	197	809	17	4.2	4.8
2	12	13	15	11	e12	14	52	160	586	15	3.8	4.5
3	16	7.2	14	11	13	18	51	191	401	15	3.6	4.5
4	21	13	14	12	e12	18	34	220	295	14	3.7	4.5
5	23	14	14	12	12	17	32	216	228	13	3.9	4.4
6	25	13	13	11	13	17	30	168	202	11	4.0	4.4
7	25	14	12	11	15	17	27	180	188	13	3.4	4.7
8	26	15	11	11	16	20	24	195	146	11	2.6	6.0
9	26	15	11	11	17	18	29	171	140	13	2.2	6.6
10	26	14	11	10	16	20	42	153	143	13	1.9	6.7
11	25	14	12	11	16	22	68	126	180	10	1.8	8.3
12	25	12	13	11	16	26	93	134	144	8.8	1.8	10
13	24	15	14	11	17	29	108	219	117	9.6	1.9	11
14	24	15	14	11	e16	35	158	274	127	9.4	2.2	10
15	24	13	14	11	e17	37	185	411	113	9.4	2.4	9.7
16	24	10	13	11	18	35	132	455	103	8.9	2.4	9.4
17	24	15	14	11	17	34	107	546	109	8.2	2.8	8.9
18	24	16	14	11	17	28	102	597	96	7.3	4.1	9.2
19	24	15	12	10	16	25	70	529	83	6.5	5.6	9.5
20	23	15	10	10	16	24	61	393	92	5.9	6.1	9.5
21	11	14	15	10	16	23	75	375	84	5.3	5.7	9.4
22	9.9	14	15	10	16	24	106	389	63	4.8	5.0	9.1
23	12	15	12	10	16	26	143	435	54	4.1	4.9	8.9
24	14	16	12	10	17	37	113	488	44	3.7	6.1	8.9
25	14	12	11	10	17	27	170	536	40	3.5	6.3	8.6
26	14	5.6	11	9.6	17	29	208	512	35	3.3	6.2	8.4
27	12	8.8	11	9.9	18	30	222	549	30	3.6	6.0	7.7
28	12	13	11	12	16	24	232	577	27	3.9	5.6	7.5
29	13	14	11	11	---	22	286	584	22	4.0	4.9	7.3
30	11	14	11	11	---	26	294	625	20	4.2	4.6	7.3
31	13	---	10	e12	---	27	---	669	---	4.3	4.5	---
TOTAL	586.3	397.6	390	334.5	437	766	3,293	11,274	4,721	263.7	124.2	229.7
MEAN	18.9	13.3	12.6	10.8	15.6	24.7	110	364	157	8.51	4.01	7.66
MAX	26	16	15	12	18	37	294	669	809	17	6.3	11
MIN	9.4	5.6	10	9.6	12	14	24	126	20	3.3	1.8	4.4
AC-FT	1,160	789	774	663	867	1,520	6,530	22,360	9,360	523	246	456

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2003, BY WATER YEAR (WY)

	20.0	19.2	17.5	17.3	18.7	29.7	120	380	247	36.9	9.75	11.5
MEAN	20.0	19.2	17.5	17.3	18.7	29.7	120	380	247	36.9	9.75	11.5
MAX	62.4	49.2	44.1	36.9	46.5	144	323	801	660	189	38.4	55.0
(WY)	(1986)	(1985)	(1985)	(1985)	(1986)	(1998)	(1985)	(1984)	(1995)	(1983)	(1945)	(1984)
MIN	7.29	7.73	7.30	4.42	9.83	12.6	25.2	45.7	16.0	1.27	1.39	3.20
(WY)	(1934)	(1934)	(1932)	(1992)	(1981)	(1965)	(1933)	(1934)	(2002)	(1977)	(1994)	(1960)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1932 - 2003

ANNUAL TOTAL	10,976.3	22,817.0	
ANNUAL MEAN	30.1	62.5	77.5
HIGHEST ANNUAL MEAN			157 1984
LOWEST ANNUAL MEAN			20.5 1934
HIGHEST DAILY MEAN	250	809	1,500 Jun 1
LOWEST DAILY MEAN	1.1	1.8	a0.00 Aug 11
ANNUAL SEVEN-DAY MINIMUM	1.3	2.0	0.00 Aug 9
MAXIMUM PEAK FLOW		1,030	b2,250 Jun 1
MAXIMUM PEAK STAGE		8.50	c11.78 Jun 1
ANNUAL RUNOFF (AC-FT)	21,770	45,260	56,140
10 PERCENT EXCEEDS	103	186	252
50 PERCENT EXCEEDS	14	14	20
90 PERCENT EXCEEDS	1.8	4.8	7.0

e Estimated.

a Also occurred several days during years 1936, 1954, and 1977.

b From rating curve extended above 1,000 ft<sup>3</sup>/s.

c From floodmark.

## 09260000 LITTLE SNAKE RIVER NEAR LILY, CO

LOCATION.--Lat 40°32'50", long 108°25'25", in NW¼NE¼ sec.20, T.7 N., R.98 W., Moffat County, Hydrologic Unit 14050003, on left bank 170 ft downstream from highway bridge, 6.0 mi north of Lily, and 10 mi upstream from mouth.

DRAINAGE AREA.--3,730 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--June to August 1904 (published as "near Maybell"), October 1921 to current year. Monthly discharge only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09260000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09260000)

REVISED RECORDS.--WSP 1713: 1959.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,685 ft above NGVD of 1929, from river-profile map. June 9 to Aug. 14, 1904, nonrecording gage, and May 5, 1922 to Nov. 30, 1935, water-stage recorder, at site 300 ft upstream at different datums.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 21,000 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.22	57	e60	e60	e91	188	e250	1,380	3,820	246	5.1	0.43
2	12	73	e60	e60	e102	207	e300	1,280	3,700	215	8.2	0.10
3	45	47	e50	e60	e111	172	383	974	3,790	180	1.9	0.03
4	9.5	55	e60	e40	e111	157	567	801	2,780	143	2.0	0.00
5	14	49	e55	e50	e108	164	575	829	2,170	130	1.1	0.02
6	40	83	e65	e50	e106	168	470	926	1,800	117	0.17	0.09
7	30	72	e60	e55	e95	168	398	864	1,510	101	1.1	0.06
8	56	65	e55	e55	e88	202	340	743	1,350	104	2.1	0.21
9	53	76	e40	e55	e75	216	304	722	1,180	92	1.5	0.58
10	52	66	e30	e64	e66	185	269	823	1,040	78	0.29	2.9
11	45	58	e40	e64	e73	300	249	1,040	1,020	72	0.00	2.6
12	42	60	e40	e66	e83	422	308	794	1,060	73	0.00	7.2
13	40	87	e40	e62	e82	476	507	655	1,130	69	0.26	5.1
14	41	73	e50	e75	e81	516	717	565	1,030	58	0.21	4.2
15	38	72	e50	e77	e84	563	866	775	957	37	0.00	4.5
16	42	63	e45	e68	e85	792	1,200	1,100	905	25	0.24	3.8
17	45	66	e45	e62	e111	933	1,200	1,590	828	27	1.4	2.8
18	38	76	e50	e77	e133	826	923	1,890	761	19	3.6	2.5
19	34	63	e45	e95	e180	602	879	2,210	688	18	4.8	2.4
20	36	73	e40	e106	e168	423	892	2,390	625	26	3.2	4.8
21	38	83	e40	e104	e174	289	714	2,130	553	10	2.4	3.6
22	39	97	e50	e95	e167	231	671	1,880	544	9.0	1.8	3.3
23	45	84	e40	e86	e173	320	759	1,890	541	9.7	1.4	2.9
24	50	89	e40	e79	e144	423	917	1,980	478	19	0.89	1.7
25	46	65	e50	e95	e93	427	999	2,330	472	16	1.9	1.5
26	45	51	e60	e113	e114	583	899	2,640	411	7.8	1.9	0.51
27	52	e56	e50	e124	e144	416	1,310	2,660	389	16	3.0	0.42
28	58	e50	e40	e131	e186	340	1,440	2,790	359	4.3	3.1	0.31
29	59	e60	e50	e131	---	328	1,300	3,100	309	3.3	1.4	0.43
30	53	e50	e50	e122	---	284	1,290	3,290	280	4.1	0.88	0.28
31	62	---	e50	e108	---	230	---	3,430	---	5.6	0.57	---
TOTAL	1,259.72	2,019	1,500	2,489	3,228	11,551	21,896	50,471	36,480	1,934.8	56.41	59.27
MEAN	40.6	67.3	48.4	80.3	115	373	730	1,628	1,216	62.4	1.82	1.98
MAX	62	97	65	131	186	933	1,440	3,430	3,820	246	8.2	7.2
MIN	0.22	47	30	40	66	157	249	565	280	3.3	0.00	0.00
AC-FT	2,500	4,000	2,980	4,940	6,400	22,910	43,430	100,100	72,360	3,840	112	118

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2003, BY WATER YEAR (WY)

	114	121	98.3	91.9	124	380	1,062	2,548	1,859	296	68.4	54.7
MEAN	114	121	98.3	91.9	124	380	1,062	2,548	1,859	296	68.4	54.7
MAX	385	363	244	227	595	1,260	3,259	5,967	4,601	1,395	534	314
(WY)	(1926)	(1928)	(1928)	(1999)	(1986)	(1962)	(1952)	(1984)	(1983)	(1995)	(1941)	(1965)
MIN	0.000	0.000	25.0	16.0	18.0	80.5	320	477	36.7	0.29	0.000	0.000
(WY)	(1935)	(1935)	(1931)	(1933)	(1933)	(1964)	(1961)	(1934)	(1934)	(1934)	(1924)	(1934)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1922 - 2003

ANNUAL TOTAL	56,345.75	132,944.20	
ANNUAL MEAN	154	364	569
HIGHEST ANNUAL MEAN			1,252 1984
LOWEST ANNUAL MEAN			110 1934
HIGHEST DAILY MEAN	1,000 Apr 18	3,820 Jun 1	13,400 May 18, 1984
LOWEST DAILY MEAN	0.00 Jul 7	0.00 Aug 11	a0.00 Jul 30, 1924
ANNUAL SEVEN-DAY MINIMUM	0.00 Jul 28	0.07 Sep 2	0.00 Jul 30, 1924
MAXIMUM PEAK FLOW		4,380 Jun 1	16,700 May 18, 1984
MAXIMUM PEAK STAGE		5.91 Jun 1	b9.85 May 18, 1984
ANNUAL RUNOFF (AC-FT)	111,800	263,700	412,400
10 PERCENT EXCEEDS	530	1,040	1,920
50 PERCENT EXCEEDS	63	73	128
90 PERCENT EXCEEDS	0.00	1.9	12

e Estimated.

a No flow at times some years.

b Maximum gage height, 11.10 ft, Feb 13, 1962, backwater from ice.

## 09260050 YAMPA RIVER AT DEERLODGE PARK, CO

LOCATION.--Lat 40°27'06", long 108°31'28", in SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.21, T.6 N., R.99 W., Moffat County, Hydrologic Unit 14050002, in Dinosaur National Monument, on left bank at Deerlodge Park, 1,150 ft upstream from Disappointment Draw, and 5.5 mi downstream from Little Snake River.

DRAINAGE AREA.--7,660 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1975 and January 1978 (discharge measurements only) April 1982 to September 1994, and October 1996 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09260050](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09260050)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,600 ft above NGVD of 1929, from topographic map. Prior to Oct. 1, 1996, gage located 100 ft upstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transbasin diversions, numerous storage reservoirs and diversions for irrigation of about 86,800 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	257	301	e245	e310	352	707	6,060	14,700	2,150	e230	178
2	136	272	e320	e240	e320	344	716	5,480	15,000	1,990	e246	169
3	170	297	e310	e250	e320	392	1,260	4,510	15,700	1,830	e205	168
4	195	277	e315	e230	e315	367	1,980	4,000	13,900	1,670	e190	e173
5	188	281	e310	e230	e305	366	1,930	4,200	11,000	1,530	e195	e161
6	215	313	e320	e240	e300	378	1,480	4,340	9,350	1,410	159	e134
7	331	294	e300	e250	e300	389	1,230	4,040	8,260	1,260	131	e110
8	295	284	e290	e250	e295	446	1,120	3,560	7,560	1,150	111	e90
9	290	315	288	e250	e280	544	1,000	3,480	6,830	1,060	113	91
10	242	314	236	e260	e260	674	909	3,620	6,660	991	88	119
11	230	318	e240	e255	e259	807	933	3,910	6,670	847	72	216
12	249	343	e240	e265	e267	1,250	1,470	3,560	7,250	768	69	276
13	237	362	e250	e260	e282	1,480	2,270	3,190	7,510	678	62	309
14	234	346	e240	e275	e272	1,600	2,840	3,240	6,780	642	69	396
15	237	339	e230	e275	e284	1,780	3,470	4,220	6,380	576	79	411
16	227	344	e220	e265	e314	1,960	4,230	5,940	6,320	540	77	408
17	204	363	e260	e265	e343	2,100	4,380	7,410	6,150	514	82	365
18	198	337	e250	e270	e378	1,960	3,600	8,680	5,670	471	79	293
19	196	315	e240	e285	e415	1,610	3,130	9,760	5,230	416	84	252
20	180	306	e210	e305	e398	1,260	3,060	9,730	4,930	393	79	236
21	185	349	e210	e310	e400	999	2,620	9,150	4,920	426	80	195
22	193	351	e210	e305	e380	876	2,410	8,800	4,480	454	113	204
23	221	365	e210	e295	e383	838	2,610	9,060	4,130	446	157	229
24	236	359	e180	e285	363	1,060	3,280	9,550	3,940	451	214	226
25	234	329	e200	e305	316	1,150	3,810	10,300	3,770	395	222	231
26	220	318	e230	e320	320	1,600	4,620	11,200	3,380	337	198	209
27	254	246	e220	e335	341	1,260	6,220	11,600	3,100	314	182	187
28	266	e220	e220	e340	388	1,110	6,570	11,500	2,670	281	190	200
29	273	249	e230	e340	---	1,030	6,020	12,400	2,500	241	165	179
30	252	267	e240	e335	---	906	5,860	13,300	2,310	218	179	172
31	245	---	e240	e330	---	779	---	14,200	---	226	182	---
TOTAL	6,929	9,330	7,760	8,665	9,108	31,667	85,735	223,990	207,050	24,675	4,302	6,587
MEAN	224	311	250	280	325	1,022	2,858	7,225	6,902	796	139	220
MAX	331	365	320	340	415	2,100	6,570	14,200	15,700	2,150	246	411
MIN	96	220	180	230	259	344	707	3,190	2,310	218	62	90
AC-FT	13,740	18,510	15,390	17,190	18,070	62,810	170,100	444,300	410,700	48,940	8,530	13,070

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2003, BY WATER YEAR (WY)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	558	591	436	427	553	1,439	3,683	8,193	6,802	1,549	478	367										
MAX	1,412	1,127	832	742	1,811	3,200	8,211	18,330	16,120	5,890	1,537	1,594										
(WY)	(1998)	(1986)	(1985)	(1998)	(1986)	(1986)	(1985)	(1984)	(1984)	(1983)	(1984)	(1997)										
MIN	133	189	236	210	223	563	1,965	2,442	1,378	34.4	21.6	45.6										
(WY)	(1990)	(1990)	(1990)	(1989)	(1989)	(2002)	(1992)	(2002)	(2002)	(2002)	(2002)	(2002)										

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1983 - 2003	
ANNUAL TOTAL	243,128.7		625,798			
ANNUAL MEAN	666		1,715		2,093	
HIGHEST ANNUAL MEAN					4,286 1984	
LOWEST ANNUAL MEAN					678 2002	
HIGHEST DAILY MEAN	3,470	Jun 2	15,700	Jun 3	32,300	May 18, 1984
LOWEST DAILY MEAN	1.9	Sep 4	62	Aug 13	1.9	Sep 4, 2002
ANNUAL SEVEN-DAY MINIMUM	4.1	Jul 11	73	Aug 11	4.1	Jul 11, 2002
MAXIMUM PEAK FLOW			16,200	Jun 3	33,200	May 18, 1984
MAXIMUM PEAK STAGE			11.86	Jun 3	19.13	May 18, 1984
ANNUAL RUNOFF (AC-FT)	482,200		1,241,000		1,516,000	
10 PERCENT EXCEEDS	2,280		5,970		6,470	
50 PERCENT EXCEEDS	300		320		650	
90 PERCENT EXCEEDS	13		180		210	

e Estimated.

## 09260050 YAMPA RIVER AT DEERLODGE PARK, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1977 to September 1981 published as "09260025, below Little Snake River." April 1982 to September 1983, October 1993 to September 1994, October 1996 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09260050](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09260050)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1977 to September 1982.

WATER TEMPERATURE: October 1979 to September 1982, April 2002 to current year.

INSTRUMENTATION.--Water-quality monitor, November 1977 to September 1982. Water-temperature sensor with satellite telemetry since April 2002.

REMARKS.--Daily record of water temperature is excellent. Interruptions in daily record are due to instrument malfunction or sensor being isolated.

Unpublished maximum and minimum specific conductance data for period of daily record available in district office. November 1977 to April 1980, all water-quality data collected approximately 3.5 mi upstream. All data subsequent to April 1980 were collected at present site.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,040 microsiemens/cm, Oct. 4, 1979; minimum, 64 microsiemens/cm, July 13, 1978.

WATER TEMPERATURE: Maximum, 31.5°C, July 19, 2003; minimum, 0.0°C on many days during winter months.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 31.5°C, July 19; minimum, 0.0°C, on many days.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat fltrd end lab, mg/L as CaCO3 (29801)
OCT 23...	0945	209	10.1	8.5	586	6.0	180	44.2	17.3	2.54	2	56.9	E161
MAR 06...	0841	300	11.5	8.5	612	0.1	210	47.6	21.5	2.68	2	55.5	197
MAY 20...	1250	9,600	9.2	8.0	193	9.7	79	20.9	6.58	1.25	0.4	7.34	63
AUG 20...	1000	81	8.0	8.5	690	20.8	220	51.1	21.9	3.79	2	60.4	172

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)
OCT 23...	23.8	0.3	6.3	109	--	--	--	0.34	<0.04	<0.06	<0.008	<0.02	0.083
MAR 06...	22.6	0.29	8.7	132	409	0.56	331	0.23	<0.04	E.06	<0.008	<0.02	0.039
MAY 20...	2.13	<0.2	9.5	25.4	113	0.15	2,920	1.5	<0.04	0.47	E.005	E.01	0.53
AUG 20...	36.2	0.3	4.8	123	404	0.55	88.4	0.34	<0.04	<0.06	<0.008	<0.02	0.018

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	E coli, m-TEC MF, water, col/100 mL (31633)	Fecal coliform, M-FC 0.7u MF col/100 mL (31625)	Cadmium, water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, unfltrd recoverable, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recoverable, ug/L (01055)	Mercury, water, fltrd, ug/L (71890)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
OCT 23...	27	34	<0.2	<1.2	1,110	<1	6.5	59.1	<0.02	<3	<0.3	<24
MAR 06...	E5	E8	<0.2	<1.2	550	<1	6.8	20.4	<0.02	<3	<0.3	<24
MAY 20...	46	42	<0.2	E1.0	8,240	<1	3.9	284	<0.02	<3	<0.3	<24
AUG 20...	34	61	<0.2	<1.2	100	<1	3.6	21.3	<0.02	<3	<0.3	<3

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

09260050 YAMPA RIVER AT DEERLODGE PARK, CO—Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 08...	0915	278	619	1.9	JUL 30...	1445	217	440	26.3
MAR 03...	1045	392	625	0.3	AUG 21...	1235	97	677	25.1
APR 29...	1122	6,130	350	11.3	SEP 08...	1240	80	639	20.0

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	14.4	11.0	12.6
2	---	---	---	---	---	---	---	---	---	15.6	9.9	12.6
3	---	---	---	---	---	---	---	---	---	14.5	10.8	12.6
4	---	---	---	---	---	---	---	---	---	16.1	11.1	13.6
5	---	---	---	---	---	---	13.2	9.9	11.5	16.4	12.2	14.3
6	---	---	---	---	---	---	12.0	8.6	10.2	16.9	12.0	14.4
7	---	---	---	---	---	---	14.2	8.8	10.9	16.4	12.5	14.4
8	---	---	---	---	---	---	14.0	8.6	11.0	15.7	10.0	12.8
9	---	---	---	---	---	---	14.2	8.7	11.3	14.4	10.2	12.3
10	---	---	---	---	---	---	12.5	10.5	11.4	13.6	10.5	11.8
11	---	---	---	---	---	---	13.9	9.5	11.4	13.9	9.9	11.5
12	---	---	---	---	---	---	12.4	9.2	10.9	15.0	8.9	11.8
13	---	---	---	---	---	---	14.6	9.1	11.7	17.2	10.5	13.7
14	---	---	---	---	---	---	14.7	10.3	12.2	17.7	12.6	14.8
15	---	---	---	---	---	---	11.4	9.5	10.6	18.4	13.1	15.5
16	---	---	---	---	---	---	12.4	9.0	10.4	16.4	13.6	14.8
17	---	---	---	---	---	---	10.9	8.5	9.7	18.0	12.0	14.9
18	---	---	---	---	---	---	10.6	7.6	8.9	19.0	13.5	16.1
19	---	---	---	---	---	---	11.6	7.1	9.1	19.4	13.8	16.6
20	---	---	---	---	---	---	9.6	7.5	8.6	19.8	15.3	17.2
21	---	---	---	---	---	---	10.4	6.0	8.2	16.1	11.8	14.5
22	---	---	---	---	---	---	12.1	6.6	9.4	12.6	9.8	11.1
23	---	---	---	---	---	---	13.4	8.2	10.7	12.6	9.6	11.2
24	---	---	---	---	---	---	14.1	8.2	11.0	14.4	9.9	11.9
25	---	---	---	---	---	---	14.6	10.2	12.1	16.4	10.1	13.2
26	---	---	---	---	---	---	14.5	10.9	12.5	17.8	12.2	15.0
27	---	---	---	---	---	---	13.8	10.5	11.8	18.8	13.5	16.2
28	---	---	---	---	---	---	14.1	9.2	11.4	20.3	14.4	17.4
29	---	---	---	---	---	---	14.5	9.7	12.1	21.8	15.6	18.5
30	---	---	---	---	---	---	15.7	10.5	12.9	22.3	16.6	19.3
31	---	---	---	---	---	---	---	---	---	22.5	17.2	19.9
MONTH	---	---	---	---	---	---	---	---	---	22.5	8.9	14.4



## GREEN RIVER BASIN

09260050 YAMPA RIVER AT DEERLODGE PARK, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	20.6	17.8	19.1	---	---	---	26.0	18.7	21.4	19.9	15.4	17.6
2	19.1	16.2	17.5	---	---	---	---	---	---	21.0	15.9	18.3
3	17.5	15.3	16.2	---	---	---	---	---	---	19.8	16.1	17.7
4	18.5	14.2	16.3	---	---	---	---	---	---	20.3	14.2	16.4
5	19.6	14.5	17.1	---	---	---	---	---	---	22.1	12.3	16.7
6	20.4	15.6	17.9	---	---	---	---	---	---	18.9	13.4	16.2
7	21.2	16.2	18.6	---	---	---	---	---	---	21.3	14.0	16.9
8	20.5	16.3	18.1	---	---	---	22.9	18.4	20.6	22.0	14.8	17.5
9	19.9	15.0	17.1	---	---	---	---	---	---	24.7	14.5	18.8
10	19.5	13.4	16.2	---	---	---	---	---	---	24.3	15.3	18.9
11	20.0	13.8	16.9	---	---	---	---	---	---	19.5	17.2	18.2
12	21.8	14.8	18.1	---	---	---	---	---	---	21.2	15.8	17.9
13	23.1	15.9	19.2	---	---	---	---	---	---	23.3	14.8	18.6
14	---	---	---	---	---	---	24.1	16.9	20.0	25.1	13.9	18.5
15	---	---	---	---	---	---	22.7	17.3	19.9	24.5	12.3	17.8
16	---	---	---	---	---	---	21.9	17.7	19.7	24.0	12.6	17.2
17	---	---	---	15.6	14.7	15.2	20.5	17.4	19.0	19.8	12.0	14.9
18	---	---	---	16.2	15.0	15.5	21.0	17.4	19.0	15.9	12.6	13.7
19	---	---	---	---	---	---	21.0	17.5	19.1	18.6	9.8	13.7
20	---	---	---	---	---	---	20.5	18.2	19.4	20.9	9.2	14.5
21	22.7	17.6	20.1	---	---	---	20.3	18.2	19.3	22.4	10.0	14.7
22	24.1	17.0	20.3	---	---	---	20.5	17.4	19.0	20.6	8.8	14.4
23	25.4	16.5	20.8	---	---	---	20.1	17.1	18.7	20.2	10.3	14.9
24	28.3	17.0	22.4	---	---	---	20.0	17.2	18.7	19.5	10.8	15.1
25	29.0	18.5	23.3	---	---	---	19.1	16.4	18.0	17.7	12.2	14.5
26	---	---	---	---	---	---	19.9	15.7	17.6	20.9	11.3	15.3
27	---	---	---	28.8	17.2	21.7	20.9	17.0	18.8	18.6	9.8	14.1
28	---	---	---	30.6	16.6	22.8	20.6	17.5	19.0	18.0	11.5	14.3
29	---	---	---	27.9	17.7	22.6	19.8	17.2	18.1	16.4	11.6	13.7
30	---	---	---	28.0	19.0	23.3	18.7	15.5	17.2	16.9	9.7	12.7
31	---	---	---	26.2	20.2	23.0	18.4	16.2	17.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	25.1	8.8	16.1
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	18.6	9.8	13.6	2.3	0.0	0.8	0.5	0.0	0.2	0.1	0.1	0.1
2	14.9	10.3	12.4	4.9	0.2	2.0	1.2	0.0	0.3	0.2	0.1	0.1
3	12.8	9.8	11.6	5.1	0.0	1.7	1.1	0.0	0.3	0.1	0.1	0.1
4	14.7	9.5	11.3	4.8	0.0	1.3	1.1	0.0	0.2	0.1	0.1	0.1
5	15.4	9.6	12.0	5.2	0.0	1.7	1.9	0.0	0.5	0.1	0.1	0.1
6	17.0	8.8	12.6	6.0	0.0	2.1	2.3	0.0	0.6	0.1	0.0	0.1
7	16.1	10.1	13.0	5.4	0.0	2.4	0.8	0.0	0.2	0.1	0.0	0.0
8	16.8	10.7	13.5	6.4	1.5	3.8	1.0	0.0	0.1	0.1	0.0	0.1
9	15.6	10.0	12.7	4.9	1.9	3.8	0.6	0.0	0.1	0.1	0.1	0.1
10	14.7	9.4	12.1	5.5	0.8	2.6	0.2	0.0	0.0	0.1	0.1	0.1
11	12.2	9.6	10.9	6.0	0.8	2.7	0.1	0.0	0.0	0.1	0.1	0.1
12	12.6	6.9	9.6	4.3	0.0	1.7	0.1	0.0	0.0	0.1	0.1	0.1
13	11.9	5.9	8.9	3.2	0.9	1.9	0.3	0.0	0.1	0.2	0.1	0.1
14	11.8	5.8	8.8	5.6	0.3	2.6	0.2	0.0	0.1	0.2	0.2	0.2
15	12.0	6.1	9.0	4.6	0.8	2.4	0.2	0.0	0.1	0.2	0.2	0.2
16	12.0	6.3	9.2	3.5	0.0	1.4	0.1	0.0	0.0	0.2	0.2	0.2
17	12.2	6.4	9.3	1.4	0.0	0.4	0.1	0.0	0.0	0.2	0.2	0.2
18	12.1	6.7	9.4	3.0	0.0	0.8	0.5	0.0	0.1	0.2	0.2	0.2
19	11.7	6.3	9.0	4.0	0.0	1.2	0.1	0.0	0.1	0.2	0.2	0.2
20	11.5	5.5	8.5	4.9	0.0	1.8	0.0	0.0	0.0	0.2	0.2	0.2
21	11.1	5.9	8.5	5.4	0.0	2.2	0.1	0.0	0.0	0.2	0.2	0.2
22	9.6	5.6	7.7	5.5	0.0	2.4	0.0	0.0	0.0	0.2	0.2	0.2
23	9.4	5.8	7.5	6.3	0.9	3.3	0.0	0.0	0.0	0.2	0.2	0.2
24	10.3	5.7	7.6	5.2	0.8	3.0	0.0	0.0	0.0	0.2	0.2	0.2
25	11.4	4.8	7.7	2.3	0.0	0.6	0.0	0.0	0.0	0.2	0.2	0.2
26	8.9	4.7	6.9	0.6	0.0	0.2	0.0	0.0	0.0	0.2	0.2	0.2
27	11.3	5.2	7.9	0.3	0.1	0.2	0.0	0.0	0.0	0.2	0.2	0.2
28	10.3	5.2	7.3	0.6	0.1	0.3	0.1	0.0	0.0	0.2	0.1	0.2
29	7.1	2.5	5.3	0.7	0.2	0.4	0.1	0.0	0.1	0.2	0.1	0.2
30	5.9	1.1	3.0	0.7	0.1	0.3	0.1	0.0	0.0	0.2	0.1	0.1
31	3.5	0.6	1.9	---	---	---	0.1	0.0	0.1	0.2	0.1	0.2
MONTH	18.6	0.6	9.3	6.4	0.0	1.7	2.3	0.0	0.1	0.2	0.0	0.2



## 09303000 NORTH FORK WHITE RIVER AT BUFORD, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 39°59'15", long 107°36'50", in N/W<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.9, T.1.S., R.91 W., Rio Blanco County, Hydrologic Unit 14050005, on right bank 600 ft east of Buford, and 1.2 mi upstream from South Fork White River.

DRAINAGE AREA.--259 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1976 to December 1978, October 1982 to September 1992. October 1994 to current year. Daily-discharge records available, May 1910 to December 1915, July 1919 to December 1920, October 1951 to September 2001. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09303000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09303000)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)
FEB 17...	0910	120	11.2	8.3	383	0.0	0.26	<0.015	0.060	E.002	0.013	0.042	<2.0
APR 16...	1530	307	10.5	8.5	298	6.9	0.29	<0.015	0.444	0.003	0.012	0.050	<2.0
JUN 11...	1510	822	9.3	8.1	178	7.6	0.39	<0.015	0.156	<0.002	E.004	0.024	<2.0
JUL 30...	1550	205	8.9	8.2	318	14.4	0.20	<0.015	0.033	E.002	0.009	0.024	<2.0
AUG 11...	1150	182	8.7	8.7	318	14.0	E.10	<0.015	<0.022	<0.002	<0.007	0.018	<2.0

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	E coli, m-TEC MF, water, col/100 mL (31633)
FEB 17...	E5
APR 16...	E13
JUN 11...	51
JUL 30...	E6
AUG 11...	32

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## 09304000 SOUTH FORK WHITE RIVER AT BUFORD, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 39°58'28", long 107°37'30", in NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.17, T.1 S., R.91 W., Rio Blanco County, Hydrologic Unit 14050005, on right bank 30 ft downstream from highway bridge, 0.8 mi upstream from mouth, and 1.0 mi south of Buford.

DRAINAGE AREA.--177 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1976 to December 1978, October 1984 to September 1992. October 1994 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09304000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09304000)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)
FEB 11...	1430	99	11.5	8.3	273	0.1	E.09	<0.015	<0.022	<0.002	0.013	0.013	<2.0
APR 16...	1230	149	10.5	8.5	252	6.0	0.15	<0.015	0.124	E.002	<0.007	0.019	<2.0
JUN 11...	1216	798	10.0	8.2	180	7.3	0.27	<0.015	0.076	<0.002	0.008	0.051	<2.0
JUL 30...	1400	140	8.1	8.3	290	14.9	0.14	<0.015	0.023	E.002	E.006	0.017	<2.0
AUG 14...	0946	143	8.2	8.2	276	14.5	0.14	<0.015	E.017	0.004	<0.007	0.017	<2.0

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	E coli, m-TEC MF, water, col/100 mL (31633)
FEB 11...	E3
APR 16...	E13
JUN 11...	33
JUL 30...	E12
AUG 14...	26

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

**09304115 WHITE RIVER BELOW NORTH ELK CREEK NEAR BUFORD, CO**

LOCATION.--Lat 39°57'00", long 107°41'39", in SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.22, T.1 S., R.92 W., Rio Blanco County, Hydrologic Unit 14050005, on left bank at County Road 8 bridge, 0.7 mi downstream from North Elk Creek, and 4.8 mi southwest of Buford.

DRAINAGE AREA.--529 mi<sup>2</sup>.

PERIOD OF RECORD.--January to September 2003. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09304115](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09304115)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,780 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data for Gaging Stations" section of this report.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period January to September, 4,180 ft<sup>3</sup>/s, June 2, gage height, 5.54 ft; minimum daily, 149 ft<sup>3</sup>/s, Feb. 7.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	235	216	279	714	3,720	854	402	342
2	---	---	---	---	239	215	306	651	3,840	824	404	328
3	---	---	---	---	229	238	312	689	3,470	788	403	341
4	---	---	---	---	213	240	274	764	3,170	760	405	343
5	---	---	---	---	198	233	264	715	2,890	732	396	336
6	---	---	---	---	164	230	267	647	2,610	716	375	350
7	---	---	---	---	149	231	254	642	2,390	702	369	392
8	---	---	---	---	155	231	247	663	2,210	673	389	378
9	---	---	---	e225	212	231	273	669	2,160	650	378	343
10	---	---	---	e227	204	233	312	610	2,110	608	376	434
11	---	---	---	e221	224	239	375	578	2,000	567	375	422
12	---	---	---	e225	241	247	447	602	1,960	542	368	415
13	---	---	---	230	274	258	531	744	1,850	520	353	420
14	---	---	---	e223	284	271	644	910	1,730	499	390	407
15	---	---	---	e217	259	272	680	983	1,740	486	360	358
16	---	---	---	208	238	274	591	1,150	1,660	476	365	371
17	---	---	---	e186	245	274	549	1,690	1,520	472	366	359
18	---	---	---	e155	236	265	532	1,740	1,480	473	408	361
19	---	---	---	213	222	247	481	1,900	1,480	483	381	344
20	---	---	---	e200	216	242	451	1,940	1,720	470	342	348
21	---	---	---	237	240	246	470	2,030	1,490	466	343	341
22	---	---	---	245	235	244	517	2,140	1,360	461	339	337
23	---	---	---	e233	229	253	551	2,370	1,270	465	344	335
24	---	---	---	e230	230	280	538	2,300	1,190	465	406	330
25	---	---	---	e223	234	259	544	2,650	1,170	463	369	321
26	---	---	---	e217	234	261	625	2,670	1,080	449	341	317
27	---	---	---	e220	236	261	713	2,850	1,020	434	344	314
28	---	---	---	e219	230	232	768	3,050	964	417	373	316
29	---	---	---	233	---	229	796	3,070	924	427	346	315
30	---	---	---	230	---	248	805	3,270	892	419	341	303
31	---	---	---	236	---	252	---	3,350	---	402	356	---
TOTAL	---	---	---	---	6,305	7,652	14,396	48,751	57,070	17,163	11,507	10,621
MEAN	---	---	---	---	225	247	480	1,573	1,902	554	371	354
MAX	---	---	---	---	284	280	805	3,350	3,840	854	408	434
MIN	---	---	---	---	149	215	247	578	892	402	339	303
AC-FT	---	---	---	---	12,510	15,180	28,550	96,700	113,200	34,040	22,820	21,070

e Estimated.

## 395650107435600 WHITE RIVER ABOVE DRY CREEK NEAR MEEKER, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 39°56'50", long 107°43'56", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.21, T.1 S., R.92 W., Rio Blanco County, Hydrologic Unit 14050005, on right bank 100 ft downstream from highway bridge, 1.5 mi upstream from Dry Creek, and 13.0 mi southeast of Meeker.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.-- December 1997 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=395650107435600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=395650107435600)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)
FEB 11...	1730	228	11.2	8.5	380	0.0	0.10	<0.015	0.022	0.003	0.007	0.014	<2.0
APR 07...	1146	254	10.6	8.5	380	3.8	0.12	<0.015	E.020	<0.002	<0.007	0.018	<2.0
JUN 05...	1115	3,050	12.1	7.9	179	7.2	0.26	<0.015	0.206	0.006	E.006	0.119	<2.0
JUL 30...	1145	401	9.0	8.4	344	14.6	0.23	<0.015	E.021	<0.002	0.007	0.019	<2.0
AUG 11...	1340	369	8.1	8.5	344	18.1	0.13	<0.015	<0.022	<0.002	<0.007	0.015	<2.0

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	E coli, m-TEC MF, water, col/100 mL (31633)
FEB 11...	E7
APR 07...	E19
JUN 05...	36
JUL 30...	29
AUG 11...	36

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## 09304200 WHITE RIVER ABOVE COAL CREEK NEAR MEEKER, CO

LOCATION.--Lat 40°00'18", long 107°49'29", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.3, T.1 S., R.93 W., Rio Blanco County, Hydrologic Unit 14050005, on left bank 15 ft downstream from county road bridge, 2.3 mi upstream from Coal Creek, and 5.0 mi southeast of Meeker.

DRAINAGE AREA.--648 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09304200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09304200)

REVISED RECORDS.--WDR CO-79-3: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,400 ft above NGVD of 1929, from topographic map. Oct. 1, 1961 to Sept. 30, 1976, at site 76 ft upstream at datum 2.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversion upstream from station for irrigation of about 8,000 acres and about 4,000 acres downstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	266	251	e245	e257	211	322	672	3,410	533	137	70
2	146	284	e254	e225	233	209	336	582	3,730	511	130	58
3	e187	247	e232	e260	228	232	334	560	3,410	528	127	61
4	e210	250	e231	e251	211	239	302	640	3,180	522	116	78
5	e203	255	e244	e243	221	236	304	583	2,890	497	96	78
6	e193	262	e236	e253	184	231	302	492	2,580	490	74	93
7	e196	275	e225	e251	186	233	282	470	2,260	470	72	118
8	230	293	e220	e247	173	232	270	462	2,000	432	76	131
9	235	307	e207	e245	e180	233	293	488	1,920	419	75	127
10	230	288	e200	e247	e191	246	322	439	1,900	391	66	226
11	216	284	e224	e241	e201	254	370	387	1,780	368	59	237
12	231	257	e245	e245	e206	261	421	365	1,710	364	56	225
13	212	266	e240	e232	e212	e265	474	449	1,590	355	51	241
14	218	285	e228	e234	e209	e261	584	658	1,460	341	55	242
15	217	273	e239	e237	e219	e268	631	893	1,440	305	38	209
16	211	244	e232	e219	224	e264	553	1,140	1,370	296	30	225
17	211	261	e248	e227	239	e273	514	1,530	1,220	294	34	212
18	218	278	e240	e210	227	267	493	1,810	1,170	296	49	214
19	234	248	e242	e224	215	253	456	1,740	1,150	308	61	209
20	212	263	226	e220	224	246	433	1,720	1,410	290	46	213
21	221	264	282	e258	260	247	435	1,870	1,200	264	35	206
22	225	257	278	e259	253	246	455	2,030	1,060	247	37	204
23	239	263	200	e253	229	256	471	2,330	982	236	39	204
24	278	268	218	e250	225	283	472	2,440	896	232	74	208
25	258	259	e251	e243	235	297	447	2,490	853	221	65	201
26	259	218	e225	e237	240	288	545	2,440	772	212	51	197
27	260	215	e229	e243	229	304	665	2,720	699	189	55	195
28	242	232	e281	e239	238	282	740	2,920	641	160	77	196
29	261	259	e270	e232	---	269	770	3,160	588	165	58	212
30	257	259	e238	e236	---	302	780	3,290	559	157	50	217
31	269	---	e226	e235	---	291	---	3,140	---	137	67	---
TOTAL	6,933	7,880	7,362	7,441	6,149	7,979	13,776	44,910	49,830	10,230	2,056	5,307
MEAN	224	263	237	240	220	257	459	1,449	1,661	330	66.3	177
MAX	278	307	282	260	260	304	780	3,290	3,730	533	137	242
MIN	146	215	200	210	173	209	270	365	559	137	30	58
AC-FT	13,750	15,630	14,600	14,760	12,200	15,830	27,320	89,080	98,840	20,290	4,080	10,530

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)

	351	339	305	292	287	307	514	1,501	1,699	565	284	253
MEAN	351	339	305	292	287	307	514	1,501	1,699	565	284	253
MAX	616	488	426	405	387	448	1,034	2,785	3,526	1,924	759	586
(WY)	(1998)	(1987)	(1998)	(1998)	(1986)	(1986)	(1985)	(1985)	(1984)	(1995)	(1984)	(1997)
MIN	141	229	184	181	208	225	319	397	86.7	22.5	21.5	41.3
(WY)	(1978)	(1978)	(1977)	(1977)	(1978)	(1977)	(1991)	(1977)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1962 - 2003

ANNUAL TOTAL	83,920.0	169,853	
ANNUAL MEAN	230	465	559
HIGHEST ANNUAL MEAN			966 1984
LOWEST ANNUAL MEAN			208 1977
HIGHEST DAILY MEAN	798 May 8	3,730 Jun 2	5,360 Jun 26, 1983
LOWEST DAILY MEAN	8.3 Jul 7	30 Aug 16	6.5 Jul 19, 1977
ANNUAL SEVEN-DAY MINIMUM	10 Sep 5	42 Aug 16	8.8 Jul 16, 1977
MAXIMUM PEAK FLOW		3,950 Jun 2	5,740 Jun 26, 1983
MAXIMUM PEAK STAGE		6.05 Jun 2	7.07 Jun 26, 1983
INSTANTANEOUS LOW FLOW		30 Aug 16	
ANNUAL RUNOFF (AC-FT)	166,500	336,900	404,700
10 PERCENT EXCEEDS	477	1,140	1,360
50 PERCENT EXCEEDS	255	247	328
90 PERCENT EXCEEDS	17	127	210

e Estimated.

09304200 WHITE RIVER ABOVE COAL CREEK NEAR MEEKER, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1973 to June 1975, July 1978 to September 1984, October 1986 to September 1992, October 1994 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09304200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09304200)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1973 to September 1975, July 1978 to September 1984.

WATER TEMPERATURE: March 1973 to September 1975, July 1978 to September 1984.

INSTRUMENTATION.--Water-quality monitor, July 1978 to September 1984.

REMARKS.--Unpublished daily maximum and minimum specific conductance data available in district office.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Chloride, water, fltrd, mg/L (00940)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)
FEB 11...	1230	191	10.9	8.5	473	0.0	--	0.13	<0.015	0.029	E.002	<0.007	0.017
APR 07...	1600	282	10.1	8.6	434	6.6	1.28	0.19	0.019	<0.022	<0.002	<0.007	0.014
JUN 04...	1220	3,240	9.3	8.0	185	7.4	0.87	0.27	<0.015	0.212	E.002	0.010	0.058
JUL 26...	1330	219	7.8	8.2	413	19.5	3.28	0.20	<0.015	E.015	<0.002	0.014	0.035
AUG 12...	0850	55	8.1	8.2	477	14.0	4.77	0.15	<0.015	<0.022	<0.002	0.011	0.033

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, m-TEC MF, water, col/ 100 mL (31633)
FEB 11...	<2.0	E4
APR 07...	<2.0	28
JUN 04...	<2.0	77
JUL 26...	<2.0	E10
AUG 12...	<2.0	43

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	0935	163	441	11.2	JUN 02...	1327	3,950	210	9.9
DEC 02...	1313	268	429	3.5	JUL 10...	1250	378	365	16.9
MAY 06...	1030	469	349	7.2	SEP 09...	0904	126	469	13.1
MAY 24...	1320	2,320	227	10.4					



## 09304500 WHITE RIVER NEAR MEEKER, CO

LOCATION.--Lat 40°02'01", long 107°51'42", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.30, T.1 N., R.93 W., Rio Blanco County, Hydrologic Unit 14050005, on left bank at downstream abutment of private bridge, 1.0 mi upstream from Curtis Creek and 2.5 mi east of Meeker.

DRAINAGE AREA.--755 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1901 to December 1906, October 1909 to current year. Monthly discharge only for some periods, published in WSP 1313. Published as "at Meeker" 1901-13. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09304500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09304500)

REVISED RECORDS.--WDR CO-79-3: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,300 ft above NGVD of 1929, from topographic map. Prior to Oct. 31, 1906, and May 7 to Aug. 13, 1910, nonrecording gage, and Aug. 14, 1910 to Oct. 19, 1913, water-stage recorder, at site 2.5 mi downstream, at different datum. Oct. 20, 1913 to Sept. 30, 1971, water-stage recorder at present site, at datum 3.00 ft higher, prior to Oct. 1, 1933, and at datum 2.00 ft higher, thereafter.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 12,000 acres upstream from station, and about 3,000 acres downstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	239	289	250	e255	e215	230	296	723	3,500	600	223	177
2	244	283	257	e235	e220	229	322	613	3,820	578	220	162
3	311	268	242	e271	e215	251	335	574	3,330	583	225	166
4	300	243	242	e268	e210	262	311	671	2,940	556	218	181
5	290	267	254	e253	e210	248	298	627	2,610	525	203	173
6	275	254	246	e263	204	248	302	515	2,320	516	197	187
7	280	264	235	e261	212	248	294	485	2,050	507	200	236
8	277	277	228	e257	e223	247	280	485	1,840	474	207	237
9	274	291	214	e264	e240	254	298	524	1,800	451	205	228
10	269	282	208	e255	e254	260	320	490	1,800	440	207	339
11	260	282	234	e251	e270	268	361	436	1,700	423	210	353
12	264	253	255	e255	276	e290	404	398	1,630	419	211	328
13	255	258	250	e242	305	e275	451	459	1,530	415	205	341
14	261	277	238	e244	297	e271	562	709	1,400	403	208	343
15	261	270	249	e247	282	e278	645	1,040	1,390	370	189	312
16	255	243	242	e229	252	e280	569	1,350	1,340	360	176	317
17	255	258	258	e237	267	e274	512	1,870	1,190	351	177	301
18	257	268	250	227	255	e283	494	2,200	1,130	348	208	306
19	264	248	252	e234	240	287	472	2,090	1,140	364	192	299
20	250	259	223	e230	232	279	440	2,020	1,430	352	172	298
21	250	254	276	e225	263	281	436	2,170	1,240	324	152	291
22	256	253	274	e225	253	276	450	2,320	1,060	314	160	291
23	278	258	214	e220	243	278	469	2,610	978	297	172	291
24	303	261	240	e220	247	304	479	2,660	920	299	209	290
25	276	261	261	e220	254	292	461	2,630	883	283	196	288
26	272	223	235	e215	248	285	546	2,530	813	280	171	282
27	268	213	239	e210	246	292	695	2,790	735	261	171	281
28	261	237	291	e215	245	271	791	3,010	682	232	199	278
29	275	264	e280	e215	---	264	828	3,100	643	240	175	289
30	274	259	e248	e210	---	279	854	3,290	623	243	152	283
31	279	---	e236	e215	---	288	---	3,150	---	221	175	---
TOTAL	8,333	7,817	7,621	7,368	6,878	8,372	13,975	48,539	48,467	12,029	5,985	8,148
MEAN	269	261	246	238	246	270	466	1,566	1,616	388	193	272
MAX	311	291	291	271	305	304	854	3,290	3,820	600	225	353
MIN	239	213	208	210	204	229	280	398	623	221	152	162
AC-FT	16,530	15,510	15,120	14,610	13,640	16,610	27,720	96,280	96,130	23,860	11,870	16,160

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 2003, BY WATER YEAR (WY)

MEAN	392	370	332	314	310	343	551	1,558	1,875	677	385	356
MAX	687	648	472	441	420	522	1,094	2,829	4,091	2,524	866	735
(WY)	(1998)	(1929)	(1998)	(1998)	(1930)	(1986)	(1962)	(1985)	(1921)	(1957)	(1984)	(1997)
MIN	215	255	233	225	232	261	313	499	230	116	132	152
(WY)	(1978)	(1978)	(1978)	(1981)	(1935)	(1935)	(1944)	(1977)	(2002)	(1977)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1910 - 2003

ANNUAL TOTAL	104,645	183,532				
ANNUAL MEAN	287	503				
HIGHEST ANNUAL MEAN			1,044	1984		
LOWEST ANNUAL MEAN			274	1977		
HIGHEST DAILY MEAN	940	May 8	3,820	Jun 2	6,320	May 25, 1984
LOWEST DAILY MEAN	91	Jul 15	152	Aug 21	78	Jul 16, 1977
ANNUAL SEVEN-DAY MINIMUM	99	Jul 13	169	Aug 30	86	Jul 13, 1977
MAXIMUM PEAK FLOW			4,110	Jun 2	6,950	May 25, 1984
MAXIMUM PEAK STAGE			5.44	Jun 2	a6.12	May 25, 1984
ANNUAL RUNOFF (AC-FT)	207,600	364,000	450,800			
10 PERCENT EXCEEDS	526	1,130	1,470			
50 PERCENT EXCEEDS	268	274	370			
90 PERCENT EXCEEDS	120	210	268			

e Estimated.

a Maximum gage height, 7.60 ft, Jun 16, 1921, present datum.

## 09304800 WHITE RIVER BELOW MEEKER, CO

LOCATION.--Lat 40°00'48", long 108°05'33", in SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.31, T.1 N., R.95 W., Rio Blanco County, Hydrologic Unit 14050005, on left bank 30 ft downstream from county bridge, 4.5 mi downstream from Strawberry Creek, and 10 mi west of Meeker.

DRAINAGE AREA.--1,024 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1961 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09304800](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09304800)

REVISED RECORDS.--WDR CO-79-3: Drainage area. WDR CO-86-2: 1985.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,928 ft above NGVD of 1929, from topographic map. Prior to July 22, 2002, at datum 2.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 22,000 acres upstream and a few small hay meadows downstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	299	326	323	306	e257	271	312	759	3,760	612	233	282
2	311	333	313	276	e279	293	347	680	4,240	593	245	255
3	405	313	298	319	e261	297	370	637	3,630	581	266	250
4	380	292	300	e302	e243	348	352	684	3,180	559	258	264
5	355	325	317	314	e239	314	332	693	2,790	530	242	257
6	327	310	300	289	218	324	333	593	2,430	511	196	280
7	333	322	281	254	178	350	323	524	2,140	514	178	358
8	328	347	275	267	173	372	303	512	1,950	445	179	362
9	315	377	e254	e280	247	364	312	524	1,890	389	195	346
10	319	369	e248	e267	253	369	342	532	1,930	389	190	514
11	309	355	e274	e270	260	390	396	462	1,870	375	199	579
12	309	322	e295	e275	274	418	456	427	1,760	380	215	480
13	309	320	302	291	323	405	517	422	1,660	370	240	480
14	310	362	e278	e264	e272	422	647	620	1,430	365	236	496
15	310	350	e289	e265	e274	420	726	866	1,390	326	225	445
16	310	309	274	e269	e277	407	745	1,090	1,340	327	222	434
17	311	311	312	e257	e283	387	739	1,570	1,230	330	247	404
18	309	357	e290	254	e271	383	656	1,960	1,190	344	296	411
19	313	323	e292	287	e284	336	535	1,980	1,190	366	287	400
20	308	334	231	e259	306	319	490	1,900	1,430	373	260	396
21	305	323	e285	e288	349	325	485	2,050	1,290	341	226	383
22	309	322	e236	e279	342	323	472	2,230	1,110	333	228	388
23	327	328	207	e276	325	315	499	2,600	1,000	304	274	397
24	370	329	186	e281	295	351	534	2,780	932	308	299	388
25	337	328	268	e280	286	347	528	2,840	887	291	302	375
26	325	292	256	e272	277	326	564	2,820	823	307	274	360
27	320	249	288	e267	277	333	700	2,830	757	312	260	355
28	315	254	e316	e273	271	303	783	2,900	697	274	291	346
29	330	312	e300	e279	---	281	828	3,300	641	266	282	360
30	334	351	e272	289	---	289	857	3,540	619	272	257	363
31	334	---	285	293	---	313	---	3,380	---	257	269	---
TOTAL	10,076	9,745	8,645	8,642	7,594	10,695	15,483	48,705	51,186	11,944	7,571	11,408
MEAN	325	325	279	279	271	345	516	1,571	1,706	385	244	380
MAX	405	377	323	319	349	422	857	3,540	4,240	612	302	579
MIN	299	249	186	254	173	271	303	422	619	257	178	250
AC-FT	19,990	19,330	17,150	17,140	15,060	21,210	30,710	96,610	101,500	23,690	15,020	22,630

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)

MEAN	453	412	365	337	340	391	595	1,572	1,844	735	416	392
MAX	793	638	536	493	457	586	1,141	2,979	3,904	2,155	837	821
(WY)	(1985)	(1985)	(1985)	(1986)	(1986)	(1986)	(1985)	(1985)	(1983)	(1995)	(1984)	(1997)
MIN	260	282	266	230	251	285	393	374	258	123	172	211
(WY)	(1978)	(1978)	(1964)	(1976)	(1977)	(1981)	(1977)	(1977)	(2002)	(2002)	(1990)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1962 - 2003

ANNUAL TOTAL	112,198	201,694	
ANNUAL MEAN	307	553	655
HIGHEST ANNUAL MEAN			1,069 1985
LOWEST ANNUAL MEAN			290 1977
HIGHEST DAILY MEAN	769	May 8	4,240 Jun 2
LOWEST DAILY MEAN	75	Jul 14	173 Feb 8
ANNUAL SEVEN-DAY MINIMUM	83	Jul 12	193 Aug 6
MAXIMUM PEAK FLOW			4,560 Jun 2
MAXIMUM PEAK STAGE			6.08 Jun 2
ANNUAL RUNOFF (AC-FT)	222,500	400,100	474,500
10 PERCENT EXCEEDS	495	1,140	1,480
50 PERCENT EXCEEDS	309	325	410
90 PERCENT EXCEEDS	150	256	280

e Estimated.

a At datum then in use. Maximum gage height, 6.08 ft, Jun 2, 2003, at present datum.

09304800 WHITE RIVER BELOW MEEKER, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1974 to September 1984, December 1985 to September 1992, October 1994 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09304800](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09304800)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1978 to September 1983.

WATER TEMPERATURE: July 1978 to September 1983.

INSTRUMENTATION.--Water-quality monitor, July 1978 to September 1983.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Chloride, water, fltrd, mg/L (00940)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)
FEB 17...	1541	310	11.6	8.4	568	0.7	--	--	--	7.42	0.75	0.08	0.09
MAY 05...	0920	718	10.3	8.5	417	7.0	--	--	--	4.78	0.38	<0.04	0.10
JUN 04...	1600	3,250	8.5	8.0	259	11.9	130	35.8	9.25	1.80	0.42	<0.04	0.18
JUL 26...	1200	296	7.9	8.3	612	21.0	--	--	--	7.45	0.38	<0.04	0.06
AUG 06...	0930	190	8.6	8.3	730	18.0	320	86.9	24.8	9.40	0.42	<0.04	<0.06

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)	E coli, m-TEC MF, water, col/100 mL (31633)
FEB 17...	<0.008	0.04	0.102	<2.0	E10
MAY 05...	<0.008	<0.02	0.051	<2.0	25
JUN 04...	<0.008	E.01	0.133	<2.0	E56
JUL 26...	<0.008	0.04	0.070	<2.0	E16
AUG 06...	<0.008	0.03	0.071	<2.0	59

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Aluminum, water, fltrd, ug/L (01106)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
JUN 04...	5	<0.2	E1.2	16	<1	13.1	<0.3	E3
AUG 06...	M	<0.2	E.9	65	M	25.3	<0.3	E2

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

## 09304800 WHITE RIVER BELOW MEEKER, CO—Continued

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 16...	1120	309	619	7.0	APR 21...	1215	507	505	7.5
NOV 17...	1057	316	593	0.5	MAY 19...	1042	2,040	309	8.5
JAN 03...	1142	302	563	0.0	JUN 02...	0939	4,310	264	10.3
MAR 28...	1100	318	558	4.6					

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diameter percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
JUN 04...	1600	3,250	11.9	86	67	588
AUG 06...	0930	190	18.0	--	14	6.9

## 09306200 PICEANCE CREEK BELOW RYAN GULCH NEAR RIO BLANCO, CO

LOCATION.--Lat 39°55'16", long 108°17'49", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ , sec.32, T.1 S., R.97 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank at downstream side of bridge, 40 ft downstream from Ryan Gulch, and 23 mi northwest of Rio Blanco.

DRAINAGE AREA.--506 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to September 1998, August 1999 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09306200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09306200)

REVISED RECORDS.--WDR CO-79-3: 1977 (M).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,070 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges which are poor. Diversions for irrigation upstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.0	7.3	e5.1	e5.9	e7.4	e17	9.4	4.0	8.1	6.2	3.7	4.7
2	e4.9	6.5	e5.4	e5.8	e6.9	e15	8.8	4.3	6.9	5.9	3.3	4.6
3	6.2	6.4	e5.5	e5.3	e7.5	e16	8.9	4.1	5.6	5.8	3.8	4.7
4	5.4	6.4	e5.2	e5.1	e7.9	e15	8.7	4.2	4.4	5.5	3.4	4.1
5	5.0	6.3	e6.1	e5.5	e8.0	e16	9.4	4.9	5.2	5.4	4.1	4.0
6	5.0	6.3	e5.4	e5.8	e8.7	e15	10	3.6	5.0	5.6	3.8	5.0
7	4.9	6.3	e5.8	e5.6	e9.3	e18	11	3.5	4.9	5.9	3.8	5.9
8	4.8	6.3	e5.6	e5.7	e10	e19	9.1	3.8	4.5	5.4	4.1	5.0
9	4.7	7.0	e5.6	e5.5	e11	e11	7.1	3.4	4.3	5.2	4.1	4.8
10	5.7	6.4	e5.0	e5.3	e13	17	6.4	3.1	4.2	5.1	3.9	8.4
11	5.5	5.7	e5.3	e6.0	e13	24	4.4	2.7	4.5	4.7	4.0	9.1
12	e5.4	4.4	e5.0	e5.5	e14	26	2.9	2.9	4.5	4.5	4.2	6.7
13	e5.1	e4.9	e5.3	e5.6	e14	23	3.1	8.4	4.4	4.9	4.3	6.1
14	e5.5	e6.1	e5.0	e6.0	e14	21	3.9	10	4.4	5.4	4.1	5.4
15	e5.8	e5.6	e6.2	e5.9	e16	10	4.9	8.3	e4.1	e6.4	3.4	5.1
16	e5.4	e5.5	e5.1	e5.4	e18	8.2	3.7	8.5	e4.0	e6.5	3.4	3.1
17	5.1	e5.4	e5.1	e5.1	e15	8.3	3.4	9.1	e3.8	e6.8	10	2.5
18	5.2	e5.6	e6.1	e5.3	e14	9.1	3.6	9.5	e3.5	6.7	2.8	2.5
19	4.5	e5.5	e6.0	e5.5	e13	9.4	4.1	9.4	3.1	6.4	4.3	2.9
20	4.1	e5.5	e6.1	e5.2	e12	10	5.0	9.0	3.3	6.3	4.2	3.1
21	4.8	e5.6	e5.9	e4.6	e12	11	4.4	7.8	3.3	5.8	4.3	3.0
22	4.8	e5.6	e5.7	e6.1	e10	9.5	3.4	7.2	3.2	5.4	4.2	3.2
23	5.4	e5.5	e5.4	e5.7	e10	9.2	3.4	6.5	3.4	5.1	4.4	3.5
24	5.8	e5.4	e5.6	e6.0	e12	9.4	3.1	5.9	3.6	5.0	4.7	3.8
25	5.0	e5.5	e5.1	e5.6	e15	8.0	3.5	5.2	3.8	5.2	4.8	4.1
26	5.1	e5.7	e5.0	e4.9	e13	7.8	4.4	6.6	3.9	4.0	4.7	4.2
27	4.1	e6.2	e5.5	e5.4	e16	8.6	3.8	7.1	3.7	3.8	4.7	4.2
28	4.2	e5.3	e5.8	e5.5	e15	8.7	3.6	6.0	3.3	3.2	5.2	4.3
29	4.6	e5.0	e5.7	e5.5	---	8.6	3.6	6.3	4.1	2.8	5.0	4.9
30	6.1	e5.1	e5.6	e6.2	---	8.0	4.0	7.6	5.9	2.8	5.0	5.5
31	7.5	---	e5.5	e6.0	---	8.0	---	7.5	---	2.9	4.9	---
TOTAL	160.6	174.3	170.7	172.5	335.7	404.8	165.0	190.4	130.9	160.6	134.6	138.4
MEAN	5.18	5.81	5.51	5.56	12.0	13.1	5.50	6.14	4.36	5.18	4.34	4.61
MAX	7.5	7.3	6.2	6.2	18	26	11	10	8.1	6.8	10	9.1
MIN	4.1	4.4	5.0	4.6	6.9	7.8	2.9	2.7	3.1	2.8	2.8	2.5
AC-FT	319	346	339	342	666	803	327	378	260	319	267	275

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
MEAN	21.0	25.3	23.6	21.0	24.2	33.3	45.2	63.6	30.8	22.9	28.8	20.7
MAX	69.9	58.4	60.9	55.5	61.0	112	228	326	166	98.7	95.6	65.2
(WY)	(1986)	(1986)	(1984)	(1984)	(1986)	(1986)	(1986)	(1985)	(1983)	(1984)	(1984)	(1984)
MIN	2.75	5.81	5.51	5.56	12.0	11.5	2.94	3.65	3.51	3.95	2.69	3.94
(WY)	(1965)	(2003)	(2003)	(2003)	(2003)	(1972)	(1967)	(1967)	(1967)	(1967)	(1994)	(1981)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1965 - 2003

ANNUAL TOTAL	3,229.7	2,338.5	
ANNUAL MEAN	8.85	6.41	30.1
HIGHEST ANNUAL MEAN			96.5 1985
LOWEST ANNUAL MEAN			6.41 2003
HIGHEST DAILY MEAN	e22 Feb 23	26 Mar 12	534 May 5, 1985
LOWEST DAILY MEAN	2.3 May 15	2.5 Sep 17	0.15 Jun 7, 1981
ANNUAL SEVEN-DAY MINIMUM	2.9 May 9	2.9 Sep 16	0.96 Apr 27, 1966
MAXIMUM PEAK FLOW		43 Aug 17	550 May 5, 1985
MAXIMUM PEAK STAGE		4.05 Aug 17	a7.70 May 5, 1985
ANNUAL RUNOFF (AC-FT)	6,410	4,640	21,780
10 PERCENT EXCEEDS	17	10	59
50 PERCENT EXCEEDS	7.4	5.4	20
90 PERCENT EXCEEDS	5.0	3.6	6.0

e Estimated.

a Maximum gage height, 7.95 ft, May 5, 1998.

## 09306200 PICEANCE CREEK BELOW RYAN GULCH, NEAR RIO BLANCO, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1970 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09306200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09306200)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1979 to September 1982, November 1985 to September 1998.

WATER TEMPERATURE: December 1979 to September 1982, November 1985 to September 1998.

SUSPENDED-SEDIMENT DISCHARGE: October 1972 to September 1983.

INSTRUMENTATION.--Automatic pumping sediment sampler, October 1972 to September 1983. Water-quality monitor, December 1979 to September 1982 and November 1985 to July 1996; water-quality monitor with satellite telemetry, July 1, 1996 to September 30, 1998.

REMARKS.--Prior to October 1995, unpublished maximum and minimum specific conductance data for daily record are available in district office.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
NOV 13...	0947	4.4	12.1	8.3	1,910	3.5	620	84.9	96.9	2.53	4	232	445
MAR 24...	1148	9.6	9.9	8.3	1,670	8.1	590	89.0	88.3	2.61	3	181	468
JUN 18...	1248	3.5	8.4	8.4	1,630	19.2	560	75.0	90.0	2.68	4	193	466
AUG 05...	1115	4.5	8.3	8.5	1,530	19.7	490	59.5	82.4	2.60	4	190	422

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
NOV 13...	21.8	0.8	15.0	496	1,220	1.82	16.0	1,340	<10	0.30	E.03	0.07	<0.008
MAR 24...	17.9	0.67	14.8	429	1,010	1.55	29.7	1,140	<10	0.33	E.04	0.16	<0.008
JUN 18...	18.8	0.8	13.7	419	1,100	1.53	10.6	1,130	<10	0.34	<0.04	<0.06	<0.008
AUG 05...	18.5	0.8	10.1	400	1,020	1.42	12.7	1,040	<10	0.37	<0.04	<0.06	<0.008

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Organic carbon, water, fltrd, mg/L (00681)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic, water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)
NOV 13...	0.03	E.03	5.1	<2	E.16	2	72	<0.06	229	E.03	<0.8	0.494	1.5
MAR 24...	0.03	0.04	3.9	E1	<0.30	2	72	<0.06	167	E.03	<0.8	0.573	1.5
JUN 18...	E.02	E.02	5.3	2	<0.30	3	58	<0.06	191	<0.04	<0.8	0.435	4.2
AUG 05...	E.01	<0.04	5.5	3	<0.30	3	42	<0.06	199	E.03	<0.8	0.357	2.9

09306200 PICEANCE CREEK BELOW RYAN GULCH, NEAR RIO BLANCO, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium, water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural water, fltrd, ug/L (22703)
NOV 13...	10	<0.08	10	111	E.01	9.0	4.21	<3	<0.2	3,760	E5	2	3.62
MAR 24...	13	E.04	9	106	<0.02	7.9	3.02	<3	<0.2	3,680	E6	1	3.34
JUN 18...	18	E.04	11	48.1	<0.02	7.2	1.77	<3	<0.2	3,170	7	2	3.55
AUG 05...	11	<0.08	12	12.1	<0.02	7.2	2.16	<3	<0.2	2,520	E5	2	3.23

< -- Actual value is known to be less than the value shown.  
 E -- Estimated laboratory analysis value.

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Alpha radio-activity 2-sigma wat flt Th-230, pCi/L (75987)	Alpha radio-activity water, fltrd, pCi/L (04126)	Beta radio-activity 2-sigma wat flt CS-137, pCi/L (75989)	Gross beta radioac water, fltrd, pCi/L (03515)	Date	Alpha radio-activity 2-sigma wat flt Th-230, pCi/L (75987)	Alpha radio-activity water, fltrd, pCi/L (04126)	Beta radio-activity 2-sigma wat flt CS-137, pCi/L (75989)	Gross beta radioac water, fltrd, pCi/L (03515)
NOV 13...	1.1	4	6.3	3	JUN 18...	--	7.5	--	5.2
MAR 24...	1.0	3	4.9	5	AUG 05...	--	7	--	3

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1327	5.0	2,010	13.0	MAY 14...	1234	11	1,820	13.9
DEC 13...	1210	5.3	1,750	0.5	JUL 15...	1518	7.8	1,680	25.1
MAR 09...	1156	17	1,350	0.6	JUL 29...	1515	3.1	1,530	26.3

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV 13...	0947	4.4	3.5	60	0.72
MAR 24...	1148	9.6	8.1	36	0.93
JUN 18...	1248	3.5	19.2	33	0.31
AUG 05...	1115	4.5	19.7	9	0.11

## 0930622 PICEANCE CREEK AT WHITE RIVER, CO

LOCATION (revised).--Lat 40°04'41", long 108°14'09", in SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.2, T.1 N., R.97 W., Rio Blanco County, Hydrologic Unit 14050006, on right bank 150 ft downstream of box culvert on county highway, 1.0 mi southwest of White River City, 1.3 mi upstream from mouth, and 17 mi west of Meeker.

DRAINAGE AREA.--652 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to September 1966, October 1970 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=0930622](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=0930622)

REVISED RECORDS.--WDR CO-82-3: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,730 ft above NGVD of 1929, from topographic map. Oct. 1, 1964 to Sept. 30, 1966, at site 65 ft upstream at different datum. Oct 1, 1970 to Nov. 14, 1972, at site 150 ft upstream at different datum. Nov. 15, 1972 to July 12, 1974, at site 50 ft upstream at different datum. July 13, 1974 to Nov. 17, 1994 at site 0.9 mi downstream at different datum. Nov. 18, 1994 to Oct. 8, 2002, at site 150 ft upstream at same datum

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversions for irrigation of about 5,500 acres upstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	5.5	e5.2	e6.0	e7.5	17	7.4	e3.4	2.8	2.1	3.4	4.8
2	5.4	5.1	e5.5	e5.9	e7.1	16	7.5	e3.0	2.4	2.5	3.5	4.1
3	7.0	4.9	e5.8	e5.4	e8.0	17	7.2	e2.8	2.6	2.4	3.9	4.1
4	6.5	5.1	e5.5	e5.4	e8.8	17	7.3	e2.4	2.4	2.0	4.2	4.2
5	6.4	5.8	e5.3	e6.0	e8.4	17	6.7	3.1	2.5	1.9	4.7	5.0
6	5.7	6.0	e6.1	e6.2	e9.5	17	7.6	3.6	2.6	2.2	4.1	5.1
7	5.2	5.7	e5.5	e5.7	e11	19	8.0	3.4	2.6	2.3	4.2	4.0
8	4.9	5.7	e6.0	e6.0	e12	20	7.7	3.5	2.2	1.9	4.0	3.7
9	e4.9	6.0	e5.7	e5.6	e11	23	6.0	4.0	2.2	1.7	3.6	4.3
10	4.3	5.9	e5.1	e5.5	e14	25	5.2	4.5	2.4	1.9	3.2	5.6
11	4.4	5.9	e5.4	e6.1	e13	29	4.7	3.3	2.5	2.0	3.5	6.4
12	4.4	5.7	e5.1	e5.9	e15	36	3.7	2.9	2.5	2.2	3.4	5.5
13	4.5	5.5	e5.4	e5.7	e16	35	3.1	2.5	2.6	2.3	3.3	5.4
14	4.5	6.4	e5.1	e6.1	e15	31	2.4	2.3	2.5	2.4	3.4	5.1
15	4.4	5.7	e6.3	e6.0	e18	19	2.5	2.5	2.4	2.6	3.4	5.0
16	4.4	5.6	e5.2	e5.5	19	13	2.5	2.6	2.5	2.6	3.5	4.8
17	4.4	5.5	e6.2	e5.2	16	12	2.5	2.4	2.6	2.4	4.1	4.6
18	4.4	5.7	e6.2	e5.4	15	13	2.7	2.7	3.0	2.3	4.8	4.0
19	4.5	5.7	e6.2	e5.6	14	12	2.6	2.8	3.1	2.5	3.9	4.0
20	4.5	5.8	e6.1	e5.6	14	12	2.8	2.9	3.3	2.7	3.4	4.0
21	4.6	5.7	e5.7	e4.7	13	13	2.7	2.9	2.9	3.0	3.7	3.5
22	4.6	5.7	e6.2	e6.2	11	12	2.7	2.7	2.6	3.4	4.1	3.6
23	4.7	5.7	e5.4	e5.8	10	11	2.6	2.7	2.4	3.8	4.5	3.6
24	4.6	5.7	e5.6	e6.1	13	11	2.6	2.9	2.4	4.3	4.9	3.4
25	4.8	5.7	e5.2	e5.7	16	9.5	2.5	3.3	2.3	4.7	5.2	3.2
26	4.7	6.9	e5.2	e5.0	16	8.6	2.4	3.2	2.2	4.6	4.4	3.4
27	4.6	e5.4	e5.5	e5.5	16	9.3	e2.3	3.6	2.1	4.6	4.8	3.6
28	4.7	e5.1	e5.9	e5.6	17	9.3	e2.5	3.1	2.0	4.0	4.6	3.3
29	4.8	e5.3	e6.0	e6.3	---	9.3	e2.7	2.6	1.9	3.6	4.6	3.2
30	4.9	e5.5	e5.7	e6.1	---	7.9	e3.1	2.5	1.8	3.4	5.1	3.4
31	5.3	---	e5.7	e6.4	---	7.0	---	2.7	---	3.4	4.7	---
TOTAL	152.2	169.9	175.0	178.2	364.3	507.9	126.2	92.8	74.3	87.7	126.1	127.9
MEAN	4.91	5.66	5.65	5.75	13.0	16.4	4.21	2.99	2.48	2.83	4.07	4.26
MAX	7.0	6.9	6.3	6.4	19	36	8.0	4.5	3.3	4.7	5.2	6.4
MIN	4.3	4.9	5.1	4.7	7.1	7.0	2.3	2.3	1.8	1.7	3.2	3.2
AC-FT	302	337	347	353	723	1,010	250	184	147	174	250	254

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

	27.9	32.9	28.8	26.0	30.4	45.5	58.8	76.4	36.2	27.2	32.8	24.3
MEAN	27.9	32.9	28.8	26.0	30.4	45.5	58.8	76.4	36.2	27.2	32.8	24.3
MAX	86.1	76.9	72.0	64.9	86.6	123	284	369	247	125	109	75.4
(WY)	(1986)	(1986)	(1986)	(1986)	(1986)	(1986)	(1998)	(1998)	(1983)	(1984)	(1984)	(1984)
MIN	1.60	5.66	5.65	5.75	13.0	16.4	3.54	2.27	1.40	1.56	1.67	2.03
(WY)	(1965)	(2003)	(2003)	(2003)	(2003)	(2003)	(1972)	(1972)	(1994)	(1972)	(1990)	(1966)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1965 - 2003

ANNUAL TOTAL	2,932.9		2,182.5			
ANNUAL MEAN	8.04		5.98		37.3	
HIGHEST ANNUAL MEAN					110 1985	
LOWEST ANNUAL MEAN					5.98 2003	
HIGHEST DAILY MEAN	22	Feb 23	36	Mar 12	539	May 7, 1998
LOWEST DAILY MEAN	2.6	May 19	1.7	Jul 9	a0.50	Jul 21, 1966
ANNUAL SEVEN-DAY MINIMUM	2.8	May 17	2.0	Jul 4	0.84	Jul 30, 1971
MAXIMUM PEAK FLOW			54	Mar 12	b628	Sep 7, 1978
MAXIMUM PEAK STAGE			c2.63	Mar 12	7.04	Sep 7, 1978
ANNUAL RUNOFF (AC-FT)	5,820		4,330		27,030	
10 PERCENT EXCEEDS	18		12		75	
50 PERCENT EXCEEDS	5.6		4.8		25	
90 PERCENT EXCEEDS	3.4		2.5		3.8	

e Estimated.

a Also occurred Jul 22, 1966.

b On basis of slope-area measurement of peak flow.

c Maximum gage height, 4.33 ft, Feb 14, backwater from ice.



## 09306222 PICEANCE CREEK AT WHITE RIVER, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1970 to July 1986, March 1987, March 1990 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09306222](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09306222)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1971 to June 1974, May 1975 to September 1983.

WATER TEMPERATURE: January 1971 to September 1974, May 1975 to September 1983.

SUSPENDED-SEDIMENT DISCHARGE: March 1974 to September 1983.

INSTRUMENTATION.--Water-quality monitor, May 1975 to September 1983. Pumping sediment sampler, March 1974 to September 1983.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
NOV 13...	1230	5.5	12.4	8.5	2,910	4.1	590	62.0	105	3.26	10	545	979
MAR 24...	0955	12	10.7	8.4	2,570	7.4	560	72.2	92.2	3.14	8	462	870
JUL 15...	1030	2.9	8.9	8.8	3,940	18.2	460	14.7	103	4.18	17	860	--
AUG 05...	1600	4.4	8.1	8.8	3,540	24.6	480	23.2	102	3.92	15	766	1,380

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Alkalinity, wat flt inc tit mg/L as CaCO3 (39086)	Bicarbonate, wat flt incm. titr., field, mg/L (00453)	Carbonate, wat flt incm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat flt mg/L (70300)	Residue total at 105 deg. C, suspended, mg/L (00530)	Ammonia + org-N, water, fltrd, mg/L as N (00623)
NOV 13...	--	--	--	64.9	1.4	9.6	547				1,960	<10	0.38
MAR 24...	--	--	--	55.0	1.33	16.2	441				1,680	<10	0.80
JUL 15...	1,600	1,680	132	137	2.5	3.2	527	2,610	3.62	20.9	2,670	<10	0.80
AUG 05...	1,340	1,370	132	116	2.1	3.2	544	2,370	3.32	29.3	2,440	<10	0.75

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Organic nitrogen, water, fltrd, mg/L (00607)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Organic carbon, water, fltrd, mg/L (00681)	E coli, m-TEC MF, water, col/ 100 mL (31633)	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)
NOV 13...	<0.04	<0.06	<0.008	--	0.02	E.02	7.0	--	<3	<0.60	3	125	<0.12
MAR 24...	0.27	0.26	0.016	0.53	0.10	0.11	5.6	E18	2	E.17	3	129	<0.06
JUL 15...	<0.04	<0.06	<0.008	--	0.04	0.08	9.1	<3	4	<0.60	5	162	<0.12
AUG 05...	<0.04	<0.06	<0.008	--	0.02	0.04	8.7	31	4	<0.60	4	162	<0.12

09306222 PICEANCE CREEK AT WHITE RIVER, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Boron, water, fltrd, ug/L (01020)	Cadmium, water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt, water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium, water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Mercury, water, fltrd, ug/L (71890)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)
NOV 13...	396	E.05	<0.8	0.430	1.8	<30	<0.16	38	12.8	E.01	9.8	3.66	<3
MAR 24...	323	0.04	<0.8	0.682	1.9	E16	0.10	37	75.6	<0.02	9.3	3.17	<3
JUL 15...	521	E.04	<0.8	0.390	1.7	E21	<0.16	100	6.5	<0.02	9.5	1.86	<3
AUG 05...	514	E.05	<0.8	0.400	3.8	16	<0.16	84	2.4	<0.02	10.0	1.84	<3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Uranium natural, water, fltrd, ug/L (22703)
NOV 13...	<0.4	3,140	<24	E2	3.86
MAR 24...	<0.2	3,180	<24	2	3.60
JUL 15...	<0.4	1,490	<18	E2	3.77
AUG 05...	<0.4	1,630	9	3	3.90

< -- Actual value is known to be less than the value shown.  
 E -- Estimated laboratory analysis value.

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC 13...	1103	6.2	2,180	0.0	JUN 08...	1017	2.2	4,010	16.1
MAR 09...	0942	20	1,310	0.4	JUL 11...	1003	2.2	4,040	17.7
APR 27...	0917	2.3	3,800	9.3					

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diameter percent <.063mm (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
NOV 13...	1230	5.5	4.1	--	6	0.09
MAR 24...	0955	12	7.4	99	160	5.2
JUL 15...	1030	2.9	18.2	--	6	0.05
AUG 05...	1600	4.4	24.6	--	4	0.05

**09306242 CORRAL GULCH NEAR RANGELY, CO**

LOCATION.--Lat 39°55'13", long 108°28'20", in SE¼NW¼ sec.35, T.1 S., R.99 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 5 ft downstream from Box Elder Gulch, 3.5 mi upstream from confluence with Stake Springs Draw, and 21 mi southeast of Rangely.

DRAINAGE AREA.--31.6 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1974 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09306242](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09306242)

GAGE.--Water-stage recorder. Concrete V-notch control since July 20, 1974. Elevation of gage is 6,580 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No diversions upstream from station.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.37	e0.37	e0.33	0.34	0.62	0.41	0.14	0.11	0.31	0.75	0.64	0.57
2	e0.60	e0.37	e0.33	0.33	0.38	0.41	0.14	0.11	0.33	0.76	0.66	0.56
3	e0.40	e0.36	e0.33	0.34	0.35	0.41	0.14	0.11	0.34	0.77	0.65	0.58
4	e0.37	e0.36	e0.33	0.36	0.36	0.41	0.14	0.11	0.37	0.75	0.64	0.53
5	e0.37	e0.35	e0.33	0.37	0.36	0.41	0.14	0.12	0.38	0.75	0.61	0.49
6	e0.37	e0.35	e0.33	0.37	0.37	0.42	0.14	0.11	0.40	0.75	0.59	0.49
7	e0.37	e0.35	e0.33	0.37	0.37	1.6	0.14	0.11	0.43	0.74	0.57	0.49
8	e0.37	e0.37	e0.33	0.38	0.37	1.1	0.14	0.13	0.44	0.72	0.57	0.48
9	e0.37	e0.37	e0.35	0.38	0.37	1.8	0.14	0.13	0.45	0.72	0.58	0.44
10	e0.37	e0.37	e0.34	0.37	0.37	4.1	0.14	0.13	0.40	0.71	0.59	0.58
11	e0.37	e0.37	0.33	0.37	0.37	4.7	0.14	0.14	0.38	0.71	0.60	0.49
12	e0.37	e0.37	0.33	0.38	0.37	2.4	0.13	0.13	0.40	0.69	0.64	0.48
13	e0.37	e0.37	0.33	0.40	0.37	1.4	0.13	0.13	0.39	0.71	0.57	0.47
14	e0.37	e0.37	0.33	0.39	2.4	0.62	0.13	0.14	0.39	0.70	0.56	0.48
15	e0.37	e0.37	0.33	0.39	0.95	0.36	0.14	0.15	0.42	0.68	0.56	0.49
16	e0.37	e0.37	0.33	0.38	0.76	0.18	0.10	0.15	0.47	0.68	0.55	0.48
17	e0.37	e0.37	0.34	0.39	0.51	0.16	0.10	0.14	0.51	0.67	0.55	0.48
18	e0.37	e0.37	0.33	0.37	0.45	0.14	0.10	0.15	0.53	0.68	0.55	0.50
19	e0.37	e0.37	0.33	0.37	0.44	0.14	0.11	0.15	0.55	0.70	0.55	0.49
20	e0.37	e0.37	0.33	0.37	0.44	0.14	0.10	0.15	0.55	0.71	0.55	0.45
21	e0.37	e0.37	0.33	0.37	0.44	0.14	0.10	0.16	0.56	0.70	0.63	0.44
22	e0.37	e0.37	0.33	0.37	0.44	0.14	0.10	0.16	0.56	0.67	0.64	0.44
23	e0.37	e0.37	0.33	0.40	0.44	0.14	0.11	0.16	0.57	0.64	0.64	0.44
24	e0.37	e0.36	0.33	0.41	0.44	0.14	0.11	0.18	0.59	0.64	0.62	0.43
25	e0.37	e0.35	0.33	0.41	0.44	0.14	0.10	0.21	0.57	0.64	0.59	0.42
26	e0.37	e0.39	0.33	0.41	0.44	0.14	0.10	0.23	0.59	0.67	0.57	0.41
27	e0.37	e0.38	0.33	0.42	0.44	0.14	0.10	0.25	0.65	0.64	0.54	0.41
28	e0.37	e0.38	0.33	0.44	0.42	0.14	0.11	0.23	0.66	0.63	0.56	0.41
29	e0.37	e0.37	0.33	0.44	---	0.14	0.11	0.24	0.70	0.61	0.57	0.41
30	e0.37	e0.35	0.33	0.44	---	0.14	0.11	0.28	0.77	0.63	0.57	0.41
31	e0.37	---	0.33	0.41	---	0.14	---	0.30	---	0.64	0.55	---
TOTAL	11.73	11.01	10.27	11.94	14.48	22.85	3.63	5.00	14.66	21.46	18.26	14.24
MEAN	0.38	0.37	0.33	0.39	0.52	0.74	0.12	0.16	0.49	0.69	0.59	0.47
MAX	0.60	0.39	0.35	0.44	2.4	4.7	0.14	0.30	0.77	0.77	0.66	0.58
MIN	0.37	0.35	0.33	0.33	0.35	0.14	0.10	0.11	0.31	0.61	0.54	0.41
AC-FT	23	22	20	24	29	45	7.2	9.9	29	43	36	28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2003, BY WATER YEAR (WY)

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003		
MEAN	1.04	0.87	0.79	0.75	0.82	1.23	2.54	6.90	4.18	1.84	1.50	1.25																				
MAX	2.88	1.99	2.07	2.40	2.22	4.99	14.9	41.7	33.4	8.98	5.56	3.39																				
(WY)	(1979)	(1984)	(1979)	(1979)	(1979)	(1998)	(1998)	(1984)	(1983)	(1984)	(1984)	(1978)																				
MIN	0.30	0.25	0.27	0.30	0.30	0.31	0.12	0.15	0.094	0.17	0.26	0.32																				
(WY)	(1991)	(1993)	(1992)	(1977)	(1993)	(1977)	(2003)	(1992)	(1992)	(1992)	(2002)	(1991)																				

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1974 - 2003

ANNUAL TOTAL	170.54	159.53	
ANNUAL MEAN	0.47	0.44	2.02
HIGHEST ANNUAL MEAN			7.75 1984
LOWEST ANNUAL MEAN			0.27 1992
HIGHEST DAILY MEAN	2.0 Sep 7	4.7 Mar 11	207 Jun 1, 1983
LOWEST DAILY MEAN	0.13 May 30	0.10 Apr 16	a0.06 Apr 10, 1974
ANNUAL SEVEN-DAY MINIMUM	0.17 May 27	0.10 Apr 16	0.07 Apr 10, 1974
MAXIMUM PEAK FLOW		19 Mar 11	b1,780 Aug 18, 1984
MAXIMUM PEAK STAGE		2.51 Mar 11	6.12 Aug 18, 1984
ANNUAL RUNOFF (AC-FT)	338	316	1,460
10 PERCENT EXCEEDS	0.78	0.66	3.9
50 PERCENT EXCEEDS	0.37	0.37	0.79
90 PERCENT EXCEEDS	0.22	0.14	0.31

e Estimated.

a Also occurred Apr 11-14, 1974.

b From rating curve extended above 70 ft<sup>3</sup>/s, on basis of slope-area measurements at gage heights, 3.89 ft, 4.08 ft, and 6.12 ft.

09306242 CORRAL GULCH NEAR RANGELY, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1974 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09306242](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09306242)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1975 to September 1989.

WATER TEMPERATURE: January 1975 to September 1989.

SUSPENDED-SEDIMENT DISCHARGE: October 1974 to September 1985.

INSTRUMENTATION.--Water-quality monitor, October 1974 to August 1989. Pumping sediment sampler, October 1974 to September 1985.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd std units (00400)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, water fltrd end lab, mg/L as CaCO3 (29801)
DEC 10...	1245	0.34	10.1	7.8	1,520	7.8	610	110	80.8	1.28	2	126	E386
MAY 14...	1030	0.16	8.9	7.7	1,530	11.6	610	107	81.2	1.06	2	121	457
AUG 05...	1340	0.67	8.0	7.9	1,330	17.8	540	93.3	73.2	1.29	2	113	370

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)
DEC 10...	12.5	0.38	22.0	400	--	--	--	--	--	--	--	--	--
MAY 14...	12.9	0.32	23.5	395	1,020	1.39	0.44	0.20	<0.04	<0.06	<0.008	0.04	E.03
AUG 05...	14.1	0.3	18.7	359	897	1.22	1.62	0.40	<0.04	0.10	<0.008	<0.02	<0.04

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Organic carbon, water, fltrd, mg/L (00681)	Boron, water, fltrd, ug/L (01020)	Strontium, water, fltrd, ug/L (01080)
DEC 10...	--	117	2,510
MAY 14...	4.8	121	2,570
AUG 05...	6.7	104	2,030

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1152	0.64	1,260	9.5	APR 15...	1440	0.11	1,530	10.8
FEB 06...	1406	0.37	1,520	7.5					

## GREEN RIVER BASIN

09306242 CORRAL GULCH NEAR RANGELY, CO—Continued

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
DEC 10...	1245	0.34	7.8	63	0.06
MAY 14...	1030	0.16	11.6	9	0.00
AUG 05...	1340	0.67	17.8	83	0.15

## 09306255 YELLOW CREEK NEAR WHITE RIVER, CO

LOCATION.--Lat 40°10'07", long 108°24'02", in NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.4, T.2 N., R.98 W., Rio Blanco County, Hydrologic Unit 14050006, on left bank 160 ft downstream from bridge on State Highway 64, 0.3 mi upstream from mouth, and 10.0 mi northwest of White River City.

DRAINAGE AREA.--262 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to September 1982, May 1988 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09306255](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09306255)

GAGE.--Water-stage recorder with satellite telemetry and v-notch concrete control. Elevation of gage is 5,535 ft above NVGD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 300 acres.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	3.3	e2.5	e3.9	3.5	2.2	e2.5	2.1	1.6	1.1	0.73	0.85
2	2.6	3.4	e4.0	3.2	3.1	2.1	e2.3	2.1	1.4	1.1	0.73	0.76
3	2.5	3.6	e3.3	3.3	3.1	2.3	e2.2	2.0	1.3	1.0	0.78	0.77
4	2.4	3.6	e2.2	3.7	2.8	2.4	e2.6	2.0	1.3	1.0	0.76	0.75
5	2.3	3.6	e2.8	2.8	2.7	2.4	2.2	2.3	1.4	0.89	0.72	0.72
6	2.6	3.6	e3.7	2.4	3.4	3.7	2.3	2.2	1.3	0.89	0.68	0.79
7	2.6	3.7	e2.5	2.4	2.7	5.6	2.2	2.3	1.4	0.95	0.66	0.83
8	2.7	3.8	e2.3	2.5	3.1	7.8	2.0	2.5	1.3	0.97	0.69	0.89
9	2.8	4.0	e2.0	2.6	2.9	5.2	2.8	2.5	1.3	1.0	0.70	1.00
10	2.7	3.8	e3.2	2.6	14	5.4	2.8	2.2	1.4	1.0	0.63	2.1
11	2.8	4.0	e3.3	2.5	7.8	4.7	2.5	2.2	1.5	1.0	0.61	2.5
12	2.6	3.9	2.6	2.6	4.4	2.8	2.5	2.1	1.3	0.94	0.66	1.4
13	2.8	3.9	e4.1	2.6	2.5	2.4	2.5	1.8	1.5	0.94	0.70	1.2
14	2.8	3.9	e3.6	2.6	3.1	2.4	2.7	1.8	1.3	0.98	0.68	1.2
15	2.7	3.9	e3.9	2.7	16	2.4	3.1	1.9	1.4	0.98	0.64	1.2
16	2.7	3.9	e2.3	2.4	7.0	2.5	3.0	2.0	1.3	0.94	0.74	1.2
17	2.8	3.9	2.7	2.7	4.8	2.6	2.9	1.8	1.4	0.90	0.89	1.1
18	2.8	4.0	2.6	2.3	2.6	2.9	2.9	1.7	1.5	3.7	0.91	1.2
19	2.9	3.9	4.0	1.8	2.5	2.6	3.0	1.7	1.5	1.0	0.73	1.3
20	2.9	4.2	e3.8	1.7	2.4	2.6	2.9	1.7	1.6	0.99	0.75	1.3
21	3.3	4.1	2.6	2.2	2.6	2.5	2.7	1.7	1.5	0.99	0.86	1.2
22	3.3	3.9	2.2	2.5	2.4	2.3	2.7	1.7	1.5	0.89	0.88	1.3
23	3.4	4.0	2.0	2.7	2.3	2.2	2.9	1.7	1.4	0.86	1.1	1.3
24	5.2	4.0	4.3	2.6	2.3	2.6	2.9	1.6	1.4	1.0	1.00	1.3
25	3.6	4.1	e2.8	2.7	2.4	2.2	2.7	1.5	1.5	0.98	0.95	1.3
26	3.3	4.3	2.1	2.6	2.4	2.3	2.4	1.5	1.5	1.1	0.93	1.3
27	3.4	4.2	e4.1	2.6	2.4	2.5	3.8	1.4	1.3	1.0	0.84	1.3
28	3.4	3.6	e2.5	2.7	2.2	2.3	2.8	1.3	1.3	0.84	0.87	1.3
29	3.5	3.7	e4.0	2.7	---	e2.4	2.1	1.3	1.3	0.86	0.85	1.3
30	3.7	3.8	e3.3	2.6	---	e2.6	2.2	1.3	1.1	0.76	0.84	1.3
31	3.1	---	e2.2	2.8	---	e2.3	---	1.4	---	0.81	0.84	---
TOTAL	92.4	115.6	93.5	82.0	113.4	93.2	79.1	57.3	41.8	32.36	24.35	35.96
MEAN	2.98	3.85	3.02	2.65	4.05	3.01	2.64	1.85	1.39	1.04	0.79	1.20
MAX	5.2	4.3	4.3	3.9	16	7.8	3.8	2.5	1.6	3.7	1.1	2.5
MIN	2.2	3.3	2.0	1.7	2.2	2.1	2.0	1.3	1.1	0.76	0.61	0.72
AC-FT	183	229	185	163	225	185	157	114	83	64	48	71

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2003, BY WATER YEAR (WY)

	2.75	3.08	2.72	2.62	4.36	4.70	3.33	4.33	3.54	3.13	2.51	3.29
MEAN	2.75	3.08	2.72	2.62	4.36	4.70	3.33	4.33	3.54	3.13	2.51	3.29
MAX	10.2	12.1	9.77	9.05	12.7	18.1	8.88	24.1	19.9	18.5	9.34	17.1
(WY)	(1999)	(1999)	(1999)	(1999)	(1980)	(1997)	(1999)	(1985)	(1985)	(1985)	(1998)	(1978)
MIN	0.50	0.78	0.15	0.008	0.22	1.64	1.37	1.03	0.68	0.34	0.30	0.80
(WY)	(1979)	(1978)	(1979)	(1979)	(1979)	(1982)	(1978)	(1978)	(1977)	(1976)	(1978)	(1976)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1973 - 2003

ANNUAL TOTAL	1,041.0		860.97			
ANNUAL MEAN	2.85		2.36		3.12	
HIGHEST ANNUAL MEAN					8.93 1999	
LOWEST ANNUAL MEAN					1.28 1977	
HIGHEST DAILY MEAN	8.1	Mar 13	16	Feb 15	500	Sep 7, 1978
LOWEST DAILY MEAN	1.4	Aug 11	0.61	Aug 11	a0.00	Sep 11, 1978
ANNUAL SEVEN-DAY MINIMUM	1.5	Aug 8	0.66	Aug 9	0.00	Dec 15, 1978
MAXIMUM PEAK FLOW			50	Feb 15	b6,800	Sep 7, 1978
MAXIMUM PEAK STAGE			6.49	Feb 15	12.97	Sep 7, 1978
ANNUAL RUNOFF (AC-FT)	2,060		1,710		2,260	
10 PERCENT EXCEEDS	4.0		3.9		5.7	
50 PERCENT EXCEEDS	2.6		2.3		2.3	
90 PERCENT EXCEEDS	1.7		0.88		0.96	

e Estimated.

a Also occurred Sep 12-16, 1978, and Dec 15, 1978 to Jan 14, 1979.

b On basis of contracted-opening, and flow-over-road measurement of peak flow.

## 09306255 YELLOW CREEK NEAR WHITE RIVER, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1974 to September 1982, March 1988 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09306255](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09306255)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1975 to September 1982.

WATER TEMPERATURE: April 1975 to September 1982.

SUSPENDED-SEDIMENT DISCHARGE: April 1974 to September 1982.

INSTRUMENTATION.--Automatic pumping sediment sampler, April 1974 to September 1982. Water-quality monitor, April 1975 to September 1982.

REMARKS.--Unpublished maximum and minimum specific conductance data for the period of daily record are available in the district office.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat fltrd inc tit field, mg/L as CaCO3 (39086)
DEC 17...	1230	2.6	11.7	8.4	3,430	0.4	840	54.5	170	3.20	9	591	--
MAR 21...	1550	2.5	10.9	8.5	3,640	8.7	920	65.8	183	3.60	9	616	--
JUN 03...	1330	1.5	9.2	8.8	3,780	16.4	810	31.4	176	3.69	12	761	1,300
AUG 18...	1030	0.93	8.8	8.7	3,850	18.6	700	33.3	148	4.96	15	885	1,460

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Bicarbonate, wat fltrd incrm. titr., field, mg/L (00453)	Carbonate, wat fltrd incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
DEC 17...	--	--	77.5	1.28	14.3	929	--	--	--	--	--	--	--
MAR 21...	--	--	87.8	1.31	17.8	940	--	--	--	--	--	--	--
JUN 03...	1,420	84	106	1.7	9.8	908	2,780	3.79	11.4	0.74	<0.04	0.15	0.047
AUG 18...	1,640	72	139	2.1	4.4	644	2,740	3.73	6.88	0.94	<0.04	E.04	<0.008

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, fltrd, mg/L (00666)	Organic carbon, water, fltrd, mg/L (00681)	E coli, m-TEC MF, water, col/100 mL (31633)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Boron, water, fltrd, ug/L (01020)	Cobalt water, fltrd, ug/L (01035)	Iron, water, fltrd, ug/L (01046)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)
DEC 17...	--	--	--	E17	--	--	490	--	--	--	--	--	--
MAR 21...	--	--	--	--	--	--	538	--	--	--	--	--	--
JUN 03...	<0.02	E.02	10.3	E17	9	155	695	<3.4	E14	128	2.8	29.3	E1.5
AUG 18...	<0.02	E.03	14.4	73	9	216	644	E2.9	49	170	5.9	20.6	E1.4

## 09306255 YELLOW CREEK NEAR WHITE RIVER, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Strontium, water, fltrd, ug/L (01080)	Zinc, water, fltrd, ug/L (01090)
DEC 17...	4,790	--
MAR 21...	5,000	--
JUN 03...	4,440	<9
AUG 18...	3,400	<9

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 11...	0953	3.2	3,750	9.5	APR 04...	1325	2.2	3,750	10.2
FEB 17...	1316	2.5	1,220	1.4	SEP 10...	0945	1.2	3,850	13.0

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
DEC 17...	1230	2.6	0.4	37	0.26
MAR 21...	1550	2.5	8.7	233	1.6
JUN 03...	1330	1.5	16.4	2	0.01
AUG 18...	1030	0.93	18.6	107	0.27



## 09306290 WHITE RIVER BELOW BOISE CREEK NEAR RANGELY, CO

LOCATION.--Lat 40°10'47", long 108°33'53", in SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.36, T.3 N., R.100 W., Rio Blanco County, Hydrologic Unit 14050007, on left bank at bridge on County Road 73, 0.5 mi downstream from Boise Creek, and 16.4 mi east of Rangely.

DRAINAGE AREA.--2,530 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1982 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09306290](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09306290)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,395 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 31,500 acres.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	323	351	384	e313	e294	e275	323	656	3,220	660	205	241
2	319	334	378	e280	e257	e309	350	581	e4,220	657	184	238
3	408	338	390	e339	e279	e306	378	550	e3,620	629	196	223
4	421	296	322	e312	e261	e346	378	558	3,300	642	204	222
5	376	298	319	e329	e243	e324	361	651	2,960	599	193	234
6	338	305	282	e297	e241	e326	355	555	2,520	566	175	242
7	321	307	269	e264	e218	e337	358	496	2,320	569	157	277
8	328	322	256	e279	e206	e332	342	486	2,030	534	153	314
9	312	359	272	e300	e212	e339	324	486	1,890	437	155	310
10	310	369	214	e297	e254	e346	324	527	1,880	406	179	331
11	300	331	e284	e290	e257	e353	344	468	1,880	401	164	511
12	288	322	e305	e295	e264	e356	395	419	1,720	389	154	451
13	295	291	e304	e306	e280	e354	431	385	1,650	395	158	430
14	292	316	e288	e284	e260	e355	504	508	1,520	380	189	424
15	310	336	e300	e285	e285	e370	615	771	1,460	343	178	421
16	298	319	e279	e289	e274	e375	626	1,020	e1,400	315	169	396
17	296	287	e317	e277	e277	e369	533	1,360	e1,350	320	179	378
18	300	318	e300	e283	e293	e375	521	1,730	e1,290	319	218	330
19	303	309	e307	e321	e281	390	494	1,910	1,280	325	238	326
20	307	290	e254	e298	e294	360	477	1,790	1,440	338	224	336
21	297	323	e328	e291	e297	364	445	1,880	1,490	324	203	329
22	304	318	e325	e288	e340	375	457	e2,120	1,250	297	186	319
23	330	315	e310	e279	e337	359	451	e2,250	1,130	285	206	312
24	393	324	e213	e276	e319	380	501	e2,380	1,040	258	221	306
25	399	336	e250	e281	e300	404	486	e2,520	1,000	275	258	299
26	342	341	e251	e280	e270	358	461	e2,650	939	274	242	288
27	341	308	e286	e272	e275	364	502	e2,700	860	287	217	280
28	338	283	e300	e267	e234	360	663	2,760	786	268	211	278
29	333	350	e287	e273	---	327	726	2,980	733	240	237	279
30	349	363	e272	e289	---	325	740	3,160	692	228	229	292
31	344	---	e284	e288	---	323	---	3,260	---	232	216	---
TOTAL	10,215	9,659	9,130	9,022	7,602	10,836	13,865	44,567	52,870	12,192	6,098	9,617
MEAN	330	322	295	291	272	350	462	1,438	1,762	393	197	321
MAX	421	369	390	339	340	404	740	3,260	4,220	660	258	511
MIN	288	283	213	264	206	275	323	385	692	228	153	222
AC-FT	20,260	19,160	18,110	17,900	15,080	21,490	27,500	88,400	104,900	24,180	12,100	19,080

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2003, BY WATER YEAR (WY)

MEAN	530	504	438	403	400	515	757	1,766	1,964	848	483	446
MAX	858	710	663	572	531	752	1,512	3,434	4,572	2,175	1,117	944
(WY)	(1985)	(1986)	(1986)	(1986)	(1986)	(1986)	(1985)	(1984)	(1984)	(1995)	(1984)	(1997)
MIN	330	322	295	260	268	324	370	449	209	120	154	206
(WY)	(2003)	(2003)	(2003)	(1991)	(1991)	(1995)	(1995)	(2002)	(2002)	(2002)	(2002)	(2002)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1983 - 2003
ANNUAL TOTAL	114,723	195,673	
ANNUAL MEAN	314	536	755
HIGHEST ANNUAL MEAN			1,345 1984
LOWEST ANNUAL MEAN			333 2002
HIGHEST DAILY MEAN	721 Apr 17	a4,220 Jun 2	6,170 May 26, 1984
LOWEST DAILY MEAN	53 Jul 17	153 Aug 8	53 Jul 17, 2002
ANNUAL SEVEN-DAY MINIMUM	72 Jul 14	160 Aug 7	72 Jul 14, 2002
MAXIMUM PEAK FLOW		unknown	6,440 Jun 7, 1984
MAXIMUM PEAK STAGE		unknown	8.45 Jun 7, 1984
ANNUAL RUNOFF (AC-FT)	227,600	388,100	547,300
10 PERCENT EXCEEDS	494	1,260	1,610
50 PERCENT EXCEEDS	325	323	495
90 PERCENT EXCEEDS	124	233	300

e Estimated.

a Estimated during period of indefinite stage-discharge relationship, Jun 2-3, 2003.

09306290 WHITE RIVER BELOW BOISE CREEK, NEAR RANGELY, CO—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to September 1993, October 1994 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09306290](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09306290)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)
MAR 21...	1400	360	10.1	8.5	905	8.1	0.59	<0.04	E.04	<0.008	<0.02	0.198	<2.0
MAY 12...	1030	405	9.5	8.6	622	11.0	0.38	<0.04	<0.06	<0.008	<0.02	0.048	<2.0
MAY 27...	1450	2,620	8.5	8.1	318	15.0	0.88	<0.04	0.29	E.004	E.01	0.26	<2.0
JUL 16...	1220	310	8.0	8.4	598	23.9	0.34	<0.04	<0.06	<0.008	<0.02	0.082	<2.0
AUG 06...	1140	188	8.1	8.3	765	22.8	0.42	<0.04	<0.06	<0.008	<0.02	0.028	<2.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	E coli, m-TEC MF, water, col/100 mL (31633)
MAR 21...	26
MAY 12...	37
MAY 27...	120
JUL 16...	57
AUG 06...	44

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
MAR 28...	1006	350	754	3.6	SEP 10...	1142	314	782	14.3

## GREEN RIVER BASIN

09306290 WHITE RIVER BELOW BOISE CREEK, NEAR RANGELY, CO—Continued

## SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Temperature, water, deg C (00010)	Suspnd. sediment, sieve diameter <.063mm percent (70331)	Suspended sediment concentration mg/L (80154)	Suspended sediment load, tons/d (80155)
OCT						
18...	1308	294	11.5	97	55	44
NOV						
07...	1130	261	5.5	--	28	20
MAR						
21...	1400	360	8.1	99	325	316
APR						
05...	1300	341	3.3	97	106	98
15...	1053	580	10.7	98	355	556
30...	1540	768	10.3	92	260	539
MAY						
12...	1030	405	11.0	94	32	35
19...	1403	2,190	9.2	76	1,310	7,750
27...	1450	2,620	15.0	86	302	2,140
JUN						
06...	1100	2,530	12.4	64	373	2,550
18...	0928	1,280	14.6	--	121	419
JUL						
16...	1220	310	23.9	--	23	19
25...	1150	283	23.2	--	32	24
AUG						
06...	1140	188	22.8	--	25	13

## 09306305 WHITE RIVER BELOW TAYLOR DRAW RESERVOIR, ABOVE RANGELY, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 40°06'12", long 108°42'56" in NW $\frac{1}{4}$ NE $\frac{1}{4}$  sec.34, T.2 N., R.101 W., Rio Blanco County, Hydrologic Unit 14050007, on left bank 0.2 mi downstream from Taylor Draw Dam, and 4.7 mi east of Rangely.

DRAINAGE AREA.--2,776 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1994 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09306305](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09306305)

REVISED RECORDS.--WDR CO-97-2: Drainage area.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	BOD, water, unfltrd 5 day, 20 degC mg/L (00310)
FEB 17...	1215	489	10.7	8.1	757	0.9	0.24	0.04	0.09	<0.008	<0.02	0.020	<2.0
MAY 12...	1420	406	8.8	8.5	532	11.1	0.28	<0.04	<0.06	<0.008	<0.02	0.032	<2.0
MAY 27...	0900	e2,620	8.8	8.0	336	11.7	0.56	0.05	0.31	E.007	<0.02	0.086	<2.0
JUL 16...	1515	301	7.2	8.4	552	21.8	0.27	<0.04	<0.06	<0.008	<0.02	0.028	<2.0
AUG 06...	1500	146	7.0	8.2	645	23.1	0.48	E.04	<0.06	E.005	<0.02	0.053	<2.0

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	E coli, m-TEC MF, water, col/100 mL (31633)
FEB 17...	E2
MAY 12...	E6
MAY 27...	87
JUL 16...	20
AUG 06...	E14

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

e--Estimated.

**09339900 EAST FORK SAN JUAN RIVER ABOVE SAND CREEK, NEAR PAGOSA SPRINGS, CO**

LOCATION.--Lat 37°23'23", long 106°50'26", in NE $\frac{1}{4}$  sec.4, T.36 N., R.1 E., Archuleta County, Hydrologic Unit 14080101, on right bank 0.3 mi upstream from Sand Creek, 4.0 mi upstream from West Fork San Juan River, and 13 mi northeast of Pagosa Springs.

DRAINAGE AREA.--64.1 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1956 to September 1996, October 1998 to September 2003 (discontinued). Prior to October 1959, published as San Juan River above Sand Creek, near Pagosa Springs. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09339900](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09339900)

REVISED RECORDS.--WSP 1713: 1957.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,940 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 500 acres of hay meadows upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood since at least 1885 occurred Oct. 5, 1911.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	12	14	e11	e12	e12	31	121	321	47	29	22
2	23	12	14	e11	e12	e11	37	119	302	45	33	22
3	36	11	13	e11	e12	e11	31	121	290	43	30	24
4	28	12	e12	e11	e11	e11	27	119	271	40	24	23
5	27	11	e12	e11	e11	e11	26	98	250	37	21	24
6	23	10	e12	e11	e11	e11	26	88	212	34	19	45
7	22	11	e12	e11	e11	e12	24	83	191	32	19	38
8	21	12	e11	e11	e11	e12	26	75	179	30	19	31
9	20	15	e11	e11	e11	e12	28	68	178	28	18	102
10	19	16	e11	e11	e11	e14	44	64	176	26	21	210
11	18	14	e11	e11	e11	e15	63	63	169	25	22	104
12	17	13	e11	e11	e12	e17	70	78	156	24	22	74
13	16	13	e11	e11	e14	e21	75	98	140	23	20	62
14	16	14	e11	e11	e15	e22	98	109	121	21	18	54
15	16	14	e11	e11	e13	e22	111	146	113	21	17	47
16	15	13	e11	e11	e12	e23	88	155	108	21	18	41
17	15	14	e11	e11	e12	22	86	216	98	22	17	37
18	15	14	e11	e11	e12	25	76	252	97	20	17	33
19	14	14	e10	e11	e12	25	67	247	99	20	16	31
20	14	14	e11	e11	e12	23	64	252	100	23	15	28
21	14	15	e11	e11	e11	21	81	269	90	20	15	26
22	14	15	e11	e11	e11	20	76	295	85	19	15	25
23	16	16	e11	e11	e11	22	68	306	80	19	23	23
24	16	15	e11	e11	e11	26	59	310	74	19	30	22
25	14	15	e11	e11	e11	27	67	309	68	17	24	21
26	14	14	e11	e11	e12	29	89	297	63	18	22	20
27	15	e13	e11	e11	e12	28	111	331	59	20	19	19
28	14	e13	e11	e11	e12	26	132	362	57	29	22	18
29	14	e13	e11	e11	---	26	139	366	53	36	30	18
30	13	e14	e11	e11	---	25	135	359	51	31	33	18
31	13	---	e11	e11	---	e28	---	350	---	28	30	---
TOTAL	548	402	352	341	329	610	2,055	6,126	4,251	838	678	1,262
MEAN	17.7	13.4	11.4	11.0	11.8	19.7	68.5	198	142	27.0	21.9	42.1
MAX	36	16	14	11	15	29	139	366	321	47	33	210
MIN	13	10	10	11	11	11	24	63	51	17	15	18
AC-FT	1,090	797	698	676	653	1,210	4,080	12,150	8,430	1,660	1,340	2,500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003, BY WATER YEAR (WY)

MEAN	33.9	22.0	14.1	11.8	12.8	27.1	103	291	320	111	54.2	42.6
MAX	107	74.9	30.3	21.7	24.6	62.9	248	520	788	395	177	207
(WY)	(1987)	(1987)	(1987)	(1973)	(1995)	(1986)	(1985)	(1984)	(1957)	(1957)	(1999)	(1970)
MIN	8.39	8.31	4.68	5.00	5.66	8.86	29.2	50.8	29.1	10.5	7.80	10.6
(WY)	(1957)	(1961)	(1959)	(1959)	(1990)	(1977)	(1977)	(2002)	(2002)	(2002)	(2002)	(1978)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1957 - 2003	
ANNUAL TOTAL	6,838.0		17,792			
ANNUAL MEAN	18.7		48.7			
HIGHEST ANNUAL MEAN					87.2	
LOWEST ANNUAL MEAN					155	1985
HIGHEST DAILY MEAN					18.3	2002
LOWEST DAILY MEAN	69	May 21	366	May 29	1,180	May 27, 1993
ANNUAL SEVEN-DAY MINIMUM	6.1	Sep 6	10	Nov 6	3.4	Dec 26, 1958
MAXIMUM PEAK FLOW	6.6	Aug 26	11	Dec 13	3.7	Dec 13, 1958
MAXIMUM PEAK STAGE			413	May 30	a2,260	Sep 14, 1970
ANNUAL RUNOFF (AC-FT)	13,560		4.43		6.75	Sep 14, 1970
10 PERCENT EXCEEDS	42		35,290		63,180	
50 PERCENT EXCEEDS	12		121		264	
90 PERCENT EXCEEDS	8.7		11		28	
					10	

e Estimated.

a From rating curve extended above 460 ft<sup>3</sup>/s, on basis of slope-area measurement at gage height, 6.13 ft.

## 09342500 SAN JUAN RIVER AT PAGOSA SPRINGS, CO

LOCATION.--Lat 37°15'58", long 107°00'37", in NE¼SW¼ sec.13, T.35 N., R.2 W., Archuleta County, Hydrologic Unit 14080101, on right bank at former bridge site in Pagosa Springs, 0.2 mi upstream from McCabe Creek, 0.6 mi downstream from bridge on U.S. Highway 160, and 2.0 mi upstream from Mill Creek.

DRAINAGE AREA.--298 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1910 to December 1914, May 1935 to current year. Monthly discharge only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09342500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09342500)

REVISED RECORDS.--WSP 1313: 1914(M).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,052.04 ft above NGVD of 1929. Jan. 29 to Mar. 6, 1911, nonrecording gage at site 0.5 mi upstream, at different datum. Mar. 7 to Oct. 4, 1911, nonrecording gage at present site, at different datum. Nov. 23, 1911 to Nov. 14, 1914, nonrecording gage at site 300 ft upstream, at different datum.

REMARKS.--Records good except for Sept. 24-30, those above 2,040 ft<sup>3</sup>/s and estimated daily discharges, which are poor. Diversions for irrigation of large areas upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1885, that of Oct. 5, 1911. Flood of June 29, 1927, reached a stage of 13.5 ft, discharge about 16,000 ft<sup>3</sup>/s, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	54	58	36	42	40	e144	531	1,730	129	58	80
2	74	53	50	30	42	37	181	506	1,500	118	52	66
3	164	50	52	33	41	38	142	524	1,410	108	57	78
4	115	50	49	34	37	39	119	512	1,300	102	53	74
5	118	51	46	34	33	37	113	414	1,100	97	53	69
6	90	50	44	37	40	35	106	349	890	92	43	104
7	84	55	40	33	31	39	96	314	765	82	42	109
8	80	60	41	33	35	41	85	286	694	73	41	90
9	76	85	37	35	36	45	105	256	680	63	43	308
10	72	92	35	40	33	51	174	242	654	53	45	1,020
11	67	69	36	38	34	63	280	224	611	49	51	455
12	63	57	27	36	38	86	327	289	561	47	50	305
13	58	62	31	32	55	113	323	403	518	46	54	241
14	57	62	33	36	76	132	441	435	452	44	50	195
15	56	60	36	37	60	126	520	647	420	40	43	161
16	53	48	40	33	49	141	389	690	421	42	45	140
17	50	52	39	33	44	131	392	998	385	45	48	125
18	48	50	40	32	45	106	356	1,200	372	48	49	115
19	47	48	29	36	41	e121	304	1,080	376	47	44	102
20	46	53	28	36	40	e117	262	1,120	414	47	41	97
21	46	59	38	38	40	e111	275	1,180	346	48	35	88
22	45	63	31	41	36	e120	284	1,370	308	42	36	73
23	52	69	38	41	34	e166	285	1,600	282	40	37	70
24	60	64	38	40	38	e187	253	1,620	251	43	81	64
25	56	61	37	39	39	e191	292	1,570	220	41	77	61
26	55	54	34	36	41	e184	416	1,530	200	37	83	56
27	70	55	30	38	43	136	530	1,670	185	40	67	54
28	64	47	33	38	42	112	606	1,920	171	52	66	55
29	61	51	36	37	---	95	660	2,040	153	66	102	51
30	56	50	36	39	---	93	626	2,020	137	80	95	48
31	54	---	33	41	---	e101	---	1,930	---	52	113	---
TOTAL	2,097	1,734	1,175	1,122	1,165	3,034	9,086	29,470	17,506	1,913	1,754	4,554
MEAN	67.6	57.8	37.9	36.2	41.6	97.9	303	951	584	61.7	56.6	152
MAX	164	92	58	41	76	191	660	2,040	1,730	129	113	1,020
MIN	45	47	27	30	31	35	85	224	137	37	35	48
AC-FT	4,160	3,440	2,330	2,230	2,310	6,020	18,020	58,450	34,720	3,790	3,480	9,030

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2003, BY WATER YEAR (WY)

MEAN	145	93.9	64.1	55.1	61.7	147	552	1,273	1,304	385	181	151
MAX	937	399	160	107	142	442	1,210	2,665	3,066	1,515	740	859
(WY)	(1942)	(1987)	(1987)	(1986)	(1995)	(1986)	(1985)	(1941)	(1957)	(1941)	(1999)	(1970)
MIN	23.3	33.6	27.5	26.8	29.2	50.3	141	158	56.6	15.5	13.5	18.8
(WY)	(1957)	(1956)	(1990)	(1990)	(1964)	(1964)	(1977)	(2002)	(2002)	(2002)	(2002)	(1956)
SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR						FOR 2003 WATER YEAR			WATER YEARS 1936 - 2003		

ANNUAL TOTAL	22,073.7						74,610					
ANNUAL MEAN	60.5						204			368		
HIGHEST ANNUAL MEAN										730		
LOWEST ANNUAL MEAN										59.0		
HIGHEST DAILY MEAN	235		Apr 15		2,040		May 29		4,640		May 13, 1941	
LOWEST DAILY MEAN	8.3		Aug 28		27		Dec 12		a8.3		Aug 28, 2002	
ANNUAL SEVEN-DAY MINIMUM	8.7		Aug 28		33		Dec 27		8.7		Aug 28, 2002	
MAXIMUM PEAK FLOW							2,580			25,000		
MAXIMUM PEAK STAGE							4.99			b17.80		
ANNUAL RUNOFF (AC-FT)	43,780						148,000			266,800		
10 PERCENT EXCEEDS	142						522			1,140		
50 PERCENT EXCEEDS	41						60			107		
90 PERCENT EXCEEDS	14						36			42		

e Estimated.

a Also occurred Sep 3, 2002.

b From floodmarks.

## 09346400 SAN JUAN RIVER NEAR CARRACAS, CO

LOCATION.--Lat 37°00'49", long 107°18'42", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.17, T.32 N., R.4 W., Archuleta County, Hydrologic Unit 14080101, on right bank five feet above the maximum water surface of Navajo Reservoir, 3 mi northwest of Carracas, 7.2 mi upstream from Piedra River.

DRAINAGE AREA.--1,230 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--Streamflow records, October 1961 to current year. Statistical summary computed for 1971 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09346400](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09346400)

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 6,090 ft above NGVD of 1929, from river-profile map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 11,000 acres upstream from station. Highwater diversions upstream from station into Rio Grande basin through Azotea tunnel(station 08284160) began in March 1971. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods occurred Sept. 5 or 6, 1909; Oct. 5, 1911; June 29, 1927.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	126	e108	e62	e78	e80	251	717	1,830	163	99	181
2	130	124	e106	e61	e78	e79	266	713	1,630	145	98	144
3	234	121	e104	e61	e74	e78	261	689	1,500	144	97	126
4	280	115	e103	e64	e71	e80	225	686	1,370	135	78	138
5	237	121	e101	e68	e71	e81	217	628	1,230	128	65	152
6	204	107	97	e70	e69	e82	209	541	1,030	123	51	171
7	175	102	93	e70	e68	87	200	483	891	114	49	213
8	165	116	90	e71	e72	100	179	422	796	102	49	201
9	152	e143	98	e73	e70	116	177	415	763	94	47	244
10	136	e137	e90	e74	e70	147	219	388	726	80	50	2,080
11	123	e119	e88	e74	e72	199	332	377	686	73	59	745
12	118	e113	e84	e71	e80	288	403	382	627	66	82	436
13	118	e117	e88	e70	e105	394	410	494	584	63	82	332
14	109	e118	e88	e72	e137	478	513	557	525	61	94	281
15	101	e108	e88	e72	e110	515	643	689	472	62	70	244
16	96	e104	e84	e71	e102	478	596	871	461	54	60	220
17	93	e105	e79	e71	e102	605	527	1,040	436	54	62	197
18	90	e106	e74	e71	e99	449	495	1,380	452	53	55	179
19	87	e106	e66	e72	e99	354	445	1,240	466	50	53	169
20	81	e111	e68	e74	102	293	384	1,270	500	46	45	150
21	80	e116	e72	e75	99	302	358	1,300	450	61	40	145
22	81	e120	e71	e77	97	315	377	1,480	373	78	37	127
23	87	e123	e74	e77	86	281	400	1,640	337	64	51	116
24	120	e119	e74	e77	80	336	359	1,720	307	54	154	114
25	130	e114	e73	e76	e82	334	361	1,670	272	58	184	99
26	122	e110	e69	e75	e84	336	437	1,670	245	52	160	93
27	168	e104	e68	e74	e85	330	556	1,740	227	49	148	91
28	160	e103	e70	e74	e84	243	673	1,890	209	109	146	88
29	146	e106	e71	e74	---	277	723	1,970	193	148	200	86
30	146	e111	e69	e74	---	247	743	1,960	178	157	196	83
31	129	---	e66	e77	---	e248	---	1,970	---	138	202	---
TOTAL	4,239	3,445	2,574	2,222	2,426	8,232	11,939	32,992	19,766	2,778	2,863	7,645
MEAN	137	115	83.0	71.7	86.6	266	398	1,064	659	89.6	92.4	255
MAX	280	143	108	77	137	605	743	1,970	1,830	163	202	2,080
MIN	80	102	66	61	68	78	177	377	178	46	37	83
AC-FT	8,410	6,830	5,110	4,410	4,810	16,330	23,680	65,440	39,210	5,510	5,680	15,160

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)

MEAN	298	239	172	155	190	574	1,030	1,687	1,700	609	330	285
MAX	932	983	406	296	481	1,369	2,524	3,195	4,039	2,427	1,004	880
(WY)	(1987)	(1987)	(1987)	(1987)	(1986)	(1995)	(1979)	(1973)	(1985)	(1995)	(1999)	(1982)
MIN	106	104	72.9	71.7	85.0	130	233	269	72.1	22.5	18.8	61.2
(WY)	(1979)	(1990)	(1990)	(2003)	(1990)	(2002)	(1977)	(2002)	(2002)	(2002)	(2002)	(1978)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1971 - 2003

ANNUAL TOTAL	41,282.80	101,121	
ANNUAL MEAN	113	277	a607
HIGHEST ANNUAL MEAN			b1,191 1985
LOWEST ANNUAL MEAN			b112 2002
HIGHEST DAILY MEAN	365 May 20	2,080 Sep 10	b6,700 Mar 12, 1985
LOWEST DAILY MEAN	0.80 Sep 1	37 Aug 22	c0.80 Sep 1, 2002
ANNUAL SEVEN-DAY MINIMUM	1.3 Aug 31	49 Aug 17	1.3 Aug 31, 2002
MAXIMUM PEAK FLOW		3,510 Sep 10	d8,590 Mar 6, 1995
MAXIMUM PEAK STAGE		5.28 Sep 10	f8.10 Mar 6, 1995
ANNUAL RUNOFF (AC-FT)	81,880	200,600	439,500
10 PERCENT EXCEEDS	240	678	1,660
50 PERCENT EXCEEDS	101	118	270
90 PERCENT EXCEEDS	17	67	105

e Estimated.

a Average discharge for 9 years (water years 1962-70), 632 ft<sup>3</sup>/s; 457,900 acre-ft/yr, prior to completion of Azotea tunnel.

b Also the highest (or lowest, as is appropriate) for the period of record.

c Also minimum daily discharge for period of record.

d Maximum discharge for period of record, 9,730 ft<sup>3</sup>/s, Sep 6, 1970, gage height, 8.34 ft, from rating curve extended above 6,000 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

f Maximum gage height for statistical period, and period of record, 9.63 ft, Jan 4, 1994, backwater from ice.

## 09349800 PIEDRA RIVER NEAR ARBOLES, CO

LOCATION.--Lat 37°05'18", long 107°23'50", in NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.21, T.33 N., R.5 W., Archuleta County, Hydrologic Unit 14080102, on left bank 2.5 mi upstream from Navajo Reservoir, 3.0 mi downstream from Ignacio Creek, and 4.6 mi northeast of Arboles Post Office.

DRAINAGE AREA.--629 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1962 to current year. Gage 09350000 (Piedra River At Arboles) operated 1895-99 and 1910-27 at site 7.5 mi downstream at elevation 6,000 ft, published in WSP 1313. Low-flow records probably not equivalent. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09349800](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09349800)

GAGE.--Water-stage recorder with satellite telemetry, and crest-stage gage. Datum of gage is 6,147.52 ft above NGVD of 1929, Colorado State Highway Department benchmark.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 2,800 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Major floods occurred Sept. 5 or 6, 1909, and Oct. 5, 1911.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	77	56	e29	21	28	187	603	1,100	63	53	81
2	84	75	54	e27	24	27	223	564	981	57	53	65
3	108	76	51	e26	25	27	204	548	918	55	45	65
4	115	69	54	e29	21	29	172	561	810	52	43	70
5	104	72	50	e31	18	30	161	500	715	50	40	79
6	100	62	44	32	19	27	151	437	599	51	35	96
7	95	63	39	26	e15	26	137	390	e517	50	33	108
8	95	70	33	24	17	29	123	358	e442	48	33	99
9	96	104	34	20	22	35	131	329	e422	42	38	150
10	90	110	27	21	e17	42	167	289	404	38	41	926
11	86	87	30	e21	e18	53	237	274	380	34	40	517
12	81	67	34	e20	e22	72	306	301	344	31	39	328
13	76	59	30	e17	30	124	323	382	310	32	43	259
14	71	65	34	19	34	191	410	428	285	32	40	210
15	67	62	36	22	34	232	521	574	255	30	36	178
16	64	53	35	e17	36	303	465	662	236	29	35	158
17	61	47	39	e16	34	335	439	764	225	32	38	141
18	60	55	35	e17	35	236	447	943	212	28	33	126
19	57	49	28	20	35	178	391	892	222	29	31	116
20	56	50	22	21	29	162	336	895	286	29	35	105
21	54	56	32	21	26	175	324	885	232	35	35	98
22	52	60	27	21	24	205	346	988	195	34	34	93
23	56	65	32	21	22	229	358	1,150	175	34	39	85
24	68	67	33	21	21	310	325	1,180	154	34	59	77
25	70	65	34	21	28	303	339	1,120	139	35	51	70
26	66	58	34	20	30	254	437	e1,090	125	34	56	67
27	85	54	31	19	31	250	569	1,140	111	52	60	70
28	84	50	31	19	32	191	647	1,250	96	55	62	68
29	80	48	38	20	---	156	659	1,310	84	66	64	65
30	81	52	e33	20	---	e149	642	1,190	74	67	68	63
31	76	---	e30	19	---	e156	---	1,180	---	61	96	---
TOTAL	2,418	1,947	1,120	677	720	4,564	10,177	23,177	11,048	1,319	1,408	4,633
MEAN	78.0	64.9	36.1	21.8	25.7	147	339	748	368	42.5	45.4	154
MAX	115	110	56	32	36	335	659	1,310	1,100	67	96	926
MIN	52	47	22	16	15	26	123	274	74	28	31	63
AC-FT	4,800	3,860	2,220	1,340	1,430	9,050	20,190	45,970	21,910	2,620	2,790	9,190

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2003, BY WATER YEAR (WY)

	1963	1968	1987	1987	1986	1995	1979	1979	1979	1975	1999	1970
MEAN	172	126	89.2	73.7	90.7	315	851	1,267	1,004	329	221	210
MAX	618	517	257	153	244	895	2,126	2,926	2,526	1,133	1,014	943
(WY)	(1973)	(1987)	(1987)	(1987)	(1986)	(1995)	(1979)	(1979)	(1979)	(1975)	(1999)	(1970)
MIN	51.2	48.4	31.2	21.8	25.7	47.4	126	91.7	24.8	12.7	15.2	35.3
(WY)	(1979)	(1968)	(1990)	(2003)	(2003)	(1964)	(1977)	(2002)	(2002)	(2002)	(2002)	(1978)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1963 - 2003

ANNUAL TOTAL	19,973.0	63,208		
ANNUAL MEAN	54.7	173		
HIGHEST ANNUAL MEAN			822	1979
LOWEST ANNUAL MEAN			53.5	2002
HIGHEST DAILY MEAN	307	Sep 12	1,310	May 29
LOWEST DAILY MEAN	3.9	Aug 26	e15	Feb 7
ANNUAL SEVEN-DAY MINIMUM	4.3	Aug 26	18	Feb 5
MAXIMUM PEAK FLOW			1,440	May 29
MAXIMUM PEAK STAGE			3.29	May 29
ANNUAL RUNOFF (AC-FT)	39,620	125,400		287,100
10 PERCENT EXCEEDS	108	479		1,170
50 PERCENT EXCEEDS	43	64		145
90 PERCENT EXCEEDS	11	23		52

e Estimated.

a Also occurred Aug 28-29, 2002.

b From rating curve extended above 4,400 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

c Gage height, 6.38 ft, recorded, 7.55 ft, from floodmarks.



**09352900 VALLECITO CREEK NEAR BAYFIELD, CO**  
(Hydrologic Benchmark Station)

LOCATION--Lat 37°28'39", long 107°32'35", in NE¼NW¼ sec.16, T.37 N., R.6 W., La Plata County, Hydrologic Unit 14080101, on right bank 60 ft upstream from Fall Creek, 0.8 mi downstream from Bear Creek, 6.7 mi north of Vallecito Dam, and 18 mi north of Bayfield.

DRAINAGE AREA--72.5 mi<sup>2</sup>.

PERIOD OF RECORD--October 1962 to current year. Daily record for water temperature available, November 1962 to September 1982. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09352900](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09352900)

REVISED RECORDS--WDR CO-00-2: Drainage area.

GAGE--Water-stage recorder with satellite telemetry and concrete control. Datum of gage is 7,906.08 ft above NGVD of 1929.

REMARKS--Records good except for estimated daily discharges, which are poor. No diversion upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD--Major floods occurred in October 1911 and June 1927.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	47	32	e12	e14	17	46	186	553	100	67	105
2	78	46	33	e12	e16	20	51	178	497	97	64	92
3	91	41	30	e11	18	e18	46	173	414	93	60	85
4	90	44	30	e10	20	e15	43	172	351	89	e58	80
5	99	40	e30	e10	e18	e14	42	149	311	84	e56	82
6	96	40	e27	e10	e16	e14	40	136	264	79	e46	85
7	104	40	e24	e11	e13	e14	38	128	227	73	46	85
8	109	43	e22	e11	e11	e13	37	116	231	71	88	76
9	107	46	e18	e10	e10	e14	43	106	227	68	77	147
10	102	47	e17	e10	e11	e17	61	97	219	64	82	377
11	95	46	e15	e11	e11	e19	83	97	199	61	72	235
12	88	42	e13	e12	e11	26	93	135	186	59	70	239
13	82	47	e12	e12	e11	31	99	189	170	56	65	262
14	77	43	e13	e12	e14	35	128	209	156	54	115	229
15	71	42	e12	e12	e14	32	140	269	165	51	85	186
16	67	42	e12	e12	16	33	119	246	162	54	92	162
17	63	40	e13	e11	16	32	119	399	142	56	84	141
18	59	44	e15	e11	16	31	115	406	138	52	77	122
19	56	41	e16	e10	16	29	104	339	160	58	76	109
20	53	39	e16	e9.6	18	28	96	381	172	55	67	96
21	50	38	e15	e11	15	29	98	481	150	54	62	88
22	49	40	e14	e12	e16	29	96	759	147	59	59	81
23	54	42	e14	e14	e16	33	92	785	147	51	61	75
24	55	41	e14	e15	e14	38	89	675	137	44	68	70
25	50	39	e14	18	e12	38	104	578	122	43	78	66
26	51	37	e14	17	e12	40	146	579	118	41	87	60
27	54	37	e14	e16	e15	40	181	828	117	56	92	57
28	50	38	e12	e14	17	37	203	944	114	64	115	54
29	51	35	e8.8	e14	---	38	201	917	107	89	112	52
30	48	35	e7.5	e14	---	36	191	694	105	92	134	49
31	48	---	e10	e14	---	e40	---	627	---	73	135	---
TOTAL	2,218	1,242	537.3	378.6	407	850	2,944	11,978	6,208	2,040	2,450	3,647
MEAN	71.5	41.4	17.3	12.2	14.5	27.4	98.1	386	207	65.8	79.0	122
MAX	109	47	33	18	20	40	203	944	553	100	135	377
MIN	48	35	7.5	9.6	10	13	37	97	105	41	46	49
AC-FT	4,400	2,460	1,070	751	807	1,690	5,840	23,760	12,310	4,050	4,860	7,230

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2003, BY WATER YEAR (WY)

	78.0	44.2	27.2	20.7	19.8	34.1	111	401	506	237	136	115
MEAN	78.0	44.2	27.2	20.7	19.8	34.1	111	401	506	237	136	115
MAX	280	104	52.0	42.5	44.5	80.8	226	697	927	596	442	455
(WY)	(1973)	(1987)	(1986)	(1986)	(1986)	(1989)	(1989)	(2001)	(1980)	(1995)	(1999)	(1970)
MIN	22.3	16.7	9.89	9.51	8.42	9.11	40.3	132	64.1	27.5	27.5	25.1
(WY)	(1979)	(1976)	(1977)	(1977)	(1977)	(1977)	(1964)	(2002)	(2002)	(2002)	(2002)	(1978)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1963 - 2003

ANNUAL TOTAL	18,079.0	34,899.9	
ANNUAL MEAN	49.5	95.6	145
HIGHEST ANNUAL MEAN			226 1973
LOWEST ANNUAL MEAN			43.9 2002
HIGHEST DAILY MEAN	400 Sep 11	944 May 28	3,020 Sep 6, 1970
LOWEST DAILY MEAN	6.6 Feb 8	e7.5 Dec 30	6.6 Feb 8, 2002
ANNUAL SEVEN-DAY MINIMUM	7.7 Feb 6	10 Dec 29	7.4 Dec 23, 1976
MAXIMUM PEAK FLOW		1,610 May 28	a7,050 Sep 6, 1970
MAXIMUM PEAK STAGE		2.76 May 28	b6.51 Sep 6, 1970
ANNUAL RUNOFF (AC-FT)	35,860	69,220	104,700
10 PERCENT EXCEEDS	107	194	409
50 PERCENT EXCEEDS	33	54	60
90 PERCENT EXCEEDS	11	12	17

e Estimated.

a From rating curve extended above 1,400 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

b Maximum gage height, 6.51 ft, from water-stage recorder, 6.76 ft, from floodmarks.

**09353000 VALLECITO RESERVOIR NEAR BAYFIELD, CO**

LOCATION.--Lat 37°23'00", long 107°34'30", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.18, T.36 N., R.6 W., La Plata County, Hydrologic Unit 14080101, in gatehouse above outlet gates at Vallecito Dam on Los Pinos (Pine) River, 300 ft left of spillway, 0.4 mi upstream from Jack Creek, and 11 mi northeast of Bayfield.

DRAINAGE AREA.--255 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1941 to current year, monthly acre feet only 1941-1960, published in WSP 1313 and 1733. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09353000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09353000)

REVISED RECORDS.--WSP 959: 1941. WSP 1513: 1956. WDR CO-00-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,580 ft above NGVD of 1929 (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by earth and rockfill dam; dam completed in March 1941. Capacity of reservoir, 125,640 acre-ft between elevations 7,580 ft, sill of outlet gate, and 7,665 ft, top of spillway gates. Dead storage, 4,314 acre-ft. Figures given are usable contents. Reservoir is used to store water for irrigation in Los Pinos (Pine) River basin and provide hydroelectric power.

COOPERATION.--Records provided by Pine River Irrigation District.

EXTREMES (AT 0900) FOR PERIOD OF RECORD.--Maximum contents, 128,200 acre-ft, July 27, 1957, elevation, 7,665.72 ft; minimum, 1,520 acre-ft, Oct. 24-25, 1944, elevation, 7,584.10 ft. No usable storage prior to April 1941.

EXTREMES (AT 0900) FOR CURRENT YEAR.--Maximum contents, 82,100 acre-ft, June 6, elevation, 7,647.95 ft; minimum contents, 19,430 acre-ft, October 1, elevation, 7,611.92 ft.

## MONTHEND ELEVATION AND CONTENTS, AT 0900, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30 . . . . .	7,611.78	19,280	-
Oct. 31 . . . . .	7,615.88	23,910	+4,630
Nov. 30 . . . . .	7,619.82	28,880	+4,970
Dec. 31 . . . . .	7,622.37	32,440	+3,560
CAL YR 2002 . . . . .	-	-	-21,770
Jan. 31 . . . . .	7,624.24	35,220	+2,780
Feb. 28 . . . . .	7,625.98	37,960	+2,740
Mar. 31 . . . . .	7,628.62	42,360	+4,400
Apr. 30 . . . . .	7,635.63	55,310	+12,950
May 31 . . . . .	7,646.68	79,130	+23,820
June 30 . . . . .	7,641.97	68,530	-10,600
July 31 . . . . .	7,627.82	40,990	-27,540
Aug. 31 . . . . .	7,616.93	25,180	-15,810
Sept. 30 . . . . .	7,624.58	35,740	+10,560
WTR YR 2003 . . . . .	-	-	+16,460

## 09353800 LOS PINOS RIVER NEAR IGNACIO, CO

LOCATION.--Lat 37°09'58", long 107°34'57", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.26, T.34 N., R.7 W., La Plata County, Hydrologic Unit 14080101, on right bank 1.7 mi downstream from Pine River Canal, 2.2 mi upstream from Beaver Creek and 5.2 mi northeast of Ignacio.

DRAINAGE AREA.--340 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1999 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09353800](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09353800)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,630 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow regulated by Vallecito Reservoir (station 09353000, capacity 125,640 acre ft.) 14 mi upstream since April 1941. Diversions for irrigation of about 2,040 acres upstream and about 40,040 acres downstream from the station. Some waste water is diverted to adjacent basins. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	17	12	e6.6	e8.5	10	28	6.1	7.4	3.6	1.2	18
2	11	16	12	e6.5	e8.6	10	31	16	6.8	2.4	4.6	5.5
3	13	14	12	e6.5	e8.4	10	30	23	7.5	1.5	9.0	3.1
4	12	16	12	e6.5	8.0	11	25	11	6.6	3.7	4.3	3.0
5	11	16	11	e6.5	8.1	11	24	8.5	5.5	3.3	1.3	3.9
6	9.8	15	11	e6.5	8.6	10	24	12	5.2	2.4	1.4	7.9
7	7.2	12	11	e6.5	8.0	11	22	7.3	6.2	4.1	1.3	8.8
8	2.9	7.8	11	e6.5	9.0	12	21	4.9	6.5	1.3	1.8	4.5
9	2.6	24	e10	e6.5	11	14	18	15	5.6	2.5	4.0	133
10	2.5	15	e9.9	e6.5	12	15	20	e20	8.5	8.3	9.9	71
11	3.0	9.0	e9.4	e6.6	11	18	22	e14	10	8.1	4.3	21
12	4.1	7.3	e9.4	e6.7	11	25	23	e8.0	6.6	10	2.9	9.4
13	3.7	6.4	e9.4	e6.9	12	29	25	7.9	3.6	9.7	3.3	6.0
14	4.2	5.6	e9.3	e7.2	15	32	24	17	6.6	8.3	4.0	5.2
15	4.0	5.2	e7.8	e7.3	13	31	27	31	6.8	3.3	1.5	4.1
16	17	5.0	e7.6	e7.8	10	38	29	22	5.2	1.5	7.2	4.3
17	21	5.6	e7.3	e7.9	9.5	51	29	7.1	11	2.4	24	3.6
18	9.8	5.3	e7.5	e8.1	10	43	28	3.8	13	3.0	17	3.1
19	13	5.1	7.5	e8.1	9.7	38	22	3.5	20	1.2	7.1	3.4
20	28	6.7	e7.3	e8.2	9.3	32	17	5.1	12	0.92	2.9	4.4
21	16	12	e7.2	e8.2	9.1	34	14	5.5	8.8	1.2	2.4	5.5
22	18	14	e7.2	e8.2	8.7	33	14	9.7	2.9	1.4	7.4	5.9
23	22	15	e7.1	e8.3	8.8	33	16	14	2.0	1.5	1.7	5.4
24	24	15	e7.0	e8.3	8.8	40	16	27	1.9	1.0	3.3	5.7
25	24	16	e6.9	8.3	10	42	13	21	1.1	1.8	3.0	6.1
26	21	15	6.8	7.8	12	44	17	60	2.8	1.1	2.8	6.8
27	28	14	e6.9	e8.3	11	41	16	26	1.8	1.2	6.7	7.9
28	22	11	e6.6	e8.3	11	35	18	6.2	1.3	2.4	8.8	7.4
29	22	11	e6.6	e8.4	---	31	16	3.7	1.1	3.4	7.8	7.5
30	21	11	e6.6	e8.4	---	30	13	6.3	1.6	5.1	22	7.2
31	18	---	e6.6	e8.5	---	29	---	5.1	---	1.3	22	---
TOTAL	422.9	348.0	269.9	230.9	280.1	843	642	427.7	185.9	102.92	200.9	388.6
MEAN	13.6	11.6	8.71	7.45	10.0	27.2	21.4	13.8	6.20	3.32	6.48	13.0
MAX	28	24	12	8.5	15	51	31	60	20	10	24	133
MIN	2.5	5.0	6.6	6.5	8.0	10	13	3.5	1.1	0.92	1.2	3.0
AC-FT	839	690	535	458	556	1,670	1,270	848	369	204	398	771

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

MEAN	48.2	22.5	26.5	26.6	25.2	72.7	165	90.3	70.7	10.3	13.6	12.9
MAX	120	31.6	46.3	45.0	36.9	188	531	298	253	24.2	36.4	17.1
(WY)	(2000)	(2002)	(2002)	(2002)	(2000)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)
MIN	13.6	11.6	8.71	7.45	10.0	24.0	17.6	12.0	6.20	3.32	2.31	8.28
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2003)	(2003)	(2002)	(2000)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 2000 - 2003

ANNUAL TOTAL	5,822.46		4,342.82				
ANNUAL MEAN	16.0		11.9		48.7		
HIGHEST ANNUAL MEAN					123 2001		
LOWEST ANNUAL MEAN					11.9 2003		
HIGHEST DAILY MEAN	61	Jan 22	133	Sep 9	1,040	Jun 12, 2001	
LOWEST DAILY MEAN	e0.33	Aug 16	0.92	Jul 20	0.33	Aug 16, 2002	
ANNUAL SEVEN-DAY MINIMUM	1.1	Aug 15	1.3	Jul 20	1.1	Aug 15, 2002	
MAXIMUM PEAK FLOW			449	Sep 9	1,100	Jun 12, 2001	
MAXIMUM PEAK STAGE			4.08	Sep 9	4.95	Jun 12, 2001	
ANNUAL RUNOFF (AC-FT)	11,550		8,610		35,290		
10 PERCENT EXCEEDS	33		25		67		
50 PERCENT EXCEEDS	12		8.4		22		
90 PERCENT EXCEEDS	2.5		2.8		4.0		

e Estimated.



## 09355000 SPRING CREEK AT LA BOCA, CO

LOCATION.--Lat 37°00'40", long 107°35'47", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.15, T.32 N., R.7 W., La Plata County, Hydrologic Unit 14080101, on right bank in an excavated channel, 0.2 mi upstream from mouth, and 0.2 mi east of La Boca.

DRAINAGE AREA.--58.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1950 to current year. Monthly discharge only for some periods, published in WSP 1733. Water-quality data available, May 1974, January 1988 to September 1991. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09355000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09355000).

REVISED RECORDS.-- WDR CO-00-02: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,160 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Part of flow is return waste from irrigation. Nearly all irrigation in this basin is water diverted from Los Pinos River which causes a considerable change in the annual pattern and natural flow. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.0	1.5	e0.48	0.34	7.2	0.90	0.17	30	40	43	46
2	1.8	0.92	e1.6	e0.49	0.13	5.6	0.90	3.4	31	42	50	63
3	2.0	0.85	1.7	e0.74	e0.28	5.2	0.97	9.4	29	41	71	69
4	1.6	1.2	1.5	e0.85	e0.51	5.2	0.90	1.7	29	38	56	48
5	1.4	1.2	1.2	e0.85	e0.58	5.9	0.96	1.4	28	42	49	45
6	1.3	0.82	e1.4	e0.79	e0.74	5.7	0.91	4.4	30	42	47	45
7	1.2	0.83	e1.6	e0.63	e1.3	5.7	0.82	7.3	37	41	48	48
8	1.1	1.2	e1.9	e0.46	e1.8	6.2	0.68	7.1	37	40	48	45
9	1.2	12	e2.4	e0.38	e2.3	8.1	0.67	9.2	34	39	51	276
10	e1.1	11	e2.9	e0.38	e3.0	12	0.67	9.4	36	35	46	281
11	e1.0	3.4	e3.0	e0.38	e3.4	22	0.66	8.2	39	41	41	9.1
12	e0.84	2.0	e3.3	e0.38	e3.9	40	0.64	9.3	41	42	40	0.99
13	0.96	1.4	e3.6	e0.35	6.0	34	0.60	8.9	45	43	40	0.33
14	0.89	1.2	e2.7	e0.37	7.7	20	0.45	7.7	43	44	46	0.12
15	0.92	1.1	e2.4	e0.42	7.7	13	0.53	11	41	44	49	0.08
16	0.82	e1.3	e2.0	e0.46	4.8	12	0.60	13	40	43	63	0.05
17	10	e1.4	e1.7	e0.53	3.8	48	0.48	13	41	43	61	0.04
18	6.1	e1.4	e1.5	e0.53	3.8	26	0.40	16	46	43	70	0.02
19	11	e1.3	e1.2	e0.51	3.7	14	0.44	19	49	41	59	0.02
20	17	e1.2	e1.1	e0.46	e2.9	7.1	0.39	19	54	42	52	0.01
21	4.9	e1.2	e0.86	e0.46	e2.7	6.2	0.41	19	43	45	49	0.05
22	1.5	e1.2	e0.86	e0.42	e2.8	7.8	0.39	18	41	48	54	0.02
23	e1.0	e1.2	e0.79	e0.38	e2.8	4.9	0.59	19	39	47	55	0.01
24	1.1	e1.3	e0.67	e0.38	e2.7	4.8	0.51	19	37	50	63	0.01
25	0.55	1.2	e0.67	e0.35	4.0	3.9	0.36	19	37	50	59	0.01
26	1.0	e1.2	e0.67	e0.27	6.5	3.1	0.32	26	40	64	60	0.05
27	3.8	e1.3	e0.67	e0.24	7.4	2.5	0.32	23	41	62	57	0.29
28	1.1	e1.3	e0.67	e0.24	15	1.8	0.27	23	40	95	63	0.78
29	0.77	e1.4	e0.61	0.41	---	1.5	0.23	20	39	46	70	1.4
30	1.1	e1.4	e0.58	0.12	---	e1.3	0.17	27	40	47	61	2.1
31	1.1	---	e0.48	0.39	---	1.1	---	28	---	43	68	---
TOTAL	81.45	59.42	47.73	14.10	102.58	341.8	17.14	419.57	1,157	1,423	1,689	981.48
MEAN	2.63	1.98	1.54	0.45	3.66	11.0	0.57	13.5	38.6	45.9	54.5	32.7
MAX	17	12	3.6	0.85	15	48	0.97	28	54	95	71	281
MIN	0.55	0.82	0.48	0.12	0.13	1.1	0.17	0.17	28	35	40	0.01
AC-FT	162	118	95	28	203	678	34	832	2,290	2,820	3,350	1,950

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

	34.1	10.4	5.38	4.73	9.78	17.9	12.8	38.1	56.9	65.9	65.1	56.9
MEAN	34.1	10.4	5.38	4.73	9.78	17.9	12.8	38.1	56.9	65.9	65.1	56.9
MAX	87.9	29.6	20.4	19.3	54.8	89.7	41.1	64.5	79.3	111	132	92.0
(WY)	(1973)	(1956)	(1985)	(1980)	(1980)	(1979)	(1979)	(1992)	(1986)	(1996)	(1996)	(1983)
MIN	2.63	1.98	1.54	0.45	2.06	2.36	0.57	13.5	24.4	1.07	0.45	0.93
(WY)	(2003)	(2003)	(2003)	(2003)	(2000)	(1999)	(2003)	(2003)	(1977)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1951 - 2003

ANNUAL TOTAL	2,589.82	6,334.27	
ANNUAL MEAN	7.10	17.4	31.9
HIGHEST ANNUAL MEAN			47.7 1987
LOWEST ANNUAL MEAN			9.78 2002
HIGHEST DAILY MEAN	64 Jun 11	281 Sep 10	918 Mar 6, 1995
LOWEST DAILY MEAN	0.00 Aug 1	0.01 Sep 20	0.00 Aug 1, 2002
ANNUAL SEVEN-DAY MINIMUM	0.03 Aug 12	0.02 Sep 19	0.02 Sep 19, 2003
MAXIMUM PEAK FLOW		742 Sep 10	a1,980 Sep 6, 1970
MAXIMUM PEAK STAGE		5.50 Sep 10	b4.62 Sep 6, 1970
ANNUAL RUNOFF (AC-FT)	5,140	12,560	23,090
10 PERCENT EXCEEDS	27	48	71
50 PERCENT EXCEEDS	1.7	3.0	21
90 PERCENT EXCEEDS	0.37	0.38	3.0

e Estimated.

a From rating curve extended above 160 ft<sup>3</sup>/s, on the basis of field estimate of peak flow.

b Maximum gage height, 5.98 ft, Mar 9, 1960, backwater from ice.

## 09358000 ANIMAS RIVER AT SILVERTON, CO

LOCATION.--Lat 37°48'40", long 107°39'31", in SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.17, T.41 N., R.7 W., San Juan County, Hydrologic Unit 14080104, on right bank at southeast end of 14th Street, 800 feet upstream from Cement Creek, in the city of Silverton.

DRAINAGE AREA.--70.6 mi<sup>2</sup>.

PERIOD OF RECORD.--June to October 1903 (staff gage), monthly discharge only, published in WSP 1313. October 1991 to September 1993. October 1994 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09358000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09358000)

REVISED RECORDS.--WDR CO 92-2: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,290 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. No diversions upstream for irrigation in Animas River drainage. Natural regulation by many lakes upstream from station. Mineral Point Ditch exports 100 to 400 acre feet of water per year from headwaters of Animas River to Uncompahgre River drainage. City of Silverton diverts some water from Boulder Creek (tributary) for municipal use. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1884, was probably that of October 5, 1911.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	39	e28	e18	e18	e17	e26	128	772	162	56	59
2	68	40	e27	e18	e18	e18	e26	125	743	163	52	55
3	76	33	e26	e18	e18	e18	e25	126	660	156	51	54
4	69	33	e26	e19	e18	e19	e25	129	610	146	45	51
5	74	31	e25	e19	e18	e19	e25	110	549	136	44	59
6	71	31	e25	e19	e18	e19	e24	96	468	122	43	67
7	71	31	e26	e19	e19	e19	e24	90	430	114	44	70
8	72	32	e26	e19	e19	e19	e23	86	439	112	47	66
9	71	32	e26	e19	e19	e20	e24	77	453	108	43	101
10	69	e33	e26	e19	e19	e20	e25	70	437	101	44	151
11	67	e33	e25	e19	e19	e20	34	67	402	95	43	135
12	65	e33	e24	e19	e19	e20	38	83	361	90	42	148
13	62	e33	e23	e19	e18	e19	41	118	313	84	67	182
14	59	e33	e23	e20	e17	e19	61	146	289	79	129	179
15	54	e33	e23	e20	e17	e19	75	193	326	74	87	170
16	51	e33	e23	e21	e16	e17	62	187	301	77	81	165
17	50	e33	e22	e22	e16	e16	60	277	262	75	75	159
18	49	e33	e22	e22	e16	e16	58	308	242	71	70	145
19	47	e33	e21	e22	e16	e16	52	282	246	70	64	127
20	45	e32	e20	e22	e16	e16	53	325	241	66	58	117
21	43	e32	e19	e22	e16	e17	61	394	230	65	55	105
22	44	e32	e19	e21	e16	e18	62	525	248	64	53	96
23	45	e32	e18	e21	e15	e19	58	633	250	61	53	87
24	46	e32	e18	e20	e16	e21	55	639	228	58	54	82
25	42	e31	e18	e19	e16	e22	65	590	204	57	50	76
26	40	e30	e18	e19	e16	e22	91	641	198	57	50	71
27	42	e30	e18	e19	e16	e22	120	829	197	57	53	68
28	39	e30	e18	e19	e16	e22	140	967	189	61	66	64
29	39	e29	e18	e19	---	e22	141	1,020	177	60	62	61
30	36	e29	e18	e18	---	e23	136	855	172	63	68	58
31	37	---	e18	e18	---	e25	---	769	---	58	64	---
TOTAL	1,706	971	687	608	481	599	1,710	10,885	10,637	2,762	1,813	3,028
MEAN	55.0	32.4	22.2	19.6	17.2	19.3	57.0	351	355	89.1	58.5	101
MAX	76	40	28	22	19	25	141	1,020	772	163	129	182
MIN	36	29	18	18	15	16	23	67	172	57	42	51
AC-FT	3,380	1,930	1,360	1,210	954	1,190	3,390	21,590	21,100	5,480	3,600	6,010

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

	60.8	37.3	28.7	25.0	23.1	27.5	63.7	312	498	252	113	79.7
MEAN	60.8	37.3	28.7	25.0	23.1	27.5	63.7	312	498	252	113	79.7
MAX	136	64.9	41.4	33.8	36.1	43.3	92.9	454	794	734	253	131
(WY)	(1998)	(1998)	(1998)	(1995)	(1995)	(1995)	(2000)	(1996)	(1997)	(1995)	(1995)	(1999)
MIN	30.4	21.2	18.9	13.8	15.7	18.6	39.6	147	128	30.5	28.0	42.2
(WY)	(2002)	(2002)	(1992)	(1992)	(1992)	(1992)	(1993)	(1995)	(2002)	(2002)	(2002)	(2001)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1992 - 2003	
ANNUAL TOTAL	20,398		35,887			
ANNUAL MEAN	55.9		98.3		127	
HIGHEST ANNUAL MEAN					194	
LOWEST ANNUAL MEAN					52.7	
HIGHEST DAILY MEAN	281	Jun 1	1,020	May 29	1,180	Jun 4, 1997
LOWEST DAILY MEAN	e14	Mar 1	e15	Feb 23	9.7	Oct 30, 1999
ANNUAL SEVEN-DAY MINIMUM	15	Feb 25	16	Feb 17	13	Jan 16, 1992
MAXIMUM PEAK FLOW			1,390		1,470	
MAXIMUM PEAK STAGE			4.32		a,b.3.99	
ANNUAL RUNOFF (AC-FT)	40,460		71,180		91,980	
10 PERCENT EXCEEDS	128		241		370	
50 PERCENT EXCEEDS	32		45		48	
90 PERCENT EXCEEDS	20		18		19	

e Estimated.

a Maximum gage height during period Jun to Oct 1903, 4.90 ft, Jun 17, 1903, site and datum then in use.

b Maximum gage height since 1992, 4.32 ft, May 28, 2003, due to channel change, present site and datum.

## 09358550 CEMENT CREEK AT SILVERTON, CO

LOCATION.--Lat 37°49'11", long 107°39'47", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.8, T.41 N., R.7 W., San Juan County, Hydrologic Unit 14080104, on left bank, at abandoned railroad crossing Cement Creek, 0.1 mile north of Silverton, and 0.8 mile upstream from mouth.

DRAINAGE AREA.--20.1 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1991 to September 1993, October 1994 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09358550](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09358550)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,380 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural regulation by many lakes upstream from station. Diversions for mining operations upstream from station. However, these diversions are returned to the creek upstream of the gage. Mine drainage contributes considerable amounts of water to the creek. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--A major flood occurred October 5, 1911. A more recent flood occurred June 6, 1978, when Lake Emma (6.5 mi northeast of Silverton) was undermined by mining operations, and released a large quantity of water into the headwaters of Cement Creek. Discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	16	e13	e8.0	e8.7	e8.4	18	53	196	36	16	14
2	20	16	e13	e8.2	e8.7	e8.5	17	49	194	35	16	14
3	21	15	e13	e8.3	e8.7	e8.6	15	48	168	35	16	14
4	22	15	e13	e8.4	e8.7	e8.7	14	48	146	33	16	14
5	22	15	e13	e8.5	e8.8	e8.9	14	40	129	30	15	15
6	21	15	e13	e8.5	e8.9	e9.0	14	35	116	28	16	16
7	21	15	13	e8.5	e8.9	e9.2	14	33	109	26	16	18
8	21	16	13	e8.5	e8.9	e9.4	13	31	109	24	16	15
9	20	16	e11	e8.5	e9.0	e9.7	16	28	108	23	15	25
10	19	15	e11	e8.5	e9.1	e10	22	26	104	22	16	36
11	19	15	e10	e8.6	e9.3	e12	27	29	99	21	e15	33
12	18	14	e9.7	e8.8	e8.7	13	28	42	86	20	e14	38
13	18	15	e8.5	e9.0	e8.4	14	32	55	73	20	19	35
14	17	15	e8.2	e9.3	e8.2	14	38	70	71	19	20	31
15	17	15	e8.0	e9.3	e8.1	14	35	77	75	18	16	29
16	17	13	e8.0	e9.5	e7.9	13	28	85	69	19	20	27
17	17	15	e8.0	e9.7	e7.7	13	29	122	60	19	18	25
18	16	14	e8.0	e9.8	e7.5	13	29	119	56	18	17	23
19	15	14	e8.0	e10	e7.6	12	24	107	56	19	16	e22
20	16	14	e7.9	e11	e7.7	12	25	118	55	17	15	e21
21	16	15	e7.8	e13	e7.7	12	28	137	53	17	15	20
22	16	16	e7.8	e12	e7.8	13	26	170	55	17	15	19
23	16	16	e7.7	e11	e8.0	14	23	194	55	17	18	18
24	15	15	e7.6	e10	e8.1	15	23	202	50	17	16	17
25	15	15	e7.6	e9.8	e8.2	15	32	166	46	17	15	17
26	16	14	e7.6	e9.3	e8.3	15	47	167	45	16	15	16
27	16	14	e7.6	e9.2	e8.3	15	60	205	44	17	15	16
28	15	e14	e7.6	e8.9	e8.3	13	65	239	42	17	16	15
29	16	e14	e7.6	e8.7	---	e15	59	237	40	17	15	15
30	14	e13	e7.7	e8.7	---	e17	55	218	39	16	18	15
31	16	---	e7.9	e8.7	---	e17	---	203	---	16	15	---
TOTAL	547	444	294.8	288.2	234.2	381.4	870	3,353	2,548	666	501	633
MEAN	17.6	14.8	9.51	9.30	8.36	12.3	29.0	108	84.9	21.5	16.2	21.1
MAX	22	16	13	13	9.3	17	65	239	196	36	20	38
MIN	14	13	7.6	8.0	7.5	8.4	13	26	39	16	14	14
MED	17	15	8.0	8.9	8.3	13	26	85	70	19	16	18
AC-FT	1,080	881	585	572	465	757	1,730	6,650	5,050	1,320	994	1,260

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

	18.7	16.1	13.0	12.1	12.1	15.3	29.3	101	125	54.0	26.2	21.7
MEAN	18.7	16.1	13.0	12.1	12.1	15.3	29.3	101	125	54.0	26.2	21.7
MAX	28.9	19.8	15.6	15.8	17.8	22.7	42.1	145	263	149	50.7	34.6
(WY)	(1998)	(1999)	(1995)	(1995)	(1995)	(1995)	(2000)	(1996)	(1995)	(1995)	(1999)	(1999)
MIN	14.0	12.7	9.26	8.27	8.36	12.3	22.6	37.3	24.6	13.2	12.9	16.9
(WY)	(1992)	(2002)	(2002)	(2002)	(2003)	(2003)	(1998)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1992 - 2003	
ANNUAL TOTAL	6,364.3		10,760.6			
ANNUAL MEAN	17.4		29.5		37.1	
HIGHEST ANNUAL MEAN					56.3	
LOWEST ANNUAL MEAN					17.0	
HIGHEST DAILY MEAN	50	May 20	239	May 28	385	Jun 16, 1995
LOWEST DAILY MEAN	e7.6	Dec 24	e7.5	Feb 18	a,e7.5	Jan 2, 1992
ANNUAL SEVEN-DAY MINIMUM	7.6	Dec 23	7.6	Dec 23	e7.6	Dec 23, 2002
MAXIMUM PEAK FLOW			300	May 28	471	Jun 14, 1995
MAXIMUM PEAK STAGE			2.26	May 28	2.85	Jun 14, 1995
ANNUAL RUNOFF (AC-FT)	12,620		21,340		26,850	
10 PERCENT EXCEEDS	33		60		95	
50 PERCENT EXCEEDS	14		16		18	
90 PERCENT EXCEEDS	8.2		8.4		11	

e Estimated.

a Also occurred Feb 18, 2003.



## 09359010 MINERAL CREEK AT SILVERTON, CO

LOCATION.--Lat 37°48'10", long 107°40'20", in NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.19, T.41 N., R.7 W., San Juan County, Hydrologic Unit 14080104, on right bank at southwest end of Greene Street at abandoned bridge crossing Mineral Creek, 300 ft downstream from U. S. Highway 550 crossing Mineral Creek, 1,400 ft upstream from mouth, and 0.5 mi southwest of Silverton.

DRAINAGE AREA.--52.5 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1991 to September 1993, October 1994 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09359010](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09359010)

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 9245.98 ft above NGVD of 1929, from San Juan County bench mark.

REMARKS.--Records good except for estimated daily discharges, which are poor. Natural regulation by many lakes upstream from station. Diversions upstream from Mineral Creek drainage to Uncompahgre River drainage consists of 100 to 200 acre-feet per year through Red Mountain Ditch and 400 to 500 acre-feet per year through Carbon Lake Ditch. City of Silverton diverts some water from Bear Creek (tributary) for municipal use. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood known occurred October 5, 1911. An indirect determination of peak flow for flood of September 5, 1970, was run in very close proximity to present site, discharge, 3,070 ft<sup>3</sup>/s, gage height not determined.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	31	e24	e16	e14	e14	e25	84	681	126	53	60
2	54	30	e24	e16	e14	e14	e25	82	671	124	51	55
3	55	28	e22	e17	e14	e15	e24	82	597	119	49	51
4	53	27	e22	e17	e14	e15	e23	83	565	111	47	49
5	55	27	e22	e17	e14	e15	e23	70	464	103	44	49
6	55	27	e22	e17	e14	e16	e23	63	370	91	46	54
7	57	27	e21	e17	e15	e16	e22	60	326	86	46	61
8	58	26	e21	e17	e15	e16	e23	56	337	84	47	54
9	57	e27	e21	e17	e15	e16	e24	51	343	81	43	72
10	55	e28	e21	e17	e16	e16	e25	47	337	76	45	102
11	54	e28	e22	e17	e16	e17	31	48	319	73	51	97
12	51	e29	e22	e18	e16	e18	35	66	281	70	52	107
13	48	e29	e21	e19	e16	e18	40	92	225	66	58	127
14	45	e29	e21	e19	e16	e18	52	119	211	63	104	125
15	42	e29	e21	e20	e15	e18	53	151	238	60	78	112
16	40	e29	e21	e20	e14	e17	45	155	211	62	80	105
17	39	e29	e20	e20	e14	e17	44	222	180	62	80	100
18	38	e29	e19	e20	e14	e17	42	229	169	60	71	91
19	36	e28	e18	e20	e14	e17	38	227	180	64	64	82
20	35	e28	e18	e21	e14	e17	38	261	180	59	56	75
21	34	e28	e17	e21	e14	e18	42	318	173	56	53	70
22	34	e28	e17	e21	e14	e18	41	440	189	57	51	65
23	35	e28	e16	e20	e14	e19	38	504	187	54	53	60
24	35	e28	e16	e18	e14	e21	37	483	167	52	57	57
25	32	e27	e16	e18	e14	e22	47	422	149	52	65	54
26	32	e27	e16	e17	e14	e23	65	485	150	50	61	51
27	32	e27	e16	e17	e14	e23	87	725	149	52	62	49
28	31	e26	e16	e16	e14	e23	103	791	143	60	76	47
29	32	e25	e16	e16	---	e23	98	880	135	68	75	45
30	30	e25	e16	e16	---	e23	88	788	130	66	74	44
31	31	---	e16	e15	---	e23	---	681	---	56	68	---
TOTAL	1,333	834	601	557	406	563	1,301	8,765	8,457	2,263	1,860	2,170
MEAN	43.0	27.8	19.4	18.0	14.5	18.2	43.4	283	282	73.0	60.0	72.3
MAX	58	31	24	21	16	23	103	880	681	126	104	127
MIN	30	25	16	15	14	14	22	47	130	50	43	44
AC-FT	2,640	1,650	1,190	1,100	805	1,120	2,580	17,390	16,770	4,490	3,690	4,300

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

	47.8	31.7	24.8	21.2	19.6	23.6	52.1	246	384	209	109	73.6
MEAN	47.8	31.7	24.8	21.2	19.6	23.6	52.1	246	384	209	109	73.6
MAX	96.4	46.9	34.3	27.1	29.5	36.1	77.4	391	635	540	260	147
(WY)	(1998)	(1998)	(2000)	(1995)	(1995)	(1995)	(2000)	(2001)	(1997)	(1995)	(1999)	(1999)
MIN	26.8	18.0	16.9	13.4	14.5	18.2	35.4	96.5	75.0	25.4	21.9	38.1
(WY)	(2002)	(2002)	(2002)	(1992)	(2003)	(2003)	(1998)	(1995)	(2002)	(2002)	(2002)	(2001)

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1992 - 2003	
ANNUAL TOTAL	15,340		29,110			
ANNUAL MEAN	42.0		79.8		104	
HIGHEST ANNUAL MEAN					147 1999	
LOWEST ANNUAL MEAN					39.6 2002	
HIGHEST DAILY MEAN	192	May 30	880	May 29	964	Jun 4, 1997
LOWEST DAILY MEAN	e13	Mar 1	e14	Feb 1	10	Mar 16, 2001
ANNUAL SEVEN-DAY MINIMUM	14	Feb 27	14	Feb 16	13	Jan 12, 1992
MAXIMUM PEAK FLOW			1,150	May 27	1,670	Jun 15, 1995
MAXIMUM PEAK STAGE			3.05	May 27	3.41	Jun 15, 1995
ANNUAL RUNOFF (AC-FT)	30,430		57,740		75,150	
10 PERCENT EXCEEDS	99		176		293	
50 PERCENT EXCEEDS	27		40		39	
90 PERCENT EXCEEDS	17		16		18	

e Estimated.



## 09359020 ANIMAS RIVER BELOW SILVERTON, CO

LOCATION.--Lat 37°47'25", long 107°40'01", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.20, T.41 N., R.7 W., San Juan County, Hydrologic Unit 14080104, on right bank 500 ft upstream from Durango-Silverton Railroad, crossing Animas River, 0.7 mi downstream from Mineral Creek, and 1.1 mi south of Silverton.

DRAINAGE AREA.--146 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1991 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09359020](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09359020).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,200 ft above NGVD of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Natural regulation by many lakes upstream from station. Diversions from Animas River and Mineral Creek drainages through Red Mountain, Carbon Lake and Mineral Point ditches amount to 600 to 1100 acre-feet per year. City of Silverton diverts some water for municipal use from Bear Creek and Boulder Creek, both tributaries upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood known occurred October 5, 1911.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	95	68	e49	42	44	67	276	1,630	358	135	145
2	149	97	e67	e50	41	e41	68	274	1,550	363	129	136
3	166	82	64	e52	e36	e43	63	277	1,280	355	123	130
4	154	80	e65	e55	e37	43	63	281	1,140	331	114	124
5	164	78	e66	e57	e39	42	62	248	896	306	108	131
6	157	78	65	57	e41	46	62	225	722	266	109	149
7	161	77	e66	e60	e42	44	60	217	681	246	112	164
8	163	78	e66	e59	e43	e44	61	207	685	242	117	150
9	158	85	e66	e57	e44	e43	66	189	709	231	105	223
10	152	85	e66	47	e46	42	84	175	700	219	106	338
11	149	81	e66	43	e47	43	101	179	678	204	115	297
12	142	83	e66	e67	e46	46	113	246	629	195	116	326
13	133	89	e66	e65	e45	51	126	343	551	186	149	392
14	127	78	e65	60	42	54	161	431	528	177	288	385
15	118	80	e65	e62	e45	52	175	542	569	168	196	356
16	112	83	e64	e60	43	52	146	574	535	173	196	341
17	108	92	60	e61	35	50	146	726	490	170	189	326
18	104	83	e58	67	36	48	143	798	479	162	173	292
19	100	92	e54	e69	37	47	129	823	485	166	156	262
20	97	75	e53	e69	38	47	130	927	484	155	139	233
21	95	80	e52	e67	38	47	147	1,030	476	149	131	210
22	96	85	e52	e67	37	48	147	1,270	492	149	125	194
23	103	85	e52	e63	41	53	138	1,410	493	142	132	182
24	102	86	e53	e62	53	56	134	1,410	474	136	139	171
25	93	77	e51	40	38	58	162	1,300	436	134	145	162
26	91	77	e49	45	37	60	219	1,410	428	135	139	153
27	94	77	e48	e47	37	61	270	1,810	427	137	144	146
28	88	e77	e47	42	39	57	301	2,040	408	154	175	139
29	92	e77	e47	44	---	56	298	2,120	385	160	169	136
30	86	e76	e48	56	---	56	287	1,860	377	159	175	130
31	91	---	e48	42	---	e63	---	1,640	---	141	163	---
TOTAL	3,777	2,468	1,823	1,741	1,145	1,537	4,129	25,258	19,817	6,269	4,512	6,523
MEAN	122	82.3	58.8	56.2	40.9	49.6	138	815	661	202	146	217
MAX	166	97	68	69	53	63	301	2,120	1,630	363	288	392
MIN	86	75	47	40	35	41	60	175	377	134	105	124
AC-FT	7,490	4,900	3,620	3,450	2,270	3,050	8,190	50,100	39,310	12,430	8,950	12,940

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

MEAN	132	88.8	68.3	61.4	56.2	68.0	161	684	1,034	494	247	186
MAX	270	136	92.9	79.8	85.6	105	216	1,002	1,647	1,393	520	336
(WY)	(1998)	(1998)	(1998)	(1998)	(1995)	(1995)	(2000)	(1996)	(1997)	(1995)	(1995)	(1999)
MIN	75.8	46.9	50.3	40.2	40.9	49.1	122	301	232	83.0	70.5	97.5
(WY)	(2002)	(2002)	(2002)	(1992)	(2003)	(2000)	(1993)	(1995)	(2002)	(2002)	(2002)	(2001)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1992 - 2003

ANNUAL TOTAL	44,321	78,999	
ANNUAL MEAN	121	216	274
HIGHEST ANNUAL MEAN			395
LOWEST ANNUAL MEAN			114
HIGHEST DAILY MEAN	443	May 18	2,350
LOWEST DAILY MEAN	e42	Feb 26	35
ANNUAL SEVEN-DAY MINIMUM	42	Feb 26	37
MAXIMUM PEAK FLOW			2,610
MAXIMUM PEAK STAGE			4.27
ANNUAL RUNOFF (AC-FT)	87,910	156,700	198,500
10 PERCENT EXCEEDS	286	487	760
50 PERCENT EXCEEDS	81	112	112
90 PERCENT EXCEEDS	48	44	52

e Estimated.

a Also occurred Nov 21, 2001.

b Maximum gage height, 4.90 ft, Jun 1, 1997.

## 09359020 ANIMAS RIVER BELOW SILVERTON, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1993 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09359020](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09359020)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat fltr inc tit field, mg/L as CaCO3 (39086)
DEC 05...	1345	88	10.3	6.3	499	0.7	250	90.7	5.48	0.86	0.1	3.40	5
MAY 02...	1245	263	9.0	6.6	284	6.1	130	45.2	3.16	0.63	0.1	2.15	10
MAY 30...	1130	1,570	9.2	7.0	133	6.2	49	17.2	1.49	0.44	0.1	0.97	12
JUL 11...	0945	209	8.5	6.7	292	8.4	130	45.3	3.19	0.72	0.1	2.06	13

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Bicarbonate, wat fltr incrm. titr., field, mg/L (00453)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Residue on evap. at 180degC wat fltr mg/L (70300)	Aluminum, water, fltrd, ug/L (01106)	Aluminum, water, unfltrd recover-able, ug/L (01105)	Cadmium, water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)
DEC 05...	6	1.36	0.63	15.3	242	368	0.54	94.7	399	140	2,790	1.7	6.4	
MAY 02...	12	1.22	0.41	9.76	116	187	0.27	139	196	20	1,140	2.3	13.5	
MAY 30...	15	0.36	0.2	5.11	39.9	73	0.11	355	84	25	1,410	0.9	4.1	
JUL 11...	16	0.51	0.4	8.86	114	184	0.26	110	195	20	770	1.5	2.9	

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Copper, water, unfltrd recover-able, ug/L (01042)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover-able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Manganese, water, unfltrd recover-able, ug/L (01055)	Mercury, water, fltrd, ug/L (71890)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
DEC 05...	E20	2,880	5,690	<1	1,380	1,300	<0.02	<3	<0.3	531	
MAY 02...	40	1,060	2,840	<1	744	723	<0.02	<3	<0.3	589	
MAY 30...	40	60	4,310	M	220	609	<0.02	<3	<0.3	209	
JUL 11...	10	390	1,040	<1	539	492	<0.02	<3	<0.3	322	

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JAN 23...	1045	63	599	0.3	MAY 23...	1301	1,180	143	7.8
APR 10...	1500	77	515	9.8	JUN 23...	1350	472	203	11.1

## 09361500 ANIMAS RIVER AT DURANGO, CO

LOCATION.--Lat 37°16'45", long 107°52'47", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.20, T.35 N., R.9 W., La Plata County, Hydrologic Unit 14080104, on left bank at abandoned power plant at Durango, 0.8 mi upstream from Lightner Creek.

DRAINAGE AREA.--692 mi<sup>2</sup>.

PERIOD OF RECORD.--July to December 1895, April 1896 to December 1898, April 1899 to December 1900, March to August 1901 (gage heights and discharge measurements only), April to November 1902, March to April 1903 (gage heights only, erroneously stated as discredited in WSP 1563), May to October 1903, July 1904 to December 1905, January to December 1910 (gage heights only), January to September 1911, January 1912 to current year. Monthly or yearly discharge only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09361500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09361500)

REVISED RECORDS.--WSP 764: Drainage area. WSP 929: 1927(M). WSP 1243: 1911, 1918(M). WSP 1563: 1911-25 (monthly figures only).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,501.57 ft above NGVD of 1929. See WSP 1713 or 1733 for history of changes prior to Mar. 2, 1921.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 4,000 acres upstream from station. Natural regulation by many lakes and regulation for power upstream from station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1885, that of Oct. 5, 1911.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	305	231	216	e158	165	150	e271	995	3,200	558	293	406
2	333	229	209	e158	146	131	295	953	3,180	538	294	353
3	368	229	216	171	142	128	299	923	2,830	521	299	328
4	389	211	219	176	153	150	282	969	2,480	498	282	312
5	378	216	206	158	147	159	273	892	2,250	474	255	310
6	384	203	206	159	e132	151	243	786	1,900	447	234	325
7	377	197	202	180	e128	150	238	728	1,630	413	226	358
8	380	200	183	171	e128	153	255	677	1,540	390	256	341
9	388	244	176	173	132	140	257	619	1,550	377	291	415
10	379	240	180	179	137	145	286	566	1,520	359	271	1,480
11	367	221	175	184	e149	168	345	517	1,440	339	272	1,260
12	353	216	170	161	157	184	394	552	1,350	325	275	1,020
13	332	208	181	150	182	196	399	777	1,190	310	289	1,060
14	316	215	189	172	179	214	474	900	1,040	296	476	1,020
15	298	207	173	178	168	229	612	1,250	1,060	285	499	908
16	288	198	186	170	143	219	578	1,280	1,060	273	424	811
17	274	195	202	169	140	226	577	1,700	942	268	433	756
18	271	201	197	165	157	229	594	2,030	869	260	423	692
19	253	195	182	148	151	218	561	1,860	858	257	389	e641
20	247	194	e165	155	149	209	508	1,910	923	262	347	580
21	236	198	e159	171	149	210	504	2,150	855	258	316	532
22	229	201	e158	174	151	206	523	2,730	839	250	306	487
23	251	209	154	172	132	197	525	3,240	846	250	302	461
24	257	214	e161	171	127	217	488	3,180	807	246	317	433
25	250	209	e160	172	158	275	499	2,900	736	236	342	411
26	242	235	e160	151	162	283	587	2,680	693	228	344	391
27	258	228	e161	149	157	287	816	3,400	681	243	344	367
28	249	221	e159	166	155	271	1,010	4,100	653	274	381	348
29	241	219	156	162	---	253	1,100	4,160	622	312	458	340
30	239	218	e157	157	---	224	1,020	3,850	594	333	429	337
31	232	---	e158	161	---	e222	---	3,470	---	316	479	---
TOTAL	9,364	6,402	5,576	5,141	4,176	6,194	14,813	56,744	40,138	10,396	10,546	17,483
MEAN	302	213	180	166	149	200	494	1,830	1,338	335	340	583
MAX	389	244	219	184	182	287	1,100	4,160	3,200	558	499	1,480
MIN	229	194	154	148	127	128	238	517	594	228	226	310
AC-FT	18,570	12,700	11,060	10,200	8,280	12,290	29,380	112,600	79,610	20,620	20,920	34,680

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 2003, BY WATER YEAR (WY)

MEAN	409	285	222	202	205	296	832	2,288	2,825	1,190	587	464
MAX	1,866	814	412	326	352	844	1,818	4,791	5,846	3,057	1,806	1,709
(WY)	(1942)	(1942)	(1942)	(1973)	(1920)	(1916)	(1985)	(1920)	(1917)	(1995)	(1999)	(1970)
MIN	162	158	129	103	110	133	246	474	357	154	134	161
(WY)	(1957)	(1935)	(1990)	(1933)	(1933)	(1990)	(1977)	(1977)	(2002)	(2002)	(2002)	(1956)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1898 - 2003	
ANNUAL TOTAL	91,125	186,973		
ANNUAL MEAN	250	512	816	
HIGHEST ANNUAL MEAN			1,366	1917
LOWEST ANNUAL MEAN			238	2002
HIGHEST DAILY MEAN	947	Sep 12	10,700	Jun 19, 1949
LOWEST DAILY MEAN	116	Aug 28	94	Mar 2, 1913
ANNUAL SEVEN-DAY MINIMUM	119	Aug 22	100	Dec 19, 1917
MAXIMUM PEAK FLOW		4,680	a25,000	Oct 5, 1911
MAXIMUM PEAK STAGE		5.88	11.00	Oct 5, 1911
ANNUAL RUNOFF (AC-FT)	180,700	370,900	591,200	
10 PERCENT EXCEEDS	463	1,050	2,210	
50 PERCENT EXCEEDS	193	271	340	
90 PERCENT EXCEEDS	130	157	179	

e Estimated.

a Present site and datum, from rating extended above 13,000 ft<sup>3</sup>/s.

**09362800 LEMON RESERVOIR NEAR DURANGO, CO**

LOCATION.--Lat 37°22'57", long 107°39'44", in SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.17, T.36 N., R.7 W., LaPlata County, Hydrologic Unit 14080104, in gatehouse at Lemon Dam on Florida River, 2.3 mi upstream from True Creek, and 15 mi northeast of Durango.

DRAINAGE AREA.--68.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1989 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09362800](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09362800)

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,948.00 ft above NGVD of 1929, (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above NGVD of 1929.

REMARKS.--Reservoir is formed by an earthfill dam. Dam was completed in 1963. Capacity, 40,100 acre-ft, between elevations 7,948.00 ft, sill of outlet gate, and 8,148.00 ft, normal reservoir water surface elevation. Dead storage below elevation 8,005.00 ft, 354 acre-ft. Figures given are total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily mean contents, 40,180 acre-ft, July 3-4, 1997, elevation, 8,148.06 ft; minimum daily mean contents, 3,080 acre-ft, Aug. 3, 2003, elevation, 8,043.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum daily mean contents, 20,330 acre-ft, June 3, daily mean elevation, 8,110.74 ft; minimum daily mean contents, 3,080 acre-ft, Aug. 3, daily mean elevation, 8,043.00 ft.

## MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30 .....	8,054.91	4,870	-
Oct. 31 .....	8,059.05	5,580	+710
Nov. 30 .....	8,061.01	5,930	+350
Dec. 31 .....	8,062.52	6,210	+280
CAL YR 2002 .....	-	-	-7,190
Jan. 31 .....	8,062.96	6,290	+80
Feb. 28 .....	8,063.38	6,370	+80
Mar. 31 .....	8,065.54	6,780	+410
Apr. 30 .....	8,078.55	9,620	+2,840
May 31 .....	8,109.94	19,990	+10,370
June 30 .....	8,091.90	13,330	-6,660
July 31 .....	8,046.08	3,500	-9,830
Aug. 31 .....	8,054.32	4,770	+1,270
Sept. 30 .....	8,076.03	9,010	+4,240
WTR YR 2003 .....	-	-	+4,140

## 09365500 LA PLATA RIVER AT HESPERUS, CO

LOCATION.--Lat 37°17'23", long 108°02'24", in NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.14, T.35 N., R.11 W., La Plata County, Hydrologic Unit 14080105, on right bank at Hesperus, 700 ft downstream from U.S. Highway 160.

DRAINAGE AREA.--37 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--June to August 1904, May 1905 to September 1906, August to November 1910, June 1917 to current year. Monthly discharge only for some periods, published in WSP 1313. Records for Nov. 11 to Dec. 31, 1910, published in WSP 289, have been found to be unreliable and should not be used. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09365500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09365500)

REVISED RECORDS.--WSP 1243: 1906(M). WSP 1563: 1923 (monthly figures only). See also PERIOD OF RECORD.

GAGE.--Water-stage recorder with satellite telemetry and concrete flume. Datum of gage is 8,104.71 ft above NGVD of 1929. Prior to May 1, 1920, nonrecording gage, and May 1, 1920 to May 24, 1927, water-stage recorder, at several sites about 600 ft downstream at different datums. May 25, 1927 to Sept. 30, 1938, water-stage recorder at site 60 ft downstream and Oct. 1, 1938 to Sept. 30, 1941, at present site at datum 1.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Cherry Creek ditch exports water upstream from station for irrigation of about 2,000 acres in Cherry Creek drainage. The Pine Ridge ditch diverts water upstream from station for irrigation of about 300 acres downstream, and also for irrigation of about 300 acres in each of the Lightner and Basin Creek drainages. The Pine River ditch also diverts up to 1,000 acre-ft for storage in the Lightner Creek drainage.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood observed occurred Oct. 5, 1911.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	8.5	12	5.7	6.4	e5.5	21	84	135	20	8.0	25
2	12	8.2	12	e5.0	6.7	5.5	24	82	129	19	8.5	21
3	14	8.2	12	e5.0	7.1	5.4	22	76	111	18	9.0	19
4	13	7.8	12	e5.0	e7.0	5.4	23	80	95	17	9.6	19
5	13	7.4	11	5.0	e6.5	5.4	24	66	80	16	9.8	19
6	13	7.4	11	5.0	e6.0	5.3	25	53	65	15	9.8	20
7	14	7.4	10	e5.0	e6.0	5.4	24	46	54	14	10	33
8	14	7.5	9.9	e5.0	e6.5	5.5	24	41	51	13	12	25
9	15	13	9.4	4.8	e6.5	5.6	25	37	50	13	12	58
10	14	11	8.5	4.8	e7.0	5.9	29	33	48	12	12	156
11	14	10	8.4	4.8	e7.0	6.4	47	29	50	11	12	77
12	13	9.4	8.2	4.6	e7.5	7.4	70	33	51	10	12	60
13	13	8.8	8.2	4.6	8.4	7.6	65	50	44	9.9	12	53
14	13	8.4	8.2	4.6	9.4	6.7	80	57	39	9.6	12	49
15	12	8.2	8.2	4.6	9.0	6.7	81	87	38	9.0	12	41
16	12	8.2	8.1	4.7	8.2	7.2	66	83	38	8.8	11	36
17	12	8.2	6.6	4.7	7.8	8.4	67	140	35	8.5	11	31
18	12	8.2	5.9	e4.8	7.8	8.9	67	138	37	8.0	11	28
19	11	8.2	5.5	4.9	7.6	9.0	59	124	37	8.0	10	25
20	10	7.6	e5.5	5.0	7.3	9.9	51	143	39	7.6	10	23
21	9.5	7.8	5.8	5.0	6.9	12	49	167	34	8.0	10	21
22	9.4	7.8	6.8	5.0	6.7	13	49	195	32	8.1	9.3	19
23	12	7.8	6.7	5.1	6.6	14	46	195	29	7.8	10	17
24	11	8.2	5.6	5.0	6.0	16	42	172	27	7.8	11	16
25	10	8.2	e5.5	5.0	e6.0	16	44	172	25	7.6	11	15
26	11	8.2	e5.5	e5.0	e6.0	16	67	169	24	7.2	11	14
27	11	8.8	e5.5	5.3	5.9	14	91	183	23	7.6	11	14
28	10	9.6	e5.5	5.4	5.9	14	98	194	22	7.7	14	13
29	9.7	10	e5.5	5.8	---	15	99	174	21	7.6	22	12
30	9.3	11	5.5	6.3	---	14	88	163	21	7.4	26	12
31	8.8	---	e5.5	6.4	---	16	---	163	---	7.4	32	---
TOTAL	366.7	259.0	244.0	156.9	195.7	293.1	1,567	3,429	1,484	331.6	381.0	971
MEAN	11.8	8.63	7.87	5.06	6.99	9.45	52.2	111	49.5	10.7	12.3	32.4
MAX	15	13	12	6.4	9.4	16	99	195	135	20	32	156
MIN	8.8	7.4	5.5	4.6	5.9	5.3	21	29	21	7.2	8.0	12
AC-FT	727	514	484	311	388	581	3,110	6,800	2,940	658	756	1,930

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 2003, BY WATER YEAR (WY)

	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	15.1	10.6	8.20	6.94	7.36	15.5	81.0	169	130	37.3	23.6	20.3																																																																										
MAX	148	54.3	20.4	15.0	18.0	54.2	203	384	421	154	79.1	124																																																																										
(WY)	(1942)	(1942)	(1987)	(1926)	(1971)	(1997)	(1924)	(1941)	(1980)	(1957)	(1999)	(1927)																																																																										
MIN	3.27	3.11	2.94	2.65	3.06	3.83	8.40	19.8	8.78	3.65	3.38	3.73																																																																										
(WY)	(1957)	(1938)	(1938)	(1938)	(1990)	(1977)	(1977)	(1977)	(2002)	(2002)	(2002)	(1956)																																																																										

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1918 - 2003

ANNUAL TOTAL	3,502.3	9,679.0	
ANNUAL MEAN	9.60	26.5	43.8
HIGHEST ANNUAL MEAN			90.5 1941
LOWEST ANNUAL MEAN			8.62 2002
HIGHEST DAILY MEAN	57 Sep 11	195 May 22	934 Jun 28, 1927
LOWEST DAILY MEAN	2.7 Sep 2	4.6 Jan 12	1.0 Feb 22, 1939
ANNUAL SEVEN-DAY MINIMUM	2.8 Aug 31	4.7 Jan 11	1.9 Oct 13, 1917
MAXIMUM PEAK FLOW		232 May 23	a1,880 Sep 22, 1941
MAXIMUM PEAK STAGE		4.81 May 23	b4.30 Sep 22, 1941
ANNUAL RUNOFF (AC-FT)	6,950	19,200	31,740
10 PERCENT EXCEEDS	22	67	125
50 PERCENT EXCEEDS	5.9	11	13
90 PERCENT EXCEEDS	3.3	5.5	5.1

e Estimated.

a Present datum, from rating curve extended above 620 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

b Maximum gage height for period of record, 5.13 ft, Sep 6, 1970.

## 09366500 LA PLATA RIVER AT COLORADO-NEW MEXICO STATE LINE

LOCATION.--Lat 36°59'59", long 108°11'17", in NW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.10, T.32 N., R.13 W., La Plata County, CO, Hydrologic Unit 14080105, on right bank at Colorado-New Mexico State line, 0.5 mi downstream from Johnny Pond Arroyo, and 4.9 mi north of La Plata, NM.

DRAINAGE AREA.--331 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1920 to current year. Monthly discharge only for some periods, published in WSP 1313. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09366500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09366500)

REVISED RECORDS.--WSP 1313: 1934 (M), 1936 (M).

GAGE.--Water-stage recorder with satellite telemetry and concrete flume. Datum of gage is 5,972.03 ft above NGVD of 1929. See WSP 1713 or 1733 for history of changes prior to Mar. 17, 1934. Mar. 17, 1934 to July 1, 1996, water-stage recorder at same site, and at datum 3.12 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 15,000 acres, mostly upstream from station.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	3.0	3.2	e5.0	0.68	4.2	5.3	43	95	3.4	2.9	1.4
2	3.0	2.9	2.8	e4.0	0.70	4.9	6.0	46	75	1.4	0.44	1.1
3	3.3	2.9	2.6	e4.0	0.65	4.4	14	37	69	0.67	0.00	1.1
4	3.2	3.0	2.3	e4.5	0.62	3.6	14	34	65	1.4	0.00	0.98
5	3.0	2.9	1.4	e5.0	0.74	3.9	11	36	57	1.0	0.00	1.3
6	2.7	2.9	1.0	e6.0	0.76	3.7	9.0	33	49	0.79	0.00	0.95
7	2.6	2.9	0.44	6.3	1.0	4.1	8.5	28	37	0.61	0.00	0.99
8	2.5	3.1	0.47	6.0	1.3	4.2	6.4	27	30	0.44	0.00	0.76
9	2.5	5.2	0.56	6.0	1.3	4.4	5.6	24	30	0.27	0.00	382
10	2.6	4.6	0.79	5.9	1.4	4.2	9.1	21	30	0.16	0.00	124
11	2.4	4.1	1.1	5.9	1.4	3.3	14	18	23	0.05	0.00	22
12	2.2	3.8	1.3	5.9	1.0	3.1	23	16	28	0.01	0.00	31
13	2.2	3.6	1.8	5.4	2.1	3.1	24	19	25	0.00	0.00	20
14	2.4	3.6	2.0	5.3	2.4	4.1	21	24	20	0.00	0.00	18
15	2.4	3.6	2.2	5.4	1.2	4.1	30	41	16	0.00	0.00	15
16	2.5	3.3	1.9	5.2	4.2	3.1	36	52	15	0.00	0.00	17
17	2.5	3.5	3.2	5.1	4.2	7.5	24	55	13	0.00	0.00	15
18	2.6	3.4	4.6	4.9	4.3	6.6	26	64	14	0.00	0.00	10
19	2.6	3.4	e2.8	5.0	3.9	4.5	26	e70	17	0.00	0.00	9.4
20	2.6	3.6	3.1	5.1	3.6	3.6	18	e85	19	0.00	0.00	7.6
21	2.6	3.6	5.0	5.2	3.4	3.5	18	e105	16	0.00	0.00	6.0
22	2.6	3.6	e3.0	5.0	3.1	4.2	20	e130	12	0.00	0.00	5.0
23	2.8	3.9	e3.5	5.0	3.0	4.7	21	e105	8.9	0.00	0.00	4.2
24	2.9	3.9	e3.0	5.0	3.2	5.1	22	59	6.0	0.00	5.3	3.5
25	2.8	3.9	e2.5	5.0	3.8	6.1	e25	54	5.0	0.00	14	2.5
26	2.9	3.8	e2.0	5.0	4.6	7.0	e30	82	6.0	0.00	1.5	2.1
27	3.5	3.7	e2.0	5.1	4.1	7.1	e35	66	6.0	0.00	3.3	3.0
28	3.0	3.7	e3.0	4.4	4.0	6.2	43	74	4.3	0.00	5.2	3.2
29	3.0	4.1	e4.0	2.0	---	6.4	46	84	4.2	0.00	2.3	3.2
30	2.9	3.7	e4.0	1.8	---	5.8	47	94	4.4	0.00	2.6	3.1
31	3.1	---	e4.0	1.6	---	5.5	---	133	---	0.00	4.3	---
TOTAL	84.6	107.2	75.56	151.0	66.65	146.2	637.9	1,759	799.8	10.20	41.84	715.38
MEAN	2.73	3.57	2.44	4.87	2.38	4.72	21.3	56.7	26.7	0.33	1.35	23.8
MAX	3.5	5.2	5.0	6.3	4.6	7.5	47	133	95	3.4	14	382
MIN	2.2	2.9	0.44	1.6	0.62	3.1	5.3	16	4.2	0.00	0.00	0.76
AC-FT	168	213	150	300	132	290	1,270	3,490	1,590	20	83	1,420

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2003, BY WATER YEAR (WY)

MEAN	13.4	11.8	12.1	11.8	16.7	36.7	103	107	65.4	19.5	12.0	11.4
MAX	260	99.2	53.9	38.3	53.9	139	364	506	306	99.4	65.1	126
(WY)	(1942)	(1942)	(1987)	(1942)	(1924)	(1997)	(1980)	(1941)	(1957)	(1957)	(1957)	(1927)
MIN	0.097	0.98	1.24	0.80	2.38	0.63	3.06	5.32	1.94	0.019	0.006	0.000
(WY)	(1935)	(1940)	(1978)	(1930)	(2003)	(1977)	(1977)	(1977)	(1924)	(1922)	(1922)	(1956)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1921 - 2003

ANNUAL TOTAL	1,581.83	4,595.33	
ANNUAL MEAN	4.33	12.6	35.0
HIGHEST ANNUAL MEAN			109
LOWEST ANNUAL MEAN			4.44
HIGHEST DAILY MEAN	17	Apr 8	382
LOWEST DAILY MEAN	0.00	Mar 29	0.00
ANNUAL SEVEN-DAY MINIMUM	0.16	Mar 24	0.00
MAXIMUM PEAK FLOW			1,380
MAXIMUM PEAK STAGE			8.67
ANNUAL RUNOFF (AC-FT)	3,140	9,110	25,380
10 PERCENT EXCEEDS	8.8	33	84
50 PERCENT EXCEEDS	3.0	3.8	12
90 PERCENT EXCEEDS	1.1	0.00	1.7

e Estimated.

a No flow at times in many years.

b From rating curve extended above 750 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow, at datum then in use.

## 09371000 MANCOS RIVER NEAR TOWAOC, CO

LOCATION.--Lat 37°01'39", long 108°44'27", Ute Indian Reservation, Montezuma County, Hydrologic Unit 14080107, on left bank 700 ft upstream from bridge on U.S. Highway 666, 2.0 mi north of Colorado-New Mexico State line, 6.0 mi upstream from Aztec Creek, and 12 mi south of Towaoc.

DRAINAGE AREA.--526 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1920 to September 1943, February 1951 to current year. Monthly discharge only for some periods, published in WSP 1313. Sediment data available, April to December 1961. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09371000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09371000)

REVISED RECORDS.--WSP 1733: 1924 (monthly figures only). WDR CO-83-3: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,055.98 ft above NGVD of 1929. See WSP 1713 or 1733 for history of changes prior to Mar. 11, 1954.

REMARKS.--Records fair except those for Mar. 14-26, Apr. 12-14 and estimated daily discharges, which are poor. Diversions for irrigation of about 10,000 acres upstream from station. One diversion upstream from station for irrigation of about 100 acres downstream from station. Flow regulated by Jackson Gulch Reservoir, capacity, 10,000 acre-ft since March 1949. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.87	0.00	0.00	e1.4	4.7	e6.3	5.7	1.9	0.00	0.00	23
2	2.4	1.3	0.00	0.00	e1.4	e4.3	7.2	3.5	3.5	0.00	0.00	14
3	5.5	0.92	0.04	0.00	e1.2	e3.9	e13	3.7	2.4	0.00	45	9.3
4	12	0.78	e0.14	0.00	0.76	e4.5	e15	2.9	2.0	0.00	9.4	5.2
5	2.1	0.50	0.11	0.00	0.28	e5.3	10	2.9	1.4	0.00	1.7	6.1
6	0.58	0.47	0.03	0.00	0.06	e5.4	8.5	4.0	0.44	0.00	0.29	3.2
7	0.15	0.18	0.00	0.00	0.01	e3.7	e7.7	3.5	0.15	0.00	0.00	2.8
8	0.02	0.13	0.00	0.09	e0.34	e3.4	e6.9	2.1	0.04	0.00	0.00	20
9	0.00	4.6	e0.09	e0.83	e0.37	e4.4	e5.8	0.91	0.00	0.00	0.00	649
10	0.00	12	e0.06	e1.0	0.19	e6.1	5.6	0.36	0.00	0.00	0.00	1,810
11	0.00	8.5	0.02	e0.94	e0.14	e11	5.7	0.19	0.00	0.00	0.00	83
12	0.00	3.6	0.00	e0.63	0.00	23	17	0.05	0.00	0.00	6.5	33
13	0.00	2.3	0.00	e0.63	1.3	40	44	0.02	0.00	0.00	2.1	19
14	0.00	1.8	0.00	e0.72	18	43	33	0.05	0.00	0.00	0.17	14
15	0.00	1.3	0.00	e0.82	14	32	40	0.00	0.00	0.00	48	10
16	0.00	1.00	0.00	e0.84	6.7	26	33	0.91	0.00	0.00	6.9	7.1
17	0.00	0.32	0.00	e0.64	4.7	34	19	5.8	0.00	0.00	16	5.4
18	0.00	0.23	0.22	e0.70	4.2	41	13	3.1	0.00	0.00	2.1	6.4
19	0.00	0.03	0.02	e0.70	3.9	27	15	4.5	0.00	0.00	1.2	9.4
20	0.00	0.07	0.00	0.44	4.7	22	7.9	1.7	0.00	0.00	0.59	10
21	0.00	e0.11	0.00	e0.95	e3.5	27	5.8	0.94	0.00	0.00	0.17	9.1
22	1.3	e0.16	0.00	e1.3	e3.4	28	3.6	0.67	0.00	0.00	3.6	7.8
23	0.54	e0.17	0.00	e1.6	e3.3	31	1.8	0.58	0.00	0.00	19	7.0
24	0.00	e0.19	0.00	e1.6	e3.4	32	1.2	0.68	0.00	0.00	61	5.2
25	0.42	e0.14	0.00	e1.5	e3.9	23	1.0	2.6	0.00	0.00	4.3	4.2
26	1.3	0.15	0.00	e1.5	5.0	17	0.89	1.8	0.00	0.00	13	3.1
27	15	0.06	0.00	1.6	6.2	e15	1.4	1.1	0.00	0.00	0.99	2.4
28	9.0	0.00	0.00	e1.4	6.4	e11	21	0.61	0.00	0.00	2.0	1.5
29	8.5	0.00	0.00	e1.4	---	e9.4	32	0.16	0.00	0.00	15	0.98
30	1.3	e0.13	0.00	e1.4	---	e3.7	27	0.02	0.00	0.00	43	0.50
31	0.49	---	0.00	e1.4	---	e3.7	---	0.17	---	0.00	38	---
TOTAL	60.60	42.01	0.73	24.63	98.75	545.5	409.29	55.22	11.83	0.00	340.01	2,781.68
MEAN	1.95	1.40	0.024	0.79	3.53	17.6	13.6	1.78	0.39	0.000	11.0	92.7
MAX	15	12	0.22	1.6	18	43	44	5.8	3.5	0.00	61	1,810
MIN	0.00	0.00	0.00	0.00	0.00	3.4	0.89	0.00	0.00	0.00	0.00	0.50
AC-FT	120	83	1.4	49	196	1,080	812	110	23	0.00	674	5,520

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2003, BY WATER YEAR (WY)

	26.6	19.4	14.0	13.2	24.8	56.9	121	172	81.9	28.5	28.3	27.0
MEAN	26.6	19.4	14.0	13.2	24.8	56.9	121	172	81.9	28.5	28.3	27.0
MAX	459	113	45.5	45.6	92.1	198	330	642	395	185	364	137
(WY)	(1942)	(1987)	(1942)	(1942)	(1993)	(1993)	(1980)	(1922)	(1957)	(1921)	(1921)	(1970)
MIN	0.11	1.00	0.024	0.31	3.53	5.26	0.15	0.000	0.000	0.000	0.000	0.000
(WY)	(1978)	(1935)	(2003)	(1960)	(2003)	(1977)	(1977)	(1959)	(1951)	(1939)	(1922)	(1922)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1921 - 2003

ANNUAL TOTAL	1,223.98	4,370.25	
ANNUAL MEAN	3.35	12.0	50.4
HIGHEST ANNUAL MEAN			138 1973
LOWEST ANNUAL MEAN			4.28 1959
HIGHEST DAILY MEAN	60 Sep 11	1,810 Sep 10	3,050 Oct 14, 1941
LOWEST DAILY MEAN	0.00 May 2	0.00 Oct 1	a0.00 Jul 12, 1922
ANNUAL SEVEN-DAY MINIMUM	0.00 May 2	0.00 Oct 9	0.00 Jul 12, 1922
MAXIMUM PEAK FLOW		b3,530 Sep 10	e5,300 Oct 14, 1941
MAXIMUM PEAK STAGE		d9.09 Sep 10	f7.30 Oct 14, 1941
ANNUAL RUNOFF (AC-FT)	2,430	8,670	36,510
10 PERCENT EXCEEDS	10	17	138
50 PERCENT EXCEEDS	0.05	0.91	15
90 PERCENT EXCEEDS	0.00	0.00	0.04

e Estimated.

a No flow at times in most years.

b Based on slope-area measurement of peak flow.

c Present site and datum, from rating curve extended above 200 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.

d From floodmarks.

f Maximum gage height, 9.09 ft, Sept. 10, 2003.



## 09371492 MUD CREEK AT HIGHWAY 32, NEAR CORTEZ, CO

LOCATION.--Lat 37°18'46", long 108°39'38", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.6, T.35 N., R.16 W., Montezuma County, Hydrologic Unit 14080202, on left bank 1 mi upstream from mouth and 4.5 mi southwest of Cortez.

DRAINAGE AREA.--33.6 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1981 to September 1986, August 1993 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09371492](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09371492)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,765 ft above NGVD of 1929, from topographic map. Prior to Aug. 25, 1993, gage at present site and datum.

REMARKS.--Records good except for estimated daily discharges and discharges above 40 ft<sup>3</sup>/s, which are poor. Some small diversions upstream from station for irrigation. Most of flow is from diversion of water from Dolores River through Dolores Project and Montezuma Valley Irrigation Company.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.83	0.81	1.1	1.1	e0.95	2.1	0.92	0.65	9.8	12	12	21
2	1.4	0.81	1.0	0.91	1.0	2.0	0.90	0.67	11	13	17	20
3	3.3	0.70	1.0	0.93	e1.0	1.8	0.88	0.71	11	13	16	19
4	1.5	0.77	0.92	0.97	e0.99	1.6	0.84	0.77	11	12	14	20
5	0.95	0.76	0.81	1.1	e0.95	1.6	0.88	0.84	11	11	12	20
6	0.79	0.70	0.81	1.1	e0.90	1.6	0.92	0.83	9.4	11	10	22
7	0.74	0.75	0.89	1.2	0.85	1.5	0.89	1.1	9.5	11	11	21
8	0.75	0.85	0.82	e1.1	e0.88	1.8	0.73	2.7	11	11	11	21
9	0.67	1.8	0.84	1.0	0.75	1.6	0.75	4.5	10	11	9.6	64
10	0.68	1.9	0.93	1.1	0.61	1.4	0.79	4.0	9.8	11	8.7	77
11	0.70	1.4	0.87	e1.1	0.59	1.4	0.83	4.5	11	10	7.7	22
12	0.83	1.1	0.87	e1.0	0.67	1.4	0.81	4.7	10	10	9.3	8.6
13	0.82	1.2	e0.90	e1.0	3.2	1.2	0.78	4.7	11	9.1	12	22
14	0.73	1.0	e0.92	e1.0	8.0	1.0	0.75	7.6	15	9.5	10	21
15	0.66	0.87	0.95	e0.98	1.6	1.2	0.81	7.0	12	8.4	20	19
16	0.66	0.74	1.3	e0.97	1.1	1.9	0.81	7.0	12	9.8	22	17
17	0.67	0.77	1.5	e0.95	1.1	4.6	0.79	8.1	12	11	22	14
18	0.70	0.77	e1.8	e0.96	1.6	3.3	0.80	8.9	12	11	22	8.7
19	0.69	0.74	e1.3	e0.97	1.5	1.8	0.82	9.0	14	11	21	7.8
20	0.62	0.77	e0.98	e0.97	1.2	1.4	0.79	6.6	15	9.6	18	8.9
21	0.66	0.76	0.87	e0.94	1.0	1.7	0.71	6.2	14	10	16	9.4
22	0.69	0.80	e0.88	e0.93	0.82	1.3	0.77	6.4	13	17	16	10
23	0.95	0.81	0.81	e0.93	0.78	1.2	0.75	6.8	13	13	17	10
24	0.88	0.81	0.90	e0.93	0.99	1.3	0.75	6.5	13	11	21	10
25	0.81	0.81	0.88	e0.94	1.4	1.2	0.70	8.4	12	11	23	10
26	1.1	0.75	0.90	e0.94	2.5	1.3	0.69	8.0	14	11	21	11
27	2.0	0.69	e0.88	e0.95	2.3	1.2	0.68	7.3	13	9.9	20	10
28	1.0	0.69	0.84	e0.95	e2.2	1.5	0.72	7.7	20	11	20	12
29	1.2	0.73	1.1	e0.95	---	1.3	0.72	8.7	13	13	21	13
30	1.0	0.85	1.2	e0.94	---	0.74	0.68	8.6	12	12	21	13
31	0.87	---	1.00	e0.95	---	0.83	---	9.1	---	11	22	---
TOTAL	29.85	26.91	30.77	30.76	41.43	49.77	23.66	168.57	364.5	345.3	503.3	562.4
MEAN	0.96	0.90	0.99	0.99	1.48	1.61	0.79	5.44	12.2	11.1	16.2	18.7
MAX	3.3	1.9	1.8	1.2	8.0	4.6	0.92	9.1	20	17	23	77
MIN	0.62	0.69	0.81	0.91	0.59	0.74	0.68	0.65	9.4	8.4	7.7	7.8
AC-FT	59	53	61	61	82	99	47	334	723	685	998	1,120

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2003, BY WATER YEAR (WY)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	7.95	2.88	2.40	2.06	2.63	3.00	2.68	9.42	13.5	14.5	15.1	13.1											
MAX	17.5	5.94	6.00	3.86	7.99	10.3	5.60	13.1	18.1	18.0	21.5	20.1											
(WY)	(1994)	(1994)	(1985)	(1997)	(1983)	(1983)	(1994)	(1982)	(1985)	(1986)	(1983)	(2001)											
MIN	0.96	0.78	0.47	0.85	1.07	1.11	0.79	5.44	6.83	9.95	4.04	1.12											
(WY)	(2003)	(2000)	(2000)	(2000)	(2002)	(1998)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)											

## SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1982 - 2003	
ANNUAL TOTAL	1,106.97		2,177.22			
ANNUAL MEAN	3.03		5.96		7.49	
HIGHEST ANNUAL MEAN					9.47 1985	
LOWEST ANNUAL MEAN					3.80 2002	
HIGHEST DAILY MEAN	17	Aug 2	77	Sep 10	77	Sep 10, 2003
LOWEST DAILY MEAN	0.27	Aug 28	0.59	Feb 11	0.27	Aug 28, 2002
ANNUAL SEVEN-DAY MINIMUM	0.59	Aug 31	0.67	Oct 15	0.41	Dec 15, 1999
MAXIMUM PEAK FLOW			274	Sep 9	a598	Aug 24, 1982
MAXIMUM PEAK STAGE			5.68	Sep 9	8.53	Aug 24, 1982
ANNUAL RUNOFF (AC-FT)	2,200		4,320		5,430	
10 PERCENT EXCEEDS	9.8		15		16	
50 PERCENT EXCEEDS	1.1		1.4		4.5	
90 PERCENT EXCEEDS	0.75		0.75		1.0	

e Estimated.

a From rating curve extended above 26 ft<sup>3</sup>/s, on basis of slope-area measurement of peak flow.



09371492 MUD CREEK AT HIGHWAY 32, NEAR CORTEZ, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1993 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09371492](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09371492)

## PERIOD OF DAILY RECORD.

SPECIFIC CONDUCTANCE: September 1993 to current year.

WATER TEMPERATURE: September 1993 to current year.

INSTRUMENTATION.--Water-quality monitor since September 1993.

REMARKS.--Daily records of specific conductance are good except June 16-25, July 7-12, Aug. 25 to Sep. 1, Sep. 16, 17 which are fair, July 13-24 and Sept. 1-4, 18-25, which are poor. Daily records of water temperature are good. Daily data that are not published are due to probes being isolated by ice and severe fouling.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 12,000 microsiemens/cm, Apr. 25, 1999; minimum, 580 microsiemens/cm, Sept. 10, 2002.

WATER TEMPERATURE: Maximum, 26.3°C, July 25, 2003; minimum, -0.6°C, Nov. 7, 2002, Jan. 12, 2003.

## EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 11,900 microsiemens/cm, Mar. 6; minimum, 699 microsiemens/cm, Sept. 9.

WATER TEMPERATURE: Maximum, 26.3°C, July 25; minimum, -0.6°C, Nov. 7, Jan. 12.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, water flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)
OCT 29...	1130	1.2	8.3	5,160	5.5	2,400	395	335	8.05	5	544	340	89.1
DEC 18...	1300	1.4	8.4	5,440	0.9	2,400	348	363	7.52	6	665	E312	92.8
FEB 06...	1530	0.69	8.3	5,380	-0.2	2,600	420	370	9.29	5	596	391	80.8
APR 09...	1600	0.83	8.2	5,760	12.6	2,700	414	395	8.00	6	687	325	90.2
APR 30...	1030	0.70	8.2	5,860	7.5	2,600	402	388	9.12	6	695	366	96.4
MAY 22...	1530	6.3	8.2	2,290	21.2	1,100	250	127	8.40	2	159	238	33.0
JUN 25...	1515	12	8.3	1,630	19.7	840	207	78.2	4.87	1	69.5	201	17.4
JUL 24...	1500	11	8.2	1,600	24.7	830	212	73.0	5.33	0.9	62.8	199	17.8
SEP 04...	1615	20	8.3	1,560	19.7	740	192	64.1	4.61	0.9	53.3	195	17.1

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)
OCT 29...	0.48	8.6	2,900	4,490	6.10	14.5
DEC 18...	0.45	8.8	3,130	--	--	--
FEB 06...	0.57	9.4	2,990	4,710	6.40	8.77
APR 09...	0.49	4.2	3,340	5,140	6.99	11.5
APR 30...	0.47	3.2	3,460	5,270	7.17	9.96
MAY 22...	0.4	11.1	1,130	1,860	2.53	31.8
JUN 25...	0.3	8.2	696	1,200	1.63	37.6
JUL 24...	0.4	10.8	673	1,170	1.60	34.3
SEP 04...	0.4	11.2	651	1,110	1.51	60.6

E -- Estimated laboratory analysis value.

## 09371492 MUD CREEK AT HIGHWAY 32, NEAR CORTEZ, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	4,700	4,530	4,610	---	---	---	---	---	---	---	---	---
2	5,300	3,300	4,360	---	---	---	---	---	---	---	---	---
3	6,740	3,600	4,480	---	---	---	---	---	---	---	---	---
4	4,380	3,980	4,190	---	---	---	---	---	---	---	---	---
5	4,920	4,220	4,620	---	---	---	---	---	---	---	---	---
6	5,010	4,880	4,950	---	---	---	---	---	---	---	---	---
7	5,050	4,860	4,980	---	---	---	---	---	---	---	---	---
8	5,030	4,870	4,950	---	---	---	---	---	---	---	---	---
9	5,120	4,880	5,050	10,500	4,630	6,930	---	---	---	---	---	---
10	5,480	4,950	5,100	10,500	5,120	6,340	---	---	---	---	---	---
11	5,090	4,980	5,030	7,920	5,020	5,560	---	---	---	9,150	5,220	5,770
12	5,080	4,600	4,820	7,880	---	---	---	---	---	9,820	5,360	7,240
13	4,660	4,570	4,610	---	4,620	---	---	---	---	6,050	4,960	5,380
14	5,120	4,570	4,810	---	---	---	---	---	---	5,870	4,880	5,230
15	5,320	5,120	5,200	---	---	---	---	---	---	5,640	4,930	5,190
16	5,300	5,220	5,260	---	---	---	---	---	---	5,950	4,980	5,240
17	5,330	5,230	5,280	---	---	---	---	---	---	5,910	4,930	5,270
18	5,270	5,190	5,230	---	---	---	---	---	---	6,020	4,560	5,180
19	5,270	5,180	5,230	---	---	---	6,420	5,150	5,590	5,760	4,240	5,020
20	5,300	5,110	5,230	---	---	---	5,720	5,300	5,550	5,690	4,070	4,900
21	5,760	5,210	5,340	---	---	---	5,380	5,000	5,200	5,520	4,520	5,020
22	5,290	5,180	5,230	---	---	---	5,350	5,040	5,250	5,680	4,660	5,080
23	5,450	4,980	5,170	---	---	---	---	---	---	5,790	4,820	5,130
24	5,120	4,960	5,060	---	---	---	---	---	---	5,780	4,800	5,110
25	5,120	4,910	5,030	---	---	---	---	---	---	5,770	4,920	5,130
26	5,130	4,730	4,990	---	---	---	---	---	---	5,810	4,890	5,220
27	6,480	4,650	5,360	---	---	---	---	---	---	5,790	4,800	5,190
28	5,120	4,650	4,940	---	---	---	---	---	---	5,720	4,860	5,170
29	6,890	4,980	5,390	---	---	---	---	---	---	5,720	4,890	5,160
30	---	---	---	---	---	---	---	---	---	5,720	4,850	5,190
31	---	---	---	---	---	---	---	---	---	5,780	4,850	5,120
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	5,630	4,870	5,140	10,700	6,220	7,930	5,700	5,570	5,630	5,930	5,640	5,800
2	5,270	5,140	5,200	11,600	6,140	8,200	5,740	5,620	5,670	5,700	5,280	5,550
3	5,710	5,010	5,230	7,880	6,140	6,820	5,840	5,640	5,720	6,850	5,600	6,180
4	5,760	4,920	5,350	8,510	6,310	7,630	5,750	5,500	5,660	6,820	6,100	6,300
5	5,950	5,080	5,430	10,800	6,410	7,120	5,850	5,620	5,710	6,130	5,810	5,940
6	5,640	4,920	5,310	11,900	6,600	8,940	5,800	5,460	5,550	6,010	5,280	5,550
7	5,820	5,050	5,380	7,420	6,290	6,780	5,690	5,480	5,600	6,010	5,250	5,730
8	---	---	---	7,660	6,070	6,660	5,750	5,560	5,670	5,250	2,480	4,010
9	---	---	---	6,110	5,300	5,600	5,910	5,660	5,760	2,480	2,190	2,280
10	---	---	---	5,830	5,300	5,500	5,930	5,750	5,860	2,190	1,920	2,090
11	---	---	---	5,530	5,270	5,370	6,080	5,760	5,890	1,980	1,810	1,900
12	---	---	---	5,420	5,230	5,310	5,900	5,750	5,830	1,850	1,600	1,770
13	---	---	---	5,500	5,280	5,400	5,860	5,690	5,800	1,600	1,480	1,530
14	---	---	---	5,570	5,450	5,500	5,930	5,750	5,850	---	---	---
15	6,200	4,870	5,360	5,610	5,460	5,540	5,900	5,730	5,820	---	---	---
16	5,660	5,200	5,380	9,960	5,320	6,330	5,810	5,630	5,720	---	---	---
17	5,400	5,250	5,330	10,700	6,560	7,740	5,860	5,700	5,770	---	---	---
18	9,950	5,060	6,190	6,660	6,010	6,300	5,870	5,730	5,810	---	---	---
19	9,220	5,400	6,410	6,300	5,760	5,890	5,950	5,650	5,770	---	---	---
20	5,470	5,300	5,400	5,790	5,320	5,640	5,980	5,560	5,690	---	---	---
21	5,680	5,320	5,480	7,050	5,410	6,370	5,910	5,700	5,790	---	---	---
22	6,020	5,570	5,720	6,450	5,780	5,990	5,870	5,730	5,790	---	---	---
23	6,140	5,670	5,840	5,860	5,600	5,720	5,860	5,690	5,770	---	---	---
24	5,930	5,050	5,460	5,780	5,040	5,360	5,780	5,620	5,710	---	---	---
25	8,010	4,540	5,090	5,160	4,960	5,080	5,780	5,620	5,710	---	---	---
26	11,800	8,010	9,580	5,190	4,800	4,910	5,780	5,630	5,720	---	---	---
27	9,670	6,850	8,390	5,040	4,900	4,960	5,850	5,690	5,770	---	---	---
28	10,700	6,380	8,360	5,310	3,890	4,190	5,920	5,620	5,780	---	---	---
29	---	---	---	4,400	3,720	3,900	5,700	5,220	5,500	---	---	---
30	---	---	---	5,620	4,400	5,330	6,020	5,690	5,850	---	---	---
31	---	---	---	5,710	5,570	5,640	---	---	---	2,020	1,870	1,940
MONTH	---	---	---	11,900	3,720	6,050	6,080	5,220	5,740	---	---	---

## 09371492 MUD CREEK AT HIGHWAY 32, NEAR CORTEZ, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1,960	1,750	1,910	1,460	1,370	1,420	1,470	1,370	1,410	1,590	1,540	1,570
2	1,780	1,710	1,750	1,500	1,380	1,440	1,410	1,190	1,360	1,630	1,560	1,590
3	1,980	1,690	1,850	1,470	1,380	1,420	1,350	1,300	1,330	1,610	1,570	1,590
4	1,870	1,710	1,810	1,440	1,370	1,410	1,330	1,280	1,300	1,590	1,540	1,560
5	1,850	1,690	1,770	1,400	1,360	1,380	1,360	1,280	1,330	1,590	1,540	1,570
6	1,860	1,780	1,810	1,550	1,370	1,470	1,390	1,350	1,380	1,930	1,360	1,560
7	1,830	1,740	1,780	1,510	1,400	1,460	1,390	1,340	1,360	1,600	1,550	1,570
8	1,840	1,610	1,760	1,570	1,400	1,510	1,590	1,380	1,460	1,600	1,530	1,570
9	1,740	1,580	1,660	1,550	1,450	1,510	1,530	1,410	1,500	2,110	699	1,580
10	1,760	1,670	1,730	1,450	1,420	1,440	1,420	1,310	1,370	2,140	1,450	1,930
11	1,730	1,660	1,700	1,520	1,440	1,450	1,410	1,300	1,350	2,130	1,800	2,020
12	1,820	1,680	1,760	1,450	1,410	1,430	1,940	1,390	1,510	1,810	1,640	1,740
13	1,840	1,620	1,720	1,640	1,410	1,460	1,520	1,450	1,480	1,700	1,630	1,670
14	1,740	1,440	1,550	1,880	1,530	1,660	1,540	1,480	1,510	2,020	1,650	1,900
15	1,560	1,460	1,530	1,560	1,520	1,540	1,640	1,140	1,500	1,960	1,790	1,870
16	1,620	1,490	1,550	1,550	1,490	1,530	1,560	1,440	1,480	1,960	1,840	1,920
17	1,760	1,620	1,700	1,520	1,490	1,510	1,470	1,360	1,450	1,960	1,890	1,920
18	1,710	1,600	1,670	1,510	1,470	1,490	1,540	1,430	1,490	1,910	1,800	1,840
19	1,680	1,580	1,620	1,640	1,500	1,540	1,530	1,480	1,500	1,890	1,800	1,840
20	1,650	1,570	1,600	1,680	1,580	1,620	1,650	1,500	1,580	1,890	1,810	1,850
21	1,700	1,550	1,620	1,610	1,560	1,590	1,670	1,600	1,630	1,810	1,780	1,790
22	1,630	1,550	1,590	1,880	1,500	1,680	1,700	1,580	1,650	1,790	1,760	1,770
23	1,630	1,550	1,590	1,600	1,540	1,570	1,640	1,540	1,590	1,790	1,750	1,770
24	1,650	1,540	1,600	1,630	1,540	1,590	1,600	1,430	1,570	1,800	1,770	1,780
25	1,640	1,470	1,590	1,550	1,480	1,510	1,660	1,420	1,520	1,810	1,780	1,790
26	1,540	1,470	1,500	1,550	1,440	1,490	1,660	1,550	1,630	---	---	---
27	1,620	1,530	1,580	1,550	1,410	1,510	1,670	1,620	1,650	---	---	---
28	1,600	1,040	1,320	1,440	1,380	1,410	1,700	1,400	1,670	---	---	---
29	1,520	1,060	1,350	1,420	1,380	1,400	1,750	1,400	1,650	---	---	---
30	1,470	1,400	1,440	1,460	1,380	1,400	1,620	1,560	1,600	---	---	---
31	---	---	---	1,560	1,420	1,520	1,590	1,560	1,570	---	---	---
MONTH	1,980	1,040	1,650	1,880	1,360	1,500	1,940	1,140	1,500	---	---	---

## 09371492 MUD CREEK AT HIGHWAY 32, NEAR CORTEZ, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	11.4	7.3	9.8	7.3	3.6	5.6	---	---	---	---	---	---
2	11.7	10.2	10.9	7.8	4.7	6.3	---	---	---	---	---	---
3	11.2	7.8	8.9	4.7	1.6	3.2	---	---	---	---	---	---
4	10.3	5.5	7.9	5.5	2.1	3.6	---	---	---	---	---	---
5	11.3	6.9	9.1	4.1	0.7	2.5	---	---	---	---	---	---
6	11.3	6.5	9.0	3.8	-0.3	1.7	---	---	---	---	---	---
7	11.6	6.7	9.1	3.9	-0.6	1.9	---	---	---	---	---	---
8	11.6	6.8	9.2	5.2	3.7	4.4	---	---	---	---	---	---
9	11.1	6.4	8.8	7.7	5.2	6.4	---	---	---	0.6	-0.4	0.1
10	10.9	5.8	8.4	6.4	4.1	4.9	---	---	---	1.2	0.3	0.6
11	10.8	6.5	8.7	5.3	3.0	4.1	---	---	---	1.3	-0.1	0.4
12	10.8	7.0	8.9	3.8	1.1	2.5	---	---	---	0.9	-0.6	0.0
13	10.8	6.2	8.5	3.7	0.7	2.2	---	---	---	1.0	-0.4	0.1
14	10.3	5.8	8.1	3.9	0.9	2.4	---	---	---	1.4	-0.5	0.2
15	9.6	4.8	7.2	3.5	---	---	---	---	---	1.7	-0.4	0.5
16	8.8	3.6	6.2	---	---	---	---	---	---	1.2	-0.4	0.2
17	8.1	3.6	6.1	---	---	---	---	---	---	0.8	-0.4	-0.1
18	10.3	7.1	8.5	---	---	---	0.8	---	---	0.2	-0.4	-0.3
19	9.3	4.8	7.1	---	---	---	-0.2	-0.4	-0.4	-0.2	-0.4	-0.4
20	8.2	3.6	5.9	---	---	---	-0.3	-0.4	-0.4	-0.3	-0.4	-0.4
21	8.0	3.2	5.7	---	---	---	-0.4	-0.4	-0.4	0.0	-0.4	-0.3
22	9.5	4.9	7.2	---	---	---	-0.3	-0.4	-0.4	1.2	-0.4	0.1
23	9.6	7.2	8.4	---	---	---	---	-0.4	---	1.6	-0.4	0.3
24	9.4	7.2	8.2	---	---	---	---	---	---	2.7	-0.4	0.8
25	8.6	4.9	6.7	---	---	---	---	---	---	1.8	-0.4	0.5
26	7.3	5.2	6.3	---	---	---	---	---	---	1.2	-0.4	0.1
27	7.9	6.0	6.8	---	---	---	---	---	---	1.7	-0.5	0.2
28	6.7	3.5	5.3	---	---	---	---	---	---	2.1	-0.4	0.5
29	6.8	5.2	5.9	---	---	---	---	---	---	1.7	-0.5	0.3
30	6.8	3.8	5.3	---	---	---	---	---	---	1.8	-0.5	0.3
31	7.4	4.4	5.8	---	---	---	---	---	---	3.0	-0.4	0.9
MONTH	11.7	3.2	7.7	---	---	---	---	---	---	---	---	---
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3.2	-0.4	1.3	1.8	-0.4	0.6	10.8	3.4	7.0	14.1	4.3	9.2
2	3.0	0.7	1.8	1.6	-0.5	0.1	7.4	4.0	5.9	16.3	6.8	11.2
3	2.4	-0.4	1.0	3.1	-0.4	0.9	6.9	3.1	5.0	16.3	8.5	12.0
4	-0.1	-0.4	-0.3	2.6	0.5	1.6	9.2	1.3	5.2	12.9	8.3	10.3
5	-0.1	-0.4	-0.3	4.8	0.1	2.2	8.0	2.2	5.3	13.5	5.6	9.2
6	-0.2	-0.4	-0.3	4.8	-0.5	2.0	8.9	3.1	5.8	14.1	5.2	9.5
7	-0.2	-0.4	-0.3	6.1	0.2	3.0	9.9	3.2	6.3	14.7	6.5	10.3
8	---	---	---	6.9	0.6	3.7	10.4	1.1	5.8	13.2	7.7	10.0
9	---	---	---	7.5	0.8	4.0	12.8	2.2	7.1	13.7	7.5	10.2
10	---	---	---	7.9	1.1	4.5	13.3	3.3	8.0	15.8	5.5	10.2
11	---	---	---	8.9	1.8	5.2	14.1	4.0	8.7	17.2	6.4	11.5
12	---	---	---	10.1	3.1	6.4	10.8	4.9	8.0	17.9	7.9	12.6
13	---	---	---	10.0	3.0	6.5	14.3	3.9	8.7	14.9	10.0	12.4
14	1.1	---	---	8.0	3.8	6.0	12.7	5.3	9.1	14.4	9.3	12.2
15	3.4	-0.5	1.1	7.6	3.2	5.5	10.0	6.9	8.6	15.9	11.8	13.4
16	3.6	-0.3	1.4	7.2	5.4	6.2	13.7	3.7	8.2	19.8	10.5	14.9
17	4.7	0.9	2.7	6.5	4.2	5.0	12.5	3.9	8.1	16.4	12.6	14.8
18	5.1	2.1	3.4	7.9	3.5	5.6	9.6	6.1	7.8	17.1	13.1	14.8
19	4.3	0.4	2.4	8.0	3.6	5.8	10.2	4.7	7.2	18.3	11.9	15.1
20	4.7	0.8	2.6	6.9	3.5	5.3	14.0	3.1	8.2	20.4	12.5	16.3
21	5.0	0.1	2.3	9.1	3.9	6.3	12.7	6.7	9.6	21.6	12.9	17.1
22	4.1	-0.3	1.6	10.3	3.1	6.5	11.6	8.1	9.7	21.7	13.0	17.2
23	3.1	-0.3	0.8	11.1	3.6	7.2	11.0	5.1	7.8	20.7	13.7	17.1
24	4.0	-0.3	1.5	9.9	4.1	7.1	15.5	5.4	9.9	21.2	13.6	17.4
25	3.3	0.9	2.3	11.6	4.5	7.8	15.9	5.4	10.5	22.4	15.5	18.2
26	4.3	1.4	2.6	8.4	4.1	6.4	16.8	7.2	11.6	22.5	14.6	18.4
27	2.5	0.9	1.6	8.3	4.2	6.0	15.9	6.6	11.1	23.3	16.3	19.7
28	1.8	0.2	0.8	5.3	1.2	3.6	16.2	7.1	11.6	24.6	16.7	20.6
29	---	---	---	7.6	0.2	3.9	12.5	7.2	10.4	24.1	17.8	20.9
30	---	---	---	9.5	1.2	5.3	14.6	6.1	10.1	24.2	17.0	20.5
31	---	---	---	11.5	2.7	6.9	---	---	---	23.0	18.0	20.3
MONTH	---	---	---	11.6	-0.5	4.7	16.8	1.1	8.2	24.6	4.3	14.4

## SAN JUAN RIVER BASIN

09371492 MUD CREEK AT HIGHWAY 32, NEAR CORTEZ, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	21.6	17.1	19.3	23.2	16.9	20.1	23.2	20.1	21.5	19.6	15.8	18.1
2	22.2	15.7	19.0	23.0	16.9	20.1	23.4	20.2	21.8	20.2	16.7	18.7
3	22.2	16.5	19.3	23.0	17.0	20.1	23.6	20.1	21.8	19.8	18.0	18.9
4	21.4	15.2	18.4	23.3	16.4	19.9	23.9	18.8	21.4	20.0	17.8	18.9
5	20.8	14.8	17.9	23.3	16.8	20.2	23.8	18.2	21.1	19.5	17.4	18.5
6	19.9	13.6	16.9	23.5	17.8	20.5	23.5	18.1	20.8	18.8	16.6	17.4
7	19.2	13.1	16.3	23.2	16.6	20.0	23.7	19.6	21.5	18.6	15.0	16.7
8	20.7	13.4	17.0	23.3	16.3	19.9	23.9	19.4	21.7	17.9	15.3	16.8
9	20.4	15.0	17.9	23.5	16.6	20.1	24.6	20.2	22.3	17.5	12.0	15.2
10	21.5	15.8	18.6	23.5	16.2	19.9	23.9	19.1	21.5	15.4	11.9	13.5
11	21.1	14.7	18.0	23.9	16.5	20.2	23.9	19.3	21.6	16.3	12.9	14.6
12	20.3	14.3	17.5	24.1	17.2	20.6	23.9	19.9	22.0	17.6	12.5	14.8
13	20.9	15.0	18.0	24.3	17.0	20.6	23.7	20.1	21.9	16.6	13.7	15.2
14	20.0	15.1	17.8	24.5	17.4	20.9	22.7	18.9	20.8	15.3	12.1	14.1
15	22.2	15.8	19.1	25.6	19.3	22.2	21.5	18.9	20.2	15.8	12.3	14.2
16	22.6	17.5	19.9	24.0	20.3	21.9	21.3	18.5	19.8	16.5	12.8	14.7
17	21.0	17.6	19.3	25.0	18.9	21.8	20.6	17.2	19.1	16.7	13.7	15.2
18	21.3	16.0	18.5	25.7	19.9	22.7	20.6	17.8	19.3	15.7	11.7	13.7
19	21.2	17.2	19.1	25.7	20.4	23.0	21.9	18.2	20.3	15.6	10.6	13.0
20	19.3	16.5	18.0	25.5	20.3	22.7	22.8	18.8	21.0	16.0	11.5	13.6
21	19.9	14.3	17.2	24.6	20.4	22.3	22.3	18.7	20.7	15.5	11.1	13.3
22	20.6	14.9	17.8	24.2	18.7	21.6	22.7	19.3	20.8	15.4	10.9	13.1
23	20.3	15.0	17.7	23.5	21.0	22.0	22.5	19.4	21.0	15.8	11.5	13.6
24	19.9	15.3	17.5	25.5	19.6	22.4	22.3	19.4	21.0	15.4	12.0	13.7
25	20.4	14.1	17.3	26.3	21.0	23.4	21.8	18.9	20.6	16.6	12.3	14.3
26	20.6	14.4	17.6	25.7	21.0	23.1	21.6	18.1	20.2	15.8	11.8	13.9
27	21.5	14.8	18.3	24.7	20.4	22.2	21.4	19.4	20.4	16.1	12.1	14.1
28	20.3	16.3	18.5	23.3	19.2	21.4	21.4	19.2	20.4	16.0	12.2	14.1
29	22.0	15.9	18.9	23.5	20.1	21.8	21.7	18.3	20.1	15.8	12.2	14.1
30	23.0	16.8	19.7	23.8	19.4	21.8	20.4	17.6	18.9	15.8	12.2	14.1
31	---	---	---	24.2	20.5	22.0	20.4	17.2	18.9	---	---	---
MONTH	23.0	13.1	18.2	26.3	16.2	21.3	24.6	17.2	20.8	20.2	10.6	15.1

## 09371520 McELMO CREEK ABOVE TRAIL CANYON, NEAR CORTEZ, CO

LOCATION.--Lat 37°19'36", long 108°42'00", in NE¼NE¼ sec.3, T.35 N., R.17 W., Montezuma County, Hydrologic Unit 14080202, on left bank adjacent to abandoned gravel pit 1.5 mi downstream from Mud Creek, 1.9 mi upstream from Trail Canyon, and 5.5 mi south of Cortez.

DRAINAGE AREA.--234 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1993 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09371520](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09371520)

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,690 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except those for Oct. 1-4, July 20-24, estimated daily discharges and discharges above 1,000 ft<sup>3</sup>/s which are poor. A few small diversions upstream from station. Most of flow comes from diversions through the Dolores Project and Montezuma Valley Irrigation Company (water imported from Dolores River Basin).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 9, 1927 at location 1.5 mi upstream was determined to be 5,560 ft<sup>3</sup>/s, gage height, 5.72 ft, site and datum then in use. Feb. 20, 1993, 890 ft<sup>3</sup>/s, gage height, 7.57 ft, present datum, on basis of slope-area measurement at site 1 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	9.7	9.0	e13	e10	25	11	7.0	33	33	35	51
2	19	12	13	e13	e11	20	13	7.6	33	30	45	49
3	39	12	11	e12	e10	20	12	12	27	30	44	48
4	18	12	10	e12	e8.6	20	16	9.6	30	27	41	50
5	e17	12	e10	e12	e8.6	20	15	11	30	27	42	46
6	e15	12	e9.8	e12	e8.4	20	14	17	32	27	38	54
7	e13	13	e9.7	e12	e8.4	20	13	26	32	27	32	58
8	e12	15	e9.7	e12	e8.4	25	11	27	28	28	33	58
9	e12	32	e9.7	e12	8.3	29	11	24	32	27	35	167
10	e12	38	e9.6	e12	8.5	31	11	21	27	27	35	976
11	e11	25	e9.6	e12	8.9	30	11	18	26	31	35	174
12	e9.2	19	e9.7	e12	11	30	9.1	16	30	27	38	104
13	e6.7	26	9.6	e12	18	25	9.2	19	37	24	34	67
14	e6.2	28	e10	e11	37	21	9.1	24	42	27	34	47
15	e7.4	25	e11	e11	18	19	11	27	36	25	50	41
16	e7.2	28	11	e10	14	22	11	34	37	26	48	38
17	e11	25	12	e10	13	64	12	29	38	26	52	32
18	e10	23	e14	e9.9	15	67	10	23	31	29	50	18
19	e8.0	9.2	e13	e9.8	19	37	9.9	27	37	29	42	16
20	e8.2	3.2	e13	e9.8	14	26	9.1	25	37	25	34	26
21	e6.2	2.7	e12	e9.7	13	30	8.4	28	27	31	37	28
22	e9.2	2.7	11	e9.7	11	24	8.2	28	27	42	52	30
23	e18	3.1	e12	e9.7	9.7	20	7.9	30	27	33	47	31
24	e13	3.3	e12	e9.7	9.7	18	8.2	30	26	33	65	29
25	e14	3.3	e12	e9.7	12	16	8.2	33	25	26	87	31
26	e19	3.7	11	e9.6	24	16	7.0	35	34	27	60	33
27	e20	5.5	e13	e9.6	27	17	5.6	28	36	29	58	33
28	e18	7.3	e14	e9.6	27	16	4.4	29	44	36	58	32
29	e19	11	e14	e9.6	---	15	7.1	32	31	37	61	32
30	15	14	e13	e9.6	---	13	6.7	37	31	40	61	32
31	12	---	e13	e9.8	---	e12	---	33	---	37	60	---
TOTAL	422.3	435.7	351.4	335.8	391.5	768	300.1	747.2	963	923	1,443	2,431
MEAN	13.6	14.5	11.3	10.8	14.0	24.8	10.0	24.1	32.1	29.8	46.5	81.0
MAX	39	38	14	13	37	67	16	37	44	42	87	976
MIN	6.2	2.7	9.0	9.6	8.3	12	4.4	7.0	25	24	32	16
AC-FT	838	864	697	666	777	1,520	595	1,480	1,910	1,830	2,860	4,820

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2003, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	76.6	48.8	31.3	31.0	35.2	37.0	28.8	54.6	69.1	78.9	93.3	93.5
MAX	125	89.1	42.9	58.8	62.5	87.4	82.8	83.0	100	108	125	126
(WY)	(1994)	(1999)	(1999)	(1997)	(1994)	(1995)	(1997)	(1998)	(1997)	(1997)	(1995)	(1997)
MIN	13.6	14.5	11.3	10.8	14.0	14.4	5.85	22.7	23.3	29.8	8.86	14.9
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2003)	(2002)	(2002)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1993 - 2003

ANNUAL TOTAL	6,108.6	9,512.0		
ANNUAL MEAN	16.7	26.1	56.4	
HIGHEST ANNUAL MEAN			78.8	1997
LOWEST ANNUAL MEAN			23.9	2002
HIGHEST DAILY MEAN	64	Sep 11	976	Sep 10, 2003
LOWEST DAILY MEAN	2.7	Nov 21	2.7	Nov 21, 2002
ANNUAL SEVEN-DAY MINIMUM	3.1	Nov 20	3.1	Nov 20, 2002
MAXIMUM PEAK FLOW			b1,790	Sep 10, 2003
MAXIMUM PEAK STAGE			c9.44	Sep 10, 2003
ANNUAL RUNOFF (AC-FT)	12,120	18,870	40,850	
10 PERCENT EXCEEDS	32	42	108	
50 PERCENT EXCEEDS	14	19	43	
90 PERCENT EXCEEDS	5.1	9.0	17	

e Estimated.

a Also occurred Nov 22, 2002.

b Based on slope area measurement of peak flow.

c From floodmarks.

09371520 McELMO CREEK ABOVE TRAIL CANYON, NEAR CORTEZ, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1990 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09371520](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09371520)

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1990 to current year.

WATER TEMPERATURES: October 1990 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1990.

REMARKS.--Daily water temperature data are good. Daily specific conductance data are good except Oct. 1-9, Jan. 29 to Feb. 14, Apr. 28 to May 6, June 4-10 and July 7-17, which are poor.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 4,970 microsiemens/cm, Apr. 25, 2002; minimum, 947 microsiemens/cm, June 20, 2000.

WATER TEMPERATURE: Maximum, 28.0°C, July 25, 2003; minimum, -0.4°C during winter months most years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 3,700 microsiemens/cm, Apr. 29; minimum, 1,060 microsiemens/cm, June 27.

WATER TEMPERATURE: Maximum, 28.0°C, July 25; minimum, -0.4°C, Jan. 17, 18, 19.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)
OCT 29...	1400	19	8.5	2,710	7.5	1,500	326	157	5.78	2	165	201	37.1
DEC 18...	1145	14	8.5	3,440	0.6	1,600	315	208	5.16	3	275	E234	49.6
FEB 06...	1345	8.4	8.5	3,300	0.2	1,700	346	206	4.93	3	239	277	41.7
APR 09...	1400	12	8.6	3,030	13.0	1,600	309	195	4.99	2	209	173	39.0
30...	1430	7.1	8.5	3,220	15.4	1,600	303	203	5.74	3	251	197	52.8
MAY 22...	1345	29	8.3	1,410	20.5	670	157	68.5	6.41	1	76.3	207	20.4
JUN 25...	1330	27	8.4	1,400	20.0	680	162	66.8	4.71	1	63.0	194	19.1
JUL 24...	1330	33	8.3	1,150	24.5	550	139	49.4	4.42	0.9	46.9	201	16.6
SEP 04...	1445	51	8.4	1,410	20.4	650	164	58.5	4.65	0.8	48.9	187	17.1

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)
OCT 29...	0.39	8.3	1,470	2,290	3.11	117
DEC 18...	0.34	7.8	1,850	--	--	--
FEB 06...	0.44	7.3	1,830	2,840	3.86	64.8
APR 09...	0.31	1.5	1,690	2,550	3.47	79.2
30...	0.32	0.7	1,860	2,800	3.80	53.8
MAY 22...	0.3	10.8	580	1,040	1.42	81.0
JUN 25...	0.3	8.3	557	998	1.36	71.9
JUL 24...	0.3	10.3	400	789	1.07	70.9
SEP 04...	0.4	12.5	539	957	1.30	132

E -- Estimated laboratory analysis value.

## 09371520 McELMO CREEK ABOVE TRAIL CANYON, NEAR CORTEZ, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	2,440	2,360	2,400	3,030	2,980	3,000	2,800	2,640	2,690	2,990	2,880	2,920
2	2,490	2,220	2,310	2,990	2,900	2,930	3,400	2,660	2,780	3,100	2,900	2,970
3	2,940	1,860	2,350	2,990	2,920	2,950	2,800	2,660	2,720	3,070	2,920	3,010
4	1,900	1,820	1,860	3,000	2,940	2,960	2,870	2,660	2,770	3,080	2,900	2,980
5	2,000	1,880	1,940	2,990	2,870	2,920	2,920	2,670	2,780	2,980	2,840	2,930
6	2,160	1,970	2,060	2,980	2,880	2,920	2,880	2,680	2,780	2,920	2,750	2,850
7	2,280	2,130	2,200	2,990	2,860	2,920	2,900	2,640	2,750	2,900	2,730	2,800
8	2,350	2,230	2,280	2,940	2,850	2,890	2,880	2,670	2,770	3,000	2,760	2,870
9	2,380	2,270	2,330	3,010	2,720	2,830	3,000	2,660	2,760	2,970	2,790	2,860
10	---	---	---	3,000	2,620	2,770	3,090	2,660	2,830	2,900	2,790	2,850
11	---	---	---	2,670	2,440	2,540	3,210	2,590	2,870	2,900	2,780	2,830
12	---	---	---	2,770	2,560	2,710	3,110	2,580	2,910	3,470	2,900	3,050
13	---	---	---	2,750	2,390	2,630	3,120	2,610	2,890	3,120	2,840	2,950
14	---	---	---	2,390	1,980	2,090	3,040	2,620	2,850	3,060	2,850	2,980
15	---	---	---	2,050	1,980	2,020	3,000	2,600	2,750	3,060	2,840	2,980
16	---	---	---	2,060	1,700	1,830	2,960	2,570	2,740	3,120	2,920	3,040
17	---	---	---	1,990	1,650	1,810	2,720	2,520	2,630	3,160	2,970	3,050
18	---	---	---	2,110	1,780	1,960	3,180	2,670	2,940	3,230	2,950	3,060
19	---	---	---	2,600	1,960	2,290	3,140	2,750	2,940	3,250	2,980	3,070
20	---	---	---	2,760	2,500	2,620	3,260	2,880	3,080	3,190	2,930	3,050
21	---	---	---	2,780	2,670	2,730	3,120	2,880	3,010	3,130	2,920	3,030
22	---	---	---	2,860	2,680	2,770	3,110	3,010	3,060	3,160	2,900	3,040
23	---	---	---	2,820	2,690	2,750	3,170	2,970	3,050	3,160	2,900	3,050
24	---	---	---	2,800	2,660	2,730	2,980	2,840	2,890	3,170	2,920	3,040
25	---	---	---	2,780	2,680	2,730	2,880	2,780	2,820	3,140	2,940	3,040
26	---	---	---	2,780	2,670	2,740	3,010	2,870	2,930	3,270	2,940	3,070
27	---	---	---	2,850	2,660	2,740	3,240	3,010	3,110	3,180	2,880	3,050
28	---	---	---	2,970	2,630	2,720	3,170	3,060	3,120	3,240	2,900	3,080
29	---	---	---	2,840	2,630	2,740	3,120	2,900	3,000	3,300	2,920	3,090
30	---	---	---	2,940	2,650	2,740	2,990	2,830	2,890	3,280	2,910	3,110
31	3,050	2,970	3,010	---	---	---	2,980	2,900	2,920	3,250	2,910	3,090
MONTH	---	---	---	3,030	1,650	2,630	3,400	2,520	2,870	3,470	2,730	2,990
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	3,200	2,960	3,080	---	---	---	---	---	---	3,370	3,220	3,300
2	3,140	3,030	3,080	---	---	---	---	---	---	3,310	3,200	3,250
3	3,130	2,960	3,060	---	---	---	---	---	---	3,390	3,010	3,200
4	3,220	2,950	3,100	---	---	---	---	---	---	3,280	2,980	3,120
5	3,340	2,880	3,100	---	---	---	---	---	---	3,380	3,060	3,200
6	3,460	2,940	3,210	---	---	---	---	---	---	3,220	2,910	3,060
7	3,540	3,000	3,240	---	---	---	---	---	---	3,500	2,200	2,710
8	3,450	2,950	3,220	---	---	---	---	---	---	2,280	1,870	2,010
9	3,390	2,940	3,130	---	---	---	---	---	---	2,320	2,030	2,120
10	3,320	2,810	3,050	---	---	---	3,230	3,120	3,170	2,100	1,860	1,990
11	3,230	2,810	2,970	---	---	---	3,240	3,140	3,180	2,170	1,960	2,100
12	3,060	2,610	2,860	---	---	---	3,310	3,120	3,190	2,150	1,940	2,050
13	2,760	2,300	2,520	---	---	---	3,360	3,110	3,200	1,940	1,660	1,770
14	2,670	2,260	2,420	---	---	---	3,310	3,100	3,210	2,040	1,540	1,650
15	---	---	---	---	---	---	3,330	3,080	3,220	1,860	1,550	1,670
16	---	---	---	---	---	---	3,380	3,120	3,220	1,690	1,540	1,610
17	---	---	---	---	---	---	3,190	2,700	2,980	1,950	1,530	1,790
18	---	---	---	---	---	---	3,160	2,820	2,960	1,840	1,680	1,760
19	---	---	---	---	---	---	3,230	3,110	3,160	1,700	1,520	1,620
20	---	---	---	---	---	---	3,230	3,070	3,130	1,870	1,510	1,640
21	---	---	---	---	---	---	3,180	3,080	3,130	1,820	1,490	1,690
22	---	---	---	---	---	---	3,240	3,140	3,200	1,490	1,400	1,430
23	---	---	---	---	---	---	3,310	3,190	3,250	1,470	1,350	1,420
24	---	---	---	---	---	---	3,310	3,190	3,240	1,500	1,340	1,400
25	---	---	---	---	---	---	3,280	3,170	3,230	2,000	1,350	1,510
26	---	---	---	---	---	---	3,330	3,190	3,250	1,920	1,300	1,410
27	---	---	---	---	---	---	3,460	3,300	3,380	1,450	1,300	1,380
28	---	---	---	---	---	---	3,510	3,290	3,410	1,420	1,300	1,370
29	---	---	---	---	---	---	3,700	3,210	3,390	1,370	1,250	1,340
30	---	---	---	---	---	---	3,340	3,260	3,290	1,280	1,140	1,220
31	---	---	---	---	---	---	---	---	---	1,300	1,150	1,250
MONTH	---	---	---	---	---	---	---	---	---	3,500	1,140	1,970



## 09371520 McELMO CREEK ABOVE TRAIL CANYON, NEAR CORTEZ, CO—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1,320	1,180	1,250	1,230	1,150	1,200	1,270	1,230	1,250	1,430	1,340	1,380
2	1,380	1,240	1,320	1,300	1,210	1,260	1,280	1,190	1,230	1,360	1,340	1,350
3	1,380	1,250	1,340	1,300	1,170	1,240	1,300	1,220	1,250	1,370	1,350	1,360
4	1,390	1,270	1,360	1,310	1,170	1,230	1,610	1,210	1,380	1,390	1,350	1,370
5	1,330	1,190	1,270	1,220	1,170	1,190	1,270	1,210	1,250	1,430	1,390	1,420
6	1,290	1,160	1,240	1,180	1,130	1,160	1,240	1,140	1,210	1,480	1,370	1,420
7	1,310	1,150	1,240	1,240	1,150	1,190	1,240	1,160	1,190	1,430	1,380	1,410
8	1,600	1,240	1,350	1,210	1,150	1,180	1,210	1,160	1,180	1,410	1,390	1,400
9	1,530	1,140	1,260	1,170	1,100	1,140	1,270	1,210	1,240	1,530	1,250	1,380
10	1,270	1,140	1,230	1,210	1,110	1,150	1,250	1,180	1,210	1,510	1,190	1,350
11	---	---	---	1,300	1,080	1,200	1,250	1,200	1,230	1,560	1,430	1,500
12	---	---	---	1,240	1,160	1,200	1,210	1,120	1,170	1,440	1,310	1,370
13	---	---	---	1,210	1,140	1,180	1,270	1,160	1,230	1,400	1,280	1,320
14	---	---	---	1,310	1,190	1,240	1,320	1,240	1,260	1,480	1,400	1,450
15	---	---	---	1,230	1,170	1,190	1,920	1,240	1,440	1,660	1,470	1,540
16	---	---	---	1,280	1,080	1,210	1,530	1,350	1,410	2,080	1,610	1,730
17	---	---	---	1,220	1,090	1,160	1,420	1,370	1,390	2,090	2,040	2,060
18	---	---	---	---	---	---	1,420	1,360	1,390	2,230	2,060	2,160
19	---	---	---	---	---	---	1,430	1,400	1,420	2,320	2,220	2,280
20	---	---	---	---	---	---	1,470	1,420	1,450	2,310	2,130	2,250
21	---	---	---	---	---	---	1,490	1,400	1,460	2,130	1,950	2,040
22	---	---	---	---	---	---	2,200	1,310	1,580	1,950	1,910	1,930
23	---	---	---	---	---	---	1,530	1,350	1,410	1,940	1,880	1,910
24	---	---	---	---	---	---	1,480	1,300	1,400	1,950	1,880	1,910
25	---	---	---	1,350	1,210	1,300	1,630	1,280	1,410	1,920	1,790	1,880
26	1,230	1,110	1,190	1,330	1,240	1,290	1,410	1,330	1,380	1,820	1,740	1,790
27	1,130	1,060	1,090	1,310	1,230	1,260	1,400	1,350	1,380	1,770	1,720	1,760
28	1,330	1,070	1,200	1,310	1,240	1,280	1,410	1,360	1,390	1,770	1,730	1,760
29	1,220	1,080	1,160	1,300	1,170	1,250	1,420	1,300	1,380	1,780	1,670	1,760
30	1,260	1,160	1,210	1,260	1,110	1,200	1,690	1,290	1,380	1,820	1,680	1,750
31	---	---	---	1,340	1,220	1,290	1,560	1,360	1,410	---	---	---
MONTH	---	---	---	---	---	---	2,200	1,120	1,330	2,320	1,190	1,670

## 09371520 McELMO CREEK ABOVE TRAIL CANYON, NEAR CORTEZ, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	13.9	9.0	11.8	9.5	4.4	6.9	2.5	-0.3	0.8	-0.2	-0.3	-0.3
2	13.1	10.5	11.7	9.8	5.7	7.5	2.1	-0.3	0.7	-0.2	-0.3	-0.3
3	11.6	8.6	9.7	6.6	2.3	4.5	3.3	0.9	1.9	0.0	-0.3	-0.3
4	11.6	7.1	9.2	6.2	2.9	4.1	2.4	-0.3	0.8	-0.1	-0.3	-0.3
5	13.1	8.6	10.8	6.1	0.9	3.3	1.7	-0.3	0.3	-0.2	-0.3	-0.3
6	13.7	8.8	11.2	6.1	0.7	3.2	0.7	-0.3	0.0	-0.2	-0.3	-0.2
7	13.9	9.4	11.6	5.5	0.6	3.2	0.5	-0.3	0.0	-0.2	-0.3	-0.3
8	13.8	9.6	11.6	5.2	3.8	4.6	0.9	-0.3	0.0	-0.2	-0.3	-0.3
9	13.3	9.5	11.5	8.5	5.2	6.8	0.3	-0.3	-0.1	-0.2	-0.3	-0.3
10	13.4	9.0	11.2	6.8	4.4	5.7	0.2	-0.3	-0.2	-0.1	-0.3	-0.2
11	12.5	9.4	11.0	6.4	2.8	4.6	-0.1	-0.3	-0.2	0.4	-0.3	-0.1
12	12.4	9.6	11.0	5.4	1.4	3.3	-0.2	-0.3	-0.3	0.4	-0.3	-0.2
13	12.8	8.4	10.5	4.5	1.3	2.8	-0.2	-0.3	-0.3	0.9	-0.3	-0.1
14	12.3	8.0	10.4	5.1	1.4	3.0	-0.2	-0.3	-0.3	1.0	-0.3	0.1
15	12.0	7.4	9.9	4.6	1.4	2.8	-0.2	-0.3	-0.3	2.4	-0.3	0.6
16	10.9	6.0	8.8	2.6	-0.3	1.3	0.0	-0.3	-0.2	2.1	-0.3	0.4
17	10.3	5.7	8.3	3.6	-0.3	1.5	0.3	-0.3	-0.2	1.6	-0.4	0.2
18	12.0	8.3	9.9	3.7	-0.3	1.6	1.1	-0.3	0.0	0.9	-0.4	0.0
19	11.9	7.0	9.4	3.6	-0.3	1.3	0.1	-0.3	-0.2	0.8	-0.4	-0.1
20	10.3	6.0	8.3	4.4	-0.2	1.8	-0.1	-0.3	-0.3	0.5	-0.3	-0.1
21	10.3	5.8	8.2	4.5	-0.2	1.9	-0.2	-0.3	-0.3	1.4	-0.3	0.2
22	11.4	7.0	9.3	4.7	0.0	2.1	-0.2	-0.3	-0.3	3.0	-0.3	0.7
23	10.7	8.4	9.8	4.4	0.6	2.3	-0.2	-0.3	-0.3	3.5	-0.3	1.0
24	11.0	8.4	9.5	4.4	-0.1	2.0	-0.2	-0.3	-0.3	4.7	-0.3	1.9
25	10.5	6.5	8.5	4.1	1.5	2.5	-0.2	-0.3	-0.3	3.1	-0.2	1.5
26	8.8	6.9	7.9	3.0	-0.3	1.0	-0.2	-0.3	-0.3	3.3	-0.3	1.1
27	8.9	7.1	7.9	1.6	-0.3	0.3	-0.2	-0.3	-0.3	3.9	-0.3	1.3
28	8.1	6.7	7.4	0.8	-0.3	0.1	-0.2	-0.3	-0.3	4.6	-0.3	1.6
29	7.5	5.7	6.9	0.9	-0.3	0.0	-0.2	-0.3	-0.2	4.1	-0.3	1.5
30	9.1	4.5	6.5	0.5	-0.3	0.0	-0.2	-0.3	-0.3	4.2	-0.3	1.5
31	9.5	5.2	7.1	---	---	---	-0.2	-0.3	-0.3	5.9	-0.3	2.4
MONTH	13.9	4.5	9.6	9.8	-0.3	2.9	3.3	-0.3	0.0	5.9	-0.4	0.4
	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	5.7	0.5	3.0	3.2	0.2	1.6	14.2	5.5	9.9	16.5	7.3	12.3
2	4.5	2.0	3.1	5.6	-0.3	1.5	9.9	6.1	8.0	18.5	9.5	14.3
3	4.1	-0.1	1.9	6.6	-0.3	2.5	8.8	3.9	6.2	18.3	11.0	14.6
4	1.9	-0.3	0.5	4.0	2.0	2.9	11.4	2.3	6.6	16.4	9.8	12.9
5	0.5	-0.3	0.0	7.3	0.5	3.6	10.0	4.0	7.2	16.9	8.3	12.7
6	0.1	-0.3	-0.2	7.5	-0.3	3.5	11.4	3.5	7.3	17.4	8.2	12.9
7	-0.1	-0.3	-0.2	9.0	1.3	5.0	12.3	4.4	8.1	16.1	9.5	12.9
8	-0.2	-0.3	-0.3	9.6	2.1	5.7	14.1	3.3	8.6	13.6	9.6	11.4
9	-0.1	-0.3	-0.3	9.8	2.6	6.1	16.1	4.8	10.3	15.5	7.9	11.3
10	0.0	-0.3	-0.2	9.9	2.9	6.4	16.2	6.1	11.2	17.1	6.5	11.6
11	-0.1	-0.3	-0.3	10.9	3.6	7.2	17.0	6.9	11.9	18.8	7.4	13.1
12	0.0	-0.3	-0.2	12.2	5.0	8.4	13.6	7.7	11.0	19.7	8.9	14.3
13	0.4	-0.2	0.0	12.9	4.9	8.9	17.4	6.4	11.8	15.9	10.7	13.4
14	3.8	-0.2	1.5	10.2	5.8	8.1	15.3	8.2	12.1	16.7	10.1	13.5
15	6.3	0.6	3.2	9.7	4.5	7.4	12.8	8.9	10.9	16.3	11.9	13.6
16	5.5	1.1	3.1	9.2	6.7	7.7	15.9	5.2	10.4	21.0	10.5	15.4
17	6.0	2.0	4.0	7.3	5.4	6.1	15.2	6.5	10.8	17.1	12.6	15.3
18	7.4	2.9	4.9	8.4	4.7	6.4	11.9	7.8	9.7	17.5	13.0	14.9
19	6.2	1.7	3.9	9.3	4.5	6.7	12.4	5.7	8.9	20.0	11.4	15.5
20	6.6	2.0	4.1	8.3	4.4	6.5	16.3	4.9	10.4	22.1	12.2	17.0
21	7.2	1.0	3.8	10.6	4.7	7.6	14.8	8.5	11.9	22.5	13.1	17.8
22	6.4	0.4	3.1	12.5	4.3	8.3	13.6	9.8	11.6	22.8	13.1	17.9
23	5.5	-0.3	2.2	13.9	5.2	9.4	13.8	6.5	10	22.0	13.9	17.9
24	6.6	-0.2	3.0	11.5	6.1	9.0	17.7	7.1	12.2	22.2	14.0	18.2
25	5.0	1.6	3.6	14.2	6.2	9.9	18.9	8.3	13.7	23.2	15.6	19.1
26	6.1	2.6	3.9	10.5	5.9	8.2	19.4	10.0	14.8	23.3	14.8	19.0
27	3.5	1.2	2.5	11.6	5.3	7.7	18.8	9.8	14.6	24.7	16.0	20.3
28	3.0	0.5	1.6	7.9	2.3	4.8	18.5	10.2	14.7	25.4	16.7	21.1
29	---	---	---	10.3	1.0	5.4	15.0	9.8	13.1	24.1	17.3	20.9
30	---	---	---	12.4	2.4	7.2	16.1	7.8	12.2	25.3	16.8	20.9
31	---	---	---	---	4.6	---	---	---	---	23.6	17.6	20.5
MONTH	7.4	-0.3	2.0	---	-0.3	---	19.4	2.3	10.7	25.4	6.5	15.7

## SAN JUAN RIVER BASIN

09371520 McELMO CREEK ABOVE TRAIL CANYON, NEAR CORTEZ, CO—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	22.8	16.9	19.6	25.5	16.1	20.7	24.5	20.0	22.0	21.9	15.0	18.2
2	23.7	15.2	19.3	24.9	16.2	20.6	25.0	19.5	22.1	21.4	16.0	18.8
3	24.1	16.1	20.0	25.2	16.2	20.6	25.5	19.8	22.4	20.7	17.6	18.9
4	23.1	14.4	18.7	25.4	15.6	20.5	25.3	17.9	21.4	20.9	17.1	18.9
5	22.5	14.2	18.3	25.0	16.2	20.7	24.8	17.8	21.2	20.6	16.7	18.6
6	20.7	13.0	17.1	24.9	17.3	20.9	24.1	17.5	21.0	18.6	15.6	17.0
7	20.6	12.7	16.8	25.2	15.9	20.5	25.4	19.3	21.9	20.3	14.2	16.9
8	23.0	13.2	18.1	25.1	15.8	20.5	26.2	18.9	22.3	18.7	14.7	16.8
9	22.4	14.9	18.8	25.5	16.1	20.7	26.6	19.8	22.9	17.2	12.9	15.2
10	23.8	15.7	19.5	25.5	15.4	20.5	26.0	18.4	22.1	14.8	12.3	13.4
11	23.6	14.3	18.8	25.6	16.1	20.9	26.4	18.8	22.3	16.4	12.7	14.5
12	22.3	13.5	18.0	25.9	16.6	21.2	25.4	19.4	22.4	17.1	12.6	14.8
13	23.8	14.8	18.9	26.0	16.7	21.4	25.5	19.8	22.3	17.8	13.4	15.5
14	22.5	14.3	18.3	26.6	17.5	22.0	25.3	18.5	21.3	16.7	11.8	14.4
15	22.8	15.0	19.1	27.1	19.1	22.8	23.0	18.6	20.6	17.2	11.9	14.6
16	23.4	16.5	19.7	26.0	20.2	22.7	22.9	17.7	20.0	17.9	12.6	15.2
17	25.1	17.2	19.6	27.1	18.5	22.6	22.5	17.0	19.6	18.2	13.9	15.8
18	22.6	15.5	18.8	27.0	19.2	23.2	22.8	17.3	19.9	16.4	11.7	14.0
19	21.4	16.8	18.9	27.7	19.8	23.6	24.3	17.8	20.9	16.4	10.4	13.5
20	20.4	16.1	18.4	27.0	19.9	23.4	25.2	18.5	21.6	16.8	11.5	14.1
21	22.6	13.8	18.1	25.4	20.2	22.6	23.9	18.3	21.2	16.0	11.1	13.7
22	23.6	14.5	18.8	26.7	19.3	22.8	23.8	19.1	21.2	16.1	10.7	13.5
23	23.1	14.1	18.5	24.7	20.6	22.4	23.1	19.2	21.3	16.5	11.4	14.0
24	22.2	14.4	17.9	27.7	19.4	23.3	24.0	18.6	21.1	16.0	11.8	14.0
25	22.3	13.7	17.9	28.0	20.8	24.2	23.2	18.3	20.7	17.2	12.1	14.7
26	22.6	13.5	18.1	27.2	20.7	23.6	23.0	17.9	20.5	16.5	11.6	14.3
27	23.3	14.2	18.8	25.9	20.3	22.7	21.6	18.9	20.4	16.7	11.9	14.4
28	23.3	14.7	19.1	25.4	18.9	22.1	23.2	19.1	20.8	16.9	11.9	14.5
29	24.0	15.3	19.7	25.8	19.8	22.5	22.7	18.0	20.2	16.6	12.0	14.4
30	24.7	16.1	20.4	26.1	18.8	22.3	21.3	16.9	19.1	16.5	11.8	14.3
31	---	---	---	25.6	20.2	22.4	21.9	16.7	19.1	---	---	---
MONTH	25.1	12.7	18.7	28.0	15.4	22.0	26.6	16.7	21.2	21.9	10.4	15.4

**09372000 McELMO CREEK NEAR COLORADO-UTAH STATE LINE**

LOCATION.--Lat 37°19'27", long 109°00'54", in NE¼ sec.2, T.35 N., R.20 W., Montezuma County, Hydrologic Unit 14080202, on right bank 1.5 mi upstream from Colorado-Utah State line, 2.0 mi upstream from Yellowjacket Creek, and 2.0 mi west of former town of McElmo.

DRAINAGE AREA.--346 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1951 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09372000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09372000)

REVISED RECORDS.--WSP 1925: 1951-52 (M), 1957 (M). WRD CO-1972: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,890 ft above NGVD of 1929, from topographic map.

REMARKS.--Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 1,780 acres upstream from station. One diversion upstream from station for irrigation of about 60 acres downstream from station. Part of flow is return water from irrigated lands of Montezuma Irrigation District (water imported from Dolores River basin).

DISCHARGE, CUBIC FEET PER SECOND  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	11	e16	e15	e12	25	12	0.54	3.3	4.5	20	40
2	10	9.4	19	e15	13	19	13	0.48	5.5	6.6	24	36
3	17	10	19	e15	13	18	13	0.46	5.4	6.3	23	33
4	32	12	18	e14	12	18	13	0.65	2.4	7.2	26	31
5	21	12	e15	e14	10	19	15	1.1	2.6	4.5	23	30
6	16	12	e15	e14	10	19	15	0.72	4.3	5.3	20	29
7	14	11	e14	e14	9.9	18	14	0.80	3.8	5.3	15	40
8	11	11	e14	14	e11	19	13	1.9	3.9	7.0	15	38
9	11	18	e14	e14	e11	23	12	2.4	3.2	5.6	16	301
10	10	33	e13	e14	e11	25	11	2.8	3.0	5.0	15	e1,010
11	10	28	e14	e14	e11	26	10	2.6	4.0	4.2	13	270
12	9.9	23	e14	e15	e11	26	10	2.5	3.4	5.7	14	123
13	7.7	22	e15	e14	16	24	8.7	1.7	4.0	4.5	14	88
14	5.1	26	e15	e14	26	21	7.1	1.3	7.1	4.7	44	62
15	4.7	25	e16	e14	24	19	7.2	2.0	14	4.0	76	52
16	6.0	26	15	e13	16	19	6.8	5.7	9.4	7.6	70	45
17	5.7	26	20	e12	14	45	5.3	5.2	6.2	6.0	52	40
18	9.0	25	e17	e12	14	66	5.1	2.1	7.3	4.6	50	31
19	8.9	22	e14	e11	17	41	3.3	1.8	7.5	3.8	42	24
20	6.6	19	e14	e12	16	29	4.0	1.2	11	4.3	33	24
21	6.7	18	e15	e12	14	25	2.5	0.76	6.1	3.6	29	26
22	4.5	18	e16	e12	13	26	2.4	2.8	4.9	9.3	35	27
23	7.7	18	e16	e12	12	20	2.3	3.3	3.8	12	39	28
24	17	18	e15	e12	11	18	2.1	2.9	3.9	8.2	58	28
25	12	18	e15	e12	12	17	1.8	3.3	2.6	8.7	64	28
26	12	17	15	e12	17	14	1.2	4.4	3.5	6.7	58	28
27	17	e15	e15	e12	23	17	1.2	3.1	4.9	7.3	46	29
28	18	e14	e16	e12	28	17	1.0	2.4	6.1	9.5	43	29
29	17	e15	e17	e12	---	16	0.80	1.9	9.6	33	43	28
30	17	e15	e16	e12	---	15	0.66	3.6	3.5	23	47	28
31	13	---	e15	e12	---	14	---	4.9	---	24	48	---
TOTAL	367.2	547.4	482	406	407.9	718	214.46	71.31	160.2	252.0	1,115	2,626
MEAN	11.8	18.2	15.5	13.1	14.6	23.2	7.15	2.30	5.34	8.13	36.0	87.5
MAX	32	33	20	15	28	66	15	5.7	14	33	76	1,010
MIN	4.5	9.4	13	11	9.9	14	0.66	0.46	2.4	3.6	13	24
AC-FT	728	1,090	956	805	809	1,420	425	141	318	500	2,210	5,210

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

	59.8	50.5	38.8	33.0	47.0	56.4	39.2	45.5	53.5	52.1	64.7	61.9
MEAN	59.8	50.5	38.8	33.0	47.0	56.4	39.2	45.5	53.5	52.1	64.7	61.9
MAX	161	122	95.4	68.4	192	197	148	108	105	132	160	226
(WY)	(1973)	(1988)	(1966)	(1969)	(1993)	(1973)	(1973)	(1992)	(1969)	(1957)	(1967)	(1986)
MIN	1.84	14.0	13.5	13.1	14.6	15.7	2.23	2.30	2.60	1.19	2.45	0.43
(WY)	(1957)	(1957)	(1978)	(2003)	(2003)	(1951)	(1977)	(2003)	(1977)	(1951)	(2002)	(1956)

## SUMMARY STATISTICS

## FOR 2002 CALENDAR YEAR

## FOR 2003 WATER YEAR

## WATER YEARS 1951 - 2003

ANNUAL TOTAL	4,048.84		7,367.47			
ANNUAL MEAN	11.1		20.2			50.6
HIGHEST ANNUAL MEAN						94.6
LOWEST ANNUAL MEAN						16.2
HIGHEST DAILY MEAN	67	Sep 11	e1,010	Sep 10	1,200	Aug 7, 1967
LOWEST DAILY MEAN	0.96	Jun 25	0.46	May 3	0.08	Sep 9, 1977
ANNUAL SEVEN-DAY MINIMUM	1.1	Jun 21	0.66	Apr 28	0.14	Sep 21, 1956
MAXIMUM PEAK FLOW			1,670	Sep 9	a3,040	Aug 7, 1967
MAXIMUM PEAK STAGE			7.64	Sep 9	b,c7.58	Aug 7, 1967
ANNUAL RUNOFF (AC-FT)	8,030		14,610		36,670	
10 PERCENT EXCEEDS	21		32		97	
50 PERCENT EXCEEDS	11		14		38	
90 PERCENT EXCEEDS	1.4		3.0		12	

e Estimated.

a From rating curve extended above 2,100 ft<sup>3</sup>/s.

b From floodmark in gage well.

c Maximum gage height, 8.21 ft, Sep 21, 1997.

09372000 McELMO CREEK NEAR COLORADO-UTAH STATE LINE, CO—Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1977 to September 1981, August 1987 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09372000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09372000)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)
OCT 28...	1230	18	8.3	2,790	10.2	1,500	310	164	5.76	2	183	210	37.5
DEC 17...	1330	19	8.4	2,360	4.3	1,400	292	162	4.80	2	172	E166	32.1
FEB 06...	1145	11	8.4	3,010	1.0	1,600	308	191	4.82	2	211	260	34.7
APR 09...	1200	12	8.4	2,940	11.0	1,500	292	191	5.11	2	209	201	36.3
APR 30...	1230	0.96	8.2	3,320	17.8	1,700	326	219	7.35	3	259	282	46.6
MAY 22...	1200	3.5	8.1	3,200	22.5	1,900	379	234	11.2	3	287	272	45.5
JUN 25...	1145	2.7	8.1	2,770	21.6	1,400	294	170	8.73	2	195	279	36.8
JUL 24...	1100	8.8	8.1	2,220	23.5	990	216	110	6.08	2	117	229	31.2
SEP 04...	1300	32	8.3	1,750	20.1	790	185	79.6	5.30	1	78.6	196	23.7

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)
OCT 28...	0.38	6.9	1,480	2,310	3.15	112
DEC 17...	0.37	7.8	1,470	--	--	--
FEB 06...	0.44	5.6	1,620	2,530	3.44	75.8
APR 09...	0.36	1.3	1,570	2,430	3.30	80.6
APR 30...	0.43	1.0	1,930	2,960	4.03	7.68
MAY 22...	0.5	11.8	1,740	2,870	3.90	27.0
JUN 25...	0.5	12.0	1,360	2,240	3.05	16.3
JUL 24...	0.5	13.0	1,020	1,650	2.25	39.4
SEP 04...	0.4	13.5	729	1,230	1.68	106

E -- Estimated laboratory analysis value.

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
APR 24...	1236	2.3	3,400	16.7

Following is a list of Transmountain Diversions no longer being published in this report. Diversions, in acre-feet, for these sites are available from the State of Colorado, Division of Water Resources.

TO PLATTE RIVER BASIN

09010000 Grand River Ditch  
 09012000 Eureka Ditch  
 09013000 Alva B. Adams Tunnel  
 09021500 Berthoud Pass Ditch  
 09022500 Moffat Water Tunnel  
 09046000 Boreas Pass Ditch  
 09047300 Vidler Tunnel  
 09050590 Harold D. Roberts Tunnel

TO ARKANSAS RIVER BASIN

09042000 Hoosier Pass Tunnel  
 09061500 Columbine Ditch  
 09062500 Wurtz Ditch  
 09063700 Homestake Tunnel  
 09073000 Twin Lakes Tunnel  
 09077160 Charles H. Boustead Tunnel  
 09077500 Busk-Ivanhoe Tunnel  
 09115000 Larkspur Ditch

TO RIO GRANDE RIVER BASIN

09118200 Tarbell Ditch  
 09121000 Tabor Ditch  
 09341000 Treasure Pass Ditch  
 09347000 Don LaFont Ditches 1 & 2  
 09348000 Williams Creek Squaw Pass Ditch  
 09351000 Pine River-Weminuche Pass Ditch  
 09351500 Weminuche Pass

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of annual maximum stage and discharge at crest-stage stations.

#### LOW-FLOW PARTIAL-RECORD STATIONS

Measurements of streamflow in the area covered by this report made at low-flow, partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

#### DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 2003

Station no	Station name	Location	Drainage area (mi <sup>2</sup> )	Period of record	Date	Discharge (ft <sup>3</sup> /s)
PINEY RIVER BASIN						
<b>*09058900</b>	<b>Moniger Creek near Minturn, CO</b>	Lat 39°43'37", long 106°28'50", in Eagle County, on left bank 1.5 mi upstream from mouth, 7.5 mi north of Minturn.	0.76	1965-2003	6-12-03 7-02-03 8-20-03	3.37 0.44 0.06

\*Also a crest-stage partial-record station. Several measurements of specific conductance and water temperature were obtained and are published in the "Supplemental Water-Quality Data For Gaging Stations" section of this report. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09058900](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09058900)

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or flood-flow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at crest-stage partial-record stations are presented in the following table. Discharge measurements made at low-flow partial-record sites and at miscellaneous sites and for special studies are given in separate tables.

## CREST-STAGE PARTIAL-RECORD STATIONS

The following table contains annual maximum discharge for crest-stage stations. A crest-stage gage is a device that will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

## MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Discharge (ft <sup>3</sup> /s)
PINEY RIVER BASIN								
<b>*Moniger Creek near Minturn, CO (09058900)</b>	Lat 39°43'37", long 106°28'50", near Minturn, in Eagle County, on left bank 1.5 mi upstream from mouth, 7.5 mi north of Minturn. Drainage area is 0.76 mi <sup>2</sup> .	1965-2003	6-01-03	2.06	29.6	6-01-03	2.06	29.6

\*Also a low-flow partial-record station. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09058900](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09058900)



**375546107412000 IRONTON METEOROLOGICAL STATION NEAR OURAY, CO**

LOCATION.--Lat 37°55'46", long 107°41'20", Ouray County, Hydrologic Unit 14020006, 0.8 mi southwest of Ironton, 1.2 mi north of Red Mountain No. 2, and 6.5 mi southwest of Ouray.

PERIOD OF RECORD.--July 1992 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=375546107412000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=375546107412000)

GAGE.--Weighing-bucket rain gage with satellite telemetry. Elevation of gage is 10,020 ft above NGVD of 1929, from topographic map.

REMARKS.--Unpublished air-temperature and rainfall data for water years 1992 and 1993 are available in district office.

## EXTREMES FOR PERIOD OF RECORD.--

AIR TEMPERATURE: Maximum, 29.7°C, Oct. 9, 1997; minimum, -32.4°C, Dec. 17, 18, 1996.

PRECIPITATION: Maximum daily, 2.3 inches, Oct. 3, 1996 and Feb. 10, 2001.

## EXTREMES FOR CURRENT YEAR.--

AIR TEMPERATURE: Maximum, 25.5°C, July 11; minimum, -25.7°C, Feb. 7.

PRECIPITATION: Maximum daily, 1.3 inches, Sept. 9.

TEMPERATURE, AIR, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	8.1	-0.7	2.8	4.2	-2.4	0.5	1.8	-12.9	-5.4	-5.3	-17.0	-10.9
2	7.1	-0.3	1.4	0.7	-7.9	-2.2	4.6	-13.3	-6.0	-0.3	-17.4	-10.8
3	2.1	-7.1	-2.7	1.1	-17.9	-6.5	-1.0	-12.5	-5.1	3.5	-10.9	-5.3
4	4.9	-9.8	-1.9	2.1	-7.5	-2.6	-0.3	-13.7	-8.7	5.3	-9.8	-4.3
5	8.1	-2.8	2.4	0.7	-13.3	-6.6	0.7	-12.5	-7.6	3.9	-9.8	-5.3
6	12.1	-4.9	1.9	8.8	-9.0	-1.6	1.1	-14.1	-7.9	5.3	-10.9	-4.4
7	13.1	-1.7	4.3	8.1	-3.5	0.9	-0.3	-12.9	-8.3	9.2	-10.9	-4.5
8	12.1	-3.1	3.0	0.4	-2.8	-1.5	1.8	-14.1	-8.7	6.7	-8.3	-3.6
9	11.7	-2.4	3.0	1.4	-8.6	-2.2	2.5	-13.7	-8.0	0.7	-9.0	-4.8
10	13.5	-3.8	4.1	-3.5	-15.7	-9.1	3.5	-14.1	-7.3	-1.0	-10.1	-5.5
11	12.1	0.4	6.4	-4.6	-14.5	-8.4	-3.5	-16.2	-11.0	-1.4	-8.6	-5.8
12	9.9	-3.5	2.1	2.1	-17.4	-8.8	-5.7	-12.1	-8.5	-0.7	-15.7	-8.9
13	12.4	-3.1	2.7	5.3	-7.9	-3.1	1.1	-13.3	-7.5	3.5	-11.7	-5.8
14	11.0	-3.8	1.8	-1.0	-11.7	-7.0	8.1	-12.9	-5.1	5.7	-8.6	-3.3
15	11.3	-3.8	1.9	-4.6	-17.0	-10.1	3.5	-10.1	-1.8	-2.4	-14.9	-6.0
16	10.2	-4.6	1.3	0.7	-17.0	-8.9	1.1	-10.1	-5.0	-1.7	-15.7	-9.9
17	12.1	-3.8	2.6	6.7	-9.8	-3.1	-6.0	-12.9	-8.1	-1.7	-14.9	-8.8
18	8.5	-3.8	0.9	1.4	-14.9	-7.7	-7.9	-13.7	-11.2	2.5	-14.5	-7.8
19	9.5	-4.2	1.4	1.8	-12.5	-6.0	-8.3	-18.8	-14.1	7.1	-10.5	-4.7
20	8.8	-5.3	0.5	8.1	-10.9	-3.3	-2.4	-17.0	-10.4	4.9	-10.1	-3.8
21	8.1	-4.6	0.8	8.8	-6.4	-1.1	-4.2	-18.8	-12.9	2.1	-10.9	-5.5
22	6.0	-2.8	0.7	10.2	-4.6	0.7	-4.6	-19.7	-13.5	2.5	-12.5	-6.4
23	4.6	-2.1	0.0	6.4	-6.4	-1.0	-3.5	-15.7	-11.0	5.7	-9.4	-2.7
24	1.8	-4.6	-2.0	2.8	-8.3	-3.0	-4.6	-18.8	-13.3	3.5	-8.3	-3.4
25	3.9	-7.9	-2.2	1.1	-14.9	-6.0	-10.5	-21.1	-15.9	-0.7	-12.5	-5.6
26	1.1	-4.6	-2.1	-0.3	-17.9	-11.4	-6.4	-23.1	-16.4	6.0	-13.3	-5.5
27	3.5	-4.9	-2.3	-0.7	-15.7	-9.5	2.1	-17.0	-9.6	7.8	-7.1	-1.7
28	1.4	-8.6	-3.6	6.4	-12.1	-4.9	7.1	-10.5	-3.5	3.2	-10.5	-3.6
29	-1.7	-10.5	-6.6	7.1	-8.3	-2.7	-0.7	-9.0	-4.6	2.1	-12.1	-5.7
30	2.1	-10.5	-4.0	6.0	-7.9	-1.5	-1.0	-13.3	-9.3	5.3	-10.5	-2.8
31	3.9	-4.2	-0.5	---	---	---	-0.3	-12.9	-5.8	9.5	-8.6	-2.4
MONTH	13.5	-10.5	0.6	10.2	-17.9	-4.6	8.1	-23.1	-8.8	9.5	-17.4	-5.5

375546107412000 IRONTON METEOROLOGICAL STATION NEAR OURAY, CO—Continued

TEMPERATURE, AIR, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	8.8	-4.9	1.8	-5.3	-17.4	-11.4	9.5	-5.3	2.9	6.0	-4.9	0.0
2	0.7	-9.8	-4.0	-2.8	-19.3	-12.6	3.9	-2.8	0.3	8.5	-2.8	3.2
3	-5.7	-16.2	-11.7	2.5	-17.9	-6.5	-1.7	-8.6	-4.8	8.5	-1.7	3.4
4	-6.0	-17.0	-11.3	-4.6	-9.8	-7.1	-0.7	-15.3	-5.8	2.1	-4.6	-1.6
5	-10.1	-18.8	-14.2	-6.0	-12.5	-10	-1.7	-10.5	-5.7	2.5	-6.0	-1.6
6	-10.5	-24.1	-17.9	0.0	-16.2	-6.8	-3.1	-10.5	-7.6	4.9	-6.0	-0.8
7	-8.6	-25.7	-18.2	4.6	-11.7	-3.9	-2.8	-14.9	-8.6	5.3	-2.8	2.0
8	-3.8	-19.7	-13.7	3.5	-10.1	-2.9	7.1	-16.6	-5.0	2.5	-4.2	-0.3
9	-11.7	-20.7	-14.8	6.4	-9.4	-1.6	11.3	-6.0	2.0	5.3	-6.4	-0.9
10	-2.1	-20.2	-11.9	5.7	-6.4	-0.5	11.3	-4.9	2.9	0.7	-9.4	-3.8
11	1.4	-17.0	-8.8	6.0	-8.3	-1.4	11.7	-4.6	3.0	9.9	-7.5	1.3
12	5.3	-11.3	-2.2	7.8	-4.9	0.3	9.5	-3.5	3.0	13.1	-2.4	5.8
13	1.8	-2.1	-0.4	9.9	-3.5	2.2	11.3	-3.5	4.0	12.1	-1.0	6.1
14	-1.0	-9.8	-3.7	7.8	-4.2	1.3	9.5	-3.5	3.4	12.8	0.7	6.5
15	1.1	-12.5	-7.4	7.4	-6.4	0.9	2.8	-4.6	-1.6	7.1	0.7	2.8
16	1.8	-12.1	-3.9	1.8	-7.1	-1.8	8.5	-6.0	0.9	14.6	1.1	7.0
17	0.0	-8.6	-4.0	-0.7	-6.4	-3.7	6.7	-5.3	0.9	15.4	1.1	8.9
18	-5.3	-13.7	-7.9	-4.2	-8.6	-6.5	1.1	-6.4	-3.3	8.8	-0.3	5.1
19	-1.4	-14.5	-8.5	-3.8	-9.0	-6.9	2.5	-8.3	-3.1	12.8	-2.4	4.6
20	0.7	-13.7	-7.7	3.2	-10.1	-3.7	7.1	-8.6	-0.4	12.8	-0.3	6.1
21	-3.5	-14.5	-8.3	-1.7	-9.4	-4.9	6.4	-3.5	0.9	15.0	-1.4	6.8
22	-4.6	-12.5	-8.4	4.6	-13.3	-4.0	2.8	-4.6	-0.4	17.3	0.4	8.8
23	-4.6	-19.3	-10.9	8.5	-6.8	0.1	-3.1	-10.1	-5.2	17.3	1.8	10.0
24	-1.7	-10.5	-5.6	4.6	-6.4	-1.2	7.4	-4.2	0.7	17.3	2.8	9.4
25	-1.0	-10.1	-5.5	3.2	-6.4	-2.7	11.7	-2.8	4.0	15.4	1.4	7.5
26	-1.7	-10.9	-6.7	6.4	-6.4	0.5	9.5	-2.4	4.0	17.3	0.7	9.5
27	-3.8	-12.5	-8.0	-6.0	-12.5	-9.6	10.6	-2.4	4.1	19.3	3.2	11.5
28	-3.1	-12.9	-9.0	-6.8	-14.5	-11.2	8.8	0.0	4.8	21.7	4.9	12.3
29	---	---	---	-4.6	-21.1	-11.9	7.1	-1.7	2.6	19.7	4.2	11.7
30	---	---	---	---	---	---	4.6	-6.8	-0.4	20.1	5.7	11.9
31	---	---	---	---	---	---	---	---	---	18.1	4.9	9.5
MONTH	8.8	-25.7	-8.3	---	---	---	11.7	-16.6	-0.2	21.7	-9.4	5.2
	JUNE			JULY			AUGUST			SEPTEMBER		
1	13.5	3.5	7.4	22.5	6.0	14.9	18.1	6.0	12.0	17.7	0.0	8.9
2	16.5	2.1	9.4	22.5	4.6	14.3	19.3	7.8	12.2	19.7	3.9	11.0
3	16.5	0.0	9.0	22.9	5.3	14.7	17.3	6.4	11.6	15.8	5.3	9.3
4	16.5	0.0	8.7	23.3	4.2	14.4	19.7	4.2	11.7	16.5	3.5	9.2
5	12.4	-1.0	5.8	22.9	4.6	14.3	20.9	5.7	13.3	15.0	3.9	8.1
6	13.9	-1.7	7.0	20.9	7.4	13.8	20.5	7.1	12.3	13.5	2.8	6.8
7	12.1	0.0	6.7	22.9	6.0	14.8	19.7	7.1	12.7	10.6	1.8	5.6
8	16.9	-0.3	8.6	24.6	6.0	15.7	18.9	6.7	12.7	16.1	0.7	8.9
9	15.8	2.8	9.7	23.3	4.6	14.6	21.3	6.4	14.1	8.5	-0.3	3.4
10	15.8	2.1	9.4	24.2	3.5	14.2	22.5	7.8	13.0	5.7	-1.4	0.9
11	16.5	-0.3	9.1	25.5	5.7	15.9	22.1	7.1	13.7	8.1	-2.4	1.6
12	15.8	0.0	8.1	24.6	7.8	16.6	21.3	7.4	13.0	14.3	-2.1	5.1
13	13.5	0.0	5.7	25.1	7.8	16.4	22.9	6.4	13.6	12.1	-3.5	3.3
14	16.5	0.0	8.8	23.8	7.8	15.8	20.9	5.3	12.9	14.3	-5.7	3.5
15	19.7	2.1	11.9	24.2	9.2	16.3	15.4	4.6	9.7	14.6	-1.7	6.7
16	17.7	4.6	10.7	22.9	7.8	13.4	13.1	3.9	7.8	16.9	1.1	8.6
17	16.9	3.5	9.4	23.8	7.4	14.2	14.3	4.9	8.9	15.0	-2.1	8.2
18	15.4	3.2	8.4	25.1	7.1	15.3	18.1	4.9	10.5	10.2	-7.1	1.2
19	12.8	2.5	7.1	23.3	8.1	12.7	20.1	4.6	12.1	---	---	---
20	13.1	1.8	8.0	22.1	7.8	15.6	20.9	5.7	13.1	13.5	-0.7	5.7
21	16.1	-0.7	8.8	22.9	7.4	15.9	21.3	6.0	12.0	14.6	-3.1	5.0
22	17.3	4.6	11.2	23.8	6.4	14.2	20.1	7.4	12.8	17.3	-1.4	6.8
23	16.9	1.4	10.6	20.1	7.8	13.6	18.1	5.7	10.2	17.3	0.7	8.2
24	15.4	2.5	10.8	23.3	7.4	12.8	18.1	4.2	10.6	18.9	0.0	8.3
25	13.1	-1.0	6.2	21.3	7.8	13.7	17.3	5.7	10.8	18.5	2.1	8.8
26	16.1	-2.1	7.1	21.7	7.8	12.9	18.5	4.6	10.2	18.9	-0.3	8.0
27	19.3	-0.7	9.8	21.3	7.8	13.2	17.3	6.0	10.0	18.5	1.1	8.4
28	20.1	2.5	11.8	20.9	4.9	12.1	13.9	5.7	9.4	18.9	1.8	9.2
29	19.7	3.9	12.0	18.5	6.7	11.2	17.7	4.9	9.2	17.7	3.9	10.3
30	22.5	3.9	13.6	21.7	5.7	13.6	15.4	4.9	8.1	18.5	2.5	9.5
31	---	---	---	18.5	7.1	10.9	16.9	2.5	8.6	---	---	---
MONTH	22.5	-2.1	9.0	25.5	3.5	14.3	22.9	2.5	11.4	---	---	---



**375852107455200 GOVERNOR BASIN METEOROLOGICAL STATION NEAR TELLURIDE, CO**

LOCATION.--Lat 37°58'52", long 107°45'52", Ouray County, Hydrologic Unit 14020006, 0.4 mi east of Stony Mountain, and 4.5 mi north of Telluride.

PERIOD OF RECORD.--October 1992 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=375852107455200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=375852107455200)

GAGE.--Weighing-bucket rain gage with satellite telemetry. Elevation of gage is 11,150 ft above NGVD of 1929, from topographic map.

REMARKS.--Unpublished air-temperature and precipitation data for water year 1993 are available in district office.

## EXTREMES FOR PERIOD OF RECORD.--

AIR TEMPERATURE: Maximum, 22.1°C, July 11, 13, 2003; minimum, -31.7°C, Dec. 17, 18, 1996.

PRECIPITATION: Maximum daily, 2.7 inches, Oct. 3, 1996.

## EXTREMES FOR CURRENT YEAR.--

AIR TEMPERATURE: Maximum, 22.1°C, July 11, 13; minimum, -23.6°C, Feb. 7.

PRECIPITATION: Maximum daily, 1.3 inches, Nov. 9.

TEMPERATURE, AIR, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	5.3	0.0	2.2	1.4	-2.8	-1.3	-4.2	-12.1	-7.5	-8.6	-16.6	-12.7
2	5.7	-1.0	0.7	-2.1	-10.1	-4.0	-0.7	-10.9	-6.0	-3.5	-15.7	-10.4
3	1.4	-9.4	-4.5	2.1	-19.7	-7.2	-3.5	-11.3	-6.8	-0.3	-8.6	-4.2
4	4.2	-9.8	-3.0	-1.0	-9.0	-3.8	-0.7	-11.3	-8.8	0.7	-7.9	-2.9
5	5.7	-2.8	1.6	-1.0	-10.9	-7.1	-4.2	-11.7	-9.2	-1.0	-8.6	-4.7
6	8.8	-3.8	1.6	5.3	-7.1	-0.7	-2.1	-12.5	-8.1	-2.4	-9.8	-6.1
7	11.0	0.0	4.0	5.7	-3.8	-0.3	-2.4	-11.7	-8.8	1.8	-6.8	-2.7
8	8.5	-1.0	2.5	-1.7	-4.6	-2.8	-3.5	-11.7	-9.3	2.1	-6.0	-3.2
9	8.8	-1.4	2.8	-1.7	-11.3	-4.3	-3.1	-10.9	-8.3	-2.1	-8.3	-5.2
10	10.6	-1.4	4.2	-7.5	-14.9	-10.4	-1.4	-12.1	-7.8	-4.6	-9.8	-7.0
11	8.1	1.8	5.2	-7.5	-15.7	-10.3	-6.8	-14.5	-11.7	-4.6	-12.5	-7.8
12	7.1	-4.2	1.3	-1.4	-17.0	-8.8	-7.5	-11.7	-9.9	-2.4	-14.9	-10.0
13	7.8	-1.4	2.3	3.5	-7.9	-2.1	-3.1	-12.1	-7.7	1.1	-9.0	-3.0
14	7.1	-3.1	1.0	-4.6	-12.5	-8.6	1.1	-11.7	-5.1	2.1	-4.9	-2.5
15	9.2	-2.1	2.0	-7.1	-17.0	-11.8	0.0	-8.6	-3.0	-2.1	-14.1	-7.2
16	7.8	-2.8	1.7	-0.3	-14.1	-6.1	-1.4	-8.6	-5.6	-3.8	-14.1	-8.9
17	8.8	-1.7	2.6	3.9	-10.1	-2.5	-7.9	-12.9	-9.9	-4.6	-13.3	-8.6
18	5.3	-3.5	0.0	0.4	-14.5	-7.7	-12.1	-15.7	-14.1	0.7	-11.7	-6.8
19	6.4	-2.8	0.6	0.4	-7.9	-4.0	-12.5	-19.7	-15.6	1.1	-8.6	-3.8
20	6.0	-3.8	0.1	6.7	-7.5	-2.2	-6.8	-15.7	-11.0	1.8	-6.8	-3.1
21	4.9	-3.8	0.0	7.8	-4.6	0.1	-10.5	-18.8	-14.6	-3.1	-9.0	-5.7
22	1.8	-2.8	-0.5	7.1	-1.7	1.6	-10.1	-16.2	-14.0	-1.4	-10.9	-6.6
23	1.1	-3.5	-1.7	3.9	-6.4	-1.0	-8.3	-15.3	-13.0	1.8	-6.0	-2.2
24	-0.7	-6.4	-3.5	-0.7	-7.9	-4.9	-10.1	-17.9	-14.4	-0.7	-7.5	-4.5
25	-0.3	-8.6	-4.1	-3.1	-13.3	-7.9	-13.7	-21.1	-17.0	-3.5	-11.7	-6.7
26	0.0	-6.8	-2.9	-3.5	-15.7	-10.6	-10.5	-22.6	-17.0	2.5	-11.7	-5.3
27	-0.7	-7.1	-4.2	-3.8	-14.5	-9.9	-3.5	-16.2	-8.7	4.9	-5.3	-1.3
28	-1.7	-9.0	-5.6	1.8	-9.8	-4.6	1.1	-5.3	-2.6	0.0	-9.8	-4.2
29	-4.2	-11.3	-8.0	1.1	-4.9	-3.0	-1.7	-10.1	-5.5	0.0	-10.5	-4.9
30	-2.4	-10.1	-5.5	2.5	-4.9	-2.2	-6.4	-17.0	-12.0	1.8	-7.1	-2.3
31	1.4	-5.3	-2.3	---	---	---	-2.4	-11.7	-6.1	4.9	-7.9	-2.9
MONTH	11.0	-11.3	-0.3	7.8	-19.7	-4.9	1.1	-22.6	-9.6	4.9	-16.6	-5.4

## 375852107455200 GOVERNOR BASIN METEOROLOGICAL STATION NEAR TELLURIDE, CO—Continued

TEMPERATURE, AIR, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	4.9	-1.7	0.9	-6.0	-16.6	-12.4	---	---	---	2.5	-7.9	-2.4
2	-0.7	-11.7	-5.8	-6.8	-17.9	-13.2	1.8	-6.0	-0.7	4.9	-2.8	1.7
3	-9.8	-15.7	-13.4	-0.7	-14.1	-7.0	-5.7	-10.5	-7.3	4.6	-2.8	1.6
4	-8.6	-15.7	-12.6	-7.1	-11.7	-9.9	-3.5	-16.2	-8.5	-1.4	-6.4	-3.8
5	-12.1	-19.7	-14.8	-9.8	-14.5	-12.0	-4.6	-11.7	-7.8	1.1	-6.0	-3.0
6	-14.9	-23.6	-19.8	-3.8	-11.7	-7.6	-4.6	-12.5	-9.2	2.5	-6.8	-2.4
7	-10.1	-23.6	-17.6	1.8	-9.0	-4.8	-5.3	-14.5	-10.4	3.2	-3.8	0.3
8	-7.9	-16.6	-13.6	1.8	-7.5	-3.7	4.6	-15.3	-5.2	-1.4	-6.0	-2.9
9	-13.7	-20.2	-16.0	3.5	-6.8	-2.9	7.1	-4.9	0.8	2.1	-7.9	-3.3
10	-3.8	-19.3	-11.5	5.7	-6.4	-2.0	8.5	-3.8	1.9	-1.7	-10.5	-5.7
11	-2.8	-14.9	-8.2	2.8	-4.9	-1.8	9.2	-3.1	2.3	6.4	-6.4	0.1
12	3.2	-7.1	-1.8	6.4	-4.9	-1.0	6.4	-2.4	2.3	9.9	-1.4	4.2
13	0.7	-3.1	-1.2	7.4	-4.6	1.0	8.5	-2.4	3.1	9.5	0.7	4.7
14	-2.1	-10.9	-5.3	4.9	-3.8	0.4	6.4	-2.4	2.2	10.2	1.1	4.6
15	-1.7	-11.7	-8.5	5.3	-5.7	-0.8	1.8	-8.6	-3.6	5.7	-0.7	1.9
16	-1.7	-12.1	-5.1	-0.3	-7.1	-3.3	6.0	-9.4	-1.6	9.9	0.4	5.2
17	-2.4	-10.1	-6.1	-3.5	-8.6	-5.8	3.9	-6.4	-0.9	12.1	3.2	7.9
18	-6.8	-16.2	-9.8	-5.7	-10.5	-8.3	-1.7	-8.3	-6.0	9.5	0.7	3.8
19	-6.8	-14.1	-11.0	-4.6	-12.1	-7.8	0.0	-9.4	-5.5	8.5	-1.7	3.3
20	-3.1	-14.1	-8.8	0.7	-8.6	-4.3	3.9	-9.4	-2.3	9.5	0.7	5.1
21	-6.8	-14.1	-10.0	-4.2	-12.1	-7.2	4.6	-1.4	0.4	11.0	1.4	6.2
22	-7.5	-14.5	-10.6	5.3	-12.5	-4.6	-0.7	-6.4	-2.6	13.1	2.5	8.2
23	-6.4	-17.4	-12.4	4.9	-4.2	-0.2	-5.7	-12.1	-8.0	15.0	4.2	8.7
24	-6.0	-10.9	-8.0	2.1	-7.1	-2.6	4.6	-6.0	-1.0	13.9	4.9	8.2
25	-4.6	-10.9	-7.4	0.7	-7.5	-3.8	8.5	-3.8	2.6	11.7	3.2	6.6
26	-4.2	-10.9	-8.3	2.8	-7.1	-1.1	6.7	-2.1	2.5	13.9	2.5	8.6
27	-7.5	-10.9	-9.6	-7.1	-14.5	-11.7	7.1	-2.8	2.3	16.1	6.0	10.7
28	-6.0	-14.9	-10.7	-10.1	-17.9	-13.7	5.7	-2.8	2.5	16.9	6.0	10.5
29	---	---	---	-6.0	-21.1	-13.3	4.2	-4.2	0.5	15.8	6.4	10.7
30	---	---	---	1.4	-14.1	-6.0	1.4	-6.4	-2.1	15.4	6.4	9.7
31	---	---	---	---	---	---	---	---	---	15.0	4.9	8.4
MONTH	4.9	-23.6	-9.5	---	---	---	---	---	---	16.9	-10.5	3.8
	JUNE			JULY			AUGUST			SEPTEMBER		
1	10.6	3.9	6.7	18.5	7.8	13.6	15.0	5.7	10.4	15.4	2.5	9.3
2	12.8	2.8	9.1	19.3	6.4	13.0	16.9	8.1	11.4	16.1	6.0	10.7
3	13.9	2.5	8.9	19.7	6.7	13.8	15.4	6.0	10.1	12.8	5.7	8.2
4	12.8	4.2	8.5	20.5	6.0	14.1	16.1	4.6	10.6	14.3	3.9	8.7
5	8.8	0.4	4.6	20.9	8.1	14.3	19.3	7.1	12.8	12.4	4.2	7.1
6	9.9	0.7	6.0	18.5	8.1	12.9	17.3	7.4	11.8	8.5	3.5	5.8
7	9.5	1.4	6.1	19.7	7.4	13.5	16.1	8.1	11.3	7.8	2.1	4.7
8	13.1	1.4	7.7	20.9	6.4	14.6	15.4	6.4	11.1	12.4	2.1	7.8
9	12.4	2.8	8.2	20.5	6.4	14.3	17.3	7.8	12.5	7.8	-0.3	3.1
10	12.8	2.8	8.4	20.9	6.7	14.0	17.7	8.8	11.9	1.8	-2.4	0.1
11	12.8	1.4	7.7	22.1	8.1	15.9	17.7	8.1	11.8	4.6	-3.8	-0.3
12	---	---	---	21.3	11.0	16.2	16.5	7.4	11.7	11.7	-1.4	5.0
13	10.2	1.8	5.8	22.1	11.0	16.3	18.9	7.1	12.6	9.5	-2.8	3.5
14	13.5	2.1	8.3	20.5	10.6	15.6	18.5	7.1	12.1	11.3	-4.2	3.6
15	15.8	4.6	10.6	20.5	7.4	13.7	12.4	4.9	8.2	11.3	1.4	7.1
16	15.4	5.3	9.8	18.9	8.1	11.8	10.6	3.5	6.4	13.9	2.5	8.2
17	14.6	4.9	8.4	20.9	7.8	13.3	11.7	4.6	7.5	11.3	-3.1	7.0
18	12.4	3.5	7.8	21.7	8.8	14.7	13.9	5.7	9.2	11.0	-7.1	2.2
19	10.2	2.8	5.7	18.9	8.1	11.9	16.5	6.4	11.7	11.7	0.4	5.9
20	11.0	0.7	7.1	18.9	9.2	14.8	17.3	7.8	12.2	10.2	1.8	5.9
21	13.1	1.4	8.2	19.7	7.8	13.0	17.3	7.8	11.8	11.7	-0.7	5.5
22	14.3	4.2	10.1	20.5	8.1	13.6	15.8	7.8	11.2	15.0	1.4	7.3
23	13.9	3.5	9.8	17.7	8.1	12.1	16.1	5.7	8.8	---	---	---
24	11.7	1.8	8.4	18.9	8.1	12.9	13.5	4.2	8.9	15.0	3.2	8.3
25	9.9	-1.4	5.1	18.1	8.1	12.6	14.3	6.4	9.4	14.6	3.9	9.1
26	13.5	-1.0	6.5	19.3	9.2	12.6	14.6	5.7	9.9	15.4	2.8	8.5
27	16.5	2.1	9.4	18.1	7.8	12.0	15.4	7.1	9.5	15.4	4.2	8.6
28	16.5	4.6	11.2	16.9	6.0	10.9	10.2	6.4	7.8	15.4	4.6	9.5
29	16.9	5.3	11.4	15.8	6.0	10.1	14.3	5.7	8.8	14.3	6.0	10.2
30	18.5	6.0	12.6	17.7	6.4	12.2	10.6	3.5	7.2	14.3	3.9	9.0
31	---	---	---	14.6	6.7	9.5	13.9	3.9	8.5	---	---	---
MONTH	---	---	---	22.1	6.0	13.3	19.3	3.5	10.3	---	---	---

375852107455200 GOVERNOR BASIN METEOROLOGICAL STATION NEAR TELLURIDE, CO—Continued

PRECIPITATION, TOTAL, INCHES  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0
2	0.4	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0
3	0.5	0.0	0.0	0.4	0.1	0.3	0.0	0.0	0.0	0.0	0.5	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.2	0.0	0.0	0.0	0.2
6	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.2
7	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.3
8	0.0	1.2	0.0	0.0	0.0	0.4	0.4	0.2	0.0	0.0	0.1	0.0
9	0.0	1.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.9
10	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4
11	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.0
12	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.8
13	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.6	0.0
14	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.8	0.0	0.0	0.0	0.0	0.1	0.5	0.0	0.4	0.1	0.0
16	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.4	0.3	0.0
17	0.0	0.0	0.8	0.1	0.3	0.1	0.0	0.0	0.1	0.0	0.1	0.0
18	0.0	0.0	0.3	0.0	0.3	0.3	0.1	0.3	0.0	0.0	0.2	0.0
19	0.0	0.0	0.1	0.0	0.5	0.1	0.0	0.0	0.4	0.2	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.3	0.0	0.0
22	0.0	0.0	0.0	0.0	0.1	0.2	0.5	0.0	0.0	0.0	0.1	0.0
23	0.4	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.2	0.0
24	0.1	0.0	0.0	0.0	0.1	0.4	0.0	0.0	0.0	0.0	0.1	0.0
25	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.4	0.1	0.0
26	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
27	0.3	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.2	0.2	0.0
28	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0	0.3	0.1
29	0.4	0.0	0.1	0.0	---	0.1	0.0	0.0	0.0	0.0	0.0	0.0
30	0.1	0.0	0.1	0.0	---	0.0	0.0	0.0	0.0	0.0	0.4	0.0
31	0.0	---	0.2	0.0	---	0.0	---	0.0	---	0.3	0.0	---
TOTAL	2.8	3.8	2.0	1.5	2.4	4.1	2.4	1.7	0.7	3.2	3.7	3.9
WTR YR 2003	TOTAL 32.2											

**380102107402200 OURAY METEOROLOGICAL STATION AT OURAY, CO**

LOCATION.--Lat 38°01'02", long 107°40'22", in SW $\frac{1}{4}$  sec.31,T.43 N, R.7 W., Ouray County, Hydrologic Unit 14020006, 0.4 mi southwest of post office in Ouray.

PERIOD OF RECORD.--December 1992 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=380102107402200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=380102107402200)

GAGE.--Weighing-bucket rain gage with satellite telemetry. Elevation of gage is 7,960 ft above NGVD of 1929, from topographic map.

REMARKS.--Unpublished air-temperature and rainfall data for water year 1993 are available in district office.

## EXTREMES FOR PERIOD OF RECORD.--

AIR TEMPERATURE: Maximum, 31.6°C, July 13,2002; July 11, 2003; minimum recorded, -24.1°C, Dec. 17, 18, 1996.

PRECIPITATION: Maximum daily, 2.2 inches, Oct. 3, 1996.

## EXTREMES FOR CURRENT YEAR.--

AIR TEMPERATURE: Maximum, 31.6°C, July 11; minimum, -17.9°C, Feb. 7.

PRECIPITATION: Maximum daily, 1.6 inches, Sept. 9.

TEMPERATURE, AIR, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.3	5.7	9.9	9.5	-1.4	6.2	2.5	-3.8	-0.9	-2.4	-10.5	-6.7
2	9.9	3.9	6.4	7.1	-2.4	3.5	3.2	-7.1	-1.9	-0.3	-11.3	-5.9
3	3.9	-2.1	0.5	1.4	-9.0	-4.0	2.5	-4.6	-1.2	4.6	-5.7	-0.4
4	9.5	-2.8	3.1	6.0	-3.8	0.7	2.8	-7.1	-3.0	6.7	-2.4	1.0
5	13.5	0.7	6.3	5.3	-6.0	-1.3	3.9	-4.9	-1.5	5.7	-3.5	-1.0
6	13.9	0.7	6.8	12.4	-3.1	3.5	4.2	-5.7	-2.0	4.9	-4.2	-1.3
7	17.3	1.8	8.8	13.5	2.8	7.5	3.2	-5.3	-2.1	5.3	-6.0	-1.6
8	15.8	3.2	8.4	5.3	1.4	3.3	1.8	-7.1	-3.7	8.5	-3.8	0.9
9	15.8	3.5	8.5	6.7	-3.5	1.5	6.0	-5.7	-1.8	4.9	-3.5	-0.4
10	18.9	3.9	11.0	1.1	-7.9	-4.3	4.2	-6.0	-1.8	2.8	-4.9	-0.9
11	17.3	8.5	13.3	2.1	-7.1	-3.1	0.0	-8.3	-4.7	0.0	-2.8	-1.8
12	13.5	1.8	6.7	1.8	-9.8	-4.2	-0.3	-5.7	-3.0	1.4	-8.6	-4.2
13	14.6	1.1	7.8	5.3	-4.6	0.1	5.3	-4.9	-1.3	6.0	-6.0	-0.9
14	14.6	2.8	7.5	2.5	-3.5	-1.4	7.8	-4.6	-0.3	9.2	-2.8	2.8
15	16.1	1.8	7.5	-2.4	-9.8	-5.5	8.8	-2.4	3.3	5.3	-7.5	-1.7
16	14.6	1.8	7.0	4.2	-10.9	-3.4	6.4	-2.1	2.2	1.8	-8.6	-4.0
17	16.5	3.5	8.8	9.9	-2.8	1.6	-1.4	-7.5	-3.5	1.8	-6.8	-3.1
18	12.4	2.1	6.2	5.3	-6.8	-1.8	-4.2	-8.6	-6.5	4.6	-7.1	-2.8
19	14.3	1.8	6.5	5.7	-4.6	-0.6	-4.2	-12.5	-9.0	8.8	-4.2	0.8
20	13.5	1.1	6.5	7.4	-4.6	0.4	1.4	-10.1	-4.0	7.8	-4.2	0.5
21	12.4	2.5	6.7	10.2	-1.7	2.9	-2.1	-12.5	-8.2	6.0	-3.1	0.2
22	10.2	3.9	7.0	12.4	0.4	5.6	-3.5	-12.5	-9.0	4.9	-3.8	-0.3
23	8.8	0.0	3.8	10.6	0.0	6.0	-3.8	-13.3	-8.8	7.8	-3.5	1.4
24	4.6	0.0	1.8	6.7	-1.4	1.6	-3.8	-11.3	-7.8	6.4	-1.7	1.6
25	8.5	-1.0	3.2	0.7	-6.4	-2.7	-4.6	-13.7	-9.8	2.5	-3.8	-0.3
26	6.7	-0.3	2.8	-0.7	-9.8	-6.1	-2.8	-15.3	-9.6	7.1	-5.3	-0.3
27	4.6	-0.3	1.5	3.2	-8.3	-3.7	3.2	-9.4	-3.8	11.7	-1.0	3.7
28	5.7	-2.4	1.2	7.1	-6.4	-1.7	5.3	-6.0	0.1	6.0	-3.1	1.7
29	0.0	-4.9	-2.6	7.4	-3.5	0.9	5.3	-5.3	1.7	5.7	-5.3	-0.2
30	6.7	-4.9	1.3	8.5	-3.5	1.8	-2.8	-8.6	-6.0	8.5	-1.7	2.9
31	9.5	-1.0	4.9	---	---	---	4.2	-7.9	-2.5	9.2	-1.0	2.8
MONTH	18.9	-4.9	5.8	13.5	-10.9	0.1	8.8	-15.3	-3.6	11.7	-11.3	-0.6

380102107402200 OURAY METEOROLOGICAL STATION AT OURAY, CO—Continued

TEMPERATURE, AIR, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	14.3	1.4	7.1	-1.7	-12.5	-7.0	---	---	---	10.6	-1.4	4.8
2	8.1	-5.3	1.8	0.7	-14.1	-6.9	9.5	3.5	6.6	14.6	2.8	9.3
3	-2.8	-10.9	-7.2	4.6	-9.8	-2.6	3.9	-2.4	1.5	14.3	3.9	10.5
4	-1.4	-10.5	-6.2	1.1	-4.9	-2.1	4.9	-8.3	-0.6	7.1	0.4	3.8
5	-6.8	-11.7	-9.1	-0.7	-9.8	-6.1	4.6	-4.6	0.1	8.5	-0.7	3.9
6	-9.0	-17.4	-12.2	5.7	-9.8	-2.0	2.5	-5.3	-2.8	11.0	-0.7	5.1
7	-4.9	-17.9	-12.7	9.9	-4.9	1.5	2.8	-6.4	-3.1	11.7	4.6	8.4
8	-1.4	-14.5	-8.6	8.1	-3.5	1.6	10.6	-8.3	0.4	8.1	0.0	4.8
9	-6.8	-12.5	-9.1	9.5	-2.8	2.9	15.4	0.0	7.3	10.2	-2.1	4.1
10	1.4	-12.5	-5.7	9.9	-1.4	3.7	16.9	4.2	9.4	5.3	-5.3	0.6
11	4.6	-8.6	-2.7	9.5	-0.7	3.7	16.9	2.5	9.3	16.1	-1.4	7.4
12	7.4	-4.9	1.1	11.0	0.7	5.3	16.1	6.0	10.6	19.7	4.2	12.0
13	7.8	0.7	3.7	14.6	0.7	7.5	17.7	6.7	11.6	18.1	8.1	12.8
14	1.8	-3.1	0.1	13.1	1.8	8.0	15.8	6.4	10.5	19.3	7.4	12.7
15	1.4	-5.3	-1.6	12.4	0.0	6.4	9.2	1.8	3.7	11.7	4.6	8.0
16	6.7	-4.6	1.1	7.4	0.7	4.1	12.8	0.4	5.6	20.9	4.6	12.1
17	3.9	-4.9	-0.1	3.5	-2.1	0.5	13.5	-0.3	7.8	21.7	9.2	15.7
18	-1.7	-6.4	-3.9	-1.7	-4.6	-3.0	7.4	-1.7	2.3	18.1	5.3	11.6
19	-0.7	-7.5	-4.6	0.4	-4.9	-3.1	6.7	-3.1	0.9	15.4	2.1	8.9
20	2.1	-6.4	-2.7	9.2	-5.7	-0.4	11.3	-3.8	3.6	16.5	6.4	10.5
21	0.4	-6.4	-3.1	2.8	-3.1	-0.9	12.8	3.2	7.6	20.9	4.9	13.0
22	1.4	-6.0	-3.0	9.2	-6.0	1.1	7.4	-0.3	3.8	22.9	8.1	15.3
23	1.4	-9.8	-4.3	14.3	-0.3	5.7	1.8	-4.6	-0.8	23.8	11.0	17.3
24	1.8	-3.8	-1.0	10.6	-1.0	3.2	12.8	0.7	5.6	22.9	11.7	16.8
25	1.8	-3.5	-0.9	7.1	-1.4	1.7	17.3	4.2	10.6	20.5	9.5	14.7
26	1.1	-6.8	-2.5	11.7	-2.8	6.0	16.5	4.2	10.4	23.3	7.8	15.9
27	0.7	-7.1	-3.8	-2.8	-7.9	-5.2	16.9	3.5	10.4	25.5	11.0	18.6
28	-1.7	-7.9	-4.8	-1.0	-8.6	-6.3	15.8	5.7	10.9	27.3	13.1	19.1
29	---	---	---	0.7	-12.9	-5.9	13.5	3.9	9.3	27.8	14.3	19.5
30	---	---	---	7.8	-7.5	0.3	11.0	1.4	6.4	25.5	14.3	18.7
31	---	---	---	---	---	---	---	---	---	24.2	11.0	16.4
MONTH	14.3	-17.9	-3.4	---	---	---	---	---	---	27.8	-5.3	11.4
	JUNE			JULY			AUGUST			SEPTEMBER		
1	19.7	9.5	13.6	29.7	15.8	22.3	24.2	12.4	18.4	23.8	8.1	16.0
2	22.5	8.5	15.8	28.7	13.1	21.0	26.0	13.5	17.6	24.2	12.8	17.9
3	22.5	7.1	15.1	29.7	14.6	21.9	21.7	11.3	17.0	20.9	11.3	15.1
4	22.1	6.7	14.9	29.2	13.1	21.7	26.0	9.9	17.5	22.9	12.1	17.1
5	17.7	6.0	12.1	29.7	13.5	21.8	27.3	13.9	20.4	20.5	8.5	14.0
6	19.3	6.0	13.0	26.4	16.5	21.5	27.3	17.7	20.6	18.5	8.5	11.6
7	18.1	6.4	12.2	30.1	14.6	22.5	26.0	15.0	19.7	15.8	8.1	10.7
8	23.3	7.4	15.1	30.6	17.3	23.6	25.1	11.7	18.6	22.5	7.8	15.4
9	22.5	11.7	15.7	29.2	13.5	21.2	27.8	13.9	20.8	15.8	3.5	9.0
10	23.3	11.7	16.6	29.7	12.8	21.1	28.2	17.3	20.7	8.5	2.1	5.6
11	22.1	8.5	15.9	31.6	16.5	23.9	27.3	15.4	21.4	13.1	1.4	6.2
12	---	---	---	30.6	18.5	24.4	26.9	15.8	20.3	18.5	3.9	10.4
13	17.7	7.4	11.8	31.1	19.3	24.6	28.7	12.8	20.0	12.1	2.1	8.6
14	22.9	7.8	15.6	30.6	18.1	24.1	27.8	11.3	19.7	16.9	1.1	8.3
15	25.5	11.7	19.0	28.7	17.7	22.8	20.5	12.1	16.0	20.1	6.0	12.6
16	23.8	14.6	18.4	28.7	18.5	21.5	19.7	12.1	14.8	22.5	8.8	15.7
17	23.3	11.7	17.0	28.7	15.0	21.1	20.9	11.7	15.3	20.5	4.9	15.3
18	22.5	10.2	15.7	30.6	17.3	23.0	22.1	11.3	17.0	13.9	-2.1	5.5
19	17.3	9.2	13.3	28.7	16.9	21.6	26.0	12.4	18.9	18.5	3.2	10.1
20	20.1	9.2	15.1	29.2	16.1	23.1	27.3	13.5	20.2	18.9	6.7	11.9
21	22.9	9.9	16.7	30.1	15.8	22.0	23.8	13.9	17.9	18.9	4.2	11.1
22	23.3	12.8	18.6	30.6	17.3	22.4	22.9	11.7	16.6	21.3	6.7	13.2
23	22.9	13.5	18.7	26.9	18.1	21.2	22.5	10.6	14.0	22.5	8.8	14.5
24	20.9	9.2	16.8	28.7	16.5	21.1	22.9	10.2	16.6	22.5	8.1	14.4
25	18.9	4.6	12.1	27.3	15.8	20.5	23.3	12.8	17.6	22.9	9.2	15.1
26	21.3	5.3	13.4	28.2	15.8	20.8	23.3	12.1	17.4	22.1	8.1	14.2
27	25.1	9.2	17.0	28.2	13.5	19.5	22.1	12.4	16.3	22.5	8.8	14.5
28	26.4	12.8	19.0	27.8	11.3	17.9	18.1	11.7	13.7	22.9	9.5	15.5
29	26.0	11.3	19.0	26.4	12.1	17.2	22.5	11.0	15.3	22.9	10.6	16.2
30	28.2	13.1	20.7	29.2	13.5	21.1	20.9	9.2	13.9	22.5	11.0	15.8
31	---	---	---	24.6	12.8	17.7	22.1	8.5	14.8	---	---	---
MONTH	---	---	---	31.6	11.3	21.6	28.7	8.5	17.7	24.2	-2.1	12.7





**380251107513000 WEST FORK DALLAS CREEK METEOROLOGICAL STATION NEAR RIDGWAY, CO**

LOCATION.--Lat 38°02'51", long 107°51'30", Ouray County, Hydrologic Unit 14020006, 5.2 mi north of Mears Peak, and 9.0 mi southwest of Ridgway.

PERIOD OF RECORD.--October 1992 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=380251107513000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=380251107513000)

GAGE.--Weighing-bucket rain gage with satellite telemetry. Elevation of gage is 9,260 ft above NGVD of 1929, from topographic map.

REMARKS.--Unpublished air-temperature and precipitation data for water year 1993 are available in district office.

## EXTREMES FOR PERIOD OF RECORD.--

AIR TEMPERATURE: Maximum, 28.2°C, July 11, 13, 2003; minimum, -29.8°C, Dec. 18, 1996.

PRECIPITATION: Maximum daily, 2.8 inches, Oct. 3, 1996.

## EXTREMES FOR CURRENT YEAR.--

AIR TEMPERATURE: Maximum, 28.2°C, July 11, 13; minimum, -24.1°C, Feb. 7.

PRECIPITATION: Maximum daily, 2.1 inches, Sept. 9.

TEMPERATURE, AIR, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	11.7	2.5	6.1	7.8	0.4	3.0	-0.3	-10.9	-5.1	-5.7	-15.3	-9.5
2	6.0	0.7	3.7	3.5	-4.9	1.0	2.8	-13.7	-7.1	2.5	-16.2	-9.8
3	0.7	-5.3	-1.8	-1.4	-12.9	-7.0	1.1	-11.7	-5.2	1.8	-9.4	-5.0
4	6.4	-6.0	-0.7	3.9	-6.4	-1.1	0.4	-13.7	-8.6	5.7	-8.6	-4.2
5	10.2	-1.4	2.2	3.2	-10.5	-5.2	1.4	-11.3	-6.7	2.1	-7.9	-4.3
6	12.8	-3.1	2.2	10.2	-8.3	-2.5	0.7	-13.3	-8.0	4.9	-10.1	-5.3
7	14.6	-2.4	3.7	9.5	-7.1	0.5	1.8	-12.9	-8.2	6.0	-12.5	-7.3
8	13.9	-2.4	3.5	2.8	0.4	1.6	-0.3	-14.1	-9.8	6.4	-10.5	-6.6
9	13.1	-1.4	3.5	2.8	-6.0	-0.5	2.8	-13.7	-8.9	1.1	-10.1	-4.2
10	15.0	-1.7	5.9	-2.4	-10.9	-6.5	2.5	-14.1	-8.0	1.1	-8.6	-4.1
11	13.9	4.6	9.9	-1.7	-10.9	-6.0	-2.8	-14.9	-9.8	-0.7	-6.8	-4.0
12	11.0	-2.1	2.8	6.4	-14.5	-7.6	-2.8	-9.8	-6.0	0.0	-13.3	-8.2
13	12.8	-3.8	2.5	3.2	-9.0	-3.3	2.8	-10.5	-5.9	7.1	-10.5	-5.2
14	12.1	-2.1	2.6	0.7	-7.9	-4.7	6.0	-12.9	-6.5	7.1	-7.9	-2.8
15	12.8	-3.8	2.1	-2.8	-14.9	-8.1	5.3	-6.4	0.1	-0.3	-12.9	-3.7
16	12.1	-2.8	2.1	3.5	-15.3	-7.3	4.2	-6.4	-1.4	1.1	-14.1	-8.6
17	13.5	-3.1	3.1	4.2	-8.6	-3.5	-3.5	-9.4	-5.7	0.4	-14.5	-7.8
18	10.2	-2.8	1.7	2.1	-12.1	-6.8	-4.2	-12.5	-9.2	3.9	-14.5	-7.7
19	10.2	-3.8	1.6	4.6	-10.1	-5.1	-6.8	-17.0	-13.0	8.1	-10.5	-5.4
20	10.6	-3.1	1.8	9.2	-9.4	-4.0	-4.6	-16.2	-9.1	7.4	-10.5	-4.9
21	8.5	-2.8	1.5	11.0	-6.0	-2.3	-5.3	-17.0	-11.8	4.2	-9.8	-5.0
22	6.7	-1.4	2.5	11.0	-6.0	-1.9	-5.7	-18.3	-13.6	3.9	-10.9	-5.6
23	4.6	-1.0	0.6	7.1	-6.0	0.5	-6.0	-18.3	-12.9	5.7	-8.6	-2.1
24	2.1	-2.8	-0.8	5.3	-4.6	-0.9	-5.3	-18.3	-13.3	5.7	-6.4	-2.1
25	6.0	-4.9	-0.9	0.4	-10.1	-4.4	-8.3	-20.2	-16.0	0.4	-9.4	-3.5
26	4.6	-3.8	-0.6	-2.8	-14.9	-10.0	-3.5	-21.1	-14.8	6.4	-12.9	-5.2
27	1.4	-2.8	-0.7	2.5	-14.9	-9.9	1.8	-15.3	-9.9	9.9	-6.4	-0.6
28	3.9	-7.1	-1.9	6.4	-12.5	-7.1	4.6	-12.9	-6.9	6.0	-7.5	0.0
29	-1.7	-7.1	-4.5	7.8	-10.1	-5.8	1.4	-6.4	-1.6	4.9	-10.9	-4.3
30	1.8	-7.1	-1.4	5.7	-10.1	-4.1	-3.8	-13.3	-9.3	7.1	-7.5	-1.3
31	6.7	-0.7	1.9	---	---	---	0.7	-13.3	-5.6	8.1	-6.4	-1.6
MONTH	15.0	-7.1	1.7	11.0	-15.3	-4.0	6.0	-21.1	-8.3	9.9	-16.2	-4.8

380251107513000 WEST FORK DALLAS CREEK METEOROLOGICAL STATION NEAR RIDGWAY, CO—Continued

TEMPERATURE, AIR, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	9.9	-3.5	2.6	-5.7	-16.6	-10.8	12.4	0.7	6.2	8.1	-4.2	1.8
2	5.3	-7.1	-1.2	-1.4	-19.7	-12.1	6.7	-0.3	4.1	11.7	-1.4	6.1
3	-4.6	-16.6	-10.2	2.8	-17.0	-7.5	0.7	-5.7	-1.8	10.2	1.1	6.3
4	-2.4	-16.2	-9.1	-2.8	-7.1	-5.0	1.8	-11.7	-4.0	4.6	-2.1	1.1
5	-8.6	-15.7	-12.2	-4.2	-13.3	-8.8	3.5	-7.5	-2.5	4.6	-2.8	1.3
6	-10.9	-22.6	-16.5	2.5	-14.9	-5.1	-1.7	-7.5	-5.4	7.8	-3.8	1.7
7	-7.1	-24.1	-18.0	6.7	-10.1	-1.9	0.0	-12.1	-6.0	8.5	2.1	5.3
8	-2.1	-20.7	-13.2	7.1	-7.9	-1.4	6.4	-14.9	-4.6	5.3	-1.7	2.3
9	-8.3	-18.8	-11.4	7.8	-7.9	-0.6	11.7	-8.3	0.5	6.7	-2.8	1.2
10	1.4	-19.3	-10.8	8.1	-5.3	0.8	13.5	-3.8	3.1	4.6	-4.2	-0.9
11	1.4	-15.7	-7.9	7.4	-5.3	0.2	12.4	-3.1	3.3	12.1	-5.7	3.2
12	6.0	-11.7	-3.3	9.2	-3.1	1.8	12.4	-2.4	4.8	16.1	-0.7	7.3
13	4.2	-1.4	0.8	12.4	-5.7	2.5	14.6	-1.4	7.5	13.9	2.8	8.5
14	0.4	-6.8	-1.7	9.5	-1.0	4.9	13.1	-0.3	6.7	15.4	2.1	8.6
15	0.4	-10.1	-5.3	10.2	-2.8	3.2	5.7	-2.1	0.4	8.5	1.1	4.6
16	2.5	-10.5	-3.2	5.3	-3.8	0.5	9.9	-3.1	1.9	16.5	1.1	7.5
17	1.8	-6.8	-2.0	2.8	-3.8	-1.8	9.9	-2.1	3.8	18.9	1.4	10.7
18	-2.1	-10.5	-5.8	-2.8	-6.0	-4.4	4.6	-3.1	-0.3	13.1	1.4	8.0
19	-1.4	-12.1	-7.1	-1.7	-7.1	-5.1	3.2	-5.3	-1.3	12.8	-1.0	5.2
20	0.0	-12.1	-6.6	3.9	-9.4	-2.3	8.5	-7.1	0.1	13.5	0.4	6.1
21	-1.4	-11.7	-7.2	-0.7	-6.8	-3.2	11.0	-2.4	4.1	16.5	-0.7	7.5
22	-2.1	-11.3	-7.7	6.0	-9.8	-2.7	5.7	-2.4	1.6	19.7	0.7	9.7
23	-2.8	-17.4	-8.9	10.2	-4.9	3.0	0.0	-7.5	-3.0	19.3	1.8	10.1
24	0.7	-5.7	-2.7	7.1	-2.4	1.9	9.2	-1.0	2.8	18.5	2.8	9.9
25	-0.3	-8.3	-3.3	4.6	-4.6	-1.1	13.9	-2.4	5.4	15.8	2.8	7.7
26	-2.4	-10.1	-6.4	8.5	-4.9	2.6	12.4	0.7	6.9	19.3	1.1	9.9
27	-2.4	-10.5	-6.6	-3.5	-9.8	-7.3	12.8	-1.0	5.7	21.3	4.2	12.4
28	-4.2	-12.1	-7.3	-5.3	-11.7	-8.6	12.1	2.8	7.5	23.3	4.2	13.1
29	---	---	---	-1.0	-18.3	-10.2	9.5	2.1	5.5	22.5	4.6	13.3
30	---	---	---	---	---	---	7.8	-2.8	2.5	20.5	6.7	12.6
31	---	---	---	---	---	---	---	---	---	19.7	6.7	10.8
MONTH	9.9	-24.1	-6.9	---	---	---	14.6	-14.9	1.9	23.3	-5.7	6.9
	JUNE			JULY			AUGUST			SEPTEMBER		
1	15.0	4.9	9.4	25.5	7.8	16.5	19.7	7.1	12.3	20.1	1.8	10.3
2	19.3	3.2	11.4	25.1	6.0	15.8	21.3	7.8	12.3	20.9	5.3	12.0
3	18.9	1.4	10.5	25.5	6.7	16.0	17.7	8.8	12.3	18.5	7.4	11.2
4	18.1	1.4	10.1	26.0	5.3	15.6	22.1	5.7	12.7	19.3	5.7	11.2
5	14.6	0.7	7.4	25.5	4.9	15.2	23.8	7.1	14.1	15.4	5.3	9.3
6	17.3	0.4	9.1	25.1	9.2	15.4	24.2	7.1	12.6	12.1	4.2	7.9
7	14.6	2.1	8.2	26.0	7.4	16.1	20.9	8.1	12.5	9.9	3.9	6.8
8	19.3	1.8	10.8	27.3	7.1	16.9	20.9	8.1	13.9	17.7	2.5	10.1
9	17.7	7.8	12.3	25.5	6.4	15.4	22.1	7.8	14.7	12.4	1.4	7.0
10	19.7	4.2	11.4	26.0	4.6	15.1	23.8	8.8	14.7	6.0	0.0	3.5
11	---	---	---	28.2	7.1	17.4	24.2	7.4	13.4	9.2	-1.4	2.5
12	17.7	1.8	9.5	26.4	9.2	17.4	21.7	8.1	14.7	15.8	-0.7	6.1
13	16.1	2.1	8.6	28.2	8.5	18.1	24.2	8.5	15.3	10.2	-2.1	4.3
14	19.3	2.8	11.0	26.9	9.5	17.8	24.2	7.1	13.4	14.6	-3.8	3.8
15	22.1	3.5	12.8	26.0	12.1	18.9	15.0	7.1	11.5	17.7	-1.4	7.4
16	20.1	6.0	12.1	26.0	11.7	16.3	13.9	6.4	8.9	18.1	4.6	11.7
17	18.5	4.9	11.2	24.6	8.8	15.7	16.5	6.7	10.5	16.5	-0.3	11.5
18	18.1	3.9	11.0	26.0	9.2	15.2	20.1	6.7	13.1	11.0	-5.7	1.8
19	16.1	4.2	9.5	25.1	8.5	12.8	22.1	8.5	15.2	---	---	---
20	16.1	3.9	10.6	24.2	7.4	15.6	22.9	6.7	13.7	15.8	0.7	6.7
21	19.7	6.4	13.5	26.0	9.2	17.2	22.1	7.8	14.0	16.1	-1.7	5.5
22	20.9	9.5	15.1	27.3	8.1	16.8	20.5	8.5	13.1	19.3	0.0	7.1
23	19.7	8.5	14.9	23.3	10.6	16.5	18.1	8.8	11.7	19.3	0.4	7.8
24	18.5	6.0	12.8	23.3	8.5	15.3	17.3	6.0	10.9	19.7	1.4	8.9
25	16.5	-0.7	8.4	24.2	9.9	16.4	20.5	7.4	12.5	20.1	1.8	8.9
26	18.5	-0.7	8.7	22.1	9.5	15.7	17.3	5.7	10.8	19.7	1.1	8.3
27	21.3	1.4	11.3	24.6	9.9	15.6	16.9	7.4	11.9	20.5	1.4	8.8
28	22.9	3.5	13.0	23.8	7.1	13.9	15.8	7.8	10.6	20.9	2.5	9.6
29	22.9	3.9	13.1	20.9	8.8	13.2	17.3	6.4	10.1	20.5	3.5	10.1
30	25.1	6.0	14.4	24.2	6.4	14.7	15.4	5.3	9.4	19.7	6.0	11.4
31	---	---	---	20.1	8.1	11.4	18.9	4.6	10.5	---	---	---
MONTH	---	---	---	28.2	4.6	15.8	24.2	4.6	12.5	---	---	---

380251107513000 WEST FORK DALLAS CREEK METEOROLOGICAL STATION NEAR RIDGWAY, CO—Continued

PRECIPITATION, TOTAL, INCHES  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.1	0.0	0.3	0.2	0.0	0.3	0.0	0.0	0.1	0.0	0.0	0.0
2	0.5	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0
3	0.6	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.1	0.2	0.1	0.0	0.2	0.0	0.0	0.0	0.2
6	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.2	0.1
7	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.3
8	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
9	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
10	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
11	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.1	0.0
14	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.4	0.0	0.0	0.1	0.0	0.2	0.3	0.0	0.0	0.4	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.0
17	0.0	0.0	0.5	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.4	0.0	0.7	0.5	0.0	0.2	0.1	0.3	0.0	0.0
19	0.0	0.0	0.1	0.0	0.3	0.2	0.0	0.0	0.1	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
23	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.3	0.0
24	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.2	0.0	0.0	0.2	0.2	0.0	0.1	0.0	0.0	0.0	0.1
26	0.4	0.0	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
27	0.1	0.0	0.1	0.0	0.2	0.6	0.0	0.0	0.0	0.2	0.3	0.0
28	0.0	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.7	0.2	0.0
29	0.6	0.0	0.0	0.0	---	0.0	0.0	0.0	0.0	0.1	0.1	0.0
30	0.0	0.0	0.1	0.0	---	0.0	0.0	0.0	0.0	0.0	0.3	0.0
31	0.0	---	0.3	0.0	---	0.0	---	0.0	---	1.0	0.0	---
TOTAL	2.6	2.2	1.9	0.5	2.8	3.2	1.2	0.9	0.3	2.6	3.4	3.4
CAL YR	2002	TOTAL		21.6								
WTR YR	2003	TOTAL		25.0								

**380324107444500 WHITEHOUSE CREEK METEOROLOGICAL STATION NEAR OURAY, CO**

LOCATION.--Lat 38°03'24", long 107°44'45", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.21, T.44 N, R.8 W., Ouray County, Hydrologic Unit 14020006, 3.0 mi north of Whitehouse Mountain, and 4.7 mi northwest of Ouray.

PERIOD OF RECORD.--October 1992 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=380324107444500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=380324107444500)

GAGE.--Weighing-bucket rain gage with satellite telemetry. Elevation of gage is 9,480 ft above NGVD of 1929, from topographic map.

REMARKS.--Unpublished air-temperature and precipitation data for water year 1993 are available in district office.

## EXTREMES FOR PERIOD OF RECORD.--

AIR TEMPERATURE: Maximum, 28.2°C, July 11, 13, 2003; minimum recorded, -29.8°C, Dec. 17, 18, 1996.

PRECIPITATION: Maximum daily, 2.5 inches, Oct. 3, 1996.

## EXTREMES FOR CURRENT YEAR.--

AIR TEMPERATURE: Maximum, 28.2°C, July 11, 13; minimum, -23.6°C, Feb. 7.

PRECIPITATION: Maximum daily, 1.9 inches, Sept. 9.

TEMPERATURE, AIR, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.4	1.1	5.8	8.5	-2.4	2.3	0.7	-10.9	-4.8	-2.4	-14.9	-9.7
2	6.0	0.7	3.4	3.5	-6.4	0.1	2.8	-12.1	-6.6	1.8	-15.3	-9.3
3	0.7	-5.7	-2.1	-1.0	-13.7	-7.1	0.4	-10.9	-5.1	3.9	-8.3	-4.3
4	7.1	-6.0	-0.5	2.8	-7.5	-2.8	0.4	-12.1	-7.7	7.1	-7.5	-3.1
5	9.2	-1.0	1.9	2.1	-10.9	-5.3	0.4	-10.5	-6.1	3.2	-7.1	-4.2
6	12.8	-2.4	2.9	10.6	-7.1	-1.6	1.8	-12.1	-7.3	3.9	-9.8	-5.0
7	14.6	-1.0	4.6	11.3	-5.3	0.9	1.4	-11.3	-7.5	5.7	-10.1	-5.5
8	13.1	-1.0	4.3	4.6	-1.4	1.5	0.4	-12.9	-8.2	8.5	-7.9	-4.2
9	13.5	-0.7	4.4	3.5	-6.8	-0.8	3.5	-11.7	-7.2	1.1	-8.3	-4.2
10	15.4	-1.0	5.8	-1.7	-11.3	-6.9	2.5	-11.7	-7.0	0.4	-8.6	-4.5
11	14.3	0.7	7.3	-2.1	-12.9	-6.9	-2.4	-14.1	-9.8	-1.0	-6.8	-4.6
12	11.0	-2.1	3.0	2.8	-15.3	-7.7	-3.8	-10.5	-6.6	1.1	-13.3	-7.9
13	13.1	-2.4	3.5	3.9	-7.5	-2.5	3.2	-10.1	-6.0	6.4	-9.4	-4.2
14	12.1	-1.7	3.1	0.7	-7.9	-4.7	6.7	-10.9	-5.4	7.8	-6.8	-2.5
15	13.5	-2.4	3.1	-2.8	-14.5	-9.0	4.6	-7.5	-0.6	3.2	-13.3	-4.4
16	12.1	-2.1	2.9	5.7	-14.5	-6.7	4.9	-7.9	-1.9	1.1	-13.7	-7.7
17	13.1	-2.1	3.7	9.2	-7.5	-2.3	-3.1	-10.9	-6.2	1.8	-12.9	-7.0
18	10.6	-2.4	2.2	3.5	-12.5	-6.4	-5.3	-12.1	-9.8	4.9	-12.5	-6.1
19	12.1	-2.8	2.1	4.2	-10.5	-4.7	-7.1	-17.0	-12.6	8.5	-8.6	-3.8
20	11.0	-2.8	2.1	7.4	-8.3	-2.6	-1.4	-14.5	-7.9	6.4	-8.6	-3.5
21	9.2	-2.4	1.7	11.0	-4.9	-0.4	-4.6	-17.0	-11.8	4.9	-9.0	-4.2
22	6.4	-1.4	2.0	12.4	-3.8	0.1	-4.2	-17.4	-13.3	4.2	-9.8	-4.6
23	5.7	-1.0	0.6	7.8	-4.2	0.4	-3.5	-16.2	-11.8	7.1	-7.1	-1.4
24	3.2	-3.1	-1.0	5.3	-6.0	-1.8	-5.3	-16.6	-11.8	4.6	-6.0	-2.3
25	4.9	-4.9	-0.8	-0.3	-10.9	-5.4	-9.0	-18.8	-14.9	0.0	-9.8	-3.9
26	4.6	-4.2	-1.2	-0.7	-15.3	-9.7	-4.6	-20.2	-13.9	6.7	-11.3	-4.4
27	4.2	-4.2	-1.3	1.8	-14.1	-8.9	1.4	-14.1	-8.3	9.2	-5.3	-0.4
28	3.2	-6.8	-2.5	5.7	-10.5	-5.4	5.7	-10.5	-5.7	5.3	-7.9	-2.3
29	-2.1	-9.0	-5.6	7.1	-7.5	-3.7	3.2	-7.9	-2.6	3.5	-10.1	-4.7
30	5.3	-9.8	-2.2	7.8	-7.1	-2.6	-3.1	-12.9	-8.8	6.0	-7.5	-1.2
31	7.1	-4.6	1.9	---	---	---	0.7	-11.3	-5.7	9.5	-6.4	-0.9
MONTH	15.4	-9.8	1.8	12.4	-15.3	-3.7	6.7	-20.2	-7.8	9.5	-15.3	-4.4

380324107444500 WHITEHOUSE CREEK METEOROLOGICAL STATION NEAR OURAY, CO—Continued

TEMPERATURE, AIR, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	10.6	-3.1	3.1	-4.2	-17.0	-11.5	12.4	-4.2	4.6	6.7	-4.6	1.0
2	5.7	-8.6	-1.8	-0.3	-17.4	-10.8	7.8	-0.7	4.0	11.0	-1.7	5.1
3	-1.7	-16.2	-10.3	2.8	-15.7	-6.0	0.4	-6.8	-2.2	9.2	1.8	6.2
4	-2.1	-16.2	-10.1	-2.4	-7.9	-5.2	1.4	-12.1	-4.2	4.2	-2.4	0.6
5	-9.8	-15.3	-12.7	-3.5	-14.1	-8.9	1.1	-9.4	-3.6	5.3	-3.1	0.3
6	-10.5	-21.6	-16.5	2.5	-14.1	-5.4	0.0	-9.4	-5.5	6.4	-4.2	0.7
7	-6.4	-23.6	-17.0	6.4	-9.8	-2.5	1.8	-12.1	-6.1	8.5	-1.7	3.8
8	-2.1	-19.3	-12.9	6.0	-7.5	-1.6	7.8	-14.5	-4.0	5.3	-2.8	1.5
9	-9.8	-17.9	-13.5	7.4	-7.1	-0.3	11.7	-7.5	1.3	6.7	-6.0	0.4
10	0.4	-18.8	-9.9	8.5	-6.0	0.4	14.6	-3.5	3.9	2.8	-9.4	-3.1
11	1.4	-14.9	-8.0	7.4	-4.9	0.2	13.9	-3.5	3.9	12.8	-5.7	2.7
12	6.7	-11.3	-2.4	8.8	-3.8	1.6	12.4	-2.1	5.3	15.0	-1.4	6.8
13	3.9	-1.4	0.5	12.1	-4.9	2.0	14.3	-2.1	5.6	14.3	1.8	7.5
14	-0.3	-7.5	-2.7	10.6	-2.4	2.8	12.8	-2.4	5.3	14.6	2.5	7.6
15	0.0	-10.1	-5.5	9.9	-3.5	2.2	6.0	-2.8	0.4	8.8	0.4	3.9
16	4.6	-10.5	-3.4	2.8	-5.3	-0.9	9.2	-3.5	1.6	16.5	0.7	7.7
17	0.7	-8.3	-3.0	1.1	-5.3	-3.2	8.8	-3.5	4.0	18.1	2.8	10.7
18	-2.4	-10.1	-6.5	-3.5	-7.5	-5.6	4.9	-4.6	-0.7	13.1	1.1	7.2
19	-0.7	-13.3	-7.7	-1.0	-7.9	-5.7	4.9	-6.8	-1.8	12.1	-1.0	5.1
20	1.4	-13.3	-6.4	6.0	-9.0	-2.9	8.5	-7.5	0.0	13.1	0.7	5.9
21	-0.7	-10.1	-6.4	1.1	-7.5	-3.7	10.6	-2.1	3.5	17.3	0.0	8.1
22	-1.4	-10.9	-6.9	6.7	-10.5	-2.4	5.7	-2.8	0.7	19.3	1.8	10.1
23	-2.1	-16.6	-8.0	10.6	-6.0	1.5	-1.4	-8.3	-3.8	19.3	2.8	10.3
24	-0.3	-7.1	-3.8	7.4	-4.6	-0.1	9.5	-2.4	2.4	18.9	3.2	10.2
25	-1.4	-8.6	-4.4	4.9	-5.7	-1.0	13.9	-3.1	5.6	14.6	2.5	8.0
26	-2.8	-11.7	-6.9	8.5	-5.7	1.9	12.1	-0.3	6.3	19.7	2.1	10.3
27	-2.1	-12.5	-7.5	-3.8	-10.9	-7.9	13.5	-1.7	5.3	22.1	3.9	12.4
28	-4.9	-12.9	-8.0	-4.6	-13.3	-9.2	11.0	-0.7	6.1	22.5	4.9	12.0
29	---	---	---	-1.4	-19.3	-10.2	9.5	-1.7	5.2	23.3	4.6	12.5
30	---	---	---	6.4	-12.5	-3.8	7.4	-2.4	2.3	20.5	6.7	10.8
31	---	---	---	---	---	---	---	---	---	19.7	5.7	9.7
MONTH	10.6	-23.6	-7.1	---	---	---	14.6	-14.5	1.5	23.3	-9.4	6.3
	JUNE			JULY			AUGUST			SEPTEMBER		
1	14.6	4.9	8.9	24.6	9.5	16.8	20.5	7.4	13.1	20.1	3.9	11.0
2	18.9	3.5	11.4	24.6	7.8	15.8	18.5	9.5	12.1	19.7	7.1	11.8
3	18.5	2.1	10.8	25.1	8.5	16.1	17.7	8.5	11.9	18.1	6.7	10.6
4	18.9	2.8	10.4	26.4	7.4	16.3	20.9	6.4	13.2	17.7	6.0	10.7
5	14.3	1.8	7.7	23.8	8.5	15.7	23.8	8.5	15.2	16.1	5.7	9.6
6	15.8	1.4	9.1	23.8	9.9	14.7	21.7	9.5	14.1	15.0	4.9	8.1
7	13.5	2.8	8.4	25.5	8.5	16.1	20.1	9.9	13.0	10.6	4.6	7.0
8	18.5	2.8	10.7	26.4	9.2	17.5	18.9	8.5	13.6	18.5	3.5	10.8
9	17.7	7.4	11.8	24.2	8.5	16.0	22.9	9.2	14.9	9.9	0.7	5.7
10	18.5	4.9	11.4	27.3	7.8	16.3	23.3	10.2	14.7	6.0	0.0	3.2
11	17.3	5.3	11.4	28.2	9.9	17.8	23.8	9.5	13.8	8.5	-1.4	2.4
12	16.1	3.2	9.4	26.9	11.7	18.1	22.9	8.8	13.9	15.8	0.4	6.5
13	13.5	3.2	7.5	28.2	11.3	18.2	23.3	9.2	14.5	10.2	-1.4	4.6
14	17.7	3.5	10.6	26.4	11.3	18.3	23.3	7.4	13.8	14.6	-2.4	4.3
15	22.1	5.3	13.1	26.0	13.5	17.8	15.4	6.7	10.5	15.4	0.7	7.6
16	19.7	7.1	11.7	25.5	11.0	16.0	16.1	5.7	9.3	17.3	4.9	11.4
17	17.7	5.7	10.2	24.6	10.2	15.2	16.1	7.4	10.9	15.4	-0.7	9.4
18	17.7	4.9	10.6	26.0	9.9	16.8	18.5	8.5	13.3	11.3	-5.3	2.2
19	15.8	5.3	9.0	22.5	11.7	15.5	22.5	9.2	14.5	---	---	---
20	16.9	4.6	10.8	23.3	10.6	16.8	23.3	8.5	14.3	16.5	2.1	7.2
21	18.9	3.2	12.0	25.1	10.2	17.1	18.9	9.5	12.5	15.4	0.0	6.6
22	19.7	4.9	13.7	26.0	9.2	16.1	17.7	9.5	12.7	18.9	1.8	8.3
23	18.5	6.7	13.8	23.8	11.0	15.2	17.3	8.5	11.0	18.9	2.8	9.4
24	16.5	5.3	11.9	23.8	9.9	15.0	19.3	6.4	11.6	20.1	3.5	9.9
25	14.6	0.7	7.6	23.8	9.5	14.4	17.3	8.5	12.1	19.7	3.9	10.1
26	17.3	1.1	8.9	22.9	9.2	14.5	16.5	7.1	11.5	20.1	3.2	9.8
27	20.5	3.5	11.8	22.5	9.2	14.0	16.9	8.5	11.3	20.1	3.9	10.1
28	22.9	5.7	13.7	23.3	7.1	14.1	15.4	7.8	10.5	20.1	4.9	11.0
29	22.1	6.0	13.8	22.1	8.8	13.3	17.3	7.1	10.5	20.5	6.7	11.8
30	25.1	8.5	15.2	23.3	8.5	14.8	17.3	6.0	9.7	20.1	6.7	12.0
31	---	---	---	22.1	8.5	11.7	18.1	4.9	10.3	---	---	---
MONTH	25.1	0.7	10.9	28.2	7.1	15.9	23.8	4.9	12.5	---	---	---



**380436107411500 PORTLAND METEOROLOGICAL STATION NEAR OURAY, CO**

LOCATION.--Lat 38°04'36", long 107°41'15", in SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.12, T.44 N, R.8 W., Ouray County, Hydrologic Unit 14020006, 4 mi north of Ouray, and 8.6 mi east of Black Lake.

PERIOD OF RECORD.--May 1992 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=380436107411500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=380436107411500)

GAGE.--Weighing-bucket rain gage with satellite telemetry. Elevation of gage is 8,080 ft above NGVD of 1929, from topographic map.

REMARKS.--Unpublished air-temperature and precipitation data for water years 1992 and 1993 are available in district office.

## EXTREMES FOR PERIOD OF RECORD.--

AIR TEMPERATURE: Maximum, 32.6°C, July 13, 14, 2002; July 11, 2003; minimum, -23.6°C, Dec. 17, 18, 1996.

PRECIPITATION: Maximum daily, 2.3 inches, Oct. 3, 1996.

## EXTREMES FOR CURRENT YEAR.--

AIR TEMPERATURE: Maximum, 32.6°C, July 11; minimum, -17.4°C, Feb. 7.

PRECIPITATION: Maximum daily, 1.8 inches, Sept. 9.

TEMPERATURE, AIR, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	16.5	4.9	9.7	11.0	-2.8	5.2	4.2	-4.2	-0.7	-3.5	-9.8	-6.7
2	11.0	3.2	6.5	8.5	-2.8	3.4	3.5	-6.0	-1.3	1.4	-10.1	-4.3
3	3.2	-2.1	0.1	0.0	-10.9	-4.9	2.8	-4.2	-1.3	7.8	-4.2	1.1
4	10.2	-2.8	3.3	5.3	-4.6	0.2	2.5	-6.4	-2.5	7.4	-0.7	2.6
5	11.7	1.1	6.1	4.9	-6.0	-0.9	3.2	-4.6	-1.1	6.4	-4.2	-0.1
6	14.6	1.4	7.1	11.3	-2.4	3.8	3.5	-4.6	-1.7	4.9	-4.6	-0.7
7	18.1	3.9	9.7	15.0	2.5	7.2	3.5	-4.9	-1.5	6.0	-3.8	0.2
8	16.1	3.5	9.2	7.1	2.1	3.9	1.8	-6.8	-3.1	9.9	-0.7	2.9
9	16.9	4.9	10.1	7.8	-3.8	1.9	4.9	-4.9	-1.1	3.5	-2.4	0.0
10	18.5	6.4	12.1	0.0	-6.8	-3.8	5.7	-4.9	-1.1	3.2	-2.8	-0.3
11	18.9	7.8	12.7	1.1	-6.4	-3.3	-0.3	-8.3	-4.5	0.4	-3.1	-2.1
12	13.1	2.5	6.9	3.2	-9.0	-3.0	-0.3	-6.0	-3.1	1.4	-7.5	-3.4
13	15.8	1.8	7.7	4.9	-3.5	0.6	6.4	-4.2	-0.4	6.0	-6.0	-0.3
14	15.4	4.2	8.3	2.5	-3.8	-1.6	7.4	-3.1	1.1	8.5	-1.7	3.2
15	16.1	2.5	8.2	-1.7	-9.0	-5.3	8.8	-0.3	3.9	4.6	-6.0	-2.0
16	14.6	3.9	8.2	4.9	-10.1	-2.0	8.5	-1.7	2.1	1.4	-8.3	-3.8
17	16.5	4.6	9.2	11.0	-3.5	2.7	-1.0	-6.8	-3.3	2.8	-6.4	-2.2
18	13.1	2.1	6.8	4.2	-4.9	-1.2	-2.8	-9.0	-6.5	2.8	-6.4	-2.3
19	15.0	2.8	7.6	4.9	-2.8	0.4	-0.3	-10.9	-8.4	8.8	-3.8	2.0
20	13.5	3.5	7.5	6.4	-2.8	1.1	2.8	-9.8	-3.9	8.8	-0.7	2.5
21	13.9	3.9	7.8	9.9	0.0	4.3	-3.5	-11.7	-7.9	6.7	-2.1	1.6
22	11.3	2.5	6.3	13.5	2.8	7.3	-3.8	-11.7	-8.4	5.3	-2.8	0.7
23	8.5	0.0	3.3	9.9	1.1	5.6	-4.2	-12.1	-8.5	7.8	-1.7	2.2
24	3.5	-0.3	1.5	6.7	0.0	2.6	-3.5	-10.1	-7.8	6.4	-0.3	2.1
25	8.5	-1.4	3.6	1.4	-5.7	-3.3	-4.9	-12.1	-9.5	2.1	-3.5	-0.4
26	7.1	-1.4	2.3	-1.0	-8.6	-5.6	-3.5	-13.7	-8.9	6.7	-4.2	0.6
27	6.4	-1.7	1.3	4.2	-7.1	-2.6	3.2	-8.3	-2.8	12.4	0.4	5.5
28	5.7	-2.4	1.2	6.0	-4.9	-0.3	7.4	-3.5	1.9	7.4	-2.4	2.7
29	0.0	-4.9	-2.5	8.1	-2.1	2.2	4.6	-5.7	0.5	5.7	-3.1	0.7
30	7.1	-4.6	1.5	9.2	-2.1	2.4	-2.4	-7.9	-5.7	8.5	-0.3	3.8
31	9.9	0.4	5.0	---	---	---	3.9	-6.0	-2.4	9.9	-0.7	4.0
MONTH	18.9	-4.9	6.1	15.0	-10.9	0.6	8.8	-13.7	-3.2	12.4	-10.1	0.3



## 380436107411500 PORTLAND METEOROLOGICAL STATION NEAR OURAY, CO—Continued

TEMPERATURE, AIR, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	13.1	4.6	8.0	-1.7	-9.8	-6.5	16.1	5.7	10.5	11.0	-0.7	5.0
2	7.8	-5.3	1.5	0.0	-12.5	-6.4	11.3	3.2	7.7	16.1	3.2	9.8
3	-1.4	-9.0	-6.9	3.5	-9.0	-2.3	4.6	-3.1	1.1	14.6	4.6	10.7
4	-0.7	-9.4	-5.4	-0.3	-5.3	-2.6	4.6	-8.3	-1.1	10.2	0.0	3.8
5	-6.8	-11.7	-9.6	-1.4	-8.6	-5.3	5.3	-6.4	-0.3	10.2	-0.7	3.8
6	-9.0	-15.7	-12.1	3.9	-6.0	-0.9	1.8	-6.4	-2.9	11.0	-1.0	5.0
7	-6.0	-17.4	-12.5	8.8	-2.1	2.8	2.8	-5.7	-2.9	12.4	4.9	8.6
8	-1.0	-13.3	-7.8	8.5	-0.7	3.5	10.2	-6.4	1.3	10.2	-0.7	4.8
9	-6.4	-11.3	-8.8	9.5	0.4	4.7	15.4	0.7	8.1	11.3	-2.4	4.0
10	2.5	-11.3	-4.5	10.6	1.4	5.6	17.3	5.3	11.0	6.0	-5.7	0.4
11	4.2	-5.7	-1.4	10.6	0.7	5.2	17.3	4.9	10.6	18.1	-0.7	8.4
12	7.4	-3.5	1.6	11.3	2.8	6.7	16.1	7.4	11.6	19.7	6.0	13.4
13	6.4	0.4	2.7	13.9	3.2	8.5	18.5	5.7	11.9	17.7	9.2	13.4
14	1.8	-2.8	-0.1	14.3	1.8	8.6	17.3	4.6	10.3	20.1	9.9	13.6
15	2.5	-4.9	-1.6	12.8	1.8	7.1	8.8	-0.7	3.3	12.1	3.5	7.9
16	6.4	-4.2	0.8	6.7	-0.7	2.8	13.5	-1.0	5.3	20.9	5.7	13.1
17	4.2	-5.7	-0.6	3.9	-2.8	0.0	12.8	-1.4	7.7	22.5	12.4	17.5
18	-1.7	-6.0	-4.2	-1.0	-4.9	-3.2	8.8	-2.1	2.5	17.3	6.7	11.5
19	-1.0	-7.9	-4.6	0.7	-5.3	-3.0	7.8	-3.5	0.7	17.7	3.2	9.8
20	3.5	-6.8	-2.4	6.0	-4.9	-0.3	11.3	-4.2	3.6	16.5	6.7	11.0
21	0.4	-6.0	-2.5	4.9	-2.8	-0.6	14.3	2.8	8.3	22.5	7.8	14.6
22	2.5	-6.8	-2.8	9.5	-3.5	2.7	9.2	-1.0	3.7	23.8	11.3	17.1
23	0.7	-10.5	-4.5	13.1	1.8	7.0	2.8	-5.3	-0.8	23.8	13.1	18.1
24	3.2	-3.1	-0.3	9.9	-1.4	3.6	13.9	1.8	6.7	23.3	12.8	17.7
25	1.4	-3.1	-1.2	8.5	-1.7	2.1	18.5	4.6	10.8	19.7	9.9	14.7
26	0.7	-6.4	-3.2	12.4	-3.1	6.6	16.5	6.7	11.5	24.2	9.5	17.0
27	0.7	-6.8	-3.9	-1.7	-8.3	-5.3	18.5	3.9	11.5	26.0	12.4	19.6
28	-2.1	-7.1	-5.1	-1.7	-9.0	-6.3	15.8	7.4	11.6	27.3	15.0	19.8
29	---	---	---	0.7	-11.7	-4.9	14.6	3.9	9.0	28.2	13.5	19.5
30	---	---	---	---	---	---	11.0	1.4	6.3	24.2	13.1	18.3
31	---	---	---	---	---	---	---	---	---	24.6	12.1	16.6
MONTH	13.1	-17.4	-3.3	---	---	---	18.5	-8.3	6.0	28.2	-5.7	11.9
	JUNE			JULY			AUGUST			SEPTEMBER		
1	21.7	9.9	14.5	29.7	17.3	23.1	25.1	13.5	19.0	24.6	10.6	17.3
2	24.2	9.9	16.5	29.7	13.5	21.4	24.2	13.9	18.2	24.2	13.9	18.4
3	25.1	8.1	16.2	30.6	15.0	22.3	21.7	13.1	16.9	22.1	11.3	15.6
4	22.5	8.8	15.5	30.6	13.5	22.1	26.9	11.0	18.9	23.8	12.4	17.2
5	18.9	6.7	12.6	30.1	14.3	21.8	29.7	15.4	21.9	21.7	8.1	14.0
6	21.7	7.1	13.9	28.2	17.7	22.1	26.4	18.1	21.3	18.5	7.8	11.2
7	18.5	6.0	12.6	29.7	17.3	23.2	25.5	13.9	19.7	16.9	8.5	11.4
8	22.9	8.1	15.7	31.1	17.7	24.1	26.4	12.8	19.5	23.3	10.2	16.1
9	20.5	11.3	15.7	30.1	13.9	21.6	28.2	15.0	21.4	14.3	3.5	8.9
10	22.9	10.6	16.5	30.6	14.6	22.4	28.7	17.3	21.0	9.2	2.5	6.3
11	22.5	11.0	16.9	32.6	17.3	24.6	29.2	16.1	21.2	13.1	0.7	6.2
12	22.1	8.5	14.3	32.1	18.1	24.9	28.2	14.6	20.2	19.7	4.9	11.2
13	16.9	6.7	12.1	31.6	18.1	24.6	28.2	12.4	20.2	13.1	3.2	9.4
14	23.8	9.5	16.8	31.1	17.3	24.1	27.8	12.4	19.8	17.7	1.8	8.9
15	26.0	12.4	19.1	30.1	17.7	22.8	18.5	12.4	15.5	20.5	6.7	13.4
16	24.2	13.5	17.8	28.2	18.1	21.5	19.7	11.3	14.7	22.1	12.4	17.2
17	22.9	11.0	16.4	29.7	15.8	21.1	21.3	11.3	15.4	20.9	3.9	14.8
18	22.1	10.6	15.6	29.7	16.1	23.1	23.3	12.1	17.9	13.5	-2.4	5.1
19	19.7	8.1	13.3	29.2	18.1	22.0	27.8	13.9	19.9	---	---	---
20	20.1	8.1	15.0	30.6	16.1	23.0	28.2	14.6	20.3	19.3	7.4	12.6
21	23.8	9.9	17.0	29.2	16.1	21.4	24.6	15.4	18.5	19.7	5.7	11.8
22	24.6	9.9	17.5	31.1	16.9	23.1	22.9	13.9	16.7	21.3	7.4	14.1
23	23.8	14.3	18.6	26.9	18.9	21.8	20.1	11.7	14.8	22.9	9.9	15.9
24	23.3	7.4	16.8	28.2	15.8	20.7	24.2	10.6	16.7	22.1	10.2	15.5
25	20.1	4.2	12.0	26.9	15.0	20.4	22.5	13.1	17.2	22.5	10.6	15.9
26	22.1	5.3	13.4	28.2	15.0	20.7	22.5	11.7	17.2	22.9	9.2	15.6
27	26.4	9.2	17.5	28.2	13.5	19.1	21.7	11.3	16.1	22.5	9.9	15.8
28	27.8	12.1	19.6	28.7	12.4	18.4	20.1	11.3	14.5	23.8	11.3	17.0
29	26.4	11.7	19.1	26.9	12.8	17.9	22.9	12.4	16.5	23.8	13.1	17.6
30	28.2	16.5	21.5	29.2	13.9	21.1	19.7	9.2	14.0	23.3	12.8	17.4
31	---	---	---	25.5	12.1	18.0	23.8	8.8	15.6	---	---	---
MONTH	28.2	4.2	16.0	32.6	12.1	21.9	29.7	8.8	18.1	---	---	---

380436107411500 PORTLAND METEOROLOGICAL STATION NEAR OURAY, CO—Continued

PRECIPITATION, TOTAL, INCHES  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0
2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	0.6	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1
6	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
7	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
10	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
11	0.0	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
13	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	1.2	0.0
14	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0
15	0.0	0.3	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.1	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.0	0.2	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0
18	0.0	0.0	0.2	0.0	0.6	0.5	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.3	0.0	0.2	0.1	0.4	0.0	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.1	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.1	0.0
23	0.1	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3	0.0
24	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.0
26	0.3	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.3	0.7	0.0
28	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.3	0.1	0.0
29	0.4	0.0	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.1	0.0	---	0.0	0.0	0.0	0.0	0.0	0.3	0.0
31	0.0	---	0.1	0.0	---	0.0	---	0.0	---	0.3	0.0	---
TOTAL	1.7	1.5	1.0	0.4	1.8	2.5	1.8	0.2	0.2	1.4	3.0	2.3
WTR YR 2003	TOTAL 17.8											

**380844107512200 PLEASANT VALLEY METEOROLOGICAL STATION NEAR RIDGWAY, CO**

LOCATION.--Lat 38°08'44", long 107°51'22", in SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.16, T.45 N, R.9 W., Ouray County, Hydrologic Unit 14020006, 5.3 mi west of Ridgway.

PERIOD OF RECORD.--October 1994 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=380844107512200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=380844107512200)

GAGE.--Weighing-bucket rain gage with satellite telemetry. Elevation of gage is 7,530 ft above NGVD of 1929, from topographic map.

REMARKS.--Daily record for air temperature is good. Daily record for precipitation is good.

## EXTREMES FOR PERIOD OF RECORD.--

AIR TEMPERATURE: Maximum, 31.6°C, July 13, 2002; minimum recorded, -25.7°C, Dec. 18, 1996.

PRECIPITATION: Maximum daily, 3.1 inches, July 31, 1999.

## EXTREMES FOR CURRENT YEAR.--

AIR TEMPERATURE: Maximum, 32.1°C, July 13; minimum, -20.7°C, Feb. 7.

PRECIPITATION: Maximum daily, 1.7 inches, Sept. 9.

TEMPERATURE, AIR, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.4	4.2	9.7	11.3	-1.4	5.5	8.1	-6.0	-1.0	-2.4	-14.1	-6.6
2	11.0	2.8	6.6	7.8	-3.1	4.2	5.3	-9.0	-2.0	2.5	-15.3	-7.5
3	4.6	-0.3	1.9	0.7	-9.4	-4.0	4.6	-6.4	-1.5	6.0	-9.8	-2.3
4	10.6	-2.8	4.5	6.7	-4.9	0.2	3.5	-7.9	-2.8	9.2	-5.3	0.3
5	13.5	1.4	6.8	6.0	-7.5	-1.5	4.2	-6.0	-1.4	5.3	-3.5	-1.1
6	14.6	-0.3	6.5	12.8	-5.7	1.8	3.9	-7.9	-2.5	5.3	-6.8	-1.2
7	17.7	1.1	8.5	15.0	-1.7	5.5	4.6	-7.1	-2.2	8.1	-8.3	-2.5
8	16.5	0.7	8.2	7.4	2.1	5.3	3.9	-9.0	-3.8	8.8	-6.0	-0.3
9	16.1	1.1	8.2	8.8	-3.1	3.1	6.7	-8.3	-2.8	4.2	-6.4	-0.7
10	18.1	0.0	10.1	0.7	-7.9	-3.7	5.7	-8.6	-2.8	4.2	-3.8	0.2
11	16.9	6.7	13.0	0.7	-6.8	-2.7	1.1	-10.5	-5.1	2.8	-3.1	-1.1
12	13.9	-1.0	6.2	4.6	-10.5	-3.2	0.7	-7.5	-3.0	4.9	-9.0	-3.5
13	16.1	-2.1	6.6	5.3	-5.3	-0.1	6.7	-7.1	-1.4	7.4	-9.8	-2.7
14	15.0	0.0	6.9	3.2	-3.1	-0.8	8.8	-7.1	0.1	9.9	-6.8	1.1
15	16.1	-2.4	6.4	-1.4	-12.1	-5.0	8.8	-3.5	3.2	4.6	-9.0	-1.9
16	15.0	-1.0	6.4	6.0	-12.5	-3.8	8.1	-4.2	2.0	2.8	-11.7	-5.5
17	17.3	0.0	8.1	10.6	-4.6	2.2	3.2	-6.8	-1.9	2.8	-10.1	-3.8
18	13.5	-1.4	6.1	5.3	-7.5	-1.6	-1.0	-9.4	-6.2	5.3	-11.3	-4.2
19	15.0	-1.7	6.2	6.4	-5.3	-0.4	-1.4	-13.7	-9.1	8.1	-8.3	-1.0
20	13.9	-0.7	6.4	8.5	-5.7	0.4	1.8	-12.1	-4.6	8.1	-4.9	1.2
21	13.5	-1.7	6.3	11.0	-3.5	2.2	-2.1	-12.1	-7.7	7.1	-5.7	-0.1
22	11.0	1.4	6.2	14.6	-2.4	4.6	-1.0	-14.9	-9.1	6.4	-6.4	-0.8
23	11.0	0.4	3.7	12.1	-1.4	4.1	-0.7	-15.3	-8.9	9.9	-3.5	1.0
24	4.9	-0.7	2.1	7.1	-2.4	2.3	-2.1	-12.5	-7.5	8.8	-3.5	1.2
25	8.8	-2.4	3.1	3.9	-3.8	-2.0	-4.6	-13.7	-9.1	3.9	-5.3	-0.3
26	8.8	-1.7	1.7	0.7	-10.9	-5.1	-2.4	-16.2	-10	7.8	-8.3	-0.7
27	7.1	-1.7	2.2	3.9	-10.9	-4.5	3.9	-11.7	-5.3	11.0	-2.8	3.5
28	6.4	-2.1	1.8	7.4	-9.4	-2.3	8.1	-8.3	-1.5	6.7	-4.9	1.8
29	1.8	-4.9	-2.0	8.8	-5.3	0.2	5.7	-4.6	0.6	6.0	-7.1	-0.5
30	6.7	-6.0	1.6	10.2	-4.9	0.8	-1.0	-12.1	-5.7	9.2	-4.2	2.2
31	10.6	0.7	6.3	---	---	---	3.9	-10.9	-2.8	9.2	-3.5	2.9
MONTH	18.1	-6.0	5.7	15.0	-12.5	0.1	8.8	-16.2	-3.7	11.0	-15.3	-1.1

380844107512200 PLEASANT VALLEY METEOROLOGICAL STATION NEAR RIDGWAY, CO—Continued

TEMPERATURE, AIR, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	13.5	0.4	6.9	0.7	-11.7	-5.9	---	---	---	12.1	-2.8	5.3
2	7.4	-4.9	2.7	1.1	-14.5	-6.4	13.1	3.5	8.9	14.6	0.7	8.9
3	-1.4	-12.1	-6.5	3.5	-12.5	-3.1	3.9	-2.8	2.0	14.6	6.7	11.5
4	-0.7	-11.7	-5.2	0.7	-3.5	-1.4	4.6	-8.6	-0.3	9.5	2.1	4.7
5	-5.3	-12.9	-8.7	-1.4	-7.1	-4.1	7.4	-4.9	1.2	9.9	-0.7	4.8
6	-6.8	-17.9	-11.7	3.9	-6.0	0.1	1.1	-4.9	-1.8	11.0	-1.7	4.7
7	-4.9	-20.7	-13.0	8.1	-3.5	2.7	2.8	-6.0	-1.9	13.1	0.4	8.2
8	-0.7	-17.0	-8.6	8.5	-3.1	3.5	11.3	-9.0	0.7	9.5	0.4	6.0
9	-5.3	-13.7	-8.9	9.9	-2.4	4.0	16.1	-3.1	6.5	11.3	-2.1	4.7
10	2.1	-14.1	-5.7	10.2	-0.7	4.7	17.3	-1.4	8.9	7.4	-6.0	1.2
11	4.2	-10.1	-2.9	10.6	-2.1	4.1	16.9	-0.7	9.0	16.1	-4.2	6.9
12	8.1	-7.5	0.8	11.7	-0.3	5.5	16.9	1.8	9.4	19.7	1.1	11.7
13	5.7	0.7	2.8	13.9	-1.4	6.0	18.9	2.8	10.7	18.9	4.6	12.2
14	3.5	-1.4	1.2	13.9	0.7	6.6	16.9	4.6	11.8	19.3	6.7	13.5
15	2.5	-4.9	-1.3	12.4	-0.7	6.3	11.0	1.1	4.2	14.3	3.2	8.2
16	7.4	-4.9	0.9	8.1	-1.4	3.7	12.8	-0.7	5.6	20.5	3.9	12.6
17	5.3	-4.6	0.6	4.9	-1.4	1.2	13.9	-1.0	7.5	22.9	6.4	15.2
18	2.8	-4.9	-2.7	-0.7	-3.8	-2.0	7.8	0.4	3.3	16.9	4.9	11.7
19	0.7	-10.1	-3.7	1.4	-4.6	-2.2	6.7	-3.1	1.1	16.1	2.1	9.5
20	4.6	-10.1	-3.1	6.0	-6.8	0.1	12.4	-4.2	4.1	19.3	2.8	11.0
21	4.6	-8.3	-2.3	3.9	-3.5	-0.3	13.9	0.4	6.9	20.9	3.9	13.0
22	2.5	-7.1	-3.1	9.9	-5.7	1.9	9.9	-0.3	5.1	23.3	3.9	15.0
23	0.4	-11.7	-4.2	13.1	-1.4	5.7	4.2	-4.2	0.7	24.2	6.7	16.6
24	4.6	-4.6	0.2	10.2	-0.7	3.1	13.5	2.1	7.2	24.2	7.8	16.2
25	3.2	-5.3	-0.3	8.5	-0.7	2.8	16.9	4.9	10.8	20.5	7.8	13.1
26	0.7	-7.5	-3.8	12.4	-1.7	6.6	16.1	4.9	11.5	24.6	4.9	15.6
27	1.1	-6.8	-3.3	-1.7	-6.8	-4.2	16.9	2.1	10.2	25.5	7.8	17.3
28	0.0	-6.8	-4.0	-0.7	-7.9	-4.7	16.1	3.5	11.2	27.3	7.8	18.2
29	---	---	---	1.8	-12.9	-4.6	14.6	6.4	10.3	25.5	12.1	19.4
30	---	---	---	---	---	---	10.6	-1.4	6.8	26.4	10.2	17.8
31	---	---	---	---	---	---	---	---	---	24.2	11.3	16.2
MONTH	13.5	-20.7	-3.1	---	---	---	---	---	---	27.3	-6.0	11.3
	JUNE			JULY			AUGUST			SEPTEMBER		
1	20.9	7.8	14.2	27.8	12.8	21.1	25.5	11.7	18.7	24.6	6.4	16.0
2	23.3	7.1	15.6	27.8	9.2	20.0	25.1	14.3	19.2	25.1	9.9	17.4
3	23.3	4.9	15.4	28.7	9.9	20.6	22.9	12.1	17.3	22.5	9.9	15.2
4	22.1	5.7	14.5	29.7	8.8	20.8	27.3	9.9	18.6	22.5	8.1	15.5
5	18.9	6.0	12.3	28.7	9.9	20.3	29.2	10.6	20.9	22.5	8.1	13.8
6	20.9	2.1	13.1	27.8	13.1	20.4	28.7	12.4	19.7	18.5	6.7	11.0
7	18.1	5.3	12.3	28.2	9.5	20.7	26.0	13.9	18.6	15.0	6.7	11.1
8	22.9	2.8	14.4	29.7	11.3	21.9	26.9	12.8	19.1	21.7	5.3	14.7
9	20.9	9.5	15.8	29.7	9.5	20.4	27.3	12.1	20.5	15.4	4.6	10.1
10	22.9	7.4	16.2	29.7	9.2	20.3	28.7	14.3	20.4	12.4	3.9	7.8
11	---	---	---	31.6	10.2	22.3	29.2	13.5	20.4	13.1	0.4	6.4
12	22.1	5.7	14.2	31.6	13.1	22.6	27.3	13.5	20.6	18.9	2.1	10.3
13	19.7	4.2	12.7	32.1	13.1	23.1	27.8	12.1	20.3	13.5	-0.3	8.6
14	23.3	4.6	15.6	31.6	13.5	22.7	28.2	9.9	18.2	18.9	-1.4	7.8
15	26.0	6.4	18.0	30.1	16.1	21.6	20.5	11.7	15.3	20.5	1.8	11.9
16	24.2	10.6	16.5	29.7	15.0	20.9	20.5	10.2	14.4	22.1	7.1	15.5
17	22.9	8.8	16.1	29.7	13.1	20.9	21.7	11.7	15.4	20.5	2.5	15.4
18	21.3	7.8	15.0	31.1	15.4	22.6	24.6	11.0	17.6	14.3	-2.8	5.4
19	20.1	7.8	13.2	29.2	15.0	20.0	26.9	11.3	19.2	19.7	-0.7	9.7
20	20.9	6.7	14.2	29.7	13.9	22.2	28.2	12.8	20.1	19.3	3.9	11.8
21	22.5	7.8	16.6	30.1	13.1	21.9	26.4	12.8	18.9	20.1	1.1	10.3
22	23.3	10.6	18.1	31.1	13.9	22.2	25.5	13.5	17.3	22.1	2.8	12.2
23	23.3	12.8	18.6	27.3	15.0	20.3	23.3	11.3	16.3	22.9	4.6	13.9
24	22.5	9.2	16.8	28.2	12.1	20.8	23.8	8.5	16.4	23.3	4.6	13.8
25	20.1	5.7	12.6	29.2	15.0	21.5	24.2	10.6	17.6	23.3	6.0	14.1
26	22.1	3.2	13.1	29.2	13.5	20.8	22.9	9.5	16.2	22.9	4.2	13.3
27	25.1	4.6	16.1	27.8	14.3	19.8	22.9	12.4	16.5	23.3	6.0	14.2
28	26.4	6.4	17.9	27.3	11.7	19.1	20.5	11.7	14.9	23.8	5.7	15.3
29	26.0	8.8	17.9	26.4	13.1	18.2	22.9	9.2	16.2	23.8	9.2	16.7
30	27.8	9.9	19.9	28.2	10.6	20.0	22.1	9.9	14.3	23.3	10.2	17.5
31	---	---	---	25.1	13.5	17.8	22.9	7.1	14.9	---	---	---
MONTH	---	---	---	32.1	8.8	20.9	29.2	7.1	17.9	25.1	-2.8	12.6



**380916107452200 RIDGWAY METEOROLOGICAL STATION AT RIDGWAY, CO**

LOCATION.--Lat 38°09'16", long 107°45'22", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.16, T.45 N, R.8 W., Ouray County, Hydrologic Unit 14020006, 0.2 mi north of post office in Ridgway, and 0.3 mi north of State Highway 62.

PERIOD OF RECORD.--December 1992 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=380916107452200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=380916107452200)

GAGE.--Weighing-bucket rain gage with satellite telemetry. Elevation of gage is 7,000 ft above NGVD of 1929, from topographic map.

REMARKS.--Unpublished air-temperature and precipitation data for water year 1993 are available in district office.

## EXTREMES FOR PERIOD OF RECORD.--

AIR TEMPERATURE: Maximum, 33.2°C, July 8, 13, 14, 2002; minimum, -32.4°C, Dec. 21, 1998.

PRECIPITATION: Maximum daily, 2.0 inches, Oct. 3, 1996.

## EXTREMES FOR CURRENT YEAR.--

AIR TEMPERATURE: Maximum, not determined; minimum, -22.6°C, Jan. 2.

PRECIPITATION: Maximum daily, 0.9 inches, Nov. 9, may have been higher during period of missing record.

TEMPERATURE, AIR, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	16.5	-3.1	7.2	13.5	-0.7	4.5	5.3	-6.8	-1.4	0.0	-20.7	-6.9
2	13.5	3.9	7.9	9.9	-3.5	3.8	6.0	-10.5	-2.9	1.4	-22.6	-13.4
3	5.7	-1.0	2.5	2.8	-10.1	-3.6	5.7	-7.9	-1.7	8.1	-17.0	-7.9
4	12.1	-3.1	5.1	5.7	-6.0	-0.8	5.7	-10.1	-3.6	7.1	-12.9	-4.4
5	14.6	0.7	6.6	8.1	-10.9	-2.7	5.3	-8.6	-2.1	1.8	-12.1	-4.5
6	16.1	-3.5	5.6	13.1	-10.1	-1.0	5.7	-10.5	-3.7	7.8	-12.1	-2.2
7	20.1	-3.5	7.1	15.8	-10.1	2.5	7.1	-10.1	-3.3	6.7	-14.9	-7.0
8	18.1	-2.8	6.6	10.6	2.1	5.2	5.3	-11.3	-5.1	9.5	-15.3	-6.4
9	18.9	-3.8	6.7	11.0	-1.4	4.3	7.8	-12.5	-5.0	4.9	-12.5	-3.9
10	20.5	-5.3	8.5	1.8	-7.5	-2.7	7.1	-14.5	-5.8	4.6	-5.3	0.0
11	19.3	-0.3	9.7	2.8	-6.0	-1.5	2.8	-14.1	-6.8	3.5	-3.1	-1.0
12	14.3	-3.5	4.9	7.1	-10.1	-2.9	1.8	-7.9	-2.9	4.2	-10.9	-4.3
13	16.9	-7.5	4.4	6.7	-7.1	-0.7	8.1	-10.9	-3.4	9.2	-13.7	-4.5
14	16.5	-4.6	4.9	4.9	-2.8	0.1	9.2	-12.5	-3.7	9.5	-11.7	-3.6
15	18.1	-7.9	3.9	1.8	-11.3	-3.7	10.2	-7.9	2.0	2.1	-11.7	-4.8
16	17.3	-7.5	3.8	6.4	-13.7	-5.0	9.9	-9.0	0.4	4.6	-15.7	-7.5
17	18.5	-7.9	4.8	12.1	-9.0	-0.3	1.8	-7.1	-1.0	4.2	-12.9	-5.0
18	15.4	-5.7	4.4	7.8	-7.9	-1.6	-0.7	-7.5	-5.0	5.7	-15.3	-7.2
19	16.5	-6.4	3.9	7.8	-9.4	-1.7	-2.8	-14.5	-8.6	9.2	-14.1	-5.2
20	16.1	-7.5	3.6	9.5	-8.6	-1.3	3.9	-14.1	-5.5	8.8	-13.3	-3.8
21	15.4	-5.7	4.7	13.1	-7.5	0.1	-1.4	-13.3	-7.1	8.1	-11.3	-3.1
22	12.8	-2.8	5.4	15.0	-7.9	0.7	-0.3	-16.2	-9.7	7.1	-9.8	-2.8
23	12.1	1.1	4.7	15.0	-7.5	1.4	-0.3	-17.9	-9.7	9.9	-6.4	-0.6
24	7.8	0.0	3.2	9.2	-6.4	1.0	-1.7	-12.5	-7.1	8.1	-6.8	-0.2
25	10.2	-4.9	3.1	1.4	-3.1	-1.7	-1.4	-16.6	-9.7	4.9	-5.7	-0.2
26	9.5	-4.6	0.7	1.8	-10.5	-3.9	-1.0	-19.3	-11.0	9.2	-10.1	-2.2
27	7.8	-1.7	2.8	6.0	-12.9	-5.3	4.2	-16.2	-8.0	11.0	-7.1	0.1
28	8.1	-2.8	3.0	8.1	-12.1	-4.0	9.5	-16.2	-6.1	7.4	-5.7	-0.2
29	3.2	-4.9	-1.1	9.9	-9.4	-2.2	5.7	-8.6	-2.6	7.4	-9.0	-1.8
30	9.2	-7.5	0.7	11.3	-10.9	-2.1	0.4	-15.7	-6.2	9.2	-7.5	0.4
31	12.8	-1.4	5.3	---	---	---	5.7	-16.6	-5.2	12.1	-5.7	1.3
MONTH	20.5	-7.9	4.7	15.8	-13.7	-0.8	10.2	-19.3	-4.9	12.1	-22.6	-3.6







**381001107412300 DRY CREEK METEOROLOGICAL STATION NEAR RIDGWAY, CO**

LOCATION.--Lat 38°10'01", long 107°41'23", in SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.12, T.45 N, R.8 W., Ouray County, Hydrologic Unit 14020006, 3.7 mi east of Ridgway.

PERIOD OF RECORD.--October 1994 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=381001107412300](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=381001107412300)

GAGE.--Weighing-bucket rain gage with satellite telemetry. Elevation of gage is 7,360 ft above NGVD of 1929, from topographic map.

REMARKS.--Daily record for air temperature is good. Daily record for precipitation is good.

## EXTREMES FOR PERIOD OF RECORD.--

AIR TEMPERATURE: Maximum recorded, 33.2°C, July 13, 2002; minimum recorded, -26.9°C, Dec. 18, 1996.

PRECIPITATION: Maximum daily, 1.8 inches, Oct. 3, 1996.

## EXTREMES FOR CURRENT YEAR.--

AIR TEMPERATURE: Maximum, 32.6°C, July 11, 12, 13, 18; minimum, -21.6°C, Feb. 7.

PRECIPITATION: Maximum daily, 1.8 inches, Sept. 9.

TEMPERATURE, AIR, DEGREES CELSIUS  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	16.5	2.1	9.3	11.7	-1.0	4.6	6.4	-5.7	-0.5	5.7	-14.1	-5.0
2	12.8	4.6	8.3	9.5	-3.8	3.4	7.4	-8.6	-1.8	4.2	-16.6	-7.6
3	4.6	0.0	2.2	2.8	-9.8	-3.7	6.4	-6.4	-1.0	8.5	-11.3	-2.9
4	11.7	-2.1	4.8	4.9	-6.0	-0.5	6.7	-9.0	-2.3	10.2	-7.1	0.2
5	15.0	1.4	7.2	9.5	-8.6	-1.1	6.4	-6.4	-0.9	3.9	-7.5	-2.0
6	16.9	-1.0	7.1	13.9	-6.4	1.8	6.7	-8.6	-2.3	9.9	-7.9	-1.1
7	19.3	0.0	8.7	15.8	-4.9	4.6	7.1	-8.3	-2.1	11.3	-10.9	-2.6
8	18.1	0.4	8.6	9.5	2.5	4.6	7.1	-9.0	-3.7	13.5	-9.4	-1.6
9	18.9	-0.3	8.7	10.6	-1.4	3.5	9.2	-10.5	-2.7	4.6	-8.6	-1.7
10	20.1	-1.4	9.9	1.4	-8.6	-3.0	7.8	-10.5	-3.5	4.6	-3.8	0.1
11	18.9	4.6	12.2	3.2	-6.0	-2.0	4.2	-12.1	-5.3	3.5	-2.8	-0.8
12	15.0	-1.4	6.8	7.4	-10.9	-2.8	4.6	-6.0	-2.2	5.3	-6.8	-2.3
13	17.7	-3.8	6.5	7.8	-6.0	-0.2	10.2	-8.6	-1.1	9.2	-10.1	-2.5
14	17.3	-0.7	7.2	4.9	-2.8	-0.1	9.5	-9.8	-0.6	12.8	-7.9	0.0
15	18.9	-3.8	6.5	2.1	-12.5	-4.0	9.9	-3.8	3.9	1.8	-9.8	-3.1
16	17.3	-2.8	6.4	7.8	-14.1	-4.6	10.2	-4.6	1.7	4.6	-13.7	-5.5
17	19.3	-3.1	7.4	12.4	-6.8	1.0	2.1	-4.9	-1.9	4.6	-9.8	-3.0
18	15.4	-2.1	6.7	8.8	-7.1	-0.9	0.0	-7.5	-5.0	7.1	-12.1	-4.5
19	16.9	-2.8	6.4	8.5	-6.8	-0.1	-0.7	-14.5	-8.0	11.3	-9.8	-1.5
20	16.5	-3.1	6.2	9.9	-6.8	0.3	3.5	-12.1	-4.9	10.6	-7.5	0.3
21	15.4	-2.4	6.6	14.3	-4.9	2.5	1.8	-12.9	-7.1	10.2	-6.8	0.4
22	13.9	0.7	6.3	17.7	-3.8	4.2	0.7	-15.3	-8.8	10.6	-7.5	-0.3
23	9.5	1.8	4.4	13.9	-2.8	3.8	0.4	-16.6	-9.0	10.6	-4.9	1.2
24	8.1	0.7	2.7	9.2	-2.8	2.8	2.1	-11.3	-6.9	9.2	-4.2	1.2
25	10.6	-3.5	3.4	1.8	-3.5	-2.0	-1.7	-16.2	-9.3	5.7	-4.9	0.7
26	8.5	-2.8	1.7	3.9	-10.1	-4.1	0.7	-16.2	-9.6	11.0	-9.0	-0.9
27	7.1	-1.4	1.9	7.8	-10.9	-3.9	5.7	-13.3	-6.0	13.9	-5.7	3.0
28	7.4	-1.0	2.5	11.0	-10.1	-2.1	11.7	-12.1	-2.1	8.5	-4.2	2.4
29	4.2	-4.2	-1.6	12.4	-6.8	0.2	4.9	-4.6	-0.5	7.4	-7.9	-0.8
30	8.5	-6.4	1.6	11.7	-7.1	0.2	1.4	-12.5	-4.9	8.8	-6.4	2.0
31	12.8	2.1	6.5	---	---	---	4.9	-12.5	-3.5	11.7	-3.5	3.1
MONTH	20.1	-6.4	5.9	17.7	-14.1	0.1	11.7	-16.6	-3.6	13.9	-16.6	-1.1

381001107412300 DRY CREEK METEOROLOGICAL STATION NEAR RIDGWAY, CO—Continued

TEMPERATURE, AIR, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	15.4	-0.7	6.4	1.8	-10.9	-4.8	17.7	0.7	9.8	12.4	-4.9	5.7
2	10.2	-4.2	3.5	6.4	-15.7	-5.6	13.5	3.5	9.1	16.5	0.4	9.4
3	1.1	-11.3	-5.4	6.7	-12.9	-3.2	4.9	-1.7	2.4	16.5	7.4	12.5
4	1.4	-11.7	-5.2	1.4	-3.1	-1.4	7.1	-8.3	0.6	10.6	1.4	5.5
5	-4.9	-11.3	-8.2	0.7	-7.5	-3.6	7.1	-4.6	1.5	10.6	-0.3	5.3
6	-2.8	-16.2	-10.3	7.1	-7.5	0.1	2.5	-4.6	-1.2	12.8	-1.0	6.0
7	-1.7	-21.6	-12.6	9.2	-3.8	2.5	4.6	-5.3	-1.0	13.9	-0.7	8.4
8	1.8	-18.3	-8.9	11.7	-5.3	3.5	13.1	-8.6	1.8	11.0	1.1	6.4
9	-4.9	-14.5	-8.0	11.0	-3.1	3.7	18.5	-3.8	7.4	12.4	-1.4	5.2
10	4.2	-15.3	-5.7	11.7	-2.4	4.3	19.3	-1.0	9.5	8.8	-5.7	2.1
11	6.0	-11.7	-3.0	13.5	-3.8	4.3	19.7	-0.7	9.8	17.7	-5.3	7.5
12	11.0	-7.5	0.8	13.5	-1.0	5.7	18.1	-0.7	9.8	20.9	0.0	11.4
13	7.4	1.1	3.6	17.7	-2.4	6.7	20.5	0.4	10.9	19.7	4.9	12.4
14	3.5	-1.4	1.1	14.6	0.7	6.9	18.1	2.1	10.9	20.1	6.4	13.7
15	4.6	-4.9	-0.6	13.9	-2.1	6.7	12.1	2.1	5.1	15.8	4.6	9.2
16	8.1	-5.3	1.4	9.2	-1.4	3.9	15.0	0.4	6.7	22.5	4.2	13.5
17	8.8	-4.2	0.9	5.7	-2.1	1.0	14.3	0.0	7.7	23.8	4.9	16.1
18	3.2	-5.7	-2.4	2.5	-3.5	-1.1	8.5	-0.7	3.4	18.5	5.3	12.7
19	6.0	-10.1	-2.9	3.5	-4.2	-1.2	8.5	-2.4	1.9	17.7	2.1	10.2
20	6.7	-10.1	-2.2	7.4	-7.9	-0.2	15.0	-5.3	4.8	19.3	2.8	11.5
21	5.3	-7.1	-1.6	6.0	-2.8	1.0	15.4	0.7	8.4	22.5	2.5	13.6
22	3.2	-7.5	-3.0	11.3	-5.7	2.5	11.3	0.0	5.7	25.1	3.5	15.4
23	1.4	-10.5	-3.7	14.6	-2.1	6.4	4.9	-3.5	1.1	25.1	5.7	16.5
24	5.3	-3.1	0.4	10.2	-0.7	3.7	15.0	2.5	8.0	25.5	8.5	17.3
25	2.8	-4.2	-0.4	11.7	-1.0	3.4	18.9	2.5	10.5	21.3	6.0	13.9
26	2.5	-7.9	-3.7	12.8	-2.1	6.3	17.3	3.9	11.2	26.0	4.9	16.2
27	2.1	-7.5	-3.1	1.1	-6.8	-3.0	18.9	2.1	10.6	27.3	7.1	18.4
28	1.8	-6.0	-3.3	1.4	-7.5	-4.1	16.9	1.8	11.2	29.2	7.8	19.0
29	---	---	---	3.5	-11.7	-3.5	15.0	3.2	9.9	28.2	11.0	19.4
30	---	---	---	10.6	-8.3	1.5	12.1	1.4	7.6	26.4	11.0	18.3
31	---	---	---	---	---	---	---	---	---	26.0	11.7	17.2
MONTH	15.4	-21.6	-2.7	---	---	---	20.5	-8.6	6.5	29.2	-5.7	11.9
	JUNE			JULY			AUGUST			SEPTEMBER		
1	22.9	8.8	15.1	29.2	9.5	21.7	29.2	12.1	19.7	26.4	5.7	16.5
2	24.2	6.0	16.5	29.2	7.4	20.4	26.9	13.9	19.1	26.0	8.8	17.8
3	24.2	3.2	15.4	30.1	8.5	20.9	24.6	13.9	18.2	24.2	11.0	15.9
4	22.9	3.9	15.1	31.6	8.5	21.1	28.2	9.2	19.3	24.2	9.2	15.8
5	20.1	5.3	13.1	30.1	9.2	20.7	30.1	10.2	20.8	24.2	9.2	13.8
6	22.1	1.1	13.4	27.8	11.0	19.8	29.2	9.9	19.7	19.3	7.4	12.0
7	20.1	5.3	13.1	29.7	9.2	20.7	27.3	13.5	19.0	17.7	7.4	12.3
8	24.2	2.1	15.0	31.1	9.5	21.5	29.2	12.4	20.6	22.9	5.3	14.7
9	22.5	8.5	15.7	30.6	10.2	21.2	30.1	11.7	21.5	15.0	5.7	10.6
10	24.2	7.4	16.9	31.1	7.4	20.5	29.7	12.4	21.5	13.1	3.9	8.0
11	23.8	6.4	16.4	32.6	9.9	22.3	31.1	12.4	20.8	15.4	1.4	7.5
12	---	---	---	32.6	9.5	22.2	28.7	13.1	21.5	21.3	1.8	11.1
13	20.9	4.2	13.0	32.6	11.7	22.5	29.7	12.8	21.2	16.9	0.7	9.4
14	25.1	5.3	16.2	32.1	12.1	22.8	29.7	9.9	19.1	20.5	-1.7	8.5
15	28.2	5.7	18.3	31.1	16.1	23.2	21.7	12.1	16.2	22.9	1.4	12.2
16	25.1	8.1	17.0	29.7	13.9	22.0	21.3	10.2	14.3	22.9	6.0	16.1
17	23.3	9.2	16.6	31.1	12.8	20.8	21.3	11.3	15.6	21.7	3.9	15.3
18	22.5	7.4	15.7	32.6	12.1	22.8	23.8	11.0	17.6	16.1	-3.5	6.2
19	22.1	7.1	14.3	29.7	13.1	21.1	28.2	10.6	19.3	---	---	---
20	21.7	7.1	15.4	31.1	12.8	23.1	30.6	11.3	20.3	20.9	2.5	12.2
21	24.6	6.0	16.4	31.1	13.9	22.8	26.9	11.3	18.6	22.1	1.4	11.3
22	24.6	7.4	17.2	32.1	12.1	22.2	23.8	13.1	17.4	24.2	1.4	12.3
23	24.2	9.2	18.3	28.7	16.5	21.5	24.2	11.7	16.5	24.2	3.2	14.0
24	23.3	8.8	16.9	30.1	11.7	21.1	26.4	8.5	17.5	24.2	3.5	13.8
25	20.1	1.8	12.8	28.7	16.1	21.9	26.0	11.0	18.4	25.5	4.6	14.7
26	23.3	1.4	13.7	28.7	12.4	21.6	26.0	8.5	17.6	25.1	3.2	14.0
27	26.0	4.6	16.6	29.7	13.5	20.0	23.3	11.7	16.4	24.6	4.2	14.3
28	27.3	5.3	18.1	28.7	11.0	19.9	22.5	12.4	15.9	25.5	4.2	15.1
29	28.7	7.8	18.5	29.2	13.1	18.8	26.0	9.9	16.9	26.9	6.7	16.3
30	30.1	7.8	20.4	30.1	10.6	20.5	22.1	10.6	14.7	26.0	9.2	17.0
31	---	---	---	26.0	13.1	18.6	24.6	7.1	15.6	---	---	---
MONTH	---	---	---	32.6	7.4	21.3	31.1	7.1	18.4	---	---	---

381001107412300 DRY CREEK METEOROLOGICAL STATION NEAR RIDGWAY, CO—Continued

PRECIPITATION, TOTAL, INCHES  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
3	0.6	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
5	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2
6	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
7	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
8	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.7	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	1.8
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
11	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
17	0.0	0.0	0.0	0.0	0.2	0.3	0.0	0.0	0.0	0.1	0.1	0.0
18	0.0	0.0	0.1	0.0	0.7	0.4	0.0	0.1	0.0	0.0	0.0	0.0
19	0.0	0.0	0.1	0.0	0.2	0.1	0.1	0.0	0.2	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0
23	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.6	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	0.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1
27	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.7	0.0
28	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29	0.3	0.0	0.0	0.0	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.1	0.0	---	0.0	0.0	0.0	0.0	0.0	0.1	0.0
31	0.0	---	0.1	0.0	---	0.0	---	0.0	---	0.0	0.0	---
TOTAL	1.8	1.3	0.4	0.2	1.8	1.0	0.6	0.5	0.3	0.2	2.3	2.5
WTR YR 2003	TOTAL 12.9											



## 381422107453000 RIDGWAY RESERVOIR METEOROLOGICAL STATION NEAR RIDGWAY, CO—Continued

TEMPERATURE, AIR, DEGREES CELSIUS—CONTINUED  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	30.6	12.8	22.7	27.8	12.8	21.4	26.9	6.7	17.2
2	---	---	---	30.6	10.2	21.3	27.3	13.9	20.1	26.9	9.9	18.5
3	---	---	---	31.6	10.2	22.3	24.6	15.4	19.1	24.2	12.1	17.0
4	---	---	---	32.1	9.5	21.6	28.2	9.9	19.5	24.2	8.8	16.8
5	---	---	---	33.2	9.9	21.6	31.6	11.3	21.7	24.2	9.5	14.4
6	---	---	---	29.7	12.8	21.3	30.1	12.4	21.0	20.9	8.1	12.8
7	---	---	---	31.1	10.6	21.8	29.7	12.8	19.3	20.1	9.9	14.1
8	---	---	---	32.6	9.9	22.7	27.8	13.5	20.7	24.6	6.7	16.2
9	---	---	---	30.6	10.2	21.1	30.1	13.1	22.3	18.9	7.4	12.7
10	---	---	---	31.1	8.5	21.0	30.1	13.9	22.1	13.5	5.7	8.1
11	---	---	---	33.7	11.3	22.9	30.6	13.5	21.6	14.6	2.8	8.2
12	---	---	---	34.2	12.1	23.6	30.1	13.9	21.8	21.3	2.1	11.1
13	21.3	4.9	13.9	33.7	12.4	23.5	30.1	13.5	22.0	15.8	2.5	9.4
14	25.5	6.7	16.9	33.2	12.8	23.6	29.7	10.6	19.9	18.9	-1.7	8.4
15	28.7	7.4	19.3	32.1	15.4	23.7	22.9	13.1	18.1	23.8	2.1	12.6
16	26.4	9.2	17.9	31.6	15.0	22.1	23.3	10.2	15.3	24.6	6.0	15.8
17	25.5	6.4	17.3	30.6	13.1	21.6	22.9	12.1	16.3	23.3	4.6	17.4
18	24.6	7.8	17.2	32.1	12.8	23.3	25.1	12.1	19.4	15.0	-2.4	6.3
19	22.5	9.5	15.2	31.6	14.6	22.6	29.2	9.9	19.5	---	---	---
20	23.8	9.5	16.9	31.1	14.3	24.0	29.7	12.1	21.1	21.7	3.5	12.0
21	26.0	5.3	16.7	32.1	14.3	23.9	29.7	12.8	20.2	20.9	2.1	11.2
22	25.5	4.9	17.0	32.6	12.8	23.0	25.1	13.5	18.7	23.8	2.5	12.5
23	26.0	8.5	19.2	28.2	15.4	22.1	22.9	13.5	17.8	26.0	3.9	14.7
24	24.6	9.2	18.7	29.7	13.5	22.2	26.0	9.9	18.2	24.2	4.9	13.8
25	20.9	5.3	13.7	31.6	17.3	23.4	26.9	12.1	19.2	25.1	4.9	14.6
26	22.5	3.5	14.0	30.6	13.1	22.4	26.4	9.5	18.6	24.6	3.5	13.9
27	27.8	5.7	17.3	30.1	16.1	21.1	23.3	12.1	16.4	24.6	4.2	14.2
28	29.2	7.1	19.1	29.7	11.3	20.5	22.5	13.1	17.2	27.3	6.0	15.5
29	27.8	7.8	19.0	29.2	15.0	20.6	26.4	10.2	18.2	25.5	6.0	15.7
30	30.6	8.8	21.1	30.1	9.9	20.9	23.3	11.3	16.0	26.4	9.2	17.0
31	---	---	---	27.8	12.8	19.3	24.6	6.7	15.7	---	---	---
MONTH	---	---	---	34.2	8.5	22.2	31.6	6.7	19.3	---	---	---

381422107453000 RIDGWAY RESERVOIR METEOROLOGICAL STATION NEAR RIDGWAY, CO—Continued

PRECIPITATION, TOTAL, INCHES  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	0.0	0.0	0.0
2	---	---	---	---	---	---	---	---	---	0.0	0.0	0.0
3	---	---	---	---	---	---	---	---	---	0.0	0.4	0.0
4	---	---	---	---	---	---	---	---	---	0.0	0.0	0.0
5	---	---	---	---	---	---	---	---	---	0.0	0.0	0.3
6	---	---	---	---	---	---	---	---	---	0.0	0.0	0.1
7	---	---	---	---	---	---	---	---	---	0.0	0.0	0.0
8	---	---	---	---	---	---	---	---	---	0.0	0.0	0.0
9	---	---	---	---	---	---	---	---	---	0.0	0.0	1.5
10	---	---	---	---	---	---	---	---	---	0.0	0.0	0.5
11	---	---	---	---	---	---	---	---	---	0.0	0.0	0.0
12	---	---	---	---	---	---	---	---	---	0.0	0.0	0.0
13	---	---	---	---	---	---	---	---	0.0	0.0	0.0	0.0
14	---	---	---	---	---	---	---	---	0.0	0.0	0.0	0.0
15	---	---	---	---	---	---	---	---	0.0	0.0	0.1	0.0
16	---	---	---	---	---	---	---	---	0.0	0.1	0.0	0.0
17	---	---	---	---	---	---	---	---	0.0	0.0	0.2	0.0
18	---	---	---	---	---	---	---	---	0.0	0.0	0.0	0.0
19	---	---	---	---	---	---	---	---	0.1	0.0	0.0	0.0
20	---	---	---	---	---	---	---	---	0.0	0.0	0.0	0.0
21	---	---	---	---	---	---	---	---	0.0	0.0	0.0	0.0
22	---	---	---	---	---	---	---	---	0.0	0.0	0.0	0.0
23	---	---	---	---	---	---	---	---	0.0	0.0	0.1	0.0
24	---	---	---	---	---	---	---	---	0.0	0.0	0.0	0.1
25	---	---	---	---	---	---	---	---	0.0	0.0	0.0	0.0
26	---	---	---	---	---	---	---	---	0.0	0.0	0.0	0.0
27	---	---	---	---	---	---	---	---	0.0	0.1	0.2	0.0
28	---	---	---	---	---	---	---	---	0.0	0.0	0.0	0.0
29	---	---	---	---	---	---	---	---	0.0	0.0	0.0	0.0
30	---	---	---	---	---	---	---	---	0.0	0.0	0.2	0.0
31	---	---	---	---	---	---	---	---	---	0.0	0.0	---
TOTAL	---	---	---	---	---	---	---	---	---	0.2	1.2	2.5

## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

**09010500 COLORADO RIVER BELOW BAKER GULCH, NEAR GRAND LAKE, CO (LAT 40 19 33N LONG 105 51 22W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC 10...	1050	4.6	76	2.0	MAY 21...	1230	184	95	8.0
FEB 04...	1235	3.9	109	0.0	AUG 12...	0840	26	85	17.0

**09019500 COLORADO RIVER NEAR GRANBY, CO (LAT 40 07 15N LONG 105 54 00W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
MAY 06...	1410	89	220	3.0	AUG 12...	1020	35	175	17.0
JUL 03...	1350	80	250	8.0	SEP 16...	1155	21	98	9.0

**09024000 FRASER RIVER AT WINTER PARK, CO (LAT 39 54 00N LONG 105 46 34W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 23...	1345	3.6	131	3.5	APR 25...	1310	9.2	110	3.0
DEC 10...	1440	4.6	148	3.0	MAY 20...	0835	20	114	4.0
JAN 22...	1430	6.5	145	0.0	JUN 05...	0910	58	85	5.0
FEB 13...	0950	4.7	110	0.5	AUG 07...	1400	12	126	15.0
MAR 28...	0920	6.1	65	1.0	SEP 16...	1010	7.2	116	9.0

**09025000 VASQUEZ CREEK AT WINTER PARK, CO (LAT 39 55 13N LONG 105 47 05W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
MAR 28...	1015	3.7	52	1.0	AUG 07...	0800	12	112	13.0
JUN 05...	1035	26	65	5.0	SEP 22...	1200	5.6	49	7.0

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003--Continued

**09025300 ELK CREEK AT UPPER STATION, NEAR FRASER, CO (LAT 39 53 21N LONG 105 49 55W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 22...	0840	0.39	49	0.5	AUG 07...	1100	1.6	85	13.0
JUN 03...	0910	15	85	4.0	SEP 22...	1300	1.5	95	9.5
JUL 08...	1720	4.0	60	17.0		1315	1.1	50	7.5

**09026500 ST. LOUIS CREEK NEAR FRASER, CO (LAT 39 54 36N LONG 105 52 40W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 23...	0945	4.5	97	1.0	APR 16...	1230	3.8	90	3.0
JAN 23...	1025	2.2	81	1.0	MAY 01...	0915	3.7	89	2.5

**09032100 CABIN CREEK NEAR FRASER, CO (LAT 39 59 09N LONG 105 44 40W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JAN 24...	0944	0.99	32	0.0

**09034900 BOBTAIL CREEK NEAR JONES PASS, CO (LAT 39 45 37N LONG 105 54 21W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 07...	1230	3.1	83	4.5	JUN 19...	1127	72	37	4.5
JAN 08...	1305	0.78	80	0.0	SEP 26...	1310	4.8	77	7.0
FEB 28...	1135	0.67	82	0.0					



## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003--Continued

**09035500 WILLIAMS FORK BELOW STEELMAN CREEK, CO (LAT 39 46 44N LONG 105 55 40W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 04...	1240	0.65	81	0.0	APR 28...	1210	7.1	61	0.0
FEB 28...	1220	0.69	78	0.0	SEP 26...	1518	1.7	68	6.5

**09035700 WILLIAMS FORK ABOVE DARLING CREEK, NEAR LEAL, CO (LAT 39 47 22N LONG 106 01 18W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 13...	1330	6.3	71	0.0	MAY 28...	1220	309	37	5.5
JAN 31...	1503	4.2	72	0.0	MAY 28...	1954	416	35	5.0
APR 23...	1717	15	66	0.0	JUN 25...	1605	237	39	8.0
					AUG 20...	1845	18	64	15.5

**09035800 DARLING CREEK NEAR LEAL, CO (LAT 39 48 17N LONG 106 01 11W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 13...	1502	2.3	82	0.0	JUN 25...	1725	42	46	6.0
APR 23...	1451	2.8	77	0.0	AUG 20...	1635	7.1	71	10.5
MAY 28...	1620	77	44	3.5					

**09035900 SOUTH FORK OF WILLIAMS FORK NEAR LEAL, CO (LAT 39 47 44N LONG 106 01 49W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JAN 22...	1255	6.6	96	0.0	JUN 26...	0938	150	49	3.0
APR 23...	1235	11	82	0.0	AUG 20...	1457	27	78	13.5

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003--Continued

**09036000 WILLIAMS FORK NEAR LEAL, CO (LAT 39 49 53N LONG 106 03 15W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 13...	1123	19	90	2.5	AUG 21...	1215	61	79	11.5
APR 24...	1053	26	78	0.5					

**09037500 WILLIAMS FORK NEAR PARSHALL, CO (LAT 40 00 01N LONG 106 10 45W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
APR 24...	1345	74	95	1.0	AUG 21...	1415	41	104	17.0
MAY 29...	1117	1,130	51	6.5					

**09038500 WILLIAMS FORK BELOW WILLIAMS FORK RESERVOIR, CO (LAT 40 02 07N LONG 106 12 17W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC 10...	1540	77	178	3.0	JUN 25...	1315	16	77	8.0
MAY 29...	1300	19	103	8.5	AUG 21...	1805	238	76	8.5

**09046490 BLUE RIVER AT BLUE RIVER, CO (LAT 39 27 21N LONG 106 01 52W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JAN 30...	0930	1.6	211	2.0

## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003--Continued

**09046530 FRENCH GULCH AT BRECKENRIDGE, CO (LAT 39 29 35N LONG 106 02 39W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JAN 30...	1115	1.9	327	2.0

**09046600 BLUE RIVER NEAR DILLON, CO (LAT 39 34 00N LONG 106 02 56W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JAN 30...	1230	19	202	4.5

**09047500 SNAKE RIVER NEAR MONTEZUMA, CO (LAT 39 36 20N LONG 105 56 33W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JAN 29...	1030	16	197	0.5

**09047700 KEYSTONE GULCH NEAR DILLON, CO (LAT 39 35 40N LONG 105 58 19W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JAN 29...	1130	2.2	130	0.0

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003--Continued

**09050100 TENMILE CREEK BELOW NORTH TENMILE CREEK, AT FRISCO, CO (LAT 39 34 37N LONG 106 06 33W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JAN 29...	1500	23	1,250	0.5

**09050700 BLUE RIVER BELOW DILLON, CO (LAT 39 37 32N LONG 106 03 57W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 07...	1340	56	260	7.0	JAN 30...	1430	78	312	3.0

**09057500 BLUE RIVER BELOW GREEN MOUNTAIN RESERVOIR, CO (LAT 39 52 49N LONG 106 20 00W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC 10...	1110	111	244	4.0	JUN 26...	1510	63	255	8.0
JAN 23...	1603	162	260	3.5	SEP 30...	1600	871	196	11.5
APR 30...	1348	55	320	3.5					

**09058500 PINEY RIVER BELOW PINEY LAKE, NEAR MINTURN, CO (LAT 39 42 29N LONG 106 25 34W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1318	11	47	9.0	MAY 29...	1120	306	28	5.3
NOV 15...	1155	6.5	44	0.0	JUN 12...	1320	142	29	8.6
JAN 23...	1025	2.4	62	0.0	JUL 02...	1420	81	27	12.7
APR 09...	1150	4.4	70	0.2	AUG 19...	1620	24	44	17.2

## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09058610 DICKSON CREEK NEAR VAIL, CO (LAT 39 42 14N LONG 106 27 25W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1650	0.75	386	10.5	MAY 29...	1615	29	198	11.0
NOV 15...	1255	0.91	407	0.5	JUN 12...	1350	13	253	10.7
JAN 23...	1050	0.77	564	0.0	JUL 02...	0925	4.2	318	13.1
APR 17...	1700	1.7	351	0.9	AUG 20...	1205	2.2	342	14.9

**09058700 FREEMAN CREEK NEAR MINTURN, CO (LAT 39 41 54N LONG 106 26 42W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1505	0.08	225	10.0	MAY 29...	1755	22	92	12.0
NOV 15...	1510	0.09	229	0.0	JUN 12...	1510	5.1	135	13.6
JAN 23...	1000	0.08	238	0.0	JUL 02...	1120	1.1	197	16.0
APR 09...	1515	0.14	210	0.2	AUG 19...	1755	0.28	212	18.0

**09058800 EAST MEADOW CREEK NEAR MINTURN, CO (LAT 39 43 54N LONG 106 25 34W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1120	0.90	68	3.5	MAY 29...	1555	57	34	1.9
NOV 15...	1030	0.63	66	0.0	JUN 12...	1045	26	34	3.1
APR 09...	1240	1.1	80	0.9	JUL 02...	1115	10	37	5.7

**09058900 MONIGER CREEK NEAR MINTURN, CO (LAT 39 43 37N LONG 106 28 50W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JUN 12...	1145	3.4	86	4.7	JUL 02...	0830	0.44	137	6.3

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09059500 PINEY RIVER NEAR STATE BRIDGE, CO (LAT 39 48 00N LONG 106 35 00W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 08...	1320	27	268	8.5	APR 18...	1200	70	228	3.7
NOV 19...	1040	21	359	0.0	MAY 28...	1945	937	118	7.4
JAN 23...	1450	12	393	0.4	JUN 10...	1245	372	120	9.4

**09061600 EAST FORK EAGLE RIVER NEAR CLIMAX, CO (LAT 39 24 37N LONG 106 14 57W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 09...	0950	0.72	167	1.5	MAY 30...	1035	41	79	3.5
JAN 22...	1615	0.47	--	0.0	JUN 11...	1505	28	134	8.3
APR 08...	1650	0.36	225	0.2	JUN 27...	1000	12	141	7.0

**09063200 WEARYMAN CREEK NEAR RED CLIFF, CO (LAT 39 31 20N LONG 106 19 23W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	0925	2.1	293	2.5	MAY 29...	0740	42	205	2.8
NOV 14...	1615	1.6	295	0.2	JUN 11...	0945	46	200	3.4
JAN 17...	1025	0.91	293	0.0	JUL 03...	0825	19	236	4.4
APR 03...	1210	1.2	299	0.9	AUG 06...	1350	4.8	273	8.6

## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09063400 TURKEY CREEK NEAR RED CLIFF, CO (LAT 39 31 22N LONG 106 20 08W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	1050	5.0	287	4.0	MAY 29...	0920	158	171	3.6
NOV 14...	1500	3.2	270	0.0	JUN 11...	1125	124	176	4.7
JAN 17...	1030	2.2	298	0.0	JUL 03...	1005	45	209	5.8
APR 03...	1340	3.4	279	1.2	AUG 06...	1515	12	261	11.2

**09063900 MISSOURI CREEK NEAR GOLD PARK, CO (LAT 39 23 25N LONG 106 28 10W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	1025	11	29	3.0	MAY 30...	1015	52	24	2.2
NOV 14...	1235	2.2	36	0.0	JUN 11...	0920	16	25	2.3
JAN 22...	1235	0.79	--	0.1	JUN 27...	1010	6.2	31	4.8
APR 08...	1320	1.1	39	0.2	AUG 06...	0940	7.5	28	11.4

**09064000 HOMESTAKE CREEK AT GOLD PARK, CO (LAT 39 24 20N LONG 106 25 58W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	1120	27	30	4.5	MAY 30...	1055	161	24	4.2
NOV 14...	1300	17	--	0.0	JUN 11...	1130	48	28	7.1
JAN 22...	1400	3.6	38	0.0	JUN 27...	1135	36	27	8.5
APR 08...	1235	5.7	41	0.4	AUG 06...	1025	17	33	12.2

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09064500 HOMESTAKE CREEK NEAR RED CLIFF, CO (LAT 39 28 24N LONG 106 22 02W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	1350	35	35	7.5	MAY 30...	1325	296	22	9.0
NOV 14...	1355	24	34	0.1	JUN 11...	1210	107	29	8.6
JAN 22...	1420	5.0	--	0.1	JUN 27...	1045	62	33	9.4
APR 08...	1450	18	43	1.9	AUG 06...	1150	21	41	14.7

**09065100 CROSS CREEK NEAR MINTURN, CO (LAT 39 34 05N LONG 106 24 43W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1345	30	52	9.0	MAY 28...	1605	416	24	8.5
NOV 18...	1735	6.6	--	0.0	JUN 11...	1700	210	29	8.1
JAN 16...	1610	4.5	58	0.0	JUL 02...	1530	137	30	13.2
APR 04...	1015	13	45	0.3	AUG 07...	1005	22	52	14.2

**09065500 GORE CREEK AT UPPER STATION, NEAR MINTURN, CO (LAT 39 37 40N LONG 106 16 24W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 06...	1225	5.4	77	0.5	APR 15...	1245	29	54	1.5
DEC 17...	1215	3.4	76	0.5	MAY 14...	1330	23	49	6.0
FEB 11...	1315	4.0	79	0.0	JUL 01...	1235	83	28	10.0
MAR 11...	1350	2.8	97	1.0	AUG 11...	1200	11	66	13.0



## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09066000 BLACK GORE CREEK NEAR MINTURN, CO (LAT 39 35 47N LONG 106 15 52W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 31...	1049	2.2	354	0.5	MAY 14...	1140	13	457	4.0
DEC 17...	1100	1.6	358	0.0	JUL 01...	0925	30	150	7.5
MAR 11...	0940	3.3	756	0.0	AUG 11...	1030	5.6	250	11.5
APR 15...	0930	8.7	708	2.0					

**09066100 BIGHORN CREEK NEAR MINTURN, CO (LAT 39 38 24N LONG 106 17 34W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC 17...	1320	1.1	77	0.5	MAY 14...	1530	14	50	5.2
FEB 11...	1505	0.67	83	0.0	AUG 11...	1800	3.5	62	11.4
APR 15...	1430	10	57	1.5					

**09066150 PITKIN CREEK NEAR MINTURN, CO (LAT 39 38 37N LONG 106 18 07W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC 17...	1435	1.9	86	1.0	MAY 14...	1740	13	81	4.0
FEB 12...	0845	2.0	96	0.0	JUL 01...	1815	40	44	8.5
APR 15...	1600	8.9	85	1.5	AUG 11...	1655	5.4	81	10.5

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09066200 BOOTH CREEK NEAR MINTURN, CO (LAT 39 39 02N LONG 106 19 16W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC 17...	1530	1.2	114	1.0	APR 16...	0930	10	119	2.5
FEB 11...	1545	0.94	129	0.5	MAY 14...	1920	20	92	3.5
MAR 11...	1555	1.0	--	2.5	AUG 11...	1515	2.5	115	12.0

**09066300 MIDDLE CREEK NEAR MINTURN, CO (LAT 39 38 50N LONG 106 22 48W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 31...	1455	0.39	203	0.5	MAY 15...	0825	6.0	200	2.0
DEC 31...	1510	0.40	203	0.5	JUL 01...	1628	17	126	10.0
FEB 18...	1035	0.33	212	0.5	AUG 11...	1400	1.9	222	13.0
FEB 11...	1700	0.31	234	0.5					
APR 16...	1145	1.9	229	3.0					

**09066325 GORE CREEK ABV RED SANDSTONE CREEK AT VAIL, CO (LAT 39 38 28N LONG 106 23 39W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 31...	1325	24	382	4.0	APR 16...	1500	72	272	8.5
DEC 18...	1150	15	390	3.0	MAY 15...	1225	183	202	6.0
FEB 12...	1335	16	429	1.0	AUG 12...	0950	42	276	12.0
MAR 12...	1010	18	455	5.5					

## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09066400 RED SANDSTONE CREEK NEAR MINTURN, CO (LAT 39 40 58N LONG 106 24 03W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1820	1.3	99	5.5	MAY 29...	1905	153	37	2.4
NOV 15...	1640	1.0	89	0.0	JUN 12...	1820	54	46	6.1
JAN 23...	1125	0.96	128	0.0	JUL 02...	1245	13	59	8.2
APR 09...	1645	1.4	84	0.9	AUG 19...	1910	2.9	89	10.2

**09066510 GORE CREEK AT MOUTH, NEAR MINTURN, CO (LAT 39 36 34N LONG 106 26 50W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC 18...	0910	17	434	0.0	MAY 15...	1015	311	190	4.1
MAR 12...	0820	21	467	3.0	AUG 12...	0815	45	316	11.5
APR 16...	1300	93	284	6.5					

**09067000 BEAVER CREEK AT AVON, CO (LAT 39 37 47N LONG 106 31 20W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1130	4.0	251	7.5	MAY 28...	2045	108	85	5.0
NOV 18...	1430	3.0	340	1.0	JUN 10...	1755	58	76	7.2
JAN 15...	1635	2.3	365	0.6	JUN 27...	1325	37	81	10.5
APR 04...	1120	3.7	470	2.2	AUG 05...	1600	6.4	202	17.1

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09067200 LAKE CREEK NEAR EDWARDS, CO (LAT 39 38 51N LONG 106 36 31W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1806	38	260	9.5	MAY 28...	0940	512	86	4.8
NOV 12...	1658	19	352	1.2	JUN 10...	1550	215	171	9.6
JAN 15...	1700	7.7	410	1.4	AUG 05...	1330	29	284	15.4
MAR 19...	1000	12	429	2.4					

**09070500 COLORADO RIVER NEAR DOTSERO, CO (LAT 39 38 38N LONG 107 04 38W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1247	653	597	11.5	MAY 28...	1235	8,260	179	10.0
NOV 19...	1245	718	575	2.2	JUN 10...	1132	4,030	226	11.0
JAN 23...	1725	621	587	1.2	JUL 01...	1440	1,850	357	16.8
FEB 24...	1354	556	610	2.0	AUG 05...	1110	1,480	389	20.2
MAR 18...	1415	754	616	6.8					

**09073400 ROARING FORK RIVER NEAR ASPEN, CO (LAT 39 10 48N LONG 106 48 05W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1430	34	82	8.5	MAY 07...	1105	56	73	4.0
NOV 13...	1345	22	86	1.3	MAY 29...	1430	622	33	8.5
APR 02...	1130	28	92	4.3	JUL 01...	1305	105	49	12.0

## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09074000 HUNTER CREEK NEAR ASPEN, CO (LAT 39 12 21N LONG 106 47 49W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
APR 02...	0930	6.9	62	0.7	JUN 03...	1245	283	20	5.3
MAY 07...	0925	21	45	2.2	JUL 01...	1010	46	34	9.6

**09080400 FRYINGPAN RIVER NEAR RUEDI, CO (LAT 39 21 56N LONG 106 49 30W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1710	96	223	8.8	APR 03...	1515	43	302	3.7
NOV 14...	1420	43	212	7.7	MAY 06...	1505	114	264	4.1
JAN 15...	0900	40	256	3.2	JUL 01...	1515	121	226	7.2

**09089500 WEST DIVIDE CREEK NEAR RAVEN, CO (LAT 39 19 52N LONG 107 34 46W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 01...	1115	1.3	352	0.8	MAY 08...	1005	69	228	4.1
APR 01...	1245	13	417	5.3	MAY 22...	1030	188	148	5.2
APR 15...	1145	36	245	2.4	JUN 30...	1305	16	214	17.7

**09097900 PLATEAU CREEK BELOW COLLBRAN, CO (LAT 39 14 23N LONG 107 58 15W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
APR 22...	1300	97	412	8.7	JUL 02...	1310	10	707	20.7
APR 25...	1045	84	439	7.5	AUG 18...	1208	12	787	18.4
JUN 04...	1050	133	327	12.3					
JUN 10...	1050	41	504	14.8					

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09106150 COLORADO RIVER BELOW GRAND VALLEY DIVERSION NEAR PALISADE, CO (LAT 39 05 55N LONG 108 21 16W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 17...	0943	292	1,290	10.8	MAY 21...	1335	7,160	364	13.0
DEC 04...	1440	14	1,220	4.0	27...	1550	12,200	292	13.3
JAN 22...	1130	1,130	1,450	1.9	JUN 02...	1130	20,400	232	11.9
APR 08...	1433	482	1,200	12.6	JUL 01...	1430	2,370	587	21.7
					29...	1150	977	786	24.7
					AUG 20...	1400	1,160	968	21.7

**09107000 TAYLOR RIVER AT TAYLOR PARK, CO (LAT 38 51 37N LONG 106 33 58W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1146	56	127	7.0	MAY 06...	1014	76	107	4.2
NOV 13...	1050	34	125	0.0	28...	1825	607	64	11.6
JAN 29...	1445	29	122	1.2	JUN 18...	0936	235	97	7.1
MAR 17...	1551	30	125	1.8	SEP 03...	1420	51	134	13.6

**09109000 TAYLOR RIVER BELOW TAYLOR PARK RESERVOIR, CO (LAT 38 49 06N LONG 106 36 31W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1512	103	119	11.5	MAY 06...	1200	143	130	3.5
18...	1155	56	121	9.0	JUN 03...	0700	176	120	4.4
NOV 13...	1230	58	120	4.0	18...	1103	237	113	5.9
JAN 29...	1730	59	129	3.1	SEP 03...	1307	194	95	10.4
MAR 17...	1720	64	132	3.3					

## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09110000 TAYLOR RIVER AT ALMONT, CO (LAT 38 39 52N LONG 106 50 41W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1737	142	149	9.9	MAY 06...	1404	225	148	7.3
NOV 13...	1330	98	162	0.0	28...	1542	582	131	12.5
JAN 30...	1300	93	166	0.1	JUN 18...	1241	410	144	10.4
APR 02...	1023	93	165	4.4	SEP 03...	1056	238	122	11.0

**09115500 TOMICHI CREEK AT SARGENTS, CO (LAT 38 24 42N LONG 106 25 20W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1714	15	189	12.0	APR 02...	1342	29	169	0.1
NOV 14...	0845	11	--	0.0	24...	1240	51	181	4.1
JAN 30...	1100	15	171	0.0	JUN 17...	0953	94	142	10.8
					SEP 03...	1736	27	177	17.5

**09118450 COCHETOPA CREEK BELOW ROCK CREEK NEAR PARLIN, CO (LAT 38 20 08N LONG 106 46 18W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1544	16	221	11.0	MAY 05...	1925	26	208	11.8
NOV 14...	0845	19	251	0.5	29...	1205	23	208	15.3
JAN 29...	1604	9.1	270	0.0	JUN 17...	1143	17	274	12.7
APR 02...	1534	35	223	6.3	JUL 17...	1250	10	306	19.2
					SEP 03...	1842	20	227	15.6

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09124500 LAKE FORK AT GATEVIEW, CO (LAT 38 17 56N LONG 107 13 46W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	1056	92	195	8.3	MAY 05...	1325	150	186	9.2
NOV 14...	1227	63	195	0.5	MAY 27...	1306	1,020	126	10.4
JAN 29...	1340	44	207	0.5	JUN 16...	1629	553	120	10.8
MAR 17...	1150	52	193	0.7	JUN 25...	1626	365	124	14.9
					SEP 03...	1850	159	176	16.2

**09126000 CIMARRON RIVER NEAR CIMARRON, CO (LAT 38 15 26N LONG 107 32 46W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1238	31	183	11.5	MAY 05...	1505	43	111	6.1
NOV 14...	1300	13	167	2.0	JUN 02...	1348	748	--	8.4
JAN 30...	1026	17	193	0.1	JUN 16...	1425	346	86	9.9
MAR 19...	1105	12	156	0.5	SEP 03...	1711	101	158	15.2

**09132500 NORTH FORK GUNNISON RIVER NEAR SOMERSET, CO (LAT 38 55 33N LONG 107 26 01W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1205	90	115	9.0	JUL 09...	1505	259	116	9.6
OCT 25...	1345	60	138	7.5	AUG 12...	1320	220	159	18.9
JAN 22...	1535	20	141	0.0	SEP 11...	1350	194	123	11.1
APR 03...	1605	206	152	5.2					
MAY 08...	1530	584	107	6.7					
MAY 22...	1120	2,510	97	7.9					
MAY 29...	1200	2,850	86	0.2					



## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09132940 HUBBARD CREEK ABOVE IRON POINT GULCH NEAR BOWIE, CO (LAT 38 58 57N LONG 107 31 52W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 07...	1345	3.5	203	8.5	JUL 09...	1151	1.3	214	14.8
NOV 18...	1345	3.4	220	0.3	AUG 13...	0945	2.5	173	14.5
JUN 10...	1145	12	146	12.7					

**09132960 HUBBARD CREEK AT HIGHWAY 133 AT MOUTH NEAR BOWIE, CO (LAT 38 55 32N LONG 107 31 04W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1330	1.2	372	11.5	MAY 07...	1610	79	147	9.0
NOV 18...	1345	1.4	439	4.2	JUN 19...	1425	176	104	11.2
JAN 22...	1040	0.18	779	0.1	JUN 04...	1306	61	98	13.6
APR 03...	1110	17	203	3.3	JUL 10...	1530	0.21	554	21.4
16...	1745	63	130	8.8	AUG 12...	1510	0.27	353	24.6
18...	1020	59	147	2.2					

**09132985 EAST FORK TERROR CREEK BELOW COTTONWOOD STOMP NEAR BOWIE, CO (LAT 38 57 53N LONG 107 33 59W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 07...	1100	1.1	104	6.5	JUL 08...	1250	6.8	82	12.2
NOV 26...	1210	0.18	180	0.0	AUG 13...	1250	2.9	102	20.7
JUN 05...	1200	1.5	112	11.1					

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09132995 TERROR CREEK AT MOUTH NEAR BOWIE, CO (LAT 38 54 14N LONG 107 33 41W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1425	0.04	546	11.5	APR 03...	0908	12	154	2.3
NOV 23...	1521	0.65	0.0	0.5	APR 17...	1455	39	105	5.5
JAN 22...	0940	0.10	446	0.0	MAY 08...	1057	46	113	4.5
					AUG 12...	1615	0.24	388	21.6

**09134000 MINNESOTA CREEK NEAR PAONIA, CO (LAT 38 52 12N LONG 107 30 13W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 19...	1122	1.6	520	0.2	MAY 09...	0957	19	376	5.3
JAN 23...	1135	2.9	446	0.6	JUL 10...	1250	23	207	16.0
APR 02...	1405	5.8	594	8.2	SEP 02...	1115	8.3	197	15.2

**09134100 NORTH FORK GUNNISON RIVER BELOW PAONIA, CO (LAT 38 51 27N LONG 107 37 19W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	1455	79	372	11.0	APR 04...	1055	209	226	5.3
NOV 19...	1435	45	425	4.7	JUL 10...	0939	9.5	842	15.8

**09135950 NORTH FORK GUNNISON RIVER BELOW LEROUX CREEK NEAR HOTCHKISS, CO (LAT 38 47 18N LONG 107 44 21W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 31...	1432	119	901	10.4	SEP 03...	1040	59	1,570	17.9
JUL 02...	1153	144	875	19.4					

## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09143000 SURFACE CREEK NEAR CEDAREDGE, CO (LAT 38 59 05N LONG 107 51 13W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 04...	1230	10	95	4.0	MAY 06...	1400	44	109	5.8
30...	1210	10	93	0.1	23...	1221	127	82	7.2
APR 08...	1243	4.9	156	1.5	JUN 30...	1447	42	74	14.2
					SEP 03...	1210	31	69	14.3

**09143500 SURFACE CREEK AT CEDAREDGE, CO (LAT 38 54 06N LONG 107 55 14W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 04...	1405	11	105	7.5	MAY 21...	1300	68	99	8.3
30...	1355	9.7	101	5.0	JUN 30...	1306	27	87	16.1
APR 01...	1204	9.2	165	7.3	SEP 03...	1440	20	74	17.2
16...	1455	40	130	7.6					

**09144250 GUNNISON RIVER AT DELTA, CO (LAT 38 45 11N LONG 108 04 40W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	1135	554	1,010	12.0	MAY 20...	1440	3,630	380	12.1
NOV 12...	0940	420	982	4.2	JUN 25...	1220	625	710	17.2
APR 04...	1225	517	606	8.5	AUG 13...	0940	732	715	18.6

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09147000 DALLAS CREEK NEAR RIDGWAY, CO (LAT 38 10 40N LONG 107 45 28W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1345	27	614	12.0	MAY 29...	1100	104	382	10.6
NOV 12...	1520	18	742	4.1	JUN 24...	1400	13	847	18.2
JAN 07...	1510	25	644	0.0	AUG 04...	1200	34	634	15.6
APR 02...	1312	27	573	7.5					
APR 14...	1135	58	371	5.5					

**09147025 UNCOMPAHGRE RIVER BELOW RIDGWAY RESERVOIR, CO (LAT 38 14 17N LONG 107 45 31W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1105	154	569	11.0	MAY 06...	1306	91	672	5.9
NOV 13...	0905	31	648	6.5	MAY 29...	1240	984	663	5.9
JAN 07...	1110	29	682	4.2	JUN 24...	1115	281	608	8.5
APR 02...	1145	29	679	5.6	AUG 12...	1235	240	430	10.6
APR 02...	1150	29	679	5.6					

**09147500 UNCOMPAHGRE RIVER AT COLONA, CO (LAT 38 19 53N LONG 107 46 44W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 02...	0820	144	580	9.0	MAY 29...	0830	1,190	408	6.3
NOV 12...	1355	40	691	2.0	JUN 25...	0835	295	565	8.4
APR 03...	1150	64	564	5.6	AUG 04...	1310	242	498	15.9

## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09152520 CALLOW CREEK AT WHITEWATER, CO (LAT 38 59 21N LONG 108 26 53W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 03...	0905	0.32	2,230	9.0	SEP 10...	0935	2.3	1,160	11.6
25...	1420	0.01	1,420	9.5					

**09165000 DOLORES RIVER BELOW RICO, CO (LAT 37 38 20N LONG 108 03 35W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 10...	1400	35	337	5.5	MAY 05...	1350	205	183	5.7
DEC 11...	1219	11	480	0.0	27...	1439	720	106	9.0
FEB 12...	1106	9.4	552	0.0	JUN 18...	1145	141	208	9.3
APR 22...	1235	127	247	3.3	JUL 08...	1200	42	299	13.3
					SEP 05...	1515	42	322	14.4

**09166500 DOLORES RIVER AT DOLORES, CO (LAT 37 28 21N LONG 108 29 49W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 10...	1205	79	378	12.5	MAR 04...	1251	39	517	0.0
DEC 13...	1249	34	521	0.1	27...	1110	139	426	4.8
JAN 28...	1436	28	283	0.5	MAY 20...	1620	1,340	144	11.1
					JUL 16...	1405	126	304	22.9

**09166950 LOST CANYON CREEK NEAR DOLORES, CO (LAT 37 26 46N LONG 108 28 07W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
JAN 28...	1649	0.28	315	1.5	APR 14...	1221	108	68	3.6
MAR 04...	1424	1.2	233	0.8	JUL 31...	1234	0.25	1,190	21.8

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09168730 DOLORES RIVER NEAR SLICK ROCK, CO (LAT 38 02 40N LONG 108 54 17W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
MAR 11...	1451	17	475	13.5	MAY 29...	1145	36	651	21.1
APR 02...	1445	153	390	9.6					
APR 23...	1615	49	646	13.6					

**09172500 SAN MIGUEL RIVER NEAR PLACERVILLE, CO (LAT 38 02 33N LONG 108 07 54W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 18...	1345	64	420	0.7	MAY 27...	1746	908	183	12.6
DEC 11...	1405	35	485	0.0	JUN 18...	1340	383	262	11.3
FEB 12...	1244	62	452	0.0	JUL 08...	1400	194	307	15.5
APR 01...	1056	82	439	6.7	AUG 20...	1350	125	357	17.2
APR 22...	1420	241	353	8.1					

**09174600 SAN MIGUEL RIVER AT BROOKS BRIDGE NEAR NUCLA, CO (LAT 38 14 39N LONG 108 30 05W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 18...	1530	83	430	3.3	MAY 29...	0853	1,200	188	9.9
DEC 11...	1536	86	483	0.0	JUN 18...	1515	298	281	18.0
FEB 12...	1438	89	463	0.6	JUL 08...	1530	93	369	23.4
APR 01...	1321	231	322	9.4	AUG 20...	1630	30	399	27.6
APR 22...	1535	400	304	10.7					

## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09177000 SAN MIGUEL RIVER AT URAVAN, CO (LAT 38 21 26N LONG 108 42 44W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 18...	1615	93	810	4.6	MAY 28...	1522	1,240	217	15.6
DEC 11...	1645	131	1,080	0.0	JUN 18...	1630	341	460	19.3
FEB 12...	1550	85	779	2.5	JUL 08...	1700	95	775	26.5
APR 01...	1452	255	494	12.8	AUG 20...	1815	76	1,070	26.3
APR 22...	1715	522	347	11.4					

**09237450 YAMPA RIVER ABOVE STAGECOACH RESERVOIR, CO (LAT 40 16 09N LONG 106 52 49W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 28...	1330	29	461	5.2	MAY 08...	1120	88	546	6.7
JAN 13...	1146	35	420	0.1	JUL 08...	1300	78	515	17.6
MAR 19...	1200	64	607	0.0	AUG 04...	1145	72	504	17.1
MAR 26...	0955	56	631	2.5	SEP 09...	1305	46	483	14.0
APR 16...	1225	107	562	5.5					

**09237500 YAMPA RIVER BELOW STAGECOACH RESERVOIR, CO (LAT 40 17 15N LONG 106 49 33W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 28...	1250	28	442	8.8	MAY 08...	1225	99	473	5.3
NOV 25...	1330	33	438	4.3	JUL 08...	1145	83	471	9.9
JAN 13...	1300	30	451	3.4	AUG 04...	1250	65	469	11.5
MAR 26...	1055	44	468	3.2					

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09238900 FISH CREEK AT UPPER STATION NEAR STEAMBOAT SPRINGS, CO (LAT 40 28 30N LONG 106 47 11W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
APR 01...	1130	12	39	1.6	JUL 08...	1420	51	20	15.0
JUN 26...	1210	174	16	6.5	SEP 09...	1420	5.8	24	11.4

**09240900 ELK RIVER ABOVE CLARK, CO (LAT 40 44 36N LONG 106 51 17W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 07...	1245	62	105	5.3	AUG 11...	1220	77	71	15.1
APR 01...	1335	86	102	1.2					

**09241000 ELK RIVER AT CLARK, CO (LAT 40 43 03N LONG 106 54 55W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 07...	1215	68	107	4.1	AUG 11...	1120	106	76	14.2
APR 01...	1430	112	111	1.1	SEP 10...	1405	91	87	9.9
JUN 24...	1230	889	86	8.9					

**09242500 ELK RIVER NEAR MILNER, CO (LAT 40 30 53N LONG 106 57 12W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 07...	1100	112	133	7.0	JUN 24...	1015	1,580	40	9.9
OCT 28...	1035	82	143	4.0	AUG 12...	1445	128	110	23.3
MAR 19...	1035	158	177	0.4	SEP 10...	1520	85	128	12.5
MAR 26...	1320	200	253	3.2					



## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09246920 FORTIFICATION CREEK NEAR FORTIFICATION, CO (LAT 40 44 38N LONG 107 32 25W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 07...	0945	0.54	427	0.6	MAY 02...	1510	24	193	10.1
FEB 19...	0945	2.0	423	0.0	JUN 17...	1600	19	198	22.0
MAR 11...	1025	4.5	273	0.4					
MAR 13...	1000	32	226	0.1					
MAR 17...	1350	22	255	2.0					
MAR 25...	1315	7.5	346	6.9					

**09251100 YAMPA RIVER ABOVE LITTLE SNAKE RIVER NEAR MAYBELL, CO (LAT 40 27 39N LONG 108 25 30W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 08...	1025	188	575	3.1	JUN 23...	1440	3,470	152	17.0
MAR 03...	1210	223	691	0.2	JUL 28...	1325	234	426	25.6
MAR 17...	1140	1,430	686	4.4	SEP 08...	1415	95	636	19.0
APR 10...	1410	701	737	10.6					
APR 29...	1300	4,740	356	10.5					

**09253000 LITTLE SNAKE RIVER NEAR SLATER, CO (LAT 40 59 58N LONG 107 08 34W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1100	20	181	10.2	MAY 02...	1015	311	111	2.7
NOV 07...	1235	43	206	0.5	JUN 17...	1140	371	69	11.7
FEB 20...	1130	31	212	0.0	AUG 11...	1445	18	170	24.7
MAR 25...	1120	45	212	3.4	SEP 10...	1225	29	174	11.7

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09255000 SLATER FORK NEAR SLATER, CO (LAT 40 58 57N LONG 107 22 56W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 01...	1300	11	275	11.7	MAY 02...	1155	150	160	4.1
NOV 07...	1115	8.0	228	0.6	JUN 17...	1410	107	105	14.1
FEB 20...	0950	15	244	0.2	AUG 11...	1600	1.9	254	27.3
MAR 25...	0950	21	266	1.7	SEP 10...	1120	6.7	272	11.5

**09260000 LITTLE SNAKE RIVER NEAR LILY, CO (LAT 40 32 50N LONG 108 25 25W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 08...	1135	53	725	3.0	MAY 01...	1300	1,260	228	10.3
MAR 03...	1355	175	531	0.2	MAY 22...	1310	1,900	157	15.9
APR 09...	1020	318	438	5.5	JUN 02...	1545	3,990	133	17.3
					JUN 25...	1210	486	263	18.1
					JUL 28...	1440	4.0	700	33.3

**09304115 WHITE RIVER BELOW NORTH ELK CREEK NEAR BUFORD, CO (LAT 39 57 00N LONG 107 41 39W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
FEB 11...	1250	229	372	0.1	JUL 10...	1035	554	340	13.0
MAR 27...	1025	245	366	3.5	JUL 28...	1042	401	373	15.4
APR 07...	1050	253	388	3.8	SEP 16...	1029	372	334	10.1
MAY 11...	1016	565	334	5.2					

## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09304500 WHITE RIVER NEAR MEEKER, CO (LAT 40 02 01N LONG 107 51 42W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 04...	1121	309	549	9.5	APR 26...	1024	522	413	8.2
DEC 07...	1410	201	520	2.2	MAY 31...	0753	3,510	222	9.0
JAN 20...	1218	216	512	0.3	JUL 09...	1320	450	402	18.5
MAR 27...	1224	313	503	4.7	SEP 08...	0956	231	588	13.4

**09339900 EAST FORK SAN JUAN RIVER ABOVE SAND CREEK, NEAR PAGOSA SPRINGS, CO (LAT 37 23 23N LONG 106 50 26W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 24...	1217	16	160	7.0	MAY 20...	1157	235	86	6.8
APR 24...	1210	56	128	6.9	JUL 18...	1406	21	155	23.3

**09342500 SAN JUAN RIVER AT PAGOSA SPRINGS, CO (LAT 37 15 58N LONG 107 00 37W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 24...	1515	59	174	8.3	MAY 06...	1410	346	96	8.5
DEC 20...	1342	23	270	0.7	MAY 20...	1554	1,020	63	9.9
MAR 10...	1322	47	228	6.4	JUL 18...	1500	51	232	26.0

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09346400 SAN JUAN RIVER NEAR CARRACAS, CO (LAT 37 00 49N LONG 107 18 42W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 06...	1055	106	352	4.2	JUN 10...	1009	769	128	14.8
JAN 03...	1035	60	439	0.0	SEP 03...	1630	122	290	21.6
MAR 27...	1316	314	334	9.1	SEP 10...	1130	3,340	230	12.0
MAY 20...	0935	1,370	108	11.6					

**09349800 PIEDRA RIVER NEAR ARBOLES, CO (LAT 37 05 18N LONG 107 23 50W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 06...	0919	57	396	2.1	MAY 27...	1355	1,130	100	13.1
JAN 03...	1150	26	504	0.0	JUN 10...	1120	415	152	15.7
MAR 27...	1434	248	305	10.8	SEP 03...	1651	71	423	21.0

**09352900 VALLECITO CREEK NEAR BAYFIELD, CO (LAT 37 28 39N LONG 107 32 35W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC 09...	1336	18	78	0.0	MAY 07...	1601	127	65	4.5
MAR 05...	1438	14	77	0.4	MAY 23...	1230	621	48	4.7

**09353800 LOS PINOS RIVER NEAR IGNACIO, CO (LAT 37 09 58N LONG 107 34 57W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 05...	1210	16	218	7.6	JUL 17...	1221	4.2	203	25.8
JAN 02...	1606	14	230	0.0	SEP 10...	1645	68	247	17.2
APR 04...	1405	26	230	12.3					

## MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09354500 LOS PINOS RIVER AT LA BOCA, CO (LAT 37 00 34N LONG 107 35 56W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 12...	1454	24	432	7.7	JUN 04...	1500	66	273	22.6
JAN 02...	1435	15	409	0.2	JUL 29...	1400	124	272	24.6
APR 01...	1436	42	310	15.5	SEP 10...	1445	461	280	14.6

**09355000 SPRING CREEK AT LA BOCA, CO (LAT 37 00 40N LONG 107 35 47W)**

## MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 12...	1346	1.7	1,010	6.6	JUN 04...	1335	34	332	21.2
JAN 02...	1344	0.34	1,130	0.0	JUL 28...	1135	92	325	18.1
APR 01...	1241	1.1	1,030	15.5	JUL 29...	1210	53	329	22.0

**09358000 ANIMAS RIVER AT SILVERTON, CO (LAT 37 48 40N LONG 107 39 31W)**

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC 06...	1336	29	361	0.0	JUL 11...	1245	93	229	12.7
APR 10...	1258	25	428	6.5	AUG 14...	1330	110	267	15.9

**09358550 CEMENT CREEK AT SILVERTON, CO (LAT 37 49 11N LONG 107 39 47W)**

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC 06...	1435	13	946	1.1	JUL 11...	1445	20	693	15.7
JAN 23...	1334	11	1,060	3.1	AUG 14...	1140	19	828	12.8
APR 10...	1115	17	855	4.8					

MISCELLANEOUS STATION ANALYSES, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003—Continued

**09359010 MINERAL CREEK AT SILVERTON, CO (LAT 37 48 10N LONG 107 40 20W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
DEC 06...	1237	22	492	0.0	JUL 11...	1210	76	262	12.0
JAN 23...	1151	20	592	0.0	AUG 14...	1416	90	265	16.1
APR 10...	1436	26	519	8.8					

**09361500 ANIMAS RIVER AT DURANGO, CO (LAT 37 16 45N LONG 107 52 47W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
NOV 13...	1345	216	587	5.4	MAY 07...	1021	736	340	8.5
JAN 10...	1442	182	572	4.8	JUN 03...	1138	3,040	153	9.3
APR 11...	1235	349	424	10.3	JUL 10...	0935	360	517	16.5

**09371000 MANCOS RIVER NEAR TOWAOC, CO (LAT 37 01 39N LONG 108 44 27W)**

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Date	Time	Instantaneous discharge, cfs (00061)	Specific conductance, wat un f uS/cm 25 degC (00095)	Temperature, water, deg C (00010)
OCT 30...	1234	1.2	1,260	9.9	APR 14...	1451	24	880	15.5
FEB 20...	1437	5.4	2,130	9.0	JUN 06...	1218	0.53	2,100	23.6
MAR 27...	1435	16	1,640	13.4	AUG 26...	1250	8.2	642	25.1

COLORADO RIVER MAIN STEM  
THREE LAKES WATER-QUALITY STUDY

In November of 2000, a water-quality data-collection program was initiated in the Upper Colorado River basin including Grand Lake, Shadow Mountain Lake, Lake Granby, and the tributary streams to these lakes that make up a large portion of the Colorado/Big Thompson Water Diversion project. This is a cooperative effort between the USGS and Northern Colorado Water Conservancy District, Colorado River Water Conservation District, Grand County, and the Colorado Department of Public Health and Environment, and may help to determine the trophic status of these upper basin lakes.

**09011000 COLORADO RIVER NEAR GRAND LAKE, CO**

WATER-QUALITY RECORDS

LOCATION.--Lat 40°13'08", long 105°51'25", in NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.13, T.3 N., R.76 W., 200 ft downstream from bridge on U.S. Highway 34, 400 ft upstream from high-water line of Shadow Mountain Reservoir at elevation 8,376 ft above NGVD of 1929, and 3 mi southwest of town of Grand Lake.

DRAINAGE AREA.--102 mi<sup>2</sup>.

PERIOD OF RECORD.--November 2000 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09011000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09011000)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)
OCT 22...	1045	3.6	10.7	91	2.0	38	10.9	2.52	1.32	0.2	2.72	--	0.73
NOV 22...	1205	60	10.9	92	0.8	36	10.2	2.45	1.23	0.2	2.71	36	0.32
MAR 03...	0915	12	12.0	96	0.1	40	11.4	2.70	1.56	0.2	2.97	40	0.35
MAY 01...	1345	99	9.6	74	5.5	29	8.25	2.09	1.45	0.2	2.33	23	0.60
12...	1400	70	8.5	72	9.5	29	8.26	2.01	1.51	0.2	2.44	25	0.72
21...	0935	313	10.0	52	3.7	21	6.00	1.50	0.96	0.2	1.80	17	0.41
JUN 02...	1300	1,160	9.9	39	7.9	15	4.17	1.06	0.867	0.1	1.20	11	0.25
18...	0945	556	11.1	43	6.3	18	5.13	1.24	0.654	0.1	1.10	13	0.22
JUL 08...	0945	155	8.9	42	9.6	24	6.91	1.54	0.675	0.1	1.25	18	0.22
AUG 14...	1300	49	7.6	78	17.0	41	12.9	2.17	1.26	0.2	2.24	29	0.32
SEP 16...	1100	37	9.5	82	7.9	--	--	2.68	--	--	30	0.24	

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)
OCT 22...	--	8.34	--	--	--	--	--	0.005	0.002	--	--
NOV 22...	12.5	7.64	58	0.08	9.44	--	--	--	--	--	1.2
MAR 03...	14.9	6.75	65	0.09	2.13	0.25	0.013	0.084	E.003	E.006	1.1
MAY 01...	11.0	8.12	49	0.07	13.1	0.48	<0.015	0.317	<0.007	0.015	6.6
12...	9.88	7.81	48	0.07	9.12	0.42	<0.015	0.046	<0.007	0.027	6.9
21...	8.47	5.35	35	0.05	29.4	0.35	<0.015	0.067	<0.007	0.038	7.0
JUN 02...	6.35	4.44	25	0.03	78.7	0.40	<0.015	0.062	<0.007	0.068	6.3
18...	5.98	4.94	28	0.04	41.6	0.19	<0.015	0.077	<0.007	0.031	4.4
JUL 08...	5.38	7.30	34	0.05	14.4	0.23	<0.015	0.064	<0.007	0.011	2.1
AUG 14...	8.26	6.60	51	0.07	6.82	0.11	<0.015	<0.022	<0.007	0.009	1.7
SEP 16...	5.55	7.62	--	--	--	E.08	<0.015	<0.022	<0.007	0.006	1.6

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## THREE LAKES WATER-QUALITY STUDY—Continued

## 09012500 NORTH INLET AT GRAND LAKE, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 40°15'12", long 105°48'39" (revised), in NE $\frac{1}{4}$  sec.5, T.3 N., R.75 W., Grand County, Hydrologic Unit 14010001, at north edge of town of Grand Lake, 600 ft downstream from Tonahutu Creek and 0.20 mi upstream from high-water line of Grand Lake.

DRAINAGE AREA.--45.9 mi<sup>2</sup>.

PERIOD OF RECORD.--November 2000 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09012500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09012500)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfiltered mg/L as CaCO <sub>3</sub> (00900)	Calcium water, filtered, mg/L (00915)	Magnesium, water, filtered, mg/L (00925)	Potassium, water, filtered, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, filtered, mg/L (00930)	Alkalinity, water filtered lab, mg/L as CaCO <sub>3</sub> (29801)	Chloride, water, filtered, mg/L (00940)	
OCT	22...	1150	4.3	10.4	21	1.5	7	2.25	0.437	0.22	0.2	1.44	--	0.52
NOV	22...	1300	3.9	10.7	24	0.1	7	2.14	0.450	0.20	0.2	1.43	7	0.18
MAR	03...	1145	6.0	11.4	26	0.1	8	2.49	0.523	0.29	0.3	1.67	9	0.17
MAY	01...	1200	51	10.3	29	2.5	10	3.00	0.625	0.37	0.2	1.65	7	0.48
	12...	1215	28	9.3	26	5.0	10	2.96	0.609	0.36	0.3	1.82	9	0.47
	21...	1330	199	9.8	22	5.0	8	2.28	0.477	4.24	0.2	1.19	5	0.34
JUN	02...	1615	569	10.6	16	7.5	5	1.63	0.330	0.30	0.2	0.91	4	0.21
	18...	1330	457	9.2	13	6.9	5	1.40	0.267	0.200	0.2	0.81	4	0.16
JUL	08...	1245	167	8.5	14	10.5	5	1.46	0.257	0.169	0.2	0.90	4	0.16
AUG	14...	1130	31	8.2	19	13.0	6	1.98	0.351	0.203	0.2	1.14	6	0.10
SEP	16...	1255	27	9.1	20	8.2	6	1.96	0.384	0.207	0.2	1.03	6	0.12

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silica, water, filtered, mg/L (00955)	Sulfate water, filtered, mg/L (00945)	Residue water, filtered, sum of constituents mg/L (70301)	Residue water, filtered, tons/acre-ft (70303)	Residue water, filtered, tons/d (70302)	Ammonia + org-N, water, unfiltered mg/L as N (00625)	Ammonia water, filtered, mg/L as N (00608)	Nitrite + nitrate water, filtered, mg/L as N (00631)	Orthophosphate, water, filtered, mg/L as P (00671)	Phosphorus, water, unfiltered mg/L (00665)	Organic carbon, water, filtered, mg/L (00681)	
OCT	22...	--	2.00	--	--	--	--	--	--	--	--	
NOV	22...	6.08	1.91	17	0.02	0.18	--	--	--	--	1.2	
MAR	03...	7.62	2.01	21	0.03	0.34	0.25	0.013	0.177	E.001	<0.003	1.2
MAY	01...	7.51	2.88	22	0.03	2.97	0.25	<0.015	0.156	<0.007	0.006	6.9
	12...	7.44	2.89	22	0.03	1.66	0.24	<0.015	0.064	<0.007	0.010	6.4
	21...	6.20	1.99	20	0.03	11.0	0.28	<0.015	0.122	<0.007	0.015	7.1
JUN	02...	4.83	1.44	12	0.02	19.0	0.22	<0.015	0.111	<0.007	0.015	5.6
	18...	4.39	1.13	11	0.01	13.4	0.15	<0.015	0.067	<0.007	0.012	3.9
JUL	08...	3.55	1.05	10	0.01	4.61	1.8	<0.015	0.042	<0.007	0.006	2.2
AUG	14...	4.03	1.29	13	0.02	1.11	E.07	<0.015	0.081	<0.007	0.004	1.5
SEP	16...	4.51	1.65	14	0.02	1.01	E.07	<0.015	0.127	<0.007	0.004	1.6

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.



GRAND LAKE OUTLET BASIN  
THREE LAKES WATER-QUALITY STUDY—Continued

**09013500 EAST INLET NEAR GRAND LAKE, CO**

WATER-QUALITY RECORDS

LOCATION.--Lat 40°14'11", long 105°47'52" (revised), in NW<sup>1</sup>/<sub>4</sub> sec.9, T.3 N., R.75 W., Grand County, Hydrologic Unit 14010001, approximately 0.15 mi upstream from high-water line of Grand Lake and 1 mi southeast of town of Grand Lake.

DRAINAGE AREA.--27.2 mi<sup>2</sup>.

PERIOD OF RECORD.--November 2000 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09013500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09013500)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)	Chloride, water, fltrd, mg/L (00940)	
OCT	22...	1305	3.5	9.9	19	4.5	7	2.26	0.361	0.18	0.2	1.06	--	<0.20
NOV	22...	1420	4.0	10.8	21	0.1	7	2.14	0.355	0.16	0.2	1.03	6	0.17
MAR	03...	1400	4.0	11.5	23	0.1	8	2.50	0.405	0.21	0.2	1.20	7	0.15
MAY	01...	1040	30	10.4	--	1.0	9	2.67	0.471	0.33	0.2	1.16	6	0.37
	12...	1010	17	10.1	21	4.3	9	2.71	0.463	0.31	0.2	1.34	7	0.33
	21...	1145	127	10.5	19	3.2	7	2.16	0.353	0.26	0.1	0.85	4	0.26
JUN	02...	1430	432	9.8	15	6.2	5	1.60	0.271	0.22	0.1	0.66	3	0.19
	18...	1050	388	10.6	12	5.0	5	1.47	0.239	0.157	0.1	0.62	3	0.11
JUL	08...	1045	138	9.4	12	9.5	4	1.43	0.212	0.138	0.1	0.68	4	0.10
AUG	14...	1000	18	8.4	17	13.0	6	1.78	0.286	0.143	0.2	0.86	5	0.08
SEP	16...	1430	25	9.2	19	8.6	6	1.83	0.287	0.158	0.1	0.71	5	0.10

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	
OCT	22...	--	2.16	--	--	--	--	--	--	--	--	
NOV	22...	4.41	2.13	14	0.02	0.15	--	--	--	--	1.6	
MAR	03...	5.76	2.31	18	0.02	0.19	0.41	0.015	0.204	E.002	<0.003	1.5
MAY	01...	6.16	2.70	18	0.02	1.45	0.23	<0.015	0.097	<0.007	0.004	6.5
	12...	6.27	2.71	19	0.03	0.84	0.20	<0.015	0.069	<0.007	0.008	5.9
	21...	4.87	1.97	14	0.02	4.68	0.20	<0.015	0.082	<0.007	0.008	6.2
JUN	02...	3.81	1.44	11	0.01	12.3	0.20	<0.015	0.086	<0.007	0.009	5.1
	18...	3.70	1.25	10	0.01	10.3	0.12	<0.015	0.063	<0.007	0.007	3.5
JUL	08...	3.00	1.12	9	0.01	3.40	0.12	<0.015	0.044	<0.007	0.006	<0.3
AUG	14...	3.20	1.43	11	0.02	0.54	0.10	<0.015	0.081	<0.007	0.004	1.4
SEP	16...	3.54	1.75	12	0.02	0.79	0.11	<0.015	0.110	<0.007	0.004	1.8

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

## THREE LAKES WATER-QUALITY STUDY—Continued

## 09013900 GRAND LAKE AT GRAND LAKE, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 40°14'41", long 105°49'32", in NE $\frac{1}{4}$ SW $\frac{1}{4}$  sec.5, T.3 N., R.75 W., Grand County, Hydrologic Unit 14010001, between North Inlet and Shadow Mountain Lake Inlet channel, approximately 0.6 mi south southeast of the town of Grand Lake.

DRAINAGE AREA.--76.3 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1973 to June 1975, November 2000 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09013900](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09013900)

REMARKS.--Each sample is a composite of three equally-spaced point samples of equal volume. The surface sample is collected in the depth interval from the surface to twice the secchi disk depth (photic zone approximation.) The bottom sample is collected in the interval from twice the secchi depth to the reservoir bottom.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
OCT						
15...	0958	0.50	7.2	7.3	49	9.2
15...	0959	5.00	7.2	7.3	49	9.2
15...	1000	10.0	7.1	7.3	48	9.2
15...	1001	15.0	7.2	7.3	48	9.2
15...	1002	20.0	7.1	7.3	48	9.2
15...	1003	25.0	7.1	7.3	47	9.2
15...	1004	30.0	7.1	7.3	47	9.2
15...	1005	35.0	7.1	7.3	47	9.2
15...	1006	40.0	7.0	7.3	47	9.2
15...	1007	45.0	7.1	7.3	47	9.2
15...	1008	50.0	5.8	6.9	44	8.4
15...	1009	55.0	5.2	6.8	42	7.6
15...	1010	60.0	5.0	6.8	43	6.4
15...	1011	65.0	5.0	6.8	44	6.1
15...	1012	70.0	5.2	6.7	45	5.8
15...	1013	75.0	5.2	6.7	46	5.6
15...	1014	80.0	5.1	6.7	46	5.5
15...	1015	85.0	5.2	6.7	47	5.3
15...	1016	90.0	5.2	6.7	47	5.2
15...	1017	100	5.2	6.7	48	4.9
15...	1018	110	5.2	6.7	49	4.6
15...	1019	120	5.1	6.7	49	4.5
15...	1020	130	5.1	6.7	49	4.4
15...	1021	140	5.0	6.7	49	4.3
15...	1022	150	5.1	6.7	49	4.2
15...	1023	160	5.0	6.7	49	4.2
15...	1024	170	4.9	6.7	49	4.2
15...	1025	180	4.8	6.7	49	4.2
15...	1026	190	4.4	6.7	49	4.1
15...	1027	200	4.3	6.6	49	4.1
15...	1028	210	3.9	6.6	50	4.1
15...	1029	220	3.5	6.6	50	4.1
15...	1030	230	2.9	6.6	50	4.1

## GRAND LAKE OUTLET BASIN

## THREE LAKES WATER-QUALITY STUDY—Continued

09013900 GRAND LAKE AT GRAND LAKE, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
NOV						
05...	0956	0.50	7.2	7.0	44	6.1
05...	0957	5.00	7.2	7.0	44	6.1
05...	0958	10.0	7.2	6.9	44	6.1
05...	0959	15.0	7.2	6.9	44	6.1
05...	1000	20.0	7.2	6.9	44	6.1
05...	1001	25.0	7.1	6.9	44	6.1
05...	1002	30.0	7.1	6.9	43	6.1
05...	1003	35.0	7.0	6.9	43	6.1
05...	1004	40.0	7.1	6.9	44	6.1
05...	1005	45.0	7.0	6.9	43	6.0
05...	1006	50.0	6.9	6.8	44	5.9
05...	1007	55.0	6.6	6.8	44	5.8
05...	1008	60.0	6.5	6.8	44	5.7
05...	1009	65.0	6.5	6.8	45	5.7
05...	1010	70.0	6.5	6.7	45	5.7
05...	1011	75.0	6.6	6.7	45	5.6
05...	1012	80.0	6.6	6.8	45	5.6
05...	1013	85.0	6.7	6.8	45	5.4
05...	1014	90.0	6.7	6.8	45	5.2
05...	1015	100	6.2	6.7	46	5.0
05...	1016	110	5.8	6.5	45	5.0
05...	1017	120	5.0	6.5	46	4.8
05...	1018	130	5.0	6.5	46	4.8
05...	1019	140	4.9	6.4	46	4.5
05...	1020	150	4.8	6.4	47	4.4
05...	1021	160	4.8	6.4	47	4.3
05...	1022	170	4.7	6.4	47	4.3
05...	1023	180	4.7	6.4	47	4.2
05...	1024	190	4.6	6.4	47	4.2
05...	1025	200	4.4	6.3	47	4.1
05...	1026	210	3.6	6.3	47	4.1
05...	1027	220	1.3	6.2	48	4.1
JAN						
23...	0902	0.50	9.3	6.6	40	0.4
23...	0903	5.00	8.0	6.6	62	1.7
23...	0904	10.0	7.5	6.6	63	2.0
23...	0905	15.0	7.3	6.6	62	2.1
23...	0906	20.0	7.1	6.6	61	2.2
23...	0907	25.0	7.0	6.6	59	2.4
23...	0908	30.0	6.9	6.6	58	2.5
23...	0909	35.0	6.7	6.6	57	2.7
23...	0910	40.0	6.5	6.5	55	3.0
23...	0911	45.0	6.3	6.5	53	3.3
23...	0912	50.0	6.1	6.5	53	3.4
23...	0913	55.0	6.1	6.5	53	3.4
23...	0914	60.0	6.0	6.5	53	3.4
23...	0915	65.0	6.1	6.5	52	3.4
23...	0916	70.0	6.1	6.5	53	3.4
23...	0917	75.0	6.0	6.5	52	3.4
23...	0918	80.0	6.1	6.5	53	3.4
23...	0919	85.0	6.0	6.5	53	3.4
23...	0920	90.0	6.0	6.5	52	3.4
23...	0921	100	6.1	6.5	52	3.4
23...	0922	110	6.1	6.5	52	3.4
23...	0923	120	6.2	6.5	52	3.4
23...	0924	130	6.1	6.5	52	3.4
23...	0925	140	6.0	6.4	52	3.4
23...	0926	150	6.0	6.4	52	3.4
23...	0927	160	6.1	6.5	53	3.4
23...	0928	170	6.1	6.5	53	3.4
23...	0929	180	6.2	6.4	53	3.4
23...	0930	190	6.2	6.4	53	3.4
23...	0931	200	5.9	6.4	53	3.4
23...	0932	210	6.0	6.4	53	3.4
23...	0933	220	5.9	6.4	53	3.4
23...	0934	230	5.3	6.4	53	3.4

## THREE LAKES WATER-QUALITY STUDY—Continued

09013900 GRAND LAKE AT GRAND LAKE, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
MAY						
29...	1020	0.50	7.8	6.8	59	7.5
29...	1021	5.00	7.7	6.8	51	5.1
29...	1022	10.0	7.5	6.7	48	4.9
29...	1023	15.0	7.4	6.7	47	4.8
29...	1024	20.0	7.5	6.7	44	4.7
29...	1025	25.0	7.5	6.6	43	4.7
29...	1026	30.0	7.4	6.6	42	4.7
29...	1027	35.0	7.3	6.6	40	4.6
29...	1028	40.0	7.2	6.6	41	4.5
29...	1029	45.0	7.2	6.6	43	4.4
29...	1030	50.0	7.1	6.6	44	4.4
29...	1031	55.0	7.0	6.6	46	4.5
29...	1032	60.0	7.0	6.6	45	4.4
29...	1033	65.0	7.0	6.6	45	4.4
29...	1034	70.0	6.8	6.6	47	4.3
29...	1035	75.0	6.7	6.6	47	4.3
29...	1036	80.0	6.8	6.6	47	4.3
29...	1037	85.0	6.7	6.6	47	4.2
29...	1038	90.0	6.6	6.6	47	4.2
29...	1039	100	6.6	6.6	46	4.2
29...	1040	110	6.1	6.6	50	3.9
29...	1041	120	5.7	6.6	51	3.8
29...	1042	130	5.7	6.6	49	3.8
29...	1043	140	5.6	6.6	50	3.7
29...	1044	150	5.4	6.6	50	3.7
29...	1045	160	5.3	6.6	50	3.6
29...	1046	170	5.2	6.6	50	3.6
29...	1047	180	5.1	6.5	50	3.6
29...	1048	190	5.0	6.5	50	3.6
29...	1049	200	4.6	6.5	51	3.6
29...	1051	210	4.7	6.5	51	3.6
29...	1052	220	4.5	6.5	51	3.6
JUL						
15...	1000	0.50	7.8	7.6	27	15.4
15...	1001	5.00	7.9	7.6	22	14.9
15...	1002	10.0	8.4	7.6	16	12.7
15...	1003	15.0	8.3	7.6	15	11.7
15...	1004	20.0	8.1	7.6	13	10.4
15...	1005	25.0	8.1	7.5	12	9.8
15...	1006	30.0	8.0	7.4	11	9.1
15...	1007	35.0	8.0	7.4	12	8.0
15...	1008	40.0	7.9	7.4	13	7.5
15...	1009	45.0	7.9	7.3	14	7.1
15...	1010	50.0	7.9	7.3	15	6.8
15...	1011	55.0	7.9	7.3	14	6.7
15...	1012	60.0	7.8	7.3	14	6.5
15...	1013	65.0	7.7	7.2	14	6.2
15...	1014	70.0	7.7	7.2	15	5.9
15...	1015	75.0	7.5	7.2	16	5.8
15...	1016	80.0	7.5	7.2	17	5.7
15...	1017	85.0	7.4	7.2	17	5.5
15...	1018	90.0	7.4	7.2	18	5.4
15...	1019	100	7.2	7.2	20	5.0
15...	1020	110	6.8	7.2	23	4.7
15...	1021	120	6.6	7.1	24	4.5
15...	1022	130	6.5	7.1	25	4.4
15...	1023	140	6.2	7.1	27	4.2
15...	1024	150	6.1	7.1	27	4.2
15...	1025	160	5.9	7.1	28	4.1
15...	1026	170	5.7	7.1	29	4.0
15...	1027	180	5.6	7.1	30	4.0
15...	1028	190	5.5	7.1	30	3.9
15...	1029	200	5.4	7.1	31	3.9
15...	1030	210	5.2	7.1	31	3.8
15...	1031	210	4.8	7.0	31	3.8
15...	1032	230	4.7	7.0	32	3.8
15...	1033	240	4.3	7.0	32	3.7

## GRAND LAKE OUTLET BASIN

## THREE LAKES WATER-QUALITY STUDY—Continued

09013900 GRAND LAKE AT GRAND LAKE, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
AUG						
20...	1015	0.50	7.4	7.1	31	16.6
20...	1016	5.00	7.4	7.1	31	16.3
20...	1017	10.0	7.3	7.2	22	15.0
20...	1018	15.0	7.2	7.1	24	14.1
20...	1019	20.0	7.2	7.1	19	12.5
20...	1020	25.0	6.6	7.0	14	10.7
20...	1021	30.0	6.7	7.0	14	9.3
20...	1022	35.0	6.8	6.9	13	8.5
20...	1023	40.0	6.7	6.9	14	8.2
20...	1024	45.0	6.8	6.8	15	7.4
20...	1025	50.0	7.0	6.7	15	7.1
20...	1026	55.0	7.0	6.7	14	6.7
20...	1027	60.0	7.0	6.7	15	6.5
20...	1028	65.0	7.0	6.7	15	6.3
20...	1029	70.0	7.0	6.7	15	6.1
20...	1030	75.0	7.0	6.6	16	5.9
20...	1031	80.0	6.9	6.6	17	5.8
20...	1032	85.0	6.9	6.6	18	5.6
20...	1033	90.0	6.9	6.6	18	5.4
20...	1034	100	6.6	6.6	20	5.1
20...	1035	110	6.4	6.6	22	4.9
20...	1036	120	6.2	6.6	23	4.7
20...	1037	130	6.1	6.6	25	4.5
20...	1038	140	6.1	6.6	25	4.4
20...	1039	150	5.8	6.5	26	4.3
20...	1040	160	5.8	6.6	27	4.2
20...	1041	170	5.6	6.5	28	4.1
20...	1042	180	5.3	6.5	29	4.1
20...	1043	190	5.3	6.5	29	4.0
20...	1044	200	5.0	6.5	31	4.0
20...	1045	210	4.6	6.5	31	3.9
20...	1046	220	4.3	6.5	30	3.8
20...	1047	230	3.8	6.5	32	3.8
SEP						
16...	0954	0.50	8.2	6.9	50	11.8
16...	0955	5.00	8.2	6.9	48	11.8
16...	0956	10.0	8.2	7.0	43	11.8
16...	0957	15.0	8.2	7.0	43	11.8
16...	0958	20.0	7.2	7.0	31	11.2
16...	0959	25.0	6.9	6.9	25	10.6
16...	1000	30.0	6.8	6.9	20	9.6
16...	1001	35.0	6.4	6.9	16	9.6
16...	1002	40.0	6.3	6.8	15	8.3
16...	1003	45.0	6.4	6.7	15	7.9
16...	1004	50.0	6.5	6.7	15	7.3
16...	1005	55.0	6.6	6.7	16	7.0
16...	1006	60.0	6.7	6.6	17	6.5
16...	1007	65.0	6.7	6.6	18	6.3
16...	1008	70.0	6.8	6.6	19	6.1
16...	1009	75.0	6.8	6.6	19	5.8
16...	1010	80.0	6.7	6.5	21	5.7
16...	1011	85.0	6.6	6.5	21	5.5
16...	1012	90.0	6.5	6.5	22	5.4
16...	1013	100	6.4	6.5	24	5.1
16...	1014	110	6.3	6.5	26	4.9
16...	1015	120	6.2	6.5	28	4.7
16...	1016	130	6.1	6.5	28	4.6
16...	1017	140	6.0	6.5	29	4.5
16...	1018	150	5.7	6.4	31	4.3
16...	1019	160	5.6	6.4	31	4.3
16...	1020	170	5.4	6.4	32	4.2
16...	1021	180	5.2	6.4	33	4.1
16...	1022	190	5.1	6.4	33	4.1
16...	1023	200	4.8	6.4	34	4.0
16...	1024	210	4.5	6.4	35	3.9
16...	1025	220	4.3	6.4	35	3.9
16...	1026	230	3.5	6.4	36	3.8

## THREE LAKES WATER-QUALITY STUDY—Continued

09013900 GRAND LAKE AT GRAND LAKE, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Trans- parency Secchi disc, inches (00077)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)
OCT													
15...	1035	204	7.1	7.3	48	9.2	0.07	0.005	0.028	0.002	--	3.8	--
15...	1045	--	5.0	6.7	49	4.3	0.17	--	0.080	0.002	--	3.7	--
NOV													
05...	1040	168	7.2	6.9	44	6.1	E.06	E.004	0.042	E.002	E.008	2.9	2.8
05...	1055	--	5.0	6.5	46	4.5	<0.05	E.006	0.095	E.002	E.008	3.5	2.6
JAN													
23...	0940	--	7.5	6.6	63	2.0	--	--	--	--	--	2.3	2.9
23...	0950	--	6.1	6.5	52	3.4	--	--	--	--	--	2.3	2.9
MAY													
29...	1050	156	7.8	6.8	59	7.5	0.20	<0.015	0.070	<0.007	0.010	3.6	4.1
29...	1100	--	4.5	6.5	51	3.6	0.21	<0.015	0.083	<0.007	0.009	3.2	3.3
JUL													
15...	1040	149	7.8	7.6	27	15.4	0.16	<0.015	E.016	<0.007	0.006	3.1	3.0
15...	1055	--	4.3	7.0	32	3.7	0.17	<0.015	0.087	<0.007	0.006	3.7	4.0
AUG													
20...	1050	96.0	7.2	7.1	22	15.0	0.21	<0.015	<0.022	<0.007	0.010	3.0	4.2
20...	1100	--	6.1	6.6	25	4.5	0.13	<0.015	0.082	<0.007	0.007	3.3	4.1
SEP													
16...	1030	78.0	8.2	6.9	48	11.8	0.32	<0.015	<0.022	<0.007	0.014	3.4	4.8
16...	1045	--	3.5	6.4	36	3.8	0.16	<0.015	0.082	<0.007	0.008	3.4	3.6

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloro- phyll a phyto- plank- ton, fluoro, ug/L (70953)	Chloro- phyll b phyto- plank- ton, fluoro, ug/L (70954)
OCT		
15...	2.6	2.4
15...	--	--
NOV		
05...	4.3	1.4
05...	--	--
JAN		
23...	--	--
23...	--	--
MAY		
29...	2.3	0.2
29...	--	--
JUL		
15...	0.8	<0.1
15...	--	--
AUG		
20...	E.7	<0.1
20...	--	--
SEP		
16...	E4.1	E.4
16...	--	--

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## THREE LAKES WATER-QUALITY STUDY—Continued

## 09014500 SHADOW MOUNTAIN LAKE NEAR GRAND LAKE, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 40°12'26", long 105°50'27", in SW $\frac{1}{4}$ NW $\frac{1}{4}$  sec.19, T.3 N., R.75 W., Grand County, Hydrologic Unit 14010001, near Shadow Mountain Dam, approximately 3 mi south of Grand Lake.

DRAINAGE AREA.--185 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1989 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09014500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09014500)

REMARKS.--Each sample is a composite of three equally-spaced point samples of equal volume collected in the depth interval from the surface to twice the secchi disk depth (photic zone approximation).

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
OCT						
15...	1112	0.50	8.3	8.5	61	8.8
15...	1113	5.00	8.3	8.5	61	8.7
15...	1114	10.0	8.2	8.5	60	8.6
15...	1115	15.0	8.2	8.5	60	8.6
15...	1116	20.0	8.1	8.5	60	8.6
NOV						
05...	1103	0.50	8.2	7.4	57	5.2
05...	1104	5.00	8.1	7.4	57	5.2
05...	1105	10.0	8.1	7.5	57	5.2
05...	1106	15.0	8.0	7.4	57	5.2
05...	1107	20.0	8.1	7.4	57	5.2
JAN						
22...	1322	0.50	8.1	6.5	60	1.1
22...	1323	5.00	7.9	6.5	60	1.8
22...	1324	10.0	7.8	6.5	60	2.1
22...	1325	15.0	7.8	6.4	59	2.1
22...	1326	20.0	7.7	6.4	59	2.1
22...	1327	25.0	7.7	6.4	59	2.1
MAY						
29...	1120	0.50	7.9	7.1	43	12.0
29...	1121	5.00	7.9	7.0	42	11.6
29...	1122	10.0	7.9	7.0	43	11.0
29...	1123	15.0	7.8	6.9	42	9.8
29...	1124	20.0	7.7	6.9	41	9.5
JUL						
15...	1109	0.50	7.2	7.0	23	17.9
15...	1110	5.00	7.2	7.0	21	17.7
15...	1111	10.0	6.8	7.0	21	16.8
15...	1112	15.0	5.8	7.0	24	14.2
15...	1113	20.0	4.9	6.9	24	12.7
AUG						
20...	1130	0.50	7.8	7.8	38	15.7
20...	1131	5.00	8.0	7.8	35	15.1
20...	1132	10.0	7.3	7.7	38	14.0
20...	1133	15.0	6.0	7.5	39	12.6
20...	1134	20.0	5.3	7.4	38	12.2
SEP						
16...	1100	0.50	4.9	6.8	49	9.7
16...	1101	5.00	4.7	6.8	47	9.7
16...	1102	10.0	4.6	6.8	46	9.6
16...	1103	15.0	4.7	6.8	46	9.6
16...	1104	20.0	4.7	6.7	45	9.6
16...	1105	25.0	4.7	6.7	45	9.5

THREE LAKES WATER-QUALITY STUDY—Continued

09014500 SHADOW MOUNTAIN LAKE NEAR GRAND LAKE, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Trans- parency Secchi disc, inches (00077)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)
OCT 15...	1120	96.0	8.2	8.5	60	8.6	0.13	--	0.006	0.004	--	3.1	--
NOV 05...	1115	108	8.1	7.4	57	5.2	E.12	--	0.011	E.001	0.014	2.9	3.2
JAN 22...	1330	--	7.8	6.5	60	2.0	--	--	--	--	--	2.5	3.3
MAY 29...	1130	38.0	7.9	7.1	43	12.0	0.31	<0.015	E.012	<0.007	0.025	4.9	6.1
JUL 15...	1115	96.0	7.2	7.0	23	17.9	0.26	<0.015	<0.022	<0.007	0.015	3.5	4.2
AUG 20...	1140	72.0	7.3	7.7	38	15.1	0.30	<0.015	<0.022	<0.007	0.021	3.7	4.9
SEP 16...	1110	84.0	4.7	6.8	47	9.7	0.25	<0.015	0.133	E.006	0.028	3.9	4.4

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloro- phyll a phyto- plank- ton, fluoro, ug/L (70953)	Chloro- phyll b phyto- plank- ton, fluoro, ug/L (70954)
OCT 15...	7.2	2.0
NOV 05...	3.4	0.5
JAN 22...	--	--
MAY 29...	4.2	0.2
JUL 15...	0.8	<0.1
AUG 20...	E1.6	<0.1
SEP 16...	E.9	<0.1

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.



## THREE LAKES WATER-QUALITY STUDY—Continued

## 09016500 ARAPAHOE CREEK AT MONARCH LAKE OUTLET, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 40°06'45", long 105°44'57", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.24, T.2 N., R.75 W., Grand County, Hydrologic Unit 14010001, approximately 0.25 mi downstream from Monarch Lake Outlet and 10 mi east of Granby.

DRAINAGE AREA.--46.9 mi<sup>2</sup>.

PERIOD OF RECORD.--November 2000 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09016500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09016500)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO <sub>3</sub> (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO <sub>3</sub> (29801)	Chloride, water, fltrd, mg/L (00940)
OCT													
22...	0905	12	7.0	40	4.5	17	4.91	1.14	0.35	0.1	1.16	--	<0.20
NOV													
23...	1100	--	9.4	28	2.6	19	5.34	1.28	0.40	0.1	1.23	16	0.27
MAR													
03...	1600	7.4	10.1	56	1.3	22	6.38	1.51	0.59	0.1	1.50	20	0.33
MAY													
01...	1545	69	9.6	41	2.5	16	4.52	1.14	0.39	0.1	1.15	14	0.33
12...	1615	41	8.8	38	5.5	17	4.81	1.12	0.40	0.1	1.30	14	0.41
21...	1550	449	9.8	30	5.6	12	3.58	0.817	0.36	0.1	0.88	9	0.25
JUN													
02...	1045	1,270	9.9	56	4.3	9	2.70	0.617	0.31	0.1	0.70	7	0.17
18...	1600	729	10.3	23	8.3	10	2.85	0.634	0.24	0.1	0.67	8	0.16
JUL													
08...	1515	203	7.9	26	14.3	11	3.26	0.689	0.226	0.1	0.73	9	0.14
AUG													
14...	1430	46	7.2	34	19.8	14	4.09	0.926	0.189	0.1	0.87	13	0.08
SEP													
16...	0900	68	8.9	34	9.0	13	3.76	0.861	0.236	0.1	0.75	11	0.12

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)
OCT											
22...	--	4.86	--	--	--	--	0.005	0.065	0.002	--	--
NOV											
23...	3.44	4.99	27	0.04	--	--	--	--	--	--	1.0
MAR											
03...	5.66	4.68	34	0.05	0.67	0.25	0.090	0.119	E.002	E.003	0.9
MAY											
01...	5.25	3.65	25	0.03	4.68	0.22	0.023	0.083	<0.007	0.004	3.7
12...	4.97	3.76	26	0.03	2.86	0.18	0.016	0.059	<0.007	0.008	3.4
21...	4.58	2.65	19	0.03	23.2	0.18	<0.015	0.080	<0.007	0.008	4.3
JUN											
02...	3.88	2.03	15	0.02	51.6	0.15	<0.015	0.114	<0.007	0.009	4.6
18...	3.43	2.02	15	0.02	29.6	E.09	<0.015	0.092	<0.007	0.006	2.5
JUL											
08...	2.44	2.19	15	0.02	8.45	0.13	<0.015	0.033	<0.007	0.005	2.2
AUG											
14...	1.59	2.78	18	0.02	2.23	0.16	E.008	<0.022	<0.007	0.008	1.9
SEP											
16...	2.83	3.63	19	0.03	3.52	0.16	E.011	0.086	<0.007	0.005	2.3

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

THREE LAKES WATER-QUALITY STUDY—Continued

09018000 STILLWATER CREEK ABOVE LAKE GRANBY, NEAR GRAND LAKE, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°11'17", long 105°53'40" (revised), in SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.27, T.3 N., R.76 W., Grand County, Hydrologic Unit 1401001, approximately 0.25 mi upstream from high-water line of Lake Granby, 0.50 mi upstream from U.S. Highway 34, and 6 mi southwest of town of Grand Lake.

DRAINAGE AREA.--17.5 mi<sup>2</sup>.

PERIOD OF RECORD.--November 2000 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09018000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09018000)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Chloride, water, fltrd, mg/L (00940)
MAY 30...	0820	96	9.6	7.0	47	5.0	19	6.16	0.816	0.844	0.2	2.36	0.41
SEP 17...	0900	3.7	8.9	8.1	160	7.0	69	24.3	2.15	2.15	0.3	5.77	0.87

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)
MAY 30...	13.8	3.40	0.44	<0.015	<0.022	0.025	0.119	5.1
SEP 17...	23.9	5.82	0.20	<0.015	<0.022	0.052	0.095	3.4

< -- Actual value is known to be less than the value shown.

## THREE LAKES WATER-QUALITY STUDY—Continued

## 09018300 GRANBY PUMP CANAL NEAR GRAND LAKE, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 40°12'24", long 105°50'56" (revised), in SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.24, T.3 N., R.76 W., Grand County, Hydrologic Unit 14010001, at road crossing at south end of Shadow Mountain Lake, 4 mi southwest of Grand Lake, and 13.5 mi northeast of Granby.

PERIOD OF RECORD.--September 1970 to September 1975, March 1978 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09018300](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09018300)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO <sub>3</sub> (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat fltrd end lab, mg/L as CaCO <sub>3</sub> (29801)
NOV 15...	0910	579	8.5	7.6	62	6.5	25	7.82	1.41	0.70	0.2	2.24	--
JAN 28...	1045	268	9.0	7.8	64	3.5	26	7.87	1.45	0.80	0.2	2.34	28
AUG 21...	0750	360	3.8	7.4	68	9.0	28	8.63	1.61	0.900	0.2	2.58	29
SEP 17...	0800	690	3.1	7.1	64	10.0	24	7.31	1.45	0.878	0.2	2.37	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)
NOV 15...	0.97	--	3.08	--	--	--	0.29	0.009	0.019	0.002	0.017	--
JAN 28...	0.48	4.06	3.30	37	0.05	27.1	0.22	0.016	0.048	E.002	E.004	2.5
AUG 21...	1.07	7.70	4.35	45	0.06	43.5	0.16	<0.015	0.154	0.012	0.029	3.8
SEP 17...	0.94	7.11	4.18	--	--	--	0.21	<0.015	0.159	0.010	0.029	4.1

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

THREE LAKES WATER-QUALITY STUDY—Continued

09018500 LAKE GRANBY NEAR GRANBY, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°08'59", long 105°51'39", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.12, T.2 N., R.76 W., Grand County, Hydrologic Unit 14010001, near Granby Dam and approximately 6 mi northeast of Granby.

DRAINAGE AREA.--312 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1973 to June 1975, June 1979 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09018500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09018500)

REMARKS.--Each sample is a composite of three equally-spaced point samples of equal volume. The surface sample is collected in the depth interval from the surface to twice the secchi disk depth (photic zone approximation). The bottom sample is collected in the interval from twice the secchi depth to the reservoir bottom.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
OCT						
15...	1159	0.50	6.5	7.3	60	10.4
15...	1200	5.00	6.5	7.2	60	10.2
15...	1201	10.0	6.4	7.2	59	10.0
15...	1202	15.0	6.4	7.2	59	9.9
15...	1203	20.0	6.4	7.2	59	9.9
15...	1204	25.0	6.4	7.2	59	9.9
15...	1205	30.0	6.4	7.2	60	9.9
15...	1206	35.0	6.3	7.2	60	9.9
15...	1207	40.0	6.3	7.2	60	9.8
15...	1208	45.0	6.3	7.2	60	9.8
15...	1209	50.0	6.3	7.2	60	9.8
15...	1210	55.0	6.3	7.3	61	9.7
15...	1211	60.0	5.6	7.1	62	9.6
15...	1212	65.0	5.7	7.2	61	9.6
15...	1213	70.0	6.1	7.2	61	9.6
15...	1214	75.0	6.2	7.2	61	9.6
15...	1215	80.0	6.0	7.2	62	9.6
15...	1216	85.0	4.6	7.0	62	9.4
15...	1217	90.0	3.9	6.9	62	9.4
NOV						
05...	1152	0.50	7.3	7.1	58	7.1
05...	1153	5.00	7.3	7.2	57	7.1
05...	1154	10.0	7.2	7.2	57	7.1
05...	1155	15.0	7.2	7.1	57	7.1
05...	1156	20.0	7.2	7.1	57	7.1
05...	1157	25.0	7.2	7.1	57	7.1
05...	1158	30.0	7.1	7.1	57	7.1
05...	1159	35.0	7.2	7.1	57	7.1
05...	1200	40.0	7.1	7.1	57	7.0
05...	1201	45.0	7.1	7.1	57	7.0
05...	1202	50.0	7.1	7.1	57	7.0
05...	1203	55.0	7.1	7.1	57	7.0
05...	1204	60.0	7.1	7.1	57	7.0
05...	1205	65.0	7.1	7.1	57	7.0
05...	1206	70.0	7.0	7.1	57	7.0
05...	1207	75.0	7.0	7.1	57	7.0
05...	1208	80.0	7.1	7.1	57	7.0
05...	1209	85.0	7.0	7.1	57	7.0
05...	1210	90.0	7.0	7.1	57	7.0
05...	1211	100	7.1	7.1	57	7.0
JAN						
22...	1117	0.50	9.1	6.5	77	0.4
22...	1118	5.00	8.4	6.6	69	1.9
22...	1119	10.0	8.2	6.6	66	2.4
22...	1120	15.0	7.7	6.5	65	2.6
22...	1121	20.0	7.3	6.5	64	2.8
22...	1122	25.0	7.1	6.4	63	2.9
22...	1123	30.0	6.8	6.4	61	3.2
22...	1124	35.0	6.6	6.4	61	3.3
22...	1125	40.0	6.4	6.3	60	3.3
22...	1126	45.0	6.3	6.3	61	3.3
22...	1127	50.0	6.3	6.3	61	3.2
22...	1128	55.0	5.9	6.2	60	3.3
22...	1129	60.0	5.2	6.2	60	3.4
22...	1130	65.0	4.9	6.1	61	3.4
22...	1131	70.0	4.5	6.1	61	3.4
22...	1132	75.0	4.1	6.1	61	3.6
22...	1133	80.0	3.8	6.0	61	3.6
22...	1134	85.0	3.0	6.0	62	3.7
22...	1135	90.0	2.4	6.0	65	3.9

## COLORADO RIVER MAIN STEM

## THREE LAKES WATER-QUALITY STUDY—Continued

## 09018500 LAKE GRANBY NEAR GRANBY, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
MAY						
29...	1213	0.50	8.6	7.7	62	13.5
29...	1214	5.00	8.8	7.8	66	12.4
29...	1215	10.0	8.5	7.6	61	11.1
29...	1216	15.0	8.0	7.3	56	9.8
29...	1217	20.0	7.6	7.2	55	9.4
29...	1218	25.0	7.4	7.0	64	8.7
29...	1219	30.0	7.3	7.0	73	8.1
29...	1220	35.0	7.0	7.0	70	7.6
29...	1221	40.0	7.0	6.9	71	7.3
29...	1222	45.0	6.8	6.9	73	6.8
29...	1223	50.0	6.5	6.9	74	6.2
29...	1224	55.0	6.3	6.9	75	5.9
29...	1225	60.0	6.0	6.8	76	5.7
29...	1226	65.0	5.9	6.8	77	5.6
29...	1227	70.0	5.9	6.8	80	5.2
29...	1228	75.0	5.7	6.8	81	5.2
29...	1229	80.0	5.7	6.8	82	5.1
29...	1230	85.0	5.6	6.8	85	4.9
29...	1231	90.0	5.4	6.8	88	4.7
JUL						
15...	1205	0.50	6.8	7.0	39	19.2
15...	1206	5.00	6.9	7.0	37	18.4
15...	1207	10.0	6.8	7.0	36	18.1
15...	1208	15.0	6.6	7.0	36	17.8
15...	1209	20.0	6.2	7.0	36	17.3
15...	1210	25.0	5.0	7.0	39	14.6
15...	1211	30.0	5.2	6.9	39	13.6
15...	1212	35.0	5.5	6.9	37	12.4
15...	1213	40.0	5.6	6.9	35	11.6
15...	1214	45.0	5.8	6.9	34	11.1
15...	1215	50.0	5.6	6.9	35	9.4
15...	1216	55.0	5.3	6.9	37	8.7
15...	1217	60.0	5.1	6.9	38	8.3
15...	1218	65.0	5.0	6.8	39	8.2
15...	1219	70.0	4.9	6.8	39	7.9
15...	1220	75.0	4.8	6.8	40	7.6
15...	1221	80.0	4.6	6.8	41	7.4
15...	1222	85.0	4.5	6.8	42	7.3
15...	1223	90.0	4.5	6.8	42	7.2
15...	1224	100	4.5	6.8	42	7.2
15...	1225	110	4.5	6.8	42	7.1
15...	1226	120	4.4	6.8	43	7.0
15...	1227	130	4.4	6.8	43	7.0
15...	1228	140	4.3	6.8	43	6.9
15...	1229	150	4.3	6.8	43	6.9
15...	1230	160	4.2	6.8	44	6.8
AUG						
20...	1243	0.50	6.1	7.1	37	19.9
20...	1244	5.00	6.2	7.2	36	18.7
20...	1245	10.0	6.1	7.2	37	18.5
20...	1246	15.0	6.0	7.2	37	18.4
20...	1247	20.0	6.0	7.2	37	18.3
20...	1248	25.0	5.6	7.1	36	17.9
20...	1249	30.0	3.0	7.1	37	15.5
20...	1250	35.0	3.8	7.0	35	13.5
20...	1251	40.0	4.2	7.0	35	11.8
20...	1252	45.0	4.4	6.9	35	10.5
20...	1253	50.0	4.3	6.9	35	10.0
20...	1254	55.0	4.2	6.9	36	9.3
20...	1255	60.0	3.9	6.9	37	8.8
20...	1256	65.0	3.8	6.8	38	8.4
20...	1257	70.0	3.7	6.8	39	8.2
20...	1258	75.0	3.6	6.8	39	8.0
20...	1259	80.0	3.6	6.8	39	7.9
20...	1300	85.0	3.5	6.8	39	7.9
20...	1301	90.0	3.6	6.8	40	7.8
20...	1302	100	3.5	6.8	39	7.8
20...	1303	110	3.4	6.7	39	7.7
20...	1304	120	3.4	6.7	40	7.6
20...	1305	130	3.3	6.7	40	7.6
20...	1306	140	3.3	6.7	40	7.5

THREE LAKES WATER-QUALITY STUDY—Continued

09018500 LAKE GRANBY NEAR GRANBY, CO—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sam- pling depth, feet (00003)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl- uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)
SEP						
16...	1146	0.50	6.7	7.0	43	15.0
16...	1147	5.00	6.7	7.1	42	14.8
16...	1148	10.0	6.7	7.1	42	14.6
16...	1149	15.0	6.6	7.1	42	14.5
16...	1150	20.0	6.6	7.1	42	14.5
16...	1151	25.0	6.5	7.1	42	14.5
16...	1152	30.0	6.4	7.1	42	14.5
16...	1153	35.0	6.1	7.0	43	14.3
16...	1154	40.0	5.5	7.0	42	14.1
16...	1155	45.0	3.2	7.0	42	12.2
16...	1156	50.0	3.2	6.9	42	11.3
16...	1157	55.0	3.4	6.9	42	10.2
16...	1158	60.0	3.4	6.8	43	9.2
16...	1159	65.0	3.3	6.8	44	9.0
16...	1200	70.0	3.0	6.8	45	8.4
16...	1201	75.0	3.0	6.8	45	8.3
16...	1202	80.0	2.9	6.8	46	8.1
16...	1203	85.0	2.8	6.7	46	8.0
16...	1204	90.0	2.8	6.7	46	8.0
16...	1205	100	2.8	6.7	46	7.9
16...	1206	110	2.7	6.7	46	7.8
16...	1207	120	2.6	6.7	46	7.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Trans- parency Secchi disc, inches (00077)	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfl- uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)	Organic carbon, water, unfltrd mg/L (00680)
OCT													
15...	1220	204	6.4	7.2	59	9.9	--	--	0.025	0.007	0.003	2.9	--
15...	1230	--	6.2	7.2	61	9.6	--	0.012	0.048	0.009	0.003	3.5	--
NOV													
05...	1220	192	7.2	7.1	57	7.1	E.08	0.024	0.020	0.004	0.016	2.8	2.6
05...	1230	--	7.0	7.1	57	7.0	E.07	0.021	0.017	0.004	0.016	2.9	2.8
JAN													
22...	1140	--	9.1	6.5	77	0.4	--	--	--	--	--	2.5	3.3
22...	1150	--	2.4	6.0	65	3.9	--	--	--	--	--	2.3	3.1
MAY													
29...	1240	62.0	8.6	7.7	62	13.5	0.48	<0.015	<0.022	<0.007	0.031	4.1	5.5
29...	1250	--	8.6	7.7	62	13.5	0.28	0.022	0.085	<0.007	0.017	3.4	4.4
JUL													
15...	1240	122	6.8	7.0	39	19.2	0.27	E.011	<0.022	<0.007	0.014	4.8	5.0
15...	1250	--	4.2	6.8	44	6.8	0.27	0.017	0.113	E.006	0.015	4.0	4.1
AUG													
20...	1310	126	6.2	7.2	37	18.5	0.24	E.010	<0.022	<0.007	0.022	4.2	5.1
20...	1320	--	3.5	6.8	39	7.8	0.17	<0.015	0.143	0.008	0.021	3.9	4.9
SEP													
16...	1210	162	6.7	7.1	42	14.6	0.24	<0.015	<0.022	<0.007	0.017	3.9	4.6
16...	1225	--	2.8	6.7	46	7.8	0.19	<0.015	0.160	0.008	0.021	3.9	5.1

## COLORADO RIVER MAIN STEM

## THREE LAKES WATER-QUALITY STUDY—Continued

## 09018500 LAKE GRANBY NEAR GRANBY, CO—Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloro- phyll a phyto- plank- ton, fluoro, ug/L (70953)	Chloro- phyll b phyto- plank- ton, fluoro, ug/L (70954)
OCT		
15...	2.1	1.4
15...	--	--
NOV		
05...	1.7	0.6
05...	--	--
JAN		
22...	--	--
22...	--	--
MAY		
29...	10.6	1.4
29...	--	--
JUL		
15...	1.6	<0.1
15...	--	--
AUG		
20...	E1.0	<0.1
20...	--	--
SEP		
16...	E1.1	<0.1
16...	--	--

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

THREE LAKES WATER-QUALITY STUDY -- Continued

09019000 COLORADO RIVER BELOW LAKE GRANBY, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°08'39", long 105°52'00", in SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.11, T.2 N., R.76 W., 0.3 mi downstream from Granby Dam, 1 mi upstream from Walden Hollow, and 6 mi northeast of Granby.

DRAINAGE AREA.--312 mi<sup>2</sup>.

PERIOD OF RECORD.--November 2000 to current year. For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09019000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09019000)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium adsorption ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end lab, mg/L as CaCO3 (29801)
NOV 13...	1045	20	10.2	8.2	63	6.5	25	7.71	1.42	0.70	0.2	2.26	--
JAN 15...	1230	20	11.0	8.1	65	3.0	25	7.76	1.44	0.77	0.2	2.25	27
MAR 12...	1345	20	10.9	8.5	65	3.5	27	8.26	1.52	0.81	0.2	2.42	29
MAY 29...	1415	66	9.4	7.8	83	9.0	34	10.4	2.01	1.07	0.4	5.01	33
JUL 23...	1215	86	10.4	8.2	69	9.0	27	8.18	1.56	0.894	0.2	2.55	26
SEP 25...	1330	12	11.0	8.2	66	11.0	30	9.16	1.65	0.909	0.2	2.86	26

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Chloride, water, fltrd, mg/L (00940)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Organic carbon, water, fltrd, mg/L (00681)
NOV 13...	0.31	--	3.07	33	0.04	1.77	--	0.011	0.019	0.013	0.014	--
JAN 15...	0.49	3.85	3.26	36	0.05	1.97	--	--	--	--	--	2.6
MAR 12...	0.50	4.26	3.36	39	0.05	2.10	E.17	E.005	0.052	0.003	E.006	2.7
MAY 29...	1.51	8.07	5.32	54	0.07	9.56	0.25	E.009	0.044	<0.007	0.024	4.2
JUL 23...	1.10	6.44	4.41	42	0.06	9.65	0.19	<0.015	0.131	E.006	0.021	4.5
SEP 25...	1.01	7.37	4.25	43	0.06	1.40	0.21	<0.015	0.133	E.006	0.025	3.8

< -- Actual value is known to be less than the value shown.  
 E -- Estimated laboratory analysis value.



## EAGLE RIVER WATERSHED SNOWMELT RUNOFF SAMPLING

(Eagle River Watershed Retrospective Assessment Program)

A network of surface water-quality sites has been established in the Eagle River watershed as an aid in determining long-term trends. In water year 2003, the Eagle River Watershed Retrospective Assessment Program conducted a major ion and trace element sampling program during April-June 2003. Samples were collected to investigate natural and human factors influencing water-quality conditions during snowmelt runoff. Additional water-quality data for sites 09064600 Eagle River near Minturn, CO, and 09067005 Eagle River at Avon, CO, are published elsewhere in this report.

REMARKS.--The following remark codes may appear in the data tables below: e, estimated; E, estimated laboratory analysis value; M, presence of material verified but not quantified.

## WATER-QUALITY RECORDS

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Station number	Station name	Date	Time	Instantaneous discharge, cfs (00061)	Turbidity, water, unfiltered, Hach 2100AN NTU (99872)	Dissolved oxygen, mg/L (00300)	pH, water, unfiltered, std units (00400)
<b>393030106224700</b>	<b>EAGLE RIVER BELOW HOMESTAKE CREEK NEAR RED CLIFF, CO</b>	04-23-03	1325	103	2.8	10.1	8.5
		05-01-03	1225	158	7.5	9.7	8.1
		05-06-03	1245	133	2.3	8.8	8.3
		05-14-03	1020	182	3.7	8.5	8.2
		05-21-03	1615	368	4.7	8.0	8.1
		05-29-03	1225	1,210	9.3	8.7	8.0
		06-04-03	1125	759	6.0	9.1	8.2
		06-12-03	0927	e435	2.4	9.4	8.1
		06-26-03	0945	211	1.2	8.6	8.4
		<b>09064600</b>	<b>EAGLE RIVER NEAR MINTURN, CO</b>	04-23-03	1645	113	3.6
05-01-03	1545			191	5.2	8.9	7.9
05-06-03	1000			137	3.5	9.7	8.0
05-14-03	1350			202	4.6	8.5	7.9
05-21-03	1335			397	10	8.6	7.8
05-28-03	1550			832	9.7	--	7.9
06-03-03	0940			748	7.2	8.8	8.1
06-11-03	1212			505	1.7	8.6	8.1
06-26-03	1300			253	<1.0	9.4	8.3
<b>393627106264000</b>	<b>EAGLE RIVER ABOVE GORE CREEK NEAR MINTURN, CO</b>			04-24-03	0910	150	6.8
		05-02-03	1035	261	3.4	10.0	8.1
		05-07-03	0830	193	2.8	9.6	8.1
		05-13-03	1439	e285	3.1	8.7	8.1
		05-21-03	1030	772	6.5	10.3	7.8
		05-28-03	1145	2,180	11	8.9	8.1
		06-03-03	1310	1,910	7.3	8.7	7.8
		06-11-03	1535	931	1.4	8.6	8.1
		06-26-03	1405	476	<1.0	8.4	8.3
		<b>09067005</b>	<b>EAGLE RIVER AT AVON, CO.</b>	04-24-03	1135	225	6.3
05-02-03	1425			362	5.4	9.2	8.2
05-07-03	1048			301	2.5	9.4	8.3
05-13-03	1025			399	4.3	9.3	8.3
05-21-03	1130			1,240	5.4	9.9	8.1
05-28-03	1410			2,910	15	8.7	7.8
06-04-03	1030			2,560	11	9.5	7.9

## (Eagle River Watershed Retrospective Assessment Program)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Station number	Date	Specif. conduc- tance, wat unf uS/cm (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Potas- sium, water, fltrd, mg/L (00935)	Sodium adsorp- tion ratio (00931)	Sodium, water, fltrd, mg/L (00930)	Alka- linity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicar- bonate, wat flt incrm. titr., field, mg/L (00453)	Carbon- ate, wat flt incrm. titr., field, mg/L (00452)	
393030106224700	04-23-03	107	2.1	49	11.8	4.73	0.75	0.1	2.36	44	53	--	
	05-01-03	124	3.2	55	13.4	5.35	0.85	0.1	2.34	50	61	--	
	05-06-03	134	5.7	62	15.0	6.08	0.83	0.1	2.40	64	78	--	
	05-14-03	114	6.5	54	12.9	5.18	0.75	0.1	2.06	44	54	--	
	05-21-03	125	10.5	61	14.8	5.74	0.72	0.1	1.69	58	71	--	
	05-29-03	94	8.5	42	10.3	4.02	0.55	0.1	1.10	40	49	--	
	06-04-03	118	7.0	63	15.8	5.64	0.71	0.1	1.22	55	67	--	
	06-12-03	127	5.5	68	17.5	6.03	0.65	0.1	1.38	54	66	--	
	06-26-03	147	7.4	79	20.4	6.80	0.62	0.1	1.43	70	85	--	
	09064600	04-23-03	127	1.4	56	13.1	5.77	0.77	0.1	2.46	40	49	--
		05-01-03	136	5.6	57	13.5	5.74	0.80	0.1	2.29	47	57	--
		05-06-03	152	3.0	69	16.0	6.93	0.80	0.1	2.44	49	60	--
		05-14-03	123	7.9	56	13.2	5.56	0.83	0.1	2.09	42	51	--
05-21-03		117	8.0	54	13.1	5.24	0.68	0.1	1.60	50	61	--	
05-28-03		88	10.5	42	10.4	3.83	0.55	0.1	1.16	36	44	--	
06-03-03		101	5.0	55	13.7	4.95	0.63	0.1	1.20	43	52	--	
06-11-03		114	7.5	61	15.4	5.42	0.63	0.1	1.29	51	62	--	
06-26-03		137	9.7	68	17.6	5.86	0.56	0.1	1.27	61	74	--	
393627106264000		04-24-03	175	0.2	79	18.7	7.95	0.77	0.2	3.43	49	60	--
	05-02-03	166	3.4	73	17.7	6.92	0.82	0.1	2.78	--	--	--	
	05-07-03	163	3.1	75	18.1	7.14	0.76	0.1	2.58	62	76	--	
	05-13-03	149	8.4	66	16.2	6.15	0.74	0.1	2.48	51	62	--	
	05-21-03	106	4.2	53	13.5	4.71	0.61	0.1	1.53	47	57	--	
	05-28-03	75	7.0	36	9.50	3.02	0.49	0.1	1.00	30	37	--	
	06-03-03	96	8.8	49	12.9	4.09	0.60	0.1	1.10	41	50	--	
	06-11-03	102	9.8	52	13.8	4.33	0.49	0.1	1.28	42	52	--	
	06-26-03	119	11.6	60	16.0	4.95	0.53	0.1	1.40	46	57	--	
	09067005	04-24-03	240	0.7	100	28.5	8.03	0.93	0.3	6.18	62	75	--
05-02-03		221	5.6	94	25.9	7.15	0.87	0.2	4.90	68	78	2	
05-07-03		233	5.0	100	27.7	7.56	0.87	0.2	5.15	74	90	--	
05-13-03		207	5.8	91	25.1	6.73	0.86	0.2	4.59	58	70	--	
05-21-03		128	5.8	--	--	4.43	0.62	--	2.45	46	56	--	
05-28-03		93	8.7	41	11.4	2.96	0.57	0.1	1.50	36	43	--	
06-04-03		105	5.3	50	14.2	3.41	0.60	0.1	1.62	42	51	--	

(Eagle River Watershed Retrospective Assessment Program)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Station number	Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)	Residue water, fltrd, tons/ acre-ft (70303)	Residue water, fltrd, tons/d (70302)	Aluminum, water, fltrd, ug/L (01106)	Arsenic water, fltrd, ug/L (01000)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)
393030106224700	04-23-03	2.73	<0.17	6.90	5.3	61	0.08	16.9	19	<0.3	<0.04	<0.8
	05-01-03	3.02	<0.17	7.23	5.7	68	0.09	29.1	18	E.2	<0.04	<0.8
	05-06-03	2.73	<0.17	7.04	6.3	79	0.11	28.3	16	E.2	<0.04	<0.8
	05-14-03	2.22	<0.2	6.53	5.8	62	0.08	30.5	16	E.2	<0.04	<0.8
	05-21-03	1.21	<0.2	6.43	5.3	71	0.10	70.3	24	E.2	<0.04	<0.8
	05-29-03	0.62	<0.2	5.19	3.6	50	0.07	162	34	E.2	<0.04	--
	06-04-03	0.67	<0.2	5.85	5.0	68	0.09	139	36	E.2	<0.04	--
	06-12-03	0.60	<0.2	5.78	5.5	70	0.09	--	16	E.2	<0.04	--
	06-26-03	0.55	<0.2	5.85	5.8	83	0.11	47.6	10	<0.3	<0.04	--
09064600	04-23-03	2.99	<0.17	7.15	16.0	73	0.10	22.3	71	E.2	0.94	<0.8
	05-01-03	2.86	<0.17	7.40	13.3	75	0.10	38.5	64	E.2	0.71	<0.8
	05-06-03	2.80	<0.17	7.39	15.9	82	0.11	30.5	61	E.2	0.78	<0.8
	05-14-03	2.15	<0.2	6.81	11.2	68	0.09	36.8	54	E.2	0.46	<0.8
	05-21-03	1.14	<0.2	6.57	7.9	66	0.09	71.2	54	E.2	0.24	<0.8
	05-28-03	0.66	<0.2	5.31	5.0	49	0.07	110	39	E.2	0.15	--
	06-03-03	0.60	<0.2	6.05	5.2	58	0.08	118	40	E.2	0.15	--
	06-11-03	1.23	<0.2	5.75	6.4	67	0.09	90.9	27	<0.3	0.12	--
	06-26-03	0.48	<0.2	5.59	7.2	75	0.10	51.3	18	E.2	0.13	--
393627106264000	04-24-03	3.59	<0.17	7.11	28.3	100	0.14	40.6	38	E.2	0.66	<0.8
	05-02-03	2.87	<0.17	7.32	19.6	92	0.13	65.0	44	E.2	0.44	<0.8
	05-07-03	2.85	<0.17	7.06	16.8	93	0.13	48.5	44	E.2	0.48	<0.8
	05-13-03	2.27	<0.2	6.63	17.1	83	0.11	--	38	E.2	0.29	<0.8
	05-21-03	0.89	<0.2	6.09	9.0	65	0.09	135	48	E.2	0.15	<0.8
	05-28-03	0.48	<0.2	4.78	5.3	43	0.06	254	50	E.2	0.08	--
	06-03-03	0.49	<0.2	5.59	5.8	55	0.08	285	39	E.2	0.09	--
	06-11-03	0.50	<0.2	5.32	7.8	59	0.08	149	32	E.1	0.08	--
	06-26-03	0.50	<0.2	5.15	10.4	67	0.09	86.1	20	E.2	0.07	--
09067005	04-24-03	11.4	<0.17	6.39	30.6	130	0.18	78.7	28	E.1	0.33	<0.8
	05-02-03	8.04	<0.17	6.71	22.0	117	0.16	114	31	E.2	0.24	<0.8
	05-07-03	10.2	<0.17	6.31	22.2	125	0.17	101	28	E.2	0.27	<0.8
	05-13-03	8.72	<0.2	5.87	19.4	106	0.14	114	25	E.2	0.20	<0.8
	05-21-03	3.49	<0.2	5.90	8.8				86	E.2	0.08	0.8
	05-28-03	1.93	<0.2	4.68	5.3	50	0.07	392	41	E.2	0.04	--
06-04-03	2.03	<0.2	5.26	6.0	59	0.08	406	32	E.1	0.04	--	

## (Eagle River Watershed Retrospective Assessment Program)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Station number	Date	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Iron, water, unfltrd recover- able, ug/L (01045)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Mangan- ese, water, unfltrd recover- able, ug/L (01055)	Nickel, water, fltrd, ug/L (01065)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	Zinc, water, unfltrd recover- able, ug/L (01092)
<b>393030106224700</b>	04-23-03	--	165	360	E.07	19.9	27	0.53	<0.2	1	3
	05-01-03	--	98	360	E.04	14.4	25	0.79	<0.2	1	3
	05-06-03	--	131	300	E.08	16.2	20	0.60	<0.2	1	2
	05-14-03	--	125	400	0.09	14.4	26	0.81	<0.2	M	3
	05-21-03	--	78	370	0.09	10.5	26	0.82	<0.2	2	3
	05-29-03	1.0	54	--	--	10.7	--	--	--	M	--
	06-04-03	0.8	72	--	--	10.0	--	--	--	1	--
	06-12-03	0.7	72	--	--	10.1	--	--	--	1	--
	06-26-03	0.6	97	--	--	14.7	--	--	--	M	--
	<b>09064600</b>	04-23-03	--	340	310	0.84	200	190	1.01	<0.2	327
05-01-03		--	211	800	0.48	140	177	0.88	<0.2	207	251
05-06-03		--	292	680	0.50	180	178	1.01	<0.2	254	279
05-14-03		--	238	670	0.47	106	116	1.07	<0.2	140	175
05-21-03		--	133	490	0.39	57.7	79	0.90	<0.2	70	91
05-28-03		2.7	64	--	--	29.3	--	--	--	37	--
06-03-03		2.3	95	--	--	29.1	--	--	--	38	--
06-11-03		1.8	111	--	--	33.9	--	--	--	34	--
06-26-03		1.8	154	--	--	57.5	--	--	--	41	--
<b>393627106264000</b>		04-24-03	--	211	1,490	0.43	224	746	1.11	<0.2	273
	05-02-03	--	164	540	0.35	107	122	0.88	<0.2	147	171
	05-07-03	--	239	520	0.41	130	126	0.94	<0.2	167	188
	05-13-03	--	170	530	0.30	79.3	94	1.09	<0.2	90	127
	05-21-03	--	99	450	0.29	34.2	181	0.89	<0.2	46	108
	05-28-03	2.5	74	--	--	19.9	--	--	--	23	--
	06-03-03	2.2	60	--	--	18.0	--	--	--	19	--
	06-11-03	2.0	74	--	--	20.7	--	--	--	20	--
	06-26-03	1.8	101	--	--	40.3	--	--	--	21	--
	<b>09067005</b>	04-24-03	--	138	690	0.37	115	256	1.09	<0.2	138
05-02-03		--	91	400	0.18	58.5	80	0.82	<0.2	72	101
05-07-03		--	123	360	0.23	71.5	79	0.94	<0.2	92	112
05-13-03		--	118	420	0.22	50.1	75	1.32	<0.2	64	100
05-21-03		--	86	420	0.40	19.5	59	1.61	<0.2	29	43
05-28-03		1.8	45	--	--	13.9	--	--	--	12	--
06-04-03		1.4	39	--	<1	10.3	60.2	--	<0.3	11	--

GUNNISON RIVER BASIN  
CURECANTI WATER-QUALITY NETWORK

The National Park Service and the US Geological Survey have entered into a partnership to collect and quality assure water-quality data for streams entering or within the boundaries of the Curecanti National Recreation Area (CNRA). Data were collected by Park Service personnel and reviewed by USGS personnel. The study area is located in the central southwest part of the State. The purpose of the data collection effort is to assess the quality of the surface-water resource prior to significant expected population growth upstream of CNRA. The goal of this program is to provide data that will assist the National Park Service in "helping to protect and enhance the quality of Park water".

**382943107015300 BEAVER CREEK AT HIGHWAY 50 NEAR GUNNISON, CO**

WATER-QUALITY RECORDS

LOCATION.--Lat 38°29'43", long 107°01'53", in SE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.24, T.49 N., R.2 W., Gunnison County, Hydrologic Unit 14020002, approximately 350 ft northwest of U.S. Highway 50, 600 ft upstream of mouth of Beaver Creek, and 8.3 mi southwest of Gunnison.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=382943107015300](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=382943107015300)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
JAN 22...	0935	--	10.9	7.8	92	0.0	37	11.3	2.08	E.08	<0.015	E.013	<0.002
APR 29...	1145	14	9.2	8.1	88	7.8	38	11.7	2.11	0.26	<0.015	E.012	<0.002
JUN 03...	1320	56	8.2	7.6	48	10.5	21	6.38	1.13	0.24	<0.015	E.014	<0.002
JUL 01...	0952	19	7.3	7.6	123	12.7	58	18.3	2.94	0.18	<0.015	<0.022	<0.002
JUL 31...	0955	6.7	7.2	7.9	122	14.3	58	18.2	3.08	0.18	<0.015	<0.022	<0.002
AUG 19...	0815	11	7.8	7.8	106	11.8	41	12.5	2.44	0.25	<0.015	<0.022	<0.002
SEP 02...	1415	6.3	7.1	7.9	108	16.4	49	15.6	2.50	0.24	<0.015	<0.022	<0.002

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
JAN 22...	0.034	0.052	<0.04	E.2	<0.08	40.0	<0.5	<0.2	<1
APR 29...	0.054	0.094	<0.04	0.4	<0.08	17.3	<0.5	<0.2	<1
JUN 03...	0.036	0.092	<0.04	0.5	<0.08	16.6	<0.5	<0.2	<1
JUL 01...	0.063	0.097	<0.04	0.3	<0.08	33.1	<0.5	<0.2	<1
JUL 31...	0.084	0.137	<0.04	E.2	<0.08	30.1	<0.5	<0.2	<1
AUG 19...	0.117	0.163	<0.04	E.2	<0.08	26.7	<0.5	<0.2	<1
SEP 02...	0.106	0.146	<0.04	0.3	<0.08	28.0	<0.5	<0.2	<1

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

CURECANTI WATER-QUALITY NETWORK—Continued

382937107033500 STEUBEN CREEK NEAR MOUTH NEAR GUNNISON, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°29'37", long 107°03'35", in SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.22, T.49 N., R.2 W., Gunnison County, Hydrologic Unit 14020002, approximately 600 ft upstream of mouth of Steuben Creek, 0.3 mi from U.S. Highway 50 and State Highway 149 intersection, and 9.3 mi southwest of Gunnison.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=382937107033500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=382937107033500)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
JAN 22...	1030	--	10.0	7.7	93	0.0	36	11.3	1.86	E.08	<0.015	0.060	<0.002
APR 29...	0843	4.9	10.3	8.1	76	3.0	31	9.63	1.63	0.36	<0.015	<0.022	<0.002
JUN 04...	0945	50	10.1	7.3	41	4.8	16	5.07	0.887	0.27	<0.015	<0.022	<0.002
JUL 01...	1148	7.7	7.3	--	96	12.4	42	13.2	2.07	0.27	<0.015	<0.022	<0.002
JUL 31...	1020	2.0	7.6	7.9	92	13.1	40	12.7	1.99	0.16	<0.015	<0.022	<0.002
AUG 19...	0917	2.3	8.3	7.9	86	9.9	30	9.30	1.69	0.21	<0.015	<0.022	<0.002

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
JAN 22...	0.030	0.038	<0.04	E.2	E.07	5.0	<0.5	<0.2	<1
APR 29...	0.034	0.069	<0.04	0.4	<0.08	4.3	<0.5	<0.2	<1
JUN 04...	0.023	0.059	<0.04	0.3	<0.08	7.0	<0.5	<0.2	<1
JUL 01...	0.094	0.132	<0.04	0.3	<0.08	8.9	<0.5	<0.2	<1
JUL 31...	0.068	0.104	<0.04	E.2	<0.08	3.0	<0.5	<0.2	<1
AUG 19...	0.065	0.106	<0.04	0.3	<0.08	3.7	<0.5	<0.2	<1

< -- Actual value is known to be less than the value shown.  
 E -- Estimated laboratory analysis value.

## CURECANTI WATER-QUALITY NETWORK—Continued

## 382856107050000 BLUE MESA RESERVOIR BELOW HIGHWAY 149 NEAR GUNNISON, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°28'56", long 107°05'00", in NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.28, T.49 N., R.2 W., Gunnison County,Hydrologic Unit 14020002, 1.4 mi downstream of U.S. Highway 149 bridge over Blue Mesa Reservoir, and 10.0 mi southwest of Gunnison.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=382856107050000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=382856107050000)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)
APR 17...	0845	8.4	8.3	239	7.8	110	32.8	7.14	0.40	E.013	0.029	<0.002	E.005
JUL 02...	0930	6.7	8.2	230	18.2	110	32.9	6.70	0.24	<0.015	<0.022	<0.002	<0.007
21...	0847	6.4	8.2	244	19.9	120	34.9	7.02	0.26	<0.015	<0.022	<0.002	E.005
AUG 14...	0957	6.7	8.7	245	20.4	120	37.9	7.31	0.37	<0.015	<0.022	<0.002	<0.007
26...	0835	7.4	8.5	236	19.1	110	33.9	7.15	0.25	<0.015	<0.022	<0.002	<0.007
SEP 09...	0843	7.3	8.7	236	17.9	120	34.7	7.29	0.51	<0.015	<0.022	<0.002	<0.007

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phos- phorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
APR 17...	0.051	<0.04	0.7	E.06	32.7	<0.5	<0.2	M
JUL 02...	0.028	<0.04	0.8	<0.08	22.5	E.3	<0.2	1
21...	0.022	<0.04	0.8	<0.08	1.5	<0.5	<0.2	M
AUG 14...	0.023	<0.04	0.8	<0.08	7.2	<0.5	<0.2	<1
26...	0.014	<0.04	0.9	<0.08	0.9	<0.5	<0.2	M
SEP 09...	0.021	<0.04	1.0	<0.08	1.1	<0.5	<0.2	<1

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

CURECANTI WATER-QUALITY NETWORK—Continued

382900107101600 EAST ELK CREEK NEAR MOUTH NEAR SAPINERO, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°29'00", long 107°10'16", in NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.27, T.49 N., R.3 W., Gunnison County,Hydrologic Unit 14020002, approximately 0.5 mi northeast of U.S. Highway 50 bridge over East Elk Creek inlet, and 7.3 mi northeast of Sapinero.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=382900107101600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=382900107101600)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
JAN 22...	1120	--	9.8	7.9	94	0.0	36	10.7	2.21	E.07	<0.015	0.039	<0.002
APR 14...	1502	10	8.7	7.6	83	9.0	32	9.48	1.95	0.20	<0.015	<0.022	<0.002
JUN 03...	1425	27	7.9	7.5	51	12.2	20	6.07	1.24	0.26	<0.015	<0.022	<0.002
JUL 08...	1332	1.8	5.8	7.6	110	18.6	51	15.2	3.06	0.22	<0.015	<0.022	<0.002
JUL 31...	1315	2.9	5.8	7.3	132	19.1	57	17.3	3.40	0.27	<0.015	<0.022	<0.002
AUG 19...	1040	3.4	6.7	7.6	126	14.1	49	14.2	3.16	0.26	<0.015	<0.022	<0.002
SEP 24...	0925	2.4	8.0	7.5	112	7.6	49	14.5	3.06	0.21	<0.015	<0.022	<0.002

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
JAN 22...	0.063	0.086	<0.04	E.1	<0.08	57.4	<0.5	<0.2	<1
APR 14...	0.079	0.118	<0.04	0.3	<0.08	18.8	<0.5	<0.2	<1
JUN 03...	0.061	0.105	<0.04	0.7	<0.08	20.5	<0.5	<0.2	<1
JUL 08...	0.161	0.22	<0.04	0.3	<0.08	128	E.3	<0.2	<1
JUL 31...	0.176	0.29	<0.04	E.2	<0.08	246	<0.5	<0.2	<1
AUG 19...	0.190	0.26	<0.04	E.2	<0.08	204	<0.5	<0.2	<1
SEP 24...	0.141	0.20	<0.04	E.2	<0.08	151	<0.5	<0.2	<1

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.



## CURECANTI WATER-QUALITY NETWORK—Continued

## 382829107122200 BLUE MESA RESERVOIR ABOVE CEBOLLA CREEK NEAR SAPINERO, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°28'29", long 107°12'22", in NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.29, T.49 N., R.3 W., Gunnison County, Hydrologic Unit 14020002, approximately 0.5 mi east of Cebolla Creek, 5.2 mi east of Sapinero.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=382829107122200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=382829107122200)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Dis-solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat un f uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Hard-ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes-ium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)
APR													
17...	0955	9.2	8.4	230	5.2	110	33.1	6.81	0.15	<0.015	<0.022	<0.002	<0.007
JUL													
02...	1045	6.5	8.5	213	18.1	100	30.7	6.24	0.27	<0.015	<0.022	<0.002	<0.007
21...	0950	6.3	8.4	223	19.9	100	31.2	6.28	0.22	<0.015	<0.022	<0.002	<0.007
AUG													
14...	1107	6.4	8.7	226	20.6	110	34.7	6.56	0.22	<0.015	<0.022	<0.002	<0.007
26...	0940	6.7	8.5	226	19.5	110	32.5	6.81	0.18	<0.015	<0.022	<0.002	<0.007
SEP													
09...	1031	6.5	8.6	229	18.2	110	34.1	6.97	0.25	<0.015	<0.022	<0.002	<0.007

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phos-phorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Mangan-ese, water, fltrd, ug/L (01056)	Selen-ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
APR								
17...	0.010	<0.04	0.6	<0.08	2.2	<0.5	<0.2	<1
JUL								
02...	0.011	<0.04	0.9	E.08	2.6	<0.5	<0.2	M
21...	0.013	<0.04	0.9	<0.08	1.0	<0.5	<0.2	<1
AUG								
14...	0.009	<0.04	0.9	0.08	0.7	<0.5	<0.2	M
26...	0.009	<0.04	0.9	<0.08	0.3	<0.5	<0.2	<1
SEP								
09...	0.017	<0.04	1.1	<0.08	0.9	<0.5	<0.2	<1

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

## CURECANTI WATER-QUALITY NETWORK—Continued

## 381633107054700 CEBOLLA CREEK AT POWDERHORN, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°16'33", long 107°05'47", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.4, T.46 N., R.2 W., Gunnison County, Hydrologic Unit 14020002, on County Road 29, approximately 800 ft northeast of Cebolla Hot Springs, and 250 ft southwest of Powderhorn.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=381633107054700](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=381633107054700)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
FEB 26...	1117	--	10.2	--	116	0.0	46	13.9	2.71	0.10	<0.015	<0.022	<0.002
APR 23...	1105	77	10.2	7.8	101	3.7	38	11.4	2.33	0.36	<0.015	0.029	E.002
JUN 18...	1440	39	7.2	7.6	183	17.1	75	22.2	4.83	0.29	<0.015	<0.022	<0.002
JUL 17...	1032	46	6.8	7.9	168	21.9	72	21.5	4.52	0.36	<0.015	<0.022	<0.002
AUG 06...	0850	44	7.4	8.0	146	13.1	61	18.9	3.41	0.19	<0.015	<0.022	<0.002
AUG 21...	1130	26	7.4	8.5	156	15.2	58	17.2	3.61	0.17	<0.015	<0.022	<0.002
SEP 03...	0900	45	8.0	7.8	167	11.8	71	22.1	3.72	0.15	<0.015	<0.022	<0.002

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
FEB 26...	0.031	0.054	<0.04	0.3	<0.08	11.3	<0.5	<0.2	<1
APR 23...	0.040	0.089	<0.04	0.7	<0.08	18.6	<0.5	<0.2	<1
JUN 18...	0.031	0.058	<0.04	1.0	<0.08	48.5	<0.5	<0.2	M
JUL 17...	0.041	0.103	<0.04	0.8	<0.08	35.3	<0.5	<0.2	<1
AUG 06...	0.049	0.079	<0.04	0.6	<0.08	16.5	<0.5	<0.2	<1
AUG 21...	0.050	0.068	<0.04	0.5	<0.08	14.9	<0.5	<0.2	<1
SEP 03...	0.034	0.054	<0.04	0.5	<0.08	17.3	<0.5	<0.2	<1

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

## CURECANTI WATER-QUALITY NETWORK—Continued

## 382902107140400 RED CREEK NEAR MOUTH NEAR SAPINERO, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°29'02", long 107°14'04", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.30, T.49 N., R.3 W., Gunnison County, Hydrologic Unit 14020002, 0.7 mi upstream of U.S. Highway 50, and 4.0 mi northeast of Sapinero.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=382902107140400](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=382902107140400)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
JAN 23...	1225	--	11.1	8.0	150	0.0	63	18.1	4.28	0.15	<0.015	0.034	E.002
MAY 05...	0845	3.1	9.0	7.9	110	6.6	46	13.4	2.99	0.34	<0.015	<0.022	<0.002
JUN 02...	1145	8.6	7.5	7.6	81	13.8	35	10.1	2.24	0.35	<0.015	<0.022	E.002
JUL 08...	1437	0.13	5.5	7.9	225	19.7	110	31.3	7.60	0.39	0.015	E.017	E.002
AUG 04...	0815	0.18	6.7	7.9	276	15.8	140	39.8	9.37	0.34	E.009	E.018	<0.002
AUG 19...	1132	0.19	7.2	8.1	277	14.5	130	36.6	8.98	0.41	<0.015	E.018	<0.002
SEP 24...	1017	0.43	7.8	7.9	235	9.4	110	31.5	7.56	0.41	<0.015	<0.022	<0.002

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
JAN 23...	0.061	0.141	<0.04	E.2	<0.08	113	<0.5	<0.2	<1
MAY 05...	0.096	0.170	<0.04	0.4	<0.08	61.6	<0.5	<0.2	<1
JUN 02...	0.103	0.176	<0.04	0.4	<0.08	29.7	<0.5	<0.2	<1
JUL 08...	0.085	0.191	<0.04	0.4	<0.08	75.6	<0.5	<0.2	<1
AUG 04...	0.074	0.161	<0.04	0.3	<0.08	77.3	<0.5	<0.2	<1
AUG 19...	0.055	0.139	<0.04	0.3	<0.08	105	<0.5	<0.2	M
SEP 24...	0.062	0.193	<0.04	0.3	<0.08	245	<0.5	<0.2	M

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

CURECANTI WATER-QUALITY NETWORK—Continued

383028107162200 WEST ELK CREEK BELOW FOREST BOUNDARY NEAR SAPINERO, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°30'28", long 107°16'22", in SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.14, T.49 N., R.4 W., Gunnison County, Hydrologic Unit 14020002, approximately 0.7 mi south of Gunnison National Forest Boundary, and 3.7 mi northeast of Sapinero.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=383028107162200](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=383028107162200)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
MAR 04...	1047	--	10.8	8.3	86	0.3	34	10.2	2.13	<0.10	<0.015	<0.022	<0.002
APR 17...	1253	29	9.8	8.1	70	5.9	28	8.57	1.64	0.16	<0.015	0.047	<0.002
JUN 30...	1140	24	7.4	--	54	10.5	21	6.44	1.22	E.06	<0.015	<0.022	<0.002
JUL 22...	1102	9.0	7.5	8.0	70	14.3	28	8.40	1.61	E.06	<0.015	<0.022	<0.002
AUG 12...	0900	4.4	8.0	7.9	83	11.9	34	10.0	2.25	E.09	<0.015	<0.022	<0.002
AUG 26...	1202	8.3	7.7	8.0	80	13.6	33	9.77	2.07	0.11	<0.015	<0.022	<0.002
SEP 17...	1125	16	8.3	7.8	78	8.9	34	10.2	2.04	0.12	<0.015	<0.022	<0.002

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
MAR 04...	0.054	0.060	<0.04	0.3	<0.08	0.4	<0.5	<0.2	<1
APR 17...	0.036	0.057	<0.04	0.5	<0.08	0.8	<0.5	<0.2	<1
JUN 30...	0.036	0.051	<0.04	0.4	<0.08	1.9	<0.5	<0.2	<1
JUL 22...	0.049	0.057	<0.04	0.3	<0.08	2.0	<0.5	<0.2	<1
AUG 12...	0.053	0.066	<0.04	0.4	<0.08	1.3	<0.5	<0.2	<1
AUG 26...	0.046	0.068	<0.04	0.4	<0.08	1.4	<0.5	<0.2	<1
SEP 17...	0.043	0.054	<0.04	0.5	<0.08	1.7	<0.5	<0.2	<1

< -- Actual value is known to be less than the value shown.  
E -- Estimated laboratory analysis value.

## CURECANTI WATER-QUALITY NETWORK—Continued

## 382831107172600 BLUE MESA RESERVOIR ABOVE SOAP CREEK NEAR SAPINERO, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°28'31", long 107°17'26", in NW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.27, T.49 N., R.4 W., Gunnison County, Hydrologic Unit 14020002, 0.6 mi north of U.S. Highway 50, approximately 2.7 mi downstream of U.S. Highway 50 bridge, and 1.3 mi northeast of Sapinero.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=382831107172600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=382831107172600)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat un- f uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)
APR													
17...	1045	9.5	8.3	234	4.5	110	34.1	6.74	0.14	<0.015	E.021	<0.002	E.006
JUL													
02...	1140	6.8	8.4	196	17.7	90	27.5	5.32	0.21	<0.015	<0.022	<0.002	<0.007
22...	0920	6.7	8.4	206	20.1	94	28.4	5.55	0.21	<0.015	<0.022	<0.002	<0.007
AUG													
14...	1156	6.8	8.7	210	20.9	100	32.0	5.82	0.20	<0.015	<0.022	<0.002	<0.007
26...	1040	6.7	8.5	209	19.4	97	29.1	5.90	0.15	<0.015	<0.022	<0.002	<0.007
SEP													
17...	0940	6.3	8.2	215	16.2	100	31.2	6.08	0.17	<0.015	<0.022	<0.002	<0.007

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phos- phorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
APR								
17...	0.014	<0.04	0.6	<0.08	0.7	<0.5	<0.2	<1
JUL								
02...	0.019	<0.04	1.0	<0.08	3.3	<0.5	<0.2	M
22...	0.011	<0.04	0.9	<0.08	0.7	<0.5	<0.2	<1
AUG								
14...	0.007	<0.04	1.0	<0.08	0.4	E.3	<0.2	<1
26...	0.006	<0.04	1.1	<0.08	0.5	<0.5	<0.2	1
SEP								
17...	0.012	<0.04	0.9	<0.08	0.5	<0.5	<0.2	<1

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

CURECANTI WATER-QUALITY NETWORK—Continued

383137107183600 SOAP CREEK ABOVE CHANCE CREEK NEAR SAPINERO, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°31'37", long 107°18'36", in NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.8, T.49 N., R.4 W., Gunnison County, Hydrologic Unit 14020002, approximately 850 ft upstream of confluence with Chance Creek, and 4.7 mi north of Sapinero.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=383137107183600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=383137107183600)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)
FEB 25...	1030	--	10.4	--	138	0.0	57	17.0	3.52	<0.10	<0.015	0.024	<0.002
JUN 09...	1037	80	10.0	7.7	69	6.7	28	8.79	1.58	0.32	<0.015	0.031	<0.002
JUL 07...	1300	27	6.9	8.3	103	17.4	45	13.7	2.60	E.08	<0.015	<0.022	<0.002
AUG 05...	1222	9.3	7.8	8.5	136	17.6	60	18.5	3.47	E.09	<0.015	<0.022	<0.002
AUG 20...	1225	8.6	7.5	8.8	134	16.2	55	15.9	3.71	0.17	<0.015	<0.022	<0.002
SEP 22...	1135	17	9.2	8.1	129	7.2	56	16.8	3.44	0.14	<0.015	<0.022	<0.002

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Cadmium, water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
FEB 25...	0.028	0.037	<0.04	0.4	E.08	1.2	<0.5	<0.2	<1
JUN 09...	0.013	0.053	<0.04	0.4	<0.08	2.6	<0.5	<0.2	<1
JUL 07...	0.017	0.027	<0.04	0.4	<0.08	1.2	<0.5	<0.2	<1
AUG 05...	0.020	0.031	<0.04	0.5	<0.08	1.3	<0.5	<0.2	<1
AUG 20...	0.022	0.069	E.02	0.5	<0.08	1.3	<0.5	<0.2	<1
SEP 22...	0.018	0.028	<0.04	0.4	<0.08	2.0	<0.5	<0.2	<1

< -- Actual value is known to be less than the value shown.  
 E -- Estimated laboratory analysis value.

## CURECANTI WATER-QUALITY NETWORK—Continued

## 381934107133500 LAKE FORK GUNNISON RIVER BELOW GATEVIEW, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°19'34", long 107°13'35", in SE $\frac{1}{4}$ NE $\frac{1}{4}$  sec.17, T.47 N., R.3 W., Gunnison County, Hydrologic Unit 14020002, at bridge on County Road 25, 2.3 mi northwest of Gateview.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=381934107133500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=381934107133500)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO <sub>3</sub> (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
FEB 26...	1025	--	11.3	--	195	0.0	80	26.2	3.61	E.07	<0.015	<0.022	<0.002
APR 23...	0925	72	9.3	8.1	186	5.4	77	25.1	3.41	0.19	<0.015	<0.022	<0.002
JUN 24...	0935	265	7.9	8.4	124	9.2	53	17.7	2.18	E.09	<0.015	<0.022	<0.002
JUL 21...	1245	122	6.6	8.3	166	21.0	67	21.9	2.84	E.10	<0.015	<0.022	<0.002
AUG 06...	1055	150	7.6	8.1	169	15.1	71	23.4	2.98	E.10	<0.015	<0.022	<0.002
SEP 21...	0915	124	7.5	8.2	179	14.1	71	23.2	3.11	0.10	<0.015	E.013	<0.002
SEP 03...	1048	170	8.1	8.2	173	12.3	72	23.9	2.88	0.16	<0.015	<0.022	<0.002

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
FEB 26...	0.023	0.034	0.08	1.0	0.14	15.1	<0.5	<0.2	19
APR 23...	0.009	0.024	0.08	1.3	0.19	18.7	<0.5	<0.2	13
JUN 24...	<0.007	0.011	0.06	1.2	0.17	13.8	<0.5	<0.2	7
JUL 21...	0.008	0.016	0.05	1.1	0.27	9.6	<0.5	<0.2	4
AUG 06...	E.005	0.016	E.03	1.0	0.45	12.3	<0.5	<0.2	4
SEP 21...	<0.007	0.016	0.05	1.0	0.12	12.5	<0.5	<0.2	4
SEP 03...	<0.007	0.014	E.03	1.0	0.12	9.0	<0.5	<0.2	2

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

CURECANTI WATER-QUALITY NETWORK—Continued

382702107203900 PINE CREEK AT HIGHWAY 50 NEAR SAPINERO, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°27'02", long 107°20'39", in NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.5, T.48 N., R.4 W., Gunnison County, Hydrologic Unit 14020002, approximately 600 ft upstream of confluence with Gunnison River below Blue Mesa Reservoir dam, 0.8 mi downstream of U.S. Highway 50 bridge over Pine Creek inlet, and 2.4 mi west of Sapinero.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=382702107203900](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=382702107203900)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
FEB 18...	1052	--	11.0	8.0	116	0.2	48	13.9	3.23	0.11	<0.015	0.241	<0.002
APR 30...	0930	14	9.9	8.0	78	4.4	33	9.78	2.20	0.55	E.008	0.273	0.003
JUN 04...	1330	4.6	7.5	8.1	111	13.8	51	14.9	3.38	0.44	<0.015	0.032	E.002
JUL 07...	1015	1.6	7.7	8.1	146	11.9	71	21.4	4.31	0.30	<0.015	0.043	<0.002
AUG 04...	1135	1.6	7.4	8.1	151	15.1	70	21.1	4.14	0.27	<0.015	E.019	<0.002
AUG 19...	1443	1.6	7.3	8.3	144	15.8	65	19.3	3.97	0.28	<0.015	E.018	<0.002
SEP 22...	0915	1.5	9.3	8.1	137	7.2	58	17.4	3.51	0.21	<0.015	E.013	<0.002

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
FEB 18...	0.047	0.074	<0.04	E.2	<0.08	8.4	<0.5	<0.2	<1
APR 30...	0.041	0.122	<0.04	0.8	<0.08	4.7	<0.5	<0.2	<1
JUN 04...	0.065	0.133	<0.04	0.4	<0.08	9.2	<0.5	<0.2	<1
JUL 07...	0.079	0.134	<0.04	0.4	<0.08	12.3	<0.5	<0.2	M
AUG 04...	0.089	0.160	<0.04	0.4	<0.08	13.2	<0.5	<0.2	2
AUG 19...	0.088	0.145	<0.04	0.4	<0.08	12.2	<0.5	<0.2	<1
SEP 22...	0.066	0.110	<0.04	0.3	<0.08	17.3	<0.5	<0.2	<1

< -- Actual value is known to be less than the value shown.  
 E -- Estimated laboratory analysis value.  
 M -- Presence of material verified but not quantified.



## CURECANTI WATER-QUALITY NETWORK—Continued

## 382418107242600 BLUE CREEK AT HIGHWAY 50 NEAR SAPINERO, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°24'18", long 107°24'26", in NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.23, T.48 N., R.5 W., Gunnison County, Hydrologic Unit 14020002, 200 ft downstream of confluence with East Fork of Little Blue Creek, 750 ft northwest of Halfway House, and 6.8 mi southwest of Sapinero.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=382418107242600](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=382418107242600)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
FEB 19...	1210	11	10.7	8.0	80	0.0	26	7.84	1.59	0.12	<0.015	0.087	<0.002
MAY 05...	1055	60	10.6	8.1	63	3.7	25	7.41	1.56	0.38	<0.015	0.070	E.002
JUN 19...	1200	32	7.8	--	--	12.7	27	8.04	1.74	0.30	<0.015	<0.022	<0.002
JUL 14...	1255	11	6.6	8.2	88	18.7	32	9.70	2.00	0.32	E.013	E.014	<0.002
AUG 04...	1100	11	7.8	7.9	88	13.1	38	11.4	2.23	0.23	<0.015	E.011	<0.002
AUG 20...	1035	8.4	7.6	8.2	90	12.3	35	10.5	2.15	0.27	<0.015	<0.022	<0.002
SEP 02...	1050	9.5	7.8	8.2	84	11.5	40	12.5	2.13	0.28	<0.015	<0.022	<0.002

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	
FEB 19...		0.038	0.059	<0.04	E.2	<0.08	17.3	<0.5	<0.2	<1
MAY 05...		0.023	0.070	<0.04	0.6	<0.08	15.3	<0.5	<0.2	5
JUN 19...		0.038	0.079	<0.04	0.6	<0.08	17.2	<0.5	<0.2	<1
JUL 14...		0.062	0.105	<0.04	0.5	<0.08	20.5	<0.5	<0.2	<1
AUG 04...		0.060	0.105	<0.04	0.4	<0.08	26.0	<0.5	<0.2	M
AUG 20...		0.048	0.094	<0.04	0.4	<0.08	28.1	<0.5	<0.2	2
SEP 02...		0.045	0.092	<0.04	0.4	<0.08	29.7	<0.5	<0.2	<1

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

## CURECANTI WATER-QUALITY NETWORK—Continued

## 09125000 CURECANTI CREEK NEAR SAPINERO, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°29'15", long 107°24'55", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.21, T.49 N., R.5 W., Gunnison County, Hydrologic Unit 14020002, on downstream side of left bridge pier on State Highway 92, 3.3 mi upstream from mouth, and 6.5 mi west of Sapinero.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09125000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09125000)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	
MAY	06...	1005	50	--	8.0	62	3.6	26	8.00	1.36	0.26	<0.015	0.028	E.002
JUN	11...	1045	41	9.0	7.7	48	8.1	20	6.23	1.00	0.23	<0.015	<0.022	<0.002
JUL	24...	0917	4.4	7.3	8.1	107	14.0	46	14.4	2.31	0.15	<0.015	<0.022	<0.002
AUG	05...	0917	3.7	7.9	8.2	116	11.9	53	16.8	2.67	0.18	<0.015	<0.022	<0.002
	23...	1027	4.9	7.7	8.5	116	14.3	45	13.9	2.50	0.28	<0.015	<0.022	<0.002
SEP	16...	1040	8.2	9.4	7.8	94	7.4	42	13.0	2.19	0.23	<0.015	<0.022	<0.002
	25...	0810	5.6	9.3	8.2	105	5.5	47	14.8	2.45	0.18	<0.015	<0.022	<0.002

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)	
MAY	06...	0.017	0.044	<0.04	0.4	<0.08	9.1	<0.5	<0.2	<1
JUN	11...	0.016	0.051	<0.04	0.3	<0.08	12.7	<0.5	<0.2	<1
JUL	24...	0.055	0.082	<0.04	0.3	<0.08	7.1	<0.5	<0.2	<1
AUG	05...	0.047	0.084	<0.04	0.3	<0.08	7.2	<0.5	<0.2	<1
	23...	0.054	0.093	<0.04	0.3	<0.08	4.2	<0.5	<0.2	M
SEP	16...	0.053	0.084	<0.04	0.5	<0.08	7.7	<0.5	<0.2	<1
	25...	0.034	0.072	<0.04	0.2	<0.08	3.8	<0.5	<0.2	<1

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

## CURECANTI WATER-QUALITY NETWORK—Continued

## 382644107271000 MORROW POINT RESERVOIR BELOW BLUE CREEK NEAR SAPINERO, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°26'44", long 107°27'10", in SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.5, T.48 N., R.5 W., Gunnison County, Hydrologic Unit 14020002, approximately 0.7 mi upstream of mouth of Myers Creek, 2.5 mi downstream of Blue Creek, and 8.2 mi west of Sapinero.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=382644107271000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=382644107271000)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)
APR 24...	1010	10.4	8.2	211	4.8	99	30.0	5.95	0.19	<0.015	0.044	E.002	0.009
JUN 16...	1010	8.2	8.5	142	15.1	61	18.3	3.65	0.30	<0.015	<0.022	<0.002	E.006
JUL 23...	1025	8.3	8.4	188	16.9	84	25.6	4.93	E.09	<0.015	<0.022	<0.002	<0.007
AUG 13...	1150	7.6	8.4	194	18.3	96	29.7	5.34	0.16	<0.015	<0.022	<0.002	<0.007
AUG 23...	1205	8.4	8.6	196	16.3	90	26.9	5.47	0.17	<0.015	<0.022	<0.002	<0.007
SEP 16...	1217	8.0	8.1	203	13.2	98	29.6	5.89	0.19	<0.015	<0.022	<0.002	<0.007

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phos- phorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
APR 24...	0.024	<0.04	0.7	<0.08	0.9	<0.5	<0.2	<1
JUN 16...	0.021	<0.04	0.6	<0.08	2.9	<0.5	<0.2	<1
JUL 23...	0.011	<0.04	0.7	<0.08	0.4	<0.5	<0.2	<1
AUG 13...	0.007	<0.04	0.7	<0.08	0.8	<0.5	<0.2	<1
AUG 23...	0.011	<0.04	0.9	<0.08	0.3	<0.5	<0.2	M
SEP 16...	0.019	<0.04	0.8	<0.08	0.8	<0.5	<0.2	1

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

## CURECANTI WATER-QUALITY NETWORK—Continued

## 382702107315400 MORROW POINT RESERVOIR ABOVE MORROW POINT DAM NEAR CIMARRON, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°27'02", long 107°31'54", in SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec.4, T.48 N., R.6 W., Gunnison County, Hydrologic Unit 14020002, approximately 0.3 mi upstream of Morrow Point Reservoir dam, 1.3 mi northeast of Cimarron.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=382702107315400](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=382702107315400)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unfltrd uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)
APR													
24...	1108	10.3	8.4	215	4.2	100	30.9	6.06	0.14	<0.015	E.020	<0.002	0.007
JUN													
16...	1115	8.4	8.6	166	14.2	74	22.3	4.44	0.23	<0.015	<0.022	<0.002	<0.007
JUL													
23...	1130	7.8	8.5	181	17.6	82	24.9	4.79	0.14	<0.015	<0.022	<0.002	<0.007
AUG													
13...	1315	7.6	8.6	191	18.8	93	28.8	5.17	0.14	<0.015	<0.022	<0.002	<0.007
23...	1305	7.6	8.8	192	17.1	84	25.1	5.14	0.19	<0.015	<0.022	<0.002	<0.007
SEP													
16...	1307	7.8	8.1	204	13.2	99	30.0	5.99	0.21	<0.015	<0.022	<0.002	<0.007

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phos- phorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
APR								
24...	0.016	<0.04	0.7	<0.08	0.3	<0.5	<0.2	<1
JUN								
16...	0.015	<0.04	0.7	<0.08	1.1	<0.5	<0.2	<1
JUL								
23...	0.009	<0.04	0.6	<0.08	0.9	<0.5	<0.2	<1
AUG								
13...	0.006	<0.04	0.7	<0.08	0.8	<0.5	<0.2	<1
23...	0.010	<0.04	0.8	<0.08	0.4	<0.5	<0.2	M
SEP								
16...	0.015	<0.04	0.8	<0.08	0.4	<0.5	<0.2	<1

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

## CURECANTI WATER-QUALITY NETWORK—Continued

## 09127000 CIMARRON RIVER BELOW SQUAW CREEK, AT CIMARRON, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°27'00", long 107°33'20", in sec.5, T.48 N., R.6 W., Gunnison County, Hydrologic Unit 14020002, 850 ft downstream from Squaw Creek, 0.25 mi northeast of Cimarron, and 0.75 mi upstream from mouth.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09127000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09127000)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
JAN 28...	1050	30	10.9	--	--	0.0	130	32.3	12.1	0.22	<0.015	0.115	<0.002
APR 16...	1230	68	9.8	8.7	348	7.7	140	32.5	13.5	0.32	<0.015	0.153	<0.002
JUN 19...	0925	150	8.4	8.3	275	10.4	110	27.4	11.2	0.28	<0.015	E.012	<0.002
JUL 14...	1055	31	8.8	8.8	592	15.4	230	52.6	25.1	<0.10	E.010	0.045	<0.002
AUG 13...	0847	23	7.7	8.6	742	15.8	310	67.2	34.9	0.73	E.010	0.077	<0.002
AUG 20...	0855	28	8.9	8.5	648	12.0	290	63.2	30.9	0.54	<0.015	0.084	<0.002
SEP 02...	0903	23	9.3	8.4	650	11.1	280	63.5	29.2	0.46	<0.015	0.052	<0.002

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
JAN 28...	0.027	0.063	<0.04	0.7	<0.08	14.7	0.8	<0.2	<1
APR 16...	0.028	0.095	<0.04	1.2	<0.08	19.3	1.0	<0.2	<1
JUN 19...	0.020	0.061	<0.04	1.4	<0.08	23.2	E.3	<0.2	M
JUL 14...	0.032	0.074	<0.04	3.0	<0.08	17.9	2.9	<0.2	3
AUG 13...	0.029	0.104	E.02	1.9	<0.08	33.3	1.6	<0.2	1
AUG 20...	0.036	0.095	<0.04	1.7	<0.08	26.9	1.3	<0.2	M
SEP 02...	0.033	0.082	E.02	2.2	<0.08	32.7	0.9	<0.2	<1

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

## CURECANTI WATER-QUALITY NETWORK—Continued

## 382924107352300 CRYSTAL RESERVOIR AT CRYSTAL CREEK NEAR CIMARRON, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°29'24", long 107°35'23", in SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub> sec.19, T.49 N., R.6 W., Gunnison County, Hydrologic Unit 14020002, 0.5 mi upstream of Crystal Creek, and 3.7 mi northwest of Cimarron.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=382924107352300](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=382924107352300)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat un- f uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)
APR 22...	1133	10.9	8.2	224	4.9	100	30.7	6.48	0.13	<0.015	0.053	E.002	0.009
JUN 10...	1107	8.1	8.1	200	13.3	86	24.8	5.87	0.21	0.026	0.036	E.002	0.009
JUL 10...	1117	7.6	8.1	209	14.4	94	27.9	5.92	0.24	<0.015	0.022	E.002	<0.007
AUG 11...	1242	8.0	8.4	212	15.7	100	31.5	6.22	0.24	<0.015	E.014	<0.002	<0.007
AUG 25...	1027	7.8	8.2	213	15.7	97	28.5	6.27	0.26	<0.015	<0.022	<0.002	<0.007
SEP 08...	1035	8.6	8.2	217	14.1	100	30.8	6.80	0.31	<0.015	E.016	<0.002	E.004

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phos- phorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
APR 22...	0.021	<0.04	0.7	<0.08	1.5	<0.5	<0.2	<1
JUN 10...	0.026	<0.04	0.9	<0.08	17.1	<0.5	<0.2	M
JUL 10...	0.018	<0.04	0.7	<0.08	14.5	<0.5	<0.2	M
AUG 11...	0.014	<0.04	0.8	<0.08	3.8	E.3	<0.2	<1
AUG 25...	0.016	<0.04	0.9	<0.08	2.1	<0.5	<0.2	1
SEP 08...	0.020	<0.04	1.0	<0.08	1.6	E.3	<0.2	<1

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E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

## CURECANTI WATER-QUALITY NETWORK—Continued

## 383024107371800 CRYSTAL RESERVOIR AT CRYSTAL DAM NEAR CIMARRON, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°30'24", long 107°37'18", in NW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub> sec.14, T.49 N., R.7 W., Gunnison County, Hydrologic Unit 14020002, approximately 0.3 mi upstream of Crystal Dam, 3.7 mi northwest of Cimarron.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=383024107371800](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=383024107371800)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Dis- solved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat un- f uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Hard- ness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnes- ium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)
APR 22...	1238	10.7	8.3	230	5.6	110	31.0	6.76	0.15	<0.015	0.054	E.002	0.009
JUN 10...	1225	8.5	8.1	201	13.8	86	24.9	5.80	0.25	0.031	0.037	E.002	0.010
JUL 10...	1242	7.3	8.3	206	14.9	92	27.2	5.94	0.28	E.010	<0.022	E.002	<0.007
AUG 11...	1400	7.8	8.7	213	17.0	110	33.1	6.70	0.17	<0.015	<0.022	<0.002	<0.007
AUG 25...	1132	8.1	8.5	213	16.1	93	27.2	6.04	0.22	<0.015	<0.022	<0.002	<0.007
SEP 08...	1132	8.3	8.5	214	14.8	100	29.7	6.38	0.22	<0.015	<0.022	<0.002	<0.007

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phos- phorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Mangan- ese, water, fltrd, ug/L (01056)	Selen- ium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
APR 22...	0.020	<0.04	0.8	<0.08	0.8	<0.5	<0.2	<1
JUN 10...	0.027	<0.04	0.8	<0.08	15.6	<0.5	<0.2	<1
JUL 10...	0.019	<0.04	0.6	<0.08	17.2	<0.5	<0.2	<1
AUG 11...	0.007	<0.04	0.8	<0.08	4.0	E.3	<0.2	<1
AUG 25...	0.009	<0.04	0.9	<0.08	2.3	<0.5	<0.2	<1
SEP 08...	0.014	<0.04	1.0	<0.08	0.4	<0.5	<0.2	<1

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E -- Estimated laboratory analysis value.

CURECANTI WATER-QUALITY NETWORK—Continued

09128000 GUNNISON RIVER BELOW GUNNISON TUNNEL, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°31'45", long 107°38'54", in NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub> sec.10, T.49 N., R.7 W., Montrose County, Hydrologic Unit 14020002, on left bank 0.4 mi downstream from east portal of Gunnison tunnel, 4.7 mi downstream from Crystal Creek, and 12 mi northeast of Montrose.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=09128000](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=09128000)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)
MAR 12...	1137	269	11.0	8.5	236	3.5	110	31.2	7.10	E.07	<0.015	0.057	<0.002
APR 16...	0948	275	9.3	8.3	236	4.0	110	31.7	7.41	0.14	<0.015	0.052	<0.002
JUN 12...	1033	386	9.6	8.1	187	10.4	81	23.2	5.62	0.21	E.014	0.042	0.003
JUL 15...	1107	883	8.7	8.0	198	10.7	91	27.4	5.50	0.24	<0.015	0.048	<0.002
AUG 18...	1025	824	8.4	8.1	208	12.0	89	26.4	5.51	0.18	<0.015	0.060	E.002
28...	1228	672	8.7	8.2	210	12.5	100	29.9	6.37	0.18	<0.015	0.051	<0.002

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Cadmium, water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
MAR 12...	E.005	0.016	<0.04	0.7	<0.08	1.6	<0.5	<0.2	<1
APR 16...	0.008	0.024	<0.04	0.8	<0.08	1.2	E.3	<0.2	<1
JUN 12...	0.013	0.041	<0.04	0.8	<0.08	15.7	<0.5	<0.2	<1
JUL 15...	0.010	0.020	<0.04	0.9	<0.08	1.6	<0.5	<0.2	M
AUG 18...	0.010	0.021	<0.04	0.8	<0.08	0.9	<0.5	<0.2	M
28...	0.009	0.020	<0.04	0.8	<0.08	0.8	E.3	<0.2	M

< -- Actual value is known to be less than the value shown.  
 E -- Estimated laboratory analysis value.  
 M -- Presence of material verified but not quantified.



## CURECANTI WATER-QUALITY NETWORK—Continued

## 383418107471401 RED ROCK CANYON NEAR NATIONAL PARK SERVICE BOUNDARY NEAR MONTROSE, CO

## WATER-QUALITY RECORDS

LOCATION.--Lat 38°34'18", long 107°47'14", in SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub> sec.29, T.50 N., R.8 W., Gunnison County, Hydrologic Unit 14020002, in the Black Canyon of the Gunnison National Park, 0.6 mi north of the south boundary, 0.75 mi east of the west boundary, and 8.0 mi northeast of Montrose.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=383418107471401](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=383418107471401)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium, water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia, water, fltrd, mg/L as N (00608)	Nitrite + nitrate, water, fltrd, mg/L as N (00631)	Nitrite, water, fltrd, mg/L as N (00613)
JUL 16...	1115	6.3	8.4	7.9	841	13.6	410	99.8	40.0	0.41	0.020	0.781	0.004
AUG 07...	1117	3.4	8.0	8.2	902	14.8	440	107	41.6	0.41	0.019	0.722	0.004
27...	1206	6.3	8.7	7.7	--	14.4	440	112	38.1	0.44	0.020	0.642	E.002

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Cadmium, water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
JUL 16...	0.114	0.175	<0.04	1.4	<0.08	29.2	17.5	<0.2	1
AUG 07...	0.122	0.172	E.02	1.7	<0.08	15.0	23.2	<0.2	1
27...	0.067	0.108	E.02	1.6	<0.08	23.9	17.2	<0.2	M

< -- Actual value is known to be less than the value shown.

E -- Estimated laboratory analysis value.

M -- Presence of material verified but not quantified.

CURECANTI WATER-QUALITY NETWORK—Continued

383537107471500 RED ROCK CANYON AT MOUTH NEAR MONTROSE, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°35'37", long 107°47'15", T.50 N., R.8 W., Gunnison County, Hydrologic Unit 14020002, 0.1 mi upstream of confluence with Gunnison River, and 9.3 mi northeast of Montrose.

PERIOD OF RECORD.--For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=383537107471500](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=383537107471500)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfiltered uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)
MAY 22...	1130	1.3	8.5	8.7	1,010	11.9	500	115	51.0	0.31	0.025	0.989	0.004
JUN 17...	0942	2.3	8.8	8.6	972	12.2	470	109	47.3	0.37	0.016	1.01	<0.002
JUL 16...	0840	2.5	8.2	8.5	946	14.2	460	105	48.1	0.24	0.016	0.995	E.002
AUG 07...	0820	3.0	7.7	8.5	888	14.4	460	108	45.0	0.32	0.019	0.896	<0.002
AUG 27...	0912	6.5	8.0	8.4	903	14.4	460	113	42.8	0.33	0.016	0.767	<0.002

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Cadmium water, fltrd, ug/L (01025)	Copper, water, fltrd, ug/L (01040)	Lead, water, fltrd, ug/L (01049)	Manganese, water, fltrd, ug/L (01056)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Zinc, water, fltrd, ug/L (01090)
MAY 22...	0.037	0.054	<0.04	1.9	<0.08	1.1	46.1	<0.2	1
JUN 17...	0.055	0.082	<0.04	2.0	<0.08	0.8	50.1	<0.2	1
JUL 16...	0.030	0.044	<0.04	1.4	<0.08	1.0	48.9	<0.2	M
AUG 07...	0.051	0.078	<0.04	1.7	<0.08	1.1	50.9	<0.2	M
AUG 27...	0.028	0.065	<0.04	1.8	<0.08	1.4	38.9	<0.2	M

< -- Actual value is known to be less than the value shown.  
 E -- Estimated laboratory analysis value.  
 M -- Presence of material verified but not quantified.

LA PLATA COUNTY

**371127107484801 NB03400915BDD1 SIMON**

LOCATION.--Lat 37°11'27", long 107°48'48", in SE ¼ NW ¼ sec.15, T.34 N., R.9 W., La Plata County, Hydrologic Unit 14080104, 0.5 mi southwest of Pastorius Reservoir, 7.5 mi southeast of Durango, Colo.

AQUIFER.--Animas Formation of Paleocene-Upper Cretaceous age. Aquifer code: 125ANMS.

WELL CHARACTERISTICS.--Drilled, observation well, diameter 3 in., depth 300 ft.

INSTRUMENTATION.--Water-level recorder with satellite telemetry.

DATUM.--Elevation of land-surface datum is 6,845 ft above NGVD of 1929, from topographic map. Measuring point: screw in recorder shelf above well casing, 3.00 ft above land-surface datum.

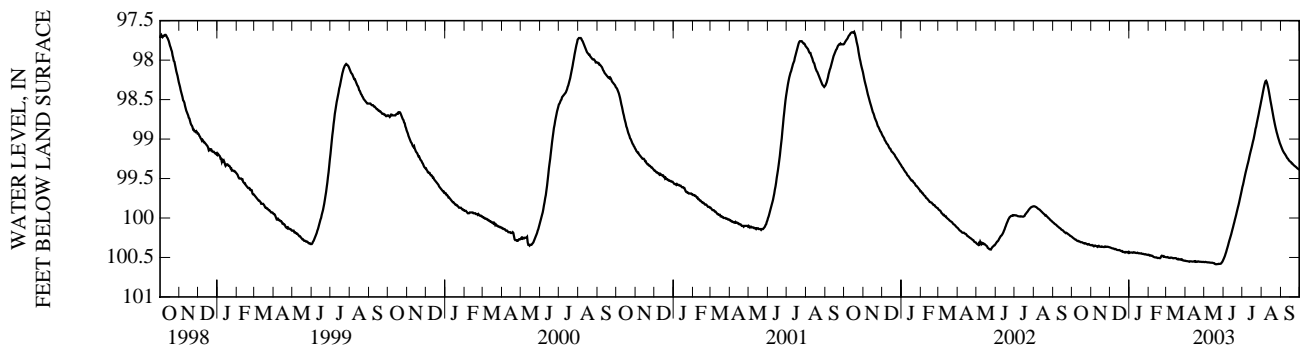
PERIOD OF RECORD.--June 1995 to September 2003 (discontinued). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=3711271074848](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=3711271074848)

EXTREMES FOR PERIOD OF RECORD.--Highest water level 97.63 ft below land-surface datum, Oct. 13, 14, 17, 2001; lowest, 100.61 ft below land-surface datum, May 15, 2003.

EXTREMES FOR CURRENT YEAR.--Highest water level 98.25 ft below land-surface datum, Aug. 7, 8; lowest, 100.61 ft below land-surface datum, May 15.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100.24	100.34	100.37	100.44	100.47	100.50	100.54	100.56	100.52	99.61	98.48	99.09
2	100.25	100.34	100.38	100.44	100.47	100.50	100.54	100.56	100.50	99.58	98.44	99.11
3	100.25	100.35	100.38	100.44	100.48	100.49	100.55	100.56	100.48	99.54	98.40	99.13
4	100.26	100.35	100.38	100.44	100.47	100.50	100.55	100.56	100.45	99.50	98.36	99.15
5	100.27	100.36	100.39	100.44	100.48	100.50	100.55	100.56	100.43	99.47	98.32	99.16
6	100.27	100.36	100.39	100.44	100.48	100.50	100.55	100.56	100.40	99.43	98.29	99.18
7	100.27	100.35	100.39	100.44	100.48	100.51	100.55	100.56	100.38	99.40	98.27	99.19
8	100.28	100.35	100.39	100.43	100.49	100.50	100.55	100.56	100.35	99.36	98.26	99.20
9	100.29	100.36	100.39	100.44	100.49	100.50	100.55	100.56	100.32	99.33	98.28	99.21
10	100.29	100.36	100.39	100.44	100.50	100.50	100.55	100.57	100.29	99.30	98.31	99.23
11	100.29	100.37	100.40	100.44	100.50	100.51	100.55	100.57	100.26	99.27	98.34	99.24
12	100.30	100.36	100.40	100.44	100.50	100.51	100.55	100.57	100.24	99.23	98.38	99.25
13	100.30	100.35	100.41	100.44	100.50	100.51	100.55	100.57	100.21	99.19	98.42	99.26
14	100.30	100.36	100.41	100.44	100.50	100.51	100.55	100.57	100.18	99.16	98.47	99.27
15	100.31	100.37	100.41	100.45	100.51	100.51	100.55	100.57	100.15	99.13	98.52	99.28
16	100.31	100.36	100.41	100.45	100.51	100.51	100.55	100.57	100.12	99.10	98.56	99.29
17	100.31	100.36	100.41	100.45	100.51	100.51	100.55	100.57	100.08	99.06	98.60	99.29
18	100.31	100.37	100.42	100.45	100.51	100.52	100.55	100.58	100.05	99.03	98.65	99.31
19	100.32	100.36	100.42	100.45	100.51	100.52	100.56	100.59	100.02	99.00	98.69	99.31
20	100.32	100.37	100.42	100.45	100.50	100.52	100.55	100.59	99.99	98.96	98.73	99.32
21	100.32	100.37	100.43	100.45	100.48	100.53	100.55	100.58	99.96	98.92	98.77	99.33
22	100.32	100.37	100.43	100.45	100.48	100.53	100.55	100.58	99.93	98.87	98.81	99.34
23	100.32	100.36	100.43	100.45	100.48	100.52	100.55	100.58	99.89	98.84	98.85	99.34
24	100.33	100.37	100.44	100.46	100.49	100.53	100.56	100.58	99.86	98.80	98.88	99.35
25	100.33	100.37	100.43	100.46	100.48	100.53	100.55	100.58	99.83	98.76	98.92	99.35
26	100.34	100.36	100.44	100.46	100.49	100.52	100.56	100.58	99.79	98.72	98.94	99.36
27	100.33	100.37	100.43	100.46	100.49	100.53	100.56	100.58	99.76	98.69	98.97	99.37
28	100.33	100.37	100.43	100.46	100.50	100.54	100.56	100.58	99.72	98.64	99.00	99.38
29	100.34	100.37	100.43	100.47	---	100.54	100.56	100.56	99.68	98.61	99.03	99.38
30	100.34	100.37	100.44	100.47	---	100.54	100.56	100.55	99.65	98.57	99.05	99.39
31	100.34	---	100.43	100.47	---	100.54	---	100.54	---	98.53	99.07	---
MEAN	100.30	100.36	100.41	100.45	100.49	100.52	100.55	100.57	100.12	99.08	98.61	99.27
MAX	100.34	100.37	100.44	100.47	100.51	100.54	100.56	100.59	100.52	99.61	99.07	99.39
MIN	100.24	100.34	100.37	100.43	100.47	100.49	100.54	100.54	99.65	98.53	98.26	99.09



## LA PLATA COUNTY

**371422107473301 NB03400807BBA1 ROYCE**

LOCATION.--Lat 37°14'22", long 107°47'33", in NW ¼ NW ¼ sec.7, T.34 N., R.8 W., La Plata County, Hydrologic Unit 14080104, 0.5 mi north of the Florida Mesa School, 7.0 mi southeast of Durango, Colo.

AQUIFER.--Animas Formation of Paleocene-Upper Cretaceous age. Aquifer code: 125ANMS.

WELL CHARACTERISTICS.--Drilled, unused well, diameter 3 in., depth 110 ft.

INSTRUMENTATION.--Water-level recorder with satellite telemetry.

DATUM.--Elevation of land-surface datum is 7,000 ft above NGVD of 1929, from topographic map. Measuring point: screw in recorder shelf above well casing, 3.00 ft above land-surface datum.

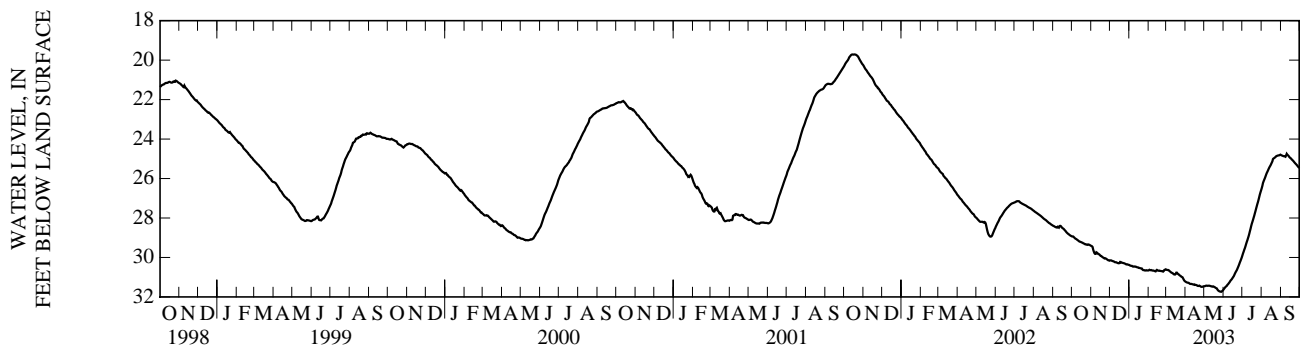
PERIOD OF RECORD.--June 1995 to September 2003 (discontinued). For a complete listing of historical data available for this site, see [http://waterdata.usgs.gov/co/nwis/inventory/?site\\_no=3714221074733](http://waterdata.usgs.gov/co/nwis/inventory/?site_no=3714221074733)

EXTREMES FOR PERIOD OF RECORD.--Highest water level 19.70 ft below land-surface datum, Oct. 13-15, 17, 18, 2001; lowest, 31.76 ft below land-surface datum, May 28, 2003.

EXTREMES FOR CURRENT YEAR.--Highest water level 24.73 ft below land-surface datum, Sept. 10; lowest, 31.76 ft below land-surface datum, May 28.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28.93	29.42	30.15	30.38	30.65	30.61	31.23	31.46	31.62	29.90	26.49	24.81
2	28.93	29.43	30.15	30.41	30.62	30.63	31.25	31.45	31.57	29.80	26.37	24.83
3	28.94	29.47	30.15	30.42	30.64	30.64	31.26	31.44	31.53	29.71	26.23	24.84
4	28.97	29.61	30.17	30.43	30.65	30.64	31.28	31.43	31.49	29.61	26.14	24.86
5	29.00	29.70	30.18	30.43	30.64	30.65	31.28	31.43	31.47	29.52	26.06	24.87
6	29.03	29.78	30.19	30.45	30.65	30.68	31.29	31.44	31.44	29.42	25.98	24.87
7	29.06	29.82	30.20	30.46	30.66	30.71	31.31	31.43	31.39	29.32	25.90	24.88
8	29.07	29.82	30.22	30.46	30.66	30.73	31.34	31.43	31.36	29.21	25.81	24.90
9	29.10	29.74	30.24	30.46	30.67	30.76	31.34	31.43	31.31	29.12	25.72	24.84
10	29.12	29.76	30.24	30.47	30.69	30.78	31.34	31.44	31.27	29.02	25.66	24.75
11	29.14	29.79	30.25	30.46	30.69	30.79	31.35	31.45	31.23	28.92	25.59	24.79
12	29.17	29.83	30.26	30.48	30.70	30.82	31.36	31.46	31.17	28.80	25.52	24.82
13	29.19	29.83	30.28	30.49	30.66	30.85	31.37	31.47	31.14	28.67	25.45	24.85
14	29.20	29.85	30.29	30.50	30.63	30.86	31.38	31.48	31.10	28.55	25.39	24.90
15	29.22	29.89	30.29	30.51	30.65	30.87	31.37	31.47	31.05	28.42	25.34	24.94
16	29.23	29.92	30.29	30.53	30.67	30.84	31.39	31.48	31.00	28.30	25.27	24.97
17	29.25	29.93	30.23	30.53	30.67	30.77	31.39	31.50	30.96	28.20	25.20	24.99
18	29.26	29.96	30.23	30.54	30.67	30.77	31.40	31.51	30.89	28.09	25.13	25.03
19	29.28	29.99	30.26	30.55	30.68	30.81	31.41	31.54	30.82	27.99	25.01	25.06
20	29.29	30.01	30.27	30.55	30.68	30.84	31.44	31.56	30.75	27.88	24.98	25.09
21	29.31	30.02	30.27	30.56	30.69	30.86	31.44	31.57	30.70	27.76	24.96	25.13
22	29.33	30.05	30.28	30.61	30.69	30.89	31.44	31.62	30.64	27.64	24.94	25.17
23	29.33	30.04	30.29	30.64	30.70	30.92	31.43	31.67	30.57	27.52	24.91	25.21
24	29.35	30.05	30.30	30.64	30.72	30.94	31.45	31.69	30.50	27.41	24.87	25.24
25	29.35	30.07	30.31	30.65	30.69	30.97	31.47	31.71	30.42	27.29	24.86	25.28
26	29.36	30.10	30.33	30.66	30.63	30.99	31.49	31.73	30.33	27.18	24.84	25.31
27	29.34	30.12	30.35	30.66	30.62	31.00	31.49	31.73	30.25	27.06	24.83	25.35
28	29.35	30.14	30.35	30.65	30.60	31.06	31.48	31.74	30.17	26.93	24.83	25.39
29	29.36	30.15	30.35	30.66	---	31.12	31.47	31.72	30.09	26.81	24.82	25.43
30	29.38	30.16	30.37	30.66	---	31.17	31.46	31.69	30.00	26.69	24.80	25.47
31	29.40	---	30.38	30.66	---	31.21	---	31.66	---	26.59	24.79	---
MEAN	29.20	29.88	30.26	30.53	30.66	30.84	31.38	31.54	30.94	28.30	25.38	25.03
MAX	29.40	30.16	30.38	30.66	30.72	31.21	31.49	31.74	31.62	29.90	26.49	25.47
MIN	28.93	29.42	30.15	30.38	30.60	30.61	31.23	31.43	30.00	26.59	24.79	24.75



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