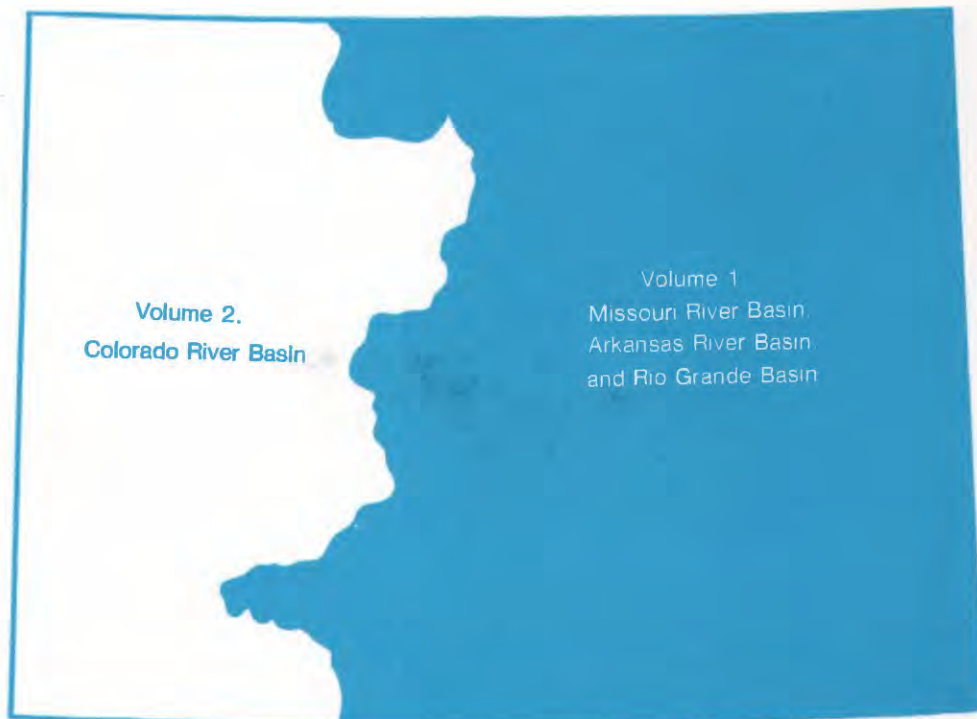


Water Resources Data Colorado Water Year 1993

Volume 1. Missouri River Basin, Arkansas River
Basin and Rio Grande Basin



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CO-93-1
Prepared in cooperation with the State of Colorado
and with other agencies

CALENDAR FOR WATER YEAR 1993

1992

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19
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1993

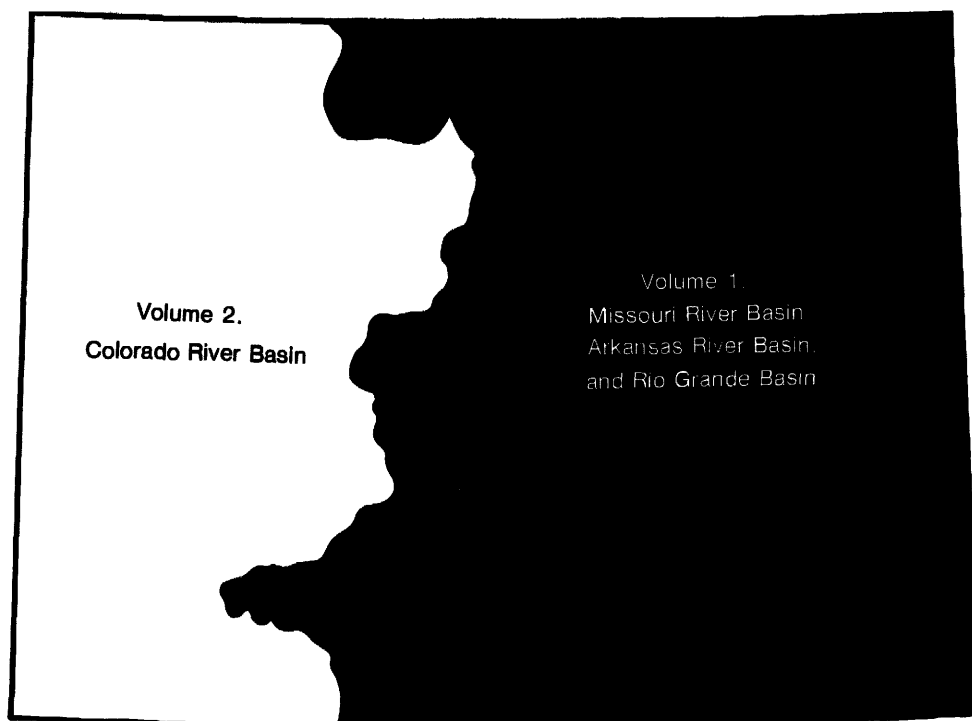
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Water Resources Data Colorado Water Year 1993

Volume 1. Missouri River Basin, Arkansas River
Basin and Rio Grande Basin

by R.C. Ugland, B.J. Cochran, M.M. Hiner, and R.D. Steger



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CO-93-1
Prepared in cooperation with the State of Colorado
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

U. S. GEOLOGICAL SURVEY

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For information on the water program in Colorado write to:

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Denver Federal Center
Lakewood, CO 80225**

1994

PREFACE

This volume 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.

This report 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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This report was prepared in cooperation with the State of Colorado and with other agencies under the general supervision of D. J. Lystrom, District Chief, Colorado.

REPORT DOCUMENTATION PAGE		1. REPORT NO. USGS/WRD/HD-94/274	2.	3. Recipient's Accession No.	
4. Title and Subtitle Water Resources Data for Colorado, Water Year 1993 Volume 1. Missouri River basin, Arkansas River basin, and Rio Grande basin.				5. Report Date March 1994	
				6.	
7. Author(s) R.C. Ugland, B.J. Cochran, M.M. Hiner, and R.D. Steger				8. Performing Organization Rept. No. USGS-WDR-CO-93-1	
9. Performing Organization Name and Address U.S. Geological Survey, Water Resources Division Box 25046, Mail Stop 415 Denver Federal Center Lakewood, CO 80225				10. Project/Task/Work Unit No.	
				11. Contract(C) or Grant(G) No. (C) (G)	
12. Sponsoring Organization Name and Address U.S. Geological Survey, Water Resources Division Box 25046, Mail Stop 415 Denver Federal Center Lakewood, CO 80225				13. Type of Report & Period Covered Annual--Oct. 1, 1992 to Sept. 30, 1993	
				14.	
15. Supplementary Notes Prepared in cooperation with the State of Colorado and other agencies.					
16. Abstract (Limit: 200 words) Water-resources data for Colorado for the 1993 water year consist of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of wells and springs. This report (Volumes 1 and 2) contains discharge records for 325 gaging stations, stage and contents of 26 lakes and reservoirs, 1 partial-record low-flow station, peak flow information for 55 crest-stage partial record stations, and 4 miscellaneous sites; water quality for 119 gaging stations, supplemental water-quality for 181 gages sites; water-quality for 2 miscellaneous sites, and 18 observation wells, and meteorological data for 4 sites. Eleven pertinent stations operated by bordering states also are included in this report. The records were collected and computed by the Water Resources Division of the U.S. Geological Survey under the direction of D.J. Lystrom, 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.					
17. Document Analysis a. Descriptors *Colorado, *Hydrologic data, *Surface water, *Ground water, *Water quality; Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water analyses. b. Identifiers/Open-Ended Terms c. COSATI Field/Group					
18. Availability Statement No restriction on distribution. This report may be purchased from: National Technical Information Service, Springfield, VA 22161		19. Security Class (This Report) Unclassified		21. No. of Pages 518	
		20. Security Class (This Page) Unclassified		22. Price	

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(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.

Partial tables: (c) chemical, (b) biological, (m) microbiological, (s) sediment, (t) temperature)

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WATER RESOURCES DATA - COLORADO, 1993
VOLUME 1: MISSOURI RIVER, ARKANSAS RIVER, AND RIO GRANDE BASINS

By R. C. Ugland, B. J. Cochran, R. D. Steger, and M. M. Hiner

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 1 of two volumes) includes records on both surface and ground water in the State, east of the Continental Divide. Specifically, it contains: (1) discharge records for 142 surface-water stations, and peak discharges for 47 partial-record surface-water stations; (2) stage and contents for 13 lakes and reservoirs; (3) surface-water-quality data for 71 surface-water stations, 4 reservoirs, 18 wells, and miscellaneous surface-water-quality data for 51 gaged sites, 2 miscellaneous sites, and meteorological data for 2 sites. Locations of lake and surface-water stations and surface-water-quality stations are shown in figure 1, locations of crest-stage partial-record stations are shown in figure 2. Four pertinent stations operated by bordering States also are included in this report. 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, and 8. 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, surface-water data were released by the Survey in annual reports on a State-boundary basis. surface-water-quality records for water years 1964 through 1970 were similarly released either in separate reports or in conjunction with surface-water records.

Beginning with the 1971 water year, water data on surface-water, water quality, and ground-water are published in official Survey reports on a State-boundary basis. 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-93-1." 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. Beginning with the 1990 water year, all water-data reports will also be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (303) 236-4882. A limited number of CD-ROM discs will be available for sale by the Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Building 810, Box 25425, Denver, CO 80225.

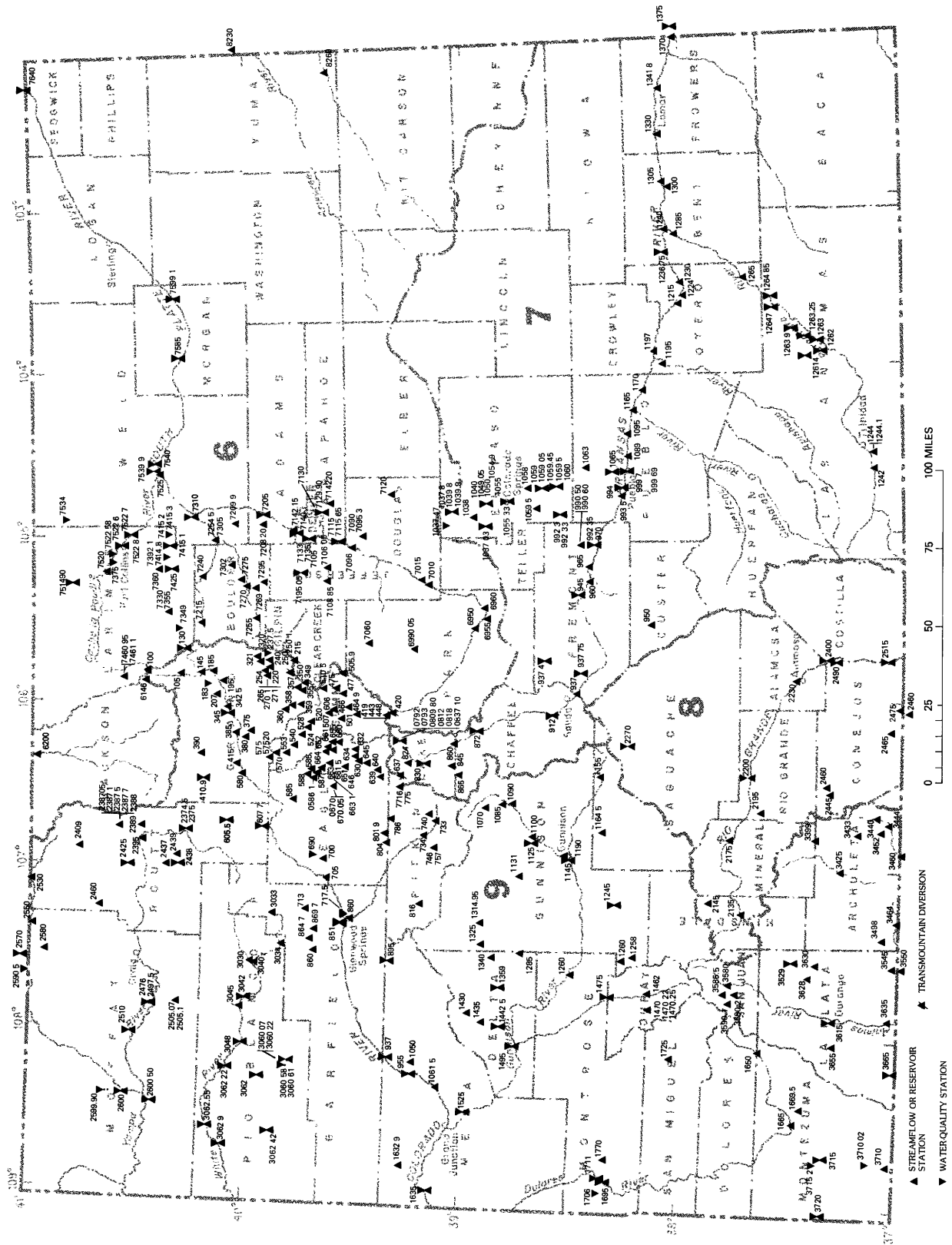


Figure 1.--Map showing locations of lakes and surface-water stations and surface-water quality stations in Colorado



COOPERATION

The U.S. Geological Survey and organizations of 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 assisted in collecting data for this report through cooperative agreement with the Survey are:

Arapahoe County, Water and Wastewater Authority.
 Arkansas River Compact Administration.
 Bent County Commissioners.
 Boulder County.
 Centennial Water and Sanitation District.
 Central Colorado Water Conservancy District.
 Cherokee Metropolitan District.
 City and County of Denver, Board of Water Commissioners.
 City of Arvada.
 City of Aspen.
 City of Aurora.
 City of Boulder.
 City of Colorado Springs.
 City of Englewood.
 City of Fort Collins.
 City of Glendale.
 City of Glenwood Springs.
 City of Golden.
 City of Lakewood.
 City of Lamar.
 City of Las Animas.
 City of Littleton.
 City of Longmont.
 City of Loveland.
 City of Northglenn.
 City of Pueblo.
 City of Rocky Ford.
 City of Steamboat Springs, Public Works Department.
 City of Thornton.
 City of Westminster.
 Colorado Department of Health.
 Colorado Department of Transportation.
 Colorado Division of Water Resources.
 Colorado Division of Wildlife.
 Colorado Department of Minerals and Geology.
 Colorado River Water Conservation District.
 Colorado Oil and Gas Conservation Commission.
 Colorado Water Conservation Board.
 Delta County Board of County Commissioners.
 Eagle County Board of Commissioners.
 East Cherry Creek Valley Water and Sanitation District.
 East Grand County Water-Quality Board.
 Evergreen Metropolitan District.
 Fountain Valley Authority.
 Fremont Sanitation District.
 Garfield County.
 La Plata County.
 Lower Fountain Water-Quality Management Association.
 Metro Wastewater Reclamation District.
 Moffat County.
 Northern Colorado Water Conservancy District.
 Pueblo Board of Water Works.
 Pueblo County Commissioners.
 Pueblo West Metro Water District.
 Rio Blanco County Board of County Commissioners.
 Rio Blanco Water Conservancy District.
 Rio Grande Water Conservation District.
 Routt County.
 Southeastern Colorado Water Conservancy District.
 Southern Ute Indian Tribe.
 Southwestern Colorado Water Conservation District.
 St. Charles Mesa Water District.
 Teller - Park Soil Conservation District.
 Town of Breckenridge.
 Trans Mountain Hydro Corporation, (Federal Energy Regulatory Commission Licensee).
 Trinchera Water Conservancy District.
 Uncompahgre Valley Water Users Association.
 Upper Arkansas Council of Governments.
 Upper Arkansas River Water Conservancy District.
 Upper Eagle Regional Water Authority.
 Upper Gunnison River Water Conservancy District.
 Upper Yampa Water Conservancy District.
 Urban Drainage and Flood Control District.
 Ute Mountain Ute Indian Tribe.
 Vail Valley Consolidated Water District.
 Yellowjacket Water Conservancy District.

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

OVERVIEW OF HYDROLOGIC CONDITIONS

[East of the Continental Divide]

Prepared by K.R. Wilke

Precipitation

Precipitation data for water year 1993 were obtained from published reports of the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Climatic Data Center, for the four National Weather Service divisions in Colorado that are east of the Continental Divide. These data are listed in table 1. Precipitation and departures-from-normal precipitation (1951-80 for October-December and 1961-90 for January-September) are listed for the first 6 months of the water year when precipitation is predominately snow and for the remaining 6 months when precipitation is predominately rain. Also listed are the precipitation and departures-from-normal precipitation¹ for the entire water year.

Precipitation was greater than normal for October-March in the Arkansas Drainage Basin, the Platte Drainage Basin, and the Rio Grande Drainage Basin. Precipitation was about normal in the Kansas Drainage Basin.

Graphs of monthly precipitation for the water year and for normal monthly precipitation, at selected weather stations, are shown in figure 3. Monthly precipitation data for water year 1993 were supplemented by data obtained from the Colorado State University, Department of Atmospheric Science, Colorado Climate Center, in Fort Collins.

**Table 1.--Precipitation during water year 1993 and departures-from-normal precipitation
(1951-80 for October-December and 1961-90 for January-September), in inches
[--, data unavailable]**

National Weather Service division	October-March		April-September		Water year 1993	
	Precipitation	Departure from normal	Precipitation	Departure from normal	Precipitation	Departure from normal
Arkansas Drainage Basin	5.05	1.00	10.84	--	15.89	--
Kansas Drainage Basin	3.46	0.01	13.01	--	16.47	--
Platte Drainage Basin	4.93	0.61	10.18	--	15.11	--
Rio Grande Drainage Basin	7.14	2.10	7.98	--	15.12	--

Streamflow

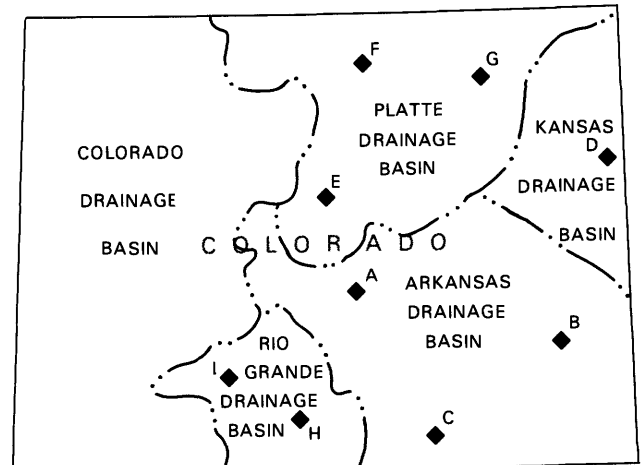
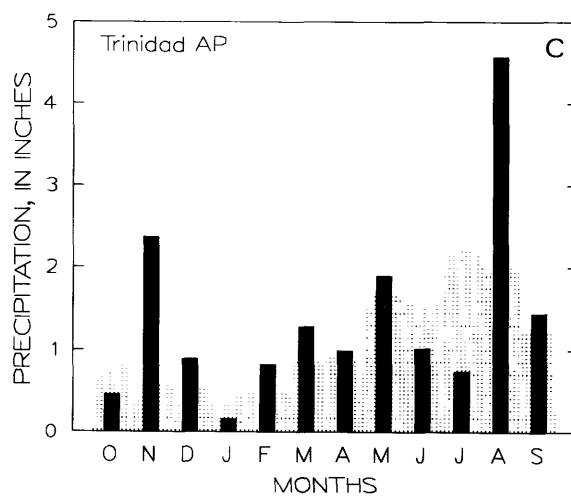
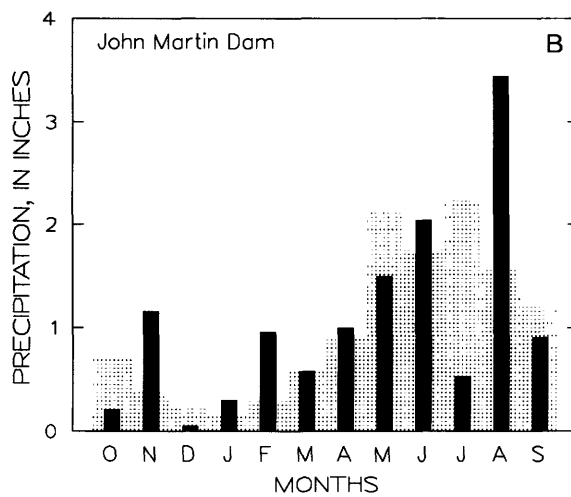
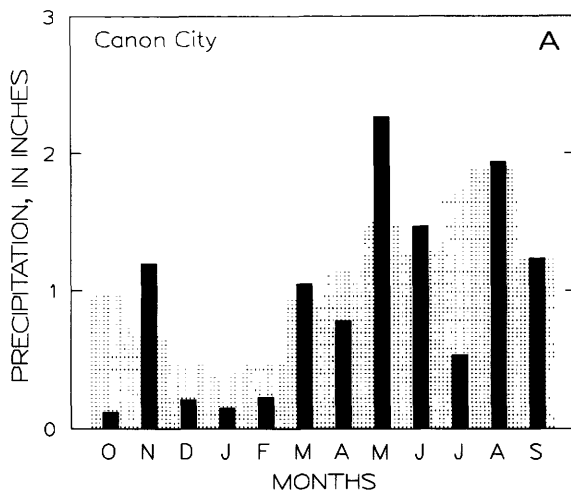
Monthly mean discharges during water year 1993 at selected streamflow-gaging stations are compared to long-term mean monthly discharges in figure 4. Individual graphs show the varied streamflow east of the Continental Divide during the water year. The long-term mean monthly discharges used for gaging station 06706000, North Fork South Platte River below Geneva Creek, at Grant (fig. 4, site B), do not include records prior to water year 1964 (the year that imported water from the Colorado River basin began flowing past the gaging station).

The graphs for gaging stations 06701500, South Platte River below Cheesman Lake (fig. 4, site A); 06706000, North Fork South Platte River below Geneva Creek, at Grant (fig. 4, site B); and 06758500, South Platte River near Weldona (fig. 4, site C), indicate that monthly discharges for water year 1993 were not consistent with long-term mean monthly discharges. Local water-management practices, which consisted mostly of storage, release, or diversion of water as determined by daily and seasonal irrigation and municipal needs, also affected the trends in the three discharge graphs. The water year 1993 mean discharge at gaging station 06701500, South Platte River below Cheesman Lake, was 14 percent less than the long-term average. The water year 1993 mean discharge at gaging station 06706000, North Fork South Platte River below Geneva Creek, at Grant, was 81 percent greater than the long-term average. The water year 1993 mean discharge at gaging station 06758500, South Platte River near Weldona, was 17 percent less than the long-term average.

The graphs for gaging stations 07094500, Arkansas River at Parkdale (fig. 4, site D); 07126300, Purgatoire River near Thatcher (fig. 4, site E); and 07133000, Arkansas River at Lamar (fig. 4, site F), indicate that monthly discharges for water year 1993 were not consistent with the long-term mean monthly discharges. The trends in the three discharge graphs were affected by local water-management practices, which consisted mostly of storage and release of water as determined by daily and seasonal irrigation and municipal needs. The water year 1993 mean discharge at gaging station 07094500, Arkansas River at Parkdale, was 20 percent more than the long-term average. The water year 1993 mean discharge at gaging station 07126300, Purgatoire River near Thatcher, was 64 percent more than the long-term average. The water year 1993 mean discharge at gaging station 07133000, Arkansas River at Lamar, was 45 percent less than the long-term average.

The graph for gaging station 08217500, Rio Grande at Wagon Wheel Gap (fig. 4, site G), indicates that monthly discharges for water year 1993 were generally consistent with long-term mean monthly discharges. The graph for gaging station 08251500, Rio Grande near Lobatos (fig. 4, site H), indicates that monthly discharges for water year 1993 were not consistent with the long-term mean monthly discharges. The trends in the two discharge graphs were affected by local water-management practices, which consisted mostly of storage, release, and diversion of water as determined by daily and seasonal irrigation needs. The water year 1993 mean discharge at gaging station 08217500, Rio Grande at Wagon Wheel Gap, was 5 percent more than the long-term average. The water year 1993 mean discharge at gaging station 08251500, Rio Grande near Lobatos, was 8 percent less than the long-term average.

¹Some divisional data were unavailable.



EXPLANATION

Monthly precipitation for water year 1993

Normal monthly precipitation for reference period

◆ **B** WEATHER STATION—
Letter refers to
accompanying graph
and map

Figure 3.--Comparison of monthly precipitation for water year 1993 to normal monthly precipitation for the reference period. (Reference period is 1951-80 for October-December and 1961-90 for January-September.).

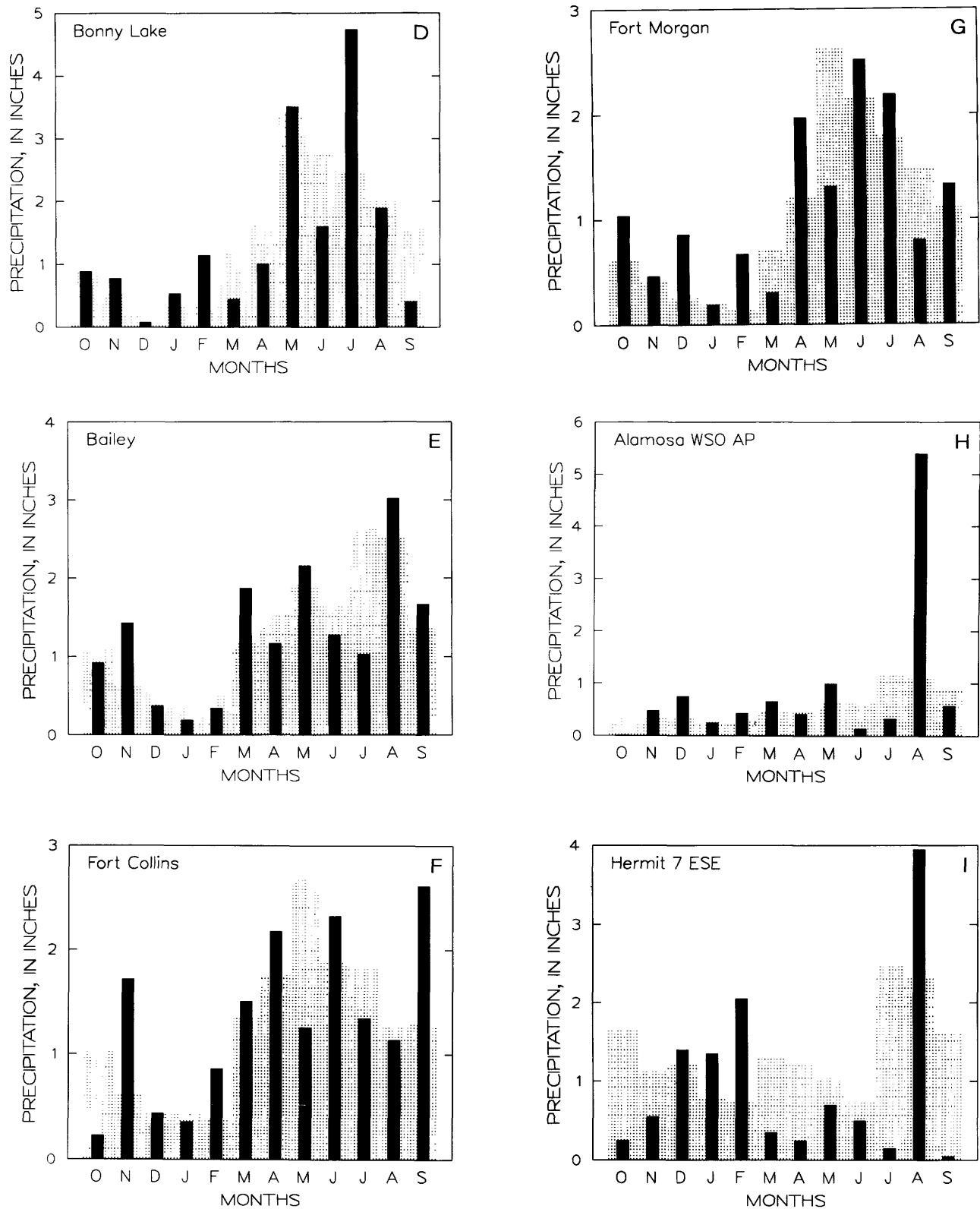


Figure 3.--(continued)

WATER RESOURCES DATA - COLORADO, 1993

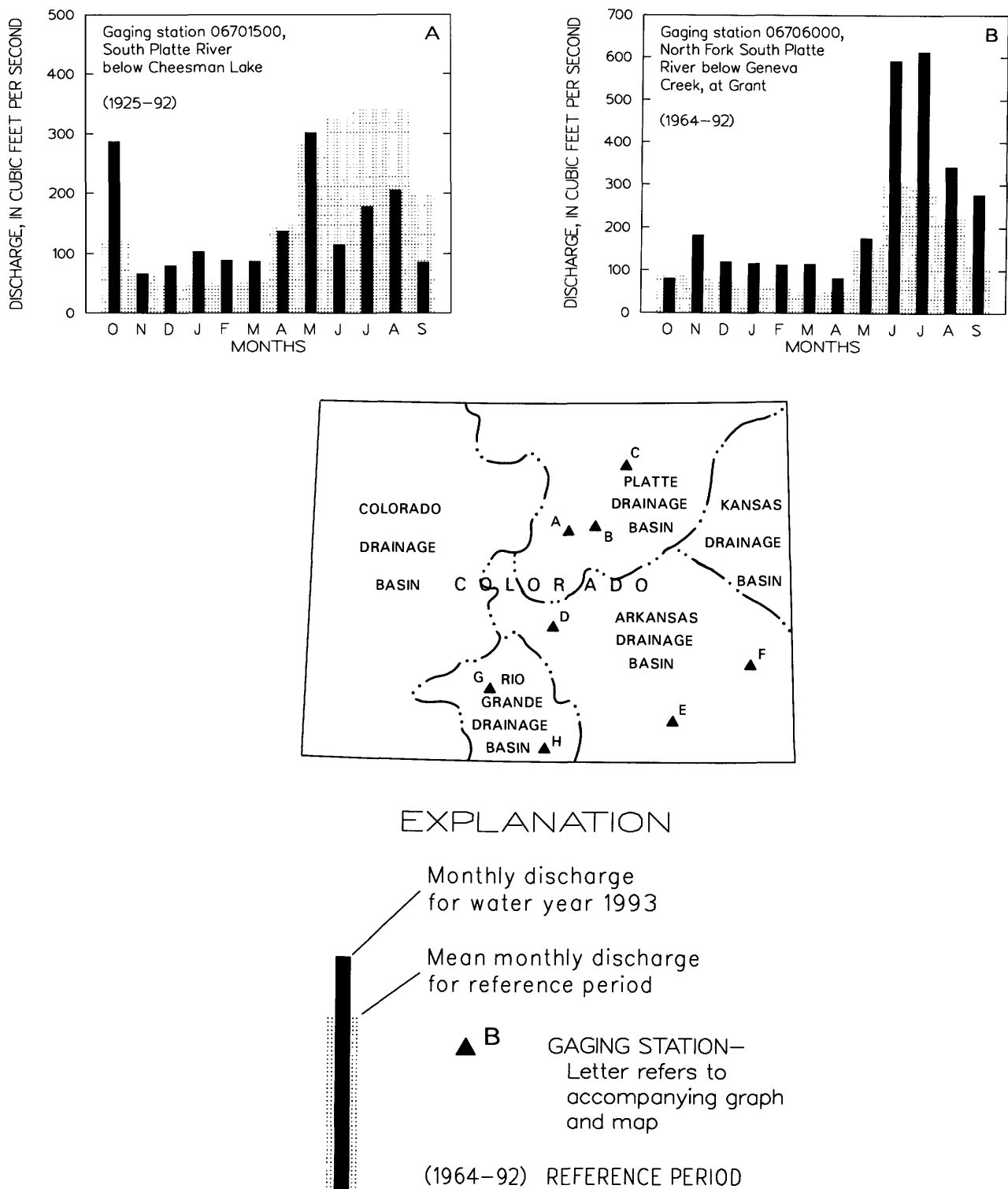


Figure 4.--Comparison of monthly discharges for water year 1993 to mean monthly discharges for the reference periods indicated on the individual graphs.

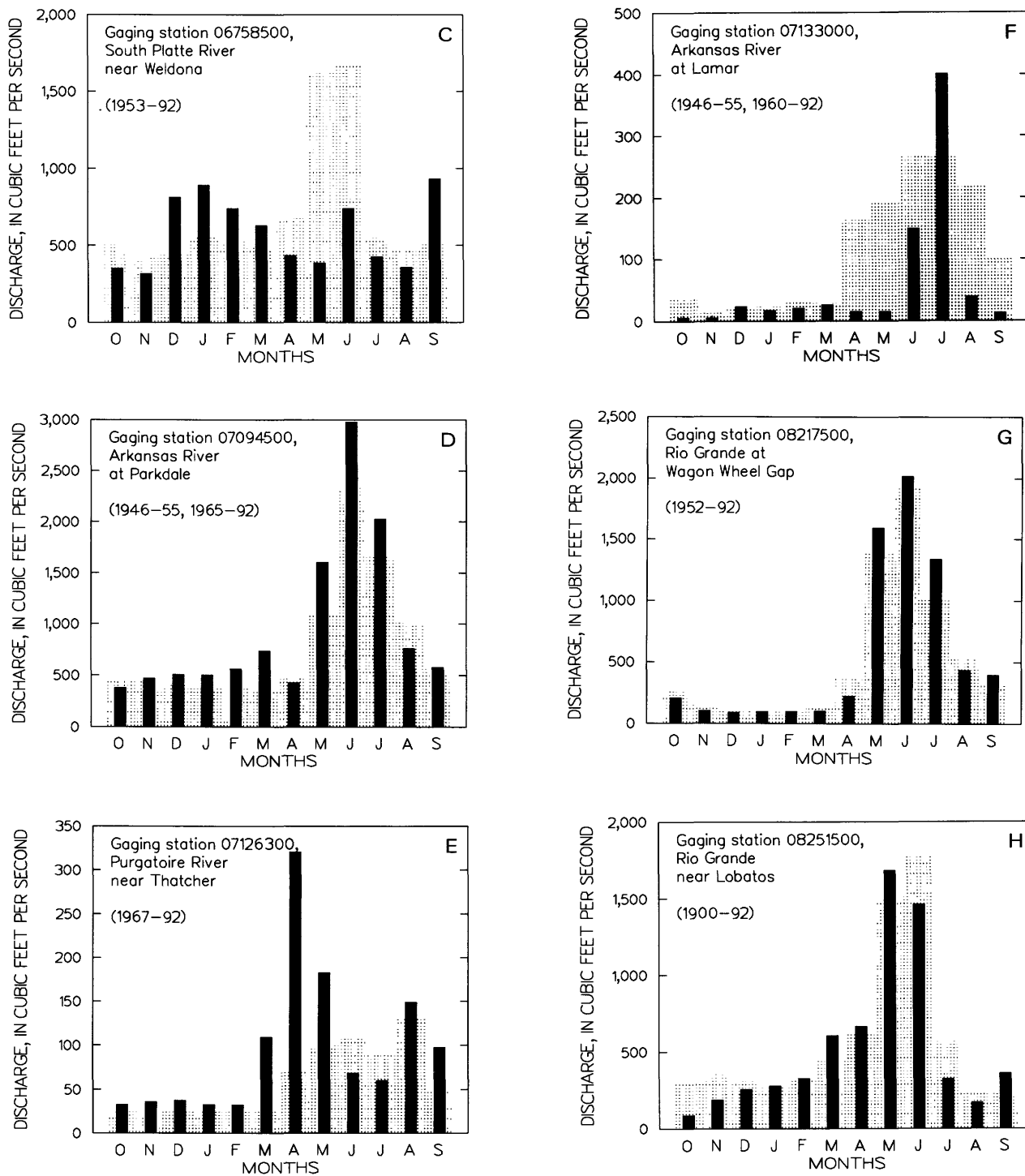


Figure 4.--(continued)

Peak discharges during water year 1993 and for the period of record for selected gaging stations are listed in table 2. Peak discharge at gaging station 06706000, North Fork South Platte River below Geneva Creek, at Grant, was greater than the long-term 75th-percentile value and was the third highest for the period of record for the station. Peak discharges at gaging stations 06752500, Cache la Poudre River near Greeley; 07094500, Arkansas River at Parkdale; 07126300, Purgatoire River near Thatcher; 08220000, Rio Grande near Del Norte; 08240000, Rio Grande above mouth of Trinchera Creek, near Lasauces; and 08251500, Rio Grande near Lobatos, were greater than the long-term median value. The peak discharge at each of the remaining selected gaging stations was less than the long-term median value. At five of the selected gaging stations, peak discharges were less than the 25th-percentile values. At four of the five gaging stations, peak discharges were substantially greater than the record low peak discharges for the stations. However, at gaging station 07128500, Purgatoire River near Las Animas, the peak discharge was the fifth lowest for the period of record.

Table 2.--Peak discharges for water year 1993 and for the period of record at selected gaging stations

[mi², square miles; ft³/s, cubic feet per second]

Gaging station identification	Drainage area (mi ²)	Period of record (water years)	Water year 1993		Period of record		Remarks on 1993 peak discharge
			Date	Peak discharge (ft ³ /s)	Date	Peak discharge (ft ³ /s)	
06620000 North Platte River near Northgate	1,431	1904, 1915-92	6/19	2,420	6/11/23	6,720	Less than median
06696000 South Platte River near Lake George	963	1930-92	8/22	219	4/28/70	3,000	Less than 25th percentile
06701500 South Platte River below Cheesman Lake	1,752	1926-92	5/13	601	4/29/70	4,640	Less than 25th percentile
06706000 North Fork South Platte River below Geneva Creek, at Grant	127	¹ 1964-92	6/3	815	7/8/90	835	Greater than 75th percentile (3d highest)
06752500 Cache la Poudre River near Greeley	1,877	1903, 1916-17, 1919, 1924-92	6/20	1,780	6/14/83	6,360	Greater than median
06758500 South Platte River near Weldona	13,245	1953-92	6/20	2,800	5/8/73	26,800	Less than median
07094500 Arkansas River at Parkdale	2,548	1946-55, 1965-92	6/17	4,700	6/26/83	6,310	Greater than median
07106500 Fountain Creek at Pueblo	926	1921-22, 1924-25, 1935, 1941-65, 1971-92	6/18	2,880	6/17/65	47,000	Greater than 25th percentile
07109500 Arkansas River near Avondale	6,327	1939-51, 1965-92	6/18	5,350	6/18/65	50,000	Greater than 25th percentile
07124000 Arkansas River at Las Animas	14,417	1939-92	6/21	1,700	5/20/55	44,000	Less than 25th percentile
07126300 Purgatoire River near Thatcher	1,791	1965-92	7/18	6,870	6/18/65	47,700	Less than 75th percentile
07128500 Purgatoire River near Las Animas	3,318	1922-31, 1949-92	4/7	1,590	5/20/55	70,000	Less than 25th percentile (5th lowest)
07133000 Arkansas River at Lamar	19,780	1913, 1915, 1919-55, 1960-92	8/11	1,330	6/5/21	130,000	Less than 25th percentile
08220000 Rio Grande near Del Norte	1,320	1890-1992	5/27	5,300	10/5/11	18,000	Greater than median
08240000 Rio Grande above mouth of Trinchera Creek, near Lasauces	5,740	1936-62, 1964-80, 1982-92	5/30	1,410	6/21/49	5,470	Greater than median
08246500 Conejos River near Mogote	282	1903-5, 1912-92	5/27	2,230	10/5/11	9,000	Less than median
08251500 Rio Grande near Lobatos	7,700	1900-92	5/30	3,890	6/8/05	13,200	Greater than median

¹Period since imported water began flowing past this gaging station.

Chemical Quality of Streamflow

To determine if substantial changes occurred during water year 1993 in the chemical quality of streamflow, an analysis was made of specific conductance, which was measured approximately monthly at gaging stations on six representative streams. Each gaging station either is the most downstream gaging station on that stream, is representative of a substantial part of the drainage area of that stream, or is the only gaging station in that drainage that had monthly specific-conductance measurements. A comparison of the range and distribution of the specific conductance for water year 1993 to long-term values for each selected gaging station is shown in figure 5.

Specific conductance can be used to estimate the dissolved-solids concentration in water because specific conductance is directly proportional to the concentrations of ions in water. To determine if there were significant differences between values of specific conductance for water year 1993 and values for the period of record used for comparison, a statistical technique called the Wilcoxon-Mann-Whitney rank sum test was used. This test is a non-parametric counterpart to the common t-test and does not require the data to have a normal distribution.

The Wilcoxon-Mann-Whitney rank sum test was applied to the hypothesis that the mean specific conductance for water year 1993 was equal to the mean for the period of record. The procedure for testing the hypothesis involves computing a test statistic from the ranks of the data by using a pooled standard deviation and comparing the test statistics to a value obtained from a table of "Student's" t values (Box and others, 1978). The table value is $(1 - \alpha/2)$, where alpha (the level of significance) equals 0.05, at the appropriate degrees of freedom for the number of samples. If the absolute value of the computed test statistic (t_R) is greater than the tabular t value (t_{tab}), the hypothesis is rejected. A rejection of the hypothesis is statistical evidence that the two means are different.

Results of the Wilcoxon-Mann-Whitney rank sum tests for the six gaging stations are listed in table 3. For each gaging station, the tests indicate that the mean specific conductance for water year 1993 and the mean specific conductance for the period of record are not statistically different.

Table 3.--Results of Wilcoxon-Mann-Whitney rank sum tests comparing mean specific conductance of discharge for water year 1993 with mean for the period of record at selected gaging stations

[Specific conductance, in microsiemens per centimeter at 25 degrees Celsius;
 t_R , calculated test statistic; t_{tab} , t-values from standard table; A, accepted]

Gaging station identification	Specific conductance						Wilcoxon-Mann-Whitney rank sum test			
	Water year 1993			Period of record			Period used (water years)	t_R	t_{tab}	Hypothesis
	Number of values	Mean	Standard devia- tion	Number of values	Mean	Standard devia- tion				
06741510 Big Thompson River at Loveland-----	12	1,113	681	116	868	476	1983-92	1.53	1.98	A
06752280 Cache la Poudre River above Box Elder Creek, near Timnath----	11	1,480	781	110	1,250	740	1983-92	1.06	1.98	A
07094500 Arkansas River at Parkdale-----	10	242	56.6	98	263	71.2	1983-92	-.98	1.98	A
07128500 Purgatoire River near Las Animas---	12	2,639	846	125	2,934	1,208	1983-92	-.82	1.98	A
07133000 Arkansas River at Lamar-----	11	3,849	807	123	3,375	1,096	1983-92	1.57	1.98	A
08217500 Rio Grande at Wagon Wheel Gap-----	9	85.8	21.7	105	91.5	26.6	1983-92	-.62	1.98	A

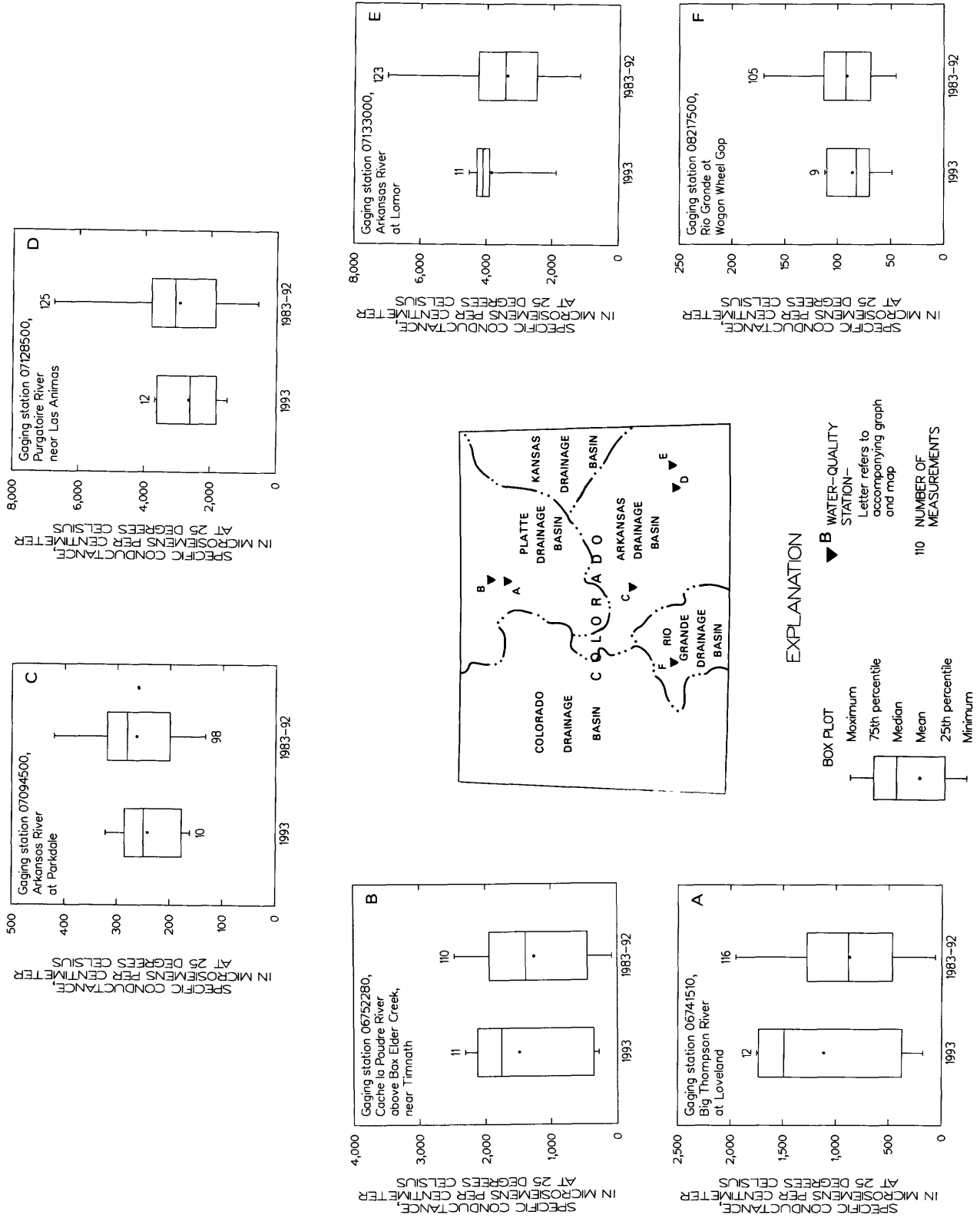


Figure 5.--Comparison of range and distribution of specific conductance measured during water year 1993 to long-term values.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 57 small sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

National Water-Quality Assessment Program (NAWQA) is a nationwide program that was implemented full-scale by the U.S. Geological Survey in 1991. The long term goals of the NAWQA program are to describe the status and trends in the quality of a large, representative part of the Nation's surface-water, and ground-water resources and to provide a sound, scientific understanding of the primary natural and human factors affecting the quality of these resources. The principal building blocks of the NAWQA program are the study-unit investigations on which national-level assessments are based. Study-unit investigations are comprehensive and include information on water, sediment, biota, and aquatic and terrestrial habitats within its boundaries. Of the 60 study-unit investigations that comprise the NAWQA program, parts of two are located in Colorado; the South Platte River and Rio Grande Valley Basins. Selected water-quality data for nine surface-water monitoring sites within the South Platte River Basin NAWQA and five surface-water monitoring sites within the Rio Grande Valley Basin NAWQA are included in volume one of this report.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1993 water year that began on October 1, 1992, and ended September 30, 1993. 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, and water-quality data for surface and ground water. 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.

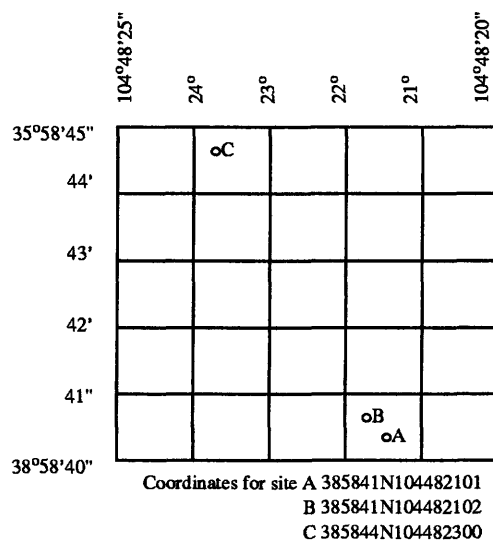
Downstream Order System

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-mi² area described by the township and range designation is subdivided into 1-mi² 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 or 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.)

INSTANTANEOUS PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period. Note that secondary instantaneous peak discharges above a selected base discharge are stored in District computer files for stations meeting certain criteria. Those discharge values may be obtained by writing to the District Office. (See address on back of title page of this report.)

INSTANTANEOUS PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, 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 by 10 percent of the time for the designated period.

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

90 PERCENT EXCEEDS.--The discharge that has been exceeded by 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 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/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. Sulfate values in this report have not been corrected for this bias."

Accuracy of the Records

Accuracy of water-quality monitor records are based on: (1) The completeness of the record, (2) frequency of calibration checks, (3) the length of time and frequency that data exceed allowable error limits, (4) the magnitude of errors, and (5) confidence in the resultant shifts applied. Listed below are the limits of allowable error.

*	Temperature:	+/- 0.3 degree C.
*	Specific Conductance:	+/- 5 uS/cm or + 5% whichever is greater
*	pH:	+/- 0.2 pH units
*	Dissolved Oxygen:	+/- 0.3 mg/L or + 5% whichever is greater.

A record is rated excellent if the allowable error limits are never exceeded, good if limits are occasionally exceeded and shifts are no greater than two times the limit, fair if limits are regularly exceeded and shifts are no greater than three times the limit, and poor for all others.

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 table of discharge measurements at miscellaneous sites.

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. 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.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally, all other samples are analyzed in the Geological Survey laboratories in Arvada, 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 (1993) 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.

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 to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. 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 the appropriate computer file to insure the most recent updates.

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 remarks codes may appear with the water-quality data in this report:

PRINTED OUTPUT REMARK

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

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 WATSTORE DATA

The U.S. Geological Survey is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National Water Data Storage and Retrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water-data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products ranging from data tables to complex statistical analyses such as Log Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia, and consists of related files and data bases.

- * Station Header File - Contains descriptive information on more than 440,000 sites throughout the United States and its territories where the U.S. Geological Survey collects or has collected data.
- * Daily Values File - Contains more than 220 million daily values of stream flows, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water levels.
- * Peak Flow File - Contains approximately 500,000 maximum (peak) streamflow and gage-height values at surface-water sites.
- * Water Quality File - Contains approximately 2 million analyses of water samples that describe the chemical, physical, biological, and radio-chemical characteristics of both surface and ground water.
- * Ground-Water Site Inventory Data Base - Contains inventory data for more than 900,000 wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

In 1976, the U.S. Geological Survey opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requester will be expected to pay all computer costs he/she incurs. Direct access may be obtained by contacting:

U.S. Geological Survey
National Water Data Exchange
421 USGS National Center
Reston, VA 22092

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 inch floppy disk; and, as noted in the introduction, on CD-ROM discs. Beginning with the 1990 water year, all water-data reports will also be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc. 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's District offices. (see address on the back of the title page.) A limited number of CD-ROM discs will be available for sale by the Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, CO 80225.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-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.

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

Algae are mostly aquatic single-celled, colonial, or multicelled plants, containing chlorophyll and lacking roots, stems, and leaves.

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.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while 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.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which 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 \pm 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm blooded animals. They are often 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 \pm 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.

Fecal streptococcal bacteria are bacteria found also in the intestine of warmblooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as Gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organism which produce red or pink colonies with 48 hours at 35°C \pm 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.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

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 micro-organisms, such as bacteria.

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

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m³), and periphyton and benthic organisms in grams per square meter (g/m²).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, 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.

Organic mass or volatile mass of the living substance is the difference between the dry mass and the ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which 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, usually milliliters (mL) or liters (L).

Cfs-day is the volume of water represented by flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons or 2,447 cubic meters.

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 natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

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

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.

Control designates a feature downstream from the gage that determines the stage-discharge relation at a gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

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

Cubic foot per second (ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic feet per second per square mile (ft³/s)/mi² is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

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

Instantaneous discharge is the discharge at a particular instant of time.

Annual 7-day minimum is 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.)

Dissolved refers to that material in a representative water sample which passes through a 0.45 um membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water 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 of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage" although gage height is more appropriate when used with a reading on a gage.

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO₃).

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

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

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

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.

Methylene blue active substances (MBAS) are apparent detergents. 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) 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 liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per unit area habitat, usually square meter (m²), 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.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter or particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

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

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
Clay.....	0.00024 - 0.004	Sedimentation
Silt.....	.004 - .062	Sedimentation
Sand.....	.062 - 2.0	Sedimentation or sieve
Gravel.....	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. 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.

Percent composition 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, mass, or volume.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

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

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is a community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually 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 are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often 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 is dominated by small crustaceans and rotifers.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic 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 by the plants (carbon method).

Milligrams of carbon per area or volume per unit time $\text{mg C}/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg C}/(\text{m}^3 \cdot \text{time})$ for phytoplankton are units for expressing primary productivity. They define 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 in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time $\text{mg O}_2/(\text{m}^2 \cdot \text{time})$ for periphyton and macrophytes and $\text{mg O}_2/(\text{m}^3 \cdot \text{time})$ for phytoplankton are the units for expressing primary productivity. They define 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.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Recoverable from 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.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN, in) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

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

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it 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 influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

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 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft³/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

7-day 10-year low flow (7 Q₁₀) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

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. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 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.

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

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.

Natural substrate refers to any naturally occurring emerged or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely 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 taken. 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 plexiglas strips for periphyton.

Surface area of a lake is that area outlined on the latest U.S.G.S. topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimeted. All areas shown are those for the stage when the planimeted map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with 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 water-suspended sediment sample that is retained on a 0.45 um 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 analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituents.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter. 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 determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchial 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
<u>Genus</u>	<u>Hexagenia</u>
<u>Species</u>	<u>Hexagenia limbata</u>

Thermograph is an instrument that continuously records variation of temperature on a chart. The more general term "temperature recorder" is used in the table headings 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 that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 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) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment 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 all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment 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, equivalent digestion procedures are required of all laboratories performing such analyses, because different digestion procedures are likely to produce different analytical results.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium

in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

Water year in Geological Survey 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, 1980, is called the "1980 water year."

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.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

SELECTED REFERENCES

The following publications are available for background information on the methods for collecting, analyzing, and evaluating the chemical and physical properties of surface waters:

- American Public Health Association, and others, 1980, Standard methods for the examination of water and waste water, 13th ed: American Public Health Assoc., New York, 1134 p.
- Box, George E. P., Hunter, William G., and Hunter, J. Stuart, 1978, Statistics for Experimenters: New York, John Wiley, and Sons, 653 p.
- Cain, D. L., 1984, Quality of the Arkansas River and irrigation-return flows in the lower Arkansas River Valley of Colorado: Water-Resources Investigation Report 84-4273, 91 p.
- Carter, R. W., and Davidian, Jacob, 1968, General procedures for gaging streams: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6, 13 p.
- Clarke, F. W., 1924, The composition of the river and lake waters of the United States: U.S. Geological Survey Professional Paper 135, 199 p.
- Colby, B. R., 1963, Fluvial sediments--a summary of source, transportation, deposition, and measurements of sediment discharge: U.S. Geological Survey Bulletin 1181-A, 47 p.
- Colby, B. R., and Hembree, C. H., 1955, Computations of total sediment discharge, Niobrara River near Cody, Nebraska: U.S. Geological Survey Water-Supply Paper 1357, 187 p.
- Colby, B. R., and Hubbell, D. W., 1961, Simplified methods for computing total sediment discharge with the modified Einstein procedure: U.S. Geological Survey Water-Supply Paper 1593, 17 p.
- Collins, W. D., and Howard, C. S., 1928, Quality of water of Colorado River in 1925-26: U.S. Geological Survey Water-Supply Paper 596-B, p. 33-43.
- Corbett, D. M., and others, 1942, Stream-gaging procedure, a manual describing methods and practices of the Geological Survey: U.S. Geological Survey Water-Supply Paper 888, 245 p.
- Crouch, T. M., and others, 1984, Water-Resources Appraisal of the upper Arkansas River basin from Leadville to Pueblo, Colorado: Water-Resources Investigation Report 82-4114, 123p.
- Fishman, M. J., and Bradford, W. L., 1982, A supplement to methods for the determination of inorganic substances in water and fluvial sediments: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Laboratory Analysis, Chapter A1, open-file report 82-272, 136 p.
- Goerlitz, D. F., and Brown, Eugene, 1972, Methods for analysis of organic substances in water: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Chapter A3, 40 p.
- Gregg, D. O., and others, 1961, Public water supplies of Colorado (1959-60): Fort Collins, Colorado State University Agricultural Experiment Station, General Service 757, 128 p.
- Guy, H. P., 1970, Fluvial sediment concepts: U.S. Geological Survey Techniques of Water-Resources Investigation, Book 3, Chapter C1, 55 p.
- _____, 1969, Laboratory theory and methods for sediment analysis: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Chapter C1, 57 p.
- Guy, H. P., and Norman, V. W., 1970, Field methods for measurement of fluvial sediment: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter C2, 59 p.
- Hawley, Gessner G., 1981, The condensed chemical dictionary; Van Nostrand-Reinhold Publication Corporation, New York, 10th edition, 1135 p.
- Hem, John D., 1970, Study and interpretation of the chemical characteristics of natural water, 2d ed.: U.S. Geological Survey Water-Supply Paper 1473, 363 p.
- Howard, C. W., 1955, Quality of water of the Colorado River, 1925-40: U.S. Geological Survey open-file report, 103 p.
- Jorns, W. V., and others, 1964, Water Resources of the Upper Colorado River basin--basic data: U.S. Geological Survey Professional Paper 442, 1,036 p.
- _____, 1965, Water Resources of the Upper Colorado River basin--technical report: U.S. Geological Survey Professional Paper 441, 370 p.

- Lane, E. W., and others, 1947, Reports of Subcommittee on terminology: American Geophysical Union Transaction, v. 28, p. 937.
- Langbein, W. B., and Iseri, K. T., 1960, General introduction and hydrologic definitions: U.S. Geological Survey Water-Supply Paper 1541-A, 29 p.
- Lohman, S. W., and others, 1972, Definitions of selected ground-water terms--revisions and conceptual refinements: U.S. Geological Survey Water-Supply Paper 1988, p. 2.
- McGuinness, C. L., 1963, The role of ground water in the national water situation: U.S. Geological Survey Water-Supply Paper 1800, 1121 p.
- Meinzer, O. E., 1923, The occurrence of ground water in the United States: U.S. Geological Survey Water-Supply Paper 489, 321 p.
- _____, 1923, Outline of ground-water hydrology, with definitions: U.S. Geological Survey Water-Supply Paper 494, 71 p.
- Moran, R. E., and Wentz, D. A., 1974, Effects of metal-mine drainage on water quality in selected areas of Colorado, 2 of 3, 1972-73: Colorado Water Conservation Board Circular 25, 250 p.
- Porterfield, George, 1972, Computations of fluvial-sediment discharge: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter C3, 66 p.
- Rantz, S. E. and others, Measurement and Computation of Streamflow: Volume 1. Measurement of Stage and Discharge: U.S. Geological Survey Water-Supply Paper 2175, 284 p.
- Rantz, S. E. and others, Measurement and Computation of Streamflow: Volume 2. Computation of Discharge: U.S. Geological Survey Water-Supply Paper 2175, 285-631 p.
- Ritter, J. R., and Helley, E. J., 1969, Optical method for determining particle sizes of coarse sediment: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Chapter C3, 33 p.
- Slack, K. V., and others, 1973, Methods for collection and analysis of aquatic biological and microbiological samples: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Chapter A4, 165 p.
- Spahr, N. E., Blakely, S. R., and Hammond, S. E., 1985, Selected Hydrologic Data for the South Platte River through Denver, Colorado: U. S. Geological Survey open file report 84-703, 225 p.
- Stabler, Herman, 1911, Some stream waters of the Western United States: U.S. Geological Survey Water-Supply Paper 274, 188 p.
- U.S. Inter-Agency Committee on Water Resources, A study of methods used in measurements and analysis of sediment loads in streams:
- Report 11, 1957, The development and calibration of visual accumulation tube: St. Anthony Falls Hydraulic Lab., Minneapolis, Minn., 109 p.
- Report 12, 1957, Some fundamentals of particle-size analysis: Washington, D. C., U.S. Government Printing Office, 55 p.
- Report AA, 1959, Federal Inter-Agency sedimentation instruments and reports: St. Anthony Falls Hydraulic Laboratory, Minneapolis, Minn., 41 p.
- Report 13, 1961, The single-stage sampler for suspended sediment: Washington, D. C., U.S. Government Printing Office, 105 p.
- Report 14, 1963, Determinations of fluvial sediment discharge: Washington, D. C., U.S. Government Printing Office 151 p.

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.

Station name	Station number	Drainage area (sq mi)	Period of record (calendar years)
Colorado Creek near Spicer, CO	06611000	25.8	1950-55
Grizzly Creek near Spicer, CO	06611100	118	1976-80
Buffalo Creek near Hebron, CO	06611200	56.3	1976-80
Grizzly Creek near Hebron, CO	06611300	223	1976-80
Grizzly Creek near Walden, CO	06611500	258	1904-05, 1923, 1926-47
Little Grizzly Creek near Coalmont, CO	06611700	10.1	1967-73
Little Grizzly Creek above Coalmont, CO	06611800	35.4	1976-80
Little Grizzly Creek above Hebron, CO	06611900	52.2	1976-80
Little Grizzly Creek near Hebron, CO	06612000	98.6	1904-05, 1931-45
Roaring Fork near Walden, CO	06612500	79.1	1904-05, 1923-47
North Platte River near Walden, CO	06613000	469	1904-05, 1923-47
North Fork North Platte River near Walden, CO	06614000	160	1923-28, 1936-45
South Fork Michigan River near Gould, CO	06615000	11.4	1950-58
Michigan River near Lindland, CO	06615500	60.9	1931-41
North Fork Michigan River near Gould, CO	06616000	20.5	1950-82
Michigan River at Walden, CO	06617100	182	1904-05, 1923-47
Illinois Creek near Rand, CO	06617500	70.6	1931-40
Willow Creek near Rand, CO	06618000	55.9	1931-40
Illinois Creek at Walden, CO	06618500	259	1923-47
Michigan River near Cowdrey, CO	06619000	478	1904-05, 1937-47
Canadian River near Lindland, CO	06619400	44.0	1978-83
Bush Draw near Walden, CO	06619415	4.10	1980-83
Williams Draw near Walden, CO	06619420	3.95	1979-83
Canadian River near Brownlee, CO	06619450	158	1978-83
Canadian River at Cowdrey, CO	06619500	181	1904-05, 1929-31, 1937-47
Laramie River near Glendevy, CO	06657500	101	1904-05, 1910-82
Middle Fork South Platte River above Fairplay, CO	06693980	62.2	1978-80
Middle Fork South Platte River near Hartsel, CO	06694100	250	1978-80
South Fork South Platte River above Fairplay, CO	06694400	50.3	1978-80
Fourmile Creek near Fairplay, CO	06694700	12.0	1978-80
South Platte River at Lake George, CO	06696200	1,084	1910-11, 1929
Tarryall Creek at Upper Station near Como, CO	06696980	23.7	1978-86
French Creek near Jefferson, CO	06697200	4.63	1986-90
Michigan Creek above Jefferson, CO	06697450	23.1	1978-86
Jefferson Creek near Jefferson, CO	06698000	11.8	1910-12, 1978-86
Tarryall Creek near Jefferson, CO	06698500	183	1910-11, 1912-17, 1977-81
Rock Creek near Jefferson, CO	06699000	45.5	1986-90
Tarryall Creek near Lake George, CO	06699500	236	1910-12, 1916, 1925-55
South Platte River above Cheesman Lake, CO	06700000	1,628	1899-1901, 1924-43
Goose Creek above Cheesman Lake, CO	06700500	86.6	1899, 1924-82
South Platte River above North Fork at South Platte, CO	06702000	2,098	1905-12
North Fork South Platte River at Grant, CO	06702500	49.0	1910-17
Geneva Creek at Grant, CO	06705500	77.5	1908-18
North Fork South Platte River at Pine, CO	06706500	374	1942-46
North Fork South Platte River at South Platte, CO	06707000	479	1909-10, 1913-82
South Platte River at South Platte, CO	06707500	2,579	1887-92, 1895-97, 1898-1982
South Platte River at Waterton, CO	06708000	2,621	1926-80
East Plum Creek at Castle Rock, CO	06708750	102	1985-89
Plum Creek near Louviers, CO	06709500	302	1947-90
South Platte River at Littleton, CO	06710000	3,069	1941-86
Turkey Creek above Bear Creek Lake, near Morrison, CO	06711040	50.6	1986-89
South Platte River at Florida Avenue, at Denver, CO	06711590	--	1981-82
Cherry Creek near Melvin, CO	06712500	360	1939-69
South Platte River at 50th Avenue at Denver, CO	06714130	3,810	1980-81
West Fork Clear Creek above Empire, CO	06715500	40.5	1942-46

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

Station name	Station number	Drainage area (sq mi)	Period of record (calendar years)
West Fork Clear Creek near Empire, CO	06716000	58.2	1929-31
Clear Creek near Lawson, CO	06716500	147	1946-86
Clear Creek below Idaho Springs, CO	06718000	259	1951-55
North Clear Creek near Blackhawk, CO	06718500	52.2	1951-55
Clear Creek at Forks Creek, CO	06719000	339	1899-1912
Clear Creek near Golden, CO	06719500	399	1908-09, 1911-74
Clear Creek at Tabor Street, at Lakewood, CO	06719526	427	1981-83
Ralston Creek near Plainview, CO	06719725	36.9	1983-84
Schwartzwalder Mine Effluent near Plainview, CO	06719730	--	1983-84
Ralston Creek below Schwartzwalder Mine near Plainview, CO	06719735	38.9	1983-84
Ralston Creek above Ralston Reservoir near Golden, CO	06719740	42.7	1983-84
Clear Creek at Mouth Near Derby, CO	06720000	575	1914, 1927-82
Grange Hall Creek at Grant Park at Northglenn, CO	06720330	--	1978-79
Grange Hall Creek at Northglenn, CO	06720415	3.08	1978-81
Grange Hall Creek below Northglenn, CO	06720417	--	1981-82
Woman Creek near Plainview, CO	06720690	--	1973-74
South Platte River at Fort Lupton, CO	06721000	5,010	1906, 1929-57
North Saint Vrain Creek at Longmont Dam near Lyons, CO	06722000	106	1925-53
South Saint Vrain Creek near Ward, CO	06722500	14.4	1925-27, 1928-31, 1954-73
Middle Saint Vrain Creek near Raymond, CO	06722900	16.8	1956-58
Middle Saint Vrain Creek near Allens Park, CO	06723000	28.0	1925-30, ^a
South Saint Vrain Creek above Lyons, CO	06723400	81.4	1971-80
Lefthand Creek near Boulder, CO	06724500	52.0	1929-31, 1947-53, 1976-80
Lefthand Creek at Mouth at Longmont, CO	06725000	72.0	1927-42, 1953-55, 1976-79
Saint Vrain Creek near Longmont, CO	06725100	370	1964-68
North Boulder Creek at Silver Lake, CO	06726000	8.70	1913-32
North Boulder Creek near Nederland, CO	06726500	30.4	1929-31
South Boulder Creek near Rollinsville, CO	06729000	42.7	1910-18, 1945-49
South Boulder Creek at Pinecliff, CO	06729300	72.7	1979-80
Coal Creek near Plainview, CO	06730300	15.1	1959-82
Boulder Creek at Mouth near Longmont, CO	06730500	439	1927-49, 1951-55, 1978-90
Boulder Brook near Estes Park, CO	06731800	3.83	1968-70
Glacier Creek near Estes Park, CO	06732000	20.8	1941-57, 1968-70
Beaver Brook near Estes Park, CO	06732300	1.49	1968-70
Fall River at Estes Park, CO	06732500	39.8	1945-53, ^a
Big Thompson River at Estes Park, CO	06733000	137	1946-86
Fish Creek near Estes Park, CO	06734500	15.8	1947-55
North Fork Big Thompson River at Drake, CO	06736000	85.1	1947-55
Big Thompson River below Power House near Drake, CO	06736500	278	1917-55
Dry Creek near Pinewood, CO	06740000	7.11	1950-52
Cottonwood Creek near Pinewood, CO	06741000	14.7	1947-53
Big Thompson River near Loveland, CO	06741500	505	1947-55
Little Thompson River near Berthoud, CO	06742000	100	1929-30, 1947-61
Little Thompson River at Milliken, CO	06743500	199	1951-55
Big Thompson River at Mouth near La Salle, CO	06744000	830	1914-15, 1927-82
Cache La Poudre River above Chambers Lake Outlet, CO	06745000	89.7	1929-31
Joe Wright Creek near Cameron Pass, CO	06746100	5.05	1974-78
Cache La Poudre River near Rustic, CO	06747500	198	1956-68
Cache La Poudre River near Log Cabin, CO	06748000	234	1909-11, 1929-31
Fall Creek near Rustic, CO	06748200	3.59	1960-73
South Fork Cache La Poudre near Eggers, CO	06748500	70.6	1929-31
Little Beaver Creek near Idylwilde, CO	06748510	0.88	1960-73
Little Beaver Creek near Rustic, CO	06748530	12.3	1960-73
South Fork Cache La Poudre River near Rustic, CO	06748600	92.4	1956-79
Cache La Poudre River below Elkhorn, CO	06749000	409	1946-59
North Fork Cache La Poudre River near Livermore, CO	06751500	567	1947-65
Lonetree Creek near Nunn, CO	06753500	199	1951-57
Crow Creek near Barnsville, CO	06756500	1,324	1951-57
South Platte River at Masters, CO	06756995	12,175	1976-88
South Platte River at Sublette, CO	06757000	12,170	1926-42, 1943-55
Kiowa Creek at K-79 Reservoir near Eastonville, CO	06757600	3.20	1955-65
Kiowa Creek at Elbert, CO	06758000	28.6	1955-65
West Kiowa Creek at Elbert, CO	06758100	35.9	1962-65
Kiowa Creek at Kiowa, CO	06758200	111	1955-65
Kiowa Creek at Bennett, CO	06758300	236	1960-65
Bijou Creek near Wiggins, CO	06759000	1,314	1950-56
Bijou Creek near Fort Morgan, CO	06759100	1,500	1976-87

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

Station name	Station number	Drainage area (sq mi)	Period of record (calendar years)
South Platte River at Fort Morgan, CO	06759500	14,810	1943-58
South Platte River at Balzac, CO	06760000	16,852	1916-80
South Platte River near Crook, CO	06760500	19,238	1953-58
North Fork Republican River near Wray, CO	06822000	1,019	1937-46, 1951-57, 1962-64
South Fork Republican River near Idalia, CO	06825000	1,300	1950-71, 1972-81
Landsman Creek near Hale, CO	06825500	268	1950-76, 1977-81
South Fork Republican River near Hale, CO	06826500	1,825	1946-48, 1951-86
East Fork Arkansas River near Leadville, CO	07079500	50.0	1890-1903, 1910-24
Tennessee Creek near Leadville, CO	07081000	48.0	1890-1903, 1910-1924
Arkansas River near Leadville, CO	07081200	97.2	1967-83
Lake Fork above Sugar Loaf Reservoir, CO	07082000	23.9	1946-67
Halfmoon Creek near Leadville, CO	07083500	25.2	1911-14
Arkansas River near Malta, CO	07083700	228	1964-67, 1976-84
Cottonwood Creek below Hot Springs near Buena Vista, CO	07089000	65.0	1910-23, 1949-86
Chalk Creek Upper Station near Saint Elmo, CO	07090000	48.0	1913-19
Chalk Creek near Saint Elmo, CO	07090500	83.0	1910-16
Chalk Creek near Nathrop, CO	07091000	97.0	1910, 1949-56, ^a
Arkansas River at Salida, CO	07091500	1,218	1895-97, 1901-03, 1909-80
South Arkansas River at Poncha, CO	07092000	140	1910-18
Poncha Creek at Poncha, CO	07093000	56.0	1910-18
South Arkansas River near Salida, CO	07093500	208	1922-23, 1929-40
South Colony Creek nr Westcliffe, CO	07094600	6.03	1974-78
Middle Taylor Creek near Westcliffe, CO	07094900	3.19	1974-78, 1984-85
Beaver Creek near Portland, CO	07099100	214	1971-81
Arkansas River near Portland, CO	07099200	4,280	1964-79
Turkey Creek near Fountain, CO	07099215	13.0	1978-89
Little Turkey Creek near Fountain, CO	07099220	9.59	1978-88
Turkey Creek above Teller Reservoir near Stone City, CO	07099230	62.3	1978-88
Turkey Creek near Stone City, CO	07099235	71.5	1978-83, 1987
Arkansas River near Pueblo, CO	07099500	4,686	1885-87, 1889, 1894-1975
Monument Creek at Palmer Lake, CO	07103747	25.9	1977-90
Monument Creek at Monument, CO	07103750	28.5	1976-77
West Monument Creek near Pikeview, CO	07103900	15.4	1957-70
Kettle Creek near Black Forest, CO	07103950	9.01	1976-86
Templeton Gap Floodway at Colorado Springs, CO	07104500	8.73	1951-81
B Ditch Drain near Security, CO	07105780	--	1981-88
Clover Ditch near Widefield, CO	07105820	--	1981-88
Little Fountain Creek above Keaton Reservoir near Fort Carson, CO	07105920	11.0	1978-88
Womack Ditch near Fort Carson, CO	07105924	--	1978-91
Little Fountain Creek near Fort Carson, CO	07105928	11.8	1978-89
Little Fountain Creek near Fountain, CO	07105940	26.9	1978-88
Rock Creek above Fort Carson Reservation, CO	07105945	6.79	1978-84
Rock Creek near Fountain, CO	07105960	16.9	1978-88
Saint Charles River at San Isabel, CO	07107000	16.0	1936-41
Greenhorn Creek near Rye, CO	07107900	9.56	1974-79
Greenhorn Creek near Colorado City, CO	07108050	29.6	1974-79
Saint Charles River near Pueblo, CO	07108500	467	1941-53, 1955
Saint Charles River near Vineland, CO	07108800	473	1968-74
Saint Charles River at Mouth near Pueblo, CO	07109000	475	1922-25
Sixmile Creek near Avondale, CO	07110000	45.0	1922-24, 1941-46
Chico Creek near North Avondale, CO	07110500	864	1941-46
Huerfano River at Manzanares Crossing near Redwing, CO	07111000	73.0	1923-82
Huerfano River at Malachite, CO	07111500	107	1923-25
Huerfano River near Badito, CO	07112000	499	1941-46
Huerfano River at Badito, CO	07112500	532	1912, 1923-25, 1938-41, 1946-54
Huerfano River at Huerfano, CO	07113000	717	1923-28
Huerfano River near Mustang, CO	07113500	803	1942-47
Cucharas River at Boyd Ranch near La Veta, CO	07114000	56.0	1934-82
Cucharas River near La Veta, CO	07114500	75.0	1923-34
Huerfano River below Huerfano Valley Dam nr Undercliffe, CO	07116000	1,673	1939-67
Arkansas River at Nepesta, CO	07117500	9,460	1898-1902, 1904-06, 1936

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

Station name	Station number	Drainage area (sq mi)	Period of record (calendar years)
Chicosa Creek near Fowler, CO	07117600	109	1968-74
Apishapa River near Aguilar, CO	07118000	126	1939-50
Apishapa River at Aguilar, CO	07118500	149	1938-39, 1978-81
Apishapa River near White Rock, CO	07119000	737	1942-47
Big Arroyo near Thatcher, CO	07120620	15.5	1983-90 ^a
Timpas Creek near Rocky Ford, CO	07121000	451	1922-27, 1940-50
Fort Lyon Canal near Casa, CO	07122060	--	1988-90
Fort Lyon Canal near Cornelia, CO	07122105	--	1988-90
Fort Lyon Canal near Hasty, CO	07122200	--	1968-75, 1988-90
Fort Lyon Canal near Big Bend, CO	07122350	--	1988-90
Crooked Arroyo near La Junta, CO	07122500	--	1922-25
Horse Creek near Sugar City, CO	07123500	1,080	1940-47
Middle Fork Purgatoire River at Stonewall, CO	07124050	57.1	1978-81
Molino Canyon near Weston, CO	07124100	4.23	1978-81
Sarcillo Canyon near Segundo, CO	07124120	35.3	1978-81
Mulligan Canyon near Boncarbo, CO	07124210	4.53	1978-81
Reilly Canyon at Cokedale, CO	07124220	35.1	1978-81
Long Canyon Creek near Madrid, CO	07124300	100	1972-89
Carplos Canyon near Jansen, CO	07124350	4.57	1978-81
Purgatoire River at Trinidad, CO	07124500	795	1895-99, 1905-12, 1915-60, 1961-82
Purgatoire River near Hoehne, CO	07125000	857	1954-68
Frijole Creek near Alfalfa, CO	07125100	80.0	1957-68
San Francisco Creek near Alfalfa, CO	07125500	160	1954-68
Purgatoire River near Alfalfa, CO	07126000	1,320	1905-07, 1924-28, 1951-68
Van Bremer Arroyo near Thatcher, CO	07126130	80.6	1983-85
Burke Arroyo Tributary near Thatcher, CO	07126320	4.66	1983-87
Lockwood Canyon Creek near Thatcher, CO	07126390	41.4	1983-92
Red Rock Canyon Creek at Mouth, near Thatcher, CO	07126415	48.8	1983-90 ^a
Bent Canyon Creek at Mouth near Timpas, CO	07126480	56.2	1983-90 ^a
Purgatoire River at Highland Dam near Las Animas, CO	07128000	3,376	1898, 1931-55
Rule Creek near Caddoa, CO	07129500	435	1941-46
Caddoa Creek at Caddoa, CO	07131000	131	1941-46
Willow Creek near Lamar, CO	07133050	42.0	1974-77
Big Sandy Creek above Amity Canal near Korman, CO	07134000	3,396	1941-46
Big Sandy Creek near Lamar, CO	07134100	3,307	1968-82
Two Butte Creek near Holly, CO	07135000	817	1942-46
Arkansas River at Holly, CO	07135500	25,073	1894, 1901-02, 1907-53
Wild Horse Creek at Holly, CO	07136000	270	1922-35, 1938-50
Holly Drain near Holly, CO	07136500	--	1924-50
Willow Creek at Creede, CO	08216500	51.7	1951-82
Rio Grande at Wason below Creede, CO	08217000	705	1907-54
Goose Creek near Wagonwheel Gap, CO	08218000	53.6	1924-26, 1939-52
Goose Creek at Wagonwheel Gap, CO	08218500	90.0	1954-91
Pinos Creek near Del Norte, CO	08220500	53.0	1919-24, 1936-82
San Francisco Creek at upper station near Del Norte, CO	08220900	11.8	1967-69
Rio Grande near Monte Vista, CO	08221500	1,590	1926-80
Rio Grande at Alamosa, CO	08223000	1,710	1912-80
Rock Creek near Monte Vista, CO	08223500	32.9	1935-55, 1966-70
San Luis Creek near Poncha Pass, CO	08224110	6.57	1979-85
San Luis Creek above Villa Grove, CO	08224113	11.2	1979-85
Raspberry Creek near Villa Grove, CO	08224200	1.78	1967-70
Kerber Creek at Ashley Ranch near Villa Grove, CO	08224500	38.0	1923-26, 1936-82
Noland Gulch Tributary Reservoir Inflow, near Villa Grove, CO	08226600	0.08	1979-89
Cotton Creek near Mineral Hot Springs, CO	08226700	13.6	1967-70
Saguache Creek near Saguache, CO	08227000	595	1910-12, 1914-82
Anaconda Reservoir near Villa Grove, CO	08227300	0.17	1979-85
Tracy Pit Reservoir Inflow near Saguache, CO	08227400	0.05	1979-89
North Crestone Creek near Crestone, CO	08227500	10.7	1936-82
Cottonwood Creek near Crestone, CO	08229500	6.77	1936, 1967-70
Carnero Creek near La Garita, CO	08230500	117	1919-82
La Garita Creek near La Garita, CO	08231000	61.0	1919-82
Mosca Creek near Mosca, CO	08234200	3.67	1967-70
Alamosa Creek above Terrace Reservoir, CO	08236000	107	1911-12, 1914-27, 1934-82

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

Station name	Station number	Drainage area (sq mi)	Period of record (calendar years)
Alamosa Creek below Terrace Reservoir, CO	08236500	116	1909-55
La Jara Creek at Gallegos Ranch near Capulin, CO	08238000	98.0	1916-17, 1919-23 1936-82
Yellow Warbler Reservoir Inflow near Antonito, CO	08238350	0.18	1979-89
Turkey Reservoir Inflow near Conejos, CO	08238380	0.24	1979-89
Bobolink Reservoir near Conejos, CO	08238400	0.23	1979-89
Trinchera Creek above Turners Ranch near Ft Garland, CO	08240500	45.0	1923-82
Trinchera Creek above Mountain Home Reservoir nr Ft Garland, CO	08241000	61.0	1923-55
Sangre De Cristo Creek near Ft Garland, CO	08241500	190	1916, 1923-30, 1931-82
Ute Creek near Ft Garland, CO	08242500	32.0	1916, 1923-82
Trinchera Creek below Smith Reservoir near Blanca, CO	08243500	396	1928-82
Conejos River at Platoro, CO	08245500	44.4	1936-53
Conejos River at Counsellors Cabin near Mogote, CO	08246000	211	1943-47
San Antonio River at mouth near Manassa, CO	08248500	348	1923-82
Culebra Creek near Chama, CO	08249400	72.4	1967-70
Culebra Creek at San Luis, CO	08250000	220	1927-82
Culebra Creek below San Luis, CO	08250500	255	1938-55
Rio Grande at CO-NM State Line	08252000	--	1953-82

a-Converted to a crest-stage partial-record station.

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.

Discontinued continuous-record surface-water-quality stations

Station name	Station number	Drainage area (sq mi)	Type of record	Period of record (water years)
Canadian River near Lindland, CO	06619400	44.0	Temp., S.C., Sed.	1978-83
Canadian River near Brownlee, CO	06619450	158	Temp., S.C., Sed.	1978-83
South Platte River at Littleton, CO	06710000	3,069	Temp. S.C.	1970-86 1984-86
South Platte River at 64th Ave. at Commerce City, CO	06714215	3,884	Temp., pH., D.O.	1987
Ralston Creek near Plainview, CO	06719725	36.9	Temp., S.C., pH., D.O.	1983-84
Schwartzwalder Mine Effluent near Plainview, CO	06719730	--	Temp., S.C., pH., D.O.	1983-84
Ralston Creek below Schwartzwalder Mine, CO	06719735	38.9	Temp., S.C., pH., D.O.	1983-84
Ralston Creek above Ralston Res. nr Plainview, CO	06719740	42.7	Temp., S.C., pH., D.O.	1983-84
Cache La Poudre River near Greeley, CO	06752500	1,877	Temp., S.C., pH., D.O.	1975
South Platte River near Kersey, CO	06754000	8,598	Temp.	1950-53
Kiowa Creek at Elbert, CO	06758000	28.6	Sed.	1957-68, 1960-62, 1964-65
West Kiowa Creek at Elbert, CO	06758100	35.9	Sed.	1962-65
Kiowa Creek at Kiowa, CO	06758200	111	Sed.	1956-65
South Platte River at Julesburg, CO (Chan. 2)	06763990	--	Temp. S.C.	1967-73 1971-73
North Fork Republican River near Wray, CO	06822000	1,019	Temp., Sed.	1962-63
Halfmoon Creek near Malta, CO	07083000	23.6	Temp.	1967-82
Fountain Creek near Pinon, CO	07106300	849	Temp., S.C.	1976-79
Apishapa River at Aguilar, CO	07118500	149	Sed.	1979-81
Apishapa River near Fowler, CO	07119500	1,125	Temp., S.C.	1966-68
Big Arroyo near Thatcher, CO	07120620	15.5	Temp., S.C., Sed.	1983-90 ^a
Arkansas River near La Junta, CO	07122000	--	Temp., S.C.	1966-68
Middle Fork Purgatoire River at Stonewall, CO	07124050	52.1	Temp., S.C. Sed.	1978-81 1979-81
Molino Canyon near Weston, CO	07124100	4.23	Sed.	1979-81
Sarcillo Canyon near Segundo, CO	07124120	35.3	Sed.	1980-81
Purgatoire River at Madrid, CO	07124200	550	Temp., S.C. Sed.	1979-81 1978-81
Mulligan Canyon near Boncarbo, CO	07124210	4.53	Sed.	1979-81
Reilly Canyon at Cokedale, CO	07124220	35.1	Sed.	1979-81
Carplos Canyon near Jansen, CO	07124350	100	Sed.	1979-81
Purgatoire River below Trinidad Lake, CO	07124410	672	Sed.	1977-82
Luning Arroyo Tributary near Model, CO	07126110	--	Temp., S.C.	1984
Van Bremer Arroyo near Thatcher, CO	07126130	80.6	Temp., S.C.	1985
Burke Arroyo Tributary near Thatcher, CO	07126320	4.66	Temp., S.C. Sed.	1983-86 1984-86
Red Rock Canyon Creek at Mouth, near Thatcher, CO	07126415	41.4	Temp., S.C.	1983-90 ^a
Bent Canyon Creek at Mouth near Timpas, CO	07126480	56.2	Temp., S.C.	1983-90 ^a
Purgatoire River at Highland Dam near Las Animas, CO	07128000	3,376	S.C.	1967-68
Willow Creek at Creede, CO	08216500	35.3	Temp., S.C.	1976-77
Rio Grande at Wagonwheel Gap, CO	08216500	780	Temp., S.C.	1976-77
San Luis Creek near Poncha Pass, CO	08224110	6.57	Sed.	1981-83
San Luis Creek above Villa Grove, CO	08224113	11.2	Sed.	1981-83
Rio Grande above Culebra Creek near Lobatos, CO	08249200	--	Temp. S.C.	1964-66 1964-66

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

a-Converted to a crest-stage partial-record station.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1 *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2 *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. McCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W. Scott Keys: USGS--TWRI Book 2, Chapter E2. 150 pages.
- 2-F1 *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W. E. Teasdale: USGS--TWRI Book 2, Chaptr F1. 1989. 97 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS---TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS-TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3. Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F. A. Kilpatrick and J. F. Wilson, Jr.: USGS---TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS- -TWRI Book 3, Chapter A12. 1986. 41 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F. A. Kilpatrick, R. E. Rathburn, N. Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.
- 3-A19. *Levels of streamflow gaging stations*, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 27 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by R. L. Cooley and R.L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.
- 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, Chapter B4. 1993. 8 pages.
- 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, Chapter B5. 1987. 15 pages.
- 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, Chapter B6. 1987. 28 pages.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by Eliezer J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 90 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. J. Fishman and L. C. Friedman: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 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, Chapter A3. 1987. 80 pages.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

- 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, Chapter A4. 1989. 363 pages.
- 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, Chapter A5. 1977. 95 pages.
- 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, Chapter A6. 1982. 181 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.
- 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, Chapter A2. 1991. 68 pages.
- 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, Chapter A3. 1993. 136 pages.
- 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, Chapter A4. 1992. 108 pages.
- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-problems, Part 3: Design philosophy and programming details*, by L. J. Torak: USGS--TWRI Book 6, Chapter A5, 1993. 243 pages..
- 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, Chapter C1. 1976. 116 pages.
- 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, Chapter C2. 1978. 90 pages.
- 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, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

06614800 MICHIGAN RIVER NEAR CAMERON PASS, CO

LOCATION.--Lat 40°29'46", long 105°51'52", in S1/2 sec.12, T.6 N., R.76 W. (unsurveyed), Jackson County, Hydrologic Unit 10180001, on right bank 500 ft upstream from Michigan ditch, 2.2 mi southeast of Cameron Pass, 8 mi east of Gould, and 27 mi southeast of Walden.

DRAINAGE AREA.--1.53 mi².

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 10,390 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 2 to Apr. 30, and Aug. 11-24. Records good above 5.0 ft³/s, and fair below, except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.89	.60	.46	.40	.33	.36	.39	.35	8.9	27	3.8	1.6
2	.86	.56	.44	.38	.32	.35	.42	.35	9.3	27	3.5	1.7
3	.84	.52	.44	.36	.32	.35	.44	.34	10	23	3.2	1.5
4	.81	.50	.42	.35	.31	.35	.42	.38	8.7	17	2.9	1.4
5	.79	.48	.42	.33	.30	.37	.44	.52	10	13	2.7	1.4
6	.77	.50	.40	.34	.30	.39	.44	.44	10	11	2.6	1.3
7	.79	.54	.40	.36	.31	.41	.44	.40	11	12	2.4	1.6
8	.82	.49	.40	.35	.34	.43	.41	.39	10	15	2.4	1.4
9	.78	.45	.41	.35	.34	.45	.36	.38	10	15	2.6	1.3
10	.80	.43	.41	.36	.34	.46	.40	.37	7.5	16	2.3	1.2
11	.84	.42	.42	.34	.36	.45	.45	.44	7.7	18	2.5	1.1
12	.82	.44	.40	.32	.36	.44	.45	.78	10	17	2.4	1.1
13	.79	.45	.38	.30	.34	.43	.45	1.4	13	16	2.4	1.6
14	.76	.45	.36	.32	.33	.43	.40	2.0	15	16	2.4	1.5
15	.73	.45	.34	.34	.32	.43	.42	2.6	18	16	2.4	1.5
16	.68	.47	.37	.36	.31	.43	.44	2.9	22	15	2.3	1.5
17	.68	.47	.37	.34	.33	.43	.45	2.9	27	12	2.2	1.6
18	.67	.45	.39	.33	.35	.42	.45	2.4	25	10	2.2	1.5
19	.65	.43	.36	.31	.36	.42	.40	2.6	20	9.6	2.1	1.4
20	.64	.45	.35	.33	.35	.42	.37	3.0	22	8.3	2.2	1.5
21	.63	.43	.36	.33	.34	.38	.39	3.5	27	7.1	2.1	1.4
22	.63	.41	.37	.35	.33	.41	.41	3.7	28	7.0	2.1	1.3
23	.62	.42	.38	.33	.34	.43	.43	3.5	24	6.8	2.1	1.1
24	.61	.42	.36	.30	.35	.45	.45	3.5	21	6.7	2.0	1.1
25	.61	.44	.35	.29	.36	.43	.43	4.5	20	6.5	2.1	1.0
26	.61	.44	.37	.31	.37	.43	.40	5.0	24	5.6	2.9	1.1
27	.61	.45	.38	.32	.38	.40	.41	5.3	23	4.9	2.5	1.1
28	.61	.45	.39	.32	.37	.41	.43	7.1	25	4.7	2.4	1.1
29	.62	.46	.40	.30	---	.42	.42	7.0	31	4.9	2.2	1.1
30	.61	.46	.40	.30	---	.45	.41	7.5	30	4.1	2.0	1.1
31	.61	---	.40	.31	---	.42	---	8.5	---	4.2	1.7	---
TOTAL	22.18	13.93	12.10	10.33	9.46	12.85	12.62	84.04	528.1	376.4	75.6	40.1
MEAN	.72	.46	.39	.33	.34	.41	.42	2.71	17.6	12.1	2.44	1.34
MAX	.89	.60	.46	.40	.38	.46	.45	8.5	31	27	3.8	1.7
MIN	.61	.41	.34	.29	.30	.35	.36	.34	7.5	4.1	1.7	1.0
AC-FT	44	28	24	20	19	25	25	167	1050	747	150	80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1993, BY WATER YEAR (WY)

MEAN	.81	.53	.42	.35	.30	.32	.38	3.69	16.3	9.09	2.76	1.30
MAX	1.94	1.08	.67	.57	.55	.86	.64	9.50	27.1	24.6	6.83	3.32
(WY)	1983	1985	1978	1988	1986	1986	1986	1974	1990	1983	1983	1984
MIN	.32	.20	.25	.17	.16	.17	.22	1.12	10.9	3.21	1.20	.49
(WY)	1980	1979	1979	1991	1977	1974	1982	1982	1992	1987	1988	1988

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1974 - 1993
ANNUAL TOTAL	856.95	1197.71	
ANNUAL MEAN	2.34	3.28	3.03
HIGHEST ANNUAL MEAN			4.61
LOWEST ANNUAL MEAN			1.97
HIGHEST DAILY MEAN	16	31	45
LOWEST DAILY MEAN	.22	.29	.08
ANNUAL SEVEN-DAY MINIMUM	.22	.31	.14
INSTANTANEOUS PEAK FLOW		47	79
INSTANTANEOUS PEAK STAGE		3.46	3.59
ANNUAL RUNOFF (AC-FT)	1700	2380	2190
10 PERCENT EXCEEDS	8.1	10	10
50 PERCENT EXCEEDS	.61	.47	.57
90 PERCENT EXCEEDS	.24	.34	.25

a-Also occurred Jan 13-30.

LOCATION.--Lat 40°56'15", long 106°20'16", in NE1/4SW1/4SE1/4 sec.11, T.11 N., R.80 W., Jackson County, Hydrologic Unit 10180001, on right bank 1,000 ft downstream from bridge on State Highway 125, 0.7 mi upstream from Camp Creek, 4.2 mi northwest of Northgate, and 4.4 mi south of Colorado-Wyoming State line.

PERIOD OF RECORD.--May to November 1904 (published as "near Pinkhampton"), May 1915 to current year. Monthly discharge only for some periods, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 7,810.39 ft above sea level. See WSP 1730 for history of changes prior to Apr. 8, 1918. Apr. 8, 1918, to Aug. 21, 1961, water-stage recorder at site 0.7 mi downstream at datum 3.36 ft lower. Aug. 22, 1961, to Sept. 18, 1984, at site 650 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Nov. 3 to Apr. 8. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 130,000 acres of hay meadows upstream from station. Transbasin diversions upstream from station to Cache la Poudre River basin. National Weather Service satellite telemeter at station.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	94	73	67	80	94	292	1040	1790	1260	335	144
2	62	99	77	66	85	97	292	918	1730	1170	321	135
3	62	99	75	65	82	98	307	840	1840	1090	303	139
4	67	87	71	66	81	98	330	851	2090	1170	289	139
5	59	93	67	68	80	103	394	993	2110	1090	318	128
6	57	97	69	72	82	110	475	1170	1640	916	359	120
7	56	105	71	73	86	116	490	1070	1440	754	335	120
8	56	110	73	71	91	119	465	981	1570	637	298	130
9	60	104	75	70	92	118	439	879	1650	588	289	135
10	62	99	78	71	88	113	491	779	1470	598	287	124
11	62	93	81	72	91	107	484	694	1220	662	317	112
12	60	94	77	73	92	104	475	700	996	724	327	102
13	63	100	74	79	90	111	482	794	827	844	323	103
14	62	111	71	84	88	121	444	1010	866	934	286	149
15	59	126	68	87	86	127	400	1210	907	918	266	184
16	55	140	65	85	84	131	395	1510	1030	838	267	169
17	57	151	63	82	85	135	403	1870	1270	781	247	178
18	57	140	62	80	90	141	424	2040	1980	734	215	211
19	61	128	61	78	96	150	480	2060	2360	678	200	200
20	63	119	63	82	100	162	434	1960	2360	613	190	205
21	62	110	64	86	97	176	405	1870	2190	617	186	198
22	59	103	65	83	95	190	425	1950	1990	593	212	182
23	59	94	65	86	95	213	515	2030	1770	546	232	162
24	65	80	64	84	95	233	659	1990	1670	521	213	147
25	72	70	62	82	92	255	656	1740	1460	549	189	139
26	69	66	63	80	92	272	626	1580	1290	525	175	146
27	77	70	65	77	92	297	736	1530	1190	455	180	151
28	80	72	66	74	91	308	934	1640	1190	421	194	146
29	80	72	68	72	---	308	1050	1650	1240	393	182	142
30	81	71	69	70	---	302	1050	1780	1220	370	160	134
31	88	---	68	74	---	292	---	1870	---	350	152	---
TOTAL	2003	2997	2133	2359	2498	5201	15452	42999	46356	22339	7847	4474
MEAN	64.6	99.9	68.8	76.1	89.2	168	515	1387	1545	721	253	149
MAX	88	151	81	87	100	308	1050	2060	2360	1260	359	211
MIN	55	66	61	65	80	94	292	694	827	350	152	102
AC-FT	3970	5940	4230	4680	4950	10320	30650	85290	91950	44310	15560	8870

MEAN	161	149	100	81.3	86.0	168	759	1141	1481	636	267	146
MAX	538	366	200	177	199	722	2444	3649	3296	2367	763	502
(WY)	1962	1962	1928	1984	1986	1986	1962	1984	1983	1957	1983	1929
MIN	31.7	54.2	33.9	27.5	35.7	47.8	131	212	89.4	26.7	38.5	23.8
(WY)	1935	1935	1977	1977	1933	1964	1981	1981	1934	1934	1934	1934

ANNUAL TOTAL	68858		156658		--	
ANNUAL MEAN	188		429		433	
HIGHEST ANNUAL MEAN	--		--		878	1917
LOWEST ANNUAL MEAN	--		--		117	1977
HIGHEST DAILY MEAN	1340	May 29	2360	Jun 19, 20	6450	Jun 10 1923
LOWEST DAILY MEAN	37	Jan 21	55	Oct 16	19	Jul 17-19 1934
ANNUAL SEVEN-DAY MINIMUM	39	Jan 19	59	Oct 5	20	Jul 15 1934
INSTANTANEOUS PEAK FLOW	--		2420	Jun 19	a 6720	Jun 11 1923
INSTANTANEOUS PEAK STAGE	--		5.26	Jun 19	b 9.65	Apr 25 1980
ANNUAL RUNOFF (AC-FT)	136600		310700		313600	
10 PERCENT EXCEEDS	398		1260		1220	
50 PERCENT EXCEEDS	111		142		160	
90 PERCENT EXCEEDS	51		66		68	

b-Backwater from ice jam.

06695000 SOUTH PLATTE RIVER ABOVE ELEVENMILE CANYON RESERVOIR, NEAR HARTSEL, CO

LOCATION.--Lat 38°58'03", long 105°34'51", in NE1/4 sec.32, T.12 S., R.73 W., Park County, Hydrologic Unit 10190001, on left bank 200 ft downstream from highway bridge, 2.5 mi upstream from water line of Elevenmile Canyon Reservoir, at elevation 8,561 ft, and 13 mi southeast of Hartsel.

DRAINAGE AREA.--980 mi².

PERIOD OF RECORD.--June 1933 to current year (no winter records prior to 1940). Monthly discharge only for some periods, published in WSP 1310. Statistics computed for the period 1982 to current year.

REVISED RECORDS.--WSP 1630: 1958. WSP 1730: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry, and Parshall flume. Datum of gage is 8,612.83 ft above sea level, Denver Board of Water Commissioners Datum. Prior to May 27, 1939, water-stage recorder near present site at different datum. May 27, 1939, to Nov. 4, 1961, at datum 0.46 ft, lower.

REMARKS.--Estimated daily discharges: Mar. 13-21. Records good. Flow regulated by Antero Reservoir, capacity, 22,300 acre-ft, prior to Sept. 15, 1981, and by Spinney Mountain Reservoir, 3.6 mi upstream, capacity, 152,900 acre-ft, since Sept. 15, 1981. Many small diversions upstream from station for irrigation of about 24,000 acres.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	61	65	52	48	50	102	40	86	135	182	152
2	127	60	61	51	49	49	101	40	120	196	214	162
3	131	59	53	51	48	51	101	38	139	212	203	156
4	133	59	51	53	48	49	101	38	117	207	193	144
5	125	60	49	55	49	46	94	38	80	218	193	129
6	107	60	52	53	50	45	86	38	51	201	184	118
7	124	60	51	50	49	45	86	38	41	152	179	84
8	102	60	55	50	48	45	76	38	44	130	176	80
9	101	60	52	42	48	45	59	39	41	162	172	67
10	75	60	50	48	48	45	58	39	46	174	164	69
11	58	60	49	49	48	45	57	66	42	163	159	64
12	67	60	49	51	48	45	58	86	40	178	185	65
13	60	60	50	52	48	45	58	86	41	216	194	59
14	52	60	49	49	49	45	58	86	73	230	208	53
15	52	60	53	51	48	45	58	86	130	181	207	53
16	66	60	49	51	49	45	58	86	166	151	170	53
17	90	60	52	49	49	45	57	78	184	138	153	54
18	101	60	52	49	49	45	57	74	213	118	172	55
19	101	60	49	48	49	45	52	65	265	138	188	54
20	92	60	51	48	49	45	45	38	227	141	217	55
21	85	59	52	48	50	45	45	39	162	124	202	55
22	83	63	52	48	50	47	45	38	148	102	184	55
23	83	63	53	48	50	48	66	38	149	127	179	55
24	84	63	54	51	50	61	83	48	148	143	173	55
25	85	62	54	52	50	80	83	60	151	135	176	55
26	103	63	55	49	50	80	83	57	154	125	183	56
27	95	62	55	49	50	82	73	57	140	161	191	56
28	78	63	50	51	50	82	55	70	133	191	203	57
29	71	57	50	48	---	128	46	90	139	196	194	59
30	57	64	50	50	---	205	45	103	127	207	159	72
31	61	---	52	50	---	146	---	113	---	187	137	---
TOTAL	2776	1818	1619	1546	1371	1924	2046	1850	3597	5139	5694	2301
MEAN	89.5	60.6	52.2	49.9	49.0	62.1	68.2	59.7	120	166	184	76.7
MAX	133	64	65	55	50	205	102	113	265	230	217	162
MIN	52	57	49	42	48	45	45	38	40	102	137	53
AC-FT	5510	3610	3210	3070	2720	3820	4060	3670	7130	10190	11290	4560

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1993, BY WATER YEAR (WY)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	87.5	64.7	61.7	55.3	53.2	78.9	93.5	111	181	203	189	110
MAX	191	81.7	129	135	114	242	141	332	415	339	381	151
(WY)	1985	1987	1990	1990	1990	1986	1983	1987	1985	1984	1984	1988
MIN	30.1	29.1	28.2	21.7	21.9	23.2	66.5	40.0	38.8	122	125	44.9
(WY)	1982	1984	1985	1983	1982	1982	1982	1991	1991	1992	1992	1982

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1982 - 1993

	1992 CALENDAR YEAR	1993 WATER YEAR	WATER YEARS 1982 - 1993
ANNUAL TOTAL	31774	31681	
ANNUAL MEAN	86.8	86.8	^a 108
HIGHEST ANNUAL MEAN			148
LOWEST ANNUAL MEAN			73.3
HIGHEST DAILY MEAN	210	265	655
LOWEST DAILY MEAN	42	38	1.20
ANNUAL SEVEN-DAY MINIMUM	47	38	1.9
INSTANTANEOUS PEAK FLOW		332	^c 3970
INSTANTANEOUS PEAK STAGE		2.27	7.60
ANNUAL RUNOFF (AC-FT)	63020	62840	78020
10 PERCENT EXCEEDS	148	179	223
50 PERCENT EXCEEDS	73	60	74
90 PERCENT EXCEEDS	51	45	36

a-Average discharge for 42 years (water years 1940-81), 77.3 ft³/s; 56000 acre-ft/yr, prior to completion of Spinney Mountain Dam.

b-Also occurred, May 4-8, 20, 22, 23.

c-Maximum daily discharge. Maximum instantaneous discharge, not determined, occurred Apr 28, 1970.

06696000 SOUTH PLATTE RIVER NEAR LAKE GEORGE, CO

LOCATION.--Lat 38°54'19", long 105°28'22", in SW 1/4 sec.20, T.13 S., R.72 W., Park County, Hydrologic Unit 10190001, on left bank 700 ft downstream from Elevenmile Canyon Reservoir and 8.2 mi southwest of town of Lake George.

DRAINAGE AREA.--963 mi².

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1730: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry, and Parshall flume. Elevation of gage is 8,458 ft above sea level, from topographic map. Prior to Oct. 26, 1940, at site 1 mi downstream at datum 8,423.95 ft, above sea level, adjustment of 1912.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by transmountain diversions through East and West Hoosier ditches at Hoosier Pass prior to 1941, storage in Elevenmile Canyon Reservoir (see elsewhere in this report) and Antero Reservoir, capacity, 22,300 acre-ft, diversions for irrigation, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	71	58	52	52	51	110	61	67	121	152	180
2	106	64	58	53	52	50	110	59	64	124	158	171
3	106	62	58	53	52	50	115	57	74	139	161	168
4	106	57	56	53	52	50	115	53	72	138	164	162
5	106	54	58	53	52	49	113	51	74	145	168	156
6	106	54	57	53	52	49	110	50	70	152	169	148
7	107	53	55	52	52	49	107	45	67	151	168	144
8	99	52	61	53	52	49	105	43	57	147	169	135
9	95	52	56	57	52	48	100	40	57	139	165	122
10	87	49	55	57	53	47	94	37	55	143	165	112
11	82	53	55	56	53	48	87	36	53	143	168	106
12	77	54	58	55	52	48	82	40	52	149	167	97
13	73	52	58	54	52	48	81	45	47	154	180	91
14	69	52	58	54	52	48	77	48	45	162	186	90
15	63	53	57	53	52	61	75	52	52	171	188	84
16	60	53	58	53	53	56	72	56	60	168	184	76
17	61	54	58	53	54	47	71	64	72	160	176	72
18	63	55	57	53	53	46	70	68	96	153	169	68
19	66	56	56	54	52	46	71	69	119	149	178	66
20	69	57	55	55	55	46	64	68	142	148	191	61
21	70	59	54	55	54	46	62	64	149	144	198	59
22	69	58	53	54	53	46	61	63	147	136	196	52
23	70	56	52	53	53	47	63	57	145	127	191	52
24	71	57	52	53	53	47	67	51	138	128	186	52
25	70	57	52	52	52	50	70	51	149	123	180	49
26	78	56	52	53	52	54	72	52	147	123	180	45
27	82	57	52	52	52	63	72	52	133	118	187	44
28	80	56	52	53	52	76	71	52	131	124	193	42
29	81	57	52	53	---	80	68	54	129	133	196	42
30	75	58	52	52	---	96	65	56	123	142	194	44
31	73	---	52	52	---	109	---	62	---	153	187	---
TOTAL	2526	1678	1717	1658	1470	1700	2500	1656	2786	4407	5514	2790
MEAN	81.5	55.9	55.4	53.5	52.5	54.8	83.3	53.4	92.9	142	178	93.0
MAX	107	71	61	57	55	109	115	69	149	171	198	180
MIN	60	49	52	52	52	46	61	36	45	118	152	42
AC-FT	5010	3330	3410	3290	2920	3370	4960	3280	5530	8740	10940	5530

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1993, BY WATER YEAR (WY)

	MEAN	53.5	41.6	26.3	24.8	26.1	40.3	92.9	93.3	143	180	152	72.1
MAX	221	166	107	133	117	201	436	775	614	610	459	288	
(WY)	1931	1955	1990	1990	1990	1986	1970	1970	1949	1949	1984	1930	
MIN	2.12	2.26	2.20	1.50	1.00	3.00	7.08	4.77	7.78	16.9	14.8	4.73	
(WY)	1941	1940	1940	1933	1933	1933	1939	1961	1961	1940	1940	1953	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1930 - 1993

ANNUAL TOTAL	30484	30402	
ANNUAL MEAN	83.3	83.3	79.7
HIGHEST ANNUAL MEAN			218
LOWEST ANNUAL MEAN			14.1
HIGHEST DAILY MEAN	186	Aug 27	2820
LOWEST DAILY MEAN	38	Jun 18	1.00
ANNUAL SEVEN-DAY MINIMUM	42	Jun 16	1.0
INSTANTANEOUS PEAK FLOW			3000
INSTANTANEOUS PEAK STAGE			8.34
ANNUAL RUNOFF (AC-FT)	60470	60300	57710
10 PERCENT EXCEEDS	132	160	204
50 PERCENT EXCEEDS	76	60	40
90 PERCENT EXCEEDS	54	50	8.0

a-No flow at times in January 1930, February 1931, and November 1935.

06699005 TARRYALL CREEK BELOW ROCK CREEK, NEAR JEFFERSON, CO

LOCATION.--Lat 39°27'13", long 105°41'43", in NW¹/4NW¹/4 sec.8, T.9 S., R.74 W., Park County, Hydrologic Unit 10190001, on left bank 1,800 ft downstream from Rock Creek, 1.0 mi northwest of Bordenville, and 9 mi southeast of Jefferson.

DRAINAGE AREA.--230 mi².

PERIOD OF RECORD.--April 1983 to current year.

REVISED RECORDS.--WDR CO-86-1: Drainage area. WDR CO-87-1: 1986 (M).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,020 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 1-5, Nov. 17 to Apr. 18, June 11-22, and July 11-13. Records fair except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	16	12	10	8.0	8.0	16	28	120	115	54	41
2	12	16	12	10	8.0	8.0	16	24	130	115	50	36
3	13	17	12	10	8.0	8.0	18	22	136	103	50	35
4	13	17	12	10	8.0	8.0	19	23	123	113	51	28
5	12	18	12	10	8.0	8.0	20	26	122	109	49	26
6	18	18	12	9.8	8.0	8.0	20	23	109	106	47	26
7	15	18	12	9.5	8.0	8.0	20	21	107	86	43	28
8	12	18	12	9.3	8.0	8.0	20	17	105	64	43	35
9	14	17	12	9.0	8.0	8.0	20	16	92	85	43	29
10	13	19	12	9.0	8.0	8.6	20	15	112	91	63	25
11	14	21	12	9.0	8.0	9.0	22	15	90	92	54	22
12	14	16	12	9.0	8.0	9.0	23	17	70	96	44	19
13	13	17	12	9.0	8.0	9.0	24	22	96	102	44	31
14	13	17	12	8.8	8.0	9.0	25	33	125	107	43	44
15	12	17	11	8.6	7.8	9.0	24	37	160	97	45	42
16	10	18	11	8.4	7.8	9.0	19	49	190	68	41	35
17	11	17	11	8.2	7.8	9.0	19	57	220	55	36	31
18	10	17	10	8.0	8.0	9.0	19	62	250	62	38	26
19	11	15	10	8.0	8.0	9.4	26	46	230	53	48	23
20	11	14	10	8.0	8.0	10	20	51	215	52	48	22
21	10	14	10	8.0	8.0	10	20	60	200	54	59	20
22	9.6	13	10	8.0	8.0	10	30	73	190	74	49	19
23	10	13	10	8.0	8.0	10	40	75	166	73	39	18
24	9.9	13	10	8.0	8.0	10	37	68	156	67	34	18
25	11	13	10	8.0	8.0	10	23	87	147	60	32	18
26	27	12	10	8.0	8.0	11	27	91	140	56	31	18
27	24	12	10	8.0	8.0	12	26	109	134	56	36	18
28	19	12	10	8.0	8.0	13	32	111	127	55	35	18
29	18	12	10	8.0	---	15	31	113	123	53	32	18
30	19	12	10	8.0	---	16	32	110	119	54	37	17
31	15	---	10	8.0	---	16	---	116	---	63	45	---
TOTAL	426.5	469	341	269.6	223.4	305.0	708	1617	4304	2436	1363	786
MEAN	13.8	15.6	11.0	8.70	7.98	9.84	23.6	52.2	143	78.6	44.0	26.2
MAX	27	21	12	10	8.0	16	40	116	250	115	63	44
MIN	9.6	12	10	8.0	7.8	8.0	16	15	70	52	31	17
AC-FT	846	930	676	535	443	605	1400	3210	8540	4830	2700	1560

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1993, BY WATER YEAR (WY)

	MEAN	29.3	18.3	10.9	7.42	8.71	12.8	35.8	74.5	148	103	76.9	40.9
MAX	59.4	31.8	17.9	12.5	20.5	29.2	85.4	148	234	254	161	83.0	
(WY)	1985	1985	1984	1987	1985	1985	1987	1987	1983	1984	1984	1983	
MIN	13.8	12.6	5.48	3.02	5.00	7.82	17.6	39.4	76.5	41.6	39.5	17.8	
(WY)	1993	1988	1988	1988	1992	1992	1984	1986	1992	1992	1992	1992	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1983 - 1993
ANNUAL TOTAL	9831.6	13248.5	
ANNUAL MEAN	26.9	36.3	45.5
HIGHEST ANNUAL MEAN			79.7
LOWEST ANNUAL MEAN			27.1
HIGHEST DAILY MEAN	155	250	540
LOWEST DAILY MEAN	4.8	7.8	3.0
ANNUAL SEVEN-DAY MINIMUM	5.0	7.9	3.0
INSTANTANEOUS PEAK FLOW		Not determined	654
INSTANTANEOUS PEAK STAGE		5.79	7.00
ANNUAL RUNOFF (AC-FT)	19500	26280	32990
10 PERCENT EXCEEDS	60	105	123
50 PERCENT EXCEEDS	17	18	27
90 PERCENT EXCEEDS	5.0	8.0	6.8

a-Also occurred Feb 16 and 17.
b-Also occurred Jan 4-29, 1988.
c-From floodmarks.
d-Backwater from ice.

RESERVOIRS IN SOUTH PLATTE RIVER BASIN

06695500 ELEVENMILE CANYON RESERVOIR.--Lat 38°54'19", long 105°28'30", in N¹/2SW¹/4 sec.20, T.13 S., R.72 W., Park County, Hydrologic Unit 10190001, at north end of dam on South Platte River, 8 mi southwest of Lake George. DRAINAGE AREA, 963 mi². PERIOD OF RECORD, October 1932 to current year. Prior to September 1938, published in WSP 1310. REVISED RECORDS, WSP 1730: Drainage area. GAGE, nonrecording gage read once daily. Datum of gage is 8,597.00 ft above sea level, (levels by Denver Board of Water Commissioners); gage readings published are to datum.

Reservoir is formed by concrete arch dam; storage began in October 1932; dam completed in November 1932. Spillway built 5.00 ft, higher, Aug. 1, 1957. Capacity, 97,780 acre-ft, between elevations 8,488.25 ft, invert of outlet pipe, and 8,597.00 ft, crest of spillway. Dead storage is negligible. Figures given represent total contents. Water is for municipal use by city of Denver. Records provided by Denver Board of Water Commissioners.

EXTREMES FOR PERIOD OF RECORD: Maximum contents observed, 111,200 acre-ft, Apr. 28, 1970, elevation, 8,600.82 ft; no contents at times in 1935.

EXTREMES FOR CURRENT YEAR: Maximum contents observed, 101,100 acre-ft, Apr. 20-21, elevation, 8,597.96 ft; minimum observed, 99,010 acre-ft, May 11, elevation, 8,597.36 ft.

06701000 CHEESMAN LAKE.--Lat 39°12'26", long 105°16'18", in NW¹/4SW¹/4 sec.6, T.10 S., R.70 W., Douglas County, Hydrologic Unit 10190002, at dam on South Platte River, 4.1 mi southwest of Deckers. DRAINAGE AREA, 1,752 mi². PERIOD OF RECORD, September 1900 to December 1901, September 1902 to current year. Prior to October 1938, published in WSP 1310. Published as Lake Cheesman prior to 1947. REVISED RECORDS, WSP 1730: Drainage area. GAGE, nonrecording gage read once daily. Datum of gage is 6,834.91 ft above sea level, (levels by Denver Board of Water Commissioners); gage readings published are to datum.

Reservoir is formed by masonry dam. Storage began September 1900. Dam completed about October 1902. Capacity, 79,060 acre-ft at gage height 212 ft, spillway crest, above sill of lowest gate. No dead storage. Figures given represent total contents. Water is for municipal use by city of Denver. Records provided by Denver Board of Water Commissioners.

EXTREMES FOR PERIOD OF RECORD: Maximum contents observed, 81,360 acre-ft, Apr. 29, 1970, gage height, 214.60 ft, minimum observed since appreciable storage was attained, 3,650 acre-ft, Apr. 20, 1933, gage height, 55.02 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents observed, 67,920 acre-ft, Sept. 30, gage height, 198.65 ft; minimum observed, 46,370 acre-ft, May 16, gage height, 168.44 ft.

MONTHEND ELEVATION IN FEET AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Date	Elevation a (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)
06695500	ELEVENMILE CANYON RESERVOIR			06701000	CHEESMAN LAKE	
Sept. 30.....	8,597.67	100,100	-	196.00	65,830	-
Oct. 31.....	8,597.56	99,690	-410	181.71	55,230	-10,600
Nov. 30.....	8,597.46	99,350	-340	193.32	56,370	+1,140
Dec. 31.....	8,597.40	99,140	-210	182.93	56,100	-270
CAL YR 1992....	-	-	-620	-	-	-9,050
Jan. 31.....	8,597.41	99,180	+40	179.82	53,920	-2,180
Feb. 28.....	8,597.42	99,210	+30	178.30	52,870	-1,050
Mar. 31.....	8,597.68	100,100	+890	179.93	54,000	+1,130
Apr. 30.....	8,597.46	99,350	-750	181.95	55,400	+1,400
May 31.....	8,597.50	99,490	+140	172.83	49,200	-6,200
June 30.....	8,597.75	100,300	+810	187.99	59,750	+10,550
July 31.....	8,597.81	100,600	+300	192.56	63,180	+3,430
Aug. 31.....	8,597.94	101,000	+400	195.07	65,110	+1,930
Sept. 30.....	8,597.40	99,140	-1,860	198.65	67,920	+2,810
WTR YR 1993....	-	-	-960	-	-	+2,090

a-Above sea level.

c-Also occurred Apr 9-14, 1957.

06706000 NORTH FORK SOUTH PLATTE RIVER BELOW GENEVA CREEK, AT GRANT, CO

LOCATION.--Lat 39°27'26", long 105°39'29", in NW¹/₄ sec.10, T.7 S., R.74 W., Park County, Hydrologic Unit 10190002, on left bank at Grant, 1,550 ft downstream from Geneva Creek, and 1.3 mi downstream from east portal of Harold D. Roberts tunnel.

DRAINAGE AREA.--127 mi².

PERIOD OF RECORD.--July 1908 to November 1913 (published as "at Cassells"), June 1942 to current year. Monthly discharge only for some periods, published in WSP 1310. December 1913 to March 1918, equivalent records may be obtained by summation of flow of North Fork South Platte River at Grant (above Geneva Creek) and Geneva Creek at Grant.

REVISED RECORDS.--WSP 956: Drainage area at site at Cassells. WSP 1116: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Datum of gage is 8,560.81 ft above sea level, adjustment of 1960. See WSP 1710 or 1730 for history of changes prior to July 23, 1948. July 23, 1948, to Nov. 15, 1968, water-stage recorder at site 50 ft downstream at datum 3.49 ft, lower.

REMARKS.--No estimated daily discharges. Records good. Small diversions upstream from station for irrigation of about 200 acres. Diversions from Colorado River basin to North Fork South Platte River upstream from station through Harold D. Roberts tunnel (see elsewhere in this report).

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	230	150	115	115	112	121	33	485	619	586	309
2	34	230	150	118	115	112	121	33	538	628	578	304
3	34	225	138	118	115	112	118	36	594	628	515	260
4	34	215	124	118	115	115	118	41	500	628	359	215
5	36	220	118	118	115	115	118	44	492	602	326	245
6	41	225	121	118	112	115	118	37	485	578	320	265
7	37	225	121	118	112	115	115	37	515	586	320	304
8	36	225	121	118	112	115	115	34	578	628	314	333
9	36	225	121	118	112	115	115	34	619	637	314	287
10	34	225	121	118	115	115	118	34	602	637	333	265
11	36	225	121	118	115	115	118	49	610	637	326	265
12	36	225	121	121	115	112	118	70	619	637	309	260
13	36	184	121	121	115	112	118	85	628	637	326	265
14	34	158	118	118	115	115	115	82	637	619	320	245
15	34	158	118	118	112	115	115	91	646	610	314	230
16	34	142	118	118	112	115	112	109	628	602	304	250
17	33	158	115	118	112	112	112	121	628	610	304	276
18	33	154	115	118	112	112	115	112	562	619	304	276
19	34	154	115	118	112	115	41	118	578	619	304	276
20	56	158	115	115	112	115	26	230	586	619	304	276
21	79	154	115	115	112	115	22	399	628	610	309	270
22	91	150	115	115	112	115	26	448	619	610	309	270
23	115	154	115	115	112	118	30	427	619	610	298	270
24	124	150	115	115	112	121	28	424	610	610	399	270
25	127	150	115	115	112	109	26	174	619	602	399	270
26	154	154	115	115	115	121	30	192	628	602	298	270
27	184	150	115	115	115	124	33	235	628	602	304	270
28	220	150	115	115	115	121	34	326	628	602	298	304
29	240	154	115	115	---	118	36	455	628	602	298	352
30	235	150	115	115	---	115	37	462	628	594	298	352
31	235	---	115	115	---	118	---	470	---	594	314	---
TOTAL	2526	5477	3727	3625	3175	3574	2469	5442	17765	19018	10604	8304
MEAN	81.5	183	120	117	113	115	82.3	176	592	613	342	277
MAX	240	230	150	121	115	124	121	470	646	637	586	352
MIN	33	142	115	115	112	109	22	33	485	578	298	215
AC-FT	5010	10860	7390	7190	6300	7090	4900	10790	35240	37720	21030	16470

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1993, BY WATER YEAR (WY)

	MEAN	65.4	59.6	49.9	45.5	41.8	35.7	47.5	151	289	234	158	87.6
MAX	340	189	130	161	132	116	162	303	592	613	450	277	
(WY)	1979	1979	1990	1981	1981	1978	1967	1970	1993	1993	1978	1993	
MIN	20.5	19.6	11.4	8.57	8.43	10.6	18.2	67.4	74.0	49.5	34.6	26.0	
(WY)	1945	1944	1944	1944	1944	1944	1944	1963	1963	1963	1954	1944	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1909 - 1993

ANNUAL TOTAL	60322	85706	
ANNUAL MEAN	165	235	^a 71.4
HIGHEST ANNUAL MEAN			239
LOWEST ANNUAL MEAN			35.9
HIGHEST DAILY MEAN	^b 508	646	860
LOWEST DAILY MEAN	^c 19	22	6.5
ANNUAL SEVEN-DAY MINIMUM	20	27	7.2
INSTANTANEOUS PEAK FLOW		815	990
INSTANTANEOUS PEAK STAGE		2.09	4.72
ANNUAL RUNOFF (AC-FT)	119600	170000	51730
10 PERCENT EXCEEDS	399	610	276
50 PERCENT EXCEEDS	110	121	57
90 PERCENT EXCEEDS	35	37	17

a-Adjusted for inflow from Harold D. Roberts tunnel since 1964.

b-Also occurred Jun 19.

c-Also occurred Mar 26-29.

LOCATION.--Lat 39°26'18", long 104°58'57", in NE1/4SE1/4 sec.15, T.7 S., R.68 W., Douglas County, Hydrologic Unit 10190002, on south side of county road no. 20 bridge, over Plum Creek, 1.0 mi west of Sedalia, and 1.4 mi downstream of the confluence of East and West Plum Creeks.

PERIOD OF RECORD.--June 1942 to September 1947. August 1990 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,720 ft above sea level, from topographic map. Aug. 1942 to Sept. 1947, water-stage recorder at site 150 ft upstream at different datum. Prior to Aug. 1942, nonrecording gage at bridge.

REMARKS.--Estimated daily discharges: Jan. 4-7, 15-26, July 6-13, 18-29, and July 31 to Aug. 5. Records poor. Diversions upstream from station for irrigation. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

COOPERATION.--U.S. Army Corps of Engineers.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	15	22	15	16	18	21	44	9.7	4.4	1.1	1.8
2	4.1	14	14	14	14	22	19	45	8.9	3.4	.90	1.9
3	2.9	13	15	17	21	18	22	43	8.6	1.9	.74	2.5
4	3.1	15	18	15	18	18	23	46	8.4	1.9	.60	1.4
5	3.9	15	18	20	12	20	24	39	10	2.2	.40	.19
6	5.0	17	16	20	12	17	29	43	8.6	1.7	.29	3.2
7	9.3	18	11	20	12	16	36	44	7.2	1.5	.07	2.8
8	9.4	14	13	16	17	21	39	50	6.4	1.3	.34	4.0
9	8.1	15	14	14	22	19	37	39	6.5	1.3	.73	3.3
10	10	15	14	12	16	22	36	31	7.5	1.3	.13	2.6
11	16	14	20	19	13	14	35	30	7.1	1.3	.19	2.4
12	15	13	21	22	15	16	35	29	6.5	1.3	1.7	1.4
13	15	12	17	25	18	14	40	28	6.3	1.3	.97	2.9
14	15	9.8	18	24	22	17	42	33	5.9	4.3	.15	5.8
15	12	13	23	20	19	15	41	35	5.2	3.5	.00	5.2
16	9.4	14	22	17	24	16	42	36	4.6	2.0	.00	4.2
17	9.6	19	13	16	26	15	42	37	6.3	1.7	.06	4.0
18	10	18	17	16	30	15	37	40	23	1.3	.72	4.1
19	10	14	11	16	30	16	39	31	22	1.3	1.3	3.5
20	8.9	14	9.5	16	29	14	36	27	18	1.3	1.4	2.9
21	7.7	16	11	16	21	13	34	25	17	1.3	1.4	3.0
22	8.3	16	9.2	16	19	15	41	27	12	1.3	1.9	2.2
23	7.8	16	7.3	16	19	13	42	22	7.6	1.3	1.5	3.8
24	5.9	16	15	16	19	12	46	22	7.1	1.3	.83	4.0
25	6.9	17	19	18	22	10	41	29	6.5	1.3	.09	3.8
26	9.0	17	25	20	20	9.5	42	24	6.4	1.3	1.8	3.6
27	10	19	19	22	21	9.8	49	18	6.4	1.3	2.2	3.4
28	13	22	20	20	18	13	50	15	6.2	1.3	1.5	3.2
29	12	25	20	18	---	16	45	13	5.2	1.9	2.2	1.5
30	11	21	15	13	---	16	45	14	4.2	2.2	1.4	.56
31	15	---	13	15	---	19	---	11	---	1.3	.91	---
TOTAL	287.7	476.8	500.0	544	545	489.3	1110	970	265.3	56.0	27.52	89.15
MEAN	9.28	15.9	16.1	17.5	19.5	15.8	37.0	31.3	8.84	1.81	.89	2.97
MAX	16	25	25	25	30	22	50	50	23	4.4	2.2	5.8
MIN	2.9	9.8	7.3	12	12	9.5	19	11	4.2	1.3	.00	.19
AC-FT	571	946	992	1080	1080	971	2200	1920	526	111	55	179

MEAN	8.89	16.1	13.6	12.6	19.1	21.0	52.7	100	37.8	15.3	22.5	5.39
MAX	31.8	30.6	29.1	23.0	27.8	37.5	112	332	134	71.2	147	13.6
(WY)	1943	1943	1943	1943	1944	1992	1992	1944	1947	1947	1945	1947
MIN	1.32	3.34	5.00	4.78	6.50	9.92	15.7	5.06	2.70	1.81	.29	.000
(WY)	1945	1945	1944	1991	1991	1991	1943	1946	1946	1993	1943	1943

ANNUAL TOTAL	10489.8		5360.77				
ANNUAL MEAN	28.7		14.7			27.3	
HIGHEST ANNUAL MEAN						58.3	1947
LOWEST ANNUAL MEAN						10.6	1946
HIGHEST DAILY MEAN	169	Apr 14	a 50	Apr 28		915	Aug 8 1945
LOWEST DAILY MEAN	b 2.7	Aug 8	c .00	Aug 15		d .00	Jul 11 1943
ANNUAL SEVEN-DAY MINIMUM	3.3	Aug 5	.31	Aug 5		e, f .00	Aug 29 1943
INSTANTANEOUS PEAK FLOW			60	Apr 24		7700	Aug 8 1945
INSTANTANEOUS PEAK STAGE			g 3.87	Apr 24		h 6.52	Aug 8 1945
ANNUAL RUNOFF (AC-FT)	20810		10630			19780	
10 PERCENT EXCEEDS	59		34			52	
50 PERCENT EXCEEDS	18		14			13	
90 PERCENT EXCEEDS	4.6		1.3			1.2	

q-Maximum gage height, 7.07 ft, Jan 15, 1993, backwater from ice.

06709530 PLUM CREEK AT TITAN ROAD NEAR LOUVIERS, CO

LOCATION.--Lat 39°30'27", long 105°01'26", on line between sec.20 and sec.29, T.6 S., R.68 W., Douglas County, Hydrologic Unit 10190002, on upstream side of bridge on Titan Road, 2.4 mi north of Louviers.

DRAINAGE AREA.--315 mi².

PERIOD OF RECORD.--May 1, 1984 to current year.

REVISED RECORDS.--WDR CO-86-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,520 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 21 to Jan. 30, Feb. 4-6, Feb. 11 to Mar. 1, and Mar. 12-13. Records poor. Diversions upstream from station for irrigation. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.87	22	15	15	16	15	24	40	19	.07	.00	.00
2	.79	21	14	14	10	18	25	42	14	.00	.00	.00
3	.04	26	13	17	7.0	17	43	50	14	.00	.00	.00
4	.00	19	13	16	7.2	14	36	59	13	.00	.00	.00
5	.12	19	12	20	7.4	17	38	61	12	.00	.00	.00
6	1.6	18	11	20	7.6	16	48	40	13	.00	.00	.00
7	4.2	25	11	20	7.8	13	65	34	8.5	.00	.00	.00
8	4.8	19	10	17	6.4	12	61	35	11	.00	.00	.00
9	5.2	18	11	14	19	13	62	30	11	.00	.00	.00
10	5.3	19	12	12	16	13	72	28	10	.00	.00	.00
11	5.7	24	11	20	14	13	67	33	9.5	.00	.00	.00
12	5.6	14	14	23	15	14	69	28	6.7	.00	.00	.00
13	5.9	14	15	25	16	16	69	25	4.9	.00	.00	.00
14	7.7	16	15	23	17	20	56	30	4.8	.00	.00	.00
15	11	17	16	20	18	13	49	27	3.0	.00	.00	.00
16	8.3	15	17	17	17	20	56	38	2.3	.00	.00	.00
17	8.0	12	15	16	19	20	52	46	9.3	.00	.00	.00
18	7.3	13	17	16	20	13	54	46	17	.00	.00	.00
19	8.4	13	12	16	20	8.4	47	36	25	.00	.00	.00
20	6.8	19	10	16	20	6.0	56	38	15	.00	.00	.00
21	6.6	18	11	16	19	13	58	30	19	.00	.00	.00
22	7.3	17	10	16	18	15	44	33	12	.00	.00	.00
23	7.3	16	7.6	16	17	14	41	35	10	.00	.00	.00
24	5.3	16	14	17	16	19	41	26	9.4	.00	.00	.00
25	5.0	16	20	18	16	15	32	29	5.7	.00	.00	.00
26	8.9	16	22	20	16	13	30	23	3.9	.00	.00	.00
27	9.1	17	20	22	16	10	31	18	5.0	.00	.00	.00
28	8.8	17	20	20	16	15	31	25	4.0	.00	.00	.00
29	8.7	17	20	18	---	18	35	25	2.0	.00	.00	.00
30	9.1	16	16	14	---	18	34	23	.26	.00	.00	.00
31	15	---	13	18	---	22	---	22	---	.00	.00	---
TOTAL	188.72	529	437.6	552	414.4	463.4	1426	1055	294.26	0.07	0.00	0.00
MEAN	6.09	17.6	14.1	17.8	14.8	14.9	47.5	34.0	9.81	.002	.000	.000
MAX	15	26	22	25	20	22	72	61	25	.07	.00	.00
MIN	.00	12	7.6	12	6.4	6.0	24	18	.26	.00	.00	.00
AC-FT	374	1050	868	1090	822	919	2830	2090	584	.1	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1993, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	16.3	20.8	16.3	14.7	19.5	32.9	71.5	181	49.1	15.2
MAX	71.8	75.9	44.3	29.7	42.7	62.1	126	779	135	45.4
(WY)	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
MIN	.48	5.16	6.30	4.86	5.14	14.9	23.2	10.4	5.89	.002
(WY)	1992	1990	1991	1991	1990	1993	1989	1989	1990	1993

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1984 - 1993

ANNUAL TOTAL	9209.95	5360.45	
ANNUAL MEAN	25.2	14.7	31.1
HIGHEST ANNUAL MEAN			68.3
LOWEST ANNUAL MEAN			8.86
HIGHEST DAILY MEAN	327	Apr 18	1770
LOWEST DAILY MEAN	a .00	Aug 1	b .00
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 1	.00
INSTANTANEOUS PEAK FLOW		c 91	2300
INSTANTANEOUS PEAK STAGE		d 7.98	e 7.00
ANNUAL RUNOFF (AC-FT)	18270	10630	22550
10 PERCENT EXCEEDS	55	34	73
50 PERCENT EXCEEDS	15	13	16
90 PERCENT EXCEEDS	.50	.00	.00

a-No flow many days.

b-No flow many days, most years.

c-Also occurred Apr 10, 12.

d-Maximum gage height, 8.64 ft, Jan 18, backwater from ice.

e-Maximum gage height, 9.14 ft, Mar 9, 1992, backwater from ice.

06709600 CHATFIELD LAKE NEAR LITTLETON, CO

LOCATION.--Lat 39°33'26", long 105°03'27", in NW¹/₄SE¹/₄ sec.1, T.6 S., R.69 W., Jefferson County, Hydrologic Unit 10190002, near left end of dam on South Platte River at mouth of Plum Creek and 4.7 mi southwest of courthouse in Littleton.

DRAINAGE AREA.--3,018 mi².

PERIOD OF RECORD.--Contents, May 1975 to current year. Water-quality data available, October 1976 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 5,500.00 ft above sea level, (levels by U.S. Army, Corps of Engineers); gage readings have been reduced to elevations above sea level.

REMARKS.--Reservoir is formed by earthfill dam. Storage began May 29, 1975. Capacity, 235,000 acre-ft at elevation 5,500 ft, crest of spillway. No dead storage. Figures given represent total contents. Reservoir is for flood control and recreation.

COOPERATION.--Records provided by U.S. Army, Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 54,690 acre-ft, May 26, 1980, elevation, 5,447.58 ft; minimum since first filling in June 1979; 17,300 acre-ft, Nov. 17, 1986, elevation 5,424.46 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 27,340 acre-ft, Apr. 6-7, elevation, 5,432.20 ft; minimum, 19,830 acre-ft, Sept. 5, elevation, 5,426.46 ft.

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	5,428.90	22,840	-
Oct. 31.	5,429.37	23,460	+620
Nov. 30.	5,428.66	22,540	-920
Dec. 31.	5,431.15	25,860	+3,320
CAL YR 1992	-	-	-1,840
Jan. 31.	5,431.96	26,990	+1,130
Feb. 28.	5,431.97	27,000	+10
Mar. 31.	5,432.02	27,080	+80
Apr. 30.	5,430.80	25,370	-1,710
May 31.	5,427.46	21,040	-4,330
June 30.	5,426.67	20,080	-960
July 31.	5,428.71	22,600	+2,520
Aug. 31.	5,426.73	20,150	-2,450
Sept. 30.	5,427.04	20,520	+370
WTR YR 1993.	-	-	-2,320

06710245 SOUTH PLATTE RIVER AT UNION AVENUE, AT ENGLEWOOD, CO

LOCATION.--Lat 39°37'52", long 105°00'50", in NW¼4SW¼4 sec.9, T.5 S., R.68 W., Arapahoe County, Hydrologic Unit 10190002, on right bank 280 ft downstream from Big Dry Creek, 285 ft upstream from Union Avenue bridge in Englewood, and 7.5 mi downstream from Chatfield Dam.

DRAINAGE AREA.--3,043 mi².

PERIOD OF RECORD.--April 11, 1989 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,300 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 2-5, Dec. 21, Jan. 13-15, Feb 10, 22, and Mar. 12. Records fair, except for estimated daily discharges and discharges less than 20 ft³/s or greater than 300 ft³/s, which are poor. Flow regulated by Chatfield Reservoir (station 06709600) 7.1 mi upstream. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	37	24	35	72	68	159	321	171	136	183	94
2	26	35	26	36	68	64	103	319	181	181	229	155
3	27	37	27	37	67	62	159	262	137	225	256	161
4	26	82	28	42	69	62	91	150	61	201	177	204
5	26	112	28	42	68	64	80	135	162	142	175	90
6	26	107	27	46	67	65	150	73	149	132	177	87
7	26	84	28	46	69	64	200	71	52	164	180	80
8	25	84	30	48	69	64	204	73	122	209	137	71
9	25	84	29	51	70	65	187	73	180	230	124	45
10	25	99	29	52	78	64	124	73	119	211	110	82
11	25	122	29	57	76	64	116	73	128	174	114	46
12	25	125	29	57	72	63	115	74	225	146	150	41
13	25	124	29	60	69	63	173	88	252	171	223	129
14	25	108	29	67	69	63	137	101	215	257	242	65
15	25	107	30	70	66	62	101	84	163	247	207	45
16	25	100	30	70	59	64	94	84	128	211	133	38
17	26	68	28	69	58	62	93	154	184	68	87	38
18	26	67	29	68	65	62	94	303	250	92	47	76
19	25	69	29	67	70	64	94	417	204	195	41	47
20	25	81	29	70	71	63	80	351	461	191	63	35
21	25	147	30	83	70	62	80	186	362	140	85	33
22	25	139	30	85	70	62	92	226	119	63	58	36
23	25	125	28	77	71	62	160	203	229	149	55	39
24	25	45	28	69	71	62	223	182	251	81	134	36
25	27	37	29	71	70	62	216	133	243	66	176	34
26	27	32	29	75	69	62	241	181	304	65	124	33
27	26	29	30	74	69	62	289	181	311	60	130	33
28	27	27	31	73	69	67	251	181	221	55	126	36
29	29	25	32	75	---	97	249	180	150	58	124	37
30	30	22	32	73	---	119	263	176	173	88	99	38
31	39	---	33	73	---	163	---	175	---	154	88	---
TOTAL	815	2360	899	1918	1931	2152	4618	5283	5907	4562	4254	1984
MEAN	26.3	78.7	29.0	61.9	69.0	69.4	154	170	197	147	137	66.1
MAX	39	147	33	85	78	163	289	417	461	257	256	204
MIN	25	22	24	35	58	62	80	71	52	55	41	33
AC-FT	1620	4680	1780	3800	3830	4270	9160	10480	11720	9050	8440	3940

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1993, BY WATER YEAR (WY)

	MEAN	73.3	45.0	42.6	44.3	72.3	140	172	198	169	169	71.9
MAX	80.7	125	113	64.3	73.7	133	203	193	222	241	241	101
(WY)	1991	1991	1990	1992	1992	1992	1992	1992	1990	1990	1991	1991
MIN	23.8	27.0	15.6	15.9	11.5	32.3	84.3	114	168	131	107	29.2
(WY)	1992	1990	1992	1991	1991	1991	1990	1991	1991	1992	1992	1992

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1989 - 1993

ANNUAL TOTAL	38745	36683	
ANNUAL MEAN	106	101	103
HIGHEST ANNUAL MEAN			110
LOWEST ANNUAL MEAN			99.3
HIGHEST DAILY MEAN	490	461	490
LOWEST DAILY MEAN	11	22	9.7
ANNUAL SEVEN-DAY MINIMUM	25	25	10
INSTANTANEOUS PEAK FLOW		537	1520
INSTANTANEOUS PEAK STAGE		5.52	6.63
ANNUAL RUNOFF (AC-FT)	76850	72760	74770
10 PERCENT EXCEEDS	223	210	242
50 PERCENT EXCEEDS	83	71	80
90 PERCENT EXCEEDS	27	28	21

a-Maximum gage height, 7.16 ft, Feb 3, 1992, backwater from ice.

06710385 BEAR CREEK ABOVE EVERGREEN, CO

LOCATION.--Lat 39°37'58", long 105°19'59", in SE¹/4NE¹/4 sec.9, T.5 S., R.71 W., Jefferson County, Hydrologic Unit 10190002, on right bank 0.6 mi upstream from Evergreen Lake dam at Evergreen.

DRAINAGE AREA.--104 mi².

PERIOD OF RECORD.--August 1984 to current year.

GAGE.--Water-stage recorder. Elevation of gage 7,076 ft above sea level, from topographic map. Prior to May 1, 1986, at site 200 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Nov. 2, Nov. 4-9, Nov. 12 to Mar. 29, Apr. 2-3, and Apr. 5-6. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by small diversions for irrigation. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	9.9	12	11	11	11	16	33	52	51	24	20
2	17	9.2	12	11	11	11	16	29	50	48	24	20
3	17	8.5	12	11	11	11	16	29	46	46	25	26
4	17	8.6	11	10	12	11	16	32	38	45	26	20
5	17	8.6	11	9.6	12	12	16	36	38	46	27	19
6	19	8.5	11	9.7	12	12	16	32	34	42	26	19
7	21	8.5	12	9.8	12	12	16	32	34	39	23	21
8	17	8.4	12	10	12	12	16	29	30	37	23	28
9	19	8.4	12	10	12	12	18	28	29	36	21	21
10	19	8.1	12	10	12	12	19	26	33	35	30	19
11	18	8.0	12	10	11	12	18	27	33	36	32	17
12	18	8.4	12	10	11	11	21	29	31	38	25	16
13	18	8.6	11	10	11	11	20	29	30	42	26	20
14	18	9.0	11	11	10	11	21	34	31	46	26	24
15	17	9.3	11	11	10	11	20	40	34	41	25	27
16	17	9.4	11	11	10	11	20	55	35	37	22	25
17	17	9.4	12	11	10	11	20	64	47	36	20	26
18	17	9.6	12	11	10	11	22	60	144	38	20	26
19	18	10	11	12	11	11	22	51	109	35	26	24
20	17	10	11	12	11	11	21	51	80	36	24	21
21	17	11	11	12	11	11	19	56	78	39	27	20
22	16	11	10	12	11	11	23	64	77	32	27	19
23	16	11	10	12	11	11	26	55	73	30	22	19
24	15	11	10	12	11	11	28	54	67	30	19	19
25	15	11	10	12	11	11	24	56	60	27	19	18
26	18	11	11	12	11	12	25	60	57	27	21	17
27	16	11	11	11	11	12	28	63	53	25	23	17
28	14	11	11	11	11	13	31	58	52	24	21	17
29	13	11	11	11	---	14	31	54	50	23	19	17
30	13	12	11	11	---	14	33	50	50	23	20	16
31	13	---	11	11	---	15	---	51	---	27	21	---
TOTAL	522	289.4	348	338.1	310	362	638	1367	1575	1117	734	618
MEAN	16.8	9.65	11.2	10.9	11.1	11.7	21.3	44.1	52.5	36.0	23.7	20.6
MAX	21	12	12	12	12	15	33	64	144	51	32	28
MIN	13	8.0	10	9.6	10	11	16	26	29	23	19	16
AC-FT	1040	574	690	671	615	718	1270	2710	3120	2220	1460	1230

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1993, BY WATER YEAR (WY)

	MEAN	32.6	26.4	17.9	14.3	13.0	16.7	39.9	86.3	91.3	57.6	47.4	33.5
MAX	85.1	56.2	32.8	18.3	17.5	26.7	89.7	230	144	76.5	87.3	50.1	
(WY)	1985	1985	1985	1985	1992	1992	1987	1987	1987	1985	1991	1991	
MIN	16.8	9.65	11.2	10.4	8.89	10.8	13.9	44.1	49.8	36.0	23.7	20.6	
(WY)	1993	1993	1993	1990	1990	1991	1991	1993	1990	1993	1993	1993	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1985 - 1993
ANNUAL TOTAL	11149.4	8218.5	
ANNUAL MEAN	30.5	22.5	39.9
HIGHEST ANNUAL MEAN			61.5
LOWEST ANNUAL MEAN			22.5
HIGHEST DAILY MEAN	85 Apr 16	144 Jun 18	276 May 16 1987
LOWEST DAILY MEAN	8.0 Nov 11	8.0 Nov 11	a 8.0 Feb 15 1990
ANNUAL SEVEN-DAY MINIMUM	8.3 Nov 6	8.3 Nov 6	b 8.3 Nov 6 1992
INSTANTANEOUS PEAK FLOW		170 Jun 18	b 388 Aug 26 1984
INSTANTANEOUS PEAK STAGE		3.47 Jun 18	3.80 Aug 26 1984
ANNUAL RUNOFF (AC-FT)	22110	16300	28870
10 PERCENT EXCEEDS	60	46	82
50 PERCENT EXCEEDS	22	17	27
90 PERCENT EXCEEDS	11	10	12

a-Also occurred Feb 16, 1990, and Nov 11, 1992.

b-Site then in use.

06710500 BEAR CREEK AT MORRISON, CO

LOCATION.--Lat 39°39'11", long 105°11'43", in SE1/4SW1/4 sec.35, T.4 S., R.70 W., Jefferson County, Hydrologic Unit 10190002, on left bank at Morrison, 180 ft upstream from bridge on State Highway 8 and 0.2 mi upstream from Mount Vernon Creek.

DRAINAGE AREA.--164 mi².

PERIOD OF RECORD.--Streamflow records, September 1887 to September 1891, May 1895 to December 1901, February 1902 (gage heights only), October 1919 to current year. No winter records for water years 1888-90, 1896, 1898, 1900. Monthly discharge only for some periods, published in WSP 1310. Published as "near Morrison" 1900-1902, as "at Starbuck" 1919-28, and as "at Idledale" 1929-34. Water-quality data available, October 1976 to September 1981.

REVISED RECORDS.--WSP 976: 1942. WSP 1310: 1888, 1890-91, 1898, 1935(M). WSP 1730: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,780.43 ft above sea level. See WSP 1710 or 1730 for history of changes prior to Oct. 1, 1934. Oct. 1, 1934, to Oct. 10, 1961, water-stage recorder at site 80 ft downstream at present datum.

REMARKS.--Estimated daily discharges: Oct. 31 to Nov. 2, Nov. 9, 10, and Nov. 12 to Mar. 3. Records good except for estimated daily discharges, which are poor. Small diversions for irrigation of about 1,000 acres 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	20	18	15	13	12	27	52	58	47	20	21
2	16	20	18	15	13	13	32	48	56	45	19	20
3	16	18	17	15	13	13	35	46	55	45	22	27
4	16	17	17	15	13	14	32	47	49	41	24	22
5	16	19	17	15	13	14	38	49	48	44	25	19
6	18	20	17	15	13	15	40	46	45	41	24	20
7	20	20	17	15	13	16	36	46	43	38	22	24
8	20	22	17	15	13	17	33	45	37	37	20	34
9	18	19	17	15	13	17	37	42	36	35	17	25
10	19	19	17	15	13	19	38	38	39	35	22	22
11	18	20	17	15	13	17	36	37	38	35	31	20
12	17	19	17	15	13	16	40	39	36	41	24	18
13	17	19	17	15	13	22	42	38	33	41	24	23
14	17	19	17	15	12	22	42	42	34	47	25	27
15	17	19	17	15	12	18	41	48	35	44	24	30
16	16	19	17	14	12	18	40	61	36	37	21	29
17	18	19	16	14	12	19	39	73	45	35	18	30
18	18	19	16	14	12	19	40	76	112	37	17	31
19	17	18	16	14	12	21	41	65	98	33	22	32
20	17	18	16	14	12	18	37	67	74	37	21	25
21	17	18	16	14	12	19	36	66	68	43	26	23
22	17	18	16	14	12	19	38	73	67	33	26	22
23	18	18	16	14	12	17	44	67	63	30	21	22
24	18	18	16	14	12	19	45	66	60	30	18	22
25	18	18	16	14	12	20	44	67	56	25	17	21
26	26	18	16	14	12	22	42	68	54	25	18	20
27	23	18	15	14	12	23	44	68	52	22	22	20
28	21	18	15	14	12	25	49	67	50	20	21	18
29	22	18	15	13	---	29	50	63	47	20	19	19
30	20	18	15	13	---	30	53	60	46	20	18	19
31	20	---	15	13	---	29	---	59	---	23	20	---
TOTAL	567	563	509	446	349	592	1191	1729	1570	1086	668	705
MEAN	18.3	18.8	16.4	14.4	12.5	19.1	39.7	55.8	52.3	35.0	21.5	23.5
MAX	26	22	18	15	13	30	53	76	112	47	31	34
MIN	16	17	15	13	12	12	27	37	33	20	17	18
AC-FT	1120	1120	1010	885	692	1170	2360	3430	3110	2150	1320	1400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1900 - 1993, BY WATER YEAR (WY)

	MEAN	31.6	23.8	17.0	13.6	14.3	20.2	53.3	143	132	72.1	65.0	44.5
MAX	115	86.7	57.0	34.0	36.0	48.3	296	525	551	249	307	371	
(WY)	1985	1924	1924	1924	1924	1960	1942	1973	1949	1949	1923	1938	
MIN	9.52	9.59	7.31	5.19	4.00	4.00	13.1	12.4	11.5	5.72	6.58	5.41	
(WY)	1935	1957	1940	1950	1933	1933	1982	1963	1954	1963	1978	1978	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1900 - 1993

ANNUAL TOTAL	12952	9975	
ANNUAL MEAN	35.4	27.3	
HIGHEST ANNUAL MEAN			52.7
LOWEST ANNUAL MEAN			125
HIGHEST DAILY MEAN	104	Apr 17	14.6
LOWEST DAILY MEAN	a 12	Jan 9	1410
ANNUAL SEVEN-DAY MINIMUM	12	Jan 6	c .80
INSTANTANEOUS PEAK FLOW			3.0
INSTANTANEOUS PEAK STAGE			d 8600
ANNUAL RUNOFF (AC-FT)	25690	19790	38150
10 PERCENT EXCEEDS	74	48	118
50 PERCENT EXCEEDS	23	20	26
90 PERCENT EXCEEDS	15	14	11

a-Also occurred Jan 10-12.

b-Also occurred Feb 15 to Mar 1.

c-Result of freezeup.

d-Estimated.

06710605 BEAR CREEK ABOVE BEAR CREEK LAKE NEAR MORRISON, CO

LOCATION.--Lat 39°39'08", long 105°10'23", in NW¹/4NE¹/4 sec.1, T.5 S. R.70 W., Jefferson County, Hydrologic Unit 10190002, on left bank, 0.9 mi downstream from Strain Gulch, 1.0 mi east of Morrison, and 1.1 mi downstream from Mt. Vernon Creek.

DRAINAGE AREA.--176 mi².

PERIOD OF RECORD.--May 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage 5,645 ft above sea level, from topographic map. Prior to Apr. 21, 1989, at datum 3.37 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 6 to Jan. 29, Feb. 10-13, 17-19, and Mar. 3-5. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by diversions to Harriman Canal, and Ward Canal, 0.7 mi upstream from gage. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	9.9	12	11	15	13	5.5	34	37	25	8.0	4.9
2	6.6	5.9	12	11	14	14	4.9	30	35	26	8.1	3.9
3	9.6	5.4	12	11	13	13	10	23	33	24	7.4	3.7
4	9.6	5.9	12	10	12	12	10	23	29	25	7.5	3.4
5	9.6	6.0	11	10	11	12	11	27	29	27	8.1	3.1
6	9.6	7.2	11	9.8	13	15	13	24	26	26	8.0	3.2
7	10	8.2	12	9.6	13	17	12	24	25	21	5.4	4.4
8	10	8.4	12	9.6	13	18	9.8	24	19	19	2.9	9.5
9	9.9	8.4	12	9.9	13	18	10	20	18	18	2.4	6.7
10	9.4	8.6	13	10	13	20	8.1	18	19	19	4.8	3.8
11	9.6	8.6	13	10	12	17	7.3	16	18	17	8.5	6.1
12	7.9	9.0	13	10	12	13	7.0	17	17	18	6.0	10
13	5.7	9.5	12	11	11	13	8.2	18	14	19	5.8	14
14	6.0	9.6	11	11	9.9	17	7.4	21	12	31	5.7	16
15	7.7	9.8	11	11	11	18	7.1	28	13	32	5.5	15
16	7.3	9.9	12	11	12	16	6.4	44	13	23	5.2	14
17	7.2	10	12	12	13	16	5.9	65	27	20	4.9	13
18	7.0	10.5	12	12	14	16	6.1	69	119	22	4.8	12
19	8.0	11	12	12	14	19	11	54	148	17	4.9	13
20	6.7	11	11	12	14	16	17	55	79	15	4.8	9.1
21	5.7	10.5	11	12	14	16	19	54	60	23	5.1	7.5
22	5.4	10.2	11	12	13	16	19	59	59	13	5.2	6.7
23	6.0	10	10.5	12	14	15	25	53	51	11	5.2	6.4
24	6.0	10	10.5	13	13	17	25	49	46	8.9	4.9	6.4
25	5.7	10	11	13	13	11	25	52	37	5.7	4.8	6.5
26	6.8	10	11	13	12	5.0	22	49	33	6.1	4.6	6.5
27	9.6	10	11	14	13	3.1	23	49	32	6.6	4.7	6.6
28	8.3	11	11	14	13	3.1	30	52	30	6.4	4.7	7.0
29	7.0	11	11	14	---	3.3	32	50	26	6.5	4.6	6.5
30	4.7	11	11	14	---	4.6	33	42	24	5.9	4.4	6.0
31	4.4	---	11	15	---	6.1	---	39	---	7.4	4.6	---
TOTAL	234.5	276.5	358.0	359.9	357.9	413.2	430.7	1182	1128	544.5	171.5	234.9
MEAN	7.56	9.22	11.5	11.6	12.8	13.3	14.4	38.1	37.6	17.6	5.53	7.83
MAX	10	11	13	15	15	20	33	69	148	32	8.5	16
MIN	4.4	5.4	10	9.6	9.9	3.1	4.9	16	12	5.7	2.4	3.1
AC-FT	465	548	710	714	710	820	854	2340	2240	1080	340	466

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1993, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993
MEAN	13.7	15.5	17.4	15.9	17.0	23.0	53.0
MAX	20.4	32.1	29.5	23.1	23.4	44.8	158
(WY)	1991	1987	1987	1987	1987	1987	1987
MIN	4.34	.38	11.5	11.6	12.2	12.8	2.83
(WY)	1990	1990	1993	1993	1990	1991	1989

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1987 - 1993

ANNUAL TOTAL	8644.56	5691.6	
ANNUAL MEAN	23.6	15.6	33.7
HIGHEST ANNUAL MEAN			85.1
LOWEST ANNUAL MEAN			10.4
HIGHEST DAILY MEAN	111	Apr 18	492
LOWEST DAILY MEAN	.86	Sep 22	a .25
ANNUAL SEVEN-DAY MINIMUM	1.7	Sep 16	.27
INSTANTANEOUS PEAK FLOW			825
INSTANTANEOUS PEAK STAGE			5.07
ANNUAL RUNOFF (AC-FT)	17150	11290	24430
10 PERCENT EXCEEDS	53	30	65
50 PERCENT EXCEEDS	15	11	18
90 PERCENT EXCEEDS	7.4	5.4	4.2

a-Also occurred Nov 12 and 13, 1989.

06711500 BEAR CREEK AT MOUTH, AT SHERIDAN, CO

LOCATION.--Lat 39°39'08", long 105°01'57", in NW¹/4NW¹/4 sec.5, T.5 S., R.68 W., Arapahoe County, Hydrologic Unit 10190002, on left bank just downstream from bridge on road to Fort Logan Mental Health Center, at Highway Department maintenance building at northwest city limits of Sheridan, 1.3 mi upstream from mouth, and 2.1 mi west of city hall in Englewood.

DRAINAGE AREA.--260 mi².

PERIOD OF RECORD.--April to November 1914, March 1927 to current year. Monthly discharge only prior to October 1933, published in WSP 1310. Published as "at Sheridan Junction" 1934-41.

REVISED RECORDS.--WSP 1730: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,295 ft above sea level, from topographic map. See WSP 1710 or 1730 for history of changes prior to Oct. 9, 1953. Oct. 9, 1953, to Aug. 6, 1969, water-stage recorder at present site at datum 1.0 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 26-28, 30, Dec. 6-8, 18-27, Jan. 4-7, 9-16, and Feb. 16-19. Records good except for estimated daily discharges, which are fair. Flow regulated by Bear Creek Lake since July 1979. Storage and diversions upstream from station for irrigation of about 12,000 acres.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	22	29	25	22	23	21	71	58	36	10	9.1
2	14	27	29	26	22	23	22	70	58	34	9.3	14
3	13	22	28	25	23	23	42	61	80	30	11	15
4	14	18	27	23	24	22	28	56	55	31	12	13
5	15	17	26	23	22	22	29	59	47	31	15	13
6	16	17	26	23	22	22	40	58	43	33	15	13
7	21	19	34	23	22	23	41	53	38	30	14	18
8	22	21	31	23	23	24	32	51	35	24	11	17
9	20	23	28	23	22	24	29	48	32	21	9.1	17
10	19	28	28	23	28	25	27	45	30	22	9.8	14
11	18	30	28	23	24	26	25	39	29	22	13	12
12	17	30	28	23	21	26	27	37	26	35	16	13
13	16	31	28	23	23	21	36	39	22	29	19	37
14	16	31	27	23	22	23	31	38	20	40	29	33
15	17	31	27	23	23	27	31	43	16	42	34	28
16	17	28	24	23	23	25	32	57	14	36	35	26
17	17	26	14	23	23	24	32	96	37	29	35	24
18	18	23	26	23	24	25	30	112	140	29	34	29
19	14	25	26	23	23	23	30	92	152	27	31	28
20	13	28	26	24	23	20	36	92	96	25	38	25
21	12	34	26	25	25	22	43	87	74	30	45	21
22	14	27	26	25	23	19	44	98	66	26	38	19
23	14	27	25	25	22	16	48	87	62	20	30	17
24	14	29	25	26	20	18	59	79	58	17	16	18
25	15	25	24	23	24	25	63	82	52	15	11	17
26	15	25	24	23	23	18	61	81	50	13	8.8	17
27	17	25	24	23	22	30	56	73	45	9.9	9.8	17
28	19	27	25	23	22	25	58	73	45	7.4	11	15
29	19	30	24	23	---	17	61	74	40	8.0	8.9	15
30	18	31	25	22	---	37	65	67	35	5.9	12	14
31	25	---	24	22	---	31	---	63	---	6.5	12	---
TOTAL	514	777	812	728	640	729	1179	2081	1555	764.7	602.7	568.1
MEAN	16.6	25.9	26.2	23.5	22.9	23.5	39.3	67.1	51.8	24.7	19.4	18.9
MAX	25	34	34	26	28	37	65	112	152	42	45	37
MIN	12	17	14	22	20	16	21	37	14	5.9	8.8	9.1
AC-FT	1020	1540	1610	1440	1270	1450	2340	4130	3080	1520	1200	1130

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1993, BY WATER YEAR (WY)

	MEAN	22.0	22.5	21.3	19.6	19.1	22.3	51.6	147	96.4	34.9	36.2	24.0
MAX	151	99.8	61.3	46.3	43.5	94.4	394	859	630	238	255	256	
(WY)	1985	1985	1985	1970	1942	1960	1942	1973	1949	1983	1984	1938	
MIN	1.52	3.53	8.21	3.85	5.09	5.35	3.33	1.16	1.67	1.77	3.05	1.82	
(WY)	1955	1955	1951	1945	1945	1935	1935	1963	1966	1963	1954	1956	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1927 - 1993

ANNUAL TOTAL	14748.0	10950.5	
ANNUAL MEAN	40.3	30.0	43.5
HIGHEST ANNUAL MEAN			157
LOWEST ANNUAL MEAN			6.53
HIGHEST DAILY MEAN	296	Aug 24	4020
LOWEST DAILY MEAN	8.5	Sep 17	.00
ANNUAL SEVEN-DAY MINIMUM	10	Sep 16	.33
INSTANTANEOUS PEAK FLOW			8150
INSTANTANEOUS PEAK STAGE			10.50
ANNUAL RUNOFF (AC-FT)	29250	21720	31530
10 PERCENT EXCEEDS	78	57	90
50 PERCENT EXCEEDS	27	25	16
90 PERCENT EXCEEDS	14	14	5.8

a-Present datum, from floodmarks, from rating curve extended above 3400 ft³/s.

06711565 SOUTH PLATTE RIVER AT ENGLEWOOD, CO

LOCATION.--Lat 39°39'54", long 105°00'13", in NW¹/4NE¹/4 sec.33, T.4 S., R.68 W., Arapahoe County, Hydrologic Unit 10190002, on right bank, 0.3 mi downstream from Dartmouth Ave bridge at Englewood, and 1.4 mi downstream from Bear Creek.

DRAINAGE AREA.--3,387 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1983 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,250 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 3 to Feb. 8, and Feb. 15-18. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage and flood control reservoirs, power developments, diversions for irrigation and municipal use, and return flow from irrigated areas. Flow regulated by Chatfield Dam since May 29, 1975 (station 06709600), and Bear Creek Dam since July 1979.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	71	58	51	80	93	149	375	244	162	130	80
2	36	68	58	57	75	79	107	356	258	207	164	128
3	34	66	55	50	75	81	192	291	259	257	219	123
4	34	120	56	40	80	78	100	174	132	235	141	169
5	38	154	55	40	80	78	99	159	250	168	144	83
6	46	155	76	40	75	81	177	105	221	146	138	83
7	51	129	73	40	75	80	209	98	102	171	144	88
8	50	133	57	40	75	80	180	96	156	208	98	86
9	51	136	60	40	83	84	170	95	222	234	91	62
10	52	148	63	40	112	80	118	88	148	214	91	79
11	50	175	66	40	92	82	113	75	144	174	98	51
12	45	173	65	40	86	92	127	72	243	172	129	45
13	35	171	57	60	83	81	195	94	259	171	199	163
14	35	164	63	90	79	80	141	102	239	290	237	110
15	41	162	56	75	70	84	119	82	186	291	204	81
16	43	152	57	65	70	86	118	106	147	250	129	75
17	48	113	48	65	65	83	116	219	269	96	104	71
18	48	109	58	65	75	81	115	406	547	111	90	131
19	41	113	61	65	95	79	112	547	382	215	82	90
20	38	125	86	70	97	77	107	506	534	212	90	70
21	38	199	88	80	84	79	112	268	463	167	129	62
22	41	179	65	85	84	80	114	349	203	100	104	63
23	48	171	74	80	94	77	157	304	321	140	78	62
24	35	72	74	70	94	76	246	276	345	80	105	59
25	45	60	53	75	96	79	219	210	312	62	130	56
26	47	56	53	80	96	72	239	275	366	62	99	58
27	44	60	57	80	90	83	296	262	367	55	106	53
28	48	58	49	80	94	90	264	275	284	52	102	52
29	52	62	54	80	---	109	272	271	181	54	94	54
30	52	68	60	80	---	145	299	257	209	71	92	55
31	83	---	51	80	---	163	---	249	---	111	85	---
TOTAL	1388	3622	1906	1943	2354	2692	4982	7042	7993	4938	3846	2442
MEAN	44.8	121	61.5	62.7	84.1	86.8	166	227	266	159	124	81.4
MAX	83	199	88	90	112	163	299	547	547	291	237	169
MIN	34	56	48	40	65	72	99	72	102	52	78	45
AC-FT	2750	7180	3780	3850	4670	5340	9880	13970	15850	9790	7630	4840

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1993, BY WATER YEAR (WY)

	MEAN	187	192	102	90.3	94.0	154	441	985	714	506	465	177
MAX	1050	733	268	216	166	261	1074	2576	2224	1549	1574	724	
(WY)	1985	1985	1985	1985	1985	1983	1984	1987	1983	1983	1984	1984	
MIN	44.8	39.3	49.6	45.4	35.5	51.7	123	209	243	159	124	43.7	
(WY)	1993	1990	1989	1991	1991	1991	1991	1989	1990	1993	1993	1992	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1983 - 1993

ANNUAL TOTAL	54404	45148		
ANNUAL MEAN	149	124	303	
HIGHEST ANNUAL MEAN			692	1984
LOWEST ANNUAL MEAN			124	1993
HIGHEST DAILY MEAN	1210	Aug 24	3910	May 16 1984
LOWEST DAILY MEAN	31	Sep 17	c 25	Feb 1 1990
ANNUAL SEVEN-DAY MINIMUM	36	Sep 15	40	Oct 1
INSTANTANEOUS PEAK FLOW			886	Jun 17
INSTANTANEOUS PEAK STAGE			3.04	Jun 17
ANNUAL RUNOFF (AC-FT)	107900	89550	219300	5.25
10 PERCENT EXCEEDS	301	253	890	
50 PERCENT EXCEEDS	115	90	157	
90 PERCENT EXCEEDS	45	50	52	

a-Also occurred Jun 18.

b-Also occurred Oct 4.

c-Also occurred Mar 31, 1991.

06711565 SOUTH PLATTE RIVER AT ENGLEWOOD, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1985 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1985 to current year.

pH: March 1985 to current year.

WATER TEMPERATURE: March 1985 to current year.

DISSOLVED OXYGEN: March 1985 to current year.

INSTRUMENTATION.--Water-quality monitor since March 1985. Values recorded hourly.

REMARKS.--Water temperature and specific conductance records are good. Dissolved oxygen and pH are poor. Daily maximum and minimum specific conductance data available in District office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum mean, 995 microsiemens, Jan. 31, 1990; minimum mean, 223 microsiemens, May 16, 1987.

pH: Maximum, 9.9 units, July 14, 15, 18, 1987, June 8 and 11, 1993; minimum, 6.4 units, Oct. 18, 1989.

WATER TEMPERATURE: Maximum, 29.0°C, Aug. 17, 1986, July 30, 1987; minimum, 0.0°C, freezing point on many days during winter months.

DISSOLVED OXYGEN: Maximum, 17.4 mg/L, Mar. 14, 1985; minimum, 3.4 mg/L, July 31, 1987.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum mean, 883 microsiemens, Oct. 24; minimum mean, 365 microsiemens June 18.

pH: Maximum, 9.9 units, June 8 and 11; minimum, 7.2 units, many days.

WATER TEMPERATURE: Maximum, 27.8°C, July 29; minimum, 0.0°C, freezing point on many days during winter months.

DISSOLVED OXYGEN: Maximum, 16.3 mg/L, Mar. 5; minimum, 4.2 mg/L, July 29.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	832	757	859	815	623	607	527	441	437	---	464	614
2	836	743	825	833	636	637	560	429	451	---	437	553
3	864	767	812	831	659	638	502	446	439	---	405	529
4	861	627	800	---	---	624	621	493	521	---	452	435
5	840	554	811	---	710	---	631	507	453	---	449	571
6	821	530	812	---	650	---	546	551	454	---	448	601
7	819	539	792	890	636	---	510	558	573	---	441	587
8	804	535	798	843	618	---	508	576	504	---	500	606
9	815	523	842	851	620	---	500	598	446	---	520	672
10	818	536	866	851	711	---	556	607	500	407	546	---
11	815	519	844	864	---	---	560	612	507	437	542	---
12	831	521	813	829	709	---	545	617	447	469	531	---
13	853	501	---	844	673	---	518	598	436	474	444	---
14	857	489	---	738	641	---	555	565	446	395	405	---
15	826	493	---	744	624	---	575	594	468	398	416	---
16	805	499	---	737	616	---	574	584	526	382	470	---
17	804	552	---	692	670	---	563	486	464	521	513	---
18	798	561	---	657	---	---	572	418	365	574	515	---
19	832	558	---	659	---	---	573	401	399	420	592	---
20	874	541	---	633	662	603	585	402	---	423	561	---
21	869	609	---	641	644	592	572	430	404	449	530	---
22	864	534	821	---	632	600	568	404	463	526	590	---
23	856	500	799	---	615	603	528	420	401	557	595	743
24	883	647	832	---	608	600	491	435	---	562	547	756
25	851	749	843	---	605	581	477	451	---	637	481	765
26	853	---	835	---	601	597	469	420	---	649	542	775
27	851	854	850	---	605	---	443	424	---	688	541	781
28	833	805	846	---	603	---	454	437	---	695	554	769
29	807	---	861	---	---	647	458	422	---	685	547	768
30	797	841	876	---	---	562	452	427	---	613	606	772
31	772	---	827	---	---	541	---	436	---	507	599	---
MEAN	834	---	---	---	---	---	533	490	---	---	509	---

PH (STANDARD UNITS), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

[illegible]

06711565 SOUTH PLATTE RIVER AT ENGLEWOOD, CO--Continued

TEMPERATURE, WATER (DEG. C) WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.1	12.1	10.8	6.4	5.0	1.0	3.5	.3	---	---	8.1	2.1
2	19.9	12.7	9.5	5.1	4.3	.5	5.4	1.4	4.6	2.0	8.3	2.0
3	19.7	12.1	6.5	4.3	1.6	.0	2.9	.0	3.8	2.0	8.3	2.8
4	19.2	12.0	8.7	4.2	3.0	.0	1.7	.0	5.0	2.1	8.5	2.5
5	17.5	12.1	7.9	4.7	.8	.0	1.2	.0	5.2	.0	8.4	2.1
6	16.3	12.0	9.7	5.7	2.6	.0	1.2	.0	6.0	.7	9.8	5.0
7	13.5	8.6	8.5	4.6	2.7	.0	1.5	.0	6.0	1.9	10.6	3.9
8	12.9	6.5	9.7	4.9	3.5	.0	.9	.0	6.0	2.0	11.0	5.4
9	12.5	9.7	9.3	4.9	5.0	.7	.6	.0	7.0	2.3	11.1	4.6
10	14.5	7.2	7.7	4.8	4.8	1.4	.8	.0	5.5	1.2	9.8	5.4
11	16.3	9.7	7.9	5.3	5.8	1.8	.9	.0	5.1	.4	6.7	1.8
12	16.2	10.4	7.2	3.8	3.7	1.6	1.7	.0	5.7	.4	---	---
13	16.9	11.5	---	---	---	---	.8	.0	5.6	.7	---	---
14	15.8	10.2	9.0	4.3	---	---	1.0	.0	4.7	.9	---	---
15	14.9	9.2	9.5	4.6	---	---	---	---	2.7	.0	---	---
16	10.9	7.3	8.6	4.8	---	---	2.9	.0	1.3	.0	---	---
17	13.9	7.0	8.2	4.9	---	---	2.8	.8	1.5	.0	---	---
18	13.7	8.2	7.9	4.4	---	---	3.6	.2	3.2	.0	---	---
19	14.0	9.6	8.9	6.0	---	---	2.5	.8	6.7	1.7	---	---
20	15.5	8.6	6.6	2.3	---	---	4.3	.2	7.9	2.0	12.3	5.6
21	15.1	9.7	5.4	2.3	---	---	5.7	2.0	5.8	1.5	10.5	5.8
22	---	---	5.3	1.8	2.7	.0	---	---	5.8	.6	12.4	4.5
23	15.2	10.5	3.7	.6	2.7	.0	---	---	5.7	.4	14.0	5.4
24	16.2	9.8	2.5	.1	2.9	.0	---	---	3.7	1.4	14.7	6.3
25	14.7	10.3	3.5	.0	2.8	.0	---	---	2.8	1.5	14.9	6.7
26	15.5	10.2	3.5	.1	3.6	.0	---	---	5.8	1.5	13.8	8.2
27	14.8	9.7	3.9	.0	3.5	.0	---	---	7.4	.8	11.9	7.6
28	13.9	10.1	3.8	.0	4.0	.7	---	---	7.8	1.8	12.2	5.0
29	11.7	9.0	4.5	.7	4.2	1.0	---	---	---	---	9.6	8.1
30	12.2	7.0	3.6	.0	4.9	1.8	---	---	---	---	8.5	6.5
31	9.6	7.1	---	---	4.2	.9	---	---	---	---	11.3	5.6
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	14.5	5.6	15.3	9.9	22.6	15.1	25.8	18.2	23.8	19.1	21.4	15.2
2	11.6	7.1	17.0	9.3	21.3	15.8	25.4	17.3	22.8	18.5	19.6	15.3
3	9.1	5.6	18.7	10.3	21.0	14.0	21.9	17.7	20.2	17.2	22.1	12.1
4	14.4	5.6	18.8	10.7	19.7	13.6	20.3	16.1	22.4	16.7	23.0	15.4
5	13.9	8.1	17.6	12.0	22.1	14.6	23.2	15.3	22.6	17.1	21.0	15.8
6	11.2	6.5	19.1	11.0	21.2	15.2	23.7	15.8	24.2	17.1	22.1	16.0
7	9.7	5.2	---	---	20.2	14.7	24.0	16.6	24.3	17.0	20.8	15.7
8	14.6	5.4	17.8	10.7	20.5	13.2	22.7	17.1	23.3	17.3	21.1	13.8
9	14.5	6.9	16.8	10.7	20.1	14.5	24.0	17.0	25.1	17.0	21.2	15.0
10	14.3	7.3	19.1	9.8	23.1	13.8	23.4	17.1	24.0	19.7	21.5	15.3
11	14.4	6.9	19.9	10.4	22.8	15.5	20.3	17.0	25.2	18.7	22.4	14.9
12	12.3	8.0	21.1	13.6	22.8	15.3	22.2	16.8	21.9	18.1	20.8	15.0
13	13.3	5.8	22.1	13.9	22.5	15.7	23.5	17.1	22.9	17.1	16.6	9.0
14	14.9	7.2	20.8	14.0	24.2	15.7	24.1	17.2	22.2	17.9	16.3	8.6
15	14.2	7.0	21.2	13.5	24.8	16.9	25.1	17.0	23.9	17.0	18.8	11.1
16	14.5	7.7	18.2	14.7	20.8	17.0	24.9	17.0	25.3	16.6	18.2	12.7
17	16.8	7.7	15.4	13.6	18.5	15.3	21.7	18.5	24.8	17.1	19.7	13.6
18	15.8	8.7	20.7	12.1	16.5	14.5	25.7	17.1	22.3	18.6	16.2	12.1
19	13.1	7.0	19.1	13.7	22.3	13.8	22.9	18.5	22.7	17.1	17.4	11.0
20	14.1	6.6	20.9	14.2	22.4	15.8	22.7	18.5	24.3	17.1	18.3	11.5
21	17.3	6.9	21.1	14.3	21.6	16.4	24.2	17.0	22.9	17.1	19.6	12.5
22	18.1	9.2	20.0	14.5	24.0	15.8	22.5	17.0	22.6	17.0	16.6	13.8
23	17.8	9.3	22.4	13.8	23.8	16.4	22.2	17.1	24.2	16.3	15.6	12.1
24	12.7	9.5	18.8	14.7	23.3	15.3	24.1	17.2	25.5	17.1	17.6	13.3
25	18.1	8.6	16.6	14.1	23.5	15.4	24.4	17.0	25.9	17.2	17.4	11.2
26	16.0	9.4	20.8	13.8	24.3	16.2	26.1	18.8	20.7	17.1	18.0	11.7
27	17.2	10.7	19.0	14.6	22.8	16.7	25.8	18.0	19.7	16.2	18.8	11.2
28	18.7	10.5	19.3	13.8	24.3	16.4	26.9	17.2	22.0	16.8	17.9	12.0
29	18.8	9.7	20.2	14.4	25.3	17.1	27.8	19.2	22.3	16.7	18.6	11.6
30	15.7	10.6	22.6	14.1	24.6	17.0	24.7	19.6	19.7	15.6	18.9	12.0
31	---	---	22.5	14.9	---	---	27.1	17.1	20.8	15.3	---	---
MONTH	18.8	5.2	---	---	25.3	13.2	27.8	15.3	25.9	15.3	23.0	8.6

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

[illegible]

06712000 CHERRY CREEK NEAR FRANKTOWN, CO

LOCATION.--Lat 39°21'21", long 104°45'46", in NE 1/4 sec.15, T.8 S., R.66 W., Douglas County, Hydrologic Unit 10190003, on right bank 1.5 mi upstream from Russellville Gulch, and 2.5 mi south of Franktown.

DRAINAGE AREA.--169 mi².

PERIOD OF RECORD.--November 1939 to current year.

REVISED RECORDS.--WSP 1730: Drainage area. WDR CO-87-1: 1983-85 (P).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,170 ft above sea level, from topographic map. See WSP 1730 for history of changes prior to Oct. 1, 1953.

REMARKS.--Estimated daily discharges: Nov. 20-24, 30, Dec. 17-23, Jan. 4, 13, 24, 25, Feb. 5, 6, 12-19, 22-25, and Aug. 19-31. Records good except for estimated daily discharges, which are poor. Many small diversions upstream from station for irrigation of about 800 acres. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 3, 1933, caused by Castlewood Dam failure, exceeded all other observed floods at this location.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	3.2	4.8	5.6	8.1	16	14	4.9	3.9	2.3	1.6	2.0
2	2.1	3.4	5.0	6.1	9.0	17	15	4.7	6.7	2.3	1.6	2.4
3	2.0	3.7	5.1	5.9	9.0	16	23	4.3	7.7	2.2	1.7	2.2
4	2.0	3.9	4.9	5.9	7.4	15	22	4.1	5.0	2.1	1.7	2.0
5	2.1	3.8	4.8	5.8	8.0	13	20	4.1	4.0	2.1	1.7	1.9
6	2.2	3.8	5.1	5.7	8.2	15	18	4.0	3.5	2.2	1.7	1.9
7	2.4	3.9	5.1	5.2	8.4	17	26	4.0	3.2	2.0	1.6	2.0
8	2.4	3.9	5.3	5.1	8.6	18	27	4.2	3.0	1.9	1.7	2.1
9	2.4	3.8	5.4	5.1	10	18	24	4.2	3.2	1.8	1.6	2.0
10	2.4	3.8	5.6	4.9	11	17	19	4.1	3.3	1.7	6.0	1.9
11	2.4	3.9	6.0	5.4	8.1	15	17	3.9	3.0	1.7	1.8	1.9
12	2.4	4.3	6.2	4.9	8.0	10	15	4.0	2.8	1.9	3.2	1.9
13	2.3	4.1	5.1	4.9	7.9	12	14	4.3	2.5	1.9	5.1	3.5
14	2.4	3.9	5.8	5.1	7.8	13	13	4.4	2.4	2.8	2.9	3.5
15	2.4	4.2	5.9	4.9	7.8	16	12	3.9	2.2	2.7	2.1	2.9
16	2.5	4.2	5.7	5.0	7.8	14	6.9	4.5	2.2	2.0	1.9	2.5
17	2.5	4.3	5.8	5.2	8.4	13	14	5.9	12	1.8	1.8	2.3
18	2.5	4.3	5.8	5.1	9.0	13	12	6.0	76	1.8	19	2.4
19	2.5	4.3	6.0	5.3	9.6	12	11	5.3	18	1.7	7.0	2.4
20	2.5	4.3	6.0	5.3	33	12	9.8	4.8	7.2	1.7	5.0	2.3
21	2.7	4.3	5.4	5.3	18	11	9.2	4.7	5.4	1.7	3.7	2.2
22	2.6	4.2	5.1	5.3	16	11	8.7	7.7	4.5	1.7	2.7	2.2
23	2.6	4.1	5.1	5.5	14	10	7.5	6.2	3.8	1.7	2.0	2.2
24	2.7	4.0	5.0	5.6	11	10	6.9	7.4	3.4	1.6	2.0	2.2
25	2.7	3.9	4.8	5.6	10	9.8	6.8	6.4	3.2	1.6	2.0	2.2
26	2.7	4.3	4.8	5.6	11	9.5	6.2	5.6	2.8	1.5	2.0	2.2
27	2.7	4.3	4.8	6.0	11	9.4	5.6	4.8	2.7	1.4	2.0	2.2
28	2.7	4.4	5.0	6.5	15	9.8	5.4	4.3	2.6	1.4	2.0	2.2
29	2.7	4.7	5.4	6.0	---	10	5.1	4.3	2.4	1.5	2.0	2.2
30	2.8	4.7	5.8	6.5	---	13	4.8	4.5	2.3	1.5	2.0	2.1
31	3.0	---	5.7	6.7	---	14	---	4.3	---	1.6	2.0	---
TOTAL	76.4	121.9	166.3	171.0	301.1	409.5	398.9	149.8	204.9	57.8	95.1	67.9
MEAN	2.46	4.06	5.36	5.52	10.8	13.2	13.3	4.83	6.83	1.86	3.07	2.26
MAX	3.0	4.7	6.2	6.7	33	18	27	7.7	76	2.8	19	3.5
MIN	2.0	3.2	4.8	4.9	7.4	9.4	4.8	3.9	2.2	1.4	1.6	1.9
AC-FT	152	242	330	339	597	812	791	297	406	115	189	135

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1993, BY WATER YEAR (WY)

	MEAN	4.41	5.57	5.04	5.05	8.52	23.4	20.1	15.8	8.57	7.09	8.64	3.42
MAX	29.1	30.7	25.2	17.7	29.3	184	138	138	42.6	43.8	59.9	18.2	
(WY)	1985	1985	1985	1985	1948	1960	1984	1973	1983	1957	1945	1984	
MIN	.97	1.32	1.41	1.57	1.99	2.36	1.70	1.43	1.12	.80	.76	.78	
(WY)	1953	1955	1964	1951	1956	1972	1963	1963	1954	1981	1962	1950	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1940 - 1993

ANNUAL TOTAL	3171.9	2220.6	
ANNUAL MEAN	8.67	6.08	9.65
HIGHEST ANNUAL MEAN			31.9
LOWEST ANNUAL MEAN			2.89
HIGHEST DAILY MEAN			1400
LOWEST DAILY MEAN	93	76	c
	a 1.6	b 1.4	c 20
ANNUAL SEVEN-DAY MINIMUM	1.7	1.5	d 29
INSTANTANEOUS PEAK FLOW		209	9170
INSTANTANEOUS PEAK STAGE		4.24	4.91
ANNUAL RUNOFF (AC-FT)	6290	4400	6990
10 PERCENT EXCEEDS	19	13	17
50 PERCENT EXCEEDS	4.8	4.4	4.3
90 PERCENT EXCEEDS	2.0	1.9	1.3

a-Also occurred Sep 6 and 7.

b-Also occurred Jul 28.

c-Also occurred Sep 30 and Oct 1, 1950.

d-Site and datum then in use, by float measurement.

393109104464500 CHERRY CREEK NEAR PARKER, CO

LOCATION.--Lat 39°31'09", long 104°46'45", in SE¹/4NW¹/4NE¹/4 sec.21, T.6 S., R.67 W., Douglas County, Hydrologic Unit 10190003, on right bank 200 ft upstream from Main Street, 0.8 mi west of City of Parker, and 1,100 ft downstream from mouth of Sulphur Gulch.

DRAINAGE AREA.--Not determined.

PERIOD OF RECORD.--October 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,805 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Feb. 15 and 17. Records fair except for estimated daily discharges, which are poor. Several diversions upstream from station for irrigation. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	2.1	4.5	7.4	12	18	22	7.8	4.3	2.2	1.2	1.0
2	1.7	2.5	4.7	10	12	18	24	7.7	4.3	2.1	1.1	.99
3	1.8	2.7	4.9	8.1	12	20	35	7.3	8.7	1.9	1.1	.94
4	1.8	2.3	4.5	5.1	10	19	40	7.1	9.0	1.9	1.2	.94
5	1.8	2.9	4.0	6.1	8.0	16	38	6.6	8.5	1.9	1.2	1.0
6	1.8	3.4	3.8	6.3	9.6	18	34	6.6	5.4	1.8	1.1	.92
7	1.8	3.6	4.1	7.3	12	21	39	6.9	4.3	1.8	1.2	1.0
8	1.9	3.9	5.4	7.1	12	23	47	6.6	3.6	1.7	1.3	1.1
9	1.9	3.7	6.0	5.9	13	24	47	6.0	3.6	1.8	1.3	1.2
10	1.8	3.7	7.1	5.8	13	22	36	6.1	3.7	1.8	1.3	1.1
11	1.8	3.8	7.9	6.4	12	21	27	6.3	3.1	1.9	1.3	1.1
12	2.2	3.9	7.6	6.8	10	17	25	6.2	2.8	1.9	1.4	.98
13	2.2	4.8	4.1	6.2	10	13	22	6.2	2.6	1.9	1.3	1.1
14	1.7	4.6	4.2	6.8	10	16	19	5.9	2.5	1.4	1.2	1.2
15	1.6	5.1	6.2	7.2	8.0	18	18	5.5	2.3	1.5	1.2	1.2
16	1.5	5.4	7.3	8.1	4.9	17	14	6.1	2.2	1.5	1.2	1.2
17	1.5	5.6	5.7	8.2	5.0	15	17	7.4	3.3	1.6	1.2	1.2
18	1.5	5.8	6.2	7.7	11	16	20	7.6	15	1.7	1.2	1.3
19	1.6	5.3	6.1	7.7	26	15	15	6.9	34	2.0	1.2	1.3
20	1.5	5.7	5.0	7.7	43	14	13	6.5	11	1.4	1.2	1.4
21	1.6	6.2	6.0	9.1	38	14	12	5.7	8.7	1.4	1.2	1.4
22	1.6	5.4	6.0	9.3	20	13	11	6.1	5.0	1.4	1.2	1.4
23	1.6	4.7	5.8	8.7	15	13	11	6.9	3.6	1.5	.99	1.3
24	1.6	2.7	6.0	6.7	14	13	13	6.9	3.1	1.5	1.0	1.3
25	1.7	3.7	6.5	7.5	14	13	11	7.9	2.9	1.4	1.0	1.3
26	1.7	3.5	6.3	10	13	12	9.4	7.2	2.8	1.3	1.1	1.3
27	1.8	3.4	6.9	10	12	12	9.0	27	2.7	1.1	1.1	1.3
28	1.8	3.5	7.2	9.7	15	13	8.2	12	2.7	1.1	1.0	1.3
29	1.8	4.3	7.9	9.1	---	15	8.0	6.5	2.5	1.1	.94	1.5
30	1.8	3.1	8.3	9.2	---	15	7.7	5.3	2.4	1.1	.98	1.5
31	2.0	---	7.2	10	---	20	---	4.7	---	1.1	.95	---
TOTAL	54.1	121.3	183.4	241.2	394.5	514	652.3	229.5	170.6	49.7	35.86	35.77
MEAN	1.75	4.04	5.92	7.78	14.1	16.6	21.7	7.40	5.69	1.60	1.16	1.19
MAX	2.2	6.2	8.3	10	43	24	47	27	34	2.2	1.4	1.5
MIN	1.5	2.1	3.8	5.1	4.9	12	7.7	4.7	2.2	1.1	.94	.92
AC-FT	107	241	364	478	782	1020	1290	455	338	99	71	71

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1993, BY WATER YEAR (WY)

	MEAN	1.50	2.64	3.60	5.80	12.1	29.7	21.0	6.32	8.61	2.97	2.33	1.47
MAX	1.75	4.04	5.92	7.78	14.1	42.8	21.7	7.40	11.5	4.34	3.51	1.74	
(WY)	1993	1993	1993	1993	1993	1992	1993	1993	1992	1992	1992	1992	
MIN	1.26	1.24	1.28	3.82	10.1	16.6	20.2	5.23	5.69	1.60	1.16	1.19	
(WY)	1992	1992	1992	1992	1992	1993	1992	1992	1993	1993	1993	1993	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1992 - 1993

ANNUAL TOTAL	3507.4	2682.23	
ANNUAL MEAN	9.58	7.35	8.14
HIGHEST ANNUAL MEAN			8.92
LOWEST ANNUAL MEAN			7.35
HIGHEST DAILY MEAN			
LOWEST DAILY MEAN	83	47	83
ANNUAL SEVEN-DAY MINIMUM	1.3	.92	.86
INSTANTANEOUS PEAK FLOW	1.4	.96	.96
INSTANTANEOUS PEAK STAGE		166	246
ANNUAL RUNOFF (AC-FT)	6960	6.05	6.43
10 PERCENT EXCEEDS	26	5320	5890
50 PERCENT EXCEEDS	4.7	17	20
90 PERCENT EXCEEDS	1.7	5.3	4.2
		1.2	1.2

a-Also occurred Apr 9.

b-Also occurred Jan 2, 3.

06712990 CHERRY CREEK LAKE NEAR DENVER, CO

LOCATION.--Lat 39°39'03", long 104°51'13", in NW¹/4NE¹/4 sec.2, T.5 S., R.67 W., Arapahoe County, Hydrologic Unit 10190003, 0.2 mi from right end of dam, 0.8 mi southwest from intersection of Interstate Highway 225 and Parker Road, 1.6 mi northwest of intersection of Parker and Airline Roads, and 11.5 mi upstream from mouth.

DRAINAGE AREA.--385 mi².

PERIOD OF RECORD.--Contents, October 1960 to current year. Water-quality data available, October 1976 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 5,598.00 ft above sea level (levels by U.S. Army, Corps of Engineers); gage readings have been reduced to elevations above sea level.

REMARKS.--Reservoir is formed by earthfill dam. Dam completed in June 1950; storage began May 15, 1957. Capacity, 92,820 acre-ft, at elevation 5,598.00 ft, crest of spillway. No dead storage. Figures given represent total contents. Reservoir is for flood control and recreation.

COOPERATION.--Records provided by U.S. Army, Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 31,120 acre-ft, June 3, 1973, elevation, 5,565.82 ft; minimum, 9,980 acre-ft, Nov. 23, 24, 1978, elevation, 5,545.90 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 13,360 acre-ft, Apr. 7, elevation, 5,550.65 ft; minimum, 11,840 acre-ft, Sept. 12, elevation, 5,548.83.

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	5,549.84	12,670	-
Oct. 31.	5,549.70	12,560	-110
Nov. 30.	5,549.80	12,640	+80
Dec. 31.	5,550.11	12,900	+260
CAL YR 1992.	-	-	+680
Jan. 31.	5,550.48	13,220	+320
Feb. 28.	5,550.42	13,160	-60
Mar. 31.	5,550.51	13,240	+80
Apr. 30.	5,550.45	13,190	-50
May 31.	5,549.99	12,800	-390
June 30.	5,549.62	12,490	-310
July 31.	5,548.95	11,940	-550
Aug. 31.	5,548.88	11,880	-60
Sept. 30.	5,548.89	11,890	+10
WTR YR 1993.	-	-	-780

a-Also occurred Apr 3, 6, and 7.
b-No flow many days.
c-No flow most of time since May 1957.

06713300 CHERRY CREEK AT GLENDALE, CO.

LOCATION.--Lat 39°42'22", long 104°56'13", in SW¹/4NW¹/4 sec.18, T.4 S., R.67 W., Denver County, Hydrologic Unit 10190003, on left bank 900 ft upstream from Colorado Boulevard, on Cherry Creek South Drive and Ash Court, in the City of Glendale, and 5 miles downstream from Cherry Creek Reservoir.

DRAINAGE AREA.--404 mi².

PERIOD OF RECORD.--January 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,320 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Feb. 10, 16-18. Records poor. Flow regulated by Cherry Creek Lake (see elsewhere in this report). Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	14	6.7	3.9	4.6	12	18	7.3	16	13	4.9	6.5
2	3.3	17	5.9	5.4	4.5	12	21	7.0	27	14	4.9	13
3	3.3	12	5.5	4.5	5.7	11	54	7.0	36	14	4.4	7.0
4	3.3	9.5	5.1	3.8	7.6	10	22	7.0	18	15	4.0	5.6
5	3.5	9.1	4.9	4.0	5.8	10	21	6.9	18	15	32	6.1
6	13	9.5	4.7	3.8	5.5	10	55	9.9	18	14	12	10
7	15	15	4.8	4.1	5.1	9.9	36	8.0	19	14	8.2	20
8	7.6	16	4.8	4.2	4.6	9.3	29	7.3	17	14	7.2	15
9	6.5	17	7.5	3.8	5.7	9.1	28	6.9	17	14	6.2	7.3
10	6.3	16	5.9	3.7	9.8	9.2	28	6.8	14	13	34	4.4
11	6.0	17	6.9	3.2	11	9.4	28	6.4	14	12	27	3.4
12	6.0	17	4.5	3.4	12	13	44	5.9	14	32	26	3.0
13	5.7	7.6	3.9	3.0	10	9.5	59	14	13	22	17	43
14	6.0	5.3	3.7	3.5	8.9	8.8	33	15	11	32	9.6	9.8
15	6.9	5.1	3.9	4.7	7.9	8.5	30	15	10	18	8.4	3.8
16	9.6	4.8	3.9	5.5	11	8.3	30	22	9.1	14	7.3	2.6
17	12	5.1	4.0	4.5	10	8.8	29	30	75	14	6.5	3.5
18	14	4.8	4.1	4.0	21	9.0	29	13	101	14	9.0	112
19	16	4.6	3.7	3.8	25	8.6	27	9.3	22	13	8.5	21
20	20	6.9	3.8	4.3	21	7.8	16	76	14	19	8.1	5.6
21	22	15	4.1	6.0	17	7.8	15	37	13	16	8.9	3.9
22	22	11	5.0	5.8	16	8.0	11	30	13	13	8.7	3.2
23	4.9	9.1	4.3	4.7	16	8.5	9.4	17	13	13	8.0	3.4
24	4.6	7.8	4.0	4.0	15	8.5	32	22	12	13	8.2	2.5
25	4.5	7.9	3.8	4.3	13	6.2	11	15	13	10	8.0	2.3
26	5.0	8.1	3.9	5.0	13	6.0	8.5	15	13	10	7.3	3.4
27	5.0	7.4	3.9	4.9	12	6.1	8.0	16	23	9.2	7.0	2.1
28	5.0	6.6	4.2	4.7	12	8.5	7.6	17	15	8.1	7.8	2.0
29	5.5	6.6	5.6	4.7	---	10	7.3	17	13	6.2	7.0	2.0
30	4.8	6.3	5.6	4.7	---	17	7.0	17	14	5.7	10	2.0
31	18	---	4.2	4.4	---	19	---	17	---	5.6	6.6	---
TOTAL	268.6	299.1	146.8	134.3	310.7	299.8	753.8	500.7	625.1	439.8	332.7	329.4
MEAN	8.66	9.97	4.74	4.33	11.1	9.67	25.1	16.2	20.8	14.2	10.7	11.0
MAX	22	17	7.5	6.0	25	19	59	76	101	32	34	112
MIN	3.3	4.6	3.7	3.0	4.5	6.0	7.0	5.9	9.1	5.6	4.0	2.0
AC-FT	533	593	291	266	616	595	1500	993	1240	872	660	653

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1993, BY WATER YEAR (WY)

	MEAN	14.1	11.1	11.2	13.2	19.7	34.7	42.2	34.9	35.7	22.5	24.0	17.8
	MAX	38.0	22.2	29.8	45.7	53.2	75.2	74.5	77.3	63.1	36.3	42.9	37.9
	(WY)	1986	1988	1988	1985	1988	1985	1986	1987	1985	1985	1991	1990
	MIN	7.38	4.84	3.41	3.66	3.46	4.51	9.81	16.2	13.7	14.2	8.41	9.22
	(WY)	1990	1990	1990	1990	1990	1991	1991	1993	1990	1993	1986	1986

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1985 - 1993

	ANNUAL TOTAL	6592.6	4440.8	
	ANNUAL MEAN	18.0	12.2	22.0
	HIGHEST ANNUAL MEAN			36.2
	LOWEST ANNUAL MEAN			12.2
	HIGHEST DAILY MEAN	416	112	416
	LOWEST DAILY MEAN	3.3	2.0	1.1
	ANNUAL SEVEN-DAY MINIMUM	3.4	2.3	1.7
	INSTANTANEOUS PEAK FLOW		663	1970
	INSTANTANEOUS PEAK STAGE		6.82	6.74
	ANNUAL RUNOFF (AC-FT)	13080	8810	15950
	10 PERCENT EXCEEDS	39	22	61
	50 PERCENT EXCEEDS	11	8.7	12
	90 PERCENT EXCEEDS	4.2	3.9	4.5

a-Also occurred Oct 2-4.

b-Also occurred Sep 29 and 30.

c-Maximum gage height, 7.54 ft, Jun 8, 1987.

LOCATION.--Lat 39°44'58", long 105°00'08", in NE1/4 sec.33, T.3 S., R.68 W., Denver County, Hydrologic Unit 10190003, on right bank on downstream side of Wazee Street Bridge in Denver, 0.5 mi upstream from mouth.

DRAINAGE AREA.--409 mi².

PERIOD OF RECORD.--August 1942 to September 1969, February 1980 to September 1983, and annual maximums 1984, 1985.
April 1986 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,175.48 ft above sea level. See WSP 1730 for history of changes prior to July 16, 1951. July 16, 1951 to Sept. 30, 1969, water-stage recorder at present site and datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 26, 1885, reached a discharge of 20,000 ft³/s, by float measurement. Flood of May 19 and 20, 1864, reached a somewhat higher stage. Flood of Aug. 3, 1933, reached a discharge of about 15,000 ft³/s, as determined by rise of South Platte River at Denver.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	21	16	13	11	18	25	12	23	19	13	13
2	16	25	15	14	11	18	26	12	44	19	14	27
3	13	21	14	14	13	18	60	13	59	19	15	17
4	14	16	14	13	16	18	29	14	27	21	14	14
5	13	16	14	13	13	18	33	13	25	20	59	19
6	19	15	14	12	11	18	59	16	23	20	25	26
7	23	20	14	13	10	18	45	17	24	21	17	45
8	17	22	14	14	10	19	37	15	22	22	16	43
9	16	23	21	12	12	20	35	16	22	22	15	20
10	15	23	17	11	26	20	36	15	19	21	41	19
11	14	23	18	11	19	21	37	15	18	22	47	20
12	14	23	15	11	21	29	51	17	18	41	26	18
13	16	16	13	11	19	24	78	24	19	54	33	90
14	16	15	13	12	17	21	39	26	16	60	18	33
15	16	14	14	13	17	19	36	28	17	27	16	23
16	17	13	13	14	16	17	35	33	18	20	15	19
17	17	13	13	12	18	17	34	51	113	21	15	19
18	18	13	14	11	29	16	33	27	156	21	17	138
19	18	14	13	11	31	15	33	21	29	20	16	53
20	16	17	13	12	28	15	27	85	17	23	16	25
21	16	28	13	15	24	14	25	47	16	22	16	19
22	16	20	14	15	22	14	19	47	16	19	16	18
23	17	17	13	13	22	15	17	25	16	18	15	19
24	17	15	13	11	23	15	50	32	16	20	14	17
25	18	15	13	11	21	13	22	23	16	21	15	15
26	17	16	13	12	19	10	18	22	18	18	13	19
27	17	16	13	12	18	10	14	23	27	16	15	15
28	16	16	13	11	18	16	11	26	18	16	13	13
29	17	16	15	11	---	21	15	28	18	14	14	12
30	16	15	15	11	---	30	12	26	19	13	19	12
31	30	---	13	11	---	29	---	24	---	14	16	---
TOTAL	519	537	440	380	515	566	991	793	889	704	614	840
MEAN	16.7	17.9	14.2	12.3	18.4	18.3	33.0	25.6	29.6	22.7	19.8	28.0
MAX	30	28	21	15	31	30	78	85	156	60	59	138
MIN	13	13	13	11	10	10	11	12	16	13	13	12
AC-FT	1030	1070	873	754	1020	1120	1970	1570	1760	1400	1220	1670

MEAN	13.1	10.7	9.20	8.83	14.8	24.3	25.1	33.6	28.3	22.4	37.7	15.6
MAX	31.2	30.3	54.4	27.5	73.8	179	119	119	117	161	236	64.9
(WY)	1943	1988	1988	1943	1948	1948	1983	1983	1944	1983	1945	1965
MIN	3.66	3.61	3.39	3.17	4.18	3.25	3.28	6.10	3.17	3.74	4.05	4.03
(WY)	1949	1955	1956	1956	1952	1955	1955	1966	1946	1948	1948	1948

ANNUAL TOTAL	9857.8		7788				
ANNUAL MEAN	26.9		21.3			20.2	
HIGHEST ANNUAL MEAN						70.7	1983
LOWEST ANNUAL MEAN						6.00	1954
HIGHEST DAILY MEAN	505	Aug 24	156	Jun 18	1350		Aug 8 1945
LOWEST DAILY MEAN	^a 8.4	Feb 17	^b 10	Feb 7	^c 4.40		Jun 16 1948
ANNUAL SEVEN-DAY MINIMUM	8.6	Feb 14	11	Jan 27	^d .93		Jun 14 1948
INSTANTANEOUS PEAK FLOW			659	Jul 13	^d 3120		Aug 5 1945
INSTANTANEOUS PEAK STAGE			4.44	Jul 13	^e 5.25		Aug 5 1945
ANNUAL RUNOFF (AC-FT)	19550		15450		14670		
10 PERCENT EXCEEDS	51		33		38		
50 PERCENT EXCEEDS	19		17		9.6		
90 PERCENT EXCEEDS	12		13		4.2		

e-Maximum gage height, 11.91 ft, Jun 17, 1965, backwater from South Platte River.

PLATTE RIVER BASIN

06713500 CHERRY CREEK AT DENVER, CO--Continued
(National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1993

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)
APR										
12...	1130	34	997	7.9	11.5	9.1	320	94	20	88
MAY										
14...	1145	27	1050	8.5	19.0	8.0	310	93	19	93
JUN										
02...	0925	22	1100	8.3	16.5	7.8	320	100	18	99
JUL										
15...	1130	26	936	8.3	21.5	6.6	280	87	15	84
28...	1030	17	1180	7.8	19.0	8.1	380	120	19	110
AUG										
05...	1630	348	190	7.8	21.0	5.9	65	21	3.1	16
05...	1930	168	403	7.7	20.5	6.2	110	35	5.9	32
06...	1045	21	958	--	20.0	7.4	280	89	15	84
10...	1150	16	1120	8.2	23.5	7.1	350	110	8	100
10...	2210	161	658	--	21.0	6.8	180	56	10	58
30...	0730	21	943	7.8	15.5	6.7	290	92	14	79
SEP										
02...	1130	15	941	8.5	17.0	9.0	290	93	14	80
13...	1255	172	362	7.7	9.0	9.1	110	33	5.5	29

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA-A LINITY MG/L AS CaCO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
APR										
12...	5.8	176	220	76	0.6	11	640	0.01	1.6	0.03
MAY										
14...	6.5	167	220	86	0.7	12	690	0.03	2.2	0.03
JUN										
02...	6.6	178	220	90	0.8	16	700	0.03	3.1	0.05
JUL										
15...	7.4	176	190	68	0.8	15	602	0.03	2.1	0.03
28...	7.0	210	230	100	0.8	18	764	0.03	3.0	0.03
AUG										
05...	4.2	37	40	14	0.4	3.6	167	0.07	1.3	1.1
05...	4.3	--	77	24	0.4	5.5	239	0.05	1.2	0.45
06...	6.1	--	180	75	0.7	16	607	0.04	2.9	0.04
10...	6.6	201	210	94	0.8	18	740	0.05	3.1	0.03
10...	4.9	--	170	37	0.5	7.3	443	0.06	1.4	0.49
30...	9.5	--	170	76	0.8	12	580	0.11	3.4	0.74
SEP										
02...	7.1	168	170	75	0.8	15	580	0.08	3.4	0.46
13...	3.0	60	72	21	0.4	5.2	208	0.02	0.83	0.24

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
APR										
12...	<0.20	0.40	0.21	0.16	0.17	<3	4	--	5.0	0.8
MAY										
14...	0.80	0.50	0.33	0.27	0.26	3	4	--	5.1	1.4
JUN										
02...	0.60	0.50	0.38	0.36	0.35	6	7	--	4.2	0.5
JUL										
15...	0.50	0.50	0.28	0.26	0.22	6	9	--	5.5	0.8
28...	0.40	0.40	0.26	0.29	0.26	6	12	--	3.8	--
AUG										
05...	2.1	2.0	0.31	0.26	0.20	51	27	--	49	>5.0
05...	1.4	1.1	0.33	0.24	0.19	66	4	--	11	>5.0
06...	0.60	0.40	0.27	0.26	0.24	5	15	6.4	--	--
10...	0.50	0.40	0.28	0.26	0.24	3	25	--	3.7	0.8
10...	1.4	1.2	0.25	0.14	0.12	16	4	55	--	--
30...	2.2	1.9	0.44	0.33	0.29	77	34	43	--	--
SEP										
02...	3.4	1.2	0.74	0.28	0.24	29	42	--	17	>5.0
13...	0.80	0.70	0.27	0.19	0.18	35	7	--	6.5	>5.0

A--Total alkalinity, determined in field by fixed end-point titration method on filtered sample

06713500 CHERRY CREEK AT DENVER, CO--Continued
(National Water-Quality Assessment Program station)

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
MAY				
14...	1140	27	24	1.7
JUN				
02...	0900	22	13	0.77
JUL				
15...	1205	26	14	0.98
28...	1000	17	3	0.14
AUG				
05...	1915	168	1170	531
06...	1030	21	13	0.74
10...	1125	16	4	0.17
10...	2200	155	969	406
30...	0735	21	75	4.3
SEP				
02...	1045	13	10	0.35
13...	1235	172	706	328

06714000 SOUTH PLATTE RIVER AT DENVER, CO

LOCATION.--Lat 39°45'35", long 105°00'10", in NW¹/4SE¹/4 sec.28, T.3 S., R.68 W., Denver County, Hydrologic Unit 10190003, on right bank 90 ft upstream from Nineteenth Street Bridge in Denver and 0.4 mi downstream from Cherry Creek.

DRAINAGE AREA.--3,861 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to October 1889, June to October 1890, July 1895 to current year. Monthly discharge only for some periods, published in WSP 1310. Statistical summary computed for 1976 to current year.

REVISED RECORDS.--WSP 1310: 1934(M). WSP 1730: 1957(M). WDR CO-86-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,157.64 ft above sea level, adjustment of 1960. Prior to Aug. 12, 1909, nonrecording gages, and Aug. 12, 1909, to Aug. 28, 1931, water-stage recorder, at several sites within 0.5 mi of present site at various datums. Aug. 29, 1931, to June 28, 1965, water-stage recorder at site 70 ft downstream at datum 3.66 ft, lower. June 29, 1965, to Mar. 18, 1966, water-stage recorder at site 70 ft downstream at present datum.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 79,000 acres and municipal use, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	158	103	95	149	166	258	413	335	201	191	140
2	100	155	98	111	140	149	203	395	405	237	229	231
3	106	144	98	107	148	146	474	351	505	283	323	192
4	97	166	101	99	165	137	192	227	197	279	225	255
5	100	200	101	93	152	137	188	217	329	219	322	153
6	111	207	97	84	144	140	328	157	319	189	220	158
7	129	189	110	90	148	134	366	172	207	212	228	241
8	118	191	100	84	147	137	290	159	214	248	179	193
9	112	194	128	83	154	132	275	158	310	288	160	122
10	112	203	134	86	250	135	200	147	220	278	205	136
11	106	231	144	78	182	128	195	128	197	257	205	113
12	101	231	124	78	176	170	259	119	306	351	201	99
13	90	217	112	71	166	147	465	151	311	391	310	453
14	88	212	115	118	160	134	263	172	299	506	323	210
15	96	207	111	124	160	134	231	151	238	379	289	150
16	97	203	109	137	152	134	224	209	185	340	200	144
17	103	169	91	127	154	124	210	423	608	179	156	142
18	102	163	102	126	212	124	210	504	1140	179	149	415
19	94	166	101	126	215	121	214	633	469	286	133	209
20	74	197	94	138	210	121	188	699	583	314	140	152
21	94	318	95	161	177	118	191	379	566	262	205	132
22	90	253	100	172	165	118	172	557	256	192	177	131
23	84	238	98	161	178	114	207	421	357	201	141	138
24	82	142	96	141	177	111	428	427	392	179	161	134
25	99	116	95	146	175	114	293	309	340	138	191	127
26	107	115	95	147	172	105	290	384	395	143	153	133
27	92	113	96	149	167	111	359	370	402	123	169	116
28	94	115	96	144	167	146	305	380	322	107	164	105
29	109	124	99	147	---	217	308	382	216	102	156	105
30	100	105	112	147	---	337	313	359	254	116	167	109
31	219	---	101	146	---	304	---	348	---	166	148	---
TOTAL	3196	5442	3256	3716	4762	4545	8099	9901	10877	7345	6220	5138
MEAN	103	181	105	120	170	147	270	319	363	237	201	171
MAX	219	318	144	172	250	337	474	699	1140	506	323	453
MIN	74	105	91	71	140	105	172	119	185	102	133	99
AC-FT	6340	10790	6460	7370	9450	9020	16060	19640	21570	14570	12340	10190

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1993, BY WATER YEAR (WY)

	MEAN	210	198	144	130	147	208	460	973	798	526	499	238
MAX	1184	809	366	282	273	420	1377	2970	2759	1913	1774	911	
(WY)	1985	1985	1985	1985	1984	1983	1984	1980	1983	1983	1984	1984	
MIN	66.8	94.4	84.1	64.9	80.7	94.9	99.1	218	164	183	177	76.5	
(WY)	1978	1976	1978	1979	1977	1978	1982	1978	1981	1977	1981	1977	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1976 - 1993
ANNUAL TOTAL	88446	72497	
ANNUAL MEAN	242	199	^a 379
HIGHEST ANNUAL MEAN			961
LOWEST ANNUAL MEAN			138
HIGHEST DAILY MEAN	3300	Aug 24	^b 4020
LOWEST DAILY MEAN	74	Oct 20	^c 43
ANNUAL SEVEN-DAY MINIMUM	88	Oct 19	^d 12200
INSTANTANEOUS PEAK FLOW			^e 7.77
INSTANTANEOUS PEAK STAGE		6.33	Jun 18
ANNUAL RUNOFF (AC-FT)	175400	143800	274400
10 PERCENT EXCEEDS	403	353	772
50 PERCENT EXCEEDS	186	161	191
90 PERCENT EXCEEDS	99	99	85

a-Average discharge for 79 years (water years 1896-1974), 344 ft³/s; 249200 acre-ft/yr, prior to completion of Chatfield Dam.

b-Maximum daily discharge for period of record, 12000 ft³/s, Jun 17, 1965.

c-Minimum daily discharge for period of record, 8.8 ft³/s, Mar 25, 1951.

d-Maximum discharge and stage for period of record, 40300 ft³/s, Jun 17, 1965, gage height, 18.66 ft, from flood-marks, present datum, from rating curve extended above 2700 ft³/s, on basis of contracted-opening measurement of peak flow.

e-Maximum gage height for statistical period, 8.42 ft, Aug 24, 1991.

06714000 SOUTH PLATTE RIVER AT DENVER, CO--Continued
(National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1993

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
APR 14...	1500	252	703	8.2	12.0	10.0	220	63	14	56
MAY 07...	1000	127	798	8.0	15.5	9.1	230	68	14	70
MAY 17...	1815	823	454	8.0	14.0	8.1	120	35	7.2	40
JUN 02...	1350	940	475	8.0	18.5	6.4	140	43	8.5	36
JUL 06...	1220	180	690	8.2	19.5	8.5	210	63	12	59
AUG 02...	1230	204	607	8.2	20.5	7.9	180	52	11	48
SEP 02...	1100	166	810	7.9	17.5	7.6	240	71	14	71

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA-A LITY MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
APR 14...	4.2	115	130	49	0.8	6.7	433	0.09	2.5	0.32
MAY 07...	4.7	130	150	59	0.8	9.4	507	0.29	4.9	0.57
MAY 17...	4.1	81	71	31	0.5	6.7	269	0.17	2.2	0.90
JUN 02...	4.3	77	77	32	0.8	7.0	288	0.08	1.8	0.40
JUL 06...	4.6	121	130	45	0.9	10	425	0.35	3.9	0.81
AUG 02...	4.3	113	110	38	0.9	8.7	369	0.36	2.6	1.0
SEP 02...	5.6	153	140	52	1.0	9.7	502	0.66	5.2	1.7

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
APR 14...	9.3	0.70	0.93	0.34	0.37	4	81	5.9	1.1
MAY 07...	1.5	1.2	0.80	0.83	0.76	17	120	4.8	1.7
MAY 17...	1.7	1.4	0.51	0.41	0.41	70	62	9.2	>5.2
JUN 02...	1.2	1.1	0.43	0.37	0.31	32	61	8.8	>4.5
JUL 06...	1.6	1.4	0.83	0.73	0.71	11	57	4.5	0.6
AUG 02...	1.6	1.8	0.66	0.66	0.55	7	68	3.4	0.7
SEP 02...	2.4	2.3	1.0	1.0	0.96	15	110	4.9	1.1

A--Total alkalinity, determined in field by fixed end-point titration method on filtered sample

PLATTE RIVER BASIN

06714000 SOUTH PLATTE RIVER AT DENVER, CO--Continued
(National Water-Quality Assessment Program station)

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
MAY				
07...	1015	127	18	6.2
17...	1825	802	466	1010
JUN				
02...	1400	940	419	1060
JUL				
06...	1145	180	10	4.9
AUG				
02...	1210	204	23	13
SEP				
02...	1115	169	29	13

06714215 SOUTH PLATTE RIVER AT 64TH AVENUE AT COMMERCE CITY, CO

LOCATION.--Lat 39°48'44", long 104°57'28", in NW¹/4NW¹/4 sec.12, T.3 S., R.68 W., Adams County, Hydrologic Unit 10190003, on right bank 300 ft southeast of intersection of York Street and East 64th Avenue and 1,900 ft upstream from mouth of Sand Creek at northeast corner of Metro Denver Sewage Disposal plant at Commerce City.

DRAINAGE AREA.--3,884 mi².

PERIOD OF RECORD.--January 1982 to current year.

REVISED RECORDS.--WDR CO-86-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5,105 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: May 17 to June 11. Records fair. Natural flow of stream affected by transmountain diversions, storage and flood-control reservoirs, power developments, diversions for irrigation and municipal use, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	18	22	14	20	48	117	17	10	133	100	91
2	18	12	17	15	18	57	18	17	13	161	133	190
3	26	11	17	17	19	57	253	16	64	219	245	146
4	24	10	17	15	28	60	19	15	60	227	148	214
5	23	10	16	13	25	64	12	15	12	153	317	122
6	23	11	15	15	19	62	97	13	7.0	120	174	121
7	22	9.4	16	15	18	62	192	13	8.0	141	177	205
8	17	9.2	16	15	17	65	95	11	9.0	174	124	196
9	15	8.5	17	16	18	63	64	11	12	238	106	94
10	17	8.9	17	15	93	66	17	9.7	7.0	229	141	89
11	17	8.0	18	15	64	67	18	11	7.0	196	176	87
12	17	9.8	18	15	114	109	31	16	6.8	292	124	71
13	15	9.4	16	16	150	87	308	97	7.2	356	280	414
14	14	7.9	15	23	134	79	87	140	8.4	521	286	125
15	14	8.2	13	38	131	81	61	134	6.7	197	256	6.8
16	13	8.4	15	41	124	81	54	205	6.0	34	161	4.3
17	13	7.3	15	42	122	70	48	400	233	14	106	3.9
18	15	7.9	16	35	188	74	48	450	591	10	99	148
19	14	6.9	14	37	197	73	47	590	34	4.7	89	15
20	61	5.0	16	38	195	70	26	640	42	6.6	90	5.6
21	111	12	17	67	157	70	13	70	74	5.7	151	2.8
22	88	8.6	17	71	140	71	12	120	6.7	14	130	3.9
23	21	117	13	49	104	68	13	12	4.7	23	97	5.9
24	19	149	15	32	21	61	142	14	6.5	57	106	6.9
25	17	120	16	31	32	48	38	10	5.5	17	132	8.9
26	17	126	16	32	40	39	28	17	5.5	21	102	10
27	14	122	17	24	38	19	34	15	6.7	13	112	6.7
28	16	124	19	21	40	18	15	10	6.7	21	110	5.1
29	14	125	17	20	---	64	16	13	77	37	103	6.8
30	12	24	17	19	---	177	18	16	187	40	112	6.1
31	37	---	19	20	---	162	---	15	---	74	99	---
TOTAL	762	1114.4	509	836	2266	2192	1941	3132.7	1524.4	3749.0	4586	2411.7
MEAN	24.6	37.1	16.4	27.0	80.9	70.7	64.7	101	50.8	121	148	80.4
MAX	111	149	22	71	197	177	308	640	591	521	317	414
MIN	12	5.0	13	13	17	18	12	9.7	4.7	4.7	89	2.8
AC-FT	1510	2210	1010	1660	4490	4350	3850	6210	3020	7440	9100	4780

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1993, BY WATER YEAR (WY)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	142	134	76.8	99.7	90.3	151	383	876	498	434	441	147
MAX	1286	927	199	235	325	305	1335	2675	2462	1769	1410	755
(WY)	1985	1985	1986	1984	1984	1984	1984	1987	1983	1984	1984	1984
MIN	10.0	9.00	8.79	13.7	8.57	8.75	21.0	75.1	47.3	121	148	20.1
(WY)	1989	1989	1991	1990	1982	1982	1991	1986	1990	1993	1993	1992

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1982 - 1993
ANNUAL TOTAL	40596.5	25024.2	
ANNUAL MEAN	111	68.6	305
HIGHEST ANNUAL MEAN			825
LOWEST ANNUAL MEAN			68.6
HIGHEST DAILY MEAN	3170	640	4110
LOWEST DAILY MEAN	5.0	2.8	2.8
ANNUAL SEVEN-DAY MINIMUM	7.4	6.0	5.5
INSTANTANEOUS PEAK FLOW		2300	14300
INSTANTANEOUS PEAK STAGE		4.77	8.09
ANNUAL RUNOFF (AC-FT)	80520	49640	221100
10 PERCENT EXCEEDS	289	175	743
50 PERCENT EXCEEDS	35	23	103
90 PERCENT EXCEEDS	13	8.1	9.6

394839104570300 SAND CREEK AT MOUTH NEAR COMMERCE CITY, CO

LOCATION.--Lat 39°48'39", long 104°57'03", in SE¹/₄NW¹/₄NW¹/₄ sec.12, T.3 S., R.68 W., Adams County, Hydrologic Unit 10190003, on left bank 0.1 mi downstream from confluence of ditch and Sand Creek in NE corner of Metro Sewer Plant.

DRAINAGE AREA.--191 mi².

PERIOD OF RECORD.--January 1992 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,120 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharge: Water year 1992, Aug. 24. Records fair. Estimated daily discharges: Water year 1993, July 15 to Aug. 17. Records fair except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	34	17	31	32	271	32	96	27
2	---	---	---	---	28	17	28	33	87	69	90	26
3	---	---	---	---	22	17	28	36	54	50	91	19
4	---	---	---	---	23	389	27	32	53	42	105	18
5	---	---	---	---	17	120	27	32	53	56	98	16
6	---	---	---	---	16	40	27	52	103	67	94	16
7	---	---	---	---	14	21	26	79	81	59	92	19
8	---	---	---	---	13	43	25	64	69	49	90	19
9	---	---	---	---	13	118	27	80	65	43	82	22
10	---	---	---	---	13	104	27	89	41	59	67	26
11	---	---	---	---	14	83	26	89	44	48	77	21
12	---	---	---	---	16	64	34	92	57	113	83	23
13	---	---	---	---	16	49	39	95	42	92	78	18
14	---	---	---	---	17	88	54	91	42	47	72	15
15	---	---	---	---	16	30	32	90	39	390	69	14
16	---	---	---	---	15	26	61	97	29	228	67	16
17	---	---	---	---	15	24	88	100	25	198	81	15
18	---	---	---	---	15	28	62	95	25	102	76	14
19	---	---	---	---	14	35	46	86	41	89	71	14
20	---	---	---	---	15	23	53	88	48	127	64	15
21	---	---	---	---	15	23	45	91	38	143	57	15
22	---	---	---	---	15	33	34	87	36	99	59	14
23	---	---	---	---	20	26	33	95	32	92	61	14
24	---	---	---	---	18	27	33	105	29	119	940	13
25	---	---	---	---	16	31	36	116	62	91	377	14
26	---	---	---	---	15	25	34	50	63	97	77	12
27	---	---	---	---	15	24	38	56	28	49	35	13
28	---	---	---	---	17	546	36	58	33	56	23	13
29	---	---	---	---	17	84	53	50	54	90	22	13
30	---	---	---	---	---	40	32	53	44	99	25	13
31	---	---	---	34	---	32	---	70	---	99	25	---
TOTAL	---	---	---	---	494	2227	1142	2283	1688	2994	3344	507
MEAN	---	---	---	---	17.0	71.8	38.1	73.6	56.3	96.6	108	16.9
MAX	---	---	---	---	34	546	88	116	271	390	940	27
MIN	---	---	---	---	13	17	25	32	25	32	22	12
AC-FT	---	---	---	---	980	4420	2270	4530	3350	5940	6630	1010

394839104570300 SAND CREEK AT MOUTH NEAR COMMERCE CITY, CO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	44	22	16	14	15	33	10	51	66	60	38
2	18	28	19	17	14	14	20	10	74	67	63	44
3	14	33	17	19	15	14	97	11	81	59	64	44
4	13	18	15	15	21	14	35	10	58	57	65	46
5	17	15	12	15	20	14	30	11	55	61	113	44
6	18	15	15	15	16	14	106	35	56	64	101	66
7	17	14	16	15	16	14	106	75	62	66	69	60
8	18	13	17	14	15	14	61	70	58	66	56	55
9	17	14	29	12	16	14	28	67	58	68	55	42
10	18	15	28	13	31	14	12	66	66	65	78	37
11	17	13	24	13	25	14	11	64	67	59	105	34
12	18	13	21	13	35	24	21	61	69	63	62	34
13	19	13	14	12	29	24	104	40	66	99	64	71
14	17	14	14	14	23	18	24	37	59	198	47	45
15	17	13	17	16	17	16	14	38	57	67	42	32
16	21	13	16	18	17	15	11	38	84	39	40	26
17	18	14	13	18	16	15	9.8	58	180	51	37	28
18	16	14	16	15	36	15	9.1	48	247	61	36	188
19	15	12	14	14	47	15	8.8	40	65	58	47	53
20	16	18	14	15	39	14	9.0	29	53	52	45	30
21	17	46	16	20	30	15	8.7	48	49	82	42	23
22	15	30	16	21	20	14	7.8	84	47	118	47	21
23	16	30	15	17	18	13	7.8	55	44	120	39	19
24	16	14	16	13	17	14	66	54	42	110	35	18
25	16	15	17	15	16	39	32	61	42	90	32	18
26	18	16	16	15	16	68	16	56	43	92	34	21
27	16	18	16	15	15	12	12	39	44	92	34	17
28	16	16	17	14	14	20	12	46	43	76	35	17
29	19	17	19	14	---	18	11	49	51	59	36	15
30	19	21	21	14	---	29	11	49	67	60	40	15
31	44	---	18	14	---	38	---	71	---	61	40	---
TOTAL	552	569	540	471	608	591	934.0	1430	2038	2346	1663	1201
MEAN	17.8	19.0	17.4	15.2	21.7	19.1	31.1	46.1	67.9	75.7	53.6	40.0
MAX	44	46	29	21	47	68	106	84	247	198	113	188
MIN	13	12	12	12	14	12	7.8	10	42	39	32	15
AC-FT	1090	1130	1070	934	1210	1170	1850	2840	4040	4650	3300	2380

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1993, BY WATER YEAR (WY)

MEAN	17.8	19.0	17.4	15.2	19.3	45.5	34.6	59.9	62.1	86.1	80.8	28.5
MAX	17.8	19.0	17.4	15.2	21.7	71.8	38.1	73.6	67.9	96.6	108	40.0
(WY)	1993	1993	1993	1993	1993	1992	1992	1992	1993	1992	1992	1993
MIN	17.8	19.0	17.4	15.2	17.0	19.1	31.1	46.1	56.3	75.7	53.6	16.9
(WY)	1993	1993	1993	1993	1992	1993	1993	1993	1992	1993	1993	1992

SUMMARY STATISTICS

FOR 1993 WATER YEAR

WATER YEARS 1992 - 1993

ANNUAL TOTAL	12943.0	
ANNUAL MEAN	35.5	35.5
HIGHEST ANNUAL MEAN		35.5
LOWEST ANNUAL MEAN		35.5
HIGHEST DAILY MEAN	247	940
LOWEST DAILY MEAN	a 7.8	a 7.8
ANNUAL SEVEN-DAY MINIMUM	8.7	8.7
INSTANTANEOUS PEAK FLOW	1210	1210
INSTANTANEOUS PEAK STAGE	b 7.80	b 7.80
ANNUAL RUNOFF (AC-FT)	25670	25690
10 PERCENT EXCEEDS	67	90
50 PERCENT EXCEEDS	21	32
90 PERCENT EXCEEDS	13	14

a-Also occurred Apr 23.

b-Maximum gage height, 10.41 ft, Aug 24, 1992, backwater from South Platte River.

06714220 SENAC CREEK AT NORTH BORDER SLUDGE AREA NEAR AURORA, CO

LOCATION.--Lat 39°39'06", long 104°40'34", NW¹/₄NW¹/₄ Sec.4, T.5 S., R.65 W., Arapahoe County, Hydrologic Unit 10190003, on left bank 0.9 mi downstream from where stream crosses under E. Quincy Ave. 2 mi east of Lowry landfill site.

DRAINAGE AREA.--7.81 mi².

PERIOD OF RECORD.--August 1989 to September 1993, seasonal record only (Discontinued).

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 5,705 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records fair. Flow is partially regulated by the City of Aurora, Aurora Reservoir, located approximately 2 mi upstream of gage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge (estimate) 250 ft³/s, May 31, 1991, gage height, 4.76 ft; maximum gage height, 5.26 ft, Aug. 10, 1993; no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 43 ft³/s at 1845 Aug. 10, gage height, 5.26 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
2	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
3	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
4	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
5	---	---	---	---	---	---	.00	.00	.00	.00	.00	.01
6	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
7	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
8	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
9	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
10	---	---	---	---	---	---	.00	.00	.00	.00	3.1	.00
11	---	---	---	---	---	---	.00	.00	.00	.00	.12	.00
12	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
13	---	---	---	---	---	---	.00	.00	.00	.00	.02	.00
14	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
15	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
16	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
17	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
18	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
19	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
20	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
21	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
22	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
23	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
24	---	---	---	---	---	---	.00	.02	.00	.00	.00	.00
25	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
26	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
27	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
28	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
29	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
30	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
31	---	---	---	---	---	---	---	.00	---	.00	.00	---
TOTAL	---	---	---	---	---	---	0.00	0.02	0.00	0.00	3.24	0.01
MEAN	---	---	---	---	---	---	.000	.001	.000	.000	.10	.000
MAX	---	---	---	---	---	---	.00	.02	.00	.00	3.1	.01
MIN	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
AC-FT	---	---	---	---	---	---	.00	.04	.00	.00	6.4	.02

06719505 CLEAR CREEK AT GOLDEN, CO

LOCATION.--Lat 39°45'11", long 105°14'05", in NE¹/4NW¹/4 sec.33, T.3 S., R.70 W., Jefferson County, Hydrologic Unit 10190004, on left bank 100 ft downstream from U.S. Highway 6 bridge at west edge of Golden, 0.7 mi downstream from headgate of Church ditch, and 13.3 mi downstream from North Clear Creek.

DRAINAGE AREA.--400 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1974 to current year. Records for station at site 0.8 mi upstream (October 1908 to December 1909, June 1911 to September 1974) are not equivalent due to diversions by Church ditch. Sediment data available April to September 1981.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,695 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 22 to Mar. 3. Records poor. Natural flow of stream affected by minor transmountain diversions from Colorado River basin through Berthoud Pass ditch (see elsewhere in this report) and several small reservoirs upstream from station. Diversion by Welch ditch 1.4 mi upstream from station and by Church Ditch 0.7 mi upstream from station for irrigation of about 5,200 acres downstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	51	48	46	36	32	38	56	606	836	269	153
2	68	49	49	45	35	32	37	51	656	816	252	160
3	71	48	49	45	34	31	44	50	675	868	245	154
4	65	46	49	44	34	29	42	54	576	795	233	146
5	65	57	50	43	35	30	43	78	470	699	233	143
6	69	60	50	43	35	31	44	77	445	571	232	138
7	77	64	50	42	34	30	42	71	493	520	236	135
8	72	63	50	41	33	31	37	74	430	500	206	167
9	81	57	49	40	32	30	42	77	390	550	188	134
10	72	53	49	40	33	28	46	73	362	587	195	114
11	64	53	49	39	32	28	42	79	363	608	212	105
12	73	50	50	38	32	27	44	99	396	606	200	94
13	72	52	51	37	31	33	52	121	511	618	191	118
14	65	51	51	36	31	35	44	160	612	570	199	107
15	71	50	50	35	32	30	37	173	744	597	191	105
16	62	52	49	34	32	27	35	199	751	565	175	114
17	64	49	48	33	32	29	31	249	930	537	163	120
18	63	48	48	33	32	29	29	226	978	493	160	129
19	67	45	48	33	31	29	32	216	762	466	163	123
20	62	47	48	33	31	28	31	219	708	453	177	106
21	61	48	47	33	32	29	37	273	826	422	195	96
22	58	49	46	33	32	29	44	307	915	418	180	87
23	57	49	46	33	32	27	71	315	920	393	163	83
24	58	50	47	34	33	32	46	318	914	387	153	92
25	59	49	47	34	34	36	45	365	878	354	161	95
26	76	48	47	35	34	42	43	403	883	322	153	91
27	68	47	46	35	33	48	43	440	927	311	158	88
28	56	47	46	35	33	55	46	459	873	282	163	87
29	56	48	45	36	---	50	54	486	811	274	149	91
30	55	48	46	36	---	50	58	503	872	268	146	91
31	52	---	47	36	---	50	---	547	---	273	154	---
TOTAL	2032	1528	1495	1160	920	1047	1279	6818	20677	15959	5895	3466
MEAN	65.5	50.9	48.2	37.4	32.9	33.8	42.6	220	689	515	190	116
MAX	81	64	51	46	36	55	71	547	978	868	269	167
MIN	52	45	45	33	31	27	29	50	362	268	146	83
AC-FT	4030	3030	2970	2300	1820	2080	2540	13520	41010	31650	11690	6870

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1993, BY WATER YEAR (WY)

	MEAN	84.5	61.7	49.5	43.3	42.0	42.1	71.2	292	743	456	201	124
MAX	192	115	86.6	70.5	66.9	58.9	112	655	1271	1030	475	231	
(WY)	1985	1985	1984	1984	1985	1984	1984	1984	1984	1983	1984	1984	1984
MIN	54.3	39.2	33.5	30.6	29.2	31.2	39.0	123	382	161	100	78.8	
(WY)	1982	1982	1990	1979	1992	1976	1982	1981	1977	1977	1977	1977	1977

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1975 - 1993

ANNUAL TOTAL	58402	62276	
ANNUAL MEAN	160	171	184
HIGHEST ANNUAL MEAN			316
LOWEST ANNUAL MEAN			109
HIGHEST DAILY MEAN	841	978	1920
LOWEST DAILY MEAN	26	27	18
ANNUAL SEVEN-DAY MINIMUM	27	29	24
INSTANTANEOUS PEAK FLOW		1160	2370
INSTANTANEOUS PEAK STAGE		4.78	6.44
ANNUAL RUNOFF (AC-FT)	115800	123500	133600
10 PERCENT EXCEEDS	475	541	526
50 PERCENT EXCEEDS	69	57	77
90 PERCENT EXCEEDS	29	32	36

a-Also occurred Mar 16 and 23.

06719505 CLEAR CREEK AT GOLDEN, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1981 to current year.

pH: March to September 1981.

WATER TEMPERATURE: March 1981 to current year.

DISSOLVED OXYGEN: March to September 1981.

SUSPENDED-SEDIMENT DISCHARGE: March to September 1981.

INSTRUMENTATION.--Water-quality monitor since March 1981.

REMARKS.--Records rated fair. Daily maximum and minimum specific conductance data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum mean, 597 microsiemens, Jan. 9, 1983; minimum mean, 38 microsiemens, July 1, 1983.

pH: Maximum, 8.7 units, Mar. 27, April 10, 1981; minimum, 6.6 units, July 16, 1981.

WATER TEMPERATURE: Maximum, 23.0°C, Aug. 4, 1981; minimum, freezing point on many days during winter months most years.

DISSOLVED OXYGEN: Maximum, 14.2 mg/L, May 7, 1981; minimum, 5.2 mg/L, July 16, 1981.

SEDIMENT CONCENTRATION: Maximum daily, 282 mg/L, May 29, 1981; minimum daily, 3 mg/L, Sept. 21-24, 1981.

SEDIMENT LOAD: Maximum daily, 230 tons, June 3, 1981; minimum daily, 0.62 ton, Sept. 23-24, 1981.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 436 microsiemens, Mar. 13; minimum, 78 microsiemens, July 9.

WATER TEMPERATURES: Maximum, 18.9°C, Aug. 25; minimum, freezing point on many days during winter months.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	174	270	---	---	---	---	356	285	119	---	---	135
2	180	281	---	---	---	---	354	294	115	90	---	134
3	175	276	---	---	---	---	342	296	108	92	---	---
4	187	292	---	---	---	---	365	287	110	90	---	---
5	194	294	---	---	---	---	353	266	111	91	---	---
6	203	273	---	---	---	---	347	261	113	93	---	---
7	205	264	---	---	---	---	351	262	110	94	---	---
8	210	275	---	---	---	---	359	258	114	92	---	---
9	217	277	---	---	---	---	354	265	---	87	---	---
10	215	279	---	---	---	---	348	269	---	89	---	---
11	220	277	---	---	---	---	340	267	---	93	---	---
12	217	285	---	---	---	362	333	253	---	92	---	---
13	218	284	---	---	---	392	320	248	---	92	---	---
14	226	288	---	---	---	374	352	226	---	92	---	---
15	229	287	---	---	---	367	346	217	---	90	---	155
16	239	287	---	---	---	369	335	205	---	88	---	155
17	249	288	---	---	---	370	329	189	---	89	---	154
18	252	290	---	---	---	365	325	196	---	89	---	155
19	255	---	---	---	---	361	322	187	---	90	---	156
20	254	---	---	---	---	363	321	173	---	89	---	160
21	252	---	---	---	---	357	304	164	---	91	131	161
22	251	---	---	---	---	357	327	149	---	92	132	161
23	253	---	---	---	---	359	269	140	---	94	131	161
24	255	---	---	---	---	351	293	140	---	86	131	160
25	253	---	---	---	---	341	290	136	---	101	133	162
26	257	---	---	---	---	324	302	130	---	---	134	165
27	248	---	---	---	---	311	303	124	---	---	133	166
28	257	---	---	---	---	309	295	122	---	---	135	168
29	259	---	---	---	---	331	290	117	---	---	137	170
30	257	---	---	---	---	328	285	118	---	---	137	173
31	263	---	---	---	---	361	---	124	---	---	135	---
MEAN	230	---	---	---	---	---	327	205	---	---	---	---

06719505 CLEAR CREEK AT GOLDEN, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.8	8.9	5.3	3.1	---	---	---	---	---	---	.4	.0
2	12.8	9.0	3.9	1.2	---	---	---	---	---	---	.8	.0
3	12.5	8.7	2.5	1.1	---	---	---	---	---	---	1.9	.0
4	12.3	9.2	1.1	.4	---	---	---	---	---	---	2.0	.0
5	11.2	9.0	.7	.4	---	---	---	---	---	---	1.9	.0
6	10.3	9.1	1.1	.3	---	---	---	---	---	---	3.7	.3
7	9.7	6.2	2.1	.3	---	---	---	---	---	---	5.2	.0
8	6.2	3.9	3.0	1.3	---	---	---	---	---	---	6.1	.8
9	7.7	4.8	2.7	.8	---	---	---	---	---	---	7.0	1.0
10	8.1	5.1	2.3	.8	---	---	---	---	---	---	4.4	2.0
11	9.8	6.3	1.9	.3	---	---	---	---	---	---	2.1	.0
12	9.5	6.9	1.0	.1	---	---	---	---	---	---	.4	.0
13	10.7	7.9	2.3	.1	---	---	---	---	---	---	.6	.0
14	9.3	6.9	2.8	1.2	---	---	---	---	---	---	2.1	.0
15	8.7	6.3	3.4	1.6	---	---	---	---	---	---	6.5	.0
16	6.7	4.4	3.8	2.3	---	---	---	---	---	---	6.0	2.0
17	8.4	4.9	3.4	1.9	---	---	---	---	---	---	4.3	1.5
18	8.3	5.5	3.3	1.3	---	---	---	---	---	---	9.2	2.4
19	8.9	6.4	---	---	---	---	---	---	---	---	7.1	3.2
20	8.3	5.2	---	---	---	---	---	---	.1	.0	8.1	2.5
21	9.3	6.4	---	---	---	---	---	---	.1	.0	9.1	3.2
22	9.4	6.8	---	---	---	---	---	---	.1	.0	9.3	3.3
23	9.2	7.0	---	---	---	---	---	---	.1	.0	10.8	3.3
24	9.1	6.7	---	---	---	---	---	---	.0	.0	11.1	4.3
25	9.0	7.1	---	---	---	---	---	---	.0	.0	10.7	4.9
26	8.6	6.7	---	---	---	---	---	---	.1	.0	8.3	4.7
27	8.7	6.7	---	---	---	---	---	---	.2	.0	7.4	5.1
28	8.2	6.4	---	---	---	---	---	---	.2	.0	7.7	3.3
29	7.0	5.7	---	---	---	---	---	---	---	---	5.7	2.9
30	7.6	5.6	---	---	---	---	---	---	---	---	3.5	.7
31	6.7	5.3	---	---	---	---	---	---	---	---	6.6	1.4
MONTH	12.8	3.9	---	---	---	---	---	---	---	---	11.1	.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.0	2.8	10.5	6.2	13.6	8.5	14.8	10.6	15.5	14.0	15.0	11.1
2	7.5	4.1	11.5	5.1	11.8	8.7	14.7	10.3	15.5	13.9	13.5	11.2
3	6.8	1.8	12.8	7.1	11.9	8.2	13.9	10.3	14.8	13.4	14.8	8.5
4	9.5	2.1	13.3	7.5	10.6	6.6	11.9	9.2	15.7	11.8	15.1	10.7
5	8.6	4.7	11.9	9.4	11.0	7.7	12.5	8.2	16.8	13.1	14.8	12.1
6	6.8	3.1	12.0	7.3	12.8	7.8	13.5	8.5	16.7	12.6	16.2	12.4
7	5.0	2.0	10.4	8.2	12.4	8.6	14.6	9.3	16.2	12.0	14.1	11.2
8	9.6	1.5	9.2	5.7	10.5	6.3	14.1	11.1	16.9	12.9	14.2	9.3
9	10.0	3.9	9.0	6.7	10.4	7.3	15.4	10.6	16.7	12.9	14.5	11.1
10	10.3	5.1	13.1	5.3	13.4	7.6	15.7	10.7	17.5	14.3	15.2	11.3
11	10.1	4.4	13.9	7.6	12.6	9.5	15.0	12.2	17.9	13.7	16.0	11.3
12	7.3	3.2	13.3	9.9	14.1	8.7	15.1	11.6	16.7	13.7	16.0	11.0
13	9.0	2.2	13.8	10.1	14.3	9.2	15.0	11.7	16.6	13.9	13.6	6.4
14	9.8	4.0	13.3	11.0	14.7	8.9	16.1	12.6	15.4	12.9	10.4	4.7
15	8.7	4.5	12.5	9.7	13.8	9.6	15.7	12.1	16.7	11.9	11.8	6.9
16	8.5	4.0	12.4	10.3	12.2	9.0	16.0	12.4	17.7	12.5	11.6	8.6
17	9.6	4.8	11.4	8.8	11.4	9.1	14.0	12.1	17.5	13.6	13.3	9.6
18	11.3	5.8	12.9	7.4	9.1	7.7	15.6	11.4	16.3	14.2	11.4	9.7
19	8.5	3.5	11.8	8.4	12.8	7.0	15.7	11.7	16.8	13.3	11.0	7.6
20	8.5	3.5	13.7	8.4	13.8	8.6	14.7	12.2	16.8	12.4	11.8	7.4
21	11.5	2.9	12.9	9.2	12.8	9.4	14.7	11.9	15.0	13.0	12.9	8.2
22	13.1	6.5	12.4	8.7	13.8	9.1	14.6	11.0	15.1	12.7	11.6	9.5
23	13.1	6.7	13.7	7.2	13.3	9.5	13.4	11.4	17.0	11.2	11.3	9.5
24	8.8	5.7	11.8	8.6	12.4	8.1	14.8	11.1	18.1	12.7	12.0	9.9
25	12.0	4.7	12.7	8.6	13.4	8.0	14.1	10.9	18.9	13.9	11.0	7.8
26	11.2	6.4	13.0	8.8	14.2	9.0	15.8	12.3	16.4	13.4	11.8	7.9
27	12.5	8.1	11.8	8.9	13.3	9.6	15.9	12.9	13.8	12.2	12.5	8.0
28	14.1	8.2	11.7	8.3	13.8	9.6	16.0	12.9	16.3	12.5	12.1	8.6
29	13.5	7.2	12.5	8.3	15.1	10.2	16.0	13.7	15.2	12.5	12.3	8.2
30	12.4	8.0	13.1	8.0	15.1	10.6	14.7	13.7	14.0	11.5	11.8	7.5
31	---	---	13.5	8.7	---	---	15.4	13.5	14.7	10.6	---	---
MONTH	14.1	1.5	13.9	5.1	15.1	6.3	16.1	8.2	18.9	10.6	16.2	4.7

PLATTE RIVER BASIN

06719505 CLEAR CREEK AT GOLDEN, CO--Continued
(National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1993

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
APR 02...	1030	36	370	7.8	6.0	10.1	110	31	8.7	23
MAY 06...	1300	76	265	8.1	10.0	9.3	80	22	6.0	17
JUN 08...	1040	388	116	7.8	8.0	9.9	35	10	2.5	6.2
JUL 01...	1420	740	74	7.7	13.0	9.3	27	7.7	1.8	3.8
JUL 07...	1240	530	88	7.7	11.0	8.5	30	8.4	2.1	4.5
AUG 03...	1210	237	106	7.8	13.0	9.1	34	9.8	2.4	5.4
SEP 03...	1045	156	146	7.8	10.0	10.0	43	12	3.1	8.0

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA-A LINITY MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
APR 02...	3.6	55	87	22	1.0	10	238	0.02	0.41	0.08
MAY 06...	2.5	41	54	17	0.8	9.8	156	<0.01	0.15	0.02
JUN 08...	1.2	22	23	4.6	0.6	7.5	76	<0.01	0.12	0.02
JUL 01...	1.2	19	11	2.8	0.4	5.8	53	<0.01	0.14	0.02
JUL 07...	0.8	22	15	2.9	0.4	6.4	56	<0.01	0.14	0.02
AUG 03...	1.0	23	20	2.2	0.5	5.2	66	<0.01	0.07	0.02
SEP 03...	1.4	31	30	3.4	0.6	6.6	83	0.02	0.13	<0.01

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDEED TOTAL (MG/L AS C)
APR 02...	0.30	<0.20	0.07	0.03	<0.01	5	1300	1.3	0.9
MAY 06...	0.20	<0.20	0.03	<0.01	<0.01	88	490	2.0	0.8
JUN 08...	<0.20	<0.20	0.03	0.01	<0.01	200	630	2.5	0.5
JUL 01...	<0.20	<0.20	<0.01	<0.01	<0.01	120	140	1.8	0.6
JUL 07...	<0.20	<0.20	0.04	0.02	0.01	120	150	1.6	0.4
AUG 03...	<0.20	<0.20	<0.01	<0.01	<0.01	30	200	1.0	1.7
SEP 03...	<0.20	<0.20	0.01	<0.01	<0.01	54	270	1.0	0.4

A-Total alkalinity, determined in field by fixed end-point titration method on filtered sample

06719505 CLEAR CREEK AT GOLDEN, CO--Continued
(National Water-Quality Assessment Program station)

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)
MAY				
06...	1245	76	17	3.5
JUN				
08...	1410	388	37	39
22...	1445	821	138	306
JUL				
01...	1345	740	83	175
07...	1140	530	29	41
20...	1350	478	14	18
AUG				
03...	1120	237	9	5.8
SEP				
03...	1110	156	8	3.4

06720460 FIRST CREEK BELOW BUCKLEY ROAD, NEAR ROCKY MOUNTAIN ARSENAL, CO

LOCATION.--Lat 39°48'28", long 104°47'36", in SE¹/₄NE¹/₄ sec.84, T.3 S., R.66 W., Adams County, Hydrologic Unit 10190003, military reservation, on right bank 1,000 ft downstream from Buckley Road, at Rocky Mountain Arsenal.

DRAINAGE AREA.--26.4 mi², from reports of the U.S. Army.

PERIOD OF RECORD.--October 1992 to September 1993. Previous records collected at this site 1982 to September 1992, are in reports of the U.S. Army.

GAGE.--Water-stage recorder and v-notch sharp-crested weir. Datum of gage is 5,289.63 ft, above sea level.

REMARKS.--Estimated daily discharges: Dec. 18 to Feb. 5. Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	1.1	1.2	.77	1.3	.78	.70	.60	1.3	5.4	.00	.00
2	.29	1.1	.92	.86	1.3	.75	.63	.56	1.4	4.9	.00	.00
3	.27	1.1	.86	1.1	1.3	.73	1.6	.55	1.9	4.6	.00	.00
4	.28	.92	.66	.78	1.2	.70	.97	.57	1.3	4.7	.00	.00
5	.33	.92	.65	.69	1.2	.69	.68	.60	3.2	5.2	.00	.00
6	.84	.97	.71	.79	1.3	.72	.89	.64	3.4	4.9	.00	.00
7	.84	1.1	.67	.57	1.3	.72	1.7	.69	3.6	5.8	.00	.00
8	.86	1.1	.64	.57	1.3	.72	.74	1.0	3.2	5.3	.00	.00
9	.91	1.1	.79	.61	1.3	.70	.67	3.0	2.9	4.3	.00	.00
10	.91	.95	.88	.50	1.4	.67	.64	.90	3.8	4.2	.00	.00
11	.90	.97	.93	.33	1.1	.67	.63	.60	5.4	2.2	.00	.00
12	.91	.99	.98	.45	1.2	.62	.69	.55	5.9	.76	.03	.00
13	.90	.97	.84	.51	1.2	.78	1.9	.55	5.3	.45	.00	.00
14	.83	1.0	.70	.53	1.2	.85	.86	.49	4.7	.97	.00	.00
15	.86	1.0	.77	.53	.87	.71	.70	.48	4.0	.37	.00	.00
16	.85	1.0	.84	.69	.79	.64	.67	.55	2.8	.19	.00	.00
17	.88	1.1	.80	.87	.57	.62	.66	.61	3.6	.15	.00	.00
18	.91	.97	.75	.97	.43	.63	.68	.70	7.6	.18	.00	.00
19	.88	1.0	.73	.93	1.3	.62	.65	.60	5.1	.10	.00	.00
20	.91	1.1	.63	.92	2.2	.60	.59	.59	4.9	.08	.00	.00
21	.89	1.2	.63	.87	1.7	.61	.61	.59	4.4	.06	.00	.00
22	.87	1.4	.59	1.3	.85	.59	.65	.62	4.6	.04	.00	.00
23	.88	1.2	.72	1.7	.78	.59	.64	.55	4.1	.03	.00	.00
24	.97	1.0	.69	1.1	.77	.59	.81	.45	4.0	.03	.00	.00
25	1.0	.95	.72	.95	.71	.56	.93	.60	4.0	.00	.00	.00
26	1.0	1.1	.73	1.2	.71	.55	.69	.51	4.1	.00	.00	.00
27	.97	.85	.74	1.4	.70	.54	.67	.79	4.2	.00	.00	.00
28	.88	.79	.78	1.4	.74	.58	.67	4.2	4.4	.00	.00	.00
29	1.0	1.0	.81	1.2	---	.59	.68	5.1	4.6	.00	.00	.00
30	.97	.95	1.0	1.1	---	.56	.72	2.0	4.9	.00	.00	.00
31	1.0	---	.97	1.2	---	.65	---	1.4	---	.00	.00	---
TOTAL	25.14	30.90	24.33	27.39	30.72	20.33	24.32	31.64	118.6	54.91	0.03	0.00
MEAN	.81	1.03	.78	.88	1.10	.66	.81	1.02	3.95	1.77	.001	.000
MAX	1.0	1.4	1.2	1.7	2.2	.85	1.9	5.1	7.6	5.8	.03	.00
MIN	.27	.79	.59	.33	.43	.54	.59	.45	1.3	.00	.00	.00
AC-FT	50	61	48	54	61	40	48	63	235	109	.06	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1993, BY WATER YEAR (WY)

	MEAN	.58	.96	.76	.83	1.36	2.44	3.46	6.79	7.95	3.38	.95	.68
MAX	.81	1.03	.78	.88	1.62	4.22	6.10	12.6	11.9	4.99	1.90	1.36	
(WY)	1993	1993	1993	1993	1992	1992	1992	1992	1992	1992	1992	1992	1992
MIN	.34	.89	.73	.77	1.10	.66	.81	1.02	3.95	1.77	.001	.000	
(WY)	1992	1992	1992	1992	1993	1993	1993	1993	1993	1993	1993	1993	1993

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1992 - 1993

ANNUAL TOTAL	1467.38	388.31	
ANNUAL MEAN	4.01	1.06	2.51
HIGHEST ANNUAL MEAN			3.95
LOWEST ANNUAL MEAN			1.06
HIGHEST DAILY MEAN	41	Mar 28	41
LOWEST DAILY MEAN	.15	Aug 22	.00
ANNUAL SEVEN-DAY MINIMUM	.26	Aug 16	.00
ANNUAL RUNOFF (AC-FT)	2910	770	1820
10 PERCENT EXCEEDS	14	3.1	6.2
50 PERCENT EXCEEDS	1.2	.73	.85
90 PERCENT EXCEEDS	.48	.00	.08

a-Occurred many days.

b-Many days most years.

06720490 FIRST CREEK AT HIGHWAY 2, NEAR ROCKY MOUNTAIN ARSENAL, CO

LOCATION.--Lat 39°52'39", long 104°51'20", in NE1/4SW1/4 sec.14, T.2 S., R.67 W., Adams County, Hydrologic Unit 10190003, military reservation, on left bank 75 ft upstream from Highway 2, near Rocky Mountain Arsenal.

DRAINAGE AREA.--39.0 mi², approximately, from reports of the U.S. Army.

PERIOD OF RECORD.--October 1992 to September 1993. Previous records collected at this site 1986 to September 1992, are in reports of the U.S. Army.

GAGE.--Water-stage recorder and triangular throated flume. Datum of gage is 5,106.41 ft, above sea level.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.55	.66	e.45	e1.3	1.8	1.3	.86	.54	1.0	.00	.00
2	.03	.58	.67	e.45	e1.3	1.7	1.2	.85	.48	1.1	.00	.00
3	.03	.59	.64	e.50	e1.2	1.6	1.5	.75	.50	.98	.00	.00
4	.03	.63	.58	e.46	e1.2	1.5	1.5	.69	.67	.80	.00	.00
5	.03	.60	.55	e.44	e1.4	1.4	1.5	.49	.73	.86	.01	.00
6	.03	.67	.51	e.43	1.5	1.4	1.7	.39	.88	.97	.01	.00
7	.03	.63	.48	e.42	1.5	1.5	1.7	.35	1.2	.97	.01	.00
8	.03	.67	.43	e.43	1.6	1.5	1.6	.37	1.4	.91	.01	.00
9	.03	.72	.41	e.42	1.7	1.5	1.6	.45	1.4	1.0	.00	.00
10	.03	.71	.39	e.41	1.7	1.4	1.4	.42	1.5	.60	.00	.00
11	.03	.67	.48	e.40	1.2	1.3	1.2	.52	1.3	.44	.01	.00
12	.05	.61	.56	e.39	1.2	1.0	1.2	.48	1.5	.51	.01	.00
13	.05	.62	.55	e.37	1.2	1.1	2.4	.41	2.0	.26	.01	.00
14	.05	.70	.51	e.36	1.1	1.4	1.9	.36	2.4	.08	.01	.00
15	.03	.71	.52	e.35	1.1	1.4	1.8	.32	2.3	.01	.01	.00
16	.03	.72	.55	e.35	.94	1.5	1.6	.38	2.0	.00	.30	.00
17	.03	.75	.53	e.36	.84	1.3	1.5	.36	2.2	.00	3.0	.00
18	.05	.77	e.60	e.37	.96	1.2	1.4	.35	3.8	.00	.00	.02
19	.13	.81	e.65	e.38	1.4	1.1	1.3	.28	4.2	.00	.01	.10
20	.32	.87	e.58	e.40	2.5	1.0	1.2	.26	2.9	.00	.01	.00
21	.35	.99	e.56	e.51	2.9	1.0	1.2	.23	2.3	.00	.00	.00
22	.34	.82	e.53	e.70	2.5	.96	1.2	.26	2.0	.00	.00	.00
23	.33	.62	e.51	e1.2	2.3	.91	1.1	.39	1.9	.00	.00	.00
24	.33	.72	e.48	e1.0	1.9	.87	1.4	.27	1.7	.00	.00	.00
25	.35	.67	e.47	e.95	1.7	.86	1.5	.31	1.6	.00	.00	.00
26	.37	.65	e.46	e1.0	1.7	.83	1.3	.29	1.5	.00	.00	.00
27	.39	.60	e.45	e1.2	1.7	.79	1.3	.20	1.4	.00	.00	.00
28	.41	.61	e.45	e1.2	1.8	.87	1.1	.18	1.2	.00	.00	.00
29	.43	.63	e.46	e1.1	---	.92	1.0	.24	1.1	.00	.00	.00
30	.45	.64	e.47	e1.1	---	1.2	.95	.78	.95	.00	.00	.00
31	.53	---	e.47	e1.2	---	1.3	---	.69	---	.00	.00	---
TOTAL	5.35	20.53	16.16	19.30	43.34	38.11	42.55	13.18	49.55	10.49	3.41	0.12
MEAN	.17	.68	.52	.62	1.55	1.23	1.42	.43	1.65	.34	.11	.004
MAX	.53	.99	.67	1.2	2.9	1.8	2.4	.86	4.2	1.1	3.0	.10
MIN	.03	.55	.39	.35	.84	.79	.95	.18	.48	.00	.00	.00
AC-FT	11	41	32	38	86	76	84	26	98	21	6.8	.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1993, BY WATER YEAR (WY)

MEAN	.13	.64	.64	.64	1.94	2.82	3.23	4.07	4.87	2.16	.11	.29
MAX	.17	.68	.76	.66	2.32	4.40	5.05	7.71	8.09	3.99	.11	.57
(WY)	1993	1993	1992	1992	1992	1992	1992	1992	1992	1992	1993	1992
MIN	.083	.60	.52	.62	1.55	1.23	1.42	.43	1.65	.34	.11	.004
(WY)	1992	1992	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993

SUMMARY STATISTICS

FOR 1993 WATER YEAR

WATER YEARS 1992 - 1993

ANNUAL TOTAL	262.09		
ANNUAL MEAN	.72		
HIGHEST ANNUAL MEAN		.72	1993
LOWEST ANNUAL MEAN		.72	1993
HIGHEST DAILY MEAN	4.2	Jun 19	18
LOWEST DAILY MEAN	a.00	Jul 16	b.00
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 16	.00
ANNUAL RUNOFF (AC-FT)	520		520
10 PERCENT EXCEEDS	1.6		5.8
50 PERCENT EXCEEDS	.55		.71
90 PERCENT EXCEEDS	.00		.01

a-Occurred many days.
b-Many days most years.
e-Estimated.

06720500 SOUTH PLATTE RIVER AT HENDERSON, CO

LOCATION.--Lat 39°55'19", long 104°52'00", in SE¹/₄NE¹/₄ sec.34, T.1 S., R.67 W., Adams County, Hydrologic Unit 10190003, on right bank 500 ft upstream from bridge on State Highway 22 and 0.2 mi northwest of Henderson.

DRAINAGE AREA.--4,713 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1926 to current year. Prior to October 1933, monthly discharge only, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1934-36(M). WSP 1730: Drainage area. WDR C0-88-1: 1986.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,003.12 ft above sea level. See WSP 1710 or 1730 for history of changes prior to June 1, 1960. June 1, 1960, to May 10, 1969, water-stage recorder at site 1,200 ft upstream at datum 2.00 ft, higher. May 11 to Oct. 2, 1969, nonrecording gage at site 500 ft downstream at present datum.

REMARKS.--No estimated daily discharges. Records fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, ground-water withdrawals, diversions for irrigation of about 253,000 acres, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199	335	324	253	253	304	484	193	376	754	380	314
2	206	234	304	267	250	311	303	193	400	752	433	394
3	210	232	296	272	253	305	707	196	467	755	502	450
4	199	213	291	267	266	306	378	182	284	774	466	433
5	213	199	276	259	267	335	295	193	231	644	589	340
6	211	166	281	252	256	319	412	206	240	541	567	409
7	211	170	300	259	251	316	648	249	336	443	418	434
8	216	166	302	255	255	321	413	251	240	436	359	585
9	217	175	318	258	245	312	335	219	240	554	336	324
10	211	173	335	264	389	318	257	204	250	528	338	270
11	207	167	321	237	349	324	238	164	240	527	549	257
12	214	166	316	251	402	389	254	149	260	718	381	239
13	218	175	303	276	453	382	752	220	297	732	522	799
14	220	166	296	268	423	353	414	297	366	1600	490	557
15	220	166	296	304	411	353	335	327	393	976	474	228
16	225	171	291	322	400	342	292	426	296	564	397	167
17	226	170	315	327	393	329	239	777	856	524	347	195
18	222	177	292	317	467	337	221	827	2290	555	343	591
19	225	209	296	334	517	316	224	740	976	494	345	415
20	250	255	330	285	498	324	202	741	726	417	378	243
21	334	340	300	301	450	316	178	313	729	381	470	185
22	338	321	299	340	417	299	171	494	807	436	444	164
23	259	369	288	311	381	286	171	478	800	432	370	164
24	251	500	261	274	285	278	410	427	699	481	338	160
25	240	436	248	279	286	282	307	444	563	371	365	152
26	280	433	239	278	294	351	220	424	461	371	390	153
27	250	423	250	266	291	265	231	354	415	358	357	153
28	245	433	259	264	295	289	202	295	559	389	343	145
29	245	466	232	254	---	356	202	314	683	343	331	152
30	240	381	262	252	---	494	197	290	794	377	345	154
31	255	---	266	259	---	543	---	364	---	373	343	---
TOTAL	7257	7987	8987	8605	9697	10355	9692	10951	16274	17600	12710	9226
MEAN	234	266	290	278	346	334	323	353	542	568	410	308
MAX	338	500	335	340	517	543	752	827	2290	1600	589	799
MIN	199	166	232	237	245	265	171	149	231	343	331	145
AC-FT	14390	15840	17830	17070	19230	20540	19220	21720	32280	34910	25210	18300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1993, BY WATER YEAR (WY)

	MEAN	350	333	299	318	329	393	545	1160	1129	751	645	372
MAX	1835	1268	554	592	642	842	1732	3923	4173	2386	2074	1141	
(WY)	1985	1985	1984	1984	1984	1983	1983	1980	1983	1983	1984	1984	
MIN	144	173	177	155	156	118	140	324	334	358	279	157	
(WY)	1978	1978	1976	1977	1977	1982	1982	1986	1981	1981	1977	1977	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1976 - 1993
ANNUAL TOTAL	149705	129341	
ANNUAL MEAN	409	354	^a 553
HIGHEST ANNUAL MEAN			1379
LOWEST ANNUAL MEAN			252
HIGHEST DAILY MEAN	5330	2290	^b 6030
LOWEST DAILY MEAN	^c 166	145	^d 27
ANNUAL SEVEN-DAY MINIMUM	169	153	69
INSTANTANEOUS PEAK FLOW		4260	^e 12300
INSTANTANEOUS PEAK STAGE		6.88	^f 7.58
ANNUAL RUNOFF (AC-FT)	296900	256500	400800
10 PERCENT EXCEEDS	629	554	1070
50 PERCENT EXCEEDS	369	311	339
90 PERCENT EXCEEDS	200	198	176

a-Average discharge for 48 years (water years 1927-74), 366 ft³/s; 265200 acre-ft/yr, prior to completion of Chatfield Dam.

b-Maximum daily discharge for period of record, 13200 ft³/s, May 7, 1973.

c-Also occurred Nov 8, 12, 14, and 15.

d-Minimum daily discharge for period of record, 4.4 ft³/s, Apr 1, 1950.

e-Maximum discharge and stage for period of record, 33000 ft³/s, May 6, 1973, gage height, 11.67 ft, from rating curve extended above 7200 ft³/s, partly on basis of flow-over-road measurement of peak flow; maximum gage height, 12.93 ft, Jun 17, 1965, site and datum then in use.

f-Maximum gage height for statistical period, 9.50 ft, Jun 9, 1987.

06720500 SOUTH PLATTE RIVER AT HENDERSON, CO--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1955 to September 1957, June 1962 to September 1973. Established as NASQAN station in 1988 water year. April 18, 1988, to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCOCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CACO3)
NOV 09...	1305	158	1110	8.0	12.5	2.5	9.2	K130	K63	250
JAN 13...	1330	224	1080	8.0	5.0	12	9.3	K53	150	230
MAR 22...	1300	302	1020	8.0	12.0	5.5	--	K130	K10	230
JUN 02...	1115	350	782	7.7	18.0	13	9.5	410	330	170
JUL 27...	0940	278	801	7.7	19.5	1.1	6.0	580	210	190
SEP 21...	1235	145	887	7.7	17.5	3.4	7.0	K210	260	220

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR-A BONATE WATER WH FET FIELD (MG/L AS HCO3)	CAR-B BONATE WATER WH FET FIELD (MG/L AS CO3)	ALKA-C LINITY WAT WH TOT FET FIELD (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
NOV 09...	74	16	110	3	10	260	0	211	200
JAN 13...	68	15	110	3	12	230	0	186	180
MAR 22...	67	14	99	3	9.9	230	0	187	170
JUN 02...	51	11	76	3	8.0	170	0	136	140
JUL 27...	58	12	79	2	7.9	270	0	218	140
SEP 21...	68	13	92	3	9.2	180	0	148	170

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)
NOV 09...	24	1.0	12	660	613	0.90	282	0.51	5.3
JAN 13...	94	1.2	13	638	643	0.87	386	0.37	--
MAR 22...	82	1.0	8.8	594	603	0.81	484	0.46	--
JUN 02...	61	1.1	11	465	469	0.63	439	0.55	--
JUL 27...	59	1.0	11	494	531	0.67	371	0.58	--
SEP 21...	72	1.0	13	553	561	0.75	216	0.36	--

A-Field dissolved bicarbonate, determined by incremental titration method
B-Field dissolved carbonate, determined by incremental titration method.
C-Field total dissolved alkalinity, determined by incremental titration method.
K-Based on non-ideal colony count.

PLATTE RIVER BASIN

06720500 SOUTH PLATTE RIVER AT HENDERSON, CO.--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
NOV 09...	5.3	4.5	4.6	1.1	5.6	11	2.5	2.5	2.3
JAN 13...	5.1	--	6.0	2.2	8.2	13	3.0	2.5	2.2
MAR 22...	5.4	--	5.4	1.5	6.9	12	2.8	2.3	2.5
JUN 02...	4.0	--	4.0	2.0	6.0	10	2.6	1.8	1.7
JUL 27...	5.2	--	3.3	1.2	4.5	9.7	1.8	1.9	1.7
SEP 21...	5.4	--	1.7	0.8	2.5	7.9	2.0	1.7	1.7

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
NOV 09...	1305	<10	29	<3	32	27	310
JAN 13...	1330	--	--	--	--	--	--
MAR 22...	1300	30	28	<3	32	19	200
JUN 02...	1115	<10	28	<3	38	15	200
JUL 27...	0940	--	--	--	--	--	--
SEP 21...	1235	<10	33	<3	26	21	270

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
NOV 09...	10	5	3	<1	660	<6
JAN 13...	--	--	--	--	--	--
MAR 22...	30	16	3	<1	560	<6
JUN 02...	20	3	2	<1	450	<6
JUL 27...	--	--	--	--	--	--
SEP 21...	20	4	2	<1	560	<6

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 09...	1305	158	4	1.8
JAN 13...	1330	224	22	14
MAR 22...	1300	302	11	8.6
JUN 02...	1115	350	22	21
JUL 27...	0940	278	10	7.7
SEP 21...	1235	145	15	5.8

06720820 BIG DRY CREEK AT WESTMINSTER, CO

LOCATION.--Lat 39°54'20", long 105°02'04", NE¹/4SE¹/4 sec.6, T.2 S., R.68 W., Adams County, Hydrologic Unit 10190003, on left bank 0.75 mi upstream from bridge on 120th Ave and 5.2 mi downstream from outlet of Standley Lake.

DRAINAGE AREA.--43.8 mi².

PERIOD OF RECORD.--July 1987 to current year.

REVISED RECORDS.--WDR CO-91-1: Drainage area.

GAGE.--Water-stage recorder and concrete and wooden control. Elevation of gage is 5,215 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 23 to Nov. 4, Nov. 18, 19, 20-23, Nov. 30 to Dec. 2, Dec. 9-13, 16-21, Jan. 22-30, Feb. 19-22, June 18 to July 7, and Sept. 5-16. Records fair except for estimated daily discharges, which are poor. Flow affected by storage diversions, ground-water withdrawals and diversions for irrigation and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	1.9	1.8	1.1	2.1	4.2	5.0	2.2	31	85	22	42
2	2.0	2.0	1.7	1.2	2.0	4.0	3.7	2.1	39	74	23	40
3	2.1	1.9	1.7	1.3	2.0	3.9	16	2.0	40	69	24	31
4	2.1	1.8	1.7	1.2	1.8	4.1	6.1	1.9	34	64	29	27
5	1.9	1.6	1.5	1.2	1.9	4.1	8.7	1.9	32	62	24	27
6	1.8	1.5	1.4	1.2	2.0	4.3	4.7	2.1	26	54	22	32
7	1.7	1.5	1.6	1.2	2.0	4.6	6.2	2.1	31	52	21	34
8	1.9	1.4	1.4	1.1	2.3	3.1	3.0	1.8	19	14	22	35
9	1.9	1.4	1.5	1.0	2.3	1.7	2.8	1.6	23	14	21	30
10	1.8	1.4	1.6	1.0	3.7	1.1	3.2	1.4	20	13	23	28
11	1.8	1.4	1.7	1.0	4.3	1.5	3.2	6.5	20	17	23	28
12	2.1	1.4	1.8	1.0	4.3	2.5	3.3	51	21	19	21	26
13	2.2	1.4	1.8	1.1	3.9	2.1	14	33	25	19	19	30
14	2.2	1.3	1.9	1.1	3.8	1.5	5.3	38	33	32	19	27
15	2.4	1.2	2.1	1.0	3.4	1.4	4.8	41	34	11	19	27
16	2.2	1.2	2.2	1.0	3.6	1.1	4.3	47	36	9.9	21	15
17	2.2	1.2	2.3	1.0	3.7	1.2	3.7	51	54	9.6	29	3.5
18	2.2	1.2	2.4	1.0	3.7	1.1	3.2	41	90	11	40	5.3
19	2.1	1.4	2.6	1.0	4.2	1.1	2.7	34	72	13	41	7.1
20	2.0	1.4	2.7	1.0	5.8	1.0	2.3	38	74	16	41	4.4
21	2.0	1.5	2.8	1.2	7.3	1.1	2.1	37	82	14	42	3.1
22	2.0	1.6	2.9	1.5	6.8	.95	2.1	34	86	15	41	2.3
23	2.1	1.7	3.3	2.3	5.1	.84	2.1	34	90	14	39	2.0
24	2.1	1.8	4.4	2.1	5.4	.87	6.9	38	94	13	37	2.0
25	2.2	1.8	3.1	2.1	5.4	.88	5.3	37	98	12	36	1.8
26	2.1	1.8	2.1	2.1	5.1	.91	4.4	28	100	15	32	1.5
27	2.1	1.7	1.6	2.1	5.1	.89	3.8	28	110	19	35	2.6
28	2.0	1.9	1.4	2.1	4.8	1.0	3.1	28	100	15	41	2.4
29	1.9	1.9	1.2	2.1	---	2.1	2.9	30	90	21	40	1.5
30	1.9	1.9	1.2	2.1	---	9.4	2.5	25	86	18	46	1.7
31	1.9	---	1.2	2.1	---	7.3	---	25	---	19	47	---
TOTAL	63.0	47.1	62.6	43.5	107.8	75.84	141.4	743.6	1690	833.5	940	520.2
MEAN	2.03	1.57	2.02	1.40	3.85	2.45	4.71	24.0	56.3	26.9	30.3	17.3
MAX	2.4	2.0	4.4	2.3	7.3	9.4	16	51	110	85	47	42
MIN	1.7	1.2	1.2	1.0	1.8	.84	2.1	1.4	19	9.6	19	1.5
AC-FT	125	93	124	86	214	150	280	1470	3350	1650	1860	1030

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1993, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992	1993	1988	1989	1990	1991	1992	1993
MEAN	4.19	2.47	1.43	1.42	1.84	5.72	6.06	19.5	44.0	29.3	30.8	16.7
MAX	9.95	4.54	2.02	2.17	3.85	16.2	12.6	26.9	66.4	53.4	42.3	30.4
(WY)	1988	1988	1993	1992	1993	1992	1992	1988	1988	1988	1988	1991
MIN	1.55	1.33	1.14	1.00	1.00	1.30	1.52	9.98	13.0	19.5	24.0	6.61
(WY)	1989	1989	1991	1988	1988	1989	1989	1989	1989	1990	1992	1989

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1988 - 1993
ANNUAL TOTAL	4999.0	5268.54	
ANNUAL MEAN	13.7	14.4	13.7
HIGHEST ANNUAL MEAN			18.2 1988
LOWEST ANNUAL MEAN			7.72 1989
HIGHEST DAILY MEAN	120 Aug 24	110 Jun 27	127 Jun 23 1988
LOWEST DAILY MEAN	a 1.1 Mar 1	.84 Mar 23	b .60 Dec 21 1989
ANNUAL SEVEN-DAY MINIMUM	1.2 Feb 26	c .91 Mar 22	d .61 Dec 24 1990
INSTANTANEOUS PEAK FLOW			273 Jun 1 1991
INSTANTANEOUS PEAK STAGE		d 4.95 Jun 18	e 4.63 Jun 1 1991
ANNUAL RUNOFF (AC-FT)	9920	10450	9900
10 PERCENT EXCEEDS	35	40	41
50 PERCENT EXCEEDS	3.7	3.2	2.6
90 PERCENT EXCEEDS	1.5	1.2	1.1

a-Also occurred Mar 2, 3.

b-Also occurred Dec 22, 1989 and Dec 24-26, 1990.

c-Unknown, backwater from debris.

d-Backwater from debris.

e-Maximum gage height, 4.95 ft, Jun 18, 1993, backwater from debris.

06720990 BIG DRY CREEK AT MOUTH NEAR FORT LUPTON, CO

LOCATION.--Lat 40°04'09", long 104°49'52", in NE¹/4SE¹/4 sec.12, T.1 N., R.67 W., Weld County, Hydrologic Unit 10190003, on left bank 1.0 mi west of State Highway 85, 1.1 mi south of State Highway 52, and 25 mi northeast of Denver.

DRAINAGE AREA.--107 mi².

PERIOD OF RECORD.--October 1991 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,900 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 5, and Dec. 8 to Mar. 29. Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by storage reservoirs, diversions for irrigation, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	43	24	24	26	22	21	34	15	51	57	36
2	43	43	22	25	25	22	19	37	13	46	58	44
3	38	42	22	27	25	22	20	39	22	48	59	74
4	33	43	23	20	24	23	35	28	28	54	61	67
5	37	35	24	19	23	23	28	17	25	50	59	55
6	38	29	25	21	23	24	28	11	16	40	73	52
7	53	23	26	21	22	25	24	21	21	29	31	54
8	75	22	26	19	24	25	20	34	29	21	35	97
9	78	21	27	19	25	26	18	29	17	25	41	81
10	73	20	27	16	24	27	20	28	18	27	38	69
11	70	19	28	15	22	25	35	12	11	26	49	62
12	66	19	29	16	21	23	38	2.6	7.9	35	46	42
13	69	19	27	15	20	17	45	1.1	9.1	72	51	66
14	73	18	22	16	21	16	51	1.7	13	118	47	149
15	75	15	21	17	22	18	49	24	14	108	42	98
16	64	8.3	25	20	18	19	47	41	13	64	38	70
17	33	8.2	20	22	15	18	45	48	19	57	34	68
18	24	11	18	25	16	16	51	69	161	58	40	74
19	24	14	21	23	18	15	52	48	148	53	37	124
20	26	14	17	22	20	14	52	47	65	43	43	85
21	33	15	19	24	24	14	52	21	52	37	52	62
22	26	20	20	25	24	13	52	19	30	44	54	69
23	24	19	23	26	23	12	53	47	31	42	44	67
24	27	37	23	24	22	13	53	28	70	48	38	61
25	19	22	23	23	22	13	52	32	50	42	38	58
26	21	25	26	24	19	13	52	30	32	39	41	56
27	38	44	25	25	21	12	53	19	24	63	38	53
28	37	62	26	26	22	13	51	12	25	60	36	49
29	34	57	25	25	---	12	38	14	45	50	35	40
30	36	40	23	24	---	13	23	12	50	52	35	27
31	38	---	22	23	---	23	---	13	---	53	38	---
TOTAL	1383	807.5	729	671	611	571	1177	819.4	1074.0	1555	1388	2009
MEAN	44.6	26.9	23.5	21.6	21.8	18.4	39.2	26.4	35.8	50.2	44.8	67.0
MAX	78	62	29	27	26	27	53	69	161	118	73	149
MIN	19	8.2	17	15	15	12	18	1.1	7.9	21	31	27
AC-FT	2740	1600	1450	1330	1210	1130	2330	1630	2130	3080	2750	3980

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1993, BY WATER YEAR (WY)

	MEAN	37.4	28.4	23.5	22.1	21.7	34.2	46.0	36.1	45.5	42.0	48.1	55.0
MAX	44.6	29.9	23.5	22.6	21.8	50.1	52.8	45.8	55.3	50.2	51.5	67.0	
(WY)	1993	1992	1992	1992	1993	1992	1992	1992	1992	1993	1992	1993	
MIN	30.2	26.9	23.5	21.6	21.6	18.4	39.2	26.4	35.8	33.8	44.8	43.1	
(WY)	1992	1993	1993	1993	1992	1993	1993	1993	1993	1992	1993	1992	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1992 - 1993

ANNUAL TOTAL	14397.7	12794.9	
ANNUAL MEAN	39.3	35.1	36.7
HIGHEST ANNUAL MEAN			38.4
LOWEST ANNUAL MEAN			35.1
HIGHEST DAILY MEAN	338	Aug 25	338
LOWEST DAILY MEAN	2.3	Sep 5	1.1
ANNUAL SEVEN-DAY MINIMUM	3.6	Sep 3	3.6
INSTANTANEOUS PEAK FLOW			341
INSTANTANEOUS PEAK STAGE			7.38
ANNUAL RUNOFF (AC-FT)	28560	25380	26600
10 PERCENT EXCEEDS	74	62	67
50 PERCENT EXCEEDS	27	26	28
90 PERCENT EXCEEDS	17	15	16

06721500 NORTH ST VRAIN CREEK NEAR ALLENS PARK, CO

LOCATION.--Lat. 40°13'08", long 105°31'40", in SW1/4SE1/4 sec.14, T.3 N., R.73 W., Boulder County, Hydrologic Unit 10190005, on left bank 64 ft upstream from bridge on Colorado Highway 7, 0.8 mi upstream from Horse Creek, and 1.7 mi north of Allens Park.

DRAINAGE AREA.--32.6 mi².

PERIOD OF RECORD.--October 1925 to September 1930. October 1986 to current year.

REVISIONS.--WDR CO-91-1: 1987, 1988, 1989 (M).

GAGE.--Water stage recorder with satellite telemetry. Elevation of gage is 8,280 ft above sea level, from topographic map. Oct. 1, 1926 to June 6, 1929, water-stage recorder at present site at different datum. June 6, 1929 to Sept. 30, 1930 at site 300 ft downstream at different datum.

REMARKS.--Estimated daily discharges: Nov. 3-15, Nov. 21 to Mar. 20, Mar. 22-23, 28, Mar. 31 to Apr. 1, Apr. 8-9, 13-15. Records good except for estimated daily discharges, which are poor. No diversions upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	9.5	8.0	7.6	7.8	5.6	7.0	20	283	283	119	40
2	15	9.5	8.0	7.6	8.0	5.7	7.1	19	267	269	114	46
3	14	9.6	7.6	7.6	8.0	5.8	7.4	25	248	272	107	41
4	14	9.4	7.4	7.8	7.8	5.8	7.9	37	168	229	97	36
5	13	9.4	7.4	7.8	7.6	5.8	8.6	44	152	172	104	37
6	13	9.4	7.4	7.8	7.6	5.8	8.8	37	169	140	105	41
7	13	9.4	7.4	7.8	7.6	5.8	9.6	35	191	129	96	61
8	13	9.4	7.4	7.7	7.5	5.8	9.5	28	144	142	91	60
9	12	9.2	7.3	7.4	7.6	5.9	9.4	25	129	160	88	49
10	12	9.6	7.2	7.4	7.7	6.0	9.2	25	123	171	90	45
11	12	9.0	7.2	7.4	7.4	6.0	9.1	37	145	186	97	43
12	11	9.1	7.2	7.5	7.2	5.8	9.1	46	193	191	95	41
13	11	9.1	7.5	7.4	7.0	5.6	9.4	57	247	194	82	61
14	10	9.2	7.3	7.6	6.6	5.5	9.3	84	264	211	74	60
15	10	9.4	7.1	7.7	6.4	5.5	9.2	96	286	220	71	52
16	9.9	9.3	7.0	7.9	6.2	5.4	9.0	115	288	192	67	49
17	9.8	9.0	6.8	8.2	6.0	5.5	9.5	118	327	170	64	53
18	9.4	8.8	6.6	8.0	6.0	5.6	9.9	112	388	161	64	57
19	9.6	8.8	6.6	8.1	5.8	5.6	10	114	273	152	63	58
20	9.6	8.9	6.6	8.1	5.8	5.7	11	127	267	152	61	49
21	9.8	9.0	6.7	8.0	5.6	5.7	11	152	319	157	64	46
22	9.8	8.8	6.8	7.8	5.6	6.0	11	167	340	141	66	43
23	9.6	9.3	7.0	7.9	5.6	6.4	13	143	334	133	60	41
24	9.3	9.0	7.1	8.0	5.6	6.8	13	134	283	126	56	39
25	9.4	8.4	7.1	8.2	5.6	6.9	12	155	224	112	54	37
26	10	8.0	7.1	8.3	5.6	7.2	13	176	235	114	60	36
27	10	8.4	7.1	8.3	5.6	7.0	17	185	265	121	58	33
28	10	8.2	7.2	8.2	5.6	6.9	20	234	289	117	50	31
29	10	8.0	7.3	8.1	---	6.7	23	249	308	116	45	30
30	10	8.0	7.5	8.0	---	6.6	25	208	314	126	44	28
31	10	---	7.6	8.0	---	6.9	---	231	---	127	42	---
TOTAL	344.2	270.1	223.5	243.2	186.4	187.3	338.0	3235	7463	5186	2348	1343
MEAN	11.1	9.00	7.21	7.85	6.66	6.04	11.3	104	249	167	75.7	44.8
MAX	15	9.6	8.0	8.3	8.0	7.2	25	249	388	283	119	61
MIN	9.3	8.0	6.6	7.4	5.6	5.4	7.0	19	123	112	42	28
AC-FT	683	536	443	482	370	372	670	6420	14800	10290	4660	2660

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 1993, BY WATER YEAR (WY)

	MEAN	18.5	12.6	8.40	6.91	5.98	7.01	17.4	97.5	219	136	69.0	34.1
MAX	35.2	18.5	11.8	9.00	8.00	9.00	30.4	134	294	220	126	76.3	
(WY)	1930	1930	1926	1926	1926	1929	1930	1926	1926	1928	1930	1929	
MIN	10.7	8.16	6.69	5.60	4.00	5.45	8.92	70.7	141	76.0	34.0	15.9	
(WY)	1989	1989	1989	1988	1930	1992	1991	1990	1987	1987	1988	1988	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1926 - 1993	
ANNUAL TOTAL	14590.7		21367.7			
ANNUAL MEAN	39.9		58.5		52.9	
HIGHEST ANNUAL MEAN					67.9	
LOWEST ANNUAL MEAN					40.0	
HIGHEST DAILY MEAN	226		388		433	
LOWEST DAILY MEAN	4.4		5.4		4.0	
ANNUAL SEVEN-DAY MINIMUM	4.6		5.5		4.0	
INSTANTANEOUS PEAK FLOW			457		1000	
INSTANTANEOUS PEAK STAGE			6.36		6.36	
ANNUAL RUNOFF (AC-FT)	28940		42380		38310	
10 PERCENT EXCEEDS	128		188		162	
50 PERCENT EXCEEDS	12		10		16	
90 PERCENT EXCEEDS	5.8		6.4		6.0	

a-Maximum discharge, estimated, caused by failure of Copeland Dam 0.5 mi upstream, gage height not determined.
b-Maximum gage height recorded.

06724000 ST VRAIN CREEK AT LYONS, CO

LOCATION.--Lat 40°13'05", long 105°15'34", in NW¹/4NW¹/4 sec.20, T.3 N., R.70 W., Boulder County, Hydrologic Unit 10190005, on left bank 75 ft southwest of U.S. Highway 36 (State Highways 7 and 66) at southeast edge of Lyons, 400 ft upstream from St. Vrain Supply Canal, and 0.4 mi downstream from confluence of North and South St. Vrain Creeks.

DRAINAGE AREA.--212 mi².

PERIOD OF RECORD.--Streamflow records, August 1887 to September 1891, June 1895 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "near Lyons" 1901, 1903. Water-quality data available, October 1977 to February 1981.

REVISED RECORDS.--WSP 1310: 1898, 1900. WSP 1730: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,292 ft above sea level, from topographic map. Prior to Apr. 6, 1923, nonrecording gages near present site at different datums. Apr. 6, 1923, to Sept. 30, 1956, water-stage recorder at same site at datum 1.00 ft, higher.

REMARKS.--Estimated daily discharge: Dec. 12. Records good. Diversions upstream from station for irrigation of about 2,000 acres. Flow partly regulated by small reservoirs upstream from station.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Outstanding floods occurred in June 1864 and May 1876. Flood in May or June 1894 reached a stage of 9.13 ft, from information by local resident, discharge, about 9,800 ft³/s. For discussions of these floods, see WSP 997.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	23	26	19	24	20	40	102	536	513	217	55
2	19	22	26	19	23	20	44	73	536	460	210	55
3	20	21	26	19	25	20	45	62	524	445	208	54
4	19	20	23	16	26	18	46	75	458	420	185	43
5	19	22	23	15	24	17	47	100	416	343	188	47
6	24	21	24	15	23	18	59	114	385	273	205	57
7	22	18	25	17	24	20	64	122	395	231	188	66
8	16	18	24	18	26	20	60	113	298	243	175	82
9	20	18	24	17	25	18	56	116	266	288	160	80
10	21	20	24	20	25	18	58	114	243	298	168	74
11	18	18	25	23	21	19	55	129	240	320	184	73
12	18	16	23	22	20	17	63	136	285	346	196	70
13	24	18	24	21	21	20	77	131	389	346	183	96
14	15	20	22	20	21	20	83	147	486	370	172	102
15	25	20	22	20	21	20	86	166	567	397	164	93
16	29	20	20	20	18	19	88	233	560	380	140	88
17	27	18	17	19	21	20	84	285	681	333	118	89
18	25	20	18	22	22	19	89	269	452	301	111	96
19	23	21	16	19	22	20	101	257	319	273	108	97
20	22	23	15	19	21	21	101	278	288	262	111	102
21	14	26	17	21	20	22	91	336	304	279	113	106
22	13	27	17	23	19	22	86	354	414	268	113	105
23	25	28	16	22	20	24	78	356	694	243	110	89
24	29	25	16	21	19	24	95	336	603	232	107	73
25	26	24	16	24	19	24	92	354	480	203	114	63
26	28	25	17	22	17	27	84	371	432	192	123	49
27	25	25	17	23	17	31	89	410	501	205	122	46
28	30	25	17	23	18	34	107	488	537	209	106	44
29	30	25	17	22	---	35	108	572	515	198	87	40
30	30	25	18	22	---	35	109	531	546	207	80	42
31	25	---	17	22	---	36	---	506	---	229	66	---
TOTAL	704	652	632	625	602	698	2285	7636	13350	9307	4532	2176
MEAN	22.7	21.7	20.4	20.2	21.5	22.5	76.2	246	445	300	146	72.5
MAX	30	28	26	24	26	36	109	572	694	513	217	106
MIN	13	16	15	15	17	17	40	62	240	192	66	40
AC-FT	1400	1290	1250	1240	1190	1380	4530	15150	26480	18460	8990	4320

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1896 - 1993, BY WATER YEAR (WY)

	MEAN	38.7	24.0	16.8	13.7	13.2	19.3	90.2	291	520	291	134	67.3
MAX	189	137	70.0	59.0	56.0	76.0	347	773	1096	701	299	263	
(WY)	1896	1924	1903	1903	1903	1903	1926	1980	1969	1907	1899	1938	
MIN	3.64	4.65	4.20	3.35	2.31	2.42	14.1	94.5	148	80.6	41.1	21.9	
(WY)	1957	1940	1945	1932	1990	1964	1966	1977	1954	1934	1934	1934	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1896 - 1993

ANNUAL TOTAL	34019	43199		
ANNUAL MEAN	92.9	118		
HIGHEST ANNUAL MEAN			127	
LOWEST ANNUAL MEAN			222	1907
HIGHEST DAILY MEAN			46.3	1954
LOWEST DAILY MEAN	530	Jun 12	694	Jun 23
ANNUAL SEVEN-DAY MINIMUM	a11	Jan 21	13	Oct 22
INSTANTANEOUS PEAK FLOW	13	Feb 25	16	Dec 19
INSTANTANEOUS PEAK STAGE			818	Jun 17
ANNUAL RUNOFF (AC-FT)	67480		4.95	Jun 17
10 PERCENT EXCEEDS	267		85690	
50 PERCENT EXCEEDS	37		355	
90 PERCENT EXCEEDS	16		40	
			18	
				9.0

a-Also occurred Jan 22, and Mar 2.

b-Also occurred Jan 20, 1922 and Jan 12-13, 1950.

06725450 ST VRAIN CREEK BELOW LONGMONT, CO

LOCATION.--Lat 40°09'30", long 105°00'48", in NW¹/4NW¹/4 sec.9, T.2 N., R.68 W., Weld County, Hydrologic Unit 10190005, on left bank 1,750 ft upstream from mouth of Boulder Creek, 1.8 mi downstream from Spring Gulch, and 4.7 mi southeast of Longmont.

DRAINAGE AREA.--424 mi².

PERIOD OF RECORD.--October 1976 to September 1982, August 1984 to current year. Water-quality data available, October 1976 to February 1981.

GAGE.--Water-stage recorder. Elevation of gage is 4,852 ft, above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 11 to Feb. 1, Feb. 16, 18, and July 1-26. Records fair. Natural flow of stream affected by storage reservoirs, diversions for irrigation, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	51	45	42	50	36	42	43	156	160	150	168
2	66	51	44	44	49	37	41	39	113	155	150	162
3	66	53	40	45	55	35	44	40	145	150	148	165
4	66	52	44	45	54	33	37	45	106	160	158	161
5	71	50	42	48	50	36	37	50	102	170	196	163
6	70	50	43	47	50	33	44	57	108	150	206	180
7	70	47	46	41	50	32	40	64	139	130	181	173
8	66	46	42	42	53	30	41	60	131	160	172	162
9	64	47	43	45	53	31	39	52	121	190	165	153
10	61	47	42	48	57	32	37	52	127	190	168	151
11	64	49	42	47	52	48	35	51	132	220	176	151
12	63	52	44	48	51	48	49	51	166	250	174	154
13	62	49	43	48	49	45	83	56	188	240	171	191
14	61	48	42	47	47	47	59	55	362	300	169	146
15	61	45	44	50	46	47	51	56	387	290	176	126
16	60	47	44	45	47	47	46	67	372	250	174	109
17	60	46	40	51	47	46	44	78	471	220	165	114
18	58	46	43	45	43	45	40	83	712	190	163	179
19	52	46	42	52	41	47	40	81	269	170	162	142
20	51	48	42	60	47	42	42	81	194	135	168	117
21	48	52	41	58	43	40	39	88	189	140	166	106
22	50	47	42	50	40	40	44	116	194	170	173	100
23	52	47	42	45	38	39	42	123	554	160	176	100
24	51	46	47	48	42	38	46	128	499	170	166	94
25	50	45	42	52	37	37	43	130	319	150	165	90
26	54	44	45	51	36	38	44	136	186	154	171	86
27	54	45	42	49	35	38	44	103	183	144	180	90
28	54	43	42	48	35	39	44	101	210	150	178	85
29	54	44	43	48	---	36	54	121	200	146	171	77
30	54	43	43	49	---	58	46	157	167	142	170	83
31	53	---	42	50	---	49	---	128	---	145	171	---
TOTAL	1835	1426	1328	1488	1297	1249	1337	2492	7202	5551	5279	3978
MEAN	59.2	47.5	42.8	48.0	46.3	40.3	44.6	80.4	240	179	170	133
MAX	71	53	47	60	57	58	83	157	712	300	206	191
MIN	48	43	40	41	35	30	35	39	102	130	148	77
AC-FT	3640	2830	2630	2950	2570	2480	2650	4940	14290	11010	10470	7890

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1993, BY WATER YEAR (WY)

	MEAN	67.6	57.5	50.8	45.2	44.9	51.4	81.4	214	296	154	148	97.8
MAX	159	126	91.5	92.8	94.0	111	259	1155	690	217	185	152	
(WY)	1985	1985	1985	1980	1980	1980	1980	1980	1979	1986	1986	1982	
MIN	45.5	34.5	30.8	25.7	27.9	28.9	27.5	35.8	63.3	100	88.9	53.7	
(WY)	1990	1979	1979	1978	1978	1982	1982	1977	1981	1981	1977	1977	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1976 - 1993
ANNUAL TOTAL	36041	34462	
ANNUAL MEAN	98.5	94.4	109
HIGHEST ANNUAL MEAN			235
LOWEST ANNUAL MEAN			54.8
HIGHEST DAILY MEAN	514	712	1940
LOWEST DAILY MEAN	a 34	30	20
ANNUAL SEVEN-DAY MINIMUM	34	32	22
INSTANTANEOUS PEAK FLOW		1250	2380
INSTANTANEOUS PEAK STAGE		b 4.87	b 6.37
ANNUAL RUNOFF (AC-FT)	71490	68360	78990
10 PERCENT EXCEEDS	206	176	194
50 PERCENT EXCEEDS	68	52	66
90 PERCENT EXCEEDS	38	40	34

a-Also occurred Feb 8-10.

b-Maximum gage height, 11.45 ft, Jan 13, 1993, backwater from ice.

06725500 MIDDLE BOULDER CREEK AT NEDERLAND, CO

LOCATION.--Lat 39°57'42", long 105°30'14", in NE¹/4SE¹/4 sec.13, T.1 S., R.73 W., Boulder County, Hydrologic Unit 10190005, on left bank at Nederland just downstream from North Beaver Creek and 1,000 ft upstream from Barker Reservoir.

DRAINAGE AREA.--36.2 mi².

PERIOD OF RECORD.--June 1907 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1730: Drainage area.

GAGE.--Water-stage recorder and compound sharp-crested weir. Datum of gage is 8,186.0 ft above sea level, Public Service Co. datum. Prior to Mar. 18, 1909, at datum 4.0 ft, lower. Mar. 18, 1909 to Apr. 23, 1952, at datum 2.5 ft, lower than present datum.

REMARKS.--Estimated daily discharges: Nov. 11-12, 21-22, Dec. 20-22, Jan. 4-11, 13, 24-25, Feb. 13-16, 21-23, Mar. 23, 30-31, and Sept. 3-13. Records good except for estimated daily discharges, which are fair. No diversion above station. Flow regulated at times by Jasper Lake, capacity, 326 acre-ft. North Beaver Creek entered Middle Boulder Creek downstream from station June 1 to Dec. 31, 1907, March 1911 to Dec. 31, 1916.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	10	8.9	6.2	4.9	4.9	7.1	31	279	269	104	37
2	13	9.3	8.5	5.7	4.7	4.5	6.5	28	259	249	101	36
3	12	8.9	8.1	5.5	4.7	5.1	6.8	31	227	239	92	45
4	12	11	7.5	5.3	4.7	4.5	7.5	43	167	208	82	66
5	13	12	7.1	5.0	4.7	4.5	7.9	53	143	171	90	64
6	18	11	7.2	4.7	4.7	4.5	8.5	50	145	136	85	61
7	45	11	8.5	4.5	4.8	4.9	8.1	48	162	126	69	61
8	42	10	8.3	4.5	4.9	5.3	8.3	42	124	141	65	62
9	38	10	7.9	4.7	5.1	4.9	8.7	39	104	160	64	56
10	34	10	7.3	4.7	5.1	4.9	9.3	36	99	174	68	51
11	29	10	7.1	4.9	5.3	5.5	9.3	43	120	192	78	45
12	21	10	6.7	4.9	5.4	5.7	9.5	57	145	194	77	42
13	13	9.8	6.3	4.9	5.3	7.5	10	77	187	192	66	42
14	12	9.1	6.1	4.9	5.1	5.3	9.3	99	237	187	62	42
15	11	8.7	5.9	5.1	5.0	4.7	9.3	116	264	187	57	41
16	11	8.3	5.9	4.9	5.1	4.5	9.3	147	254	169	54	40
17	11	8.0	5.7	5.1	5.9	5.1	10	185	294	154	53	39
18	10	7.9	5.7	5.3	5.7	5.4	12	171	312	149	53	42
19	11	9.3	5.7	5.3	5.5	5.3	12	171	237	149	54	42
20	10	9.3	5.9	5.3	5.5	5.7	12	208	242	134	53	38
21	10	9.3	6.7	5.3	5.3	5.7	12	237	266	130	53	36
22	9.5	9.3	7.5	5.3	5.5	5.3	14	263	284	116	53	35
23	9.1	9.3	7.5	5.3	5.3	5.3	20	244	284	110	50	34
24	8.5	8.9	6.7	5.1	5.3	5.8	20	237	246	101	47	32
25	9.4	8.5	6.1	5.1	5.3	6.9	17	262	215	86	45	31
26	12	8.7	5.7	5.1	5.4	7.3	20	253	225	95	48	29
27	12	8.9	6.7	4.9	5.3	7.1	26	269	239	101	46	28
28	11	9.5	8.1	4.9	5.1	7.5	31	297	244	95	42	26
29	12	9.3	7.7	4.7	---	6.8	34	282	266	92	41	26
30	12	8.9	7.1	4.9	---	6.9	35	256	279	95	40	25
31	11	---	6.7	4.9	---	6.9	---	276	---	106	40	---
TOTAL	495.5	284.2	216.8	156.9	144.6	174.2	410.4	4551	6549	4707	1932	1254
MEAN	16.0	9.47	6.99	5.06	5.16	5.62	13.7	147	218	152	62.3	41.8
MAX	45	12	8.9	6.2	5.9	7.5	35	297	312	269	104	66
MIN	8.5	7.9	5.7	4.5	4.7	4.5	6.5	28	99	86	40	25
AC-FT	983	564	430	311	287	346	814	9030	12990	9340	3830	2490

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 1993, BY WATER YEAR (WY)

	MEAN	17.7	11.4	7.13	5.42	5.05	6.43	23.0	125	239	133	52.6	24.9
MAX	47.2	23.1	12.6	8.77	8.42	15.4	57.5	251	399	326	118	65.2	
(WY)	1962	1926	1962	1960	1962	1910	1946	1958	1918	1907	1947	1961	
MIN	7.74	5.43	3.97	2.00	2.75	3.46	6.67	62.0	68.6	26.4	14.0	10.1	
(WY)	1989	1953	1954	1937	1981	1944	1944	1908	1925	1934	1934	1944	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1907 - 1993

ANNUAL TOTAL	16189.7	20875.6	
ANNUAL MEAN	44.2	57.2	54.1
HIGHEST ANNUAL MEAN			83.2
LOWEST ANNUAL MEAN			26.2
HIGHEST DAILY MEAN	229	May 21	312
LOWEST DAILY MEAN	^a 3.5	Feb 22	^b 4.5
ANNUAL SEVEN-DAY MINIMUM	3.7	Feb 18	4.7
INSTANTANEOUS PEAK FLOW			375
INSTANTANEOUS PEAK STAGE			2.82
ANNUAL RUNOFF (AC-FT)	32110	41410	39230
10 PERCENT EXCEEDS	146	200	175
50 PERCENT EXCEEDS	14	12	16
90 PERCENT EXCEEDS	4.5	5.1	4.9

a-Also occurred Feb 23.

b-Also occurred Jan 8, Mar 2, 4-6, 16.

c-Datum then in use, by computation of peak flow over compound weir.

06726900 BUMMERS GULCH NEAR EL VADO, CO

LOCATION.--Lat 40°00'42", long 105°20'53", in NE¹/4NW¹/4 sec.33, T.1 N., R.71 W., Boulder County, Hydrologic Unit 10190005, on left bank, 0.8 mi north of Highway 119 on Sugarloaf Road, 0.1 mi south of service road to Boulder Filtration Plant, 0.65 mi upstream from mouth and, 3.7 mi from Boulder County courthouse.

DRAINAGE AREA.--3.87 mi².

PERIOD OF RECORD.--July 1983 to current year.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 6,270 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 19-22, Jan. 4-13, and Jan. 25 to Feb. 26. Records good except for estimated daily discharges which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	.28	.34	.30	.44	.26	.84	.84	.53	.22	.07	.05
2	.21	.30	.34	.30	.43	.24	.88	.80	.53	.20	.07	.06
3	.21	.31	.34	.30	.43	.23	.95	.79	.60	.17	.08	.06
4	.19	.29	.34	.30	.43	.22	.99	.77	.56	.17	.09	.05
5	.19	.28	.34	.29	.44	.23	1.1	.73	.54	.18	.09	.05
6	.24	.31	.33	.29	.44	.23	1.2	.73	.52	.17	.10	.07
7	.28	.32	.33	.28	.43	.24	1.2	.73	.49	.15	.08	.09
8	.26	.33	.32	.29	.42	.25	1.1	.70	.46	.13	.08	.07
9	.23	.30	.32	.29	.40	.27	1.0	.66	.49	.13	.08	.05
10	.22	.32	.34	.28	.40	.27	.95	.64	.47	.10	.08	.05
11	.19	.35	.35	.27	.41	.27	.89	.63	.44	.15	.08	.05
12	.19	.35	.34	.26	.40	.24	1.0	.61	.40	.15	.06	.05
13	.18	.36	.35	.26	.39	.28	1.2	.61	.35	.17	.06	.33
14	.19	.36	.39	.28	.39	.34	1.4	.73	.33	.26	.05	.31
15	.17	.36	.34	.26	.38	.33	1.4	.76	.31	.18	.05	.20
16	.17	.36	.31	.36	.38	.32	1.4	.76	.29	.12	.05	.11
17	.17	.35	.31	.36	.37	.30	1.5	1.0	.76	.18	.05	.37
18	.17	.33	.30	.36	.38	.32	1.5	.87	1.2	.16	.05	.67
19	.18	.33	.30	.36	.39	.32	1.4	.76	.73	.12	.05	.35
20	.17	.33	.30	.39	.40	.32	1.3	.73	.57	.13	.04	.24
21	.16	.31	.30	.40	.39	.33	1.3	.71	.54	.15	.04	.19
22	.17	.38	.30	.43	.39	.33	1.2	.67	.49	.14	.04	.22
23	.17	.34	.28	.42	.38	.33	1.1	.66	.44	.12	.04	.26
24	.17	.31	.29	.46	.39	.34	1.2	.69	.40	.13	.04	.24
25	.21	.36	.30	.46	.39	.34	1.1	.72	.39	.09	.04	.20
26	.25	.37	.28	.46	.38	.36	.99	.66	.35	.09	.04	.21
27	.22	.36	.28	.46	.36	.50	.95	.68	.32	.08	.04	.21
28	.25	.36	.28	.46	.30	.65	.89	.68	.30	.07	.04	.19
29	.28	.36	.29	.45	---	.68	.87	.65	.25	.08	.04	.19
30	.27	.35	.29	.45	---	.76	.84	.61	.24	.07	.04	.17
31	.29	---	.28	.45	---	.83	---	.56	---	.07	.05	---
TOTAL	6.46	10.02	9.80	10.98	11.13	10.93	33.64	22.14	14.29	4.33	1.81	5.36
MEAN	.21	.33	.32	.35	.40	.35	1.12	.71	.48	.14	.058	.18
MAX	.29	.38	.39	.46	.44	.83	1.5	1.0	1.2	.26	.10	.67
MIN	.16	.28	.28	.26	.30	.22	.84	.56	.24	.07	.04	.05
AC-FT	13	20	19	22	22	22	67	44	28	8.6	3.6	11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1993, BY WATER YEAR (WY)

MEAN	.33	.34	.31	.29	.31	.48	1.26	1.09	.69	.37	.24	.21
MAX	.98	.65	.43	.47	.45	.79	2.64	3.68	1.44	1.02	.56	.40
(WY)	1984	1985	1992	1985	1984	1992	1984	1984	1987	1987	1991	1987
MIN	.087	.14	.14	.21	.20	.35	.34	.35	.24	.019	.032	.069
(WY)	1990	1990	1990	1989	1990	1991	1991	1989	1989	1989	1989	1988

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1984 - 1993
ANNUAL TOTAL	197.68	140.89	
ANNUAL MEAN	.54	.39	.49
HIGHEST ANNUAL MEAN			.98 1984
LOWEST ANNUAL MEAN			.20 1989
HIGHEST DAILY MEAN	a 2.3 Apr 10	b 1.5 Apr 17	7.2 Apr 25 1984
LOWEST DAILY MEAN	.16 Oct 21	c .04 Aug 20	d .00 Jul 26 1989
ANNUAL SEVEN-DAY MINIMUM	.17 Oct 15	.04 Aug 20	.01 Jul 22 1989
INSTANTANEOUS PEAK FLOW		2.7 Jun 17	26 Aug 11 1990
INSTANTANEOUS PEAK STAGE		e 2.70 Jun 17	3.39 Aug 11 1990
ANNUAL RUNOFF (AC-FT)	392	279	357
10 PERCENT EXCEEDS	1.1	.79	1.0
50 PERCENT EXCEEDS	.35	.32	.33
90 PERCENT EXCEEDS	.21	.08	.13

a-Also occurred Apr 11.

b-Also occurred Apr 18.

c-Also occurred Aug 21-30.

d-Also occurred Jul 28, 1989.

e-Maximum gage height, 2.73 ft, Dec 21, backwater from ice.

06727500 FOURMILE CREEK AT ORODELL, CO

LOCATION.--Lat 40°01'08", long 105°19'32", in NW¹/4SE¹/4 sec.27, T.1 N., R.71 W., Boulder County, Hydrologic Unit 10190005, on right bank 30 ft downstream from private bridge, 0.3 mi upstream from Highway 119 and mouth, and 2.5 mi west of courthouse in Boulder.

DRAINAGE AREA.--24.1 mi².

PERIOD OF RECORD.--April 1947 to September 1953, April 1978 to September 1982 (peak stage and discharge only), July 1983 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5,760 ft above sea level, from topographic map. April 1, 1947 to September 30, 1953, water-stage recorder 500 feet downstream; April 1, 1978 to September 1982, crest-stage gage 200 feet downstream, at different datums.

REMARKS.--Estimated daily discharges: Oct. 1-5, Nov. 21 to Feb. 18, and July 16 to Aug. 24. Records fair except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	1.0	1.1	.80	.70	1.3	3.4	16	23	9.1	1.5	.27
2	.70	1.1	1.1	.80	.70	1.4	3.8	15	23	8.8	1.5	.30
3	.66	1.2	1.1	.80	.70	1.3	4.2	14	23	8.0	1.5	.62
4	.62	1.1	1.1	.80	.70	1.3	4.2	14	20	7.4	1.4	.34
5	.58	1.2	1.1	.80	.70	1.4	4.8	15	17	7.1	1.3	.18
6	.88	1.1	1.1	.80	.70	1.2	6.8	16	15	6.1	1.4	.61
7	.70	1.2	1.1	.80	.80	1.1	7.0	16	14	5.3	1.3	.86
8	.55	1.1	1.0	.80	.90	1.3	6.3	14	12	4.6	1.2	1.0
9	.58	1.2	1.0	.78	.95	1.4	6.4	13	12	4.4	1.1	.75
10	.55	1.2	1.0	.78	1.0	1.5	6.8	11	11	3.9	1.0	.59
11	.57	1.3	1.0	.76	1.0	1.4	6.6	10	9.6	4.1	.80	.29
12	.55	1.1	1.0	.75	1.0	1.4	8.2	10	8.6	3.9	.70	.06
13	.58	1.3	1.0	.74	1.0	1.4	10	11	8.4	3.7	.65	1.1
14	.54	1.2	1.0	.73	1.0	1.5	9.6	12	8.7	4.0	.60	1.6
15	.55	1.1	1.0	.71	1.0	1.5	9.6	13	9.4	3.5	.50	1.6
16	.58	1.1	1.0	.70	1.3	1.5	9.4	15	9.8	3.0	.40	1.3
17	.56	.98	1.0	.69	1.5	1.5	9.9	17	14	2.9	.35	1.7
18	.52	.91	.95	.68	1.8	1.4	10	21	22	2.8	.28	3.1
19	.51	.80	.95	.65	1.9	1.5	11	21	17	2.7	.22	2.3
20	.53	.89	.90	.65	1.7	1.4	10	21	16	2.6	.19	1.7
21	.53	1.1	.85	.65	1.6	1.3	9.6	22	15	2.8	.16	1.4
22	.55	1.1	.80	.65	1.7	1.3	10	23	15	2.4	.13	1.2
23	.57	1.1	.80	.65	1.5	1.4	11	20	14	2.3	.11	1.3
24	.60	1.1	.80	.68	1.2	1.5	12	20	14	2.1	.13	1.4
25	.71	1.1	.80	.70	1.2	1.6	11	21	13	2.0	.01	1.3
26	.92	1.1	.80	.70	1.2	1.8	11	21	12	2.1	.12	1.0
27	.99	1.1	.80	.70	1.2	2.5	12	24	11	2.1	.02	.96
28	.95	1.1	.80	.70	1.3	2.9	14	25	10	1.9	.15	.97
29	1.0	1.1	.80	.70	---	3.1	16	27	9.4	1.8	.11	.94
30	1.0	1.1	.80	.70	---	3.6	16	26	9.4	1.7	.01	.89
31	1.0	---	.80	.70	---	3.5	---	24	---	1.6	.34	---
TOTAL	20.87	33.08	29.35	22.55	31.95	52.2	270.6	548	416.3	120.7	19.18	31.63
MEAN	.67	1.10	.95	.73	1.14	1.68	9.02	17.7	13.9	3.89	.62	1.05
MAX	1.0	1.3	1.1	.80	1.9	3.6	16	27	23	9.1	1.5	3.1
MIN	.51	.80	.80	.65	.70	1.1	3.4	10	8.4	1.6	.01	.06
AC-FT	41	66	58	45	63	104	537	1090	826	239	38	63

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1993, BY WATER YEAR (WY)

	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959
MEAN	1.47	1.69	1.21	1.18	1.38	2.71	13.0	24.2	21.1	4.08	1.77	1.27
MAX	4.59	5.95	2.14	2.10	2.77	6.17	33.2	49.9	62.6	9.95	4.54	4.35
(WY)	1985	1985	1985	1985	1985	1992	1986	1984	1949	1949	1983	1949
MIN	.59	.55	.58	.52	.54	.83	2.97	8.58	5.90	1.49	.47	.10
(WY)	1989	1989	1990	1951	1989	1951	1991	1950	1992	1992	1948	1948

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1948 - 1993

	1992 CALENDAR YEAR	1993 WATER YEAR	WATER YEARS 1948 - 1993
ANNUAL TOTAL	1671.92	1596.41	
ANNUAL MEAN	4.57	4.37	6.25
HIGHEST ANNUAL MEAN			9.27
LOWEST ANNUAL MEAN			2.67
HIGHEST DAILY MEAN	53	27	192
LOWEST DAILY MEAN	.51	.01	.00
ANNUAL SEVEN-DAY MINIMUM	.54	.08	.00
INSTANTANEOUS PEAK FLOW		29	256
INSTANTANEOUS PEAK STAGE		2.82	3.66
ANNUAL RUNOFF (AC-FT)	3320	3170	4520
10 PERCENT EXCEEDS	13	14	19
50 PERCENT EXCEEDS	1.1	1.2	1.8
90 PERCENT EXCEEDS	.74	.58	.62

a-Also occurred Aug 30.

b-Also occurred Sep 2-7, 15-18, 1948, and Sep 5-11, 1988.

c-Site and datum then in use.

d-Also occurred Jun 1, 1991, gage height, 4.38 ft, present site and datum.

e-Maximum gage height, 4.62 ft, Jun 9, 1989, backwater from debris.

06729500 SOUTH BOULDER CREEK NEAR ELDORADO SPRINGS, CO

LOCATION.--Lat 39°55'52", long 105°17'43", in SE 1/4 sec.26, T.1 S., R.71 W., Boulder County, Hydrologic Unit 10190005, on left bank 0.2 mi downstream from South Draw, 1.0 mi west of Eldorado Springs, 1.8 mi downstream from South Boulder diversion canal, 5.0 mi south of Boulder, and 6.7 mi downstream from Gross Reservoir.

DRAINAGE AREA.--109 mi².

PERIOD OF RECORD.--April 1888 to October 1892, May 1895 to September 1901, August 1904 to current year. No winter records for water years 1889-92, 1900. Monthly discharge only for some periods, published in WSP 1310. Prior to January 1911, published as "at" or "near Marshall"; January 1911 to December 1913 as "at Eldorado Springs." Records for periods June 1900 to September 1901, August 1904 to September 1908, and October 1909 to September 1911, are not adjusted for diversions by Community ditch and South Boulder and Coal Creek ditch; all other records contain flow in these ditches. Statistical summary computed for 1957 to current year.

REVISED RECORDS.--WSP 856: 1937(M). WSP 1310: 1937. WSP 1440: 1896. WSP 1710: Drainage area. WSP 1730: 1959-60.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,080 ft above sea level, from topographic map. See WSP 1710 or 1730 for history of changes prior to May 10, 1940.

REMARKS.--Estimated daily discharges: Dec. 4-8, and Dec. 18 to Mar. 5. Records good except for estimated daily discharges, which are fair. Many small diversions upstream from station for irrigation. Water is imported upstream from Gross Reservoir from Colorado River basin through Moffat water tunnel. Flow regulated since May 1, 1955, by Gross Reservoir, capacity, 43,060 acre-ft, 6.7 mi upstream from station. City of Denver diverts water 1.8 mi 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	14	14	8.5	7.5	11	29	67	360	245	81	34
2	37	14	14	8.5	9.0	11	29	65	361	249	81	30
3	36	14	10	8.5	10	10	31	64	361	238	80	27
4	36	13	6.0	8.5	10	10	31	62	360	224	81	27
5	26	13	6.0	8.5	11	9.7	32	65	360	224	80	27
6	14	14	5.0	7.5	11	9.7	33	66	361	224	75	27
7	14	14	5.0	6.5	11	9.9	32	69	366	172	75	31
8	14	13	5.0	6.5	10	10	31	71	309	128	68	31
9	14	13	4.5	6.5	10	10	31	72	234	124	62	30
10	14	13	6.1	6.5	10	11	31	71	207	125	55	29
11	14	12	12	6.5	10	12	31	71	206	135	50	29
12	14	12	12	6.5	10	19	31	72	203	142	50	29
13	14	12	12	6.5	10	20	33	72	202	149	51	30
14	14	15	13	6.5	10	15	33	81	203	157	51	29
15	14	16	15	7.0	10	11	33	92	211	140	50	30
16	14	16	17	7.0	10	11	35	93	218	126	50	29
17	14	16	9.0	7.0	10	11	38	120	254	143	51	30
18	14	17	8.5	7.0	10	11	39	171	324	158	51	31
19	14	16	8.5	7.0	11	12	40	197	339	158	45	30
20	13	16	8.5	7.0	11	11	39	196	285	133	40	29
21	13	15	8.5	7.0	11	12	40	205	232	104	39	32
22	13	15	8.5	7.5	10	12	44	210	221	108	39	35
23	14	15	8.5	7.5	10	12	46	210	225	101	39	35
24	14	15	8.5	7.5	10	12	49	245	238	94	38	35
25	14	14	8.5	7.5	10	12	48	279	240	88	38	35
26	14	14	8.5	7.5	10	15	53	302	242	81	36	35
27	14	14	8.5	7.5	10	21	58	336	242	76	36	41
28	14	14	8.5	7.5	10	22	58	350	242	70	34	30
29	14	14	8.5	7.5	---	24	57	356	245	74	32	21
30	14	14	8.5	7.5	---	29	63	358	245	76	34	19
31	14	---	8.5	7.5	---	29	---	356	---	78	36	---
TOTAL	521	427	284.6	226.0	282.5	435.3	1178	5044	8096	4344	1628	907
MEAN	16.8	14.2	9.18	7.29	10.1	14.0	39.3	163	270	140	52.5	30.2
MAX	37	17	17	8.5	11	29	63	358	366	249	81	41
MIN	13	12	4.5	6.5	7.5	9.7	29	62	202	70	32	19
AC-FT	1030	847	565	448	560	863	2340	10000	16060	8620	3230	1800

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1993, BY WATER YEAR (WY)

MEAN	19.6	15.6	10.8	9.00	11.1	16.1	46.8	145	259	130	46.4	26.1
MAX	55.0	42.9	23.3	21.0	31.2	31.9	97.6	273	428	388	154	77.9
(WY)	1962	1970	1958	1962	1961	1983	1960	1969	1969	1957	1965	1961
MIN	5.40	5.82	2.83	2.50	4.50	7.27	14.8	68.2	119	42.3	20.0	8.85
(WY)	1989	1967	1991	1967	1965	1958	1963	1983	1966	1963	1981	1964

SUMMARY STATISTICS

	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1957 - 1993
ANNUAL TOTAL	20235.6	23373.4	
ANNUAL MEAN	55.3	64.0	a 61.4
HIGHEST ANNUAL MEAN			96.4
LOWEST ANNUAL MEAN			36.4
HIGHEST DAILY MEAN			b 1120
LOWEST DAILY MEAN	c 4.0	4.5	d 8.0
ANNUAL SEVEN-DAY MINIMUM	4.0	5.4	1.5
INSTANTANEOUS PEAK FLOW		383	e 1690
INSTANTANEOUS PEAK STAGE		3.06	5.50
ANNUAL RUNOFF (AC-FT)	40140	46360	44460
10 PERCENT EXCEEDS	169	222	196
50 PERCENT EXCEEDS	23	27	22
90 PERCENT EXCEEDS	4.5	8.5	6.5

a-Unadjusted for storage and diversions.

b-Maximum daily discharge for period of record, 1390 ft³/s, Jun 19, 1951.

c-Also occurred Jan 17 to Feb 6.

d-Minimum daily discharge for period of record, no flow, Oct 15, 1932.

e-Maximum discharge and stage for period of record, 7390 ft³/s, Sep 2, 1938, gage height, 9.24 ft, from floodmarks, site and datum then in use, from rating curve extended above 600 ft³/s, on basis of slope-area measurement of peak flow.

06730200 BOULDER CREEK AT NORTH 75TH STREET NEAR BOULDER, CO

LOCATION (REVISED).--Lat 40°03'06", long 105°10'42", in SE¹/4NW¹/4 sec.13, T.1 N., R.70 W., Boulder County, Hydrologic Unit 1019005, on left bank, 50 ft upstream from bridge on North 75th Street, 0.2 mi downstream from Boulder feeder ditch, and 6 mi northeast of Boulder.

DRAINAGE AREA.--304 mi².

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Elevation of gage is 5,106 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records poor. Flow is partially regulated by Barker Reservoir, and affected by Boulder feeder ditch, Boulder sewage treatment plant, and Public Service power plant. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	41	50	46	48	47	53	56	94	255	257	171
2	37	41	46	47	47	45	55	51	98	227	252	117
3	37	46	47	47	45	37	67	46	150	230	226	114
4	38	36	49	47	46	40	70	47	134	280	233	111
5	41	38	47	46	51	39	63	54	117	226	226	121
6	45	36	44	41	49	39	63	56	114	214	236	147
7	50	33	45	40	50	36	73	52	148	207	220	151
8	70	32	45	48	49	40	56	71	103	252	174	121
9	81	32	51	41	50	51	59	81	82	360	156	113
10	72	32	52	41	58	44	53	79	84	374	148	81
11	61	32	52	39	54	47	56	64	81	431	161	81
12	48	32	51	39	56	50	70	56	73	481	154	88
13	38	30	50	43	53	44	111	55	86	515	159	144
14	39	30	45	43	56	57	62	75	93	462	148	114
15	33	29	60	44	54	46	51	116	96	405	114	73
16	35	29	53	46	51	53	53	122	101	309	113	70
17	34	29	49	43	46	46	54	205	255	231	111	102
18	34	29	53	49	61	45	48	286	806	184	117	204
19	35	29	44	42	60	39	68	244	401	181	115	85
20	35	29	53	50	55	44	52	217	326	166	115	84
21	33	39	49	58	46	46	53	214	263	162	119	61
22	34	48	45	60	52	39	54	225	200	147	124	47
23	34	43	47	53	46	38	65	231	156	138	140	44
24	34	45	48	44	45	39	69	233	132	114	147	41
25	35	49	43	44	44	40	69	230	120	105	164	41
26	38	49	44	51	44	38	60	184	137	101	187	38
27	34	47	46	50	44	41	81	220	173	108	191	37
28	31	47	51	48	47	41	83	140	165	143	190	39
29	31	47	48	47	---	53	64	116	168	192	190	37
30	32	52	49	47	---	78	57	93	221	220	202	36
31	37	---	48	46	---	57	---	94	---	256	178	---
TOTAL	1275	1131	1504	1430	1407	1399	1892	4013	5177	7676	5267	2713
MEAN	41.1	37.7	48.5	46.1	50.2	45.1	63.1	129	173	248	170	90.4
MAX	81	52	60	60	61	78	111	286	806	515	257	204
MIN	31	29	43	39	44	36	48	46	73	101	111	36
AC-FT	2530	2240	2980	2840	2790	2770	3750	7960	10270	15230	10450	5380

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1993, BY WATER YEAR (WY)

	MEAN	53.6	50.4	48.5	45.8	51.1	75.4	140	186	196	131	69.4
MAX	53.9	78.8	74.9	68.3	59.0	76.8	145	187	248	248	170	90.4
(WY)	1988	1992	1989	1987	1987	1987	1987	1987	1991	1993	1993	1993
MIN	31.5	37.7	36.1	37.6	34.3	31.2	37.4	114	127	154	95.5	50.8
(WY)	1987	1993	1988	1988	1992	1989	1989	1991	1992	1988	1991	1992

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1987 - 1993

ANNUAL TOTAL	30746	34884	
ANNUAL MEAN	84.0	95.6	91.0
HIGHEST ANNUAL MEAN			102
LOWEST ANNUAL MEAN			85.5
HIGHEST DAILY MEAN	a 280	806	887
LOWEST DAILY MEAN	26	29	20
ANNUAL SEVEN-DAY MINIMUM	29	29	23
INSTANTANEOUS PEAK FLOW		957	1090
INSTANTANEOUS PEAK STAGE		6.65	6.72
ANNUAL RUNOFF (AC-FT)	60980	69190	65910
10 PERCENT EXCEEDS	177	220	196
50 PERCENT EXCEEDS	57	53	60
90 PERCENT EXCEEDS	33	37	34

a-Also occurred Jul 10.

b-Also occurred Nov 16-20.

c-Maximum gage height, 6.76 ft, Jun 9, 1987.

06730500 BOULDER CREEK AT MOUTH NEAR LONGMONT, CO

LOCATION.--Lat 40°09'08", long 105°00'52", in NW¹/4SW¹/4 sec.9, T.2 N., R.68 W., Weld County, Hydrologic Unit 10190005, on left bank 0.6 mi upstream from mouth, 1.0 mi downstream from State Highway 254, and 4.8 mi southeast of Longmont.

DRAINAGE AREA.--439 mi².

PERIOD OF RECORD.--March 1927 to September 1949, May 1951 to September 1955, October 1978 to September 1990, October 1991 to September 1992.

GAGE.--Water-stage recorder. Elevation of gage is 4,860 ft above sea level, from topographic map. Prior to June 10, 1939, at site 0.8 mi upstream at different datum. June 10, 1939, to Sept. 30, 1949, at site 1.0 mi upstream, at different datum. May 1, 1951, to Sept. 30, 1955, at site 1.4 mi upstream, at different datum.

REMARKS.--Estimated daily discharge: Dec. 1 to Mar. 5. Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain, transbasin, and storage diversions, diversions for irrigation, water-treatment plants, and return flows from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	93	59	38	35	40	69	50	30	72	73	30
2	46	72	56	38	36	39	66	47	13	34	70	35
3	38	106	53	37	36	37	72	45	88	17	53	34
4	39	74	53	35	36	36	79	37	88	39	50	28
5	45	63	53	35	37	37	76	32	68	40	37	28
6	49	72	54	35	37	37	73	17	72	18	79	31
7	72	57	54	35	35	38	80	7.9	125	19	79	33
8	109	59	53	35	35	35	69	5.4	108	52	47	38
9	130	61	52	35	35	43	64	5.6	82	48	14	45
10	130	58	58	35	37	40	59	9.7	98	80	12	70
11	105	56	58	30	39	43	59	9.3	60	92	21	52
12	82	56	57	28	36	42	63	19	19	198	27	55
13	64	57	56	30	36	44	124	31	14	155	19	99
14	59	55	51	34	35	44	96	17	15	227	13	136
15	56	55	60	36	34	47	73	22	23	174	16	90
16	51	56	56	36	32	44	75	27	21	83	18	67
17	53	57	50	35	30	44	70	45	82	35	18	73
18	51	58	57	34	36	43	67	187	983	28	14	338
19	56	59	48	34	41	38	65	118	629	30	16	233
20	58	60	52	35	39	35	69	102	450	36	15	126
21	53	67	48	38	37	39	74	76	365	22	16	58
22	51	92	42	43	35	40	74	52	207	21	15	33
23	50	81	40	38	35	39	77	46	142	25	19	42
24	52	90	41	35	35	38	80	41	87	20	21	37
25	40	89	39	34	35	36	90	62	25	20	26	35
26	48	92	43	33	33	37	77	35	24	24	25	41
27	44	88	45	33	35	38	67	34	33	39	31	36
28	40	84	43	36	40	42	76	32	55	19	25	83
29	38	68	40	36	---	54	62	24	18	42	14	80
30	40	57	39	36	---	78	55	15	24	41	21	73
31	45	---	38	35	---	92	---	34	---	68	25	---
TOTAL	1839	2092	1548	1087	1002	1339	2200	1284.9	4048	1818	929	2159
MEAN	59.3	69.7	49.9	35.1	35.8	43.2	73.3	41.4	135	58.6	30.0	72.0
MAX	130	106	60	43	41	92	124	187	983	227	79	338
MIN	38	55	38	28	30	35	55	5.4	13	17	12	28
AC-FT	3650	4150	3070	2160	1990	2660	4360	2550	8030	3610	1840	4280

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1993, BY WATER YEAR (WY)

	MEAN	28.4	37.7	44.5	49.0	48.2	49.2	94.2	172	170	39.7	21.7	23.4
MAX	127	95.2	93.8	104	120	148	581	1101	976	367	143	440	
(WY)	1985	1985	1939	1980	1980	1983	1942	1942	1947	1983	1979	1938	
MIN	.70	.48	1.16	2.94	2.75	2.58	1.15	1.06	1.22	1.09	.55	.54	
(WY)	1955	1955	1940	1935	1935	1935	1954	1955	1954	1954	1954	1954	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1927 - 1993

ANNUAL TOTAL	22434.6	21345.9	
ANNUAL MEAN	61.3	58.5	65.1
HIGHEST ANNUAL MEAN			220
LOWEST ANNUAL MEAN			3.93
HIGHEST DAILY MEAN	276	983	2300
LOWEST DAILY MEAN	1.4	5.4	a.00
ANNUAL SEVEN-DAY MINIMUM	3.1	11	.00
INSTANTANEOUS PEAK FLOW		1420	4410
INSTANTANEOUS PEAK STAGE		4.23	6.94
ANNUAL RUNOFF (AC-FT)	44500	42340	b47140
10 PERCENT EXCEEDS	128	89	124
50 PERCENT EXCEEDS	50	43	30
90 PERCENT EXCEEDS	7.7	21	1.8

a-No flow at times many years.

b-Site and datum then in use, from rating curve extended above 340 ft³/s, on basis of slope-area measurement of peak flow.

06731000 ST. VRAIN CREEK AT MOUTH, NEAR PLATTEVILLE, CO

LOCATION.--Lat 40°15'29", long 104°52'45", in SE1/4NW1/4 sec.3, T.3 N., R.67 W., Weld County, Hydrologic Unit 10190005, on right bank 140 ft downstream from bridge on county road, 1.3 mi upstream from mouth, and 4.2 mi northwest of Platteville.

DRAINAGE AREA.--976 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1904 to December 1906, April to December 1915, March 1927 to current year. Prior to October 1933, monthly discharge only, published in WSP 1310.

REVISED RECORDS.--WSP 956: 1938(M). WSP 1440: 1934, 1935(M). WSP 1730: 1958, drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,740 ft above sea level, from topographic map. See WSP 1730 for history of changes prior to Apr. 25, 1960.

REMARKS.--Estimated daily discharges: Dec. 8-10, 16, 29, 30, Jan. 10-12, 19, and Feb. 2. Records good. Diversions upstream from station for irrigation of about 177,000 acres. Flow partly regulated by many small reservoirs 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	136	153	146	132	135	140	120	267	276	310	272
2	137	135	156	147	133	136	130	116	210	252	299	270
3	128	149	145	144	138	134	141	114	298	234	277	293
4	127	136	146	95	141	128	139	107	299	257	286	281
5	133	129	139	105	139	124	139	89	274	273	286	280
6	147	136	143	119	140	122	141	96	254	232	422	311
7	155	127	134	148	140	123	142	94	301	219	384	311
8	170	123	128	148	144	121	134	108	305	252	343	313
9	176	121	165	106	146	128	130	103	253	301	288	302
10	185	125	185	142	162	123	122	109	253	310	269	304
11	174	128	156	139	155	127	119	103	235	344	286	279
12	162	122	153	151	145	126	124	94	221	469	300	265
13	149	126	148	130	145	127	220	101	206	444	310	307
14	141	123	139	160	140	126	197	98	345	537	299	329
15	138	127	146	176	139	130	158	111	393	525	302	262
16	136	122	146	168	115	126	151	148	390	423	291	233
17	140	120	132	176	108	124	148	161	416	350	283	215
18	138	123	141	159	131	123	145	310	1070	320	257	368
19	137	119	144	150	176	119	140	275	958	290	259	397
20	132	127	122	148	188	112	143	259	676	278	255	282
21	127	144	138	171	159	111	142	242	597	287	250	240
22	121	150	138	206	143	112	138	218	523	271	262	203
23	121	150	148	204	137	112	134	223	647	268	257	204
24	127	144	132	191	139	111	137	204	685	279	251	185
25	127	149	161	165	132	108	157	252	551	271	244	174
26	119	147	141	175	129	107	144	251	385	278	253	172
27	118	144	149	172	128	108	130	229	341	282	282	164
28	115	148	152	136	129	115	138	234	345	274	290	171
29	117	147	148	131	---	119	137	222	332	276	278	175
30	118	148	150	126	---	143	126	248	276	275	289	170
31	120	---	144	129	---	167	---	235	---	297	293	---
TOTAL	4273	4025	4522	4663	3953	3827	4286	5274	12306	9644	8955	7732
MEAN	138	134	146	150	141	123	143	170	410	311	289	258
MAX	185	150	185	206	188	167	220	310	1070	537	422	397
MIN	115	119	122	95	108	107	119	89	206	219	244	164
AC-FT	8480	7980	8970	9250	7840	7590	8500	10460	24410	19130	17760	15340

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 1993, BY WATER YEAR (WY)

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939
MEAN	135	128	118	112	118	120	181	455	574	256	199	159	
MAX	397	320	255	223	298	326	1100	2362	2619	954	653	1062	
(WY)	1985	1970	1970	1980	1962	1983	1942	1980	1949	1983	1965	1938	
MIN	25.5	31.2	27.9	24.4	30.2	28.3	25.1	43.8	56.7	50.4	41.0	22.7	
(WY)	1935	1935	1935	1935	1935	1935	1935	1955	1954	1934	1940	1934	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1927 - 1993

ANNUAL TOTAL	78160		73460									
ANNUAL MEAN	214		201							214		
HIGHEST ANNUAL MEAN										569		1983
LOWEST ANNUAL MEAN										55.1		1932
HIGHEST DAILY MEAN										6700		May 10 1957
LOWEST DAILY MEAN	a 110	Aug 25				1070	Jun 18			12		Apr 23 1935
ANNUAL SEVEN-DAY MINIMUM	113	Feb 26				89	May 5			15		Apr 17 1935
INSTANTANEOUS PEAK FLOW						100	May 5			b 11300		Sep 3 1938
INSTANTANEOUS PEAK STAGE						1360	Jun 18			8.93		Sep 3 1938
ANNUAL RUNOFF (AC-FT)	155000					4.46	Jun 18					
10 PERCENT EXCEEDS	327					145700				154800		
50 PERCENT EXCEEDS	173					310				350		
90 PERCENT EXCEEDS	119					149				130		
						119				56		

a-Also occurred Mar 2, 3.

b-Site and datum then in use, from rating curve extended above 4700 ft³/s.

PLATTE RIVER BASIN

06731000 ST. VRAIN CREEK AT MOUTH, NEAR PLATTEVILLE, CO--Continued
(National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1993

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
APR 05...	1145	135	1270	8.0	10.0	9.6	420	76	57	100
MAY 03...	1030	118	1360	8.1	13.5	8.8	460	89	58	120
JUN 01...	1135	284	835	8.2	21.5	6.8	290	59	35	63
JUN 18...	1210	1190	507	7.9	13.5	7.0	160	32	19	30
JUL 14...	1020	570	740	8.1	18.5	6.4	250	47	32	52
AUG 04...	1310	295	1240	8.1	20.5	8.1	450	81	60	99
SEP 01...	1025	288	1360	8.1	17.0	7.8	490	90	65	110

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- ^A LITY MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
APR 05...	6.8	205	370	49	0.8	5.1	870	0.11	3.4	0.17
MAY 03...	6.7	202	410	56	1.0	7.6	984	0.16	4.5	0.20
JUN 01...	3.8	147	250	21	0.8	8.8	548	0.06	2.2	0.06
JUN 18...	4.3	87	140	13	0.4	6.5	294	0.05	1.2	0.33
JUL 14...	4.7	116	230	15	0.7	6.6	488	0.06	1.6	0.10
AUG 04...	4.6	197	430	28	0.8	7.3	886	0.05	2.5	0.06
SEP 01...	4.0	202	500	25	1.0	7.8	976	0.05	2.9	0.05

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDEED TOTAL (MG/L AS C)
APR 05...	1.4	0.90	1.1	0.82	0.83	5	89	5.4	--
MAY 03...	1.2	0.80	1.0	0.87	0.88	11	130	5.7	0.8
JUN 01...	0.50	0.40	0.40	0.36	0.33	21	39	5.0	5.7
JUN 18...	0.90	0.70	0.22	0.15	0.14	66	70	5.8	>5.7
JUL 14...	1.0	0.50	0.74	0.27	0.23	22	11	5.1	5.0
AUG 04...	0.60	0.70	0.33	0.31	0.26	10	20	5.0	0.3
SEP 01...	0.40	0.40	0.26	0.24	0.22	4	20	5.1	1.8

A-Total alkalinity, determined in field by fixed end-point titration method on filtered sample

06731000 ST. VRAIN CREEK AT MOUTH, NEAR PLATTEVILLE, CO--Continued
(National Water-Quality Assessment Program station)

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
MAY				
03...	1010	118	25	8.0
JUN				
01...	1130	284	259	199
18...	1130	1190	662	2130
JUL				
14...	1100	570	488	751
AUG				
04...	1250	295	98	78
SEP				
01...	1040	288	112	87

06733000 BIG THOMPSON RIVER AT ESTES PARK, CO

LOCATION.--Lat 40°22'42", long 105°30'48", in NW¹/4NW¹/4 sec.30, T.5 N., R.72 W., Larimer County, Hydrologic Unit 10190006, on right bank in Estes Park, 600 ft downstream from bridge on State Highways 7 and 66, 900 ft downstream from Black Canyon Creek, and 0.3 mi northwest of Estes powerplant. Station is upstream from Lake Estes.

DRAINAGE AREA.--137 mi².

PERIOD OF RECORD.--October 1946 to current year. Prior to October 1947, published as Thompson River at Estes Park.

GAGE.--Water-stage recorder with satellite telemetry, and Parshall flume with overflow weirs. Datum of gage is 7,492.5 ft above sea level (levels by U.S. Bureau of Reclamation). Prior to May 18, 1949, at site 740 ft downstream at different datum. May 18, 1949 to Mar. 22, 1951, at site 60 ft upstream at datum 1.2 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 21, 22, Dec. 3 to Mar. 9, Mar. 19, 20, and Mar. 22. Records good except for estimated daily discharges, which are fair. Diversion from Colorado River basin passed this station from Aug. 10, 1947 to Aug. 2, 1950. Small power developments and small diversions for irrigation and municipal use above station. Diversions upstream from station from Wind River to Lake Estes (bypassing this station), no diversions during current year.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	23	13	11	10	12	22	67	630	605	237	84
2	32	25	13	11	10	12	24	61	568	565	225	87
3	29	32	13	11	10	12	23	65	568	585	213	83
4	27	35	13	11	10	12	23	78	414	485	195	72
5	27	24	13	11	10	12	26	99	361	379	195	73
6	28	26	13	11	10	12	30	92	378	307	195	71
7	28	25	13	11	10	12	26	87	455	277	180	91
8	23	24	13	11	10	12	23	76	351	316	171	96
9	26	24	13	11	10	12	23	70	304	351	177	82
10	24	25	13	11	11	12	26	65	288	373	183	76
11	24	37	12	11	11	11	24	78	330	397	193	72
12	24	36	12	11	11	11	28	106	404	408	194	66
13	22	24	12	11	11	9.5	29	140	502	418	172	114
14	22	23	12	10	11	10	26	209	546	445	161	111
15	21	26	12	10	11	14	26	255	621	451	155	100
16	21	22	12	10	11	14	28	321	688	418	142	96
17	21	22	12	10	11	14	31	366	830	372	132	98
18	20	22	12	10	11	16	36	333	1090	350	129	106
19	21	21	12	10	11	16	34	320	769	325	132	106
20	21	21	12	10	11	16	31	346	685	314	135	91
21	21	21	11	10	11	16	30	404	748	325	142	85
22	20	20	11	10	11	17	33	448	772	292	152	77
23	20	20	11	10	12	17	42	393	772	264	135	74
24	20	18	11	10	12	19	46	346	657	253	123	67
25	22	14	11	10	12	22	42	359	516	227	116	62
26	29	13	11	10	12	24	43	421	518	218	126	59
27	27	13	11	10	12	27	59	443	562	229	127	55
28	26	13	11	10	12	26	67	514	583	217	111	51
29	26	13	11	10	---	27	71	579	608	213	99	49
30	25	13	11	10	---	25	78	484	671	243	96	47
31	25	---	11	10	---	22	---	529	---	244	92	---
TOTAL	754	675	371	323	305	493.5	1050	8154	17189	10866	4835	2401
MEAN	24.3	22.5	12.0	10.4	10.9	15.9	35.0	263	573	351	156	80.0
MAX	32	37	13	11	12	27	78	579	1090	605	237	114
MIN	20	13	11	10	10	9.5	22	61	288	213	92	47
AC-FT	1500	1340	736	641	605	979	2080	16170	34090	21550	9590	4760

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1993, BY WATER YEAR (WY)

	MEAN	27.4	16.8	12.3	11.9	14.6	40.4	243	560	328	145	68.8
MAX	112	52.7	35.1	25.1	22.7	25.5	103	479	947	739	273	143
(WY)	1962	1962	1948	1948	1962	1986	1962	1958	1949	1957	1983	1961
MIN	22.2	15.6	9.68	4.89	5.77	8.39	18.7	112	191	112	66.7	37.4
(WY)	1989	1965	1977	1977	1977	1977	1991	1968	1954	1977	1954	1988

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1947 - 1993

ANNUAL TOTAL	32081	47416.5	
ANNUAL MEAN	87.7	130	126
HIGHEST ANNUAL MEAN			189
LOWEST ANNUAL MEAN			63.3
HIGHEST DAILY MEAN	457	1090	1520
LOWEST DAILY MEAN	^a 10	9.5	^b 3.0
ANNUAL SEVEN-DAY MINIMUM	10	10	^c 5500
INSTANTANEOUS PEAK FLOW		1230	^d
INSTANTANEOUS PEAK STAGE		6.07	
ANNUAL RUNOFF (AC-FT)	63630	94050	91410
10 PERCENT EXCEEDS	272	418	387
50 PERCENT EXCEEDS	28	27	37
90 PERCENT EXCEEDS	10	11	11

a-Many days.

b-Also occurred Jan 14-16.

c-Caused by failure of Lawn Lake Dam, gage height, indeterminate; maximum natural discharge, 1660 ft³/s, Jun 18, 1949, gage height, 3.16 ft, site and datum then in use.

d-Maximum gage height, 6.89 ft, Jun 17, 1965.

06734900 OLYMPUS TUNNEL AT LAKE ESTES, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°22'30", long 105°29'13", in SE¹/4NW¹/4 sec.29, T.5 N., R.72 W., Larimer County, Hydrologic Unit 10190006, at tunnel entrance at south end of Olympus Dam on Lake Estes, 1.9 mi east of Estes Park.

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

REMARKS.--Tunnel is part of Colorado-Big Thompson project. Field data collected prior to 1974 water year available in district office. Records of discharge are estimated values. A complete taxonomic identification with cell counts for phytoplankton available in district office.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO
NOV 19...	0915	555	48	8.2	3.5	8.7	18	5.6	1.0	1.9	0.2
APR 28...	1500	556	65	8.6	7.0	10.2	25	7.4	1.5	3.1	0.3
JUL 26...	1200	559	21	7.1	14.0	8.7	9	2.8	0.4	1.2	0.2

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
NOV 19...	0.7	20	2.8	0.5	0.1	4.9	25	30	0.03	37.5
APR 28...	0.8	27	3.5	1.4	0.1	6.2	--	41	0.05	61.0
JUL 26...	0.4	10	1.5	0.4	<0.1	3.5	16	16	0.02	24.1

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
NOV 19...	0.03	0.07	0.09	0.03	0.02	0.17	0.20	<0.01	0.01	<0.01
APR 28...	<0.01	--	0.05	--	0.02	0.28	0.30	0.02	<0.01	<0.01
JUL 26...	<0.01	--	0.06	--	0.05	0.25	0.30	0.01	<0.01	<0.01

DATE	TIME	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 19...	0915	5	<0.5	<10	<1	<5	<3	<10	19
APR 28...	1500	6	<0.5	<10	2	<5	<3	<10	95
JUL 26...	1200	4	<0.5	<10	<1	<5	<3	<10	52

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 19...	10	<4	1	<10	<10	2	33	<6	<3
APR 28...	<10	<4	4	<10	<10	<1	43	<6	<3
JUL 26...	<10	<4	3	<10	<10	2	12	<6	<3

06737500 HORSETOOTH RESERVOIR NEAR FORT COLLINS, CO

LOCATION.--Lat 40°36'00", long 105°10'06", in NW¹/4SW¹/4 sec.6, T.7 N., R.69 W., Larimer County, Hydrologic Unit 10190007, on right bank near abutment of Horsetooth Dam on tributaries to Cache la Poudre River, 4.8 mi west of city hall in Fort Collins.

RESERVOIR ELEVATIONS AND CONTENTS RECORDS

PERIOD OF RECORD.--April 1951 to current year.

GAGE.--Nonrecording gage read at irregular intervals from 1 to 10 days. Datum of gage is 5,430.00 ft above sea level, (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above sea level.

REMARKS.--Reservoir is formed by an earth and rockfill dike and dams closing openings in subsequent valleys between hogbacks; storage began Jan. 10, 1951; dams completed July 21, 1949. Usable capacity, 143,500 acre-ft above elevations 5,320 ft, invert of channel from Spring Canyon Dam, 5,310 ft, invert of channel from Dixon Canyon Dam, 5,270 ft, trashrack sill of outlet at Soldier Canyon Dam, and below maximum water-surface elevation, 5,430 ft, 6 ft below crest of Satanka Dike. Dead storage, 7,003 acre ft. Figures given represent usable contents. Water is diverted from Colorado River basin through Alva B. Adams tunnel for supplemental irrigation supply to Cache la Poudre River. Water-quality sampling at three sites in reservoir.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 141,600 acre-ft, July 2, 1970, elevation, 5,429.02 ft; minimum observed, 9 acre-ft, Nov. 16-30, 1977, elevation, 5,270.25 ft; no storage prior to Apr. 18, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum contents, observed, 133,800 acre-ft, June 13, elevation, 5,421.95 ft; minimum, observed, 98,170 acre-ft, Sept. 30, elevation, 5,401.99 ft.

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	5,403.46	100,600	-
Oct. 31.	5,403.63	100,900	+300
Nov. 30.	5,404.61	102,500	+1,600
Dec. 31.	5,409.12	110,300	+7,800
CAL YR 1992	-	-	+14,660
Jan. 31.	5,411.43	114,300	+4,000
Feb. 28.	5,413.86	118,700	+4,400
Mar. 31.	5,414.23	119,400	+700
Apr. 30.	5,415.65	122,000	+2,600
May 31.	5,420.16	130,400	+8,400
June 30.	5,420.67	131,300	+900
July 31.	5,408.09	108,500	-22,800
Aug. 31.	5,403.37	100,500	-8,000
Sept. 30.	5,401.99	98,170	-2,330
WTR YR 1993	-	-	-2,430

06737500 HORSETOOTH RESERVOIR NEAR FORT COLLINS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1969 to current year.

REMARKS.--Samples were collected near surface and near bottom, near north end of reservoir near Soldier Canyon Dam.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

		DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)			
MAY											
	19...		1025	0.1	70	8.4	13.0	8.9			
	19...		1026	5.0	70	8.4	12.5	8.9			
	19...		1027	10	70	8.4	12.5	9.0			
	19...		1028	15	71	8.4	12.0	9.1			
	19...		1029	20	71	8.3	11.5	9.1			
	19...		1030	25	72	8.1	10.5	9.0			
	19...		1031	30	72	8.0	9.5	9.0			
	19...		1032	40	73	7.8	9.0	8.7			
	19...		1033	50	73	7.6	8.5	8.3			
	19...		1034	60	73	7.6	8.0	8.2			
	19...		1035	70	74	7.6	8.0	8.2			
	19...		1036	80	73	7.6	7.5	8.1			
	19...		1037	90	72	7.5	7.5	8.0			
	19...		1038	100	68	7.5	7.5	8.1			
	19...		1039	110	68	7.5	7.0	8.1			
	19...		1040	120	68	7.5	7.0	8.0			
	19...		1041	130	69	7.5	7.0	7.9			
	19...		1042	140	70	7.5	7.0	7.9			
	19...		1043	150	70	7.5	7.0	7.8			
AUG											
	06...		0952	0.1	65	8.3	20.5	7.8			
	06...		0953	5.0	65	8.3	20.5	7.7			
	06...		0954	10	65	8.2	20.5	7.6			
	06...		0955	15	65	8.1	20.5	7.4			
	06...		0956	20	65	8.0	20.0	7.3			
	06...		0957	25	59	7.7	19.5	6.0			
	06...		0958	30	58	7.4	18.0	5.1			
	06...		0959	40	64	7.2	15.5	4.4			
	06...		1000	50	67	7.2	13.5	4.5			
	06...		1001	60	67	7.2	12.0	4.6			
	06...		1002	70	67	7.2	11.0	4.6			
	06...		1003	80	67	7.2	10.5	4.7			
	06...		1004	90	68	7.2	10.0	4.8			
	06...		1005	100	68	7.2	9.5	5.0			
	06...		1006	110	68	7.2	9.5	4.8			
	06...		1007	120	69	7.2	9.0	4.7			
	06...		1008	130	69	7.2	8.5	4.5			
	06...		1009	140	69	7.2	8.5	4.4			
	06...		1010	145	69	7.2	8.5	4.3			
DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (IN)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	
MAY											
	19...	0945	0.1	70	8.4	13.0	98.0	8.9	<1	28	8.9
	19...	1010	150	70	7.5	7.0	--	7.8	--	28	9.0
AUG											
	06...	0905	0.1	65	8.3	20.5	133	7.8	<1	27	8.7
	06...	0920	145	69	7.2	8.5	--	4.3	--	29	9.1

06737500 HORSETOOTH RESERVOIR NEAR FORT COLLINS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
MAY										
19...	1.4	2.4	0.2	0.7	31	4.2	0.7	0.2	1.0	34
19...	1.4	2.3	0.2	0.7	31	1.9	0.7	0.1	1.1	40
AUG										
06...	1.3	2.3	0.2	0.6	29	3.0	0.6	0.1	1.3	34
06...	1.4	2.4	0.2	0.7	30	3.1	0.5	0.1	2.3	36

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS DIS- SOLVED TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
MAY										
19...	38	<0.01	<0.05	0.02	0.30	<0.01	<0.01	<0.01	1.9	<0.1
19...	36	<0.01	<0.05	0.04	<0.20	<0.01	0.01	<0.01	--	--
AUG										
06...	35	<0.01	<0.05	0.01	<0.20	<0.01	<0.01	<0.01	6.5	0.2
06...	38	<0.01	0.08	<0.01	<0.20	--	<0.01	<0.01	--	--

DATE	TIME	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
MAY									
19...	0945	16	<0.5	<10	<1	<5	<3	<10	<3
19...	1010	16	<0.5	20	<1	<5	<3	<10	<3
AUG									
06...	0905	17	<0.5	<10	<1	<5	<3	<10	3
06...	0920	16	<0.5	<10	<1	<5	<3	<10	12

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAY									
19...	<10	<4	<1	<10	<10	^a <0.2	42	<6	<3
19...	<10	<4	<1	<10	<10	^a <0.2	41	<6	6
AUG									
06...	<10	<4	<1	<10	<10	^a <0.2	37	<6	3
06...	<10	<4	14	<10	<10	^a <0.2	41	<6	6

a-Analysis based on preliminary method.

403147105083800 HORSETOOTH RESERVOIR NEAR FORT COLLINS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1983 to current year.

REMARKS.--Samples were collected near surface and near bottom, near south end of reservoir near Spring Canyon Dam.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

				SPE- CIFIC							
				SAM- PLING DEPTH (FEET)	CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)			
DATE		TIME									
MAY											
19...		1158		0.1	71	8.2	14.5	8.6			
19...		1159		5.0	72	8.3	13.0	8.9			
19...		1200		10	71	8.3	12.5	8.9			
19...		1201		15	72	8.2	12.5	8.9			
19...		1202		20	72	8.2	12.5	8.9			
19...		1203		25	72	8.2	12.5	8.9			
19...		1204		30	72	8.1	12.0	8.8			
19...		1205		40	70	7.8	10.5	8.6			
19...		1206		50	70	7.7	8.5	8.4			
19...		1207		60	70	7.6	8.0	8.2			
19...		1208		70	72	7.7	8.0	8.2			
19...		1209		80	72	7.7	8.0	8.0			
19...		1210		90	72	7.7	7.5	7.9			
19...		1211		100	72	7.7	7.5	7.9			
19...		1212		110	72	7.7	7.0	7.8			
19...		1213		120	72	7.6	7.0	7.8			
19...		1214		130	72	7.6	7.0	7.7			
19...		1215		135	72	7.6	7.0	7.6			
AUG											
06...		1138		0.1	62	8.2	20.5	7.6			
06...		1139		5.0	62	8.3	20.0	7.6			
06...		1140		10	62	8.3	20.0	7.6			
06...		1141		15	61	8.2	20.0	7.5			
06...		1142		20	60	8.1	19.5	7.5			
06...		1143		25	53	7.9	19.0	7.4			
06...		1144		30	48	7.7	18.0	6.8			
06...		1145		40	57	7.4	17.0	5.4			
06...		1146		50	64	7.2	14.5	4.6			
06...		1147		60	68	7.2	11.5	4.5			
06...		1148		70	68	7.2	10.5	4.5			
06...		1149		80	68	7.2	10.0	4.4			
06...		1150		90	68	7.2	9.5	4.3			
06...		1151		100	69	7.2	9.0	4.1			
06...		1152		110	70	7.2	8.5	4.0			
06...		1153		120	70	7.2	8.5	3.8			
DATE		TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH FIELD (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (IN)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
MAY											
19...		1115	0.1	71	8.2	14.5	91.0	8.6	<1	27	8.4
19...		1145	135	72	7.6	7.0	--	7.6	--	28	8.8
AUG											
06...		1055	0.1	62	8.2	20.5	118	7.6	K1	26	8.3
06...		1110	120	70	7.2	8.5	--	3.8	--	30	9.4
DATE	TIME	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
MAY											
19...		1.4	2.4	0.2	0.7	30	4.2	0.8	0.2	1.8	26
19...		1.4	2.3	0.2	0.7	31	3.2	0.7	0.2	1.2	32
AUG											
06...		1.2	2.2	0.2	0.6	28	2.8	0.6	0.1	1.6	32
06...		1.5	2.5	0.2	0.6	30	3.2	0.6	0.1	2.4	42

K-Based on non-ideal colony count.

403147105083800 HORSETOOTH RESERVOIR NEAR FORT COLLINS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
MAY										
19...	38	<0.01	<0.05	0.02	0.20	0.01	<0.01	<0.01	2.3	<0.1
19...	37	<0.01	<0.05	0.08	<0.20	<0.01	<0.01	<0.01	--	--
AUG										
06...	34	<0.01	<0.05	<0.01	<0.20	<0.01	<0.01	<0.01	3.1	0.1
06...	39	<0.01	0.13	<0.01	0.20	<0.01	<0.01	<0.01	--	--

DATE	TIME	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
MAY									
19...	1115	14	<0.5	<10	<1	<5	<3	<10	5
19...	1145	16	<0.5	<10	<1	<5	<3	<10	8
AUG									
06...	1055	17	<0.5	10	<1	<5	<3	<10	5
06...	1110	16	<0.5	<10	<1	<5	<3	<10	9

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAY									
19...	<10	<4	<1	<10	<10	^a <0.2	42	<6	4
19...	<10	<4	4	<10	<10	^a <0.2	42	<6	<3
AUG									
06...	<10	<4	1	<10	<10	^a <0.2	36	<6	<3
06...	<10	<4	89	<10	<10	^a <0.2	42	<6	<3

a-Analysis based on preliminary method.

06739210 BIG THOMPSON RIVER ABOVE BUCKHORN CREEK NEAR LOVELAND, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°25'02", long 105°11'23", in NW¹/4SW¹/4NW¹/4 sec.12, T.5 N., R.70 W., Larimer County, Hydrologic Unit 10190006, 160 ft south of Highway 34, 1 mi upstream from Buckhorn Creek.

DRAINAGE AREA.--314 mi².

PERIOD OF RECORD.--May 1987 to December 1992 (Discontinued).

WATER-QUALITY DATA, FOR THE PERIOD OCTOBER 1992 TO DECEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CaCO ₃)	CALCIUM DIS- SOLVED (MG/L AS Ca)
OCT 14...	1330	34	80	8.1	11.0	8.3	29	9.1
NOV 16...	1215	1.7	318	8.5	7.0	10.8	150	42
DEC 16...	1030	1.2	362	8.3	2.0	10.7	170	49
DATE	TIME	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINIT LAB (MG/L AS CaCO ₃)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 14...	1.6	31	--	--	--	--	--	--
NOV 16...	11	106	0.02	0.24	0.03	0.02	0.02	0.02
DEC 16...	12	126	0.04	0.30	0.02	0.03	0.03	0.01
DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)
OCT 14...	1330	<1	4	3	160	1	<1	--
NOV 16...	1215	<1	3	2	90	<1	<1	^a <0.2
DEC 16...	1030	<1	4	1	80	<1	<1	^a <0.2

a-Analysis based on preliminary method.

06741480 BIG THOMPSON RIVER ABOVE LOVELAND, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°24'02", long 105°07'20", in SW¹/4NE¹/4 sec.16, T.5 N., R.69 W., Larimer County, Hydrologic Unit 10190006, at Wilson Avenue bridge 9 mi upstream from Greeley-Loveland Ditch and 2.5 mi west of Loveland.

DRAINAGE AREA.--525 mi², approximately.

PERIOD OF RECORD.--June 1979 to December 1992 (Discontinued).

WATER-QUALITY DATA, FOR THE PERIOD OCTOBER 1992 TO DECEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 15...	0845	6.4	1100	7.9	8.0	8.3	610	180
NOV 16...	1430	9.3	943	8.6	7.5	13.5	480	140
DEC 16...	1210	3.8	1020	8.0	2.5	11.0	520	150

DATE	TIME	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY LAB (MG/L AS CACO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 15...	40	170	--	--	--	--	--	--
NOV 16...	31	151	0.02	0.30	0.02	0.01	0.01	
DEC 16...	35	165	0.04	0.49	0.03	0.01	<0.01	

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)
OCT 15...	0845	<1	2	1	60	<1	<1	--
NOV 16...	1430	<1	1	<1	70	<1	<1	^a <0.2
DEC 16...	1210	<1	2	<1	100	<1	<1	^a <0.2

^a-Analysis based on preliminary method.

06741510 BIG THOMPSON RIVER AT LOVELAND, CO

LOCATION.--Lat 40°22'43", long 105°03'38", in SE¹/4SE¹/4 sec.24, T.5 N., R.69 W., Larimer County, Hydrologic Unit 10190006, on right bank 690 ft downstream from county road bridge C-13, 1.7 mi south of sugar refinery in Loveland, and 1.9 mi downstream from Farmers Ditch diversion.

DRAINAGE AREA.--535 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1979 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,906 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 19 to Feb. 15, Feb. 17-24, and Feb. 27 to Mar. 8. Records poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	18	3.1	2.9	2.6	1.7	15	3.1	59	130	54	36
2	2.9	12	3.1	2.9	2.6	1.7	22	3.5	53	120	50	30
3	2.7	6.2	3.1	2.9	2.7	1.7	22	3.9	62	103	47	32
4	2.3	7.4	3.0	2.8	2.8	1.6	20	6.1	53	112	45	32
5	2.1	8.7	3.0	2.8	2.8	1.6	20	41	62	100	53	27
6	2.4	9.3	3.0	2.8	2.8	1.6	24	52	59	93	61	20
7	2.9	9.0	3.0	2.8	2.7	1.5	19	72	51	81	53	26
8	3.4	8.5	2.9	2.9	2.7	1.5	18	49	43	82	40	22
9	3.7	8.3	2.9	3.0	2.7	1.5	19	44	38	78	40	27
10	4.3	8.6	2.9	3.0	2.6	2.1	18	36	41	77	70	28
11	4.5	8.5	2.8	2.9	2.6	2.3	18	47	52	85	120	16
12	4.5	8.5	2.8	2.8	2.5	2.3	22	80	53	88	120	20
13	4.5	7.9	2.8	2.8	2.5	2.3	22	105	51	86	123	30
14	4.5	7.3	2.8	2.7	2.5	2.3	18	119	58	103	118	23
15	5.1	7.3	2.7	2.7	2.5	2.7	16	150	60	88	117	20
16	5.0	7.3	2.7	2.7	2.5	2.8	5.2	189	53	105	127	20
17	4.5	4.4	2.7	2.7	2.5	2.8	3.6	215	69	102	139	17
18	4.1	2.6	2.9	2.7	2.4	2.8	6.3	184	227	89	100	25
19	3.6	2.7	2.8	2.7	2.3	2.8	5.2	161	176	88	70	38
20	3.1	2.8	2.8	2.7	2.3	2.8	5.2	118	69	79	69	27
21	2.9	2.9	2.9	2.7	2.3	3.0	7.8	214	59	72	72	34
22	3.1	3.0	2.8	2.7	2.2	3.1	7.7	332	55	69	78	34
23	3.2	3.0	2.8	2.7	2.2	3.5	8.3	401	53	60	64	31
24	3.0	2.9	2.9	2.7	2.2	4.7	11	350	56	56	64	29
25	2.3	2.9	2.9	2.7	1.8	7.2	7.9	167	60	58	65	29
26	71	2.9	2.9	2.7	1.8	11	5.9	70	68	64	62	29
27	171	3.0	2.8	2.7	1.8	9.3	2.9	60	74	56	59	25
28	166	3.0	2.7	2.6	1.8	13	1.2	59	82	45	52	16
29	137	3.1	2.7	2.6	---	8.6	1.2	69	101	52	43	12
30	75	3.1	2.8	2.6	---	16	1.5	51	116	57	41	13
31	20	---	2.8	2.6	---	14	---	61	---	57	33	---
TOTAL	727.6	185.1	88.8	85.5	67.7	135.8	373.9	3512.6	2113	2535	2249	768
MEAN	23.5	6.17	2.86	2.76	2.42	4.38	12.5	113	70.4	81.8	72.5	25.6
MAX	171	18	3.1	3.0	2.8	16	24	401	227	130	139	38
MIN	2.1	2.6	2.7	2.6	1.8	1.5	1.2	3.1	38	45	33	12
AC-FT	1440	367	176	170	134	269	742	6970	4190	5030	4460	1520

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1993, BY WATER YEAR (WY)

	MEAN	32.1	19.3	11.1	14.9	13.2	13.0	48.2	274	259	117	89.9	37.5
MAX	66.0	95.8	36.4	62.8	59.9	49.3	292	2078	1493	351	153	83.9	
(WY)	1990	1985	1985	1980	1980	1980	1980	1980	1983	1983	1981	1982	
MIN	6.15	3.96	2.86	2.68	2.42	3.22	4.49	4.07	25.0	29.9	48.0	16.6	
(WY)	1988	1982	1993	1991	1993	1991	1981	1981	1982	1987	1990	1990	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1979 - 1993

ANNUAL TOTAL	11258.6	12842.0	
ANNUAL MEAN	30.8	35.2	
HIGHEST ANNUAL MEAN			321 1980
LOWEST ANNUAL MEAN			28.4 1990
HIGHEST DAILY MEAN	261 Aug 8	401 May 23	4240 May 1 1980
LOWEST DAILY MEAN	2.1 Oct 5	a 1.2 Apr 28	.80 May 11 1981
ANNUAL SEVEN-DAY MINIMUM	2.6 Oct 1	1.6 Mar 3	.69 May 10 1981
INSTANTANEOUS PEAK FLOW		446 May 24	6970 Apr 30 1980
INSTANTANEOUS PEAK STAGE		b 4.62 May 24	c 10.10 Apr 30 1980
ANNUAL RUNOFF (AC-FT)	22330	25470	
10 PERCENT EXCEEDS	71	96	141
50 PERCENT EXCEEDS	13	8.6	19
90 PERCENT EXCEEDS	2.9	2.5	3.4

a-Also occurred Apr 29.

b-Backwater from beaver dam.

c-From high-water mark.

PLATTE RIVER BASIN

06741510 BIG THOMPSON RIVER AT LOVELAND, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LITY LAB (MG/L AS CACO3)
OCT											
15...	1115	5.3	1490	7.9	10.5	8.0	730	170	74	--	205
NOV											
17...	1320	3.5	1640	8.1	7.0	9.6	740	160	82	--	207
DEC											
16...	1445	2.6	1710	8.0	2.0	10.8	780	170	87	--	214
JAN											
19...	1100	2.7	1740	8.1	0.0	10.2	810	180	88	110	217
FEB											
23...	1015	2.2	1750	8.1	1.0	10	810	180	87	--	209
MAR											
23...	1015	3.9	1740	8.4	7.5	8.5	820	190	83	--	200
APR											
27...	1030	4.3	1490	8.4	12.0	9.6	700	160	72	--	169
MAY											
25...	1045	107	176	7.8	10.0	9.3	63	16	5.6	--	34
JUN											
22...	1315	54	204	7.8	17.5	10.0	74	18	7.0	--	32
JUL											
20...	1110	87	375	7.8	17.5	7.9	140	34	13	14	53
AUG											
16...	1130	114	375	8.0	17.0	8.2	150	34	15	--	78
SEP											
21...	1040	29	668	8.2	13.5	9.9	290	75	24	--	112

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT										
15...	--	--	--	--	--	--	--	--	--	--
NOV										
17...	--	--	--	--	--	0.02	0.31	0.02	0.01	<0.01
DEC										
16...	--	--	--	--	--	0.04	0.53	0.05	0.02	0.01
JAN										
19...	770	20	0.4	7.3	1390	0.01	0.55	0.03	<0.01	<0.01
FEB										
23...	--	--	--	--	--	<0.01	0.39	0.03	0.01	0.01
MAR										
23...	--	--	--	--	--	<0.01	0.21	0.03	<0.01	<0.01
APR										
27...	--	--	--	--	--	<0.01	0.08	0.03	<0.01	<0.01
MAY										
25...	--	--	--	--	--	<0.01	0.12	0.03	<0.01	<0.01
JUN										
22...	--	--	--	--	--	<0.01	0.14	0.02	<0.01	0.01
JUL										
20...	100	2.8	0.2	5.2	204	--	--	--	--	--
AUG										
16...	--	--	--	--	--	<0.01	0.06	0.03	--	0.01
SEP										
21...	--	--	--	--	--	<0.01	0.10	0.03	<0.01	<0.01

06741510 BIG THOMPSON RIVER AT LOVELAND, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT 15...	1115	--	--	<1	--	--	--	2	<1	130
NOV 17...	1320	--	--	<1	--	--	--	1	<1	150
DEC 16...	1445	--	--	<1	--	--	--	1	<1	150
JAN 19...	1100	<10	<1	<1	<1	<1	1	2	<1	150
FEB 23...	1015	--	--	<1	--	--	--	1	1	120
MAR 23...	1015	--	--	<1	--	--	--	1	<1	170
APR 27...	1030	--	--	<1	--	--	--	2	1	220
MAY 25...	1045	--	--	<1	--	--	--	3	2	540
JUN 22...	1315	--	--	<1	--	--	--	3	2	350
JUL 20...	1110	10	<1	<1	<1	<1	<1	3	2	420
AUG 16...	1130	--	--	<1	--	--	--	3	2	500
SEP 21...	1040	--	--	<1	--	--	--	2	2	200

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 15...	<1	--	--	--	--	--	--	--	<1	--
NOV 17...	<1	--	--	--	--	--	--	^a <0.2	<1	--
DEC 16...	<1	--	--	--	--	--	--	^a <0.2	<1	--
JAN 19...	<1	<1	60	<0.1	<0.1	2	5	^a <0.2	<1	8
FEB 23...	<1	--	--	--	--	--	--	^a <0.2	<1	--
MAR 23...	<1	--	--	--	--	--	--	^a <0.2	<1	--
APR 27...	<1	--	--	--	--	--	--	^a <0.2	<1	--
MAY 25...	<1	--	--	--	--	--	--	^a <0.2	<1	--
JUN 22...	<1	--	--	--	--	--	--	^a <0.2	<1	--
JUL 20...	2	<1	30	<0.1	<0.1	<1	<1	--	--	10
AUG 16...	<1	--	--	--	--	--	--	<0.2	--	--
SEP 21...	<1	--	--	--	--	--	--	<0.2	<1	--

a-Analysis based on preliminary method.

06741520 BIG THOMPSON RIVER BELOW LOVELAND, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°23'00", long 105°01'45", in NW¹/4SE¹/4 sec.20, T.5 N., R.68 W., Larimer County, Hydrologic Unit 10190006, at county road 9 E bridge, about 0.3 mi upstream from outlet ditch and 2.0 mi southeast of Loveland.

DRAINAGE AREA.--540 mi², approximately.

PERIOD OF RECORD.--June 1979 to December 1992 (Discontinued).

WATER-QUALITY DATA, FOR THE PERIOD OCTOBER 1992 TO DECEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 15...	1315	18	1220	8.3	14.5	12.4	490	110
NOV 17...	0830	8.8	1320	7.8	8.0	6.3	470	98
DEC 17...	0900	7.0	1370	7.6	2.5	8.3	510	110

DATE	TIME	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY LAB (MG/L AS CACO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 15...	52		143	--	--	--	--	--
NOV 17...	55		144	0.09	12	0.03	2.8	2.6
DEC 17...	56		139	0.12	12	0.10	3.0	2.7

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)
OCT 15...	1315	<1	6	2	140	<1	<1	--
NOV 17...	0830	<1	4	3	150	3	<1	^a <0.2
DEC 17...	0900	<1	5	1	380	3	<1	^a <0.2

a-Analysis based on preliminary method.

06741530 BIG THOMPSON RIVER AT I-25, NEAR LOVELAND, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°23'51", long 104°59'32", in NW¹/4SW¹/4 sec.15, T.5 N., R.68 W., Larimer County, Hydrologic Unit 10190006, at bridge on Big Thompson River on north bound lane of service road, east of interstate Highway 25 (I-25), 1.5 mi downstream from Hillsboro Ditch, and 4.5 mi east of Loveland.

DRAINAGE AREA.--571 mi².

PERIOD OF RECORD.--April 28, 1987, to December 1992 (Discontinued).

WATER-QUALITY DATA, FOR THE PERIOD OCTOBER 1992 TO DECEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
OCT 16...	0915	15	1350	7.9	7.5	7.3	560	120
NOV 17...	1020	8.8	1370	8.1	6.0	9.0	570	120
DEC 17...	1100	13	1310	8.0	0.0	10.6	540	120

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY LAB (MG/L AS CACO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 16...	62	188	--	--	--	--	--
NOV 17...	65	218	0.05	8.6	0.04	1.8	1.7
DEC 17...	58	200	0.13	9.7	0.18	1.9	1.9

DATE	TIME	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)
OCT 16...	0915	<1	2	2	160	2	<1	--
NOV 17...	1020	<1	3	2	220	2	<1	^a <0.2
DEC 17...	1100	<1	2	<1	370	2	<1	^a <0.2

^a-Analysis based on preliminary method.

06742500 CARTER LAKE NEAR BERTHOUD, CO

LOCATION.--Lat 40°19'28", long 105°12'41", in SE¹/₄ sec.10, T.4 N., R.70 W., Larimer County, Hydrologic Unit 10190006, in hoist house 293 ft from right abutment of Carter Lake Dam on Dry Creek, 7.0 mi west of Berthoud, and 8.9 mi upstream from mouth. Water-quality sampling site near center of reservoir.

RESERVOIR ELEVATIONS AND CONTENTS RECORDS

PERIOD OF RECORD.--March 1954 to current year.

GAGE.--Nonrecording gage read at irregular intervals from 1 to 13 days. Datum of gage is 5,763.00 ft above sea level, (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above sea level.

REMARKS.--Reservoir is formed by an earth and rockfill dam and dikes enlarging the natural basin of Carter Lake. Storage began in February 1954. Usable capacity, 113,500 acre-ft between elevations 5,618.00 ft, trashrack sill at outlet, and 5,763.00 ft, maximum water surface, 6 ft below crest of dam. Dead storage, 3,306 acre-ft. Figures given represent usable contents. Water diverted from Colorado River basin through Alva B. Adams tunnel is pumped from Flatiron Reservoir into Carter Lake for supplemental irrigation supply to Little Thompson River and St. Vrain and Boulder Creek basins. Water above elevation 5,620 ft may be released for return to Flatiron Reservoir where pump turbines can operate in reverse to generate power and water can be used for irrigation in Big Thompson or Cache la Poudre River basins.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 109,100 acre-ft, Apr. 27-29, 1971, elevation, 5,759.12 ft; minimum observed since appreciable storage was attained, 960 acre-ft, Oct. 25, 1954, elevation, 5,621.40 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 105,300 acre-ft, Feb. 28, elevation, 5,755.78 ft; minimum contents, 41,120 acre-ft, Oct. 29, elevation, 5,690.86 ft.

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	5,694.92	44,520	-
Oct. 31.	5,691.20	41,400	-3,120
Nov. 30.	5,703.36	51,860	+10,460
Dec. 31.	5,723.29	70,700	+18,840
CAL YR 1992.			-16,120
Jan. 31.	5,741.68	89,730	+19,030
Feb. 28.	5,755.78	105,300	+15,570
Mar. 31.	5,754.72	104,100	-1,200
Apr. 30.	5,753.65	102,900	-1,200
May 31.	5,746.60	95,060	-7,840
June 30.	5,740.46	88,420	-6,640
July 31.	5,718.92	66,410	-22,010
Aug. 31.	5,700.94	49,720	-16,690
Sept. 30.	5,702.77	51,340	+1,620
WTR YR 1993.			+6,820

06742500 CARTER LAKE NEAR BERTHOUD, CO--Continued

WATER-QUALITY RECORDS

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

REMARKS.--Samples were collected near surface and near bottom, near south end of reservoir.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

			SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)				
MAY											
	18...	1235	0.1	73	8.2	13.5	8.6				
	18...	1236	5.0	73	8.2	12.5	8.7				
	18...	1237	10	74	8.2	12.5	8.7				
	18...	1238	15	73	8.2	12.0	8.7				
	18...	1239	20	74	8.2	10.5	9.0				
	18...	1240	25	74	8.2	9.5	9.2				
	18...	1241	30	75	8.2	9.0	9.3				
	18...	1242	40	75	8.2	8.0	9.4				
	18...	1243	50	73	8.0	7.5	9.2				
	18...	1244	60	74	8.0	6.5	9.1				
	18...	1245	70	74	8.0	6.5	9.0				
	18...	1246	80	74	8.0	6.0	8.9				
	18...	1247	90	73	8.0	6.0	8.8				
	18...	1248	100	74	8.0	6.0	8.8				
	18...	1249	110	74	8.0	6.0	8.7				
	18...	1250	120	74	8.0	6.0	8.7				
	18...	1251	130	74	8.0	5.5	8.7				
	18...	1252	135	74	8.0	5.5	8.6				
AUG											
	05...	1140	0.1	82	8.2	21.0	7.4				
	05...	1141	5.0	82	8.2	20.5	7.4				
	05...	1142	10	82	8.1	20.5	7.2				
	05...	1143	15	81	8.1	20.5	7.1				
	05...	1144	20	79	8.0	20.5	7.1				
	05...	1145	25	69	7.7	18.5	6.0				
	05...	1146	30	67	7.6	17.5	5.9				
	05...	1147	40	70	7.5	11.0	6.5				
	05...	1148	50	70	7.5	9.0	6.6				
	05...	1149	60	70	7.4	8.0	6.4				
	05...	1150	70	70	7.3	8.0	6.4				
	05...	1151	80	70	7.3	7.5	6.3				
	05...	1152	90	70	7.2	7.0	6.2				
	05...	1153	95	71	7.2	7.0	6.1				
DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (IN)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	
MAY											
	18...	1200	0.1	73	8.2	13.5	97.0	8.6	<1	31	9.3
	18...	1220	135	74	8.0	5.5	--	8.6	--	29	9.1
AUG											
	05...	1115	0.1	82	8.2	21.0	48.0	7.4	K1	36	12
	05...	1125	95	71	7.2	7.0	--	6.1	--	31	10
DATE		MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
MAY											
	18...	1.8	2.8	0.2	0.8	32	4.5	0.7	0.3	3.4	38
	18...	1.4	2.4	0.2	0.7	32	4.7	0.6	0.2	4.0	34
AUG											
	05...	1.4	2.5	0.2	0.7	36	3.4	0.5	0.1	2.2	44
	05...	1.4	2.6	0.2	0.7	32	3.6	0.7	0.1	4.3	46

K-Based on non-ideal colony count.

06742500 CARTER LAKE NEAR BERTHOUD, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
MAY										
18...	43	<0.01	<0.05	0.03	<0.20	<0.01	<0.01	<0.01	1.6	<0.1
18...	42	<0.01	<0.05	0.05	<0.20	<0.01	<0.01	<0.01	--	--
AUG										
05...	45	<0.01	<0.05	<0.01	0.19	0.02	<0.01	0.01	2.5	<0.1
05...	43	<0.01	0.08	<0.01	<0.20	<0.01	<0.01	<0.01	--	--

DATE	TIME	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
MAY									
18...	1200	13	<0.5	<10	1	<5	<3	<10	<3
18...	1220	15	<0.5	<10	<1	<5	<3	<10	5
AUG									
05...	1115	25	<0.5	<10	<1	<5	<3	<10	17
05...	1125	18	<0.5	<10	<1	<5	<3	<10	25

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
MAY									
18...	<10	<4	<1	<10	<10	^a <0.2	64	<6	<3
18...	10	<4	<1	<10	<10	^a <0.2	47	<6	<3
AUG									
05...	<10	<4	2	<10	<10	^a <0.2	47	<6	5
05...	<10	<4	7	<10	<10	^a <0.2	46	<6	8

a-Analysis based on preliminary method.

06746095 JOE WRIGHT CREEK ABOVE JOE WRIGHT RESERVOIR, CO

LOCATION.--Lat 40°32'24", long 105°52'56", in SE¹/₄SE¹/₄ sec.26, T.7 N., R.76 W., Larimer County, Hydrologic Unit 10190007, on left bank 150 ft downstream from unnamed tributary and Colorado Highway 14 culvert crossing, 1.5 mi northeast of Cameron Pass, 1.5 mi southwest of Joe Wright Dam, and 8 mi east of Gould.

DRAINAGE AREA.--3.01 mi².

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,990 ft above sea level, from topographic map. Prior to Aug. 7, 1989, at datum 3.40 ft, higher.

REMARKS.--Estimated daily discharges: Oct. 7-9, 16-19, and Nov. 1 to June 14. Records good except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	2.3	1.1	.64	.50	.68	.86	.99	26	128	24	9.3
2	3.7	2.2	1.1	.62	.49	.68	.93	.96	29	124	22	9.4
3	3.6	2.1	1.1	.61	.49	.68	.97	.94	32	117	21	8.9
4	3.4	1.9	1.0	.58	.47	.68	.91	1.1	35	88	20	8.3
5	3.4	1.8	.96	.56	.46	.72	.96	1.3	32	73	20	7.9
6	3.4	1.9	.94	.57	.46	.76	.97	1.1	36	59	19	7.9
7	3.4	2.0	.93	.59	.48	.80	.97	1.1	39	55	18	8.3
8	3.4	1.8	.92	.57	.52	.84	.90	1.0	42	59	19	7.9
9	3.4	1.7	.93	.56	.54	.88	.80	.97	42	62	17	7.3
10	3.4	1.5	.90	.57	.56	.91	.89	.93	36	63	18	7.0
11	3.4	1.4	.91	.54	.58	.90	.98	1.3	36	66	17	6.7
12	3.2	1.5	.87	.51	.58	.88	.98	1.7	50	68	16	6.7
13	3.1	1.5	.82	.47	.56	.88	.98	2.3	60	66	16	8.1
14	2.9	1.5	.75	.48	.54	.88	.89	2.9	83	63	16	7.8
15	2.8	1.5	.71	.51	.54	.88	.91	3.8	102	62	15	8.1
16	2.7	1.5	.72	.53	.52	.88	.95	5.4	122	59	14	7.6
17	2.7	1.5	.73	.51	.56	.88	.99	7.0	137	55	13	7.9
18	2.6	1.4	.76	.48	.60	.86	.98	6.0	135	50	13	8.0
19	2.6	1.3	.72	.46	.64	.86	.88	5.6	119	46	13	7.7
20	2.5	1.3	.67	.46	.62	.86	.82	6.9	117	42	12	7.4
21	2.5	1.2	.66	.46	.60	.86	.85	8.5	136	39	13	7.0
22	2.5	1.1	.68	.49	.60	.84	.89	9.0	63	37	12	6.5
23	2.4	1.2	.69	.46	.62	.89	.95	12	62	34	12	6.2
24	2.4	1.2	.66	.43	.64	.95	.98	11	55	34	11	6.1
25	2.4	1.2	.64	.41	.68	.99	.94	11	49	29	11	6.1
26	2.4	1.2	.64	.43	.70	.99	.89	13	49	28	14	6.1
27	2.4	1.2	.65	.46	.71	.99	.89	15	85	27	12	5.9
28	2.4	1.2	.66	.46	.70	.96	.94	17	117	26	11	5.6
29	2.4	1.2	.67	.45	---	.98	1.0	20	135	25	10	5.6
30	2.4	1.2	.66	.44	---	.99	1.0	20	139	25	10	5.6
31	2.3	---	.66	.48	---	.92	---	23	---	24	9.7	---
TOTAL	89.9	45.5	24.81	15.79	15.96	26.75	27.85	212.79	2200	1733	468.7	218.9
MEAN	2.90	1.52	.80	.51	.57	.86	.93	6.86	73.3	55.9	15.1	7.30
MAX	3.8	2.3	1.1	.64	.71	.99	1.0	23	139	128	24	9.4
MIN	2.3	1.1	.64	.41	.46	.68	.80	.93	26	24	9.7	5.6
AC-FT	178	90	49	31	32	53	55	422	4360	3440	930	434

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1993, BY WATER YEAR (WY)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	1.99	1.14	.76	.60	.55	.57	.92	12.2	48.2	23.5	7.16	3.34			
MAX	4.93	3.20	1.37	1.25	1.20	1.20	1.62	34.6	88.5	55.9	15.1	7.30			
(WY)	1987	1991	1991	1991	1991	1991	1992	1992	1988	1993	1993	1993			
MIN	.54	.36	.28	.25	.20	.20	.39	3.58	25.5	6.75	1.88	1.06			
(WY)	1981	1979	1981	1981	1979	1979	1979	1982	1989	1989	1985	1980			

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1979 - 1993
ANNUAL TOTAL	3858.59	5079.95	
ANNUAL MEAN	10.5	13.9	8.41
HIGHEST ANNUAL MEAN			13.9
LOWEST ANNUAL MEAN			5.40
HIGHEST DAILY MEAN	a 73	139	139
LOWEST DAILY MEAN	.58	.41	.20
ANNUAL SEVEN-DAY MINIMUM	.60	.44	.20
INSTANTANEOUS PEAK FLOW		c 174	238
INSTANTANEOUS PEAK STAGE		c, d 5.31	5.60
ANNUAL RUNOFF (AC-FT)	7650	10080	6090
10 PERCENT EXCEEDS	37	49	27
50 PERCENT EXCEEDS	2.4	1.5	1.2
90 PERCENT EXCEEDS	.63	.56	.40

a-Also occurred Jun 14.

b-Also occurred Jan 31 to Apr 4, 1979, and Feb 9 to Apr 9, 1981.

c-Also occurred Jun 21.

d-Maximum gage height, 10.64 ft, May 15, 1993, present datum, backwater from ice.

06746110 JOE WRIGHT CREEK BELOW JOE WRIGHT RESERVOIR, CO

LOCATION.--Lat 40°33'43", long 105°51'48", in SE¹/4NE¹/4 sec.24, T.7 N., R.76 W., Larimer County, Hydrologic Unit 10190007, on left bank 500 ft downstream from unnamed tributary, 2,000 ft downstream from Joe Wright Dam, and 3 mi southwest of Chambers Lake.

DRAINAGE AREA.--6.90 mi².

PERIOD OF RECORD.--June 1978 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,710 ft above sea level, from topographic map. Prior to Aug. 7, 1989, at datum 0.50 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 1 to May 5. Records good except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	.68	.23	.24	.23	.26	.38	.58	25	245	48	35
2	11	.66	.21	.25	.24	.26	.40	.56	43	205	39	40
3	11	.64	.19	.25	.25	.27	.40	.59	59	172	32	40
4	10	.60	.19	.24	.25	.27	.42	.63	54	151	31	40
5	9.3	.56	.19	.23	.23	.26	.42	.64	38	144	37	39
6	8.3	.56	.20	.23	.23	.25	.44	.58	41	120	50	36
7	7.4	.58	.19	.24	.23	.25	.41	.51	45	89	42	30
8	10	.56	.18	.25	.24	.27	.39	.42	44	70	38	48
9	10	.52	.19	.25	.25	.29	.39	.38	44	72	43	66
10	10	.50	.19	.24	.26	.31	.42	.42	43	75	52	71
11	9.6	.48	.20	.24	.26	.33	.45	.75	40	81	50	70
12	9.6	.46	.21	.24	.25	.32	.45	1.2	41	96	44	67
13	9.6	.45	.20	.23	.25	.32	.47	1.8	46	102	38	42
14	5.2	.45	.19	.22	.24	.31	.45	2.2	66	102	34	6.0
15	.81	.46	.19	.22	.24	.32	.45	2.9	91	91	34	7.4
16	.79	.46	.20	.23	.23	.34	.47	3.3	119	85	34	33
17	.79	.47	.21	.23	.22	.37	.47	4.4	142	64	34	90
18	.77	.44	.21	.24	.22	.37	.48	4.2	154	61	40	95
19	.79	.42	.22	.24	.23	.38	.45	7.5	141	73	44	93
20	.79	.40	.21	.24	.24	.40	.42	12	122	72	41	94
21	.79	.38	.21	.22	.25	.40	.42	13	98	71	33	95
22	.74	.36	.22	.22	.24	.42	.45	13	147	68	33	95
23	.71	.34	.22	.23	.24	.42	.48	13	146	61	33	84
24	.71	.34	.23	.24	.25	.42	.48	13	130	61	36	63
25	.74	.33	.23	.23	.26	.45	.45	13	93	60	41	59
26	.71	.32	.24	.26	.26	.45	.45	14	78	60	41	58
27	.71	.31	.24	.27	.27	.43	.49	14	79	56	41	57
28	.71	.29	.24	.27	.27	.41	.52	16	135	54	36	37
29	.72	.27	.25	.25	---	.41	.56	18	191	53	24	3.4
30	.71	.24	.25	.24	---	.39	.57	18	227	52	14	4.4
31	.73	---	.24	.23	---	.39	---	18	---	49	31	---
TOTAL	144.72	13.53	6.57	7.41	6.83	10.74	13.50	208.56	2722	2815	1168	1598.2
MEAN	4.67	.45	.21	.24	.24	.35	.45	6.73	90.7	90.8	37.7	53.3
MAX	11	.68	.25	.27	.27	.45	.57	18	227	245	52	95
MIN	.71	.24	.18	.22	.22	.25	.38	.38	25	49	14	3.4
AC-FT	287	27	13	15	14	21	27	414	5400	5580	2320	3170

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1993, BY WATER YEAR (WY)

	MEAN	2.24	1.08	.65	.55	.48	.45	.53	10.4	61.8	36.5	25.9	26.9
MAX	8.45	3.01	1.96	1.40	1.30	1.38	.78	32.1	96.0	90.8	84.7	60.4	60.4
(WY)	1987	1982	1983	1983	1983	1983	1981	1988	1988	1993	1991	1988	1988
MIN	.54	.45	.21	.24	.24	.29	.29	1.21	12.6	2.49	6.44	1.13	1.13
(WY)	1989	1993	1993	1993	1993	1985	1991	1980	1980	1989	1981	1991	1991

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1979 - 1993
ANNUAL TOTAL	5606.21	8715.06	
ANNUAL MEAN	15.3	23.9	14.0
HIGHEST ANNUAL MEAN			23.9
LOWEST ANNUAL MEAN			3.69
HIGHEST DAILY MEAN	119 Jun 15	245 Jul 1	245 ^a Jul 1 1993
LOWEST DAILY MEAN	.18 Dec 8	.18 Dec 8	.17 Apr 3 1991
ANNUAL SEVEN-DAY MINIMUM	.19 Dec 3	.19 Dec 3	.18 Mar 31 1991
INSTANTANEOUS PEAK FLOW		260 Jul 1	284 Aug 18 1991
INSTANTANEOUS PEAK STAGE		2.59 Jul 1	2.71 Aug 18 1991
ANNUAL RUNOFF (AC-FT)	11120	17290	10120
10 PERCENT EXCEEDS	52	76	52
50 PERCENT EXCEEDS	.71	.58	1.0
90 PERCENT EXCEEDS	.33	.23	.33

a-Also occurred Apr 4, 1991.

06751490 NORTH FORK CACHE LA POUDE RIVER AT LIVERMORE, CO

LOCATION.--Lat 40°47'15", long 105°15'06", in SW¹/4SE¹/4 sec.32, T.10 N., R.70 W., Larimer County, Hydrologic Unit 10190007, on left bank 60 ft downstream from bridge on Colorado State Highway 200, 2.0 mi west of Livermore, and 2.9 mi downstream from Stonewall Creek.

DRAINAGE AREA.--539 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1986 to current year. May 1929 to September 1931, May 1947 to September 1960, published as near Livermore; records are not considered equivalent.

GAGE.--Water-stage recorder. Elevation of gage is 5,715 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 12 to Feb. 24, and Sept. 2-14. Records good except for estimated daily discharges, which are poor. Natural flow affected by transbasin diversions, storage reservoirs, and irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	7.8	9.3	10	12	11	19	50	253	32	10	6.9
2	6.5	7.8	9.0	10	13	12	34	47	249	32	9.8	7.4
3	6.5	8.0	8.7	9.5	13	12	31	46	422	32	10	7.8
4	6.5	8.3	8.8	9.8	13	11	30	43	378	33	10	8.2
5	6.5	11	12	10	11	11	31	37	287	32	11	8.6
6	6.5	8.9	10	9.0	12	12	38	35	263	30	11	8.2
7	6.5	8.2	13	9.1	13	12	37	32	261	29	10	8.0
8	6.4	8.2	13	9.6	13	13	37	25	244	26	9.8	7.0
9	6.5	7.9	13	11	12	13	35	25	228	24	9.3	7.4
10	6.5	7.7	12	11	12	12	35	24	226	20	9.6	7.8
11	6.6	7.7	10	14	11	12	35	21	200	19	11	8.0
12	6.7	7.7	9.6	11	11	11	34	22	168	22	9.8	8.2
13	6.7	7.5	9.1	9.6	11	11	39	18	145	22	9.7	8.1
14	6.6	7.4	9.1	10	11	12	42	46	120	26	9.3	7.2
15	6.6	7.5	9.0	11	10	14	42	136	99	27	9.4	6.9
16	7.0	7.9	8.8	11	9.0	13	42	254	91	23	9.0	6.6
17	7.6	7.5	9.6	11	9.4	12	44	313	112	18	8.9	6.8
18	7.2	7.4	8.6	10	10	12	45	349	357	19	8.6	8.6
19	7.2	7.4	9.3	11	12	15	48	324	440	18	8.4	9.2
20	7.0	7.6	7.9	10	13	37	48	339	321	19	8.8	7.9
21	6.9	8.5	10	13	13	52	48	375	261	19	8.7	7.7
22	6.9	7.8	10	12	12	37	48	399	223	17	8.5	8.1
23	7.0	8.0	9.8	12	11	15	46	379	186	16	7.8	8.4
24	7.3	8.9	10	11	12	12	42	343	168	16	6.9	8.8
25	7.3	9.0	9.6	10	11	11	46	344	146	14	6.5	8.4
26	7.3	9.1	10	12	11	12	46	325	126	14	6.7	7.9
27	7.4	9.8	10	12	12	12	46	289	113	12	6.6	7.9
28	7.4	9.0	10	11	11	15	49	254	95	12	7.3	7.9
29	7.6	10	10	12	---	17	49	262	73	11	6.6	8.0
30	7.7	11	10	11	---	20	50	251	49	11	7.0	7.6
31	7.7	---	10	12	---	20	---	253	---	11	7.5	---
TOTAL	214.7	250.5	309.2	335.6	324.4	491	1216	5660	6304	656	273.5	235.5
MEAN	6.93	8.35	9.97	10.8	11.6	15.8	40.5	183	210	21.2	8.82	7.85
MAX	7.7	11	13	14	13	52	50	399	440	33	11	9.2
MIN	6.4	7.4	7.9	9.0	9.0	11	19	18	49	11	6.5	6.6
AC-FT	426	497	613	666	643	974	2410	11230	12500	1300	542	467

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1993, BY WATER YEAR (WY)

	MEAN	10.0	10.2	7.54	6.78	7.90	18.2	63.1	91.5	156	24.4	19.2	9.37
MAX	17.8	14.7	9.97	10.8	11.6	55.5	244	206	492	67.9	52.5	20.3	
(WY)	1991	1987	1993	1993	1993	1990	1990	1988	1991	1991	1991	1991	
MIN	4.85	6.62	3.58	3.60	5.77	7.23	5.72	10.3	20.3	5.23	4.24	4.48	
(WY)	1989	1988	1988	1988	1988	1991	1989	1989	1987	1989	1988	1987	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1987 - 1993
ANNUAL TOTAL	10925.2	16270.4	
ANNUAL MEAN	29.9	44.6	35.3
HIGHEST ANNUAL MEAN			59.1
LOWEST ANNUAL MEAN			8.06
HIGHEST DAILY MEAN	^a 205	May 28	440 Jun 19
LOWEST DAILY MEAN	4.2	Feb 2	6.4 Oct 8
ANNUAL SEVEN-DAY MINIMUM	4.5	Jan 28	6.5 Oct 2
INSTANTANEOUS PEAK FLOW			493 Jun 18
INSTANTANEOUS PEAK STAGE			9.71 Jun 18
ANNUAL RUNOFF (AC-FT)	21670	32270	25590
10 PERCENT EXCEEDS	78	145	78
50 PERCENT EXCEEDS	12	11	9.2
90 PERCENT EXCEEDS	5.4	7.3	4.8

a-Also occurred Jun 2.

b-Also occurred Sep 3, 1988 and Apr 27, 1989.

06751490 NORTH FORK CACHE LA POUDE RIVER AT LIVERMORE, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1986, to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT
OCT 29...	1405	7.7	466	8.7	6.5	14.3	210	56	17	14	13
NOV 18...	1430	7.4	460	8.8	6.5	13.3	220	58	18	15	13
DEC 17...	1010	12	426	8.0	0.0	12.2	180	50	14	15	15
FEB 24...	1245	12	368	8.4	0.5	12.6	170	47	12	14	15
MAR 18...	1050	12	326	8.5	4.5	--	140	39	11	13	16
APR 14...	1115	43	200	8.3	5.0	11.8	83	24	5.6	8.9	19
MAY 05...	1150	36	197	8.2	10.5	9.4	83	24	5.5	8.4	18
JUN 09...	1050	223	109	8.1	12.0	9.5	47	14	2.9	4.7	18
JUL 15...	1050	28	317	8.3	17.0	9.6	130	38	8.7	15	20
AUG 10...	1150	9.3	429	8.1	18.5	9.4	210	59	15	14	13
SEP 14...	1245	8.2	432	8.2	8.5	10.5	200	55	16	13	12
DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 29...	0.4	1.8	216	16	8.9	1.0	15	275	260	0.37	5.73
NOV 18...	0.4	1.6	214	16	10	1.1	13	252	263	0.34	5.05
DEC 17...	0.5	1.6	190	17	11	1.0	12	244	237	0.33	7.71
FEB 24...	0.5	2.0	162	15	11	0.9	11	202	211	0.27	6.54
MAR 18...	0.5	1.3	147	14	11	0.9	9.6	188	189	0.26	6.24
APR 14...	0.4	1.0	80	12	5.9	0.8	13	136	120	0.18	15.6
MAY 05...	0.4	1.0	80	9.9	<0.1	0.9	13	136	--	--	--
JUN 09...	0.3	0.9	--	3.6	1.9	0.4	13	80	--	--	--
JUL 15...	0.6	1.9	141	15	7.1	0.9	15	198	188	0.27	14.9
AUG 10...	0.4	2.3	216	10	<0.1	1.1	15	262	--	--	--
SEP 14...	0.4	1.8	211	12	6.8	1.0	14	246	247	0.33	5.47

06751490 NORTH FORK CACHE LA POUDE RIVER AT LIVERMORE, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 29...	<0.01	0.06	<0.05	<0.01	0.01	--	<0.20	--	<0.01	0.01	<0.01
NOV 18...	<0.01	0.24	0.24	0.02	0.02	--	<0.20	--	<0.01	0.02	0.01
DEC 17...	0.02	0.15	0.15	0.02	0.03	--	<0.20	--	0.03	<0.01	<0.01
FEB 24...	0.01	0.21	0.21	--	0.01	--	<0.20	--	0.02	<0.01	<0.01
MAR 18...	<0.01	0.10	0.10	--	0.02	--	<0.20	--	<0.01	<0.01	<0.01
APR 14...	<0.01	--	<0.05	--	0.08	0.22	0.30	0.30	0.04	0.02	<0.01
MAY 05...	<0.01	--	<0.05	--	0.01	0.39	0.40	0.40	0.05	0.02	<0.01
JUN 09...	<0.01	0.13	0.13	--	0.02	0.28	0.30	0.43	0.03	0.04	0.03
JUL 15...	<0.01	0.24	0.24	--	0.02	0.18	0.20	0.44	0.06	0.06	0.04
AUG 10...	<0.01	--	<0.05	--	0.03	0.27	0.30	0.30	0.03	0.01	0.02
SEP 14...	<0.01	--	<0.05	--	0.02	--	<0.20	--	0.03	0.03	0.02

DATE	TIME	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 29...	1405	130	<0.5	50	<1	<5	<3	<10	15
NOV 18...	1430	120	<0.5	40	<1	<5	<3	<10	8
DEC 17...	1010	110	<0.5	50	<1	<5	<3	<10	11
FEB 24...	1245	90	<0.5	40	<1	<5	<3	<10	21
MAR 18...	1050	83	<0.5	40	<1	<5	<3	<10	18
APR 14...	1115	45	<0.5	20	<1	<5	<3	<10	74
MAY 05...	1150	46	<0.5	20	<1	<5	<3	<10	68
JUN 09...	1050	28	<0.5	20	<1	<5	<3	<10	82
JUL 15...	1050	83	<0.5	50	<1	<5	<3	<10	72
AUG 10...	1150	120	<0.5	40	<1	<5	<3	<10	7
SEP 14...	1245	110	<0.5	50	<1	<5	<3	<10	12

06751490 NORTH FORK CACHE LA POUDE RIVER AT LIVERMORE, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 29...	<10	16	13	<10	<10	<1	370	<6	7
NOV 18...	10	15	17	<10	<10	<1	380	<6	10
DEC 17...	<10	15	11	<10	<10	<1	330	<6	8
FEB 24...	<10	12	14	<10	<10	<1	280	<6	5
MAR 18...	<10	12	15	<10	<10	<1	250	<6	3
APR 14...	<10	11	11	<10	<10	<1	130	<6	5
MAY 05...	<10	8	12	<10	<10	<1	130	<6	9
JUN 09...	<10	<4	13	<10	<10	<1	77	<6	9
JUL 15...	<10	12	7	<10	<10	2	240	<6	15
AUG 10...	<10	14	22	<10	<10	<1	350	<6	7
SEP 14...	<10	16	10	<10	<10	<1	350	<6	9

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 29...	1405	7.7	8	0.17
NOV 18...	1430	7.4	15	0.30
DEC 17...	1010	12	8	0.24
FEB 24...	1245	12	2	0.06
MAR 18...	1050	12	2	0.08
APR 14...	1115	43	11	1.2
MAY 05...	1150	36	9	0.88
JUN 09...	1050	223	11	6.8
JUL 15...	1050	28	4	0.31
AUG 10...	1150	9.3	15	0.38
SEP 14...	1245	8.2	5	0.10

06752000 CACHE LA POUDE RIVER AT MOUTH OF CANYON, NEAR FORT COLLINS, CO

LOCATION.--Lat 40°39'52", long 105°13'26", in NW¼ sec.15, T.8 N., R.70 W., Larimer County, Hydrologic Unit 10190007, on left bank at mouth of canyon, 0.5 mi downstream from headgate of Poudre Valley Canal, 1.2 mi upstream from Lewstone Creek, and 9.3 mi northwest of courthouse in Fort Collins.

DRAINAGE AREA.--1,056 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Streamflow records, June to August 1881, May to July 1883, October 1883 to current year.

Monthly discharge only for some periods, published in WSP 1310. Records for Mar. 23 to Apr. 30 and July 4 to Aug. 20, 1883, published in WSP 9, have been found to be unreliable and should not be used. Prior to 1902, published as Cache la Poudre Creek or River at or near Fort Collins. Water-quality data available, June 1962 to October 1965, October 1971 to September 1982.

REVISED RECORDS.--WSP 1310: 1885-87, 1889, 1892, 1894-96, 1934. WSP 1730: 1960, drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,220 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 15, and Nov. 22 to Mar. 22. Records good except for estimated daily discharges, which are fair. Natural flow of stream affected by transbasin and transmountain diversions (see elsewhere in this report), diversions upstream from station for irrigation of about 50,000 acres, most of which is downstream from station, 88,740 acre-ft diverted during current year, and diversions for municipal use, 14,510 acre-ft diverted during current year.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	31	29	25	18	25	40	159	992	2030	614	246
2	45	32	18	35	20	27	46	151	1120	1650	598	257
3	40	28	20	36	26	29	43	147	1370	1560	561	319
4	39	21	17	30	26	25	47	155	1140	1510	537	195
5	38	15	19	27	23	20	48	154	1070	1150	563	92
6	35	27	17	25	21	26	50	162	1060	898	578	52
7	31	38	15	24	21	30	48	152	1180	759	571	42
8	29	38	15	26	21	28	39	170	902	809	525	70
9	25	32	20	30	21	31	38	197	783	815	508	101
10	25	27	20	27	28	28	37	190	702	850	510	110
11	40	19	24	30	31	23	41	183	724	955	542	204
12	45	21	22	23	30	22	44	204	838	964	493	243
13	50	32	24	24	24	19	54	166	1000	946	471	300
14	66	39	23	26	21	15	43	236	997	984	454	195
15	43	31	26	27	20	19	33	398	1260	971	519	105
16	39	34	23	31	20	26	40	598	1420	1010	551	103
17	29	34	23	32	20	33	42	898	1710	836	569	108
18	16	28	23	32	21	25	39	982	2430	906	527	140
19	14	40	23	35	24	32	45	1040	2430	896	485	129
20	14	42	26	40	35	30	51	1090	1970	691	446	115
21	14	41	21	36	33	30	114	1210	1830	624	416	100
22	13	35	20	34	27	38	113	1380	2030	706	392	110
23	13	32	20	36	24	51	116	1330	2190	697	348	102
24	14	30	20	37	20	48	128	1160	1970	717	361	103
25	15	27	18	36	26	35	134	1200	1550	681	388	71
26	30	24	20	32	24	36	133	1310	1430	605	406	68
27	39	22	16	24	25	36	133	1270	1440	653	396	69
28	37	23	20	29	25	41	151	1220	1570	632	347	69
29	28	22	20	25	---	37	158	1350	1750	599	311	91
30	38	23	21	26	---	40	157	1180	1950	606	272	68
31	33	---	19	22	---	42	---	1100	---	629	242	---
TOTAL	988	888	642	922	675	947	2205	21142	42808	28339	14501	3977
MEAN	31.9	29.6	20.7	29.7	24.1	30.5	73.5	682	1427	914	468	133
MAX	66	42	29	40	35	51	158	1380	2430	2030	614	319
MIN	13	15	15	22	18	15	33	147	702	599	242	42
AC-FT	1960	1760	1270	1830	1340	1880	4370	41940	84910	56210	28760	7890

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1881 - 1993, BY WATER YEAR (WY)

	MEAN	91.8	61.4	44.8	40.6	42.7	53.0	151	936	1847	793	326	166
MAX	270	148	125	158	138	149	743	2807	4811	2225	792	443	
(WY)	1943	1916	1984	1984	1984	1980	1900	1900	1884	1983	1884	1938	
MIN	23.5	8.14	12.6	9.00	10.2	10.6	19.5	204	442	158	61.2	37.3	
(WY)	1990	1939	1965	1930	1967	1939	1991	1977	1934	1966	1954	1962	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1881 - 1993
ANNUAL TOTAL	89614	118034	
ANNUAL MEAN	245	323	
HIGHEST ANNUAL MEAN			372
LOWEST ANNUAL MEAN			891
HIGHEST DAILY MEAN	1480	May 27	129
LOWEST DAILY MEAN	13	Oct 22	7550
ANNUAL SEVEN-DAY MINIMUM	14	Oct 19	1.6
INSTANTANEOUS PEAK FLOW			3.9
INSTANTANEOUS PEAK STAGE			d, e 21000
ANNUAL RUNOFF (AC-FT)	177700	234100	269600
10 PERCENT EXCEEDS	798	1090	1210
50 PERCENT EXCEEDS	61	42	90
90 PERCENT EXCEEDS	22	20	24

a-Also occurred Jun 19.

b-Also occurred Oct 23.

c-Also occurred Nov 28, 1948, caused by diversion of Poudre Valley Canal, 0.5 mi upstream.

d-Maximum discharge determined, caused by failure of Chambers Lake Dam, from reports of State Engineers Office.

e-Maximum discharge not determined, occurred May 20, 1904.

06752000 CACHE LA POUDRE RIVER ABOVE MOUTH OF CANYON, NEAR FT COLLINS, CO---Continued
(National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD---April to September 1993

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
APR 06...	1500	45	291	8.3	7.5	9.8	130	36	9.4	11
MAY 04...	1100	158	160	8.1	13.5	9.3	66	19	4.6	6.9
JUN 10...	1245	723	53	7.8	12.0	10.8	21	6.1	1.4	2.5
JUN 18...	1405	2790	40	7.7	8.5	10.4	14	4.0	0.9	1.6
JUL 08...	1250	852	37	7.8	13.0	9.5	15	4.4	0.9	1.5
AUG 11...	1445	564	35	7.6	18.0	8.3	14	4.3	0.9	1.7
AUG 30...	1735	257	39	7.4	15.0	8.9	15	4.5	1.0	1.5

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- ^A LINEITY MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
APR 06...	1.5	130	11	7.8	0.7	7.3	162	<0.01	<0.05	0.01
MAY 04...	1.2	65	8.1	4.1	0.5	11	114	<0.01	<0.05	0.01
JUN 10...	0.7	22	3.0	0.8	0.2	9.7	38	<0.01	<0.05	0.03
JUN 18...	0.6	15	2.2	0.6	0.2	7.2	39	<0.01	0.07	0.02
JUL 08...	0.5	15	2.2	0.3	0.2	7.6	32	<0.01	<0.05	0.02
AUG 11...	0.5	15	2.2	0.3	0.2	6.4	35	<0.01	<0.05	0.02
AUG 30...	0.9	16	2.5	<0.1	0.2	6.7	30	<0.01	0.05	0.02

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
APR 06...	0.30	<0.20	0.02	0.01	<0.01	3	6	2.9	0.7
MAY 04...	0.30	0.20	0.02	<0.01	<0.01	63	7	4.5	0.4
JUN 10...	<0.20	<0.20	0.03	0.02	0.01	120	4	6.0	0.5
JUN 18...	0.40	0.20	0.05	0.02	<0.01	120	7	8.1	1.8
JUL 08...	<0.20	<0.20	0.02	<0.01	<0.01	55	3	3.6	0.3
AUG 11...	<0.20	<0.20	<0.01	<0.01	<0.01	35	2	1.8	0.3
AUG 30...	<0.20	0.30	0.01	0.01	0.01	31	2	2.2	0.3

A-Total alkalinity, determined in field by fixed end-point titration method on filtered sample

06752000 CACHE LA POUFRE RIVER ABOVE MOUTH OF CANYON, NEAR FT COLLINS, CO--Continued
(National Water-Quality Assessment Program station)

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
MAY				
04...	1030	158	8	3.4
JUN				
10...	1215	723	8	16
18...	1530	2750	111	824
24...	1220	2120	31	177
JUL				
08...	1210	852	7	16
AUG				
11...	1535	564	6	9.1
30...	1750	257	2	1.4

06752258 CACHE LA POUDRE RIVER AT SHIELDS STREET, AT FORT COLLINS, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°36'11", long 105°05'43", in NE¹/4SE¹/4 sec.3, T.7 N., R.69 W., Larimer County, Hydrologic Unit 10190007, at Shields Street bridge, 0.8 mi downstream from Larimer-Weld Canal, and 1.0 mi northwest of Fort Collins.

PERIOD OF RECORD.--October 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LINITY LAB (MG/L AS CACO3)
OCT 29...	1050	9.5	411	8.5	8.5	15.1	180	50	13	--	162
NOV 19...	1030	5.0	478	8.5	7.0	11.2	220	60	16	--	189
DEC 17...	1430	5.0	496	8.6	3.5	11.5	240	68	18	14	185
FEB 24...	1535	23	402	8.5	1.5	13.6	180	54	12	--	128
MAR 25...	1400	36	346	8.6	13.5	10.0	150	42	11	--	131
APR 14...	1620	40	299	8.5	10.0	10.4	130	37	8.8	--	104
MAY 05...	1445	5.1	443	8.5	16.0	9.5	200	55	15	--	142
JUN 29...	1340	E 450	43	7.3	15.0	10.3	18	5.3	1.1	--	18
JUL 14...	1045	618	69	7.7	13.0	10.4	28	8.6	1.7	2.2	27
AUG 10...	1610	66	79	8.2	17.0	8.8	33	9.9	2.1	--	32
SEP 15...	1040	5.9	237	8.0	11.5	8.9	100	29	7.6	--	126

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 29...	--	--	--	--	--	0.01	1.4	0.02	<0.01	<0.01
NOV 19...	--	--	--	--	--	0.02	0.30	0.04	<0.01	0.01
DEC 17...	52	5.1	0.6	9.4	291	0.06	1.3	0.08	<0.01	<0.01
FEB 24...	--	--	--	--	--	0.01	0.38	0.03	<0.01	<0.01
MAR 25...	--	--	--	--	--	<0.01	0.14	0.02	0.03	0.01
APR 14...	--	--	--	--	--	<0.01	0.09	<0.01	<0.01	0.01
MAY 05...	--	--	--	--	--	0.01	0.52	0.03	0.03	0.01
JUN 29...	--	--	--	--	--	<0.01	<0.01	0.04	<0.01	<0.01
JUL 14...	5.2	0.7	0.1	5.1	42	<0.01	0.09	0.02	0.01	<0.01
AUG 10...	--	--	--	--	--	<0.01	0.03	0.03	0.04	0.02
SEP 15...	--	--	--	--	--	<0.01	0.01	0.02	0.02	<0.01

E-Estimated discharge.

06752258 CACHE LA POUDRE RIVER AT SHIELDS STREET, AT FORT COLLINS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT 29...	1050	--	--	<1	--	--	--	<1	<1	170
NOV 19...	1030	--	--	<1	--	--	--	1	<1	190
DEC 17...	1430	<10	<1	<1	<1	<1	<1	4	2	210
FEB 24...	1535	--	--	<1	--	--	--	1	1	130
MAR 25...	1400	--	--	<1	--	--	--	<1	1	100
APR 14...	1620	--	--	<1	--	--	--	<1	<1	150
MAY 05...	1445	--	--	<1	--	--	--	<1	1	200
JUN 29...	1340	--	--	<1	--	--	--	1	1	320
JUL 14...	1045	<10	<1	<1	<1	2	<1	2	2	230
AUG 10...	1610	--	--	<1	--	--	--	1	1	130
SEP 15...	1040	--	--	<1	--	--	--	1	<1	150

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 29...	<1	--	--	--	--	--	<1	^a <0.2	--
NOV 19...	<1	--	--	--	--	--	<1	^a <0.2	--
DEC 17...	<1	<1	30	<0.1	<1	<1	<1	^a <0.2	8
FEB 24...	<1	--	--	--	--	--	<1	^a <0.2	--
MAR 25...	<1	--	--	--	--	--	<1	^a <0.2	--
APR 14...	<1	--	--	--	--	--	<1	^a <0.2	--
MAY 05...	<1	--	--	--	--	--	<1	^a <0.2	--
JUN 29...	<1	--	--	--	--	--	<1	^a <0.2	--
JUL 14...	<1	<1	20	<0.1	<1	<1	<1	^a <0.2	17
AUG 10...	<1	--	--	--	--	--	<1	^a <0.2	--
SEP 15...	<1	--	--	--	--	--	<1	<0.2	--

a-Analysis based on preliminary method.

06752260 CACHE LA POUDDRE RIVER AT FORT COLLINS, CO

LOCATION.--Lat 40°35'21", long 105°04'09", in SE¹/4NW¹/4 sec.12, T.7 N., R.69 W., Larimer County, Hydrologic Unit 10190007, on left bank 200 ft upstream from Lincoln Street Bridge in Fort Collins.

DRAINAGE AREA.--1,127 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1975 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,940 ft above sea level, from topographic map. Prior to Nov. 10, 1988 at site 4,300 ft upstream, at different datum. Prior to May 22, 1987, at site 300 ft downstream, at different datum.

REMARKS.--Estimated daily discharges: Jan. 9-13. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, diversion for municipal supply, diversions upstream from station for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	9.3	8.1	6.0	17	27	35	5.0	438	704	85	14
2	12	8.2	8.1	5.8	20	29	34	4.1	482	446	61	13
3	13	7.6	8.1	5.7	24	31	40	5.8	1210	621	52	65
4	11	6.7	7.8	5.6	25	28	40	7.1	1190	883	60	140
5	16	7.0	7.8	5.4	22	24	48	7.0	1120	628	103	57
6	14	7.4	7.8	5.1	20	29	52	23	1110	539	135	48
7	17	7.2	7.8	5.6	18	33	45	55	1280	276	89	20
8	16	7.0	9.2	5.0	18	32	37	14	929	200	58	18
9	18	8.7	5.6	5.4	19	33	31	7.3	740	174	59	37
10	14	9.6	5.1	5.5	24	32	33	7.9	633	254	60	33
11	12	9.9	7.6	5.4	27	28	33	8.2	626	314	95	18
12	14	9.9	9.5	5.4	27	25	40	21	728	279	59	18
13	13	9.8	8.5	6.3	25	20	49	45	616	355	55	30
14	14	9.3	8.2	5.1	22	19	48	124	200	637	45	16
15	11	9.6	8.0	13	20	24	38	146	278	702	60	9.0
16	16	9.4	7.8	31	17	31	24	175	437	506	26	7.7
17	19	9.3	7.8	30	17	31	20	236	763	234	51	9.2
18	13	9.1	7.6	32	15	27	19	69	2020	184	56	18
19	12	8.7	7.2	32	24	32	18	64	2470	44	45	14
20	12	9.0	6.8	32	31	29	28	147	2230	61	43	12
21	13	9.9	7.0	30	29	29	18	138	1900	33	98	12
22	12	8.4	7.0	30	27	36	14	316	1880	42	54	9.5
23	13	8.7	7.0	32	24	35	11	303	1790	8.3	21	9.2
24	14	8.7	6.8	32	22	35	10	90	1270	50	16	10
25	13	8.4	6.8	29	26	33	12	178	603	38	59	11
26	12	8.4	6.7	27	26	25	12	327	339	145	69	11
27	10	8.4	6.7	22	26	25	10	368	198	131	51	10
28	11	8.4	6.3	23	26	30	9.3	343	223	104	49	8.5
29	9.7	8.3	6.2	20	---	35	19	432	466	62	55	7.1
30	9.3	8.1	6.2	16	---	38	13	249	590	67	36	7.5
31	9.6	---	6.2	17	---	38	---	522	---	96	34	---
TOTAL	402.8	258.4	227.3	525.3	638	923	840.3	4437.4	28759	8817.3	1839	692.7
MEAN	13.0	8.61	7.33	16.9	22.8	29.8	28.0	143	959	284	59.3	23.1
MAX	19	9.9	9.5	32	31	38	52	522	2470	883	135	140
MIN	9.2	6.7	5.1	5.0	15	19	9.3	4.1	198	8.3	16	7.1
AC-FT	799	513	451	1040	1270	1830	1670	8800	57040	17490	3650	1370

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1993, BY WATER YEAR (WY)

	MEAN	22.1	23.5	21.2	27.0	28.0	32.2	120	459	905	258	63.1	27.0
MAX	94.1	122	97.3	123	135	136	652	2720	4771	1450	290	105	
(WY)	1985	1985	1985	1984	1984	1980	1983	1980	1983	1983	1983	1983	1983
MIN	2.45	1.79	1.91	2.29	1.30	1.91	1.37	14.9	158	39.2	12.8	4.79	
(WY)	1978	1978	1978	1978	1987	1988	1988	1976	1989	1988	1988	1987	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1975 - 1993
ANNUAL TOTAL	22920.4	48360.5	
ANNUAL MEAN	62.6	132	169
HIGHEST ANNUAL MEAN			779
LOWEST ANNUAL MEAN			41.8
HIGHEST DAILY MEAN	602	2470	6080
LOWEST DAILY MEAN	3.1	4.1	a.00
ANNUAL SEVEN-DAY MINIMUM	3.6	5.3	a.00
INSTANTANEOUS PEAK FLOW		2680	b.6660
INSTANTANEOUS PEAK STAGE		7.74	c.8.31
ANNUAL RUNOFF (AC-FT)	45460	95920	122100
10 PERCENT EXCEEDS	259	394	348
50 PERCENT EXCEEDS	12	24	18
90 PERCENT EXCEEDS	4.5	7.1	2.7

a-Also occurred Aug 19, Sep 4, 18, 19, 1987, and many days in 1988.

b-Site and datum then in use.

c-Maximum gage height, 9.15 ft, Jun 2, 1991, present site and datum.

06752260 CACHE LA POUDRE RIVER AT FORT COLLINS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1987 to current year.

pH: October 1987 to current year.

WATER TEMPERATURE: October 1987 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1987. Values recorded each 30 minutes.

REMARKS.--Unpublished maximum and minimum specific conductance data for period of daily record available in district office.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 793 microsiemens, Dec. 5, 1992; minimum, 39 microsiemens, June 23, 1993.

WATER TEMPERATURE: Maximum, 23.3 Aug. 24, 1993; minimum 0.2°C many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LITY LAB (MG/L AS CACO3)
OCT											
28...	1150	11	533	8.4	9.5	9.2	220	61	17	--	188
NOV											
18...	1100	8.0	590	8.5	6.0	10.3	260	71	20	--	209
DEC											
15...	1300	7.7	588	8.1	1.5	13.0	280	78	21	20	188
FEB											
23...	1415	36	408	8.4	3.0	12.7	190	54	13	--	133
MAR											
17...	1300	31	387	8.5	2.5	--	170	48	12	--	131
APR											
13...	1415	49	350	8.3	8.0	10.6	160	44	11	--	116
MAY											
04...	1400	7.4	554	8.4	20.5	11.2	240	65	19	--	167
JUN											
08...	1240	901	70	7.7	10.0	10.8	27	7.6	1.9	--	27
JUL											
13...	1240	329	61	8.0	15.0	9.8	26	7.7	1.6	2.3	25
AUG											
09...	1355	82	104	8.7	18.0	9.6	45	13	3.0	--	43
SEP											
13...	1315	40	230	7.9	12.5	8.9	100	29	7.1	--	90

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT										
28....	--	--	--	--	--	0.02	0.75	0.02	<0.01	<0.01
NOV										
18...	--	--	--	--	--	0.03	1.0	0.02	0.01	0.02
DEC										
15...	84	9.2	0.5	9.6	359	0.05	1.2	0.04	0.02	0.01
FEB										
23...	--	--	--	--	--	0.01	0.30	0.02	<0.01	<0.01
MAR										
17...	--	--	--	--	--	<0.01	0.76	0.01	<0.01	<0.01
APR										
13...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	--	--	--	--	--	<0.01	0.41	0.03	0.01	<0.01
JUN										
08...	--	--	--	--	--	<0.01	0.05	0.03	0.03	0.03
JUL										
13...	4.8	0.6	0.1	5.2	41	<0.01	0.07	0.03	0.01	<0.01
AUG										
09...	--	--	--	--	--	<0.01	1.3	0.02	<0.01	<0.01
SEP										
13...	--	--	--	--	--	<0.01	0.05	0.01	0.02	<0.01

PLATTE RIVER BASIN

06752260 CACHE LA POUDRE RIVER AT FORT COLLINS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT 28...	1150	--	--	<1	--	--	--	1	<1	170
NOV 18...	1100	--	--	<1	--	--	--	1	2	140
DEC 15...	1300	<10	<1	<1	<1	<1	<1	2	<1	160
FEB 23...	1415	--	--	<1	--	--	--	1	2	140
MAR 17...	1300	--	--	<1	--	--	--	1	<1	100
APR 13...	1415	--	--	<1	--	--	--	<1	<1	250
MAY 04...	1400	--	--	<1	--	--	--	1	2	250
JUN 08...	1240	--	--	<1	--	--	--	1	1	380
JUL 13...	1240	10	<1	<1	<1	<1	<1	2	2	190
AUG 09...	1355	--	--	<1	--	--	--	2	1	180
SEP 13...	1315	--	--	<1	--	--	--	2	<1	190

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 28...	1	--	--	--	--	--	<1	^a <0.2	--
NOV 18...	<1	--	--	--	--	--	<1	^a <0.2	--
DEC 15...	<1	<1	60	<0.1	<1	<1	<1	^a <0.2	<3
FEB 23...	<1	--	--	--	--	--	<1	^a <0.2	--
MAR 17...	<1	--	--	--	--	--	<1	^a <0.2	--
APR 13...	2	--	--	--	--	--	<1	^a <0.2	--
MAY 04...	<1	--	--	--	--	--	<1	^a <0.2	--
JUN 08...	<1	--	--	--	--	--	<1	^a <0.2	--
JUL 13...	<1	<1	10	<0.1	<1	<1	<1	^a <0.2	11
AUG 09...	<1	--	--	--	--	--	<1	^a <0.2	--
SEP 13...	<1	--	--	--	--	--	<1	<0.2	--

a-Analysis based on preliminary method.

06752260 CACHE LA POUDRE RIVER AT FORT COLLINS, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

[illegible]

06752270 CACHE LA POUDRE RIVER BELOW FORT COLLINS, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 40°34'01", long 105°01'36", in NW¹/₄NE¹/₄ sec.20, T.7 N., R.68 W., Larimer County, Hydrologic Unit 10190007, 1.4 mi west of Interstate 25 on Prospect Street in Fort Collins.

PERIOD OF RECORD.--January 1978 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LITY LAB (MG/L AS CACO3)
OCT 28...	1510	11	844	8.6	10.0	13.3	380	97	33	--	269
NOV 20...	1240	7.3	858	8.4	5.5	9.6	370	94	33	--	267
DEC 16...	1505	8.5	923	8.7	2.0	12.2	420	110	35	37	247
FEB 25...	1030	35	572	8.6	1.5	13.7	240	66	18	--	160
MAR 17...	1515	38	493	8.6	4.0	--	210	57	17	--	153
APR 15...	1030	49	468	8.5	8.0	11.4	200	54	15	--	135
MAY 06...	1030	15	739	8.2	14.0	8.7	300	77	25	--	181
JUN 10...	1230	445	98	7.8	12.0	9.7	39	11	2.8	--	35
JUL 15...	1600	706	87	8.0	17.0	9.3	34	10	2.2	3.3	30
AUG 09...	1650	93	295	9.0	22.5	12.2	110	31	9.1	--	89
SEP 15...	1440	28	621	8.0	12.5	9.8	260	70	20	--	160

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 28...	--	--	--	--	--	2.0	0.02	2.0	0.02	0.09	0.09
NOV 20...	--	--	--	--	--	0.35	0.05	0.40	0.17	0.03	0.03
DEC 16...	200	16	0.6	12	613	2.4	0.06	2.5	0.09	0.02	0.01
FEB 25...	--	--	--	--	--	1.3	0.05	1.3	1.5	0.42	0.42
MAR 17...	--	--	--	--	--	0.79	0.04	0.83	0.37	0.22	0.20
APR 15...	--	--	--	--	--	0.54	0.05	0.59	0.41	0.15	0.15
MAY 06...	--	--	--	--	--	1.3	0.29	1.6	2.6	0.78	0.76
JUN 10...	--	--	--	--	--	--	<0.01	0.12	0.07	0.05	0.04
JUL 15...	10	1.1	0.1	5.5	55	--	<0.01	0.11	0.02	0.02	0.01
AUG 09...	--	--	--	--	--	0.55	0.03	0.58	0.03	0.19	0.17
SEP 15...	--	--	--	--	--	1.0	0.18	1.2	1.1	0.27	0.29

06752270 CACHE LA POUDRE RIVER BELOW FORT COLLINS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT 28...	1510	--	--	<1	--	--	--	<1	<1	270
NOV 20...	1240	--	--	<1	--	--	--	2	<1	430
DEC 16...	1505	<10	<1	<1	<1	<1	<1	3	<1	340
FEB 25...	1030	--	--	<1	--	--	--	2	2	250
MAR 17...	1515	--	--	<1	--	--	--	1	1	180
APR 15...	1030	--	--	<1	--	--	--	1	<1	280
MAY 06...	1030	--	--	<1	--	--	--	2	1	350
JUN 10...	1230	--	--	<1	--	--	--	2	1	350
JUL 15...	1600	20	<1	<1	<1	2	<1	2	2	460
AUG 09...	1650	--	--	<1	--	--	--	2	2	240
SEP 15...	1440	--	--	<1	--	--	--	2	<1	210

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 28...	1	--	--	--	--	--	<1	^a <0.2	--
NOV 20...	2	--	--	--	--	--	<1	^a <0.2	--
DEC 16...	1	<1	70	0.2	<1	3	<1	^a <0.2	5
FEB 25...	1	--	--	--	--	--	<1	^a <0.2	--
MAR 17...	<1	--	--	--	--	--	<1	^a <0.2	--
APR 15...	<1	--	--	--	--	--	<1	^a <0.2	--
MAY 06...	2	--	--	--	--	--	<1	^a <0.2	--
JUN 10...	<1	--	--	--	--	--	<1	^a <0.2	--
JUL 15...	1	<1	20	<0.1	<1	<1	<1	^a <0.2	9
AUG 09...	<1	--	--	--	--	--	<1	^a <0.2	--
SEP 15...	1	--	--	--	--	--	<1	<0.2	--

a-Analysis based on preliminary method.

06752280 CACHE LA POUDDRE RIVER ABOVE BOX ELDER CREEK, NEAR TIMNATH, CO

LOCATION.--Lat 40°32'56", long 105°00'28", in NW¹/4NE¹/4 sec.28, T.7 N., R.68 W., Larimer County, Hydrologic Unit 10190007, on right bank 2,100 ft upstream from Box Elder Creek, 2.0 mi upstream from Interstate Highway 25 bridge, and 3.8 mi southeast of intersection of College Avenue and Prospect Street in Fort Collins.

DRAINAGE AREA.--1,245 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,860 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: June 16-24. Records fair. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, diversion for municipal supply, diversions upstream from station for irrigation, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	4.8	6.0	4.9	6.7	6.7	7.0	37	210	419	24	6.5
2	4.8	4.4	6.1	4.9	6.7	7.3	6.1	38	203	190	21	6.6
3	4.7	4.3	6.7	5.4	6.7	8.0	7.8	39	678	308	16	12
4	4.2	4.2	6.7	5.5	6.7	7.3	6.3	40	728	538	17	46
5	4.1	4.4	6.0	5.5	6.7	6.5	10	48	649	267	26	19
6	4.8	4.4	6.0	5.5	6.7	6.7	30	45	611	306	42	12
7	6.1	4.4	5.6	5.5	6.9	7.7	14	57	690	132	44	10
8	6.6	4.4	5.9	5.5	7.3	8.4	9.6	40	523	69	19	7.3
9	5.6	4.8	5.6	5.5	7.3	8.0	7.7	40	469	63	13	7.7
10	4.8	4.9	5.5	5.5	8.6	8.6	6.9	44	390	96	16	8.2
11	4.2	4.9	5.5	5.5	8.3	9.4	6.7	43	363	140	31	6.5
12	4.0	4.9	5.5	5.5	8.7	8.6	16	41	428	115	23	5.8
13	4.2	4.9	5.3	5.8	7.4	8.0	38	47	393	137	15	6.7
14	5.0	5.2	5.5	6.1	7.3	8.0	19	82	83	372	16	6.1
15	6.4	5.7	5.5	6.7	7.3	7.3	10	102	85	475	14	6.0
16	6.7	6.0	5.5	6.7	5.8	5.9	7.1	84	110	310	21	5.8
17	5.8	6.0	5.0	6.7	5.7	7.6	6.7	132	210	122	11	5.5
18	5.4	6.1	4.4	6.6	6.0	6.5	6.7	29	536	71	12	9.3
19	5.2	6.6	4.1	6.0	6.3	6.0	6.2	23	2130	20	9.8	12
20	4.7	6.0	3.8	5.6	6.7	6.0	7.6	57	2020	16	8.7	8.0
21	5.5	6.0	3.8	5.5	7.9	6.0	7.4	57	1490	14	17	8.0
22	4.6	6.6	4.0	5.5	6.8	6.9	6.9	148	1120	16	14	8.0
23	4.4	6.7	3.9	5.5	7.0	7.7	8.9	158	960	13	7.9	8.0
24	4.8	6.5	3.8	5.5	7.5	8.8	14	43	860	16	8.0	7.6
25	4.9	6.0	4.1	5.2	7.3	15	18	73	532	13	9.9	8.0
26	5.0	6.0	4.4	5.0	7.6	51	20	131	299	57	16	8.5
27	4.3	5.9	4.9	5.5	7.3	36	23	140	146	44	15	10
28	4.1	6.0	5.5	5.5	6.1	15	25	124	89	44	9.4	12
29	3.9	6.0	5.5	5.5	---	7.1	27	181	258	22	7.8	10
30	3.8	6.0	4.9	5.1	---	17	36	91	285	19	8.7	13
31	4.4	---	4.9	5.9	---	12	---	233	---	40	8.3	---
TOTAL	151.3	163.0	159.9	174.6	197.3	331.0	415.6	2447	17548	4464	521.5	300.1
MEAN	4.88	5.43	5.16	5.63	7.05	10.7	13.9	78.9	585	144	16.8	10.0
MAX	6.7	6.7	6.7	6.7	8.7	51	38	233	2130	538	44	46
MIN	3.8	4.2	3.8	4.9	5.7	5.9	6.1	23	83	13	7.8	5.5
AC-FT	300	323	317	346	391	657	824	4850	34810	8850	1030	595

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1993, BY WATER YEAR (WY)

	MEAN	15.1	26.8	24.3	27.9	29.2	36.8	140	481	889	238	41.1	25.7
MAX	55.0	122	114	139	156	159	633	2729	4430	1288	248	121	
(WY)	1985	1985	1985	1984	1984	1980	1980	1980	1983	1983	1983	1983	1983
MIN	3.55	4.45	3.99	4.00	3.76	4.38	3.45	8.66	85.8	5.94	4.27	3.61	
(WY)	1992	1991	1991	1991	1992	1991	1991	1982	1989	1987	1987	1988	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1980 - 1993
ANNUAL TOTAL	12767.7	26873.3	
ANNUAL MEAN	34.9	73.6	
HIGHEST ANNUAL MEAN			700
LOWEST ANNUAL MEAN			19.4
HIGHEST DAILY MEAN	723	2130	5460
LOWEST DAILY MEAN	a 3.5	b 3.8	1.0
ANNUAL SEVEN-DAY MINIMUM	3.6	3.9	2.3
INSTANTANEOUS PEAK FLOW		2410	5810
INSTANTANEOUS PEAK STAGE		5.89	8.02
ANNUAL RUNOFF (AC-FT)	25320	53300	
10 PERCENT EXCEEDS	112	167	310
50 PERCENT EXCEEDS	5.9	7.6	9.1
90 PERCENT EXCEEDS	3.8	4.8	4.0

a-Also occurred Feb 6, 11, 14, 16, and 17.

b-Also occurred Dec 20, 21, and 24.

06752280 CACHE LA Poudre RIVER ABOVE BOX ELDER CREEK NEAR TIMNATH, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1979 to current year.

WATER-QUALITY DATA WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	ALKA- LITY LAB (MG/L AS CACO3)
OCT											
30...	1050	3.9	2120	8.1	7.5	8.3	1100	270	99	--	246
NOV											
19...	1425	6.9	2270	8.3	6.5	10.1	1100	280	97	--	247
DEC											
16...	1050	5.5	2300	8.3	1.5	10.6	1200	300	100	110	239
FEB											
25...	1530	7.2	1520	8.1	1.0	11.8	710	190	58	--	204
MAR											
18...	1420	6.7	1750	8.3	6.5	--	820	210	71	--	199
APR											
15...	1550	8.5	1640	8.3	9.0	8.8	780	200	69	--	185
MAY											
06...	1435	6.0	1890	8.4	15.0	9.4	910	230	82	--	203
JUN											
09...	1520	443	332	7.7	15.0	9.2	140	33	14	--	51
JUL											
14...	1425	355	357	8.1	14.0	9.4	140	38	11	13	55
AUG											
11...	1125	37	281	8.0	17.0	7.8	110	30	9.2	--	78
SEP											
16...	1320	5.8	1820	8.0	14.5	8.5	950	250	80	--	162

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT											
30...	--	--	--	--	--	1.2	0.04	1.2	0.34	0.03	0.02
NOV											
19...	--	--	--	--	--	0.23	0.05	0.28	0.21	0.01	0.02
DEC											
16...	1000	26	0.8	12	967	1.8	0.06	1.9	0.31	0.01	<0.01
FEB											
25...	--	--	--	--	--	1.6	0.04	1.6	0.68	0.14	0.14
MAR											
18...	--	--	--	--	--	1.3	0.03	1.3	0.10	0.03	0.04
APR											
15...	--	--	--	--	--	0.65	0.05	0.70	0.18	0.07	0.05
MAY											
06...	--	--	--	--	--	0.74	0.06	0.80	0.05	0.09	0.09
JUN											
09...	--	--	--	--	--	0.20	0.01	0.21	0.06	0.05	0.03
JUL											
14...	110	3.4	0.3	5.9	200	0.19	0.01	0.20	0.04	0.03	0.02
AUG											
11...	--	--	--	--	--	0.45	0.02	0.47	0.05	0.06	0.06
SEP											
16...	--	--	--	--	--	--	0.04	0.01	0.08	0.06	0.06

06752280 CACHE LA POUDRE RIVER ABOVE BOX ELDER CREEK NEAR TIMNATH, CO--Continued

WATER-QUALITY DATA WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT										
30...	1050	--	--	<1	--	--	--	<1	<1	290
NOV										
19...	1425	--	--	<1	--	--	--	1	<1	300
DEC										
16...	1050	20	<1	<1	<1	<1	<1	3	2	250
FEB										
25...	1530	--	--	<1	--	--	--	1	3	270
MAR										
18...	1420	--	--	<1	--	--	--	<1	<1	190
APR										
15...	1550	--	--	<1	--	--	--	<1	3	450
MAY										
06...	1435	--	--	<1	--	--	--	1	<1	450
JUN										
09...	1520	--	--	<1	--	--	--	2	2	350
JUL										
14...	1425	<10	<1	<1	<1	<1	<1	2	2	430
AUG										
11...	1125	--	--	<1	--	--	--	2	2	260
SEP										
16...	1320	--	--	<1	--	--	--	1	<1	350

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT									
30...	<1	--	--	--	--	--	<1	^a <0.2	--
NOV									
19...	<1	--	--	--	--	--	<1	^a <0.2	--
DEC									
16...	<1	<1	120	0.2	<1	9	<1	^a <0.2	18
FEB									
25...	<1	--	--	--	--	--	<1	^a <0.2	--
MAR									
18...	<1	--	--	--	--	--	<1	^a <0.2	--
APR									
15...	<1	--	--	--	--	--	<1	^a <0.2	--
MAY									
06...	2	--	--	--	--	--	<1	^a <0.2	--
JUN									
09...	<1	--	--	--	--	--	<1	^a <0.2	--
JUL									
14...	2	<1	30	<0.1	<1	<1	<1	^a <0.2	7
AUG									
11...	1	--	--	--	--	--	<1	^a <0.2	--
SEP									
16...	<1	--	--	--	--	--	<1	<0.2	--

a-Analysis based on preliminary method.

06752500 CACHE LA POUDRE RIVER NEAR GREELEY, CO

LOCATION.--Lat 40°25'04", long 104°38'22", in NW¹/₄ sec.11, T.5 N., R.65 W., Weld County, Hydrologic Unit 10190007, on right bank 25 ft downstream from highway bridge, 2.9 mi east of courthouse in Greeley, and 3.0 mi upstream from mouth.

DRAINAGE AREA.--1,877 mi².

PERIOD OF RECORD.--Streamflow records, March to October 1903, August to November 1904, January 1914 to December 1919, June 1924 to current year. Monthly discharge only for some periods, published in WSP 1310. Water-quality data available, November 1951 to September 1952, August 1954 to August 1956, December 1963 to September 1966, October 1967 to September 1968, October 1970 to September 1982.

REVISED RECORDS.--WSP 1440: 1935, 1938 (M), 1942-43. WSP 1730: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,610 ft above sea level, from topographic map. See WSP 1710 or 1730 for history of changes prior to Dec. 14, 1933.

REMARKS.--Estimated daily discharges: Apr. 26-30, June 29-30, July 2-16, 11-13, and July 18-19. Records good except for estimated daily discharges, which are fair. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, diversion for municipal supply, diversions upstream from station for irrigation of about 250,000 acres, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	142	117	88	104	170	158	95	224	57	39	65
2	56	150	115	93	106	184	169	93	146	65	39	70
3	49	146	112	91	109	190	195	91	326	90	45	70
4	47	132	112	88	107	186	171	65	729	115	43	67
5	62	126	100	87	101	187	185	20	623	115	55	69
6	61	123	108	91	100	189	221	24	584	95	62	71
7	101	123	95	93	100	185	231	26	590	75	53	73
8	117	121	84	95	102	188	204	36	580	44	40	75
9	112	123	104	89	103	190	200	36	404	43	35	83
10	111	119	105	89	111	185	188	29	408	93	45	82
11	114	106	104	90	110	189	164	20	392	85	53	80
12	113	105	102	90	106	183	174	31	332	80	45	70
13	114	105	94	89	103	177	240	42	312	80	45	91
14	121	105	93	92	100	175	224	35	218	143	47	104
15	118	106	106	94	100	190	206	37	89	370	35	89
16	126	108	105	95	92	218	199	53	79	323	39	82
17	119	106	104	91	101	202	187	60	84	226	39	77
18	121	106	100	96	99	192	177	73	526	110	41	110
19	122	108	103	97	121	179	184	40	1410	70	44	110
20	118	122	90	97	154	175	163	38	1730	78	52	95
21	124	129	97	98	142	172	157	32	1460	73	59	88
22	149	116	94	100	139	169	145	40	1170	76	49	78
23	144	113	92	99	146	169	116	52	1110	71	52	79
24	147	109	95	88	147	173	108	45	1070	70	52	79
25	142	112	90	94	151	174	107	46	782	54	45	75
26	130	107	87	103	158	193	105	52	397	61	40	69
27	134	108	88	100	161	217	103	84	181	55	48	72
28	128	107	94	98	160	206	101	174	123	53	50	76
29	130	108	98	101	---	171	99	308	100	59	41	86
30	140	105	97	99	---	165	97	317	45	61	43	90
31	140	---	96	96	---	179	---	170	---	49	56	---
TOTAL	3464	3496	3081	2911	3333	5722	4978	2264	16224	3039	1431	2425
MEAN	112	117	99.4	93.9	119	185	166	73.0	541	98.0	46.2	80.8
MAX	149	150	117	103	161	218	240	317	1730	370	62	110
MIN	47	105	84	87	92	165	97	20	45	43	35	65
AC-FT	6870	6930	6110	5770	6610	11350	9870	4490	32180	6030	2840	4810

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1993, BY WATER YEAR (WY)

	MEAN	94.7	113	104	94.5	102	104	115	221	449	98.6	48.9	54.5
MAX	337	368	237	249	311	343	836	3045	4786	1475	329	187	
(WY)	1962	1962	1985	1984	1984	1980	1983	1980	1983	1983	1983	1984	
MIN	7.13	6.63	34.5	37.4	38.1	33.9	7.77	9.58	9.45	13.0	5.43	9.53	
(WY)	1935	1935	1935	1935	1935	1935	1935	1954	1977	1954	1940	1948	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1903 - 1993

ANNUAL TOTAL	36770	52368	
ANNUAL MEAN	100	143	
HIGHEST ANNUAL MEAN			132
LOWEST ANNUAL MEAN			872
HIGHEST DAILY MEAN	758	Jun 26	27.9
LOWEST DAILY MEAN	a17	May 12	6090
ANNUAL SEVEN-DAY MINIMUM	20	May 20	.80
INSTANTANEOUS PEAK FLOW			1.5
INSTANTANEOUS PEAK STAGE			6360
ANNUAL RUNOFF (AC-FT)	72930	103900	8.92
10 PERCENT EXCEEDS	170	203	
50 PERCENT EXCEEDS	94	103	
90 PERCENT EXCEEDS	31	45	

a-Also occurred May 24.

b-Maximum gage height, 8.95 ft, Jun 22, 1983.

06753400 LONETREE CREEK AT CARR, CO
(National Water-Quality Assessment Program station)

LOCATION.--Lat 40°53'54", long 104°52'03", in NE¹/4NE¹/4 sec.27, T.11 N., R.67 W., Weld County, Hydrologic Unit 10190008, on left bank upstream of Weld County road 126 near bridge at east end of Carr.

DRAINAGE AREA.--Not determined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March to September 1993.

GAGE.--Water-stage recorder. Concrete control since Sept. 2, 1993. Elevation of gage is 5,670 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: May 8 to June 9, and Sept. 1-2. Records poor.

EXTREMES FOR PERIOD MARCH TO SEPTEMBER.--Maximum discharge, unknown; maximum gage height, unknown; minimum daily discharge, 0.02 ft³/s, July 31 to Aug. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.77	.62	.59	.22	.02	.28
2	---	---	---	---	---	---	.88	.65	1.1	.17	.02	.17
3	---	---	---	---	---	---	.93	.65	2.0	.10	.03	.08
4	---	---	---	---	---	---	.78	.61	.96	.13	.05	.07
5	---	---	---	---	---	---	.69	.53	.88	.22	.12	.09
6	---	---	---	---	---	---	1.3	.50	.85	.25	.34	.16
7	---	---	---	---	---	---	1.1	.47	.88	.24	.28	.27
8	---	---	---	---	---	---	.87	.45	.78	.26	.17	.28
9	---	---	---	---	---	---	.76	.46	.75	.22	.11	.21
10	---	---	---	---	---	---	.69	.44	.74	.20	.09	.17
11	---	---	---	---	---	---	.65	.39	.51	.20	.17	.14
12	---	---	---	---	---	---	.71	.40	.43	.37	.19	.12
13	---	---	---	---	---	---	1.1	.39	.35	.43	.22	.39
14	---	---	---	---	---	---	1.1	.41	.34	.85	.18	.48
15	---	---	---	---	---	---	.86	.39	.39	.93	.22	.39
16	---	---	---	---	---	---	.82	.38	.46	.80	.21	.33
17	---	---	---	---	---	---	.77	.38	.93	.74	.12	.33
18	---	---	---	---	---	---	.98	.71	.35	1.6	.78	.10
19	---	---	---	---	---	---	.96	.66	.35	1.3	.78	.13
20	---	---	---	---	---	---	.89	.67	.34	.95	.76	.16
21	---	---	---	---	---	---	.86	.76	.36	.72	.78	.19
22	---	---	---	---	---	---	.78	.76	.30	.64	.59	.21
23	---	---	---	---	---	---	.76	.70	.32	.62	.34	.17
24	---	---	---	---	---	---	.74	.72	.29	.53	.27	.11
25	---	---	---	---	---	---	.70	.95	.28	.52	.16	.10
26	---	---	---	---	---	---	.70	.80	.21	.50	.12	.15
27	---	---	---	---	---	---	.71	.76	.25	.45	.07	.14
28	---	---	---	---	---	---	.83	.74	.96	.41	.05	.14
29	---	---	---	---	---	---	.84	.67	.85	.29	.04	.12
30	---	---	---	---	---	---	.85	.64	.78	.19	.03	.21
31	---	---	---	---	---	---	.80	---	.65	---	.02	.31
TOTAL	---	---	---	---	---	---	24.32	14.41	21.66	11.12	4.78	10.66
MEAN	---	---	---	---	---	---	.81	.46	.72	.36	.15	.36
MAX	---	---	---	---	---	---	1.3	.96	2.0	.93	.34	.73
MIN	---	---	---	---	---	---	.64	.21	.19	.02	.02	.07
AC-FT	---	---	---	---	---	---	48	29	43	22	9.5	21

PLATTE RIVER BASIN

06753400 LONETREE CREEK AT CARR, CO--Continued
(National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
APR 07...	0920	1.1	518	8.2	4.0	10.5	210	66	12	26
MAY 04...	1530	0.54	509	8.2	18.5	9.0	200	60	13	25
JUN 09...	1750	0.75	517	8.4	16.5	7.8	210	61	13	27
JUL 13...	1225	0.43	482	8.3	19.5	7.6	190	54	13	28
AUG 12...	0905	0.23	470	8.2	16.5	6.4	180	53	12	24
30...	1315	0.20	433	8.4	13.0	9.5	180	54	12	21

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- ^A LITY MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
APR 07...	5.8	--	23	14	0.7	21	314	<0.01	0.10	0.02
MAY 04...	6.0	228	19	13	0.7	22	331	<0.01	0.13	0.02
JUN 09...	6.6	216	17	12	0.7	25	296	<0.01	0.10	0.04
JUL 13...	8.2	215	15	12	0.9	24	286	<0.01	0.11	0.04
AUG 12...	6.3	206	14	11	0.8	24	269	<0.01	0.12	0.04
30...	7.5	182	16	8.6	0.7	24	258	<0.01	0.22	0.04

DATE	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
APR 07...	0.30	<0.20	0.01	<0.01	<0.01	14	33	4.1	0.3
MAY 04...	0.40	0.20	0.02	<0.01	<0.01	3	39	3.1	1.3
JUN 09...	0.40	0.30	0.03	0.01	<0.01	13	20	4.6	0.4
JUL 13...	0.30	0.30	0.03	0.02	<0.01	12	13	3.9	0.5
AUG 12...	0.40	0.30	0.01	<0.01	<0.01	8	18	4.1	0.4
30...	0.30	0.30	0.02	<0.01	<0.01	7	10	2.7	0.3

A-Total alkalinity, determined in field by fixed end-point titration method on filtered sample.

06753400 LONETREE CREEK AT CARR, CO--Continued
(National Water-Quality Assessment Program station)

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
MAY				
04...	1545	0.54	53	0.08
JUN				
09...	1915	0.75	31	0.06
JUL				
13...	1250	0.43	16	0.02
AUG				
12...	0930	0.23	24	0.02
30...	1430	0.20	38	0.02

06753990 LONETREE CREEK NEAR GREELEY, CO
(National Water-Quality Assessment Program station)

LOCATION.--Lat 40°26'33", long 104°35'18", in NE1/4NW1/4 sec.31, T.6 N., R.64 W., Weld County, Hydrologic Unit 10190008, on right bank 50 ft downstream from bridge on Weld County Road 62 1/2, 5.5 mi. east of Greeley, CO.

DRAINAGE AREA.--Not determined.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March to September 1993.

GAGE.--Water-stage recorder. Elevation of gage is 4,630 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Mar. 17. Records fair, except for flows above 35 ft³/s, which are poor.

EXTREMES FOR PERIOD MARCH TO SEPTEMBER.--Maximum discharge, 429 ft³/s, May 29, gage height, 10.85 ft, result of indirect measurement of peak flow; minimum daily, 3.2 ft³/s, May 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	4.8	47	16	15	12	13
2	---	---	---	---	---	---	4.9	95	17	15	12	13
3	---	---	---	---	---	---	5.2	60	78	16	15	19
4	---	---	---	---	---	---	4.8	20	26	21	18	15
5	---	---	---	---	---	---	4.8	13	26	17	17	10
6	---	---	---	---	---	---	5.1	8.7	18	11	14	7.7
7	---	---	---	---	---	---	5.1	14	17	11	11	10
8	---	---	---	---	---	---	4.8	21	18	9.3	8.4	15
9	---	---	---	---	---	---	4.8	24	23	9.1	7.0	17
10	---	---	---	---	---	---	4.9	16	23	10	10	25
11	---	---	---	---	---	---	4.7	7.0	19	8.9	13	33
12	---	---	---	---	---	---	5.0	5.5	22	9.1	11	27
13	---	---	---	---	---	---	7.5	5.3	25	12	14	21
14	---	---	---	---	---	---	6.6	5.3	20	17	13	40
15	---	---	---	---	---	---	5.8	4.1	15	11	12	33
16	---	---	---	---	---	---	5.8	3.2	14	8.6	8.3	18
17	---	---	---	---	---	5.9	6.0	3.9	30	10	13	17
18	---	---	---	---	---	6.0	6.0	11	83	14	15	20
19	---	---	---	---	---	6.1	5.6	15	66	12	15	26
20	---	---	---	---	---	5.5	5.3	18	72	9.6	12	19
21	---	---	---	---	---	5.6	5.4	26	53	9.8	12	22
22	---	---	---	---	---	5.3	5.5	31	76	11	10	22
23	---	---	---	---	---	5.3	5.6	55	67	12	7.5	17
24	---	---	---	---	---	5.3	6.3	43	53	9.9	11	16
25	---	---	---	---	---	5.4	6.2	48	38	9.0	12	16
26	---	---	---	---	---	5.6	5.1	41	25	8.7	12	15
27	---	---	---	---	---	5.4	5.4	38	18	13	13	14
28	---	---	---	---	---	6.2	5.4	102	15	19	11	14
29	---	---	---	---	---	5.5	5.4	250	14	17	9.3	13
30	---	---	---	---	---	5.1	11	31	15	12	9.3	12
31	---	---	---	---	---	5.0	---	23	---	14	14	---
TOTAL	---	---	---	---	---	---	168.8	1085.0	1002	382.0	371.8	559.7
MEAN	---	---	---	---	---	---	5.63	35.0	33.4	12.3	12.0	18.7
MAX	---	---	---	---	---	---	11	250	83	21	18	40
MIN	---	---	---	---	---	---	4.7	3.2	14	8.6	7.0	7.7
AC-FT	---	---	---	---	---	---	335	2150	1990	758	737	1110

06753990 LONETREE CREEK NEAR GREELEY, CO--Continued
(National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
APR										
13...	1400	8.2	2680	8.1	10.5	11.4	1000	220	110	250
MAY										
05...	1330	12	1940	8.3	18.0	--	770	170	84	150
21...	1350	27	1080	8.4	--	--	390	87	42	75
29...	1500	166	680	8.0	18.0	6.4	200	46	20	38
JUN										
04...	1335	17	1650	8.2	15.5	8.3	640	150	64	130
JUL										
13...	1640	13	1330	8.4	21.0	6.8	460	110	44	80
29...	1245	16	1380	8.2	26.0	6.9	530	130	50	89
AUG										
05...	1250	16	1380	8.1	23.5	7.7	550	130	54	91
12...	1310	11	1560	8.2	21.5	7.8	620	150	59	110
20...	1145	11	1590	--	20.0	8.0	620	150	60	110
25...	1210	13	1550	8.2	21.0	8.8	600	150	55	110
31...	1635	15	1660	8.1	18.5	7.7	700	180	60	120
SEP										
15...	1345	36	1700	8.2	16.5	9.1	700	140	85	120

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA-A LITY MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
APR										
13...	31	295	1100	91	0.7	19	2120	0.24	7.3	2.6
MAY										
05...	9.7	218	780	41	0.7	11	1540	0.06	5.5	0.03
21...	7.0	150	380	22	0.6	8.9	790	0.10	2.7	0.10
29...	9.8	81	150	11	0.4	8.2	310	0.08	1.4	0.63
JUN										
04...	12	254	600	38	0.7	17	1200	0.07	5.0	0.40
JUL										
13...	8.9	179	470	23	0.7	14	958	0.18	5.9	2.5
29...	7.6	181	510	28	0.6	15	1040	0.06	6.5	0.08
AUG										
05...	7.5	179	510	26	0.5	15	1010	0.05	5.2	0.07
12...	9.2	217	580	30	0.7	19	1190	0.03	7.1	0.02
20...	8.9	--	600	31	0.6	18	1180	0.03	6.0	0.02
25...	7.7	206	610	34	0.7	19	1180	0.03	6.7	0.03
31...	10	244	620	33	0.7	21	1280	0.05	8.6	0.03
SEP										
15...	6.6	215	670	32	0.9	11	1310	0.04	5.4	0.04

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
APR									
13...	9.5	7.1	0.50	0.43	0.24	36	420	32	1.9
MAY									
05...	1.1	0.90	0.11	0.01	<0.01	<3	42	7.7	>5.1
21...	2.8	0.80	0.99	0.19	0.19	14	31	--	--
29...	7.2	1.5	3.0	0.41	0.35	65	64	--	--
JUN									
04...	2.7	1.4	0.73	0.31	0.27	10	71	10	4.6
JUL									
13...	6.3	4.4	1.3	0.26	0.23	8	6	5.8	>5.0
29...	2.4	0.70	0.72	0.22	0.19	8	6	5.8	>5.0
AUG									
05...	0.80	0.60	0.25	0.18	0.17	4	6	6.1	>5.0
12...	1.6	0.60	0.20	0.17	0.16	<3	7	6.1	5.3
20...	1.4	0.70	0.43	0.16	0.14	<3	10	5.8	3.1
25...	0.70	0.70	0.17	0.18	0.17	25	9	5.9	3.4
31...	0.70	0.60	0.15	0.12	0.11	10	15	6.6	3.7
SEP									
15...	2.5	0.60	0.32	<0.01	<0.01	<3	21	6.8	3.9

A--Total alkalinity, determined in field by fixed end-point titration method on filtered sample

PLATTE RIVER BASIN

06753990 LONETREE CREEK NEAR GREELEY, CO--Continued
(National Water-Quality Assessment Program station)

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
MAY				
05...	1325	12	207	6.7
29...	0230	408	4540 ^A	5000
29...	1345	203	2340	1280
JUN				
04...	1355	17	259	12
JUL				
13...	1700	13	929	33
AUG				
12...	1325	11	286	8.5
20...	1130	11	272	8.1
25...	1150	13	368	13
31...	1645	15	428	18
SEP				
15...	1400	36	330	32

A-Grab sample

06754000 SOUTH PLATTE RIVER NEAR KERSEY, CO

LOCATION.--Lat 40°24'44", long 104°33'46", in NW¹/4SW¹/4 sec.9, T.5 N., R.64W., Weld County, Hydrologic Unit 10190003, on downstream side of bridge on State Highway 37, 1.9 mi north of railroad in Kersey, and 2.5 mi downstream from Cache la Poudre River.

DRAINAGE AREA.--9,598 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1901 to December 1903, March 1905 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "at Kersey" 1901-3. Statistical summary computed for 1976 to current year.

REVISED RECORDS.--WSP 1310: 1902, 1906, 1935(M). WSP 1730: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,575.77 ft above sea level. See WSP 1710 or 1730 for history of changes prior to July 3, 1935.

REMARKS.--Estimated daily discharges: Oct. 12, 13, Dec. 8, Mar. 8, 9, Apr. 12-14, May 7 and 11. Records fair. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 888,000 acres, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	469	846	983	776	773	844	1080	396	704	381	332	451
2	498	921	916	776	764	926	1020	434	634	414	343	438
3	511	901	854	770	754	934	980	375	966	367	334	479
4	508	889	825	769	776	934	1110	260	1740	438	340	549
5	517	855	816	751	775	949	1090	210	1460	531	381	545
6	513	832	795	767	780	970	991	189	1290	402	491	595
7	551	814	777	770	763	999	1040	200	1280	326	656	639
8	551	771	810	785	766	1030	1210	202	1360	261	489	759
9	609	761	835	735	771	980	1020	261	1070	262	411	948
10	680	749	866	718	790	952	822	231	952	305	360	846
11	658	744	917	750	870	958	692	160	922	312	438	778
12	650	729	877	772	895	947	640	141	812	370	487	722
13	670	758	856	733	902	952	830	146	724	533	498	798
14	680	754	826	765	969	1020	1210	138	626	835	559	1380
15	695	736	837	771	945	1020	1060	136	546	1720	563	1350
16	726	733	840	798	880	1040	946	162	524	1370	548	934
17	782	724	862	787	865	1040	886	239	508	934	516	794
18	768	716	821	814	870	981	816	494	1630	690	476	851
19	749	721	846	813	942	885	742	863	4750	529	563	1290
20	750	710	815	799	1130	871	627	819	3940	476	491	1290
21	786	802	801	779	1120	844	551	803	3250	404	509	1060
22	856	895	819	778	1050	841	543	716	2640	356	498	918
23	870	932	827	802	983	835	487	801	2510	327	514	817
24	829	930	798	812	956	835	453	890	2420	352	453	756
25	832	1010	781	776	883	855	454	826	1940	349	397	696
26	770	973	775	788	854	840	558	766	982	344	404	677
27	824	979	755	790	844	926	462	703	546	329	489	661
28	910	975	767	771	844	903	451	752	417	330	499	643
29	907	992	782	762	---	845	486	1220	351	327	458	654
30	912	992	773	742	---	880	429	872	328	338	379	606
31	892	---	801	742	---	980	---	693	---	336	436	---
TOTAL	21923	25144	25653	23961	24514	28816	23686	15098	41822	15248	14312	23924
MEAN	707	838	828	773	875	930	790	487	1394	492	462	797
MAX	912	1010	983	814	1130	1040	1210	1220	4750	1720	656	1380
MIN	469	710	755	718	754	835	429	136	328	261	332	438
AC-FT	43480	49870	50880	47530	48620	57160	46980	29950	82950	30240	28390	47450

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1993, BY WATER YEAR (WY)

	MEAN	869	935	852	831	874	1011	1201	2593	2903	936	801	787
MAX	3388	2585	1337	1434	1641	1852	3894	13060	14520	5784	2783	2079	
(WY)	1985	1985	1985	1984	1984	1983	1983	1980	1983	1983	1984	1984	
MIN	415	488	568	503	540	473	144	251	113	219	304	259	
(WY)	1978	1978	1982	1982	1978	1982	1982	1977	1977	1976	1981	1977	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1976 - 1993
ANNUAL TOTAL	314196	284101	
ANNUAL MEAN	858	778	^a 1216
HIGHEST ANNUAL MEAN			3631
LOWEST ANNUAL MEAN			456
HIGHEST DAILY MEAN	7090	Aug 25	^b 16800
LOWEST DAILY MEAN	208	May 6	^c 61
ANNUAL SEVEN-DAY MINIMUM	244	May 4	^d 63
INSTANTANEOUS PEAK FLOW			18300
INSTANTANEOUS PEAK STAGE			10.31
ANNUAL RUNOFF (AC-FT)	623200	563500	880900
10 PERCENT EXCEEDS	1320	1020	2060
50 PERCENT EXCEEDS	805	776	767
90 PERCENT EXCEEDS	385	364	310

a-Average discharge for 71 years (water years 1902-03, 1906-74), 777 ft³/s; 562900 acre-ft/yr, prior to completion of Chatfield Dam.

b-Maximum daily discharge for period of record, 31000 ft³/s, Jun 7, 1921.

c-Minimum daily discharge for period of record, 28 ft³/s, Apr 30, 1955.

d-Maximum discharge and stage for period of record, 31500 ft³/s, May 8, 1973, gage height, 11.73 ft.

06754000 SOUTH PLATTE RIVER NEAR KERSEY, CO--Continued
(National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
APR										
07...	1430	1040	1360	7.9	10.5	9.0	440	100	45	110
MAY										
05...	0900	235	1590	8.1	15.0	--	580	130	62	140
JUN										
09...	1215	1020	943	8.2	18.0	7.8	320	73	34	73
19...	1200	4870	459	8.0	15.5	7.2	140	35	13	33
JUL										
09...	1030	244	1420	8.1	19.0	8.0	550	130	55	110
15...	1530	1480	783	8.0	23.5	7.7	260	59	28	57
AUG										
13...	1525	479	1320	8.0	24.0	7.8	470	100	53	100
31...	0900	434	1490	8.3	14.0	8.2	580	130	62	120

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA-A LINITY MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
APR										
07...	8.0	--	360	68	0.9	10	908	0.13	6.1	0.53
MAY										
05...	7.9	248	490	76	0.9	10	1160	0.09	6.1	0.36
JUN										
09...	4.7	140	270	37	0.7	10	639	0.04	3.3	0.13
19...	4.1	67	110	17	0.5	7.6	274	0.03	1.5	0.15
JUL										
09...	6.9	222	450	59	0.8	13	1030	0.12	5.9	0.54
15...	4.9	--	230	25	0.7	8.9	519	0.05	2.6	0.15
AUG										
13...	5.6	207	450	44	0.9	11	954	0.07	4.4	0.04
31...	7.5	216	490	51	0.8	12	1040	0.10	5.2	0.07

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)
APR									
07...	1.8	1.1	1.5	1.2	1.1	5	23	5.4	3.0
MAY									
05...	1.0	0.7	0.71	0.68	0.67	<3	43	4.7	1.3
JUN									
09...	0.9	0.5	0.48	0.38	0.38	11	19	5.3	2.4
19...	0.7	0.5	0.33	0.21	0.21	53	18	5.8	>5.2
JUL									
09...	1.0	1.0	0.48	0.46	0.45	<3	44	4.4	2.8
15...	1.8	0.5	1.1	0.42	0.39	7	4	4.8	>5.0
AUG									
13...	1.0	0.5	0.44	0.30	0.27	4	18	4.1	2.8
31...	0.5	0.5	0.30	0.26	0.26	<3	29	4.3	2.6

A-Total alkalinity, determined in field by fixed end-point titration method on filtered sample.

06754000 SOUTH PLATTE RIVER NEAR KERSEY, CO--Continued
(National Water-Quality Assessment Program station)

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
JUN				
09...	1200	1020	122	336
25...	1305	1800	203	987
JUL				
09...	1050	244	124	82
15...	1535	1480	514	2050
AUG				
13...	1455	479	110	142
31...	1040	434	90	105

06758500 SOUTH PLATTE RIVER NEAR WELDONA, CO

LOCATION.--Lat 40°19'19", long 103°55'17", in SW¹/4SW¹/4 sec.7, T.4 N., R.58 W., Morgan County, Hydrologic Unit 10190003, on left bank 400 ft downstream from bridge on State Highway 144, 2.8 mi southeast of Weldona, and 4.2 mi upstream from Bijou Creek.

DRAINAGE AREA.--13,245 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1952 to current year. Statistical summary computed for 1976 to current year.

REVISED RECORDS.--WSP 1710: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,307.80 ft above sea level.

REMARKS.--Estimated daily discharges: Jan. 6 to Feb. 3. Records good except for estimated daily discharges, which are fair. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	378	325	621	911	860	770	509	186	596	305	225	357
2	250	407	623	921	530	822	627	319	682	338	293	417
3	262	479	600	930	545	875	462	346	992	405	320	471
4	286	475	573	894	545	904	293	320	916	374	311	504
5	298	403	534	816	556	885	346	220	802	417	320	585
6	325	328	604	860	571	884	364	177	653	524	379	604
7	396	285	752	880	566	926	322	149	551	437	428	657
8	461	259	817	890	576	927	407	143	506	358	514	819
9	488	224	849	900	588	765	541	181	757	302	458	847
10	476	213	922	850	624	694	484	234	590	245	464	874
11	479	206	910	880	656	670	386	230	394	254	353	812
12	477	189	880	850	702	642	312	157	378	289	301	898
13	457	182	855	890	703	626	344	92	352	344	340	1070
14	452	184	827	850	721	653	543	160	416	474	371	1170
15	437	182	832	880	757	667	875	203	467	761	440	1590
16	484	182	818	890	724	556	777	202	378	1300	417	1560
17	479	181	817	920	800	715	747	253	322	1040	353	1250
18	449	169	836	900	936	770	744	343	404	713	311	1180
19	373	163	854	930	1010	681	695	483	1010	473	294	1290
20	329	165	874	930	1010	582	634	741	2630	411	396	1580
21	312	186	853	920	990	552	524	717	2100	391	368	1550
22	294	211	855	900	951	564	437	612	1650	373	386	1350
23	313	341	859	900	876	574	373	563	1200	335	367	1200
24	334	410	860	920	825	574	256	687	999	371	375	1010
25	340	438	880	930	800	381	199	724	920	402	335	813
26	302	499	910	890	765	212	138	610	565	400	284	754
27	228	508	923	900	769	194	196	610	331	295	292	727
28	211	554	922	900	766	231	178	586	120	251	360	720
29	183	601	969	880	---	353	169	691	195	230	392	684
30	169	613	944	870	---	412	172	596	315	228	357	653
31	228	---	905	860	---	423	---	493	---	227	314	---
TOTAL	10950	9562	25278	27642	20722	19484	13054	12028	22191	13267	11118	27996
MEAN	353	319	815	892	740	629	435	388	740	428	359	933
MAX	488	613	969	930	1010	927	875	741	2630	1300	514	1590
MIN	169	163	534	816	530	194	138	92	120	227	225	357
AC-FT	21720	18970	50140	54830	41100	38650	25890	23860	44020	26320	22050	55530

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1993, BY WATER YEAR (WY)

	551	515	620	745	687	577	892	1913	2025	667	632	643
MEAN	551	515	620	745	687	577	892	1913	2025	667	632	643
MAX	3119	2298	1266	1443	1562	1494	3226	10130	12310	4754	2208	2118
(WY)	1985	1985	1986	1984	1984	1983	1983	1980	1983	1983	1984	1984
MIN	134	100	130	337	231	132	119	183	101	191	237	123
(WY)	1977	1977	1978	1978	1978	1978	1982	1981	1977	1981	1981	1977

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1976 - 1993

ANNUAL TOTAL	221651	213292	
ANNUAL MEAN	606	584	
HIGHEST ANNUAL MEAN			^a 872
LOWEST ANNUAL MEAN			2995
HIGHEST DAILY MEAN	3140	Aug 26	2630
LOWEST DAILY MEAN	75	Jun 25	92
ANNUAL SEVEN-DAY MINIMUM	175	Nov 14	169
INSTANTANEOUS PEAK FLOW			2800
INSTANTANEOUS PEAK STAGE			5.66
ANNUAL RUNOFF (AC-FT)	439600	423100	631700
10 PERCENT EXCEEDS	1060	922	1650
50 PERCENT EXCEEDS	505	534	464
90 PERCENT EXCEEDS	213	217	158

a-Average discharge for 22 years (water years 1953-74), 572 ft³/s; 414400 acre-ft/yr, prior to completion of Chatfield Dam.

b-Maximum daily discharge for period of record, 20800 ft³/s, May 9, 1973.

c-Minimum daily discharge for period of record, 39 ft³/s, May 19, 1972.

d-Maximum discharge and stage for period of record, 26800 ft³/s, May 8, 1973, gage height, 11.68 ft, from rating curve extended above 16000 ft³/s.

06758500 SOUTH PLATTE RIVER NEAR WELDONA, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1967 to September 1968, October 1971 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
DEC 10...	1215	802	1610	8.0	0.5	14.6	200	350	530	130	49	130
APR 01...	1150	386	1690	8.4	9.5	10.3	80	150	550	130	55	140
MAY 13...	1230	92	2030	8.2	18.5	11.8	92	88	680	160	67	170
AUG 26...	1400	289	1770	8.4	19.5	9.0	780	--	610	140	63	140

DATE	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
DEC 10...	2	7.3	239	470	80	1.0	14	1110	1060	1.51	2400
APR 01...	3	8.1	230	500	80	0.9	11	1150	1090	1.56	1200
MAY 13...	3	8.4	269	710	90	0.7	13	1490	1410	2.03	370
AUG 26...	2	7.5	260	600	74	1.1	15	1260	1220	1.71	983

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
DEC 10...	0.06	0.05	2.2	6.5	6.5	1.1	1.1	1.0	0.80	0.86	0.83
APR 01...	--	0.02	0.9	6.4	6.4	--	0.03	0.64	0.51	--	0.50
MAY 13...	--	0.09	0.6	5.0	5.0	--	0.05	0.20	0.19	--	0.18
AUG 26...	--	0.02	0.5	5.1	5.1	--	0.04	0.19	0.19	--	0.21

DATE	TIME	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
DEC 10...	1215	35	<0.5	320	<1.0	<5	<3	<10	42	<10
APR 01...	1150	36	<0.5	320	<1.0	<5	<3	<10	<3	<10
MAY 13...	1230	42	<0.5	350	<1.0	<5	<3	<10	<3	<10
AUG 26...	1400	50	<0.5	310	<1.0	<5	<3	<10	<3	<10

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 10...	32	11	20	<10	3	3.0	1400	<6	20
APR 01...	33	6	<10	<10	4	<1.0	1500	<6	8
MAY 13...	48	16	<10	<10	6	<1.0	1900	<6	<3
AUG 26...	43	12	<10	<10	4	<1.0	1700	<6	6

06759910 SOUTH PLATTE RIVER AT COOPER BRIDGE, NEAR BALZAC, CO

LOCATION.--Lat 40°21'23", long 103°31'39", in SW¹/₄NE¹/₄ sec.33, T.5 N., R.55 W., Morgan County, Hydrologic Unit 10190012, on left bank 0.7 mi downstream from North Sterling Canal, 1.3 mi downstream from Beaver Creek, and 4.3 mi northeast of Snyder.

DRAINAGE AREA.--16,852 mi² (Area at downstream site used prior to October 1987).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1987 to current year. Records prior to water year 1993 can be obtained from the Colorado Division of Water Resources. Statistical summary computed for 1993 water year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,140 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 23, Jan. 14, Apr. 23, May 6, 7, 11, 12, June 16, 20, 21, 26, July 1, 6, 16, 27, and Aug. 6. Records good except for estimated daily discharges, which are fair. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, ground-water withdrawals and diversions above station for irrigation.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	464	21	513	844	520	714	516	42	496	250	158	199
2	373	30	540	796	543	762	602	43	547	279	174	210
3	288	49	563	891	544	939	690	45	483	286	229	276
4	294	47	560	823	517	938	481	41	526	311	238	333
5	153	38	516	735	528	910	432	53	308	310	238	401
6	76	28	405	605	572	881	497	75	189	380	270	473
7	155	24	579	477	560	938	440	140	105	403	301	490
8	178	22	664	560	499	975	449	127	99	332	310	551
9	228	21	745	782	518	874	539	142	167	261	329	658
10	238	22	727	617	528	800	561	158	161	203	340	668
11	227	21	805	552	582	840	499	180	68	176	409	724
12	180	21	818	449	679	722	440	130	59	179	332	666
13	150	19	819	620	709	698	426	103	57	189	301	888
14	115	19	779	660	720	702	507	135	58	226	282	1050
15	93	20	708	568	718	731	658	170	129	312	281	1260
16	82	20	836	832	749	718	856	214	120	620	333	1670
17	85	20	843	1020	788	716	836	206	167	815	299	1390
18	98	20	664	1080	950	858	781	201	310	651	255	1330
19	95	18	667	1150	1170	878	745	282	421	463	222	1350
20	45	19	698	1180	1120	818	719	463	900	336	222	1530
21	39	20	699	1140	914	764	415	548	1500	313	264	1770
22	38	21	634	1130	1080	740	174	520	1120	313	277	1560
23	26	37	629	1070	994	721	95	448	698	324	266	1440
24	27	137	629	1030	853	691	75	462	405	333	255	1330
25	27	258	668	902	731	645	61	600	385	347	249	1090
26	27	242	714	802	671	468	55	467	210	364	219	930
27	26	299	733	786	613	377	53	494	138	310	202	853
28	23	389	837	847	642	363	50	495	172	264	210	796
29	22	452	883	858	---	369	45	473	152	230	239	749
30	20	503	960	770	---	484	44	618	163	189	253	771
31	20	---	868	605	---	501	---	476	---	169	227	---
TOTAL	3912	2857	21703	25181	20012	22535	12741	8551	10313	10138	8184	27406
MEAN	126	95.2	700	812	715	727	425	276	344	327	264	914
MAX	464	503	960	1180	1170	975	856	618	1500	815	409	1770
MIN	20	18	405	449	499	363	44	41	57	169	158	199
AC-FT	7760	5670	43050	49950	39690	44700	25270	16960	20460	20110	16230	54360

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1993, BY WATER YEAR (WY)

	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993
MEAN	126	95.2	700	812	715	727	425	276	344	327	264	914
MAX	126	95.2	700	812	715	727	425	276	344	327	264	914
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993
MIN	126	95.2	700	812	715	727	425	276	344	327	264	914
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993

SUMMARY STATISTICS

FOR 1993 WATER YEAR

ANNUAL TOTAL	173533	
ANNUAL MEAN	475	
HIGHEST DAILY MEAN	1770	Sep 21
LOWEST DAILY MEAN	18	Nov 19
ANNUAL SEVEN-DAY MINIMUM	19	Nov 13
INSTANTANEOUS PEAK FLOW	2170	Sep 16
INSTANTANEOUS PEAK STAGE	4.38	Sep 16
ANNUAL RUNOFF (AC-FT)	344200	
10 PERCENT EXCEEDS	901	
50 PERCENT EXCEEDS	449	
90 PERCENT EXCEEDS	45	

06759910 SOUTH PLATTE RIVER AT COOPER BRIDGE, NR BALZAC, CO--Continued
(National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
APR 08...	1300	445	1790	8.0	11.0	9.9	630	160	55	150
MAY 12...	1315	141	1980	8.4	17.0	8.8	680	170	63	170
JUN 07...	1320	73	1520	8.3	19.5	7.5	550	140	49	130
21...	1245	1550	737	8.3	23.0	8.0	250	64	22	56
JUL 12...	1215	173	1880	8.4	26.0	7.9	650	160	60	160
AUG 09...	1250	458	1600	8.4	26.0	9.2	580	140	57	140
SEP 01...	1315	201	1870	8.1	22.5	10.5	700	170	66	160

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- ^A LITY MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
APR 08...	10	242	550	84	0.8	14	1290	0.04	4.5	0.08
MAY 12...	11	248	730	91	0.7	11	1500	0.05	3.8	0.02
JUN 07...	9.0	201	500	65	0.7	14	1100	0.02	3.3	0.02
21...	5.7	121	200	31	0.6	11	481	<0.01	1.9	0.02
JUL 12...	10	233	630	82	0.9	14	1370	0.03	3.6	0.02
AUG 09...	9.0	222	550	65	0.8	12	1190	0.02	3.4	0.04
SEP 01...	9.7	--	680	76	0.9	15	1420	0.03	4.4	0.03

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)
APR 08...	0.60	0.30	0.45	0.34	0.34	5	12	3.7	1.0
MAY 12...	0.80	0.30	0.27	0.17	0.18	<3	20	3.8	1.3
JUN 07...	0.40	0.30	0.32	0.28	0.28	<3	23	4.2	2.2
21...	0.90	0.30	0.54	0.27	0.27	25	5	5.2	3.3
JUL 12...	0.90	0.50	0.37	0.24	0.21	4	6	4.2	1.9
AUG 09...	0.60	0.50	0.24	0.21	0.18	<3	6	4.3	>5.0
SEP 01...	0.50	0.40	0.21	0.20	0.18	<3	5	--	--

A-Total alkalinity, determined in field by fixed end-point titration method on filtered sample.

PLATTE RIVER BASIN

06759910 SOUTH PLATTE RIVER AT COOPER BRIDGE, NR BALZAC, CO--Continued
(National Water-Quality Assessment Program station)

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
MAY				
12...	1210	141	59	22
JUN				
07...	1300	73	82	16
21...	1135	1550	788	3300
AUG				
09...	1405	458	149	184
SEP				
01...	1315	201	74	40

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO

LOCATION.--Lat 40°58'46", long 102°15'15", in NW¹/4NE¹/4 and NE¹/4SE¹/4 (two channels) sec.33, T.12 N., R.44 W., Sedgwick County, Hydrologic Unit 10190018, on left bank of channel 4 (left channel) 215 ft downstream from bridge, and on right bank of channel 2, 5 ft downstream from bridge on U.S. Highway 385, 0.9 mi southeast of Julesburg, 3.0 mi upstream from Colorado-Nebraska State line, and 8 mi downstream from Lodgepole Creek.

DRAINAGE AREA.--23,193 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1902 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "near Julesburg" 1903-8, 1915-16, and as "at Ovid" 1922-24.

REVISED RECORDS.--WSP 1310: 1902, 1906-7, 1948(P). WSP 1440: 1903-4. WDR CO-86-1: Drainage area.

GAGE.--Two water-stage recorders with satellite telemetry. Datum of gages is 3,446.76 ft above sea level. See WSP 1710 or 1730 for history of changes prior to Oct. 1, 1956. Since Oct. 1, 1956, water-stage recorders on channels nos. 2 and 4. Channel no. 2: Oct. 1 1956, to Sept. 22, 1965, at site 300 ft downstream at present datum. Channel no. 4: Oct. 1, 1956 to Dec. 10, 1958, at site 135 ft downstream at present datum. Since May 11, 1973, supplementary water-stage recorder on channel no. 2 at bridge 800 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Nov. 6-8, 20-22, 24-26, Dec. 4 to Mar. 8, Mar. 27 to Apr. 14, May 7-17, 23-28, June 7, 8, and June 16-24. Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of 1,200,000 acres upstream from station, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	456	348	358	890	1090	1360	720	304	128	40	45	56
2	436	349	376	890	1050	1330	659	265	122	35	47	60
3	375	325	422	835	989	1290	650	249	152	31	52	57
4	389	293	452	835	988	1260	656	223	183	31	49	54
5	384	225	502	800	1010	1220	679	234	193	35	45	54
6	393	226	624	895	1020	1160	616	269	218	39	45	65
7	447	221	925	855	1010	1070	581	244	221	47	54	89
8	361	196	867	745	990	1060	498	188	196	51	128	99
9	330	179	896	333	896	1040	492	163	167	52	46	91
10	367	166	882	378	837	993	464	152	155	57	34	99
11	393	163	1120	467	616	1170	458	152	202	56	41	180
12	441	159	1240	539	684	1100	478	127	220	57	39	263
13	446	149	1180	483	768	1070	697	102	214	59	39	344
14	436	145	1130	416	1000	1000	770	87	188	64	42	473
15	379	145	1130	472	833	1040	753	87	156	59	44	546
16	384	138	1060	416	437	1040	746	86	120	54	43	725
17	416	133	930	573	655	1040	822	76	96	42	37	968
18	452	138	870	663	655	1030	992	77	101	40	37	1100
19	468	140	870	739	622	1050	1020	82	96	42	32	1340
20	462	141	870	921	891	1130	1040	94	90	44	31	1340
21	458	141	815	1090	955	1170	1000	91	100	47	40	1280
22	426	146	815	1190	920	1120	901	95	127	54	56	1320
23	386	149	750	1310	1080	1040	705	151	292	53	61	1470
24	365	156	650	1360	1250	967	491	126	427	45	48	1540
25	375	166	604	1420	1200	917	415	101	405	42	44	1540
26	375	171	604	1380	1340	895	374	96	254	47	42	1470
27	379	180	648	1320	1500	795	357	106	148	47	43	1330
28	371	248	571	1210	1400	785	352	157	88	48	48	1130
29	382	299	506	1090	---	773	329	161	61	40	51	1060
30	370	339	802	1040	---	740	304	139	48	43	52	979
31	340	---	905	1070	---	736	---	122	---	50	51	---
TOTAL	12442	5974	24374	26625	26686	32391	19019	4606	5168	1451	1466	21122
MEAN	401	199	786	859	953	1045	634	149	172	46.8	47.3	704
MAX	468	349	1240	1420	1500	1360	1040	304	427	64	128	1540
MIN	330	133	358	333	437	736	304	76	48	31	31	54
AC-FT	24680	11850	48350	52810	52930	64250	37720	9140	10250	2880	2910	41900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1902 - 1993, BY WATER YEAR (WY)

	MEAN	288	350	403	512	603	557	564	1079	1376	266	153	223
MAX	2427	2358	1371	1566	1864	2200	2808	9922	12200	5059	1346	1964	
(WY)	1985	1985	1985	1970	1930	1939	1983	1980	1983	1983	1983	1984	
MIN	5.85	23.0	18.8	89.9	78.9	56.9	17.3	24.1	8.33	2.15	2.52	5.60	
(WY)	1904	1911	1912	1965	1935	1904	1904	1911	1910	1903	1902	1903	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1902 - 1993
ANNUAL TOTAL	214011	181324	
ANNUAL MEAN	585	497	534
HIGHEST ANNUAL MEAN			2882
LOWEST ANNUAL MEAN			76.3
HIGHEST DAILY MEAN	2740	Aug 30	a 1540 Sep 24
LOWEST DAILY MEAN	b 23	May 19	c 31 Jul 3
ANNUAL SEVEN-DAY MINIMUM	25	May 15	d 37 Jul 1
INSTANTANEOUS PEAK FLOW			Not determined
INSTANTANEOUS PEAK STAGE			Not determined
ANNUAL RUNOFF (AC-FT)	424500	359700	e 10.44
10 PERCENT EXCEEDS	1260	1120	37600
50 PERCENT EXCEEDS	454	378	387100
90 PERCENT EXCEEDS	92	47	221
			28

a-Also occurred Sep 25.

b-Also occurred May 20.

c-Also occurred Jul 4 and Aug 20.

d-Also occurred Aug 19-20, 1902, and Jul 25 to Aug 7, 1903.

e-From floodmarks in gage well.

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO--Continued
(Irrigation network station)
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1945 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1945 to September 1981 (Discontinued).

WATER TEMPERATURES: Water years 1945-49, October 1950 to September 1981 (Discontinued).

INSTRUMENTATION.--Water-quality monitor from July 1973 to September 1979.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 3,270 microsiemens Jan. 12, 1971; minimum daily, 348 microsiemens Aug. 15, 1968.

WATER TEMPERATURES: Maximum, 36.0°C, July 17, 19, 1977, July 16, 1978; minimum, freezing point on many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
DEC 09...	1115	--	2210	8.2	0.0	1.3	13.7	K35	210	760	200
MAR 31...	1330	689	2070	8.6	5.0	21	10.3	110	130	700	180
MAY 12...	1130	134	2120	8.3	13.0	7.1	10	300	350	720	190
AUG 25...	1030	28	2110	8.3	21.0	4.5	8.4	170	80	740	200

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- ^A LITY WAT WH TOT FET FIELD MG/L AS CACO3	BICAR- ^B BONATE WATER WH FET FIELD MG/L AS HCO3	CAR- ^C BONATE WATER WH FET FIELD MG/L AS CO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
DEC 09...	62	190	3	15	--	--	--	810	0.2	0.8
MAR 31...	60	180	3	13	--	--	--	700	97	0.8
MAY 12...	58	190	3	16	254	260	24	780	100	0.7
AUG 25...	58	190	3	2.9	232	280	0	820	94	0.8

DATE	SILICA, DIS- SOLVED (MG/L SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)
DEC 09...	24	1670	1500	2.27	--	4.8	0.03	0.10	4.8	4.8
MAR 31...	19	1500	1430	2.04	2790	4.4	0.01	0.03	4.4	4.4
MAY 12...	19	1550	1520	2.11	561	3.2	0.03	0.10	3.2	3.2
AUG 25...	28	1630	1550	2.22	123	3.0	0.05	0.16	3.1	3.1

A-Field total dissolved alkalinity, determined by incremental titration method.

B-Field dissolved bicarbonate, determined by incremental titration method.

C-Field dissolved carbonate, determined by incremental titration method.

K-Based on non-ideal colony count.

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO--Continued
(Irrigation network station)
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	PHOS- PHORUS ORGANIC TOTAL (MG/L AS P)
DEC 09...	0.22	0.22	0.28	0.48	0.70	0.28	0.28	0.28	0.86	0.01
MAR 31...	--	0.02	0.03	0.68	0.70	0.38	0.30	0.30	0.92	--
MAY 12...	--	0.05	0.06	0.35	0.40	0.12	0.11	0.12	0.37	--
AUG 25...	--	0.05	0.06	0.35	0.40	0.08	0.08	0.08	0.25	--

DATE	TIME	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
DEC 09...	1115	<10	42	<1	5	48	8
MAR 31...	1330	<10	39	<1	8	44	4
MAY 12...	1130	20	55	<1	<9	58	4
AUG 25...	1030	<10	63	<1	<3	54	19

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
DEC 09...	5	2	4	<1	2000	8
MAR 31...	4	2	5	<1	1800	5
MAY 12...	4	2	4	<1	1900	6
AUG 25...	4	2	3	<1	1900	7

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
MAR 31...	74	2.6	38	11	28	10	0.11	50
MAY 12...	57	1.1	31	2.5	24	2.4	0.10	48

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDEED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEED (T/DAY)
DEC 09...	1115	--	36	--
MAR 31...	1330	689	78	144
MAY 12...	1130	134	47	17
AUG 25...	1030	28	32	2.4

06823000 NORTH FORK REPUBLICAN RIVER AT COLORADO-NEBRASKA STATE LINE

LOCATION.--Lat 40°04'10", long 102°03'05", in SE1/4NW1/4 sec.10, T.1 N., R.42 W., Dundy County, Nebraska, Hydrologic Unit 10250002, on right bank 100 ft east of Colorado-Nebraska State line, 9.5 mi upstream from confluence with Arikaree River, and at mile 448.

DRAINAGE AREA.--1,360 mi², approximately, of which about 100 mi² contributes directly to surface runoff.

PERIOD OF RECORD.--October 1930 to current year. Prior to October 1932, published as North Fork of Arikaree River at Colorado-Nebraska State line. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1240: 1947(M). WSP 1390: 1934. WSP 2119: Drainage area.

GAGE.--Water-stage recorder. Steel piling control since January 1965. Datum of gage is 3,336.09 ft above sea level. Prior to Oct. 17, 1934, nonrecording gage at present site and datum.

REMARKS.--Records fair except for estimated periods of record, which are poor. Natural flow affected by diversion in Pioneer Canal for irrigation of about 2,700 acres in Colorado and Nebraska.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	30	45	e41	44	50	54	40	55	12	11	32
2	21	26	45	e41	45	53	54	39	54	12	8.7	30
3	20	25	44	41	45	56	57	39	59	18	6.8	31
4	21	24	e44	40	45	59	62	38	61	17	6.1	30
5	21	24	e44	e40	44	58	60	38	57	15	5.1	29
6	22	33	e44	e40	43	58	57	41	54	11	4.7	30
7	29	37	e44	e40	43	59	55	43	52	7.2	9.0	31
8	33	38	e44	e39	45	58	55	37	51	7.8	14	34
9	32	38	e44	e39	45	57	54	34	50	7.9	17	40
10	31	38	44	e39	46	55	51	33	35	7.9	20	38
11	30	38	44	e40	e46	55	50	37	26	8.3	23	37
12	30	33	e43	e41	e45	55	50	37	21	8.2	24	34
13	30	30	e42	41	e45	54	50	38	19	8.6	24	33
14	30	28	e41	e42	e44	54	52	36	18	10	25	37
15	29	28	e40	e43	e44	56	53	35	16	13	20	38
16	29	33	e39	e45	e44	57	53	33	16	12	21	36
17	29	42	e38	e47	e43	55	53	32	17	11	22	36
18	30	43	e37	e50	e43	53	54	30	18	10	14	37
19	30	45	36	e52	e44	53	54	29	19	11	12	38
20	30	45	e36	e52	e45	55	55	28	18	17	12	38
21	30	46	e36	e52	e46	54	53	29	18	27	17	38
22	31	46	e36	e51	e46	53	54	29	18	40	35	38
23	30	47	e36	e51	e46	53	32	36	19	52	35	38
24	29	46	e36	e50	e47	54	36	38	20	62	34	39
25	30	49	e36	49	e47	56	39	36	19	57	32	39
26	31	e46	e37	48	e46	57	39	34	16	51	30	39
27	31	e46	e38	46	47	56	38	32	15	48	29	42
28	30	e46	39	46	48	57	39	45	15	40	29	45
29	29	46	e41	45	---	57	39	44	15	34	29	45
30	29	e46	42	44	---	57	40	42	15	25	29	42
31	30	---	e42	43	---	55	---	52	---	15	32	---
TOTAL	879	1142	1257	1378	1261	1719	1492	1134	886	675.9	630.4	1094
MEAN	28.4	38.1	40.5	44.5	45.0	55.5	49.7	36.6	29.5	21.8	20.3	36.5
MAX	33	49	45	52	48	59	62	52	61	62	35	45
MIN	20	24	36	39	43	50	32	28	15	7.2	4.7	29
AC-FT	1740	2270	2490	2730	2500	3410	2960	2250	1760	1340	1250	2170

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1993, BY WATER YEAR (WY)

	MEAN	37.0	57.5	61.8	61.4	63.2	66.1	58.9	43.2	35.9	19.1	19.2	27.3
MAX	67.1	83.5	74.7	73.4	76.8	85.8	85.7	104	113	93.8	72.4	128	
(WY)	1963	1957	1954	1953	1960	1960	1980	1951	1962	1962	1950	1951	
MIN	11.1	27.0	40.5	39.4	45.0	50.7	23.5	11.0	12.2	5.36	4.12	5.78	
(WY)	1979	1989	1993	1979	1993	1980	1972	1992	1952	1978	1940	1978	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1935 - 1993

ANNUAL TOTAL	13034.4	13548.3	
ANNUAL MEAN	35.6	37.1	45.7
HIGHEST ANNUAL MEAN			65.3
LOWEST ANNUAL MEAN			30.0
HIGHEST DAILY MEAN	120	62	761
LOWEST DAILY MEAN	3.5	4.7	1.7
ANNUAL SEVEN-DAY MINIMUM	4.5	7.3	2.3
INSTANTANEOUS PEAK FLOW (STAGE)		68 (1.03)	2110
INSTANTANEOUS PEAK STAGE		*1.39	5.92
ANNUAL RUNOFF (AC-FT)	25850	26870	33080
10 PERCENT EXCEEDS	59	54	73
50 PERCENT EXCEEDS	36	39	51
90 PERCENT EXCEEDS	10	17	9.0

e-Estimated.

*-Backwater from ice.

06826000 BONNY RESERVOIR NEAR HALE, CO

LOCATION.--Lat 39°37'24", long 102°10'26", in SE¹/4SE¹/4 sec.9, T.5 S., R.43 W., Yuma County, Hydrologic Unit 10250003, in stair well to outlet conduit of Bonny Dam on South Fork Republican River, 1.7 mi west of Hale, and 3.0 mi downstream from Landsman Creek.

DRAINAGE AREA.--1,820 mi², approximately.

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 1710: 1955.

GAGE.--Water-stage recorder. Datum of gage is 3,710.00 ft above sea level, (levels by U.S. Bureau of Reclamation) Prior to Oct. 1, 1967, nonrecording gage at present site and datum.

REMARKS.--Reservoir is formed by an earthfill dam. Storage began July 6, 1950; dam completed May 4, 1951. Capacity of reservoir, 170,200 acre-ft, below elevation 3,710 ft, crest of spillway, of which 128,800 acre-ft is for flood control and 39,900 acre-ft is for irrigation. Dead storage, 1,420 acre-ft below elevation 3,635.0 ft, sill of trashrack at outlet conduit. Figures given represent total contents.

COOPERATION.--Capacity tables provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 55,030 acre-ft, May 17, 1957, elevation, 3,678.10 ft; minimum observed since appreciable contents were attained, 22,520 acre-ft, Oct. 6-14, 1952, elevation 3,661.20 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 41,100 acre-ft, June 6, elevation, 3,671.92 ft; minimum, 35,200 acre-ft, Oct. 17, elevation, 3,668.86 ft.

Capacity table (elevation, in feet, and total contents, in acre-feet)

3,668.85	35,200
3,671.90	41,100

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35500	35400	36000	36800	37900	38800	39900	40500	41000	40200	38800	40100
2	35500	35300	36100	36900	38000	38900	39900	40500	41000	40100	38700	40000
3	35400	35300	36100	36900	38000	39000	40000	40500	41100	40000	38600	40000
4	35400	35300	36100	36900	38000	39100	40000	40500	41100	39800	38600	39900
5	35300	35400	36100	36900	38000	39100	40000	40600	41100	39700	38600	39800
6	35300	35400	36200	36900	38100	39200	40100	40600	41100	39900	38500	39800
7	35400	35400	36200	37000	38100	39200	40200	40700	41100	40000	38400	39700
8	35400	35400	36200	37100	38100	39200	40200	40600	41100	40000	38400	39700
9	35400	35400	36200	37100	38200	39300	40300	40600	41000	40000	38300	39600
10	35400	35400	36300	37100	38300	39300	40300	40600	41000	40000	38300	39600
11	35400	35500	36300	37200	38300	39400	40300	40600	41000	39900	38300	39500
12	35400	35500	36300	37200	38300	39500	40200	40600	41000	39800	38400	39400
13	35400	35500	36300	37200	38300	39500	40300	40700	40900	39800	39300	39300
14	35300	35500	36300	37300	38400	39500	40200	40700	40900	39700	40400	39300
15	35300	35600	36400	37300	38500	39500	40300	40600	40900	39700	40600	39200
16	35300	35600	36400	37300	38500	39600	40300	40700	40800	39600	40700	39100
17	35300	35600	36400	37400	38400	39600	40400	40700	40800	39500	40700	39100
18	35300	35600	36400	37400	38500	39600	40400	40700	40800	39500	40600	39100
19	35300	35700	36500	37500	38600	39600	40300	40600	40800	39500	40600	39100
20	35300	35700	36500	37500	38600	39700	40300	40600	40800	39500	40600	39000
21	35300	35800	36500	37500	38700	39700	40400	40800	40900	39500	40600	38900
22	35300	35800	36500	37600	38700	39700	40400	40800	40800	39500	40600	38900
23	35300	35800	36500	37600	38700	39800	40400	40900	40700	39500	40500	38800
24	35300	35900	36600	37700	38700	39800	40400	40800	40700	39500	40500	38800
25	35300	35900	36600	37700	38800	39900	40400	40900	40700	39400	40400	38800
26	35300	35900	36700	37700	38800	39900	40400	40900	40600	39300	40300	38700
27	35300	36000	36700	37700	38900	39900	40400	40800	40500	39200	40300	38600
28	35300	36000	36700	37700	38900	39900	40500	40900	40500	39200	40300	38600
29	35300	36000	36800	37800	---	39900	40400	41000	40300	39100	40200	38500
30	35300	36100	36700	37800	---	39900	40400	41000	40200	39000	40200	38500
31	35400	---	36700	37900	---	39900	---	41000	---	39000	40100	---
MAX	35500	36100	36800	37900	38900	39900	40500	41000	41100	40200	40700	40100
MIN	35300	35300	36000	36800	37900	38800	39900	40500	40200	39000	38300	38500

CAL YR 1992 MAX 42700 MIN 35300
WTR YR 1993 MAX 41100 MIN 35300

07079200 LEADVILLE MINE DRAINAGE TUNNEL AT LEADVILLE, CO

LOCATION.--Lat 39°16'29", long 106°17'15", in SW¹/4SW¹/4 sec. 12, T.9 S., R.80 W., Lake County, Hydrologic Unit 11020001, on right bank 80 ft downstream from access road, 0.5 mi upstream from mouth, and 0.8 mi north of Leadville.

PERIOD OF RECORD.--May 4, 1990 to September 1993 (Discontinued). Formerly published as Leadville Drain at Leadville, Co.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder with satellite telemetry and Parshall flume. Elevation of gage is 9,960 ft above sea level, from topographic map. May 4, 1990 to July 19, 1990, at same location on left bank, at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by U.S. Bureau of Reclamation mine drainage treatment facility, since Feb. 15, 1992.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	2.5	2.5	2.4	2.3	1.8	2.4	2.3	1.4	2.5	2.6	2.8
2	2.7	2.6	2.5	2.4	2.3	2.3	2.4	2.3	1.4	2.5	2.4	2.8
3	2.8	2.6	2.5	2.4	2.3	2.4	2.4	2.3	2.1	2.5	2.6	2.6
4	2.7	2.6	2.5	2.4	2.3	2.3	2.4	2.4	2.5	2.4	2.6	2.7
5	2.7	2.6	2.5	2.4	2.3	2.4	2.3	2.3	2.5	2.5	2.6	2.8
6	2.7	2.6	2.4	2.4	2.3	2.4	2.3	2.3	2.5	2.5	2.6	2.7
7	2.7	2.6	2.4	2.4	2.2	2.4	2.1	2.3	2.5	2.5	2.6	2.2
8	2.6	2.6	2.4	2.4	2.2	2.4	2.3	2.3	2.5	2.5	2.6	2.8
9	2.5	2.5	2.4	2.4	2.2	2.3	2.4	2.3	2.5	2.5	2.6	2.8
10	2.6	2.6	2.5	2.4	2.3	2.4	2.4	2.3	2.5	2.5	2.6	2.6
11	2.7	2.4	2.6	2.4	2.3	2.4	2.4	2.3	2.5	2.0	2.6	2.9
12	2.6	2.5	2.6	2.4	2.3	2.4	2.4	2.4	2.5	2.4	2.6	2.9
13	2.6	2.5	2.6	2.4	2.3	2.4	2.4	2.3	2.3	2.5	2.6	2.9
14	2.6	2.5	2.5	2.4	2.3	2.4	2.0	2.3	2.5	2.5	2.6	2.8
15	2.6	2.5	2.5	2.5	2.3	2.4	2.5	2.3	2.5	2.5	2.6	2.8
16	2.6	2.5	2.5	2.5	2.3	2.4	2.4	2.3	2.3	2.6	2.6	2.8
17	2.6	2.5	2.4	2.5	2.3	2.4	2.4	2.4	2.5	2.6	2.6	2.6
18	2.6	2.5	2.5	2.4	2.3	2.4	2.4	2.2	2.5	2.6	2.6	2.0
19	2.6	2.5	2.4	2.5	2.4	2.4	2.4	2.4	2.5	2.6	2.6	1.5
20	2.6	2.5	2.4	2.5	2.4	2.4	2.4	2.1	2.5	2.6	2.6	2.4
21	2.6	2.5	2.3	2.5	2.4	2.4	2.4	1.7	2.5	2.6	2.6	2.7
22	2.6	2.5	2.4	2.2	2.4	2.4	2.4	1.5	2.5	2.6	2.6	2.7
23	2.6	2.5	2.4	2.5	2.4	2.4	2.4	1.4	2.5	2.6	2.5	2.7
24	2.6	2.4	2.4	2.5	2.3	2.4	2.4	1.4	2.5	2.6	2.5	2.7
25	2.5	2.4	2.4	2.4	2.4	2.4	2.4	1.4	2.5	2.6	2.6	2.7
26	2.5	2.4	2.4	2.4	2.4	2.4	2.4	1.4	2.5	2.6	2.6	2.7
27	2.5	2.4	2.4	2.4	2.4	2.4	2.4	1.4	2.5	2.6	2.6	2.7
28	2.5	2.5	2.4	2.4	2.0	2.4	2.4	1.4	2.5	2.6	2.7	2.6
29	2.5	2.5	2.3	2.4	---	2.4	2.3	1.4	2.5	2.6	2.8	2.6
30	2.5	2.5	2.4	2.3	---	2.4	2.4	1.4	2.5	2.6	2.8	2.7
31	2.5	---	2.4	2.3	---	2.4	---	1.4	---	2.6	2.8	---
TOTAL	80.8	75.3	75.8	74.8	64.6	73.5	71.0	61.9	72.0	78.4	80.9	79.2
MEAN	2.61	2.51	2.45	2.41	2.31	2.37	2.37	2.00	2.40	2.53	2.61	2.64
MAX	2.8	2.6	2.6	2.5	2.4	2.4	2.5	2.4	2.5	2.6	2.8	2.9
MIN	2.5	2.4	2.3	2.2	2.0	1.8	2.0	1.4	1.4	2.0	2.4	1.5
AC-FT	160	149	150	148	128	146	141	123	143	156	160	157

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1993, BY WATER YEAR (WY)

	1990	1991	1992	1993
MEAN	2.45	2.57	2.51	2.47
MAX	2.68	2.71	2.71	2.70
(WY)	1991	1991	1991	1991
MIN	2.05	2.49	2.38	2.29
(WY)	1992	1992	1992	1992

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1990 - 1993

	1992	1993	1990-1993
ANNUAL TOTAL	882.3	888.2	
ANNUAL MEAN	2.41	2.43	2.43
HIGHEST ANNUAL MEAN			2.50
LOWEST ANNUAL MEAN			2.36
HIGHEST DAILY MEAN	3.0 Sep 17	a 2.9 Sep 11	3.3 Apr 19 1991
LOWEST DAILY MEAN	1.1 Apr 5	b 1.4 May 23	1.1 Apr 5 1992
ANNUAL SEVEN-DAY MINIMUM	1.6 Apr 2	1.4 May 23	1.4 May 23 1993
INSTANTANEOUS PEAK FLOW		5.1 Jul 18	7.1 Sep 22 1991
INSTANTANEOUS PEAK STAGE		.96 Jul 18	c 1.19 Sep 22 1991
ANNUAL RUNOFF (AC-FT)	1750	1760	1760
10 PERCENT EXCEEDS	2.8	2.6	2.8
50 PERCENT EXCEEDS	2.4	2.5	2.5
90 PERCENT EXCEEDS	2.1	2.3	2.1

a-Also occurred Sep 12-13.

b-Also occurred May 24 to Jun 2.

c-Maximum gage height, 1.20 ft, Feb 13, 1992.

07079200 LEADVILLE MINE DRAINAGE TUNNEL AT LEADVILLE, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1990 to to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1990 to current year.

WATER TEMPERATURE: May 1990 to current year.

pH: May 1990 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Records for 1992 water year for daily specific conductance, daily pH, and daily water temperature are good except Feb. 6 to Apr. 10, which are fair. Records for 1993 water year for daily specific conductance, daily pH, and daily water temperature are fair. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance, daily mean pH, and daily mean water temperature data are available in the district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,480 microsiemens, Mar. 26, 1992; minimum, 388 microsiemens, Oct. 31, 1990.

WATER TEMPERATURE: Maximum, 9.9°C, July 29, 1991; minimum, 3.7°C, Feb. 7, 1992.

pH: Maximum, 9.3 units, Mar. 25, 1991, Feb. 20, Sept. 9, 1992; minimum, 5.7 units, Mar. 5, 1992.

EXTREMES FOR 1992 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,480 microsiemens, Mar. 26; minimum, 512 microsiemens, July 25.

WATER TEMPERATURE: Maximum, 9.7°C, Jan. 20, 23, Feb. 17; minimum, 3.7°C, Feb. 7.

pH: Maximum, 9.3 units, Feb. 20, Sept. 9; minimum, 5.7 units, Mar. 5.

EXTREMES FOR 1993 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,400 microsiemens, May 24; minimum, 573 microsiemens, Dec. 3.

WATER TEMPERATURE: Maximum, 9.4°C, May 23; minimum, 4.0°C, Feb. 21.

pH: Maximum, 9.0 units, July 11; minimum, 6.8 units, Oct. 26.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	727	678	705	793	803	905	896	970	935	746	674	648
2	713	685	705	792	805	900	960	925	923	739	670	646
3	743	692	739	792	807	900	984	922	915	733	656	657
4	773	690	755	791	814	907	1050	927	906	716	652	656
5	778	688	753	793	814	921	1040	941	895	709	663	650
6	762	690	741	791	822	898	1000	955	894	710	660	649
7	759	693	740	794	810	892	1020	961	886	694	665	652
8	757	694	726	799	806	892	1050	959	881	688	661	702
9	749	695	764	799	806	884	1070	964	877	684	663	646
10	750	695	744	798	813	894	1030	969	866	685	653	658
11	752	697	709	799	819	898	945	967	855	686	655	664
12	760	703	766	798	817	910	922	964	845	689	654	665
13	760	746	781	800	823	931	918	963	838	687	645	667
14	758	793	774	799	826	921	945	972	833	684	649	664
15	746	793	774	797	829	919	919	970	830	674	650	664
16	726	814	774	800	834	955	920	989	826	680	651	668
17	731	822	778	805	840	970	933	991	815	680	651	670
18	745	730	775	807	837	917	927	998	808	682	655	665
19	748	710	784	805	852	900	923	1010	805	686	656	655
20	746	722	782	805	874	916	924	1000	798	684	657	665
21	745	719	784	876	851	918	920	1000	794	667	673	696
22	743	716	785	809	872	911	926	1000	788	661	705	678
23	736	717	784	812	885	906	933	995	774	655	653	684
24	729	714	785	801	846	922	946	991	779	662	646	683
25	716	714	784	800	866	978	932	980	770	656	648	686
26	696	717	788	799	877	1040	968	984	766	671	657	680
27	692	702	789	799	877	947	952	976	765	661	656	686
28	728	699	790	796	893	949	942	956	759	666	653	682
29	717	700	790	797	902	919	951	946	753	671	650	679
30	678	703	792	802	---	905	964	950	747	672	653	681
31	676	---	791	801	---	899	---	943	---	683	652	---
MEAN	737	718	766	802	839	920	960	969	831	686	658	668

07079200 LEADVILLE MINE DRAINAGE TUNNEL AT LEADVILLE, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.6	7.4	7.8	7.8	8.0	7.7	7.4	7.4	7.4	7.3	7.2	6.7
2	8.4	7.4	7.8	7.8	8.0	7.7	7.4	7.4	7.4	7.3	8.4	6.5
3	7.9	7.3	7.9	7.8	7.9	7.6	7.4	7.4	7.4	7.3	7.5	6.4
4	8.7	7.3	7.9	7.9	8.0	7.4	7.4	7.4	7.4	7.3	7.5	6.4
5	7.4	7.3	7.9	7.8	8.0	7.5	7.4	7.4	7.4	7.3	7.1	5.7
6	7.4	7.2	7.9	7.8	8.0	7.5	7.4	7.4	7.7	7.3	9.1	6.7
7	7.6	7.3	7.8	7.8	8.0	7.5	7.4	7.4	7.9	7.4	8.6	6.2
8	7.7	7.4	7.8	7.8	8.0	7.5	7.4	7.4	7.7	7.4	7.7	6.3
9	7.7	7.4	7.8	7.8	8.0	7.5	7.4	7.4	7.5	7.4	7.3	6.4
10	7.6	7.3	7.8	7.8	8.0	7.4	7.4	7.4	7.7	7.4	9.0	6.1
11	7.7	7.3	7.9	7.8	7.9	7.6	7.4	7.3	7.6	7.5	8.5	6.5
12	7.8	7.2	7.9	7.7	7.5	7.3	7.4	7.4	8.1	7.5	8.8	6.2
13	7.3	7.2	7.7	7.6	7.4	7.3	7.4	7.3	8.1	7.5	8.1	6.5
14	7.8	7.3	7.6	7.6	7.4	7.3	7.4	7.4	8.2	7.4	8.4	6.4
15	7.9	7.4	7.6	7.6	7.3	7.3	7.4	7.3	7.4	7.3	8.9	6.3
16	7.9	7.4	7.8	7.6	7.3	7.3	7.4	7.3	7.4	7.3	8.4	6.2
17	7.8	7.3	8.0	7.8	7.3	7.3	7.4	7.3	7.6	7.3	9.0	6.4
18	7.5	7.3	8.1	8.0	7.4	7.3	7.3	7.3	7.4	7.3	8.8	7.0
19	7.4	7.3	8.2	8.1	7.4	7.3	7.3	7.3	8.1	7.3	7.6	6.7
20	7.4	7.3	8.2	8.2	7.4	7.4	7.3	7.2	9.3	7.4	7.8	6.8
21	7.6	7.4	8.2	8.2	7.4	7.4	7.3	7.3	8.2	7.3	7.5	6.9
22	8.1	7.4	8.3	8.2	7.4	7.4	7.4	7.3	---	---	7.5	7.2
23	7.9	7.4	8.3	8.2	7.4	7.4	7.4	7.4	---	---	8.1	6.9
24	7.8	7.3	8.3	8.2	7.4	7.4	7.5	7.4	8.8	6.9	8.4	6.2
25	7.7	7.4	8.3	8.2	7.4	7.4	7.5	7.4	8.5	7.0	8.5	6.8
26	7.6	7.4	8.2	8.2	7.4	7.4	7.5	7.5	8.6	7.0	8.3	6.2
27	7.7	7.6	8.2	8.0	7.4	7.4	7.6	7.5	9.0	7.0	7.3	6.3
28	7.7	7.6	8.1	7.9	7.4	7.4	7.5	7.4	8.1	6.7	7.6	6.5
29	7.7	7.7	8.0	7.6	7.4	7.4	7.4	7.3	7.5	6.7	7.1	6.3
30	7.7	7.7	8.0	7.8	7.4	7.4	7.4	7.3	---	---	7.0	6.5
31	7.8	7.7	---	---	7.4	7.4	7.4	7.3	---	---	8.1	6.5
MONTH	8.7	7.2	8.3	7.6	8.0	7.3	7.6	7.2	---	---	9.1	5.7

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.1	6.9	8.9	7.5	7.6	7.5	7.5	---	7.8	7.3	7.8	7.6
2	7.6	7.2	7.7	7.5	7.6	7.5	7.6	7.5	7.5	7.3	7.8	7.4
3	8.6	6.7	7.7	7.4	7.6	7.5	7.6	7.4	7.5	7.3	7.8	7.6
4	7.6	6.6	7.6	7.4	7.8	7.5	7.5	7.4	7.5	7.3	7.9	7.8
5	8.4	6.9	7.7	7.5	8.3	7.7	7.5	7.4	7.5	7.4	7.8	7.6
6	8.5	6.8	7.7	7.6	7.8	7.7	7.6	7.4	7.6	7.3	8.0	7.6
7	8.1	6.7	7.8	7.4	7.8	7.7	7.5	7.4	7.6	7.3	7.9	7.6
8	7.9	6.6	7.8	7.5	7.8	7.7	7.6	7.4	7.6	7.4	7.9	7.7
9	8.2	6.9	7.8	7.6	7.8	7.7	7.6	7.4	7.6	7.2	9.3	7.6
10	7.9	6.7	8.1	7.4	7.8	7.7	7.6	7.4	7.6	7.6	7.9	7.6
11	6.9	6.8	7.7	7.6	7.9	7.7	7.6	7.4	7.6	7.5	7.9	7.6
12	6.9	6.8	7.7	7.6	7.8	7.6	7.6	7.5	7.6	7.5	7.9	7.7
13	7.1	6.7	7.8	7.5	7.7	7.6	7.6	7.4	7.6	7.5	7.9	7.6
14	7.1	6.7	7.7	7.5	7.7	7.6	7.6	7.4	7.6	7.5	8.0	7.7
15	7.1	6.7	7.8	7.5	7.7	7.6	8.2	7.3	7.7	7.4	8.0	7.7
16	7.2	6.8	7.7	7.6	7.7	7.6	7.5	7.2	7.7	7.5	8.0	7.7
17	7.1	6.7	7.8	7.5	7.7	7.5	7.5	7.1	7.7	7.6	8.0	7.7
18	7.1	7.0	7.8	7.7	7.6	7.4	7.3	7.0	7.7	7.5	7.9	7.8
19	7.0	6.8	7.8	7.6	7.6	7.6	7.5	6.8	7.7	7.5	8.0	7.7
20	7.0	6.7	7.8	7.7	7.6	7.6	7.5	7.3	7.7	7.5	7.9	7.8
21	7.5	6.9	7.9	7.6	7.7	7.5	7.5	7.2	7.7	7.4	7.9	7.7
22	7.4	6.9	7.9	7.7	7.7	7.6	7.7	7.5	7.9	7.5	7.9	7.7
23	7.0	6.9	7.9	7.6	7.6	7.6	7.6	7.4	7.7	7.6	7.9	7.7
24	7.9	6.4	7.7	7.7	7.9	7.5	7.6	7.4	7.8	7.6	8.0	7.5
25	7.3	6.9	7.7	7.7	7.9	7.5	8.5	7.4	7.7	7.4	8.0	7.7
26	6.9	6.8	7.8	7.5	7.9	---	7.5	7.3	7.7	7.4	8.0	7.7
27	7.0	6.8	7.7	7.6	---	---	7.5	7.4	8.7	7.4	7.9	7.7
28	7.0	6.7	7.7	7.7	---	---	7.5	7.3	7.7	7.4	8.0	7.7
29	8.4	7.0	7.7	7.7	---	---	7.5	7.2	7.7	7.6	8.0	7.6
30	8.4	7.4	7.7	7.6	---	---	7.4	7.1	7.8	7.6	8.0	7.7
31	---	---	7.6	7.5	---	---	7.9	6.8	7.8	7.6	---	---
MONTH	9.1	6.4	8.9	7.4	---	---	8.5	---	8.7	7.2	9.3	7.4

07079200 LEADVILLE MINE DRAINAGE TUNNEL AT LEADVILLE, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.7	6.7	7.0	6.9	6.9	6.8	7.0	6.9	7.0	7.0	6.7	6.3
2	8.3	6.8	7.7	6.9	6.9	6.8	7.0	6.9	7.2	7.0	6.9	6.0
3	7.7	6.9	7.3	6.9	8.5	6.8	7.0	6.9	7.0	7.0	6.9	6.0
4	7.1	6.8	7.4	6.9	6.9	6.6	7.0	7.0	7.2	7.0	6.9	6.0
5	7.0	6.7	7.4	7.0	6.8	6.5	7.0	7.0	7.0	7.0	6.9	6.4
6	7.0	6.7	7.4	7.0	6.8	6.5	7.0	6.9	7.2	3.9	6.9	6.5
7	7.3	6.7	7.0	7.0	6.8	6.6	7.0	7.0	5.0	3.7	7.0	6.2
8	7.7	6.7	7.0	7.0	6.8	6.6	7.0	6.9	6.2	4.9	6.9	6.2
9	7.3	6.7	7.1	7.0	6.9	6.4	7.0	7.0	6.9	5.9	6.7	6.2
10	7.3	6.7	7.9	7.0	6.9	6.8	7.0	7.0	7.2	5.9	6.9	5.4
11	7.4	6.8	7.9	7.0	6.9	6.8	7.0	7.0	7.4	6.0	7.2	5.7
12	7.2	6.8	7.3	6.9	8.2	6.9	7.0	7.0	7.2	6.2	7.2	5.5
13	7.0	6.8	7.4	6.8	---	---	7.0	7.0	7.0	5.4	7.0	6.0
14	7.6	6.8	6.9	6.8	7.0	6.9	7.0	7.0	7.2	7.0	7.2	5.9
15	7.6	6.9	6.8	6.8	7.0	6.9	7.0	7.0	7.2	7.0	6.9	5.7
16	7.3	6.8	7.8	6.7	7.0	6.9	9.0	7.0	7.2	7.0	6.9	6.2
17	7.5	6.7	7.3	6.9	7.2	6.9	7.0	7.0	9.7	6.7	6.7	5.5
18	7.1	6.8	7.3	6.9	7.0	6.9	7.0	6.9	7.2	7.0	6.9	5.7
19	6.9	6.8	7.0	6.7	7.2	7.0	7.0	7.0	8.2	7.0	7.0	5.4
20	6.9	6.8	6.9	6.5	7.0	7.0	9.7	6.9	7.4	5.5	6.7	5.9
21	6.9	6.8	6.9	6.8	7.0	6.9	7.0	6.7	7.4	6.9	6.7	6.0
22	8.4	6.7	6.8	6.6	7.0	7.0	7.0	7.0	7.4	7.2	6.7	6.2
23	7.7	6.8	6.8	6.5	7.0	6.9	9.7	7.0	7.9	5.4	6.9	6.0
24	7.5	6.8	6.8	6.6	7.0	6.9	7.0	7.0	8.2	6.0	6.9	5.5
25	7.8	6.9	6.9	6.7	7.0	6.9	7.0	7.0	6.9	5.7	6.7	5.9
26	7.2	6.9	6.9	6.8	7.0	6.9	7.0	7.0	7.0	6.3	6.7	5.1
27	7.2	6.8	6.9	6.9	7.0	6.9	7.0	7.0	7.2	6.4	6.9	6.0
28	7.2	6.7	8.7	6.9	7.0	6.9	7.0	7.0	6.9	5.7	6.9	6.2
29	7.1	6.9	6.9	6.8	7.0	6.9	7.0	7.0	6.7	6.2	7.2	6.5
30	8.1	6.9	6.9	6.8	7.0	6.9	7.5	7.0	---	---	6.9	6.5
31	7.5	6.9	---	---	7.0	6.9	7.2	7.0	---	---	6.7	6.4
MONTH	8.4	6.7	8.7	6.5	---	---	9.7	6.7	9.7	3.7	7.2	5.1

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.5	6.0	7.3	7.0	7.2	7.0	7.2	6.8	7.6	6.8	7.5	6.8
2	7.0	6.1	7.4	7.0	7.7	6.9	7.0	6.8	8.0	6.8	8.5	6.8
3	7.2	5.9	7.3	7.1	7.5	7.0	7.1	6.7	7.2	6.9	7.6	6.8
4	8.0	5.9	7.4	7.0	7.3	7.1	7.2	6.8	7.3	6.9	---	6.9
5	7.0	6.1	7.5	7.0	7.4	7.2	7.2	6.8	7.6	6.9	7.4	6.8
6	7.2	5.5	7.4	7.0	7.6	7.2	8.0	6.9	7.7	7.0	7.6	6.7
7	7.2	5.5	7.5	7.1	7.8	7.2	7.2	6.8	7.3	6.9	7.4	6.7
8	7.9	---	7.9	7.1	7.4	7.2	7.1	7.0	7.3	6.9	7.4	6.7
9	8.0	---	7.3	7.1	7.3	7.2	7.8	6.9	7.4	6.9	7.5	6.8
10	7.3	6.2	7.5	7.1	7.4	7.2	7.2	6.8	7.3	7.0	7.4	6.7
11	7.3	7.0	7.5	7.0	7.4	7.0	7.3	7.0	7.4	7.0	7.4	6.7
12	7.3	6.9	7.3	7.1	7.4	7.0	7.2	7.0	7.2	6.8	7.4	6.7
13	7.4	6.9	7.4	7.0	7.3	7.0	7.3	6.9	7.2	6.8	7.7	6.8
14	7.4	7.1	7.4	7.0	7.3	6.9	7.2	6.8	7.2	6.9	7.5	6.7
15	7.2	7.0	7.3	7.0	7.2	6.9	7.5	6.9	7.2	6.9	7.7	6.8
16	7.3	7.1	7.4	7.0	7.1	6.8	7.3	6.8	7.4	6.9	7.5	6.8
17	7.2	7.0	7.6	7.0	7.2	6.9	7.2	6.9	7.6	7.0	7.7	6.8
18	7.2	6.9	7.5	7.1	7.3	6.9	7.6	6.9	7.3	7.0	7.1	6.8
19	7.0	6.8	7.6	7.1	7.3	6.9	7.6	6.9	7.2	6.8	7.3	6.8
20	7.0	6.9	7.6	7.2	7.4	7.1	7.3	6.9	7.6	6.9	7.2	6.7
21	7.3	6.9	7.6	7.2	7.4	6.9	7.3	6.9	7.7	6.9	7.4	6.8
22	7.2	6.8	7.4	7.1	7.3	6.8	7.2	6.9	7.6	7.0	7.4	6.7
23	7.1	6.9	7.4	7.2	7.4	6.9	7.2	6.9	7.4	7.0	7.6	6.9
24	7.2	6.8	7.3	7.2	7.4	7.0	7.2	6.9	7.1	6.8	7.2	6.7
25	9.1	6.2	7.5	7.2	7.4	7.0	8.6	7.1	7.5	6.7	7.3	6.7
26	7.5	6.9	7.6	6.8	7.3	7.0	8.3	7.0	7.5	6.8	7.3	6.6
27	7.5	7.0	7.8	7.2	---	6.9	7.2	6.8	7.6	6.6	7.3	6.6
28	7.4	7.1	7.3	7.1	7.4	7.0	7.2	6.8	7.7	6.7	7.3	6.6
29	7.4	7.0	7.3	7.0	---	6.9	7.3	6.9	7.3	6.7	7.4	6.6
30	9.5	6.8	7.3	7.0	7.2	6.8	7.3	6.8	7.5	6.8	7.4	6.6
31	---	---	7.6	7.0	---	---	7.3	6.9	7.6	6.8	---	---
MONTH	9.5	---	7.9	6.8	---	6.8	8.6	6.7	8.0	6.6	---	6.6

07079200 LEADVILLE MINE DRAINAGE TUNNEL AT LEADVILLE, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	683	691	612	764	815	878	905	947	1250	818	723	703
2	685	696	608	767	818	871	907	943	1220	811	719	701
3	690	697	598	769	822	845	908	934	1210	806	702	707
4	696	702	588	770	829	860	903	930	1080	805	718	709
5	696	704	623	775	827	876	906	937	1040	798	719	708
6	685	717	630	768	826	868	920	942	1030	799	712	702
7	690	729	634	762	822	866	927	946	1020	792	712	704
8	692	728	639	756	820	868	926	951	1000	789	716	717
9	690	727	639	756	822	849	926	953	994	782	716	708
10	699	729	639	773	825	846	913	945	977	774	713	711
11	699	728	643	781	825	856	909	938	960	773	709	709
12	701	730	646	787	831	875	905	932	959	775	713	706
13	700	728	651	774	834	873	913	944	---	772	711	704
14	698	734	654	766	834	867	922	947	947	768	713	707
15	702	738	655	785	834	866	955	968	934	759	712	709
16	707	747	656	789	839	882	929	1020	927	757	711	707
17	709	741	658	793	838	901	923	1070	928	757	711	706
18	705	744	656	805	835	901	923	1140	916	755	712	717
19	711	739	658	808	834	900	925	1140	906	752	713	730
20	708	720	659	807	832	900	924	1150	900	750	711	750
21	708	723	699	810	831	894	916	1180	895	750	710	699
22	703	702	740	832	835	895	909	1260	890	747	712	684
23	702	674	742	838	836	891	906	1330	881	744	710	682
24	714	639	745	821	836	890	920	1340	877	741	712	682
25	750	630	749	819	840	890	915	1290	870	738	700	684
26	759	616	751	820	843	894	913	1280	860	736	699	683
27	740	596	753	813	841	905	908	1260	845	735	699	684
28	713	593	752	817	832	905	921	1260	839	730	700	685
29	712	603	762	813	---	902	---	1270	825	730	703	687
30	704	609	764	814	---	911	939	1250	826	728	704	687
31	703	---	766	815	---	909	---	1250	---	725	704	---
MEAN	705	695	676	792	831	882	---	1090	---	764	710	702

CAL YR 1992 MEAN 784 MAX 1070 MIN 588

07079200 LEADVILLE MINE DRAINAGE TUNNEL AT LEADVILLE, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.8	7.5	7.5	7.4	7.6	7.5	7.7	7.6	7.8	7.7	7.5	7.2
2	7.8	7.5	7.5	7.4	7.5	7.5	7.7	7.6	7.7	7.7	7.6	7.5
3	7.7	7.5	7.5	7.4	7.5	7.5	7.6	7.6	7.7	7.6	7.6	7.5
4	7.6	7.3	7.5	7.3	7.5	7.5	7.7	7.6	7.6	7.4	7.9	7.6
5	7.7	7.3	7.5	7.4	7.5	7.5	7.7	7.6	7.5	7.3	7.9	7.6
6	7.7	7.4	7.5	7.4	7.6	7.5	7.6	7.6	7.6	7.3	8.0	7.9
7	7.6	7.5	7.4	7.3	7.6	7.5	7.6	7.6	7.6	7.5	8.0	7.7
8	7.6	7.4	7.5	7.3	7.6	7.5	7.6	7.6	7.5	7.5	8.0	7.9
9	7.6	7.5	7.5	7.3	7.6	7.5	7.7	7.5	7.5	7.5	8.0	7.9
10	7.6	7.3	7.4	7.3	7.6	7.5	7.7	7.6	7.6	7.4	8.0	7.8
11	7.5	7.3	7.4	7.3	7.5	7.5	7.7	7.6	7.6	7.5	8.0	7.9
12	7.5	7.4	7.4	7.3	7.6	7.5	7.7	7.6	7.6	7.5	8.0	7.9
13	7.4	7.2	7.4	7.3	7.6	7.5	7.7	7.6	7.6	7.5	8.0	7.8
14	7.4	7.2	7.4	7.3	7.6	7.4	7.6	7.6	7.5	7.2	8.1	7.9
15	7.4	7.2	7.5	7.3	7.6	7.5	7.6	7.6	7.6	7.5	8.1	8.0
16	7.4	7.2	7.4	7.3	7.6	7.5	7.6	7.5	7.6	7.5	8.1	7.5
17	7.4	7.1	7.4	7.3	7.7	7.5	7.7	7.5	7.6	7.5	8.1	7.9
18	7.4	7.2	7.4	7.3	7.7	7.6	7.7	7.5	7.6	7.4	8.1	8.0
19	7.3	7.2	7.4	7.3	7.7	7.6	7.7	7.7	7.4	7.3	8.1	8.0
20	7.4	7.1	7.4	7.3	7.6	7.6	7.7	7.6	7.3	7.2	8.1	8.0
21	7.4	7.2	7.4	7.3	7.8	7.5	7.7	7.6	7.4	7.3	8.2	8.1
22	7.4	7.2	7.4	7.3	7.6	7.6	7.8	7.6	7.5	7.3	8.2	8.1
23	7.3	7.1	7.4	7.4	7.6	7.6	7.8	7.7	7.5	7.4	8.2	8.0
24	7.3	6.9	7.5	7.4	7.6	7.6	7.8	7.6	7.5	7.3	8.1	8.0
25	7.0	6.9	7.5	7.4	7.6	7.6	7.8	7.7	7.6	7.3	8.1	8.0
26	7.3	6.8	7.5	7.4	7.6	7.6	7.8	7.7	7.6	7.5	8.0	7.9
27	7.5	7.2	7.6	7.3	7.6	7.6	7.8	7.7	7.6	7.3	7.9	7.6
28	7.4	7.4	7.5	7.5	7.6	7.6	7.8	7.7	7.5	7.4	7.7	7.6
29	7.5	7.4	7.5	7.5	7.7	7.6	7.8	7.6	---	---	8.0	7.6
30	7.5	7.3	7.5	7.5	7.7	7.6	7.8	7.7	---	---	7.9	7.8
31	7.5	7.4	---	---	7.7	7.6	7.8	7.7	---	---	8.0	7.8
MONTH	7.8	6.8	7.6	7.3	7.8	7.4	7.8	7.5	7.8	7.2	8.2	7.2
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	7.7	8.7	7.8	7.6	7.3	8.5	7.8	8.1	7.5	7.9	7.9
2	7.7	7.6	8.8	7.8	8.0	7.3	8.6	7.8	8.3	7.4	8.0	7.8
3	7.7	7.4	8.7	7.6	7.9	7.5	8.5	7.7	7.9	7.5	8.1	7.7
4	7.6	7.4	8.7	7.6	7.8	7.4	8.5	7.8	7.8	7.5	8.2	7.8
5	7.7	7.5	8.5	7.6	7.9	7.7	8.6	7.7	7.8	7.5	7.9	7.8
6	7.7	7.5	8.6	7.5	7.8	7.5	8.7	7.7	7.9	7.5	7.8	7.7
7	7.7	7.5	8.3	7.5	7.8	7.6	8.8	7.6	8.1	7.6	7.8	7.7
8	7.8	7.5	8.2	7.5	7.7	7.5	---	7.5	8.1	7.6	8.0	7.6
9	7.7	7.4	8.2	7.6	7.9	7.6	8.9	7.5	8.1	7.6	8.1	7.8
10	7.6	7.3	8.6	7.6	8.0	7.8	8.8	7.4	8.1	7.6	8.0	7.8
11	7.6	7.3	8.5	7.6	8.0	7.8	9.0	7.3	8.2	7.6	8.0	7.8
12	7.6	7.4	8.4	7.6	---	7.8	8.7	7.3	8.2	7.5	7.9	7.8
13	7.6	7.4	7.8	7.6	---	---	8.9	7.3	8.0	7.5	7.9	7.8
14	7.8	7.4	7.8	7.7	8.0	7.8	8.5	7.4	8.1	7.5	7.9	7.8
15	7.8	7.4	7.8	7.7	7.9	7.8	8.4	7.4	8.2	7.5	7.9	7.8
16	7.9	7.5	7.8	7.5	8.0	7.8	8.0	7.5	8.3	7.5	7.9	7.7
17	7.9	7.6	7.8	7.5	7.9	7.7	8.1	7.8	8.3	7.5	7.9	7.7
18	7.9	7.6	7.8	7.5	7.8	7.8	8.1	7.8	8.3	7.5	8.0	7.7
19	8.1	7.7	7.8	7.5	7.9	7.7	8.1	7.8	8.1	7.4	8.0	7.8
20	8.2	7.7	8.2	7.3	8.1	7.8	8.0	7.6	8.1	7.4	8.0	7.7
21	8.3	7.7	8.0	7.5	8.0	7.8	8.1	7.9	7.9	7.4	7.9	7.7
22	8.3	7.6	8.7	7.1	8.0	7.8	8.0	7.9	7.9	7.4	7.9	7.7
23	8.3	7.6	8.4	7.0	7.9	7.8	7.9	7.6	8.0	7.4	7.9	7.7
24	8.3	7.7	8.4	6.9	7.9	7.8	7.7	7.6	8.1	7.5	7.8	7.7
25	8.5	7.7	8.7	6.9	8.0	7.8	7.9	7.6	7.9	7.5	7.8	7.6
26	8.7	7.8	8.4	7.0	8.1	7.8	7.9	7.5	8.2	7.5	7.8	7.6
27	8.6	7.8	8.6	7.1	8.1	7.8	7.9	7.6	8.0	7.9	7.8	7.6
28	8.7	7.7	8.0	7.0	8.1	7.8	8.0	7.5	8.1	7.9	7.9	7.7
29	8.8	7.8	8.1	7.5	8.2	7.8	7.9	7.5	8.1	7.9	7.8	7.6
30	8.7	7.8	8.0	7.5	8.4	7.8	7.9	7.4	8.0	7.9	7.8	7.7
31	---	---	8.3	7.3	---	---	8.0	7.5	8.0	7.9	---	---
MONTH	8.8	7.3	8.8	6.9	---	---	---	7.3	8.3	7.4	8.2	7.6

07079200 LEADVILLE MINE DRAINAGE TUNNEL AT LEADVILLE, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.2	6.7	6.6	6.5	7.0	6.5	7.0	6.4	7.0	6.7	6.9	6.5
2	7.3	6.6	6.7	6.5	6.9	6.5	6.7	6.4	7.0	6.7	6.9	6.8
3	7.3	6.6	6.6	6.4	6.7	6.4	6.7	6.2	7.1	6.6	6.9	6.7
4	7.2	6.7	6.6	6.4	6.7	6.2	6.7	6.2	7.2	6.8	7.0	6.6
5	7.3	6.6	6.7	6.4	6.5	6.5	6.7	6.2	7.0	6.6	6.9	6.4
6	7.3	6.7	6.7	6.5	6.9	6.5	6.9	6.5	7.3	6.8	6.9	6.7
7	7.0	6.5	6.8	6.5	7.0	6.5	6.7	6.5	7.1	6.8	7.0	6.7
8	7.1	6.4	6.7	6.4	6.9	6.5	6.7	6.5	7.1	6.9	7.0	6.7
9	6.9	6.6	6.8	6.5	6.9	6.7	6.7	6.4	7.1	7.0	7.6	4.4
10	7.2	6.6	6.8	6.6	7.0	6.5	6.7	6.2	7.2	6.9	7.1	6.8
11	7.3	6.6	6.7	6.5	6.7	6.5	7.0	6.7	7.2	6.9	7.1	6.7
12	---	6.6	6.8	6.4	6.7	6.4	7.0	6.7	7.1	6.8	6.9	6.5
13	7.2	6.6	6.8	6.5	6.5	6.4	7.0	6.7	7.3	6.9	7.2	6.6
14	7.4	6.6	6.8	6.4	6.7	6.2	6.9	6.7	7.3	6.9	7.2	6.8
15	7.3	6.7	6.9	6.5	6.7	6.4	6.9	6.7	7.4	7.0	7.0	6.8
16	7.2	6.6	6.9	6.5	6.7	6.5	6.9	6.6	7.1	7.0	6.9	6.8
17	7.4	6.7	6.9	6.5	6.9	6.4	6.8	6.6	7.2	7.0	7.1	6.7
18	7.1	6.6	6.8	6.5	6.7	6.5	6.9	6.7	7.3	6.9	7.1	5.8
19	7.2	6.6	6.8	6.4	6.9	6.5	6.9	6.7	7.1	6.6	7.1	6.8
20	7.4	6.6	6.7	6.4	6.7	6.4	6.9	6.8	7.1	6.8	7.0	6.7
21	7.2	6.6	6.8	6.5	6.7	4.5	7.1	6.7	6.9	4.0	7.2	6.8
22	7.3	6.7	6.8	6.5	6.7	6.2	6.9	5.1	6.9	6.7	7.1	6.7
23	7.2	6.6	6.6	6.4	6.9	6.5	6.7	6.5	7.1	6.9	7.2	6.7
24	7.2	6.7	6.5	6.2	6.9	6.5	6.8	6.5	7.1	7.0	7.3	6.6
25	7.2	6.7	6.5	6.0	6.7	6.4	6.9	6.6	7.1	6.4	7.3	6.6
26	6.9	6.8	6.9	6.3	6.7	6.4	7.0	6.7	7.1	6.8	7.2	6.9
27	7.0	6.7	6.8	6.2	6.7	6.4	6.9	6.6	7.0	6.7	7.3	7.0
28	6.9	6.7	6.7	6.3	6.9	6.5	6.9	6.5	6.9	6.7	7.2	5.9
29	6.9	6.7	6.8	6.5	6.7	6.5	7.0	6.7	---	---	7.3	6.9
30	7.0	6.7	6.7	6.2	6.7	6.5	7.1	6.5	---	---	7.2	7.0
31	6.8	6.6	---	---	6.7	6.4	7.0	6.7	---	---	7.4	7.1
MONTH	---	6.4	6.9	6.0	7.0	4.5	7.1	5.1	7.4	4.0	7.6	4.4
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.4	6.8	7.9	7.0	7.4	7.1	7.8	7.0	7.6	7.0	7.3	7.0
2	7.2	6.9	8.1	7.0	7.4	6.4	7.7	7.0	9.0	7.0	7.2	7.0
3	7.3	6.9	7.7	7.0	8.8	7.1	7.4	7.0	7.3	7.0	7.2	6.9
4	7.3	6.8	7.9	7.1	7.5	7.0	7.3	6.9	7.3	7.0	7.3	7.0
5	7.2	6.9	7.9	7.2	7.6	7.1	7.4	6.9	7.3	7.1	7.2	7.1
6	7.3	6.9	8.2	7.1	7.7	7.1	7.6	6.9	7.4	7.0	7.2	7.0
7	7.2	6.8	7.9	7.2	7.7	7.1	7.7	6.9	7.3	6.9	7.9	7.1
8	7.2	6.7	8.0	7.1	7.5	7.1	8.3	6.3	7.4	7.0	7.4	7.1
9	7.4	6.7	7.8	7.1	7.6	7.1	7.7	6.9	7.3	7.0	7.5	7.2
10	7.4	6.9	8.3	7.0	7.8	7.1	7.6	6.9	7.4	7.1	7.4	7.1
11	7.2	6.8	8.3	7.1	7.6	7.1	7.6	7.0	7.4	7.0	7.4	7.2
12	7.3	7.0	8.3	7.2	7.9	5.8	8.5	7.2	7.3	7.0	7.4	7.2
13	7.5	6.9	7.6	7.0	8.4	5.6	7.5	7.0	7.3	7.1	7.3	7.2
14	7.8	5.6	7.5	7.1	8.1	6.3	7.7	7.0	7.3	7.0	7.3	7.1
15	7.3	5.0	7.9	7.1	7.6	7.2	7.7	7.0	7.3	6.9	7.3	7.1
16	7.4	6.8	7.8	7.2	8.1	7.1	7.4	6.9	7.3	6.9	7.3	7.2
17	7.3	6.9	7.4	7.0	7.8	7.1	7.4	7.1	7.3	7.0	7.4	6.7
18	7.3	7.1	7.7	6.9	7.6	7.1	7.3	7.0	7.3	7.0	7.4	6.5
19	7.2	7.0	7.7	6.2	8.1	6.4	7.4	7.0	7.3	7.0	7.1	6.9
20	7.6	6.9	8.0	7.1	8.2	7.1	7.4	7.0	7.3	7.0	7.5	6.8
21	7.6	6.8	8.1	4.4	7.7	6.4	7.3	7.0	7.3	7.1	7.3	7.1
22	7.5	7.0	8.2	4.4	8.1	7.1	7.3	6.9	7.3	7.0	7.4	7.1
23	7.6	6.8	9.4	4.7	8.0	7.0	7.2	7.0	7.3	6.9	7.4	7.2
24	7.2	7.0	7.5	7.0	7.8	6.9	7.3	7.0	7.3	6.9	7.3	7.1
25	7.9	6.9	7.3	6.9	7.9	6.9	7.3	7.0	7.3	7.0	7.3	7.1
26	7.6	6.9	7.9	7.0	7.9	7.0	7.5	7.0	7.4	7.1	7.3	7.1
27	7.5	7.0	7.8	7.1	7.7	7.0	7.3	7.0	7.1	7.0	7.3	7.1
28	8.2	5.1	7.5	6.4	7.8	7.0	7.3	6.4	7.2	6.4	7.3	7.1
29	8.3	6.3	7.7	7.1	7.8	7.1	7.4	7.1	7.2	7.0	7.3	7.1
30	7.4	6.3	7.5	7.1	7.8	7.0	7.4	7.1	7.2	7.1	7.3	7.1
31	---	---	7.5	7.1	---	---	7.4	7.1	7.3	7.1	---	---
MONTH	8.3	5.0	9.4	4.4	8.8	5.6	8.5	6.3	9.0	6.4	7.9	6.5

07079300 EAST FORK ARKANSAS RIVER AT HIGHWAY 24 NEAR LEADVILLE, CO

LOCATION.--Lat 39°16'21", long 106°18'21", in NW¹/4NW¹/4 sec. 14, T.9 S., R.80 W., Lake County, Hydrologic Unit 11020001, on right bank 20 ft downstream from U.S. Highway 24, 0.35 mi downstream from Leadville Mine Drainage Tunnel, 1.5 mi northwest of Leadville, and 2.2 mi upstream from mouth of Tennessee Creek.

DRAINAGE AREA.--49.9 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1990 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 9,900 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 3 to Mar. 13. Records good except for daily discharges above 350 ft³/s, which are fair, and estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions (see elsewhere in this report).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	18	12	12	6.6	11	11	14	228	151	40	23
2	18	18	12	12	6.6	11	11	15	215	137	40	23
3	18	16	12	11	6.8	11	10	16	174	120	40	23
4	18	14	11	10	6.9	12	10	19	187	107	39	23
5	18	14	11	10	7.0	12	10	20	175	109	34	23
6	18	14	11	10	7.0	12	10	18	174	106	35	22
7	18	14	12	11	6.8	12	9.9	18	174	106	34	22
8	18	14	12	11	6.5	12	9.8	17	150	110	32	24
9	18	14	11	11	6.6	12	9.8	17	136	106	38	24
10	17	14	12	10	6.6	12	10	18	132	104	37	23
11	17	14	13	10	6.7	11	9.7	22	144	108	36	22
12	17	14	12	9.9	6.8	9.0	9.7	30	157	109	34	23
13	17	15	12	9.7	6.8	9.2	9.6	43	145	105	31	21
14	17	15	11	9.4	6.6	9.4	8.9	56	211	102	29	22
15	17	14	11	9.2	6.9	9.5	9.2	64	469	99	30	22
16	17	14	11	9.1	7.1	9.4	9.2	74	285	93	29	23
17	17	14	11	9.1	7.1	9.3	9.3	76	491	88	29	23
18	17	13	11	9.0	7.0	9.5	9.7	87	335	84	28	22
19	17	13	10	8.7	7.2	9.4	9.6	92	333	81	27	21
20	17	13	10	8.6	7.3	9.5	9.4	113	272	78	28	21
21	17	13	11	8.3	7.0	9.3	9.9	131	240	75	28	21
22	17	12	11	8.4	6.8	9.5	10	120	227	72	26	21
23	17	11	12	8.3	6.8	9.5	11	145	206	69	25	20
24	17	11	12	8.3	7.0	9.6	10	138	182	66	24	19
25	17	11	12	7.8	7.5	9.7	10	163	160	62	24	19
26	19	11	12	7.7	8.0	9.9	12	171	158	61	24	19
27	18	11	12	7.6	9.0	10	12	182	148	60	24	19
28	18	11	12	7.6	9.8	9.8	13	182	142	57	24	19
29	18	11	12	7.1	---	9.6	15	200	139	55	24	19
30	18	11	12	7.4	---	9.6	15	218	154	53	24	19
31	18	---	12	7.2	---	9.5	---	225	---	42	24	---
TOTAL	544	402	358	286.4	198.8	318.2	313.7	2704	6343	2775	941	645
MEAN	17.5	13.4	11.5	9.24	7.10	10.3	10.5	87.2	211	89.5	30.4	21.5
MAX	19	18	13	12	9.8	12	15	225	491	151	40	24
MIN	17	11	10	7.1	6.5	9.0	8.9	14	132	42	24	19
AC-FT	1080	797	710	568	394	631	622	5360	12580	5500	1870	1280

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1993, BY WATER YEAR (WY)

	MEAN	18.1	13.1	10.9	10.5	9.35	9.60	11.9	85.6	181	71.4	34.3	23.1
MAX	21.0	15.1	11.5	11.3	11.0	10.3	14.3	98.3	211	89.5	38.7	24.5	
(WY)	1991	1991	1993	1992	1991	1993	1992	1992	1993	1993	1991	1991	
MIN	15.7	10.8	10.1	9.24	7.10	8.83	10.5	71.2	146	46.1	30.4	21.5	
(WY)	1992	1992	1992	1993	1993	1992	1993	1991	1992	1990	1993	1993	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1990 - 1993
ANNUAL TOTAL	14108.2	15829.1	
ANNUAL MEAN	38.5	43.4	40.8
HIGHEST ANNUAL MEAN			43.4
LOWEST ANNUAL MEAN			38.1
HIGHEST DAILY MEAN	176 Jun 26	491 Jun 17	491 Jun 17 1993
LOWEST DAILY MEAN	8.1 Mar 16	6.5 Feb 8	6.5 Feb 8 1993
ANNUAL SEVEN-DAY MINIMUM	8.4 Mar 14	6.7 Feb 8	6.7 Feb 8 1993
INSTANTANEOUS PEAK FLOW		786 Jun 15	786 Jun 15 1993
INSTANTANEOUS PEAK STAGE		4.06 Jun 15	4.06 Jun 15 1993
ANNUAL RUNOFF (AC-FT)	27980	31400	29530
10 PERCENT EXCEEDS	121	140	130
50 PERCENT EXCEEDS	17	17	19
90 PERCENT EXCEEDS	9.2	8.4	9.2

07079300 EAST FORK ARKANSAS RIVER AT HIGHWAY 24 NEAR LEADVILLE, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1990 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1990 to current year.

WATER TEMPERATURE: May 1990 to current year.

pH: May 1990 to current year.

INSTRUMENTATION: Water-quality monitor.

REMARKS.--Records for water temperature are good except Mar. 25 to Apr. 16 and July 30 to Aug. 25 which are poor. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance, daily mean water temperature, and daily mean pH data are available in the district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,010 microsiemens, Sept. 21, 1993; minimum, 66 microsiemens, June 12, 1993.

WATER TEMPERATURE: Maximum, 18.3°C, Aug. 16, 1993; minimum, 0.0°C, many days.

pH: Maximum, 8.9 units, Mar. 17-18, 1992; minimum, 7.1 units, June 28, 1993.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,010 microsiemens, Sept. 21; minimum, 66 microsiemens, June 12.

WATER TEMPERATURE: Maximum, 18.3°C, Aug. 16; minimum, 0.0°C, many days.

pH: Maximum, 8.7 units, June 13; minimum, 7.1 units, June 28.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	246	262	302	329	348	311	361	330	---	116	269	222
2	247	258	308	331	349	361	362	328	---	115	249	217
3	251	267	308	330	349	367	362	312	144	115	307	220
4	252	270	310	345	347	388	365	292	144	114	269	232
5	254	272	311	338	359	391	363	273	128	117	210	237
6	253	266	308	334	352	385	362	285	134	130	189	233
7	251	262	322	329	353	382	361	283	90	180	198	214
8	255	254	314	328	348	380	369	289	84	160	198	214
9	251	246	312	329	349	371	373	292	88	144	190	216
10	255	239	309	341	347	377	370	294	88	145	214	223
11	258	233	310	335	349	374	373	276	83	167	194	231
12	258	251	314	339	352	380	371	248	73	160	194	237
13	259	242	314	336	349	394	371	220	118	171	197	225
14	261	249	325	332	360	369	363	204	86	149	192	220
15	261	269	306	333	354	365	377	190	---	149	201	224
16	261	272	314	335	357	364	387	181	106	143	204	224
17	263	272	322	333	351	372	385	171	---	107	210	257
18	264	274	311	335	332	365	380	171	110	87	211	251
19	265	280	316	337	352	365	374	169	118	98	214	211
20	265	283	322	337	347	366	382	160	117	114	231	246
21	266	287	312	335	349	364	381	149	111	113	221	353
22	266	298	322	310	356	361	367	142	110	158	204	248
23	264	283	324	348	349	356	360	149	112	145	211	240
24	264	288	325	352	346	353	363	150	116	153	214	241
25	269	295	322	351	348	348	368	149	122	119	222	241
26	261	296	330	332	352	346	358	139	122	126	218	242
27	265	289	332	318	337	343	343	137	120	---	217	240
28	262	297	324	352	353	345	342	133	120	---	223	244
29	260	294	320	348	---	355	331	111	120	---	228	247
30	262	306	320	325	---	357	324	108	119	174	224	248
31	261	---	326	351	---	359	---	106	---	174	222	---
MEAN	259	272	317	336	350	365	365	208	---	---	218	237

07079300 EAST FORK ARKANSAS RIVER AT HIGHWAY 24 NEAR LEADVILLE, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.3	8.0	8.1	7.8	7.8	7.7	7.9	7.8	8.2	7.9	7.9	7.7
2	8.2	7.9	8.0	7.9	7.9	7.7	7.9	7.8	8.3	7.9	7.8	7.5
3	8.2	7.9	8.1	7.8	8.0	7.7	7.9	7.8	8.1	7.7	8.2	7.5
4	8.1	7.9	8.1	7.9	8.0	7.6	7.9	7.6	8.1	7.4	8.3	8.1
5	8.5	8.0	8.2	7.9	7.9	7.8	7.9	7.6	8.2	7.4	8.3	8.1
6	8.3	8.0	8.2	8.0	8.0	7.7	7.9	7.7	8.1	7.6	8.3	8.2
7	8.0	7.8	8.2	7.9	7.9	7.5	8.1	7.8	8.1	7.6	8.3	8.1
8	8.0	7.7	8.2	7.9	7.9	7.6	8.0	7.8	8.1	7.7	8.3	8.1
9	8.0	7.8	8.2	8.0	7.9	7.7	8.0	7.8	8.1	7.7	8.3	8.1
10	7.9	7.8	8.3	8.0	8.0	7.7	8.0	7.7	8.1	7.6	8.3	8.1
11	7.8	7.7	8.2	8.0	8.0	7.7	8.0	7.8	8.1	7.6	8.3	8.1
12	7.9	7.8	8.2	7.8	8.0	7.7	7.9	7.8	8.0	7.6	8.3	8.1
13	7.9	7.8	8.2	7.7	7.9	7.7	8.0	7.7	8.1	7.6	8.3	8.2
14	7.9	7.8	8.0	7.7	7.9	7.4	8.0	7.8	8.2	7.5	8.3	8.1
15	7.8	7.6	8.0	7.8	7.8	7.6	8.0	7.8	8.1	7.7	8.2	8.0
16	7.7	7.5	7.9	7.8	7.8	7.6	8.0	7.8	8.0	7.6	8.2	7.9
17	7.7	7.5	7.9	7.8	7.8	7.4	8.0	7.8	8.0	7.6	8.1	7.9
18	7.8	7.6	7.9	7.8	7.8	7.7	8.0	7.8	8.1	7.5	8.3	7.9
19	8.0	7.7	8.1	7.7	7.8	7.6	8.1	7.8	8.2	7.6	8.3	7.9
20	8.1	7.9	8.1	7.9	7.7	7.4	8.1	7.8	8.0	7.7	8.3	7.8
21	8.1	7.9	8.1	7.8	7.8	7.6	8.1	7.8	7.7	7.5	8.2	7.8
22	8.0	7.8	8.3	7.8	7.8	7.5	8.1	7.7	7.6	7.5	8.2	7.7
23	8.0	7.8	8.2	7.9	7.8	7.5	8.1	7.7	7.6	7.4	8.0	7.6
24	8.0	7.8	8.2	7.7	7.7	7.4	8.2	7.7	8.0	7.6	8.0	7.6
25	7.9	7.8	8.1	7.7	7.8	7.6	8.1	7.7	7.9	7.6	8.1	7.6
26	8.0	7.8	7.9	7.6	7.7	7.4	8.3	7.8	7.9	7.6	8.1	8.0
27	8.0	7.8	7.8	7.5	7.7	7.4	8.4	7.8	7.9	7.5	8.1	8.0
28	8.0	7.8	7.8	7.5	7.8	7.6	8.6	7.8	7.9	7.6	8.2	8.0
29	8.0	7.7	7.8	7.6	8.5	7.7	8.2	7.9	---	---	8.2	8.1
30	8.0	7.9	7.7	7.4	8.0	7.5	8.4	7.7	---	---	8.2	8.2
31	8.0	8.0	---	---	7.9	7.6	8.3	7.8	---	---	8.2	8.1
MONTH	8.5	7.5	8.3	7.4	8.5	7.4	8.6	7.6	8.3	7.4	8.3	7.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.2	8.1	8.3	8.1	8.0	7.9	8.3	7.8	8.0	7.9	7.9	7.7
2	8.3	8.1	8.2	7.8	8.0	7.9	8.4	7.8	8.0	7.8	7.9	7.7
3	8.3	8.2	7.9	7.6	---	---	8.2	7.8	8.0	7.8	8.0	7.6
4	8.3	8.2	8.0	7.5	8.0	---	8.1	7.7	8.0	7.7	8.1	7.7
5	8.3	8.1	7.8	7.5	8.5	7.9	---	---	8.1	7.7	8.1	7.8
6	8.3	8.1	8.0	7.4	8.5	7.8	8.5	---	8.1	8.0	8.1	7.8
7	8.3	8.0	7.9	7.5	8.5	8.1	8.5	8.3	8.1	8.1	8.0	7.7
8	8.4	8.0	8.0	7.4	8.5	7.9	8.4	8.2	8.2	8.1	8.1	7.7
9	8.4	8.0	8.0	7.5	8.3	7.8	8.2	8.0	8.1	8.0	8.2	7.8
10	8.4	8.0	8.1	7.4	8.1	7.7	8.2	7.9	8.0	7.9	8.2	7.9
11	8.4	8.0	8.1	7.5	7.8	7.6	8.5	8.2	8.0	7.7	8.2	7.8
12	8.4	8.0	8.0	7.4	8.4	7.8	8.5	8.2	7.9	7.7	8.2	7.8
13	8.5	7.9	7.9	7.6	8.7	---	8.4	8.1	7.9	7.6	8.3	7.9
14	8.4	7.9	8.0	7.9	---	---	8.3	7.9	7.8	7.6	8.3	7.9
15	8.4	7.9	8.1	7.9	---	---	8.4	7.9	7.8	7.5	8.4	7.9
16	8.1	7.7	8.1	8.0	8.1	7.9	8.5	8.1	7.9	7.5	8.3	8.0
17	8.1	7.6	8.1	8.0	---	---	8.5	7.5	7.9	7.6	8.3	8.1
18	7.9	7.7	8.1	8.0	8.3	8.1	8.5	7.9	7.7	7.5	8.3	8.2
19	7.9	7.6	8.2	8.0	8.5	8.2	8.5	7.9	7.6	7.5	8.3	8.2
20	---	---	8.1	8.0	8.6	8.3	8.4	8.0	8.0	7.5	8.3	8.1
21	---	---	8.1	8.0	8.5	8.3	8.5	8.2	7.9	7.5	8.4	8.2
22	---	---	8.1	8.0	8.5	8.3	8.5	7.9	8.1	7.5	8.4	8.2
23	---	---	8.0	7.9	---	---	8.4	8.1	8.1	7.9	8.4	8.2
24	---	---	8.0	7.9	---	---	8.4	7.9	8.1	7.9	8.3	8.1
25	---	---	8.0	7.9	8.6	8.4	8.4	8.0	8.2	7.8	8.3	8.1
26	8.3	7.5	7.9	7.8	8.6	8.3	8.3	7.5	8.2	7.8	8.3	8.1
27	8.2	7.8	8.1	7.8	8.5	8.0	8.3	7.5	7.9	7.7	8.3	8.1
28	8.2	7.6	8.1	8.0	8.5	7.1	8.3	7.5	7.9	7.7	8.3	8.1
29	8.3	8.1	8.1	8.0	8.4	7.9	8.2	8.0	7.9	7.4	8.3	8.0
30	8.2	8.1	8.1	7.9	8.2	7.9	8.2	7.9	8.0	7.7	8.3	8.0
31	---	---	8.1	7.8	---	---	8.0	7.9	7.9	7.7	---	---
MONTH	---	---	8.3	7.4	---	---	---	---	8.2	7.4	8.4	7.6

07079300 EAST FORK ARKANSAS RIVER AT HIGHWAY 24 NEAR LEADVILLE, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10.0	3.6	1.6	.3	.7	.1	1.1	.2	1.6	.3	3.3	1.1
2	10.5	2.1	.7	.4	1.0	.3	1.0	.3	1.5	.3	2.9	1.1
3	10.1	3.3	.9	.4	.9	.2	.9	.3	1.4	.2	3.2	1.1
4	8.1	1.6	1.3	.4	1.0	.1	.4	.1	1.0	.1	---	---
5	9.0	1.3	1.0	.5	.7	.3	.4	.1	1.1	.2	---	---
6	7.8	1.3	1.5	.5	1.0	.3	.8	.3	1.6	.2	---	---
7	7.6	2.1	2.2	.5	.5	.1	1.4	.6	2.0	.3	---	---
8	4.9	1.0	2.4	.5	.9	.2	1.2	.5	2.0	.8	---	---
9	4.3	2.1	3.0	.6	.5	.2	1.4	.3	2.3	1.1	---	---
10	7.4	1.3	3.3	.8	1.3	.3	1.0	.3	2.8	.9	---	---
11	7.5	1.8	2.7	.4	1.3	.2	1.1	.3	2.4	.6	---	---
12	8.2	2.2	1.6	.4	1.2	.2	.6	.3	2.0	.6	---	---
13	8.2	2.1	2.0	.4	.7	.3	.8	.3	2.0	.6	---	---
14	7.6	2.5	2.6	.6	.4	.1	1.3	.5	1.7	.5	---	---
15	8.4	3.5	3.4	.4	.6	.3	1.6	.4	2.4	.8	---	---
16	6.3	1.8	2.7	.3	.8	.3	1.3	.3	1.3	.7	---	---
17	7.5	2.5	3.3	.2	.6	.2	1.4	.6	2.0	.7	---	---
18	6.2	1.4	2.4	.2	.7	.3	1.4	.3	2.6	.7	---	---
19	6.4	1.5	2.6	.0	.7	.3	1.5	.5	2.2	1.0	---	---
20	7.4	1.3	1.6	.3	.4	.1	1.5	.3	2.7	.8	---	---
21	6.9	1.6	1.7	.3	.8	.2	1.6	.3	.8	.8	---	---
22	8.1	2.5	.8	.2	.6	.1	1.0	.2	.9	.8	---	---
23	8.1	2.6	.6	.3	.7	.1	.6	.3	1.0	.9	---	---
24	7.6	2.4	.3	.3	.6	.1	.6	.1	2.0	1.0	---	---
25	6.0	1.7	.4	.2	.6	.2	1.1	.1	2.3	.9	7.3	---
26	6.2	2.0	.3	.1	.4	.1	1.6	.2	2.5	1.0	6.7	1.6
27	6.6	1.6	.4	.1	.4	.1	1.3	.1	2.7	1.0	4.0	.4
28	5.5	3.3	.5	.2	.7	.3	1.0	.1	2.8	1.0	5.3	.4
29	6.1	2.4	.8	.3	1.0	.5	1.6	.3	---	---	7.3	1.1
30	6.2	3.2	.4	.1	1.1	.4	1.3	.1	---	---	4.4	1.4
31	4.8	1.5	---	---	1.0	.3	1.5	.1	---	---	6.2	.3
MONTH	10.5	1.0	3.4	.0	1.3	.1	1.6	.1	2.8	.1	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.9	.1	8.3	2.6	7.5	2.7	12.9	4.1	13.5	7.7	11.8	6.6
2	5.2	1.1	9.9	1.6	---	2.7	13.0	4.6	14.5	8.0	9.7	6.4
3	6.0	.5	9.5	3.0	7.8	---	9.5	3.1	15.4	8.4	13.5	5.2
4	7.1	.4	10.3	2.5	---	---	7.3	4.2	13.2	9.0	15.4	6.8
5	6.7	2.4	6.8	3.7	7.8	2.8	8.2	4.1	13.8	8.1	13.8	8.0
6	5.7	1.4	8.6	1.6	8.7	2.4	11.9	2.9	16.0	8.1	12.7	6.3
7	5.7	.1	6.2	2.9	7.1	1.2	12.2	2.4	13.4	7.4	10.4	5.4
8	6.8	.0	7.4	1.6	6.9	1.2	8.9	3.9	10.9	7.8	14.6	5.5
9	7.3	.1	7.9	1.6	7.9	2.5	12.2	3.5	10.2	8.1	15.4	5.6
10	7.2	2.0	11.4	1.2	10.6	2.6	10.0	4.4	13.2	7.5	12.6	7.7
11	6.7	.2	11.8	2.3	9.2	3.2	10.5	3.6	12.5	---	11.7	6.9
12	7.4	2.4	10.9	2.9	10.6	3.0	9.6	6.7	13.1	7.3	9.0	4.6
13	7.2	1.2	11.4	2.0	10.7	2.8	10.5	5.8	13.0	4.4	9.0	5.2
14	6.4	.8	9.2	1.0	10.6	2.2	---	6.6	11.9	6.0	10.9	4.8
15	6.1	.2	8.3	1.9	8.6	3.6	14.1	6.4	12.3	6.4	11.9	6.0
16	7.1	.9	9.0	2.9	9.6	2.6	12.8	6.5	18.3	---	9.8	6.9
17	6.4	1.0	6.7	2.6	---	---	12.4	6.6	16.9	---	11.0	5.3
18	5.9	1.7	8.9	2.7	8.2	4.5	13.8	6.0	15.1	9.7	9.1	5.1
19	3.7	.4	8.1	1.7	11.3	3.8	13.2	6.4	13.4	10.9	8.3	5.2
20	6.5	.5	9.6	2.7	11.9	4.5	12.5	6.7	13.6	7.3	10.3	3.4
21	7.5	.3	8.8	2.1	9.7	4.9	11.7	6.3	13.9	9.9	9.0	4.2
22	8.7	1.9	7.7	2.3	11.2	4.5	11.8	5.5	14.3	8.3	11.0	3.0
23	8.1	3.1	10.0	1.9	11.0	4.6	9.0	5.9	14.9	---	11.0	6.3
24	6.1	2.7	7.9	2.3	10.9	4.3	12.7	6.0	14.7	---	10.6	4.8
25	9.1	1.2	10.3	2.2	11.8	3.6	12.0	5.9	14.9	---	10.2	3.7
26	9.5	2.4	7.9	2.7	12.2	3.7	13.8	6.4	11.5	8.1	11.1	4.5
27	8.7	3.7	7.7	2.6	11.3	4.9	14.1	6.5	10.6	7.2	10.8	3.5
28	10.5	3.2	8.0	2.8	11.5	3.9	14.9	6.2	13.6	7.8	10.4	3.2
29	10.5	2.2	9.0	2.5	12.7	3.7	13.4	6.2	12.9	7.6	10.8	4.4
30	7.7	3.0	9.2	2.7	12.6	4.1	13.6	7.3	13.1	6.1	8.6	3.7
31	---	---	9.6	2.5	---	---	14.9	7.8	10.7	5.0	---	---
MONTH	10.5	.0	11.8	1.0	---	---	---	2.4	18.3	---	15.4	3.0

07080980 ST. KEVIN GULCH ABOVE TEMPLE GULCH NEAR LEADVILLE, CO

LOCATION.--Lat 39°17'29", long 106°22'07", in SE¹/₄SE¹/₄ sec.6, T.9 S., R.80 W., Lake County, Hydrologic Unit 11020001, on left bank 0.15 mi upstream from fork in access road, 0.85 mi upstream from mouth, 2.7 mi from turn-off from Mountain View Drive, and 6.1 mi northwest of Leadville.

DRAINAGE AREA.--1.84 mi².

PERIOD OF RECORD.--April to September 1993 (seasonal only).

GAGE.--Water-stage recorder. Elevation of gage is 9,900 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge during period of seasonal operation, 18 ft³/s, June 2, 1993, gage height, 4.67 ft; minimum daily, 0.32 ft³/s, Sept. 30, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 18 ft³/s at 1630 June 2, gage height, 4.67 ft; minimum daily, 0.32 ft³/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	1.4	14	2.1	.54	.52
2	---	---	---	---	---	---	---	1.4	14	2.0	.53	.49
3	---	---	---	---	---	---	---	1.4	13	2.3	.52	.41
4	---	---	---	---	---	---	---	1.6	12	2.3	.51	.38
5	---	---	---	---	---	---	---	1.7	9.8	2.2	.56	.39
6	---	---	---	---	---	---	---	1.7	8.6	1.8	.53	.37
7	---	---	---	---	---	---	---	1.6	8.2	1.7	.51	.70
8	---	---	---	---	---	---	---	1.7	7.5	1.7	.60	.54
9	---	---	---	---	---	---	---	1.8	6.7	1.6	.55	.42
10	---	---	---	---	---	---	---	2.1	6.1	1.5	.56	.39
11	---	---	---	---	---	---	---	2.8	5.6	1.4	.53	.36
12	---	---	---	---	---	---	---	3.5	5.4	1.3	.48	.35
13	---	---	---	---	---	---	---	4.5	5.4	1.3	.50	.61
14	---	---	---	---	---	---	---	5.7	5.5	1.2	.50	.49
15	---	---	---	---	---	---	---	6.6	5.5	1.1	.49	.44
16	---	---	---	---	---	---	---	7.8	5.3	1.0	.44	.41
17	---	---	---	---	---	---	---	8.8	5.3	.96	.42	.39
18	---	---	---	---	---	---	---	8.9	5.1	.89	.42	.38
19	---	---	---	---	---	---	---	9.5	4.6	.86	.42	.38
20	---	---	---	---	---	---	---	11	4.2	.83	.43	.36
21	---	---	---	---	---	---	---	13	3.9	.77	.53	.35
22	---	---	---	---	---	---	---	14	3.7	.76	.47	.35
23	---	---	---	---	---	---	---	14	3.5	.75	.43	.35
24	---	---	---	---	---	---	---	12	3.3	.75	.39	.35
25	---	---	---	---	---	---	---	12	3.1	.70	.38	.35
26	---	---	---	---	---	---	---	13	2.9	.66	.44	.35
27	---	---	---	---	---	---	---	14	2.7	.61	.42	.35
28	---	---	---	---	---	---	---	1.1	14	.60	.41	.34
29	---	---	---	---	---	---	---	1.4	13	.60	.40	.34
30	---	---	---	---	---	---	---	1.4	13	.58	.41	.32
31	---	---	---	---	---	---	---	13	---	.55	.42	---
TOTAL	---	---	---	---	---	---	---	230.5	182.1	37.37	14.74	12.23
MEAN	---	---	---	---	---	---	---	7.44	6.07	1.21	.48	.41
MAX	---	---	---	---	---	---	---	14	14	2.3	.60	.70
MIN	---	---	---	---	---	---	---	1.4	2.2	.55	.38	.32
AC-FT	---	---	---	---	---	---	---	457	361	74	29	24

07081200 ARKANSAS RIVER NEAR LEADVILLE, CO

LOCATION.--Lat 39°15'26", long 106°20'35", in NW¹/₄NW¹/₄ sec. 21, T.9 S, R.80 W., Lake County, Hydrologic Unit 11020001, on right bank, 500 ft downstream from confluence of East Fork Arkansas River and Tennessee Creek, 0.5 mi downstream from highway bridge, and 2.8 mi northwest of Leadville.

DRAINAGE AREA.--98.8 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1967 to September 1983. April 1990 to current year.

REVISED RECORDS.--WDR CO-91-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,730 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 4 to May 20, and Sept. 9-14. Records good except for estimated daily discharges, which are poor. Transmountain diversions from Colorado River Basin enters above this station (see elsewhere in this report). Small diversions upstream for irrigation and municipal use, amounts unknown.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	29	18	16	15	15	18	56	586	293	81	42
2	29	28	18	14	14	15	17	56	561	269	77	47
3	29	28	18	13	14	14	17	62	514	266	74	42
4	29	27	17	12	13	14	18	68	359	301	72	37
5	29	26	17	13	14	14	17	78	314	255	72	36
6	29	26	16	14	15	15	16	70	325	212	72	36
7	29	27	16	15	16	16	16	64	358	187	67	44
8	28	29	16	15	16	15	17	58	281	197	69	55
9	29	31	16	15	16	15	18	54	241	197	71	50
10	28	29	17	14	16	15	18	60	224	185	69	46
11	27	28	17	14	16	15	18	70	254	185	69	45
12	27	28	17	13	15	13	18	84	295	188	64	46
13	27	30	16	14	15	13	17	100	409	186	62	42
14	27	32	15	15	14	14	17	130	528	172	64	44
15	27	32	15	16	14	14	17	170	674	166	59	45
16	27	34	15	15	13	14	17	210	645	156	54	43
17	27	32	15	15	14	15	18	260	700	144	50	41
18	27	29	15	15	15	15	19	220	647	135	49	38
19	26	26	14	15	14	16	19	260	505	123	49	37
20	26	27	14	15	14	15	23	310	466	118	49	36
21	26	25	15	15	13	15	26	273	513	115	51	35
22	25	25	15	15	13	16	30	299	505	109	53	33
23	26	23	16	14	14	17	33	263	482	104	48	32
24	26	22	16	14	14	17	32	263	425	98	44	31
25	26	22	16	15	14	18	32	267	332	93	43	31
26	31	23	15	16	15	18	37	322	323	89	44	30
27	32	21	16	16	15	17	42	369	327	87	46	31
28	31	20	16	16	15	16	47	409	309	85	43	30
29	32	19	15	16	---	17	52	406	313	83	41	30
30	31	19	15	15	---	18	60	407	320	84	41	30
31	30	---	16	15	---	17	---	489	---	85	43	---
TOTAL	873	797	493	455	406	478	746	6207	12735	4967	1790	1165
MEAN	28.2	26.6	15.9	14.7	14.5	15.4	24.9	200	424	160	57.7	38.8
MAX	32	34	18	16	16	18	60	489	700	301	81	55
MIN	25	19	14	12	13	13	16	54	224	83	41	30
AC-FT	1730	1580	978	902	805	948	1480	12310	25260	9850	3550	2310

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1993, BY WATER YEAR (WY)

	MEAN	25.7	20.4	16.0	14.3	13.9	14.5	29.2	156	334	130	57.6	33.4
MAX	38.3	28.9	21.7	18.1	20.5	20.8	52.9	334	634	256	130	55.8	
(WY)	1971	1971	1983	1983	1973	1971	1989	1970	1980	1983	1983	1982	
MIN	16.5	11.6	11.6	9.15	7.93	8.82	12.7	55.3	114	35.9	23.8	16.7	
(WY)	1978	1977	1978	1977	1978	1974	1970	1981	1977	1977	1977	1974	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1968 - 1993

ANNUAL TOTAL	23273	31112	
ANNUAL MEAN	63.6	85.2	71.5
HIGHEST ANNUAL MEAN			101
LOWEST ANNUAL MEAN			32.4
HIGHEST DAILY MEAN	284	May 22	700
LOWEST DAILY MEAN	13	Feb 17	12
ANNUAL SEVEN-DAY MINIMUM	14	Feb 14	14
INSTANTANEOUS PEAK FLOW			821
INSTANTANEOUS PEAK STAGE			3.99
ANNUAL RUNOFF (AC-FT)	46160	61710	51770
10 PERCENT EXCEEDS	197	286	208
50 PERCENT EXCEEDS	30	29	26
90 PERCENT EXCEEDS	15	15	12

a-Also occurred Feb 4-20, 1978.

07081200 ARKANSAS RIVER NEAR LEADVILLE, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1990 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1990 to current year.

WATER TEMPERATURE: May 1990 to current year.

pH: May 1990 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Records for 1992 water year for daily specific conductance are good except Oct. 1 to May 5, which are fair, May 6-15, May 28 to July 2, which are poor; daily pH are good except Mar. 14 to Sept. 30, which are fair; and daily water temperature are good. Records for 1993 water year for daily specific conductance are good, except Sept. 4-16 which are poor; daily pH are good except Sept. 8-14, which are poor; and daily water temperature are good. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance, daily mean pH, and daily mean water temperature data are available in the district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 384 microsiemens, Sept. 12, 1993; minimum, 47 microsiemens, May 21, 1993.

WATER TEMPERATURE: Maximum, 18.7°C, July 30, 1991; minimum, 0.0°C, many days.

pH: Maximum, 8.7 units, several days 1991 and 1992; minimum, 6.2 units, June 11, 1990.

EXTREMES FOR 1992 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 335 microsiemens, Feb. 13; minimum, 51 microsiemens, May 10.

WATER TEMPERATURE: Maximum, 17.0°C, Aug. 9; minimum, 0.0°C, on many days.

pH: Maximum, 8.7 units, several days; minimum, 7.5 units, several days.

EXTREMES FOR 1993 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 384 microsiemens, Sept. 12; minimum, 47 microsiemens, May 21.

WATER TEMPERATURE: Maximum, 17.0°C, July 31, Aug. 1; minimum, 0.1°C, on many days.

pH: Maximum, 8.5 units, Jan. 11; minimum, 7.3 units, several days.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188	220	215	---	270	129	253	103	71	116	161	165
2	209	212	216	---	260	160	227	98	71	116	166	161
3	202	206	213	---	255	101	263	94	71	119	166	167
4	197	208	217	---	247	103	225	94	91	125	166	172
5	198	212	226	---	243	116	229	93	97	124	165	169
6	198	215	224	174	237	104	200	94	92	123	162	171
7	195	210	221	189	222	145	184	88	92	114	161	175
8	196	216	219	198	224	140	---	90	100	105	169	180
9	212	215	227	215	214	106	164	71	98	105	177	190
10	205	213	221	217	212	132	205	60	101	113	169	188
11	208	211	228	219	212	125	181	73	99	121	161	190
12	208	213	212	221	210	111	166	75	100	121	158	195
13	209	220	219	222	288	113	158	87	97	119	168	201
14	210	191	223	227	262	133	152	82	96	121	171	202
15	237	192	216	227	245	166	153	81	94	125	174	205
16	222	193	228	234	254	162	147	81	95	128	177	204
17	214	207	233	238	223	154	138	78	100	133	161	204
18	212	232	225	237	241	201	137	82	105	138	163	205
19	214	217	224	237	260	275	149	77	109	137	182	210
20	213	213	217	239	217	261	167	68	135	138	187	201
21	212	201	228	228	213	267	189	95	137	140	187	204
22	211	221	227	222	238	273	183	100	134	144	191	215
23	211	215	221	226	228	269	185	114	124	142	171	214
24	205	218	217	230	258	263	198	100	110	144	139	210
25	206	213	221	230	219	260	176	113	112	134	129	208
26	211	214	217	233	257	206	153	133	111	130	138	202
27	214	215	212	234	231	281	116	92	113	140	147	208
28	188	213	205	237	233	266	97	84	121	148	158	214
29	216	214	194	234	241	263	96	94	111	150	163	216
30	221	216	192	240	---	259	97	100	114	154	167	217
31	212	---	183	258	---	254	---	78	---	160	168	---
MEAN	208	212	217	---	238	187	---	89	103	130	165	195

07081200 ARKANSAS RIVER NEAR LEADVILLE, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.4	7.9	8.6	8.3	8.2	8.0	7.9	7.8	8.0	7.7	8.2	8.1
2	8.6	8.4	8.5	8.2	8.2	8.0	7.9	7.6	7.9	7.7	8.2	8.1
3	8.7	8.4	8.5	8.0	8.1	8.0	8.0	7.6	7.9	7.7	8.2	8.1
4	8.7	8.5	8.4	8.1	8.2	8.0	7.9	7.7	7.9	7.8	8.2	8.1
5	8.6	8.5	8.4	8.2	8.2	8.0	7.8	7.7	8.0	7.8	8.2	8.0
6	8.6	8.5	8.4	8.3	8.1	8.0	7.9	7.7	8.0	7.7	8.2	8.0
7	8.6	8.5	8.4	8.2	8.0	7.9	7.8	7.8	8.1	7.8	8.1	8.0
8	8.6	8.4	8.4	8.1	8.0	7.9	7.9	7.8	8.0	7.9	8.0	7.8
9	8.6	8.5	8.2	8.1	7.9	7.8	7.9	7.8	8.0	7.9	8.1	7.8
10	8.6	8.5	8.1	8.0	7.9	7.8	7.9	7.7	8.1	7.9	8.1	7.9
11	8.6	8.4	8.1	8.0	8.0	7.7	7.9	7.8	8.1	7.9	8.1	7.9
12	8.6	8.0	8.0	8.0	7.9	7.9	7.8	7.7	8.1	8.0	8.1	7.7
13	8.6	8.2	8.1	7.9	8.1	7.9	7.8	7.7	8.2	8.0	8.0	7.8
14	8.6	8.3	8.1	7.9	8.0	7.9	7.8	7.7	8.0	7.9	8.0	7.7
15	8.6	8.2	8.2	7.9	8.0	7.8	7.9	7.7	8.1	7.9	8.0	7.8
16	8.6	8.2	8.0	7.9	8.0	7.8	8.0	7.6	8.2	8.0	8.2	7.9
17	8.6	8.2	8.0	7.9	8.0	7.8	7.9	7.8	8.1	8.0	8.5	8.2
18	8.6	8.2	8.0	7.9	8.1	7.8	8.0	7.9	8.3	8.1	8.7	8.2
19	8.6	8.2	8.0	7.9	8.0	7.9	8.0	7.8	8.2	7.7	8.4	8.2
20	8.5	8.3	8.2	8.0	8.0	7.9	8.1	7.7	8.1	7.9	8.4	8.2
21	8.5	8.2	8.0	7.9	8.0	7.8	8.1	7.8	8.0	7.9	8.3	8.1
22	8.4	8.2	8.1	7.8	8.0	7.9	8.1	7.9	8.2	7.9	8.4	8.1
23	8.4	8.3	8.0	7.9	8.1	7.7	8.0	7.9	8.1	7.9	8.3	8.1
24	8.4	8.3	8.0	7.7	8.1	7.8	7.8	7.6	8.1	7.9	8.4	8.1
25	8.5	8.3	8.1	7.8	8.0	7.7	7.6	7.5	8.2	8.0	8.4	8.1
26	8.5	8.3	8.0	7.9	8.0	7.7	7.6	7.5	8.2	7.9	8.4	8.1
27	8.5	8.3	8.0	7.9	8.0	7.7	7.8	7.6	8.3	8.1	8.4	8.1
28	8.5	8.3	8.1	8.0	8.0	7.7	7.7	7.6	8.2	8.1	8.5	8.1
29	8.5	8.3	8.1	8.0	8.0	7.7	7.7	7.5	8.2	8.1	8.4	8.1
30	8.5	8.3	8.2	8.0	8.0	7.7	7.7	7.6	---	---	8.4	8.1
31	8.5	8.1	---	---	8.0	7.7	7.8	7.6	---	---	8.3	8.0
MONTH	8.7	7.9	8.6	7.7	8.2	7.7	8.1	7.5	8.3	7.7	8.7	7.7
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.4	8.0	7.8	7.5	8.2	8.0	8.0	7.7	8.3	7.8	8.2	7.7
2	8.5	8.0	7.9	7.7	8.3	8.0	8.1	7.7	8.3	8.0	8.1	7.8
3	8.6	8.0	8.0	7.7	8.3	8.0	8.1	7.8	8.3	8.0	8.1	7.7
4	8.6	8.5	7.9	7.7	8.2	8.0	8.2	7.9	8.3	7.9	8.1	8.0
5	8.7	8.4	7.9	7.6	8.1	7.9	8.2	7.9	8.2	8.0	8.1	7.7
6	8.7	8.5	7.6	7.5	8.1	7.9	8.2	7.8	8.3	7.7	8.0	7.8
7	8.7	8.5	7.9	7.5	8.1	7.9	8.1	7.8	8.3	7.6	8.0	7.8
8	---	---	7.8	7.6	8.1	7.9	8.0	7.7	8.4	8.0	8.1	7.9
9	8.5	8.2	7.7	7.6	8.0	7.9	8.1	7.7	8.4	8.1	8.2	8.0
10	---	---	7.8	7.7	8.2	7.9	8.1	7.8	8.3	7.9	8.4	8.1
11	---	---	7.8	7.7	8.1	7.9	8.1	7.8	8.3	8.0	8.5	8.3
12	---	---	7.8	7.7	8.0	7.8	8.1	7.8	8.2	7.6	8.4	8.2
13	---	---	7.8	7.7	8.0	7.7	8.1	7.9	8.2	7.9	8.3	8.2
14	---	---	7.8	7.7	8.0	7.7	8.1	7.9	8.2	7.7	8.3	8.0
15	---	---	8.2	7.7	8.0	7.8	8.3	7.9	8.2	8.1	8.2	8.0
16	8.1	7.9	7.6	7.5	7.9	7.7	8.3	8.0	8.3	8.0	8.1	7.9
17	8.2	7.6	7.7	7.5	8.0	7.8	8.4	8.0	8.3	8.1	8.0	7.8
18	8.1	7.6	7.8	7.6	8.0	7.6	8.5	8.2	8.5	8.3	8.1	7.7
19	8.2	7.9	7.7	7.6	7.9	7.7	8.5	8.2	8.5	8.2	7.9	7.7
20	8.4	8.0	7.8	7.6	7.9	7.6	8.5	8.2	8.5	8.2	7.8	7.6
21	8.5	8.2	7.7	7.6	7.9	7.6	8.7	8.1	8.5	8.2	7.7	7.6
22	8.5	8.3	8.3	7.7	7.9	7.6	8.5	7.9	8.4	8.1	7.7	7.5
23	8.5	8.3	7.9	7.8	7.9	7.6	8.1	7.9	8.3	8.1	7.8	7.5
24	8.4	8.0	7.9	7.8	7.8	7.6	8.2	8.0	8.4	8.3	8.0	7.8
25	8.5	8.0	7.9	7.7	7.8	7.6	8.1	8.0	8.4	8.0	8.0	7.9
26	8.4	7.8	8.0	7.9	7.8	7.5	8.3	8.0	8.1	8.0	8.0	8.0
27	8.2	7.7	8.1	7.9	7.8	7.6	8.2	8.1	8.1	8.0	8.0	7.9
28	8.1	7.7	8.2	8.0	7.9	7.6	8.3	8.1	8.3	7.9	8.1	7.9
29	8.1	7.7	8.3	8.0	7.9	7.6	8.3	8.0	8.2	7.9	8.1	7.9
30	8.1	7.7	8.2	8.1	8.0	7.6	8.3	7.9	8.2	7.8	8.2	7.9
31	---	---	8.1	8.0	---	---	8.3	8.0	8.2	7.8	---	---
MONTH	---	---	8.3	7.5	8.3	7.5	8.7	7.7	8.5	7.6	8.5	7.5

07081200 ARKANSAS RIVER NEAR LEADVILLE, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	11.6	3.3	.9	.0	.7	.0	.4	.0	.4	.0	1.5	.1
2	11.3	4.0	.9	.0	.7	.0	.1	.0	.5	.0	1.9	.1
3	11.0	3.7	.6	.0	.9	.0	.1	.0	.5	.1	1.9	.4
4	8.2	2.8	1.4	.0	1.0	.0	.2	.0	.8	.0	1.4	.6
5	8.3	1.2	1.3	.3	1.0	.0	.5	.0	.7	.0	1.8	.0
6	9.0	1.1	1.0	.1	1.1	.0	.4	.0	.6	.0	2.2	.5
7	8.7	1.8	1.2	.0	1.0	.0	.2	.0	.5	.0	2.0	.1
8	9.6	2.1	.9	.0	.8	.0	.4	.0	.5	.0	2.4	.8
9	9.9	2.6	3.0	.0	1.0	.0	.5	.0	.8	.1	2.1	.5
10	9.7	2.4	3.7	1.7	.9	.0	.5	.0	.8	.0	2.2	.0
11	10.4	2.4	3.8	.8	.5	.1	.5	.0	.9	.0	1.9	.0
12	9.2	2.7	1.5	.0	1.0	.0	.6	.0	1.1	.1	2.5	.5
13	9.2	2.5	.8	.0	.8	.0	.5	.0	.4	.0	2.5	.2
14	8.1	2.0	.9	.0	.6	.0	.5	.0	1.2	.1	2.2	.4
15	9.7	2.3	2.3	.2	.7	.0	.3	.0	1.3	.0	2.5	.4
16	9.5	2.1	1.9	.2	.7	.0	.3	.0	.7	.0	2.6	.3
17	9.4	2.3	1.6	.2	.6	.0	.4	.0	.8	.0	2.1	.3
18	9.0	2.6	1.2	.0	.7	.0	.3	.0	1.1	.0	1.9	.5
19	7.6	1.8	.7	.0	.8	.0	.1	.0	.8	.0	2.0	.0
20	7.6	2.3	1.0	.0	.9	.0	.1	.0	1.4	.1	2.7	.0
21	7.1	1.2	.9	.1	.7	.0	.1	.0	1.4	.4	1.4	.0
22	7.6	1.2	.6	.0	.3	.0	.0	.0	1.4	.0	2.6	.4
23	6.8	2.1	.4	.0	.6	.0	.1	.0	1.4	.2	2.0	.5
24	6.8	2.1	.8	.0	.5	.0	.2	.0	1.4	.0	2.6	.7
25	5.6	1.6	.8	.0	.6	.0	.3	.0	1.5	.2	3.0	.4
26	5.9	.8	.6	.1	.5	.0	.4	.0	1.5	.0	3.1	.2
27	6.5	.7	1.3	.0	.5	.0	.3	.0	2.0	.3	2.8	.9
28	3.2	.0	.8	.1	.5	.0	.4	.0	2.0	.1	2.6	.8
29	.8	.0	1.0	.0	.6	.0	.4	.0	1.9	.1	3.5	.7
30	.4	.0	.5	.0	.3	.0	.4	.0	---	---	4.5	1.2
31	.8	.0	---	---	.4	.0	.5	.0	---	---	2.7	.9
MONTH	11.6	.0	3.8	.0	1.1	.0	.6	.0	2.0	.0	4.5	.0
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	4.8	.8	10.8	2.5	8.5	2.9	12.2	6.8	16.2	7.4	10.7	6.1
2	5.0	.9	11.1	2.8	12.2	3.2	10.5	6.0	14.5	7.7	11.9	5.8
3	5.2	.7	10.9	4.1	11.2	4.8	14.5	4.7	14.2	7.9	11.4	5.1
4	6.3	.8	10.2	3.7	11.9	5.4	14.5	6.3	14.1	7.2	12.8	6.6
5	5.2	.9	9.1	3.4	10.1	5.5	14.3	6.6	12.9	7.4	13.3	6.6
6	5.7	1.0	9.2	2.7	11.0	4.8	16.6	7.4	13.8	8.2	12.0	5.1
7	7.0	1.0	7.9	4.1	9.5	5.0	12.6	7.5	15.7	7.2	13.7	5.7
8	1.9	.7	10.1	4.1	9.7	4.1	10.6	8.5	16.5	8.3	12.9	5.6
9	6.4	.7	8.7	4.8	8.3	4.9	14.8	7.0	17.0	8.2	14.1	6.1
10	7.7	1.4	7.9	3.5	10.5	4.1	14.5	7.0	12.8	9.5	14.0	5.6
11	6.3	2.2	11.0	3.3	9.6	5.0	13.9	8.4	13.4	7.8	12.9	5.5
12	8.3	1.5	9.0	5.0	12.9	4.4	12.2	7.9	12.0	7.0	13.0	6.3
13	6.6	1.0	10.5	4.7	13.3	5.6	13.7	7.7	12.9	6.6	13.8	7.3
14	4.9	1.8	10.4	4.8	11.6	5.4	11.3	6.5	14.0	6.3	11.0	6.0
15	5.0	.4	11.0	4.9	11.9	5.1	12.1	6.6	15.6	7.3	12.9	6.8
16	7.8	1.5	11.0	3.7	9.3	4.5	14.9	6.4	13.1	8.9	10.6	6.1
17	6.6	1.9	10.9	3.6	13.2	4.2	12.7	7.4	13.6	8.5	11.1	5.2
18	5.5	.0	11.1	4.5	14.1	5.3	15.4	6.7	15.2	6.1	10.5	6.4
19	5.2	.0	10.1	4.6	13.5	5.8	12.3	7.4	16.2	7.4	9.6	6.3
20	7.4	.3	9.8	5.1	13.0	7.5	12.7	6.7	14.8	7.8	9.3	5.0
21	9.1	1.0	9.5	4.7	11.9	6.3	15.0	7.6	13.6	7.0	10.8	6.1
22	7.5	1.5	8.1	3.5	12.5	5.4	13.4	7.5	13.2	8.6	12.6	4.3
23	5.8	1.4	10.5	4.1	12.8	6.3	12.6	7.4	11.8	8.7	13.1	5.2
24	9.7	.0	8.0	4.8	10.5	6.8	12.9	7.2	9.6	6.2	11.7	5.3
25	11.5	1.3	9.1	4.4	13.0	6.6	13.2	8.8	10.3	5.3	11.6	5.7
26	9.4	1.6	11.2	4.8	12.7	7.1	15.3	8.4	11.8	6.0	10.4	3.4
27	10.0	1.6	9.0	5.4	9.6	6.7	14.6	6.9	12.7	4.5	10.8	3.3
28	11.3	1.6	9.0	4.5	11.9	6.4	14.8	7.1	13.5	5.0	11.1	3.3
29	11.3	1.5	8.9	3.2	14.2	6.4	13.4	7.3	11.5	5.5	11.5	3.8
30	10.9	2.2	8.5	4.8	14.6	3.5	16.1	6.6	12.3	6.4	11.8	3.7
31	---	---	7.3	4.1	---	---	15.7	8.5	11.4	6.8	---	---
MONTH	11.5	.0	11.2	2.5	14.6	2.9	16.6	4.7	17.0	4.5	14.1	3.3

07081200 ARKANSAS RIVER NEAR LEADVILLE, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	218	208	226	245	251	213	232	173	82	86	126	172
2	219	207	228	250	246	236	228	171	80	89	128	165
3	220	208	231	219	232	224	229	152	77	86	115	172
4	221	207	229	208	245	231	231	143	86	78	136	185
5	219	214	231	233	223	239	229	125	92	87	137	194
6	221	219	203	252	243	243	224	120	89	98	135	193
7	211	208	200	249	250	240	222	122	81	105	138	166
8	210	219	225	244	250	249	225	121	93	101	141	157
9	213	210	235	236	248	243	231	122	98	98	132	175
10	216	206	239	244	246	244	228	125	105	98	144	---
11	222	215	236	247	245	239	229	131	99	99	146	---
12	---	216	237	243	244	227	226	121	91	98	149	210
13	226	244	225	245	240	239	225	96	83	95	152	---
14	224	216	215	248	243	248	220	82	80	96	146	---
15	225	218	226	243	245	245	224	78	75	96	155	168
16	217	219	218	244	247	243	233	80	78	97	164	167
17	222	222	225	243	249	249	232	79	71	100	155	171
18	224	218	234	225	250	244	225	90	70	103	177	167
19	227	209	216	244	249	243	217	87	81	105	172	162
20	229	204	234	245	247	244	223	85	83	108	171	176
21	229	193	229	237	258	247	231	73	80	108	169	195
22	233	229	238	233	258	241	217	77	80	109	175	196
23	231	221	236	232	260	240	207	83	78	111	172	190
24	231	204	247	218	247	240	207	84	78	115	178	188
25	230	222	236	202	241	244	215	89	83	118	175	189
26	216	210	242	218	241	229	207	82	86	124	165	192
27	211	218	250	215	243	224	195	81	86	124	160	192
28	210	226	251	232	239	225	191	80	88	126	178	195
29	208	214	247	231	---	228	184	82	88	125	175	196
30	212	217	244	216	---	227	175	85	83	126	175	196
31	208	---	237	239	---	227	---	87	---	126	169	---
MEAN	---	215	231	235	246	237	219	103	84	104	155	---

07081200 ARKANSAS RIVER NEAR LEADVILLE, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.0	7.6	7.9	7.7	7.8	7.6	8.2	7.7	8.2	8.0	7.9	7.7
2	8.1	7.9	7.7	7.6	7.8	7.6	8.3	8.1	8.2	8.0	7.9	7.6
3	8.1	7.9	8.0	7.6	7.8	7.6	8.2	7.9	8.4	7.8	8.1	7.8
4	8.0	7.9	8.0	7.5	7.8	7.6	8.3	7.9	8.4	7.9	8.2	8.0
5	8.1	7.6	8.0	7.6	7.7	7.5	8.3	8.0	8.3	7.9	8.2	7.9
6	8.1	7.6	8.0	7.8	7.7	7.4	8.2	7.9	8.4	7.9	8.0	7.9
7	8.1	7.6	8.0	7.9	7.7	7.4	8.2	7.9	8.3	7.8	8.1	7.8
8	8.1	8.0	8.0	7.9	7.8	7.5	8.1	7.8	8.1	8.0	8.0	7.9
9	8.0	7.6	8.0	7.9	7.8	7.5	8.1	7.8	8.1	8.0	8.0	7.9
10	8.0	7.6	8.0	7.9	7.8	7.4	8.2	7.9	8.2	8.0	8.0	7.9
11	8.0	7.6	7.9	7.8	7.8	7.4	8.5	8.0	8.1	7.9	8.0	7.9
12	8.0	---	8.0	7.8	7.8	7.4	8.4	8.2	8.1	7.9	8.2	7.9
13	8.1	7.4	7.9	7.8	7.9	7.5	8.3	8.1	8.3	7.9	8.3	8.0
14	8.1	7.4	8.0	7.6	8.0	7.5	8.3	8.2	8.3	7.9	8.1	7.9
15	8.0	7.7	8.0	7.9	8.1	7.6	8.3	8.2	8.0	7.9	8.0	7.9
16	8.1	7.8	8.0	7.9	7.8	7.5	8.3	8.2	8.0	7.9	8.1	7.9
17	8.2	8.0	7.9	7.8	8.1	7.5	8.3	8.1	8.0	7.7	8.1	8.0
18	8.2	7.9	8.0	7.8	7.7	7.5	8.4	8.1	8.1	7.7	8.1	7.8
19	8.2	7.9	8.0	7.7	7.9	7.5	8.4	8.1	8.0	7.9	7.9	7.8
20	8.2	7.9	7.9	7.8	8.1	7.6	8.4	8.1	8.3	7.8	8.0	7.8
21	8.3	7.9	7.9	7.7	8.1	7.6	8.3	8.1	8.2	7.8	7.9	7.7
22	8.2	8.0	7.8	7.7	8.1	8.0	8.4	8.1	7.9	7.8	7.8	7.7
23	8.1	7.9	7.9	7.7	8.1	8.0	8.4	8.0	7.9	7.8	7.9	7.8
24	8.1	7.8	7.9	7.7	8.2	8.0	8.4	8.0	7.9	7.7	8.0	7.8
25	8.0	7.8	7.8	7.5	8.1	8.0	8.4	8.1	7.9	7.7	7.9	7.7
26	8.0	7.9	7.8	7.5	8.3	8.0	8.4	7.9	7.8	7.7	7.8	7.7
27	8.2	7.9	7.8	7.6	8.3	7.8	8.4	8.0	7.9	7.6	7.9	7.3
28	8.2	7.9	7.7	7.6	7.8	7.7	8.4	8.0	8.0	7.6	7.8	7.3
29	8.2	7.9	7.7	7.5	8.0	7.7	8.3	8.0	---	---	8.1	7.4
30	8.2	7.9	7.8	7.4	8.0	7.7	8.4	8.0	---	---	8.1	7.8
31	8.1	7.8	---	---	7.9	7.7	8.4	8.1	---	---	8.0	7.5
MONTH	8.3	---	8.0	7.4	8.3	7.4	8.5	7.7	8.4	7.6	8.3	7.3
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	7.8	7.9	7.7	8.0	7.9	8.1	7.9	8.2	7.8	---	---
2	8.0	7.8	7.9	7.7	8.0	7.9	8.1	7.9	8.2	7.8	---	---
3	7.9	7.4	8.0	7.8	8.1	7.9	8.0	7.8	8.2	7.8	---	---
4	8.0	7.5	8.0	7.8	8.2	8.0	8.0	7.7	8.2	7.8	---	---
5	8.1	7.8	8.0	7.6	8.2	8.1	8.0	7.7	8.1	7.8	---	---
6	8.1	7.8	8.0	7.9	8.2	8.1	8.0	7.7	8.1	7.8	---	---
7	8.1	7.7	8.0	7.8	8.2	8.1	8.1	7.9	8.1	7.8	---	---
8	8.0	7.6	8.0	7.8	8.2	8.1	8.0	7.9	8.1	7.8	---	---
9	8.0	7.8	8.0	7.8	8.3	8.2	8.0	7.8	8.2	7.8	---	---
10	7.9	7.5	8.0	7.8	8.3	8.2	8.0	7.6	8.2	7.8	---	---
11	8.0	7.8	8.2	7.8	8.3	8.2	8.0	7.8	8.2	7.8	---	---
12	8.0	7.8	8.1	7.8	8.3	8.1	8.0	7.7	8.2	7.8	---	---
13	8.0	7.8	8.1	7.9	8.1	8.0	7.9	7.7	8.2	7.8	---	---
14	8.0	7.4	8.1	7.8	8.1	8.0	8.2	7.7	8.1	7.8	---	---
15	8.0	7.3	8.1	7.8	8.1	8.0	8.0	7.8	8.1	7.8	8.3	8.2
16	8.1	7.5	8.0	7.8	8.2	8.0	8.0	7.8	8.1	7.8	8.4	8.2
17	8.1	7.5	8.0	7.9	8.1	8.0	8.0	7.8	8.3	7.8	8.4	8.2
18	8.1	7.5	8.0	8.0	8.2	8.0	8.1	7.8	8.2	7.8	8.4	8.2
19	8.2	7.5	8.1	8.0	8.1	8.0	8.1	7.8	8.1	7.8	8.4	8.2
20	8.0	7.4	8.1	7.9	8.1	8.0	8.1	7.8	8.1	7.8	8.4	8.2
21	8.1	7.5	8.1	7.9	8.1	8.0	8.1	7.8	8.2	7.8	8.4	8.2
22	8.0	7.5	8.1	8.0	8.1	8.0	8.1	7.8	8.1	7.8	8.4	8.2
23	8.1	7.8	8.1	8.0	8.1	7.9	8.1	7.8	7.9	7.8	8.4	8.2
24	8.2	7.6	8.1	8.0	8.1	8.0	8.2	7.8	8.1	7.8	8.4	8.1
25	8.3	7.8	8.1	8.0	8.2	8.0	8.2	7.5	8.1	7.8	8.4	8.3
26	8.1	7.5	8.1	7.9	8.1	7.9	8.2	7.8	8.0	7.8	8.4	8.3
27	8.1	7.5	8.0	7.9	8.1	7.9	8.2	7.8	8.0	7.8	8.4	8.3
28	8.0	7.5	8.0	7.9	8.2	8.0	8.4	7.8	8.0	7.8	8.4	8.2
29	8.0	7.5	8.0	7.9	8.1	7.9	8.4	7.8	8.0	7.8	8.4	8.2
30	7.9	7.7	8.0	7.9	8.1	7.9	8.4	7.8	7.9	7.8	8.4	8.3
31	---	---	8.0	7.9	---	---	8.3	7.8	7.9	7.8	---	---
MONTH	8.3	7.3	8.2	7.6	8.3	7.9	8.4	7.5	8.3	7.8	---	---

07081200 ARKANSAS RIVER NEAR LEADVILLE, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.7	4.0	1.7	.2	1.1	.2	1.0	.2	1.0	.3	1.5	.2
2	11.6	3.9	.5	.2	1.1	.3	.9	.3	1.0	.2	1.2	.2
3	11.1	3.6	.7	.2	1.2	.2	.8	.2	.9	.2	1.1	.1
4	8.9	3.8	1.1	.2	1.2	.2	.4	.2	.8	.2	1.0	.1
5	10.0	3.3	.7	.2	.7	.3	.6	.2	.3	.1	1.0	.1
6	10.0	5.0	1.3	.2	1.0	.2	.9	.2	1.0	.2	1.6	.1
7	6.1	2.2	1.0	.2	1.1	.2	1.0	.3	1.1	.2	1.5	.1
8	6.2	.4	1.2	.3	1.3	.2	.8	.3	1.2	.4	2.0	.6
9	6.9	2.2	1.4	.4	.8	.2	1.1	.2	1.3	.5	1.9	.2
10	8.4	1.0	1.2	.3	1.2	.2	.7	.2	1.2	.4	1.9	.4
11	8.8	1.7	1.4	.2	1.2	.2	.8	.2	1.5	.3	1.9	.2
12	---	---	.9	.2	1.0	.2	.8	.2	1.1	.2	1.2	.1
13	9.4	2.3	1.3	.2	.7	.2	.8	.2	1.4	.2	.8	.1
14	8.7	2.9	1.1	.2	.9	.2	1.0	.3	.9	.2	1.7	.2
15	9.2	4.1	1.9	.2	.6	.2	1.1	.2	1.1	.2	2.4	.3
16	6.1	2.1	1.6	.2	.8	.2	1.0	.2	.7	.2	2.2	.7
17	8.0	2.7	2.3	.2	.8	.2	1.0	.3	.9	.2	2.4	.7
18	7.0	1.3	1.4	.2	.6	.2	.9	.2	1.2	.2	2.6	.6
19	7.1	1.7	1.1	.2	.7	.2	1.1	.5	.9	.3	2.3	.5
20	8.2	1.2	.9	.2	.6	.2	1.2	.3	1.5	.2	1.9	.2
21	7.0	1.5	.9	.2	1.0	.2	1.3	.2	.6	.2	2.8	.5
22	8.8	2.6	.7	.2	.8	.2	.9	.2	.5	.2	2.5	.2
23	8.0	2.1	.7	.1	.9	.2	.7	.2	.8	.2	2.8	.3
24	7.8	1.9	.7	.2	.8	.2	.6	.2	.9	.1	3.4	.3
25	5.8	1.8	1.2	.2	.9	.2	.9	.2	1.1	.2	3.7	.6
26	6.4	2.3	1.1	.1	.8	.2	1.1	.2	.8	.2	3.5	1.2
27	6.8	1.4	1.2	.2	.8	.2	1.0	.2	1.2	.2	2.5	.1
28	5.5	3.2	1.1	.2	.7	.3	.8	.2	1.0	.2	3.0	.2
29	6.3	2.6	1.1	.2	.9	.4	1.2	.2	---	---	3.4	.7
30	7.3	3.3	1.1	.2	.9	.2	1.0	.2	---	---	3.1	.2
31	4.4	1.0	---	---	.9	.2	.9	.2	---	---	3.9	.2
MONTH	---	---	2.3	.1	1.3	.2	1.3	.2	1.5	.1	3.9	.1
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.6	.2	8.3	2.2	11.0	3.6	13.8	6.3	17.0	8.4	12.6	6.0
2	2.9	.6	9.3	.9	9.5	3.8	13.9	7.0	16.5	8.8	11.0	6.6
3	3.9	.4	8.2	2.3	9.1	3.7	11.4	7.2	15.1	9.0	14.0	4.2
4	4.3	.2	8.8	1.6	9.4	2.3	9.3	5.5	13.4	9.3	14.7	5.6
5	3.7	1.3	6.2	2.5	9.6	3.9	10.6	4.8	13.8	9.3	13.8	8.0
6	4.0	.2	6.7	.8	10.4	3.5	12.7	4.9	15.8	8.2	12.9	6.8
7	3.8	.2	5.2	1.5	9.0	3.4	13.0	6.1	13.5	7.5	10.8	6.2
8	4.2	.2	6.9	.7	7.9	3.0	---	7.8	12.8	8.3	10.7	3.6
9	4.7	.2	7.5	.6	9.9	3.6	13.4	6.3	14.2	7.7	13.4	4.6
10	4.8	.5	9.0	.6	13.1	4.4	13.3	5.1	13.4	9.6	10.6	4.7
11	4.5	.4	8.9	1.1	11.6	5.0	13.6	7.7	15.1	8.1	13.4	---
12	4.8	1.0	8.1	1.4	12.8	4.2	13.9	7.0	13.7	7.7	11.3	---
13	3.3	.7	6.8	1.6	13.0	4.6	13.0	6.4	13.0	8.5	---	---
14	3.9	.2	6.4	.7	12.8	4.6	14.5	8.3	11.9	7.6	---	---
15	4.0	.2	7.9	.7	10.5	5.2	15.7	8.5	13.0	6.3	11.9	---
16	5.7	.5	8.6	1.6	12.3	5.2	14.7	8.1	15.4	6.2	11.1	4.7
17	5.4	.2	5.5	1.8	11.0	5.2	14.3	8.3	14.6	7.0	11.5	5.1
18	4.1	.2	9.4	2.2	8.5	5.1	15.6	7.8	14.2	7.9	10.3	5.0
19	2.3	.1	7.7	1.8	12.1	3.7	14.5	8.0	12.1	8.4	10.3	5.4
20	4.1	.2	11.5	2.8	13.3	5.2	14.7	8.2	14.0	7.3	11.8	3.0
21	5.3	.1	10.5	2.5	11.0	4.5	13.4	7.7	12.5	8.8	12.3	4.0
22	6.5	1.8	9.1	2.4	12.5	5.3	13.3	6.7	14.1	7.8	11.8	---
23	6.4	2.1	11.4	2.0	12.1	5.3	10.3	7.1	15.1	6.4	13.1	5.9
24	4.9	1.3	8.9	2.0	11.8	4.8	14.3	6.9	16.3	7.1	10.8	4.1
25	8.3	.9	12.0	2.4	12.8	4.8	13.9	7.0	15.7	8.2	10.6	2.6
26	8.1	1.8	9.0	3.9	13.3	5.5	15.7	7.5	12.0	9.1	11.2	3.7
27	7.5	2.6	9.3	3.2	12.3	6.1	16.2	7.9	10.7	7.4	11.4	2.8
28	10.2	2.7	8.9	3.4	12.2	5.8	16.6	7.5	13.9	7.7	11.8	3.1
29	9.9	1.6	10.7	3.1	13.8	6.9	15.2	7.1	13.7	7.3	11.8	3.7
30	8.2	2.7	11.6	3.1	13.6	5.2	15.6	8.5	13.2	6.4	10.8	3.2
31	---	---	11.6	3.5	---	---	17.0	8.6	11.7	7.9	---	---
MONTH	10.2	.1	12.0	.6	13.8	2.3	---	4.8	17.0	6.2	---	---

WATER-QUALITY RECORDS

[illegible]

07081800 CALIFORNIA GULCH AT MALTA, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	---	---	7.8	7.6	8.1	7.4
2	---	---	---	---	---	---	---	---	7.7	7.6	8.0	7.5
3	---	---	---	---	---	---	---	---	7.6	5.9	7.9	7.4
4	---	---	---	---	---	---	---	---	7.3	6.0	7.9	7.6
5	---	---	---	---	---	---	---	---	7.4	7.2	7.8	7.7
6	---	---	---	---	---	---	---	---	7.4	7.3	8.2	7.8
7	---	---	---	---	---	---	---	---	---	---	7.9	7.8
8	---	---	---	---	---	---	---	---	---	---	7.8	7.7
9	---	---	---	---	---	---	---	---	---	---	7.8	7.7
10	---	---	---	---	---	---	---	---	---	---	7.8	7.7
11	---	---	---	---	---	---	---	---	---	---	7.8	5.4
12	---	---	---	---	---	---	---	---	---	---	7.9	5.4
13	---	---	---	---	---	---	---	---	---	---	8.4	7.8
14	---	---	---	---	---	---	---	---	---	---	8.5	8.2
15	---	---	---	---	---	---	---	---	---	---	8.4	6.9
16	---	---	---	---	---	---	---	---	7.9	7.6	8.3	8.1
17	---	---	---	---	---	---	---	---	7.9	7.6	8.4	8.3
18	---	---	---	---	---	---	---	---	7.9	7.8	8.5	8.1
19	---	---	---	---	---	---	---	---	7.9	7.6	8.4	8.2
20	---	---	---	---	---	---	---	---	7.9	7.7	8.5	8.2
21	---	---	---	---	---	---	---	---	7.8	7.6	8.4	8.2
22	---	---	---	---	---	---	---	---	7.8	7.6	8.4	8.3
23	---	---	---	---	---	---	---	---	8.0	7.8	8.3	8.1
24	---	---	---	---	---	---	---	---	8.0	5.9	8.3	7.9
25	---	---	---	---	---	---	---	---	7.9	7.3	8.0	7.8
26	---	---	---	---	---	---	---	---	7.9	7.7	8.0	7.7
27	---	---	---	---	---	---	---	---	7.8	7.7	7.9	7.3
28	---	---	---	---	---	---	---	---	7.9	7.7	7.9	7.6
29	---	---	---	---	---	---	---	---	8.0	7.8	7.9	7.6
30	---	---	---	---	---	---	---	---	8.0	7.8	7.8	4.8
31	---	---	---	---	---	---	---	---	8.1	7.8	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	8.5	4.8

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	---	---	18.9	11.6	19.5	7.8
2	---	---	---	---	---	---	---	---	16.3	11.2	18.2	9.9
3	---	---	---	---	---	---	---	---	19.9	11.2	19.1	8.9
4	---	---	---	---	---	---	---	---	20.2	12.1	16.9	10.3
5	---	---	---	---	---	---	---	---	21.0	12.4	17.3	9.9
6	---	---	---	---	---	---	---	---	18.4	11.4	14.0	10.4
7	---	---	---	---	---	---	---	---	18.3	9.9	16.4	9.9
8	---	---	---	---	---	---	---	---	18.1	11.0	12.4	8.9
9	---	---	---	---	---	---	---	---	16.5	11.0	16.4	6.1
10	---	---	---	---	---	---	---	---	14.5	10.4	14.7	9.2
11	---	---	---	---	---	---	---	---	16.5	10.2	15.0	7.1
12	---	---	---	---	---	---	---	---	15.4	11.1	14.5	4.7
13	---	---	---	---	---	---	18.8	10.1	18.1	11.6	12.3	8.2
14	---	---	---	---	---	---	21.1	9.7	18.0	11.6	12.3	5.8
15	---	---	---	---	---	---	21.1	11.2	17.9	10.6	13.0	4.1
16	---	---	---	---	---	---	19.2	11.3	18.8	9.1	14.4	5.2
17	---	---	---	---	---	---	19.2	10.9	18.6	9.6	15.1	6.8
18	---	---	---	---	---	---	19.3	11.9	18.9	11.3	15.4	8.6
19	---	---	---	---	---	---	18.2	11.2	16.6	11.3	15.2	7.8
20	---	---	---	---	---	---	20.2	10.7	17.2	9.8	14.9	8.2
21	---	---	---	---	---	---	18.6	11.8	18.5	8.4	15.2	7.4
22	---	---	---	---	---	---	18.1	11.3	17.0	9.2	15.0	7.7
23	---	---	---	---	---	---	21.9	11.8	17.4	8.0	14.4	6.8
24	---	---	---	---	---	---	15.7	11.4	16.4	10.5	14.9	6.4
25	---	---	---	---	---	---	16.2	11.3	19.3	10.4	15.3	7.1
26	---	---	---	---	---	---	15.8	10.7	18.2	10.0	14.8	7.1
27	---	---	---	---	---	---	20.6	8.4	18.8	10.3	14.4	7.3
28	---	---	---	---	---	---	20.9	8.3	17.0	10.9	13.8	7.2
29	---	---	---	---	---	---	20.3	9.5	18.5	8.8	12.5	7.8
30	---	---	---	---	---	---	20.9	9.5	20.5	9.6	13.5	8.6
31	---	---	---	---	---	---	20.5	9.5	18.7	9.4	---	---
MONTH	---	---	---	---	---	---	---	---	21.0	8.0	19.5	4.1

07081800 CALIFORNIA GULCH AT MALTA, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	834	799	797	605	505	---	451	1130	824	534	788	867
2	777	780	781	588	496	---	440	1220	903	520	704	887
3	779	790	779	554	497	407	450	1080	939	534	650	894
4	787	821	768	668	489	457	487	1080	956	535	579	847
5	769	817	769	742	471	---	500	945	885	516	527	757
6	742	794	743	725	469	---	410	830	876	473	572	708
7	746	780	738	604	473	---	520	720	866	470	772	698
8	747	812	727	608	479	456	542	867	862	761	754	898
9	750	845	721	527	453	496	626	821	899	731	623	944
10	748	833	728	519	429	462	727	695	930	787	921	1010
11	542	818	694	701	422	454	845	600	996	923	858	1020
12	360	770	690	606	455	478	910	678	1020	876	849	901
13	396	745	606	455	427	446	911	807	998	790	854	957
14	687	774	679	426	450	477	929	837	1020	869	847	811
15	766	804	722	447	425	483	928	903	1030	998	605	1030
16	768	799	728	447	440	488	914	752	1020	943	656	864
17	795	787	742	450	447	504	876	684	831	928	920	890
18	775	788	730	456	432	521	761	666	850	989	796	909
19	735	779	686	472	408	520	568	526	827	926	806	755
20	735	780	680	462	412	540	574	529	858	993	748	802
21	721	843	670	472	440	521	595	518	807	951	729	813
22	749	814	666	467	418	536	642	477	730	973	723	815
23	760	787	667	454	414	520	650	429	792	828	624	776
24	779	844	663	434	420	506	582	432	822	881	678	798
25	799	842	646	453	420	500	631	581	836	809	814	798
26	775	833	646	533	430	497	740	729	704	797	841	616
27	774	840	666	551	---	496	876	812	614	773	869	589
28	699	840	664	561	420	519	1010	862	558	781	880	647
29	641	816	638	529	---	457	962	908	603	840	735	767
30	687	788	649	527	---	459	1070	823	621	720	736	766
31	796	---	610	518	---	456	---	804	---	723	803	---
MEAN	723	805	700	534	---	---	704	766	849	780	750	828

07081800 CALIFORNIA GULCH AT MALTA, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.4	6.4	7.5	7.4	7.5	7.4	7.6	7.5	7.4	7.3	7.5	7.4
2	7.5	7.3	7.5	7.4	7.7	7.5	7.6	7.5	7.4	7.3	7.8	7.4
3	7.5	7.3	7.4	7.3	7.6	7.5	7.6	7.5	7.3	7.3	7.9	7.8
4	7.6	7.3	7.5	7.4	7.6	7.5	7.5	7.4	7.4	7.3	7.9	7.8
5	7.6	7.3	7.6	7.4	7.5	7.4	7.5	7.4	7.4	7.2	7.8	7.7
6	7.8	7.4	7.5	7.4	7.6	7.4	7.5	7.4	7.3	7.3	7.8	7.7
7	7.8	7.5	7.5	7.4	7.6	7.5	7.5	7.5	7.3	7.3	7.8	7.7
8	7.8	7.6	7.5	7.2	7.6	7.5	7.5	7.4	7.4	7.3	7.8	7.7
9	7.8	7.5	7.4	7.3	7.7	7.6	7.5	7.4	7.4	7.4	7.9	7.8
10	7.6	7.4	7.4	7.3	7.6	7.5	7.5	7.4	7.4	7.4	8.0	7.8
11	7.7	7.4	7.4	7.3	7.6	7.5	7.5	7.4	7.4	7.3	8.0	7.9
12	7.7	7.5	7.5	7.3	7.6	7.6	7.5	7.4	7.3	7.3	8.0	7.9
13	7.6	7.4	7.6	7.3	7.7	7.6	7.6	7.4	7.3	7.3	8.0	7.9
14	7.6	7.4	7.7	7.4	7.7	7.5	7.6	7.4	7.3	7.3	8.0	7.9
15	7.7	7.4	7.5	7.4	7.5	7.5	7.5	7.4	7.4	7.3	8.0	7.9
16	7.6	7.4	7.5	7.4	7.8	7.5	7.5	7.4	7.6	7.4	8.0	7.9
17	7.6	7.5	7.5	7.4	7.8	7.6	7.4	7.4	7.6	7.5	8.0	7.9
18	7.7	7.5	7.7	7.4	7.8	7.5	7.4	7.4	7.5	7.5	7.9	7.9
19	7.9	7.6	7.7	7.4	7.6	7.6	7.4	7.4	7.5	7.4	8.0	7.9
20	7.8	7.5	7.6	7.4	7.7	7.6	7.4	6.1	7.5	7.4	8.3	7.8
21	7.8	7.5	7.6	7.4	7.7	7.6	7.4	7.4	7.5	7.4	8.0	7.9
22	7.9	7.5	7.8	7.3	7.7	7.6	7.4	7.4	7.5	7.4	8.0	7.9
23	7.7	7.4	7.6	7.4	7.7	7.5	7.5	7.3	7.4	7.3	8.0	7.8
24	7.7	6.7	7.6	7.5	7.6	7.5	7.5	7.4	7.4	7.3	7.9	7.8
25	7.5	6.1	7.5	7.5	7.6	7.6	7.4	7.4	7.5	7.4	7.9	7.8
26	7.6	7.2	7.5	7.4	7.6	7.5	7.4	7.3	7.4	7.4	7.9	7.8
27	7.6	7.3	7.6	7.4	7.6	7.5	7.4	7.4	7.5	7.4	7.9	7.8
28	7.9	7.1	7.6	7.5	7.6	7.5	7.4	7.4	7.5	7.4	7.9	7.8
29	7.8	7.2	7.5	7.5	7.6	7.5	7.4	7.4	7.5	7.4	8.0	7.8
30	7.7	7.4	7.5	7.5	7.6	7.5	7.4	7.4	---	---	7.9	7.8
31	7.6	7.3	---	---	7.6	7.5	7.4	7.4	---	---	7.9	7.8
MONTH	7.9	6.1	7.8	7.2	7.8	7.4	7.6	6.1	7.6	7.2	8.3	7.4
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.9	7.8	7.1	---	7.5	6.6	8.3	8.0	7.8	7.3	7.4	7.2
2	7.9	7.8	---	---	7.5	7.4	8.2	7.9	7.7	7.5	7.6	7.2
3	7.9	7.7	---	---	7.5	7.3	8.1	7.9	7.7	7.4	7.7	7.5
4	7.8	7.7	---	---	7.6	7.1	8.1	7.8	7.4	7.2	7.7	6.8
5	7.8	7.7	---	---	7.5	6.9	8.0	7.7	7.7	7.1	7.8	6.8
6	7.8	7.6	---	---	7.6	5.4	8.0	7.7	7.7	7.2	7.8	7.6
7	7.6	7.5	---	---	7.3	5.8	8.3	7.5	7.7	7.2	7.8	7.6
8	7.5	7.2	---	---	7.5	5.6	8.1	5.6	7.6	6.9	7.8	7.4
9	8.2	7.1	---	---	7.3	5.3	8.0	7.8	7.5	6.4	7.6	7.4
10	7.9	7.1	---	---	7.1	5.7	7.8	7.7	7.5	5.5	7.6	7.3
11	7.8	7.1	7.1	6.8	7.2	5.7	7.8	7.7	7.7	5.5	7.8	7.3
12	7.9	6.7	7.2	6.9	7.1	6.1	7.8	7.3	7.7	6.6	7.9	7.6
13	7.3	6.7	7.3	7.2	7.3	7.1	7.7	7.3	7.4	6.2	7.9	7.5
14	7.0	6.7	7.6	7.3	7.3	7.0	7.8	7.4	7.4	6.6	7.9	7.5
15	7.1	7.0	7.7	7.4	7.3	7.0	7.6	5.7	7.3	6.8	7.6	7.3
16	7.2	7.0	7.9	7.3	7.5	7.1	7.4	5.6	7.2	6.1	7.7	7.2
17	7.3	7.2	7.7	7.2	7.7	7.4	7.7	7.4	7.0	3.9	7.9	7.4
18	7.4	7.3	7.4	7.0	7.8	7.2	7.7	7.5	7.6	7.0	7.6	7.4
19	7.5	7.3	7.3	6.9	7.8	7.6	7.8	7.7	7.9	7.6	7.7	7.4
20	7.6	7.5	7.5	7.0	7.6	7.5	7.9	7.7	7.9	7.6	7.6	4.7
21	7.7	7.6	7.8	7.4	7.9	7.6	8.0	7.9	7.8	7.6	7.7	7.5
22	7.8	7.6	7.7	6.9	7.9	7.6	8.1	7.5	7.8	4.9	7.7	7.5
23	7.8	7.8	7.6	7.3	8.0	7.7	8.0	7.8	7.7	5.0	7.7	7.5
24	7.9	7.8	7.5	6.5	7.9	6.2	7.9	7.2	7.6	5.6	7.6	7.3
25	8.0	7.9	6.8	6.5	7.8	6.6	7.9	7.7	7.7	6.5	7.7	7.0
26	8.0	7.9	7.0	6.6	7.7	4.3	7.9	7.8	7.7	7.4	7.9	7.7
27	8.0	7.8	7.1	6.7	8.4	6.7	7.8	6.0	7.7	7.6	7.8	7.7
28	7.9	7.6	7.3	7.0	8.3	6.6	7.8	5.4	7.7	7.6	7.8	7.5
29	7.7	7.5	7.4	7.2	8.3	8.2	7.9	6.0	7.8	7.6	7.6	6.9
30	7.5	7.1	7.5	6.7	8.4	8.1	7.9	7.7	7.9	7.5	7.3	6.8
31	---	---	7.5	6.4	---	---	7.7	7.5	7.6	7.3	---	---
MONTH	8.2	6.7	---	---	8.4	4.3	8.3	5.4	7.9	3.9	7.9	4.7

07081800 CALIFORNIA GULCH AT MALTA, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	14.4	4.9	2.0	.2	.6	.0	1.4	.7	1.3	.0	2.0	.0
2	12.4	5.3	1.0	.1	.8	.1	1.3	.5	1.6	.3	2.0	.0
3	11.5	5.8	.2	.1	.8	.0	1.7	.5	1.2	.1	2.7	.5
4	10.6	4.2	1.4	.1	1.1	.0	1.8	.8	1.4	.0	1.7	.0
5	10.3	4.0	2.3	1.1	1.5	.0	1.6	.0	1.1	.4	2.4	.0
6	9.9	4.0	2.2	1.1	1.8	.0	1.6	.1	1.4	.3	2.9	.0
7	9.8	4.5	2.9	.1	2.0	.0	1.3	.9	1.5	.0	2.5	.0
8	11.1	3.4	3.0	.0	1.8	.7	1.4	.0	1.6	.0	2.8	.0
9	12.3	4.7	3.1	.6	1.8	.0	1.1	.0	2.0	.9	3.4	.0
10	12.3	4.5	3.8	1.8	2.0	.0	1.2	.0	1.8	.0	3.1	.0
11	13.3	4.6	4.0	.1	1.4	.7	1.4	.0	2.0	.7	2.8	.0
12	11.6	5.0	3.3	.0	1.4	.0	1.3	.5	2.1	.0	2.6	.0
13	11.3	4.8	3.8	.0	.5	.0	1.2	.0	1.6	.0	4.3	.0
14	10.7	4.0	3.2	.0	.6	.0	1.2	.0	1.4	.0	3.7	.0
15	12.0	4.4	2.8	.9	.8	.0	1.0	.0	1.7	.0	4.3	.0
16	10.6	4.4	3.0	1.0	.9	.1	.9	.0	.7	.0	4.5	.6
17	11.0	2.8	1.9	.3	.8	.0	1.0	.0	1.5	.5	4.0	.0
18	10.9	4.2	2.1	.1	1.0	.0	.9	.0	1.6	.3	3.0	.0
19	9.0	3.8	1.9	.0	1.2	.0	1.1	.0	1.5	.2	3.3	.0
20	8.4	3.2	.9	.0	1.4	.2	1.1	.0	2.0	.5	4.2	.0
21	9.0	4.0	2.3	.0	1.3	.0	1.0	.0	2.1	.4	3.0	.6
22	8.4	3.4	1.7	.0	1.1	.1	.9	.4	2.0	.0	3.7	.8
23	7.8	4.0	.1	.0	1.3	.0	1.0	.0	1.7	.0	2.4	.4
24	7.2	2.9	.9	.0	1.1	.0	1.1	.0	2.0	.0	3.1	.0
25	7.3	2.4	1.7	.5	1.2	.0	1.0	.0	2.2	.0	---	---
26	6.3	2.2	1.5	.5	1.1	.1	1.3	.0	2.2	.0	---	---
27	6.7	2.3	1.7	.0	1.0	.0	1.2	.4	2.7	.0	---	---
28	5.1	1.0	1.6	.7	1.1	.0	1.4	.0	2.8	.0	---	---
29	3.4	.1	1.3	.2	1.3	.5	1.3	.0	2.2	.0	---	---
30	1.6	.1	1.0	.1	1.4	.5	1.6	.4	---	---	---	---
31	1.3	.1	---	---	1.3	.7	1.5	.0	---	---	---	---
MONTH	14.4	.1	4.0	.0	2.0	.0	1.8	.0	2.8	.0	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	15.5	4.1	12.7	2.7	17.4	9.3	16.7	9.0	12.5	7.4
2	---	---	16.0	4.9	18.0	2.8	15.7	4.8	18.1	8.0	15.5	6.8
3	---	---	13.7	5.6	16.1	4.4	19.2	7.0	18.9	10.1	14.8	6.2
4	---	---	13.9	4.2	15.6	5.4	19.2	9.6	19.0	6.7	15.3	7.9
5	---	---	14.3	5.1	15.6	5.3	19.2	10.5	17.0	10.8	15.0	7.9
6	---	---	13.5	2.2	16.3	4.9	20.0	11.4	16.8	11.3	14.2	6.6
7	---	---	12.3	3.2	12.5	5.5	18.5	9.2	18.7	9.9	15.0	7.4
8	7.3	.5	15.0	4.5	14.6	3.4	14.1	11.4	17.7	7.5	15.1	7.8
9	8.7	.3	13.6	6.1	10.5	5.1	18.7	9.2	18.8	11.1	15.7	7.1
10	9.6	.8	13.7	2.1	15.4	3.7	17.8	9.2	16.1	11.8	16.0	6.3
11	7.2	1.2	15.6	1.5	14.4	4.5	17.2	10.5	17.2	10.0	15.4	6.2
12	10.5	1.2	15.1	2.7	19.2	4.3	15.4	8.1	16.0	8.5	14.6	8.3
13	9.4	.7	16.8	4.1	18.6	5.4	17.8	11.1	16.0	8.2	15.9	9.5
14	7.9	2.3	15.2	3.5	16.6	4.5	16.2	7.8	17.5	8.1	13.7	9.2
15	8.9	1.0	14.2	5.1	16.6	4.2	16.1	7.4	17.9	8.2	15.5	7.1
16	8.8	2.6	14.6	4.9	13.6	4.8	18.4	8.0	16.5	11.1	13.5	6.7
17	8.9	2.8	16.1	6.4	18.2	4.0	17.7	9.0	15.9	6.6	13.6	6.6
18	8.8	.0	14.3	8.1	18.6	6.4	17.1	9.8	18.3	9.9	12.6	6.8
19	7.0	1.6	16.8	9.4	19.2	8.4	19.3	6.1	19.4	9.1	12.3	7.6
20	9.0	2.0	17.4	10.8	18.0	4.8	19.3	7.6	17.2	7.6	12.0	5.1
21	11.2	1.1	16.4	10.9	18.3	7.5	16.0	5.8	16.6	7.1	12.2	4.3
22	9.9	1.8	16.5	7.8	18.9	4.0	15.9	9.3	15.9	7.1	14.4	1.6
23	7.7	.0	16.7	8.6	19.2	9.0	16.2	8.7	14.2	9.2	15.1	1.2
24	12.8	.0	14.0	8.3	17.0	6.1	18.4	10.4	10.5	5.5	13.4	5.9
25	13.8	1.9	14.5	7.3	18.8	2.9	16.9	5.6	11.8	5.6	12.4	6.8
26	13.1	1.1	17.3	7.2	19.3	3.4	16.4	6.7	14.7	6.7	12.1	4.3
27	14.5	2.5	13.7	7.0	14.9	7.9	16.3	7.2	15.0	4.8	12.2	4.5
28	15.4	3.4	11.9	5.6	17.8	9.5	16.8	11.1	16.0	5.4	13.4	4.0
29	16.8	3.7	15.5	3.2	19.0	9.1	19.6	6.4	13.5	7.1	13.3	3.2
30	14.7	4.9	11.5	5.4	18.2	5.3	18.6	7.6	14.5	8.3	13.9	2.9
31	---	---	11.1	3.8	---	---	18.0	9.2	13.4	9.2	---	---
MONTH	---	---	17.4	1.5	19.3	2.7	20.0	4.8	19.4	4.8	16.0	1.2

07082400 TURQUOISE LAKE NEAR LEADVILLE, CO

LOCATION.--Lat 39°15'10", long 106°22'26", in SW¹/4NE¹/4 sec.19, T.9 S., R.80 W., Lake County, Hydrologic Unit 11020001, in control house of Sugar Loaf Dam on Lake Fork, 4.0 mi west of Leadville and 4.6 mi upstream from mouth.

DRAINAGE AREA.--28.1 mi².

PERIOD OF RECORD.--April 1968 to current year.

GAGE.--Nonrecording gage read once daily. Datum of gage is 9,869.40 ft above sea level, (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above sea level.

REMARKS.--Reservoir formed by earthfill dam completed in 1909, capacity, 17,400 acre-ft. Enlargement of dam began Dec. 8, 1965, and closure was made Apr. 15, 1968. Enlarged capacity, 129,400 acre-ft at elevation 9,869.4 ft, crest of spillway. Dead storage, 2,770 acre-ft below elevation 9,765.90 ft, sill of lowest outlet. Figures given are total contents. Since Apr. 15, 1968, Turquoise Lake has been a regulatory reservoir for the Fryingpan-Arkansas project and stores water imported from the Colorado River basin through Charles H. Boustead Tunnel for irrigation, municipal water supply, and power development. It also stores water for industrial use, and water imported from the Colorado River basin through Busk-Ivanhoe tunnel for irrigation and through Homestake tunnel for municipal water supply.

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

EXTREMES (at 0800 of following day) FOR PERIOD OF RECORD.--Maximum contents, 131,820 acre-ft, July 10, 1983, elevation, 9,870.73 ft; minimum since appreciable storage was attained, 14,510 acre-ft, Oct. 1, 1968, elevation, 9,782.85 ft.

EXTREMES (at 0800 of the following day) FOR CURRENT YEAR.--Maximum contents, 127,860 acre-ft, Aug. 18, elevation, 9,868.54 ft; minimum, 54,170 acre-ft, May 10, elevation, 9,821.90 ft.

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	9,864.15	120,110	-
Oct. 31.	9,860.96	114,570	-5,540
Nov. 30.	9,859.99	112,900	-1,670
Dec. 31.	9,851.74	98,980	-13,920
CAL YR 1992.			-3,880
Jan. 31.	9,840.25	80,500	-18,480
Feb. 28.	9,832.93	69,450	-11,050
Mar. 31.	9,827.63	61,910	-7,540
Apr. 30.	9,822.69	55,210	-6,700
May 31.	9,833.38	70,110	+14,900
June 30.	9,860.49	113,760	+43,650
July 31.	8,867.78	126,510	+12,750
Aug. 31.	9,867.75	126,460	-50
Sept. 30.	9,865.47	122,430	-4,030
WTR YR 1993.			+2,320

07083000 HALFMOON CREEK NEAR MALTA, CO
(Hydrologic bench-mark station)

LOCATION.--Lat 39°10'20", long 106°23'19", in SE¹/4SE¹/4 sec.13, T.10 S., R.81 W., Lake County, Hydrologic Unit 11020001, on right bank 1.4 mi upstream from culvert on Halfmoon Campground road, 3.3 mi upstream from mouth, and 4.3 mi southwest of Malta.

DRAINAGE AREA.--23.6 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1946 to current year.

REVISED RECORDS.--WSP 2121: Drainage area at site 1.4 mi downstream. WRD Colo. 1968: 1967 (M). WDR CO-79-1: 1976 (M). WDR CO-80-1: 1954 (M).

GAGE.--Water-stage recorder with satellite telemetry and concrete control since 1966. Elevation of gage is 9,830 ft above sea level, from topographic map. Prior to Oct. 19, 1966, at sites 1.4 mi downstream at different datums.

REMARKS.--Estimated daily discharges: Nov. 30 to Apr. 14. Records good except for estimated daily discharges, which are poor. No regulation or diversion upstream from station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	7.8	3.6	3.3	2.6	3.0	2.9	7.2	159	171	58	25
2	11	6.8	3.7	3.2	2.5	3.1	2.9	7.3	152	169	55	28
3	11	8.4	3.6	3.1	2.5	3.2	3.0	8.4	139	170	52	24
4	10	8.9	3.4	3.0	2.5	3.2	3.0	10	104	146	49	21
5	14	9.9	3.2	3.0	2.5	3.3	3.1	12	91	112	51	22
6	11	9.5	3.2	3.1	2.5	3.3	3.2	11	93	98	49	21
7	11	9.0	3.2	3.2	2.6	3.4	3.4	11	87	103	45	26
8	11	8.3	3.1	3.2	2.6	3.4	3.6	10	71	116	50	28
9	11	8.5	3.1	3.3	2.6	3.3	3.7	9.7	62	111	50	26
10	11	8.2	3.1	3.3	2.6	3.3	3.7	10	71	113	50	24
11	11	7.4	3.0	3.2	2.7	3.3	3.8	13	95	127	51	22
12	11	7.9	3.0	3.1	2.7	3.0	3.9	17	124	132	45	21
13	10	7.6	3.0	3.0	2.7	2.9	4.0	26	160	128	42	29
14	9.9	9.6	3.0	3.0	2.7	2.9	4.0	36	185	119	45	26
15	9.8	9.3	2.9	3.0	2.7	3.0	4.1	43	212	119	42	25
16	9.4	9.9	2.9	2.9	2.7	3.0	3.7	55	207	115	37	24
17	9.4	8.3	2.9	2.9	2.7	3.0	3.8	58	195	107	34	23
18	9.2	7.4	2.9	2.9	2.7	3.0	4.0	53	164	100	32	21
19	9.1	6.6	3.0	2.8	2.7	3.0	3.6	56	142	93	31	20
20	8.9	7.2	3.0	2.8	2.8	3.0	4.1	66	158	88	31	19
21	8.9	6.3	3.1	2.8	2.8	3.0	4.1	85	185	83	31	18
22	8.7	6.6	3.2	2.8	2.8	3.0	4.9	92	192	78	36	17
23	8.9	6.4	3.2	2.8	2.7	3.0	5.3	80	193	71	31	16
24	8.8	5.7	3.3	2.8	2.7	3.1	5.1	79	167	67	28	16
25	9.1	5.9	3.4	2.8	2.7	3.1	5.1	86	149	61	27	16
26	11	6.4	3.4	2.8	2.8	3.1	5.5	99	162	63	29	15
27	10	4.5	3.4	2.7	2.8	3.2	6.6	104	170	64	29	15
28	9.9	3.8	3.3	2.7	2.9	3.2	7.1	104	175	62	27	14
29	9.6	3.6	3.3	2.6	---	3.2	7.5	112	186	62	25	14
30	9.0	3.6	3.3	2.6	---	3.1	8.0	123	188	59	24	14
31	9.2	---	3.3	2.6	---	3.0	---	151	---	61	24	---
TOTAL	312.8	219.3	99.0	91.3	74.8	96.6	130.7	1634.6	4438	3168	1210	630
MEAN	10.1	7.31	3.19	2.95	2.67	3.12	4.36	52.7	148	102	39.0	21.0
MAX	14	9.9	3.7	3.3	2.9	3.4	8.0	151	212	171	58	29
MIN	8.7	3.6	2.9	2.6	2.5	2.9	2.9	7.2	62	59	24	14
AC-FT	620	435	196	181	148	192	259	3240	8800	6280	2400	1250

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1993, BY WATER YEAR (WY)

	MEAN	10.9	7.33	5.09	3.99	3.69	3.71	6.85	44.2	126	82.5	34.3	17.4
MAX	24.5	16.6	8.33	7.00	7.90	10.8	13.8	76.5	208	239	76.1	44.3	
(WY)	1962	1962	1986	1960	1986	1947	1989	1958	1980	1957	1984	1961	
MIN	6.23	4.40	3.19	1.65	1.70	1.20	2.70	20.5	61.2	22.9	14.3	8.03	
(WY)	1956	1992	1993	1977	1948	1948	1973	1983	1977	1977	1950	1974	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1946 - 1993
ANNUAL TOTAL	8941.5	12105.1	
ANNUAL MEAN	24.4	33.2	29.0
HIGHEST ANNUAL MEAN			49.0
LOWEST ANNUAL MEAN			14.3
HIGHEST DAILY MEAN	121	212	384
LOWEST DAILY MEAN	2.0	2.5	1.1
ANNUAL SEVEN-DAY MINIMUM	2.1	2.5	1.2
INSTANTANEOUS PEAK FLOW		270	615
INSTANTANEOUS PEAK STAGE		3.31	3.77
ANNUAL RUNOFF (AC-FT)	17740	24010	20970
10 PERCENT EXCEEDS	70	112	87
50 PERCENT EXCEEDS	9.2	8.9	8.8
90 PERCENT EXCEEDS	3.0	2.8	3.1

a-Also occurred Feb 18.

b-Also occurred Feb 3-6.

c-Also occurred Apr 2, 1948.

d-From rating curve extended above 300 ft³/s.

ARKANSAS RIVER BASIN

07083000 HALFMOON CREEK NEAR MALTA, CO--Continued
(Hydrologic bench-mark station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- November 1966 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: May 1967 to September 1982.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURES: Maximum, 26.0°C, Aug. 16, 1980; minimum, 0.0°C, on many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 14...	1200	9.7	--	8.3	4.0	0.5	8.7	<1	<1
DEC 29...	1230	3.3	--	7.6	0.0	0.9	9.5	<1	<1
FEB 03...	1445	2.5	--	7.8	0.0	1.1	9.8	<1	<1
APR 29...	1030	6.7	97	7.8	2.0	2.4	9.4	<1	<1
JUN 15...	1300	180	48	7.8	7.0	2.5	8.5	<1	K1
AUG 19...	1230	31	73	8.0	9.0	0.4	7.7	21	23

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- ^A BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- ^B BONATE WATER DIS IT FIELD MG/L AS CO3
OCT 14...	41	10	3.9	1.5	7	0.1	0.6	35	8
DEC 29...	45	11	4.3	1.6	7	0.1	0.7	45	--
FEB 03...	45	11	4.2	1.9	8	0.1	0.7	47	--
APR 29...	45	11	4.3	1.8	8	0.1	0.8	54	--
JUN 15...	23	5.9	2.0	0.8	7	0.1	0.5	35	--
AUG 19...	33	8.4	2.9	1.2	7	0.1	0.8	34	--

DATE	ALKA- ^C LINTY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 14...	43	5.3	0.5	0.1	5.3	59	53	1.55
DEC 29...	37	5.4	0.4	<0.1	6.9	55	53	0.49
FEB 03...	38	5.9	0.9	0.2	6.7	53	56	0.36
APR 29...	44	4.8	0.5	<0.1	6.3	56	57	1.01
JUN 15...	29	2.6	<0.1	0.1	3.9	26	--	--
AUG 19...	28	3.6	0.3	0.1	4.3	35	39	2.93

A-Field dissolved bicarbonate, determined by incremental titration method.

B-Field dissolved carbonate, determined by incremental titration method.

C-Field total dissolved alkalinity, determined by incremental titration method.

K-Based on non-ideal colony counts.

07083000 HALFMoon CREEK NEAR MALTA, CO--Continued

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 14...	<0.01	0.13	0.02	0.01	<0.2	<0.01	<0.01	<0.01
DEC 29...	<0.01	0.16	--	0.02	<0.2	<0.01	0.01	<0.01
FEB 03...	<0.01	0.16	--	0.05	<0.2	0.02	0.01	<0.01
APR 29...	<0.01	0.14	--	0.04	0.3	0.02	0.02	0.02
JUN 15...	<0.01	0.13	--	0.03	<0.2	0.03	0.01	<0.01
AUG 19...	<0.01	0.11	--	0.03	<0.2	<0.01	<0.01	0.02

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM, DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
OCT 14...	<10	22	<3	68	<4	7	<10	<1	<1	<1	78	<6
FEB 03...	20	23	<3	62	<4	6	<10	2	<1	<1	82	<6
JUN 15...	50	15	<3	66	<4	6	<10	1	<1	<1	41	<6
AUG 19...	<10	20	<3	52	<4	6	<10	<1	<1	<1	58	<6

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. SOLVED (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. SOLVED (PCI/L AS CS-137)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
DEC 29...	1230	<0.6	<0.6	0.8	<0.6	0.9	<0.6	0.05	0.11
JUN 15...	1300	<0.6	<0.6	0.8	<0.6	0.9	<0.6	0.03	0.06

CROSS-SECTION DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM R BK)	TEMPER- ATURE WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDEDED (MG/L)
FEB 03...	1446	4.5	0.0	82	7.8	9.8	1
03...	1447	3.0	0.0	82	7.7	9.8	1
03...	1448	1.5	0.0	80	7.8	9.8	2
JUN 15...	1301	9.0	7.0	48	8.0	8.5	32
15...	1302	12.5	7.0	48	8.0	8.5	28
15...	1303	14.5	7.0	45	8.0	8.5	32
15...	1304	16.5	7.0	45	8.0	8.5	32
15...	1305	18.5	7.0	45	8.0	8.5	38
15...	1306	20.5	7.0	43	8.0	8.6	--
15...	1307	22.5	7.0	45	8.0	8.6	26
15...	1308	24.5	7.0	48	8.0	8.6	--
15...	1309	27.0	7.0	48	8.0	8.5	--
15...	1310	32.0	7.0	48	8.0	8.5	--

ARKANSAS RIVER BASIN

07083000 HALFMOON CREEK NEAR MALTA, CO--Continued

WATER-QUALITY RECORDS

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
NOV 17...	1305	12	94	0.5	JUN 02...	1430	145	58	8.0
APR 15...	1215	5.6	85	0.5	JUL 16...	1100	112	55	7.0
MAY 12...	1530	18	76	11.0	SEP 17...	1215	23	79	7.0

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 14...	1200	9.7	3	0.08
DEC 29...	1230	3.3	1	0.01
FEB 03...	1445	2.5	1	0.01
APR 29...	1030	6.7	2	0.04
JUN 15...	1300	180	31	15
AUG 19...	1230	31	2	0.14

07083710 ARKANSAS RIVER BELOW EMPIRE GULCH NEAR MALTA, CO

LOCATION.--Lat 39°09'50", long 106°19'10", in NE1/4SW1/4 sec. 22, T.10 S., R.80 W., Lake County, Hydrologic Unit 11020001, at right downstream end of private road bridge, 0.1 mi downstream from Empire Gulch, 0.4 mi downstream from bridge on U.S. Highway 24, 0.6 mi upstream from Dry Union Gulch, and 4.8 mi southeast of Malta.

DRAINAGE AREA.--237 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1990 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,280 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Nov.25 to Feb. 27. Records good except for estimated daily discharges, which are poor. Natural flow of river affected by transmountain diversions, storage reservoirs, diversions for irrigation upstream from station (acreage unknown), and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	65	52	57	42	58	56	127	697	681	199	103
2	70	67	52	56	41	55	54	126	662	716	190	111
3	68	65	52	56	42	55	53	143	629	810	178	100
4	67	64	52	56	42	68	59	163	498	840	171	102
5	68	63	52	57	43	66	59	168	447	748	168	90
6	66	66	51	58	44	65	59	149	451	611	169	89
7	67	66	50	58	45	57	55	153	486	500	158	105
8	70	66	50	59	46	61	56	144	412	586	164	119
9	74	62	48	60	46	61	60	136	371	762	166	101
10	73	60	48	60	47	57	61	143	358	789	164	93
11	73	56	48	61	47	55	62	159	389	823	160	89
12	71	60	48	62	48	51	64	186	439	838	152	85
13	72	60	48	61	49	50	63	255	551	844	154	109
14	72	54	47	61	50	55	62	326	668	803	145	106
15	73	56	46	60	51	52	62	353	802	751	145	100
16	71	54	47	58	51	49	62	371	797	655	140	96
17	69	53	48	56	52	48	64	378	871	550	145	94
18	68	59	49	54	52	49	66	358	868	527	139	90
19	69	64	50	52	52	47	65	356	732	504	127	88
20	67	63	52	50	52	46	71	374	666	594	124	86
21	67	60	55	48	53	42	83	393	738	531	119	84
22	66	65	57	48	54	42	101	414	741	530	118	84
23	64	61	59	48	56	46	102	392	819	512	114	83
24	64	62	60	48	56	52	93	373	929	488	106	82
25	65	59	60	47	56	57	92	369	927	462	101	81
26	85	57	60	46	56	60	104	415	944	457	111	81
27	77	56	60	45	58	59	124	463	862	333	126	79
28	72	55	60	44	59	57	130	493	791	208	123	75
29	75	53	59	44	---	55	135	485	799	205	118	75
30	71	52	59	43	---	53	137	504	769	204	117	70
31	71	---	58	42	---	54	---	588	---	202	109	---
TOTAL	2177	1803	1637	1655	1390	1682	2314	9457	20113	18064	4420	2750
MEAN	70.2	60.1	52.8	53.4	49.6	54.3	77.1	305	670	583	143	91.7
MAX	85	67	60	62	59	68	137	588	944	844	199	119
MIN	64	52	46	42	41	42	53	126	358	202	101	70
AC-FT	4320	3580	3250	3280	2760	3340	4590	18760	39890	35830	8770	5450

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1993, BY WATER YEAR (WY)

	1990	1991	1992	1993
MEAN	77.9	72.4	58.9	55.6
MAX	96.1	92.6	70.7	65.8
(WY)	1991	1991	1992	1992
MIN	67.5	60.1	52.8	47.7
(WY)	1992	1993	1993	1991

SUMMARY- STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1990 - 1993

	1992 CALENDAR YEAR	1993 WATER YEAR	1990 - 1993
ANNUAL TOTAL	43858	67462	
ANNUAL MEAN	120	185	144
HIGHEST ANNUAL MEAN			185
LOWEST ANNUAL MEAN			121
HIGHEST DAILY MEAN	393	944	944
LOWEST DAILY MEAN	46	41	31
ANNUAL SEVEN-DAY MINIMUM	47	42	34
INSTANTANEOUS PEAK FLOW		1030	1030
INSTANTANEOUS PEAK STAGE		4.41	4.41
ANNUAL RUNOFF (AC-FT)	86990	133800	104100
10 PERCENT EXCEEDS	283	587	347
50 PERCENT EXCEEDS	73	69	82
90 PERCENT EXCEEDS	56	48	52

a-Also occurred Jun 10, 1990, gage height, 4.19 ft, from rating curve extended above 500 ft³/s.

07083710 ARKANSAS RIVER BELOW EMPIRE GULCH NEAR MALTA, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1990 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1990 to current year.

WATER TEMPERATURE: May 1990 to current year.

pH: May 1990 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Records for 1992 water year for daily specific conductance are fair, for daily water temperature are good, and for daily pH are poor. Records for 1993 water year for daily specific conductance, daily water temperature, and daily pH are good except for Oct. 1 to Mar. 31, which are poor. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance, daily mean pH, and daily mean water temperature data are available in the district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 311 microsiemens, Sept. 5, 1990; minimum, 90 microsiemens, May 21, 1991.

WATER TEMPERATURE: Maximum, 18.9°C, Aug. 6 1990; minimum, 0.0°C, many days during the winter.

pH: Maximum, 8.9 units, July 15, 28, 30, Aug. 1, 1992, and Apr. 11, 1993; minimum, 7.2 units, Sept. 23, 24, 1993.

EXTREMES FOR 1992 YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 258 microsiemens, Aug. 22; minimum, 120 microsiemens, May 8, 9.

WATER TEMPERATURE: Maximum, 18.7°C, July 6; minimum, 0.1°C, many days during the winter.

pH: Maximum, 8.9 units, July 15, 28, 30, Aug. 1; minimum, 7.3 units, Sept. 8.

EXTREMES FOR 1993 YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 300 microsiemens, Mar. 25; minimum, 48 microsiemens, July 10.

WATER TEMPERATURE: Maximum, 17.8°C, Aug. 24; minimum, 0.0°C, on many days during winter months.

pH: Maximum, 8.9 units, Apr. 11; minimum, 7.2 units, Sept. 23, 24.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	204	210	207	219	225	209	---	153	152	151	182	203
2	206	214	218	223	222	201	---	150	162	156	179	207
3	204	215	216	223	219	207	---	141	165	156	178	206
4	203	214	215	217	215	206	---	142	159	156	181	198
5	204	206	212	215	219	213	---	140	151	154	191	196
6	205	208	212	221	223	216	---	137	151	151	190	196
7	201	209	208	221	216	216	---	129	153	146	195	202
8	201	205	201	219	216	217	199	126	157	140	195	212
9	204	210	203	222	216	211	198	124	158	151	197	221
10	204	209	210	223	213	202	201	135	158	156	202	228
11	203	209	193	222	212	201	185	145	157	160	202	223
12	207	213	204	219	215	201	196	141	152	159	207	217
13	206	205	208	222	211	203	199	136	148	162	205	220
14	209	204	218	219	213	205	193	135	144	173	197	230
15	211	205	219	224	208	202	189	132	144	176	194	222
16	212	205	221	224	207	198	191	135	148	174	201	221
17	212	209	221	224	210	195	175	139	154	175	200	221
18	209	208	222	224	216	195	163	132	157	178	210	215
19	208	192	214	229	211	196	168	130	152	173	205	216
20	207	209	213	225	206	193	169	125	143	173	203	210
21	207	211	219	220	206	192	178	129	142	171	200	217
22	207	211	221	224	210	192	176	134	144	173	203	218
23	206	216	222	223	206	195	175	134	141	181	200	219
24	206	219	224	220	211	201	175	128	139	174	185	218
25	211	212	224	218	209	199	175	135	141	183	190	212
26	213	211	224	219	207	190	180	135	139	174	194	211
27	211	201	225	220	200	200	168	129	142	176	201	212
28	208	210	227	220	203	201	156	134	147	177	201	215
29	216	204	225	222	209	206	152	143	146	177	202	217
30	221	210	226	223	---	207	152	148	149	179	203	218
31	220	---	219	223	---	---	---	151	---	181	209	---
MEAN	208	209	216	222	212	---	---	136	150	167	197	214

07083710 ARKANSAS RIVER BELOW EMPIRE GULCH NEAR MALTA, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.5	7.6	8.0	7.6	8.1	7.8	8.2	7.9	8.3	8.2	8.4	8.0
2	8.5	7.6	8.1	7.7	8.1	7.8	8.2	7.9	8.3	8.2	8.4	8.0
3	8.6	7.7	8.0	7.7	8.0	7.7	8.2	7.9	8.3	8.2	8.5	8.1
4	8.6	7.7	8.0	7.7	8.0	7.7	8.1	7.9	8.3	8.2	8.5	8.2
5	8.5	7.7	8.1	7.7	8.0	7.7	8.2	7.9	8.3	8.2	8.4	8.1
6	8.6	7.8	8.1	7.7	8.1	7.7	8.2	7.9	8.2	8.1	8.4	8.1
7	8.5	7.7	8.1	7.7	8.1	7.7	8.2	8.1	8.2	8.1	8.4	8.0
8	8.5	7.8	8.1	7.7	8.2	7.8	8.3	8.0	8.2	8.1	8.4	8.2
9	8.6	7.9	8.1	7.7	8.2	7.8	8.3	8.0	8.2	8.1	8.4	8.1
10	8.6	7.9	8.2	7.7	8.2	7.9	8.3	8.0	8.2	8.1	8.6	8.1
11	8.6	7.9	8.2	7.7	8.2	7.9	8.3	8.0	8.2	8.0	8.5	8.1
12	8.7	7.9	8.1	7.7	8.2	7.9	8.4	8.0	8.2	8.0	8.6	8.0
13	8.7	8.0	8.1	7.8	8.2	7.9	8.3	8.1	8.3	8.1	8.5	8.1
14	8.6	8.0	8.1	7.7	8.1	7.9	8.3	8.1	8.3	8.0	8.4	8.1
15	8.6	8.0	8.2	7.8	8.1	7.9	8.2	8.1	8.4	8.0	8.5	8.0
16	8.7	8.0	8.2	7.8	8.1	7.8	8.3	8.0	8.2	8.0	8.4	7.9
17	8.7	7.9	8.2	7.8	8.1	7.8	8.3	8.1	8.3	8.0	8.5	7.9
18	8.6	7.9	8.2	7.8	8.1	7.8	8.3	8.2	8.3	8.0	8.5	8.0
19	8.7	7.8	8.2	7.8	8.0	7.8	8.3	8.1	8.1	7.9	8.4	7.7
20	8.5	7.8	8.2	7.7	8.0	7.8	8.3	8.1	8.2	8.0	8.4	7.7
21	8.5	7.7	8.3	7.8	8.2	7.8	8.3	8.1	8.2	8.0	8.4	7.7
22	8.4	7.7	8.2	7.8	8.1	7.9	8.3	8.1	8.3	8.0	8.4	7.7
23	8.4	7.6	8.1	7.8	8.1	7.9	8.3	8.1	8.3	7.9	8.4	7.7
24	8.3	7.6	8.0	7.7	8.1	7.9	8.3	8.2	8.3	8.0	8.4	7.7
25	8.4	7.6	8.2	7.7	8.1	7.9	8.3	8.2	8.3	7.9	8.5	7.7
26	8.3	7.6	8.2	7.8	8.1	7.8	8.3	8.2	8.3	8.0	8.4	7.7
27	8.3	7.6	8.2	7.8	8.2	7.9	8.3	8.2	8.4	8.1	8.5	7.7
28	8.2	7.6	8.3	7.8	8.2	7.9	8.4	8.2	8.4	8.1	8.5	7.7
29	8.1	7.7	8.2	7.9	8.1	7.9	8.4	8.3	8.4	8.1	8.4	7.7
30	8.0	7.6	8.2	7.8	8.1	7.9	8.4	8.2	---	---	8.5	7.7
31	8.0	7.6	---	---	8.1	7.9	8.3	8.3	---	---	---	---
MONTH	8.7	7.6	8.3	7.6	8.2	7.7	8.4	7.9	8.4	7.9	---	---
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	8.1	7.7	8.1	7.8	8.1	---	8.9	8.0	8.4	7.8
2	---	---	8.1	7.7	8.0	7.8	8.7	7.9	8.7	7.7	8.6	7.7
3	---	---	8.2	7.7	8.0	7.8	8.6	8.0	8.6	7.7	8.7	7.8
4	---	---	8.2	7.8	7.9	7.7	8.7	7.9	8.7	7.7	8.6	7.7
5	---	---	8.2	7.8	7.9	7.7	8.7	8.0	8.8	7.7	8.6	7.6
6	---	---	8.2	7.9	8.0	7.6	8.6	7.7	8.5	7.4	8.6	7.5
7	8.3	7.7	8.1	7.8	8.0	7.6	8.7	7.9	8.2	7.4	8.6	7.4
8	8.3	7.7	8.1	7.8	8.0	7.7	8.5	7.8	8.3	7.4	8.6	7.3
9	8.3	7.7	8.0	7.8	7.9	7.6	8.6	7.9	8.2	7.6	8.6	7.6
10	8.2	7.6	8.2	7.8	7.9	7.6	8.6	8.0	8.2	7.4	8.8	7.6
11	8.1	7.6	8.2	7.9	7.9	7.6	8.6	8.2	8.1	7.4	8.8	8.3
12	8.1	7.6	8.1	7.8	7.9	7.6	8.8	7.9	8.1	7.4	8.8	8.2
13	8.1	7.6	8.3	7.8	8.0	7.6	8.7	7.9	8.4	7.4	8.8	8.2
14	8.0	7.6	8.3	8.0	8.0	7.6	8.8	7.9	8.4	7.5	8.8	8.3
15	8.0	7.7	8.3	8.0	8.0	7.7	8.9	7.9	8.4	7.5	8.7	8.2
16	8.0	7.7	8.3	8.0	8.0	7.6	8.8	7.9	8.5	7.5	8.8	8.2
17	8.0	7.6	8.4	8.0	8.0	7.7	8.6	8.0	8.6	7.6	8.8	8.2
18	8.0	7.6	8.3	8.0	8.0	7.7	8.8	7.7	8.5	7.6	8.8	8.0
19	8.0	7.6	8.3	8.0	8.0	7.7	8.6	7.6	8.6	7.6	8.7	8.0
20	8.0	7.7	8.3	8.0	8.0	7.7	8.6	7.7	8.5	7.5	8.8	8.0
21	8.0	7.7	8.2	7.9	8.0	7.7	8.7	7.7	8.5	7.5	8.8	8.0
22	8.0	7.7	8.1	7.9	8.1	7.7	8.8	7.7	8.5	7.5	8.8	8.0
23	8.0	7.7	8.2	7.9	8.1	7.7	8.8	7.6	8.3	7.4	8.8	8.0
24	8.0	7.7	8.2	7.9	8.1	7.7	8.5	7.7	8.2	7.5	8.7	7.9
25	8.0	7.7	8.2	7.9	8.0	7.7	8.7	7.6	8.5	7.6	8.8	7.9
26	8.0	7.7	8.2	7.9	---	---	8.8	7.8	8.4	7.8	8.8	7.9
27	8.0	7.6	8.1	7.8	---	---	8.8	7.8	8.7	7.8	8.8	7.9
28	7.9	7.6	8.1	7.9	---	---	8.9	7.9	8.5	7.6	8.8	7.8
29	7.9	7.5	8.2	7.9	---	---	8.8	7.8	8.5	7.6	8.8	7.8
30	8.1	7.6	8.2	7.9	---	---	8.9	7.7	8.5	7.8	8.8	7.8
31	---	---	8.1	7.9	---	---	8.8	7.8	8.5	7.7	---	---
MONTH	---	---	8.4	7.7	---	---	8.9	---	8.9	7.4	8.8	7.3

07083710 ARKANSAS RIVER BELOW EMPIRE GULCH NEAR MALTA, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.1	4.3	1.5	.2	.2	.1	.2	.1	.2	.1	3.5	.1
2	12.8	4.4	1.8	.2	.2	.2	.2	.1	.2	.1	6.0	.1
3	12.6	4.5	.4	.1	.2	.2	.2	.1	.2	.1	5.8	.1
4	9.3	2.7	.4	.2	.3	.2	.2	.1	.2	.1	3.8	.8
5	9.9	1.5	4.3	.4	.3	.2	.2	.1	.2	.1	5.6	.1
6	11.2	1.8	4.5	1.1	.2	.1	.2	.1	.2	.1	6.5	.1
7	10.2	2.1	5.6	.2	.3	.1	.1	.1	.2	.1	5.4	.1
8	10.3	2.3	4.9	.2	1.0	.1	.2	.1	.2	.1	5.4	.1
9	11.8	2.7	5.7	.1	.3	.1	.2	.1	.2	.1	5.5	.1
10	11.4	2.4	6.5	2.2	.2	.1	.2	.1	.2	.1	5.0	.1
11	12.3	2.4	6.6	1.0	.8	.1	.2	.1	.3	.1	4.7	.1
12	10.4	2.8	4.9	.1	.8	.1	.1	.1	1.0	.1	7.6	.1
13	10.5	3.4	4.9	.1	.2	.1	.2	.1	.2	.1	7.4	.1
14	9.3	2.2	2.5	.2	.2	.2	.2	.1	1.6	.1	7.2	.1
15	11.6	3.2	2.8	.2	.2	.2	.2	.1	2.1	.1	7.6	.1
16	11.2	2.6	3.3	.5	.2	.2	.2	.1	.2	.1	7.9	.1
17	11.0	3.0	2.5	.1	.3	.2	.2	.1	.4	.1	6.5	.1
18	10.5	3.1	2.7	.1	.2	.1	.2	.1	.5	.1	3.9	.1
19	9.2	2.6	3.1	.1	.2	.1	.2	.1	.4	.1	5.2	.1
20	9.9	2.8	1.2	.1	.2	.2	.2	.1	2.0	.1	6.8	.1
21	8.6	1.7	3.9	.1	.2	.2	.2	.1	3.6	.1	4.5	.1
22	9.4	1.6	.3	.1	.2	.2	.2	.1	2.8	.1	6.3	.1
23	8.5	2.6	.2	.2	.2	.2	.2	.1	3.0	.1	5.2	.1
24	9.1	1.6	.2	.2	.2	.2	.2	.1	1.8	.1	7.2	.2
25	8.3	2.1	.7	.1	.2	.1	.2	.1	4.1	.1	8.5	.2
26	7.6	1.6	1.8	.1	.2	.2	.2	.1	2.8	.1	6.7	.2
27	7.4	1.6	3.5	.1	.2	.2	.2	.1	5.1	.1	6.9	1.1
28	5.0	.2	2.7	.1	.2	.2	.2	.1	5.6	.1	6.3	1.2
29	1.9	.2	1.7	.1	.2	.2	.2	.1	5.3	.1	8.2	.7
30	.3	.2	.2	.1	.2	.1	.2	.1	---	---	8.6	1.3
31	.5	.1	---	---	.2	.1	.2	.1	---	---	---	---
MONTH	13.1	.1	6.6	.1	1.0	.1	.2	.1	5.6	.1	---	---

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	13.1	3.6	9.2	3.7	13.0	---	16.8	8.0	10.8	6.8
2	---	---	13.4	3.6	13.6	3.9	12.4	7.1	15.7	8.0	13.6	6.2
3	---	---	12.4	4.5	12.8	5.7	15.9	6.1	15.8	8.0	12.8	5.6
4	---	---	12.0	3.8	12.6	6.2	16.6	7.7	14.7	7.7	15.3	7.0
5	---	---	12.2	3.7	12.3	5.4	16.4	8.3	13.8	7.8	15.6	6.3
6	---	---	11.9	3.8	12.8	6.0	18.7	9.0	14.8	8.8	14.0	5.1
7	9.3	---	10.5	4.4	9.8	5.9	14.5	9.4	17.0	7.3	15.1	5.9
8	8.5	.5	11.1	4.6	11.0	4.7	11.1	9.2	16.6	8.2	15.3	5.8
9	10.4	.3	9.1	5.2	8.9	5.6	15.9	7.6	17.8	8.2	15.5	6.5
10	10.4	1.3	10.7	3.7	11.4	4.3	15.5	7.9	13.9	9.8	15.6	5.6
11	8.5	2.2	12.5	3.6	11.0	2.9	14.6	9.3	14.5	8.5	14.8	5.6
12	11.4	1.4	10.3	5.0	14.3	4.9	13.9	8.6	14.2	7.2	14.9	6.4
13	9.1	1.4	13.7	5.1	14.6	6.4	15.2	8.0	15.0	7.1	15.3	7.8
14	7.6	2.8	12.3	4.8	13.3	6.1	13.7	7.4	15.5	7.2	13.0	6.0
15	7.7	1.0	12.4	4.8	13.5	5.6	14.5	7.2	17.4	7.6	14.2	7.5
16	8.1	2.3	12.0	4.5	10.8	5.2	16.8	6.8	16.3	9.2	11.6	5.9
17	8.5	2.4	11.7	4.3	14.2	4.5	15.3	8.7	16.5	9.4	13.1	5.4
18	7.4	.1	10.9	5.3	15.4	6.0	16.5	7.6	17.3	9.6	11.4	6.5
19	7.3	.5	12.0	5.3	15.5	5.4	12.9	8.0	17.7	7.8	11.5	6.8
20	8.3	.4	12.2	6.4	15.7	9.1	13.3	7.1	15.6	7.8	11.7	5.6
21	10.7	.8	11.0	6.2	14.5	8.1	15.4	8.3	14.9	7.7	12.5	6.5
22	9.6	1.7	10.0	4.5	15.0	7.1	14.7	8.0	14.1	9.0	14.0	4.5
23	7.3	2.0	11.8	5.2	16.2	7.7	14.9	8.1	13.1	8.9	14.6	5.1
24	11.6	.2	9.7	5.8	13.8	8.6	14.5	7.8	10.2	6.7	13.0	5.2
25	11.7	1.6	10.8	5.1	---	8.4	14.7	9.4	11.1	6.0	12.5	6.2
26	11.4	2.2	12.7	5.9	---	---	16.3	9.3	13.1	6.5	11.8	3.1
27	12.8	2.3	9.5	4.7	---	---	15.3	7.6	13.7	4.7	12.2	3.1
28	13.0	3.1	10.1	5.3	---	---	16.9	7.7	14.9	5.0	13.1	3.4
29	13.6	3.3	10.1	4.0	---	---	13.9	7.7	12.9	5.5	13.2	3.8
30	13.3	3.9	9.4	5.8	---	---	16.9	7.0	13.4	6.8	13.8	3.7
31	---	---	9.2	4.7	---	---	17.8	9.4	12.2	7.7	---	---
MONTH	---	---	13.7	3.6	---	---	18.7	---	17.8	4.7	15.6	3.1

07083710 ARKANSAS RIVER BELOW EMPIRE GULCH NEAR MALTA, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	220	199	204	202	----	246	214	188	118	90	148	201
2	215	202	205	197	----	250	216	192	116	78	149	198
3	213	182	204	206	----	244	208	192	117	64	157	198
4	213	202	204	188	----	235	209	187	120	62	160	196
5	218	196	205	175	----	222	215	182	120	59	167	186
6	220	201	208	173	----	229	225	186	116	59	162	186
7	214	206	207	176	----	232	223	188	112	63	157	192
8	212	205	201	179	----	231	214	182	111	62	160	196
9	203	206	198	182	----	234	212	182	112	53	165	197
10	200	211	202	186	----	225	214	184	113	62	171	201
11	201	216	203	198	----	226	217	185	107	79	173	193
12	206	200	202	200	----	229	216	178	101	78	174	194
13	206	208	206	----	----	219	210	158	96	77	178	202
14	203	200	206	209	----	211	210	141	91	76	169	203
15	204	199	205	213	----	218	205	134	88	78	168	205
16	201	194	206	210	----	215	212	134	90	83	166	204
17	202	196	201	213	----	213	216	137	86	80	169	200
18	201	195	205	215	----	217	218	143	86	80	177	185
19	206	190	203	214	223	219	211	144	86	86	191	183
20	205	183	203	205	237	217	204	142	86	93	193	187
21	207	201	204	210	247	214	205	141	83	98	179	206
22	207	188	207	206	242	222	201	135	83	98	173	203
23	204	205	204	208	238	227	198	112	83	97	174	207
24	206	211	202	210	245	197	195	110	79	92	195	206
25	207	209	204	200	242	226	196	110	75	90	197	188
26	208	206	205	194	240	228	203	109	83	88	195	187
27	207	205	198	194	245	215	202	110	82	121	184	191
28	208	199	201	195	232	212	200	112	77	157	170	210
29	206	205	208	189	----	216	202	111	76	152	170	200
30	204	206	216	----	----	220	194	111	87	152	180	211
31	204	----	215	----	----	221	----	117	----	146	202	----
MEAN	207	201	205	----	----	224	209	150	96	89	173	197

07083710 ARKANSAS RIVER BELOW EMPIRE GULCH NEAR MALTA, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.5	7.3	8.1	7.6	8.2	7.7	8.3	8.1	8.1	8.0	8.2	7.8
2	8.5	7.3	8.1	7.6	8.3	7.9	8.3	8.2	8.1	8.0	8.1	7.9
3	8.4	7.3	8.0	7.6	8.4	8.0	8.3	8.1	8.1	8.0	8.0	7.9
4	8.4	7.4	8.0	7.6	8.2	8.0	---	---	8.0	8.0	8.0	7.9
5	8.6	7.3	8.0	7.6	8.4	8.0	---	---	8.0	8.0	8.0	7.8
6	8.3	7.4	8.0	7.6	8.4	7.9	---	---	8.0	8.0	8.1	7.9
7	8.2	7.3	8.0	7.6	8.4	7.9	---	---	8.1	8.0	---	---
8	8.2	7.3	8.1	7.6	8.2	7.9	---	---	8.2	8.0	---	---
9	8.4	7.3	8.1	7.6	8.4	7.9	---	---	8.2	8.1	---	---
10	8.4	7.3	8.1	7.6	8.4	7.9	---	---	8.2	8.1	---	---
11	8.5	7.4	7.9	7.6	8.4	7.9	---	---	8.2	8.0	8.1	7.8
12	8.5	7.4	8.0	7.6	8.1	7.9	---	---	8.0	7.7	8.1	7.9
13	8.5	7.4	8.0	7.7	8.1	7.9	---	---	8.0	7.7	8.1	7.8
14	8.4	7.4	8.1	7.7	8.0	7.9	8.1	7.9	8.0	7.9	---	---
15	8.3	7.6	8.1	7.7	8.0	7.9	8.1	8.0	7.9	7.8	---	---
16	8.5	7.6	8.1	7.6	8.0	7.8	8.1	8.0	7.8	7.7	---	---
17	8.5	7.6	8.2	7.6	7.9	7.8	8.1	8.0	8.0	7.7	---	---
18	8.6	7.6	8.3	7.8	8.0	7.7	8.1	8.0	7.9	7.6	7.9	7.7
19	8.5	7.6	8.4	7.8	8.0	7.6	8.0	7.9	8.4	7.6	8.0	7.8
20	8.5	7.6	8.2	7.5	8.1	7.6	8.0	8.0	8.2	7.9	8.0	7.8
21	8.5	7.6	8.0	7.5	8.1	7.6	8.0	8.0	8.0	7.8	8.0	7.7
22	8.6	7.6	8.0	7.6	8.1	7.6	8.0	8.0	7.9	7.6	8.0	7.7
23	8.6	7.6	8.0	7.5	8.0	7.6	8.0	7.9	8.0	7.8	7.9	7.7
24	8.5	7.6	8.1	7.5	8.0	7.6	8.0	7.9	8.1	7.8	8.2	7.7
25	8.3	7.6	8.0	7.7	8.0	7.6	7.9	7.8	8.2	7.9	8.2	7.7
26	8.4	7.6	8.1	7.7	8.1	7.6	8.0	7.9	8.1	7.8	8.3	8.1
27	8.3	7.6	8.1	7.7	7.9	7.7	8.0	7.9	8.0	7.8	8.4	8.2
28	8.3	7.6	8.1	7.7	7.9	7.8	8.0	7.9	8.1	7.8	8.5	8.2
29	8.4	7.6	8.1	7.7	8.1	7.9	8.0	8.0	---	---	8.5	8.2
30	8.3	7.6	8.1	7.7	8.5	8.0	8.0	8.0	---	---	8.5	8.3
31	8.3	7.6	---	---	8.3	8.1	8.1	8.0	---	---	8.5	8.3
MONTH	8.6	7.3	8.4	7.5	8.5	7.6	---	---	8.4	7.6	---	---
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	8.3	8.0	7.8	7.9	7.7	7.8	7.5	8.8	7.8	8.4	7.8
2	8.5	8.3	8.0	7.7	7.9	7.7	7.9	7.6	8.8	7.8	8.5	7.8
3	8.5	8.3	7.9	7.6	8.0	7.8	7.8	7.6	8.8	7.9	8.6	7.9
4	8.5	8.3	7.9	7.5	8.0	7.9	7.8	7.7	8.7	7.8	8.6	7.9
5	8.5	8.3	7.8	7.6	8.0	7.9	7.9	7.7	8.7	7.8	8.6	7.8
6	8.5	8.3	7.8	7.7	8.0	7.9	8.0	7.8	8.8	7.8	8.8	7.8
7	8.5	8.3	7.8	7.7	8.0	7.9	8.0	7.8	8.6	7.8	8.5	7.7
8	8.7	8.3	7.9	7.7	8.1	7.9	8.2	7.9	8.5	7.8	8.6	7.6
9	8.5	8.3	7.9	7.7	8.1	7.9	8.1	7.9	8.7	7.8	8.5	7.7
10	8.4	8.3	7.9	7.6	8.1	7.9	8.0	7.8	8.5	7.8	8.5	7.7
11	8.9	8.3	7.9	7.6	8.1	7.9	8.0	7.8	8.7	7.8	8.5	7.6
12	8.5	8.3	8.0	7.6	8.0	7.8	8.0	7.8	8.7	7.9	8.7	7.6
13	8.4	8.3	8.0	7.7	8.0	7.7	8.1	7.8	8.5	7.9	8.2	7.6
14	8.5	8.3	7.9	7.6	7.9	7.7	8.1	7.9	8.6	7.8	8.7	7.6
15	8.5	8.3	7.8	7.6	7.9	7.7	8.2	7.9	8.5	7.9	8.6	7.6
16	8.5	8.3	7.8	7.6	7.9	7.7	8.1	7.8	8.6	7.9	8.5	7.6
17	8.4	8.3	7.8	7.6	7.9	7.7	8.1	7.8	8.6	7.9	8.6	7.6
18	8.4	8.2	7.8	7.7	7.9	7.7	8.3	7.9	8.7	7.9	8.6	7.6
19	8.3	8.1	7.8	7.7	8.0	7.8	8.3	7.9	8.7	7.9	8.5	7.6
20	8.3	8.1	7.8	7.6	8.0	7.8	8.1	7.6	8.7	7.9	8.4	7.5
21	8.2	8.1	7.8	7.6	8.0	7.8	8.0	7.5	8.6	7.9	8.5	7.6
22	8.2	8.1	7.8	7.6	8.0	7.8	8.0	7.5	8.6	7.9	8.3	7.4
23	8.2	8.1	7.8	7.6	7.9	7.7	8.0	7.5	8.7	7.9	8.1	7.2
24	8.2	8.1	7.8	7.7	7.9	7.6	8.0	7.5	---	---	8.0	7.2
25	8.2	8.0	7.8	7.7	7.7	7.5	8.0	7.4	---	---	8.0	7.3
26	8.2	8.0	7.8	7.7	7.7	7.5	8.2	7.4	---	---	8.1	7.4
27	8.1	7.9	7.8	7.7	7.8	7.5	8.4	7.4	---	---	8.1	7.4
28	8.1	7.8	7.8	7.7	7.8	7.5	8.6	7.8	---	---	8.1	7.4
29	8.0	7.7	7.9	7.7	7.7	7.5	8.6	7.8	---	---	8.1	7.5
30	7.9	7.8	7.9	7.7	7.8	7.6	8.6	7.8	---	---	8.0	7.5
31	---	---	7.8	7.7	---	---	8.7	7.8	8.4	7.9	---	---
MONTH	8.9	7.7	8.0	7.5	8.1	7.5	8.7	7.4	---	---	8.8	7.2

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.1	3.9	1.5	.1	.0	.0	.0	.0	.1	.1	2.7	1.5
2	12.6	3.5	1.0	.1	.0	.0	.0	.0	.1	.1	2.6	1.1
3	11.5	3.8	.9	.1	.0	.0	.0	.0	.1	.0	1.4	.1
4	10.4	3.1	1.6	.1	.0	.0	.0	.0	.1	.0	2.6	.1
5	11.9	5.6	2.7	.1	.0	.0	.0	.0	.1	.0	2.8	.0
6	7.0	2.4	3.5	.1	.0	.0	.0	.0	.1	.0	4.7	.1
7	7.3	.1	4.1	.1	.0	.0	.0	.0	.1	.1	4.8	.1
8	8.5	1.8	4.7	.1	.0	.0	.0	.0	.1	.1	5.0	.0
9	10.0	1.6	4.6	.5	.0	.0	.0	.0	.1	.1	2.8	.1
10	10.6	2.1	3.6	.1	.0	.0	.0	.0	.1	.1	3.8	.1
11	10.6	2.3	.6	.1	.0	.0	.0	.0	.1	.1	1.1	.1
12	11.0	2.4	2.7	.1	.0	.0	.0	.0	.1	.1	.2	.1
13	9.3	2.8	3.5	.1	.0	.0	.2	.0	.1	.1	3.4	.1
14	9.5	4.2	4.6	.1	.0	.0	.1	.1	.1	.1	5.2	.1
15	9.6	2.5	4.2	.1	.0	.0	.1	.1	.1	.1	5.7	.1
16	9.3	2.6	4.7	.3	.0	.0	.1	.1	.3	.1	6.1	.1
17	8.5	1.4	3.3	.1	.0	.0	.1	.1	.7	.3	5.9	.4
18	9.7	2.1	2.9	.0	.0	.0	.1	.1	1.0	.7	6.2	.1
19	9.9	1.6	2.5	.0	.0	.0	.1	.1	1.9	1.0	6.2	.1
20	8.0	1.7	2.9	.0	.0	.0	.1	.1	1.5	1.3	6.6	.5
21	8.9	2.6	.3	.0	.0	.0	.1	.1	1.7	1.5	7.2	.1
22	9.5	2.1	.6	.0	.0	.0	.1	.1	1.9	1.7	7.3	.1
23	9.8	2.1	.1	.0	.0	.0	.1	.1	2.0	1.9	8.3	.1
24	8.0	2.7	.1	.0	.0	.0	.2	.1	2.2	2.0	12.2	.1
25	8.8	3.5	.1	.0	.0	.0	.1	.1	2.5	2.0	10.5	.1
26	8.7	2.0	.1	.0	.0	.0	.1	.1	2.7	2.1	6.2	.4
27	6.7	3.7	.0	.0	.0	.0	.1	.1	2.5	2.0	4.9	.1
28	7.3	3.8	.0	.0	.0	.0	.1	.1	3.6	1.8	6.8	.0
29	7.5	3.6	.0	.0	.0	.0	.1	.1	---	---	8.5	.0
30	5.6	1.6	.0	.0	.0	.0	.1	.1	---	---	6.9	.4
31	3.7	.2	---	---	.0	.0	.1	.1	---	---	5.7	.0
MONTH	13.1	.1	4.7	.0	.0	.0	.2	.0	3.6	.0	12.2	.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	.0	10.2	2.5	12.5	5.2	14.3	6.1	16.4	8.0	12.3	5.7
2	4.5	.0	10.8	1.2	11.0	5.3	14.2	6.7	16.4	8.6	12.9	6.4
3	7.8	.0	10.8	2.5	10.1	4.7	12.7	7.0	16.9	9.1	16.0	4.8
4	7.9	.0	11.5	2.2	9.2	3.6	9.8	5.9	13.7	9.2	16.6	6.1
5	6.7	.9	8.2	3.3	11.5	5.1	12.4	5.5	14.9	9.3	16.1	8.6
6	6.0	.6	7.4	1.7	10.8	4.8	13.6	5.6	16.1	8.6	15.5	7.8
7	6.0	.0	7.9	2.5	10.4	5.0	14.4	6.3	13.8	7.1	12.4	7.3
8	7.6	.0	10.8	1.0	9.4	4.3	11.6	7.7	13.6	7.9	15.3	5.6
9	8.9	.0	9.9	1.4	9.5	4.9	13.3	6.4	14.7	8.3	16.8	5.9
10	7.4	.3	13.3	1.3	13.6	4.6	12.8	6.5	14.0	10.2	14.1	6.8
11	8.6	.0	13.4	2.1	12.7	5.4	13.2	7.6	16.3	8.6	15.4	5.4
12	7.4	1.0	12.5	3.3	13.9	5.8	13.3	7.8	15.3	8.3	13.8	5.4
13	7.6	.0	12.4	4.2	13.8	6.0	13.4	7.2	13.1	9.1	9.6	4.7
14	8.6	.0	10.6	2.5	13.8	5.5	13.5	8.1	13.2	8.6	12.7	2.6
15	7.6	.0	10.1	2.6	11.7	4.5	14.6	8.2	14.4	6.7	13.9	3.3
16	8.2	.0	9.9	3.8	12.5	4.4	14.4	7.2	16.2	7.0	12.3	4.7
17	8.6	.0	7.8	3.9	11.6	5.1	13.0	7.7	14.8	7.8	14.3	5.6
18	6.9	.0	11.4	3.9	10.4	5.7	14.3	7.4	16.2	8.3	11.4	5.2
19	5.8	.0	10.1	3.6	13.3	4.8	13.6	7.9	14.9	9.6	11.6	4.9
20	8.5	.0	11.9	4.4	13.8	6.5	12.9	8.1	15.6	8.5	12.9	2.7
21	10.3	.0	11.4	4.4	12.4	7.2	14.0	7.9	13.7	9.3	13.5	3.7
22	10.7	.9	9.6	4.3	13.9	6.2	13.3	6.4	14.8	8.1	13.3	4.0
23	9.0	2.2	11.9	3.9	13.4	6.4	11.1	5.9	16.6	6.6	14.5	6.5
24	7.4	.8	9.8	4.7	12.4	4.2	14.0	7.8	17.8	7.2	11.6	4.6
25	12.4	.6	12.8	4.0	13.2	5.2	11.7	5.9	16.6	8.2	11.3	3.4
26	11.8	1.4	10.1	5.9	13.3	5.7	14.2	6.9	12.5	9.4	11.9	4.1
27	10.3	2.7	10.1	4.7	12.8	4.4	14.8	5.4	11.2	7.6	12.2	3.4
28	12.0	2.5	9.3	4.9	13.2	5.2	16.2	7.0	14.6	8.0	12.8	3.5
29	12.0	3.7	11.7	4.5	14.1	5.4	14.6	8.2	13.4	7.6	12.2	3.9
30	9.7	2.3	12.8	4.7	12.9	5.5	13.5	8.0	13.6	8.6	10.6	3.4
31	---	---	12.7	5.1	---	---	16.3	8.3	15.5	8.5	---	---
MONTH	12.4	.0	13.4	1.0	14.1	3.6	16.3	5.4	17.8	6.6	16.8	2.6
YEAR	17.8	.0										

07084500 LAKE CREEK ABOVE TWIN LAKES RESERVOIR, CO

LOCATION.--Lat 39°03'47", long 106°24'26", Lake County, Hydrologic Unit 11020001, on left bank 1.2 mi upstream from water line of Twin Lakes Reservoir at elevation 9,200 ft and 1.9 mi southwest of village of Twin Lakes.

DRAINAGE AREA.--75 mi².

PERIOD OF RECORD.--April 1946 to September 1962, October 1963 to current year. Monthly discharge only for some periods, published in WSP 1241, 1311, and 1731.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1711: 1951(M), 1952.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,310 ft above sea level, from topographic map. Prior to May 20, 1950, at site 190 ft downstream, at different datum. May 20, 1950, to Apr. 7, 1953, at site 10 ft upstream, at present datum.

REMARKS.--Estimated daily discharges: Nov. 1 to Apr. 9, and Apr. 15-21. Records good except for estimated daily discharges, which are poor. No diversion upstream from station. Records include inflow from Roaring Fork River in Colorado River basin through Twin Lakes tunnel.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	28	15	11	12	8.0	8.0	21	1080	1270	274	85
2	30	26	16	10	11	7.8	8.2	23	990	1260	251	84
3	29	24	17	11	11	7.8	8.0	26	876	1210	225	74
4	29	22	16	10	10	8.0	8.4	31	658	963	208	75
5	28	20	15	10	10	8.4	8.2	34	587	659	209	82
6	29	20	15	10	11	8.2	8.0	31	609	591	202	83
7	27	21	34	10	11	8.2	7.8	31	589	646	182	106
8	34	21	37	11	11	8.4	7.6	31	486	774	171	97
9	29	21	26	11	10	8.6	8.0	30	430	721	207	88
10	29	21	30	11	10	8.4	8.2	68	447	727	199	98
11	29	20	24	11	9.8	8.2	8.2	110	570	787	215	91
12	29	19	17	11	9.4	8.0	8.3	102	738	797	184	69
13	28	19	16	10	9.0	8.2	8.3	155	993	779	165	97
14	27	20	15	10	8.6	8.4	8.5	191	1140	713	162	74
15	27	21	14	11	8.0	8.6	9.1	273	1340	673	150	111
16	26	21	14	11	7.6	8.8	9.6	396	1370	654	134	102
17	26	22	13	11	7.6	9.0	9.8	436	1250	620	128	85
18	24	25	13	10	7.4	9.0	9.8	437	1080	551	108	68
19	25	32	13	10	7.4	8.8	11	447	1010	510	131	69
20	24	43	13	10	7.2	8.4	11	479	1110	480	97	66
21	24	30	13	10	7.2	8.4	12	602	1240	433	95	51
22	25	40	13	10	7.0	8.6	12	673	1320	424	133	59
23	25	38	13	9.8	7.0	8.6	12	605	1410	387	132	75
24	25	37	12	9.8	7.2	8.4	12	619	1380	344	121	71
25	27	25	12	10	7.6	8.4	12	647	1290	319	114	51
26	30	17	11	10	7.8	8.2	13	841	1300	318	96	44
27	30	17	11	11	8.0	8.0	16	814	1310	323	125	42
28	31	17	11	11	8.2	7.8	18	811	1250	310	114	37
29	30	17	11	11	---	8.0	21	821	1300	298	106	49
30	29	16	11	11	---	7.8	23	882	1350	287	85	47
31	29	---	11	12	---	7.8	---	1010	---	286	83	---
TOTAL	865	720	502	325.6	249.0	257.2	325.0	11677	30503	19114	4806	2230
MEAN	27.9	24.0	16.2	10.5	8.89	8.30	10.8	377	1017	617	155	74.3
MAX	34	43	37	12	12	9.0	23	1010	1410	1270	274	111
MIN	24	16	11	9.8	7.0	7.8	7.6	21	430	286	83	37
AC-FT	1720	1430	996	646	494	510	645	23160	60500	37910	9530	4420

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1993, BY WATER YEAR (WY)

	MEAN	43.2	27.4	19.4	15.0	13.4	13.4	30.8	319	863	413	129	65.7
MAX	185	90.0	60.0	35.0	35.0	40.0	104	704	1579	939	295	258	
(WY)	1962	1962	1962	1962	1962	1962	1962	1970	1978	1957	1983	1961	
MIN	18.8	12.4	10.3	8.68	7.00	5.00	10.1	101	415	81.3	42.2	23.5	
(WY)	1957	1989	1989	1981	1948	1948	1983	1983	1954	1977	1950	1974	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1946 - 1993
ANNUAL TOTAL	46336.9	71573.8	
ANNUAL MEAN	127	196	163
HIGHEST ANNUAL MEAN			258
LOWEST ANNUAL MEAN			78.6
HIGHEST DAILY MEAN	736	1410	2570
LOWEST DAILY MEAN	a 7.8	b 7.0	c 5.0
ANNUAL SEVEN-DAY MINIMUM	7.9	7.2	d 5.0
INSTANTANEOUS PEAK FLOW		1650	d 3270
INSTANTANEOUS PEAK STAGE		e 4.69	5.08
ANNUAL RUNOFF (AC-FT)	91910	142000	118100
10 PERCENT EXCEEDS	440	731	540
50 PERCENT EXCEEDS	29	26	33
90 PERCENT EXCEEDS	9.8	8.2	11

a-Also occurred Feb 20, 24.

b-Also occurred Feb 23.

c-Also occurred Mar 2-31, 1948.

d-From rating curve extended above 1400 ft³/s.

e-Maximum gage height, 4.92 ft, Jun 16.

LOCATION.--Lat 39°02'34", long 106°15'55", in SE¹/4SW¹/4 sec.31, T.11 S., R.79 W., Chaffee County, Hydrologic Unit 11020001, on right bank at Granite, 100 ft east of U.S. Highway 24, 100 ft downstream from county bridge, and 200 ft upstream from Cache Creek.

PERIOD OF RECORD.--April to October 1895, May to December 1897, August to September 1898, March to October 1899, April to May 1901 (gage heights and discharge measurements only in 1895, 1899, and 1901), April 1910 to current year. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,914.86 ft above sea level, supplementary adjustment of 1960. Prior to Apr. 6, 1910, nonrecording gages near present site at different datums. Apr. 6, 1910 to Oct. 25, 1917, water-stage recorder or nonrecording gage at site 832 ft upstream, at different datum. Oct. 26, 1917 to Oct. 26, 1960, water-stage recorder at site 168 ft downstream, at present datum.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	110	145	210	230	453	270	440	1660	1780	512	278
2	109	115	150	206	229	451	220	430	1730	1650	486	277
3	107	116	151	206	232	448	213	447	1740	1560	472	252
4	104	129	150	210	225	448	214	469	1660	1630	445	225
5	104	126	148	206	232	455	225	494	1490	1500	481	213
6	103	126	144	203	232	456	227	456	1330	1240	505	213
7	103	125	145	200	234	456	220	465	1330	952	520	228
8	104	118	145	204	245	451	209	571	1220	1100	552	259
9	112	114	143	206	264	455	167	617	1040	1490	564	241
10	110	113	177	206	277	460	114	629	872	1490	517	268
11	108	114	138	206	277	460	111	649	798	1520	494	288
12	107	108	136	210	280	457	115	731	872	1620	512	285
13	105	106	143	208	281	451	115	861	1060	1720	526	308
14	102	104	143	206	284	465	157	958	1500	1690	536	268
15	103	102	143	227	281	465	202	1040	2150	1560	531	234
16	105	100	167	244	281	465	203	1050	2320	1390	499	257
17	105	98	190	243	284	463	203	1210	2410	1350	455	272
18	102	98	198	242	285	456	213	1460	2410	1330	370	281
19	102	97	204	238	285	458	227	1490	2230	1260	342	281
20	101	96	215	239	285	459	269	1620	1890	1030	356	280
21	100	97	190	240	285	461	281	1690	1700	1110	361	280
22	103	97	192	238	310	463	334	1740	1810	1330	363	291
23	103	97	190	238	375	470	366	1760	2000	1330	334	293
24	102	94	195	242	385	475	380	1780	2060	1280	326	312
25	105	93	198	242	405	480	370	1710	1880	1180	330	322
26	127	94	197	235	435	489	389	1740	1740	878	370	317
27	122	93	200	238	445	500	410	1870	1760	609	371	317
28	117	92	199	235	440	491	425	1870	1800	453	327	326
29	119	93	199	231	---	488	445	1480	1790	448	303	342
30	117	115	203	230	---	456	455	1470	1780	455	301	346
31	113	---	213	230	---	372	---	1540	---	499	293	---
TOTAL	3330	3180	5351	6919	8303	14277	7749	34737	50032	38434	13354	8354
MEAN	107	106	173	223	297	461	258	1121	1668	1240	431	278
MAX	127	129	215	244	445	500	455	1870	2410	1780	564	346
MIN	100	92	136	200	225	372	111	430	798	448	293	213
AC-FT	6610	6310	10610	13720	16470	28320	15370	68900	99240	76230	26490	16570

MEAN	156	127	101	96.9	103	121	239	690	1265	896	540	248
MAX	356	337	448	419	526	500	667	1711	2146	2367	1239	546
(WY)	1977	1983	1983	1983	1985	1985	1962	1984	1984	1983	1984	1961
MIN	82.4	64.3	48.5	39.8	45.0	55.0	97.1	191	432	217	151	104
(WY)	1932	1945	1977	1918	1919	1919	1933	1935	1934	1934	1934	1990

ANNUAL TOTAL	124062		194020			
ANNUAL MEAN	339		532		383	
HIGHEST ANNUAL MEAN					687	1984
LOWEST ANNUAL MEAN					188	1934
HIGHEST DAILY MEAN	1270	Jun 27	2410	Jun 17	4990	Jun 30 1957
LOWEST DAILY MEAN	92	Nov 28	92	Nov 28	11	Mar 15 1918
ANNUAL SEVEN-DAY MINIMUM	94	Nov 23	94	Nov 23	31	Jan 10 1918
INSTANTANEOUS PEAK FLOW			2440	Jun 17	5360	Jun 28 1957
INSTANTANEOUS PEAK STAGE			5.42	Jun 17	7.20	Jun 28 1957
ANNUAL RUNOFF (AC-FT)	246100		384800		277800	
10 PERCENT EXCEEDS	757		1560		1040	
50 PERCENT EXCEEDS	265		285		165	
90 PERCENT EXCEEDS	107		107		73	

07086500 CLEAR CREEK ABOVE CLEAR CREEK RESERVOIR, CO

LOCATION.--Lat 39°01'05", long 106°16'38", in SE¹/₄ sec.12, T.12 S., R.80 W., Chaffee County, Hydrologic Unit 11020001, on right bank 0.5 mi upstream from water line of Clear Creek Reservoir at elevation 8,875 ft, 1.5 mi downstream from unnamed tributary, and 1.9 mi southwest of Granite.

DRAINAGE AREA.--67.1 mi².

PERIOD OF RECORD.--May 1946 to current year. Monthly discharge only for some periods, published in WSP 1241, and 1311.

REVISED RECORDS.--WSP 2121: Drainage area. WDR CO-91-1: 1990 (M).

GAGE.--Water-stage recorder. Elevation of gage is 8,885 ft above sea level, from topographic map. May 7, 1946, to Apr. 20, 1954, water-stage recorder at site 133 ft upstream at different datum. Apr. 21 1954 to May 28, 1958, water-stage recorder 333 ft upstream at different datum. Datum raised 2.19 ft, Apr. 21, 1954.

REMARKS.--Estimated daily discharges: Nov. 3-9, and Nov. 12 to Mar. 22. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 250 acres 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	19	15	16	13	9.6	12	26	395	408	108	51
2	32	19	15	16	12	9.4	11	25	370	395	106	53
3	31	20	15	15	12	9.2	12	28	311	389	100	49
4	30	19	14	16	11	9.0	12	32	243	316	100	46
5	30	18	14	15	11	9.0	12	36	215	239	90	43
6	29	18	14	15	12	9.0	13	34	211	207	88	42
7	28	18	14	14	12	9.2	12	33	207	211	78	45
8	27	19	14	15	12	9.2	12	31	179	243	86	54
9	28	19	14	14	11	9.4	13	32	159	239	96	48
10	28	19	15	14	11	9.5	13	33	150	247	88	45
11	26	19	15	13	11	9.5	13	42	175	260	96	43
12	26	18	15	12	11	9.3	13	51	222	260	84	41
13	25	18	15	11	11	9.1	14	67	316	256	75	45
14	24	19	14	11	10	9.2	14	92	421	239	78	46
15	24	20	15	12	10	9.2	11	113	492	234	72	45
16	24	20	15	12	9.8	9.4	12	135	492	230	67	44
17	24	21	16	13	9.8	9.4	12	153	477	207	63	43
18	24	21	16	13	9.6	9.6	14	153	370	193	59	42
19	23	20	17	13	9.6	9.4	12	166	306	179	59	40
20	23	20	17	13	9.8	9.0	12	172	348	169	57	40
21	23	19	18	12	9.8	9.0	12	189	414	162	57	39
22	21	18	18	12	9.8	8.8	13	211	427	156	70	37
23	20	18	18	13	9.8	9.2	14	193	463	141	63	35
24	20	17	18	13	9.6	9.8	14	203	401	132	57	34
25	20	16	18	12	9.4	10	14	218	376	122	55	33
26	23	15	18	11	9.4	11	14	269	414	122	53	33
27	22	15	17	11	9.6	11	18	278	408	122	53	32
28	21	16	16	11	9.6	9.8	21	265	389	115	53	32
29	20	16	16	12	---	9.2	23	274	421	113	50	31
30	20	15	16	12	---	9.2	26	306	434	113	54	30
31	19	---	16	13	---	9.2	---	364	---	113	54	---
TOTAL	768	549	488	405	295.6	291.8	418	4224	10206	6532	2269	1241
MEAN	24.8	18.3	15.7	13.1	10.6	9.41	13.9	136	340	211	73.2	41.4
MAX	33	21	18	16	13	11	26	364	492	408	108	54
MIN	19	15	14	11	9.4	8.8	11	25	150	113	50	30
AC-FT	1520	1090	968	803	586	579	829	8380	20240	12960	4500	2460

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1993, BY WATER YEAR (WY)

	MEAN	29.7	19.7	15.0	12.2	11.3	11.1	18.6	109	298	171	70.7	42.4
MAX	71.2	33.7	25.0	22.0	25.0	28.0	65.0	203	531	771	166	97.7	
(WY)	1962	1987	1962	1962	1962	1962	1962	1984	1952	1957	1984	1970	
MIN	15.5	7.77	8.50	5.50	5.00	5.00	6.50	40.2	89.4	41.8	30.6	17.8	
(WY)	1979	1956	1956	1964	1964	1948	1964	1975	1977	1977	1974	1974	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1946 - 1993
ANNUAL TOTAL	16916.6	27687.4	
ANNUAL MEAN	46.2	75.9	67.7
HIGHEST ANNUAL MEAN			134
LOWEST ANNUAL MEAN			29.3
HIGHEST DAILY MEAN	189	^a 492	1300
LOWEST DAILY MEAN	^b 8.0	8.8	^c 5.0
ANNUAL SEVEN-DAY MINIMUM	8.1	9.1	^d 5.0
INSTANTANEOUS PEAK FLOW		625	^d 1300
INSTANTANEOUS PEAK STAGE		4.69	^e 5.22
ANNUAL RUNOFF (AC-FT)	33550	54920	49040
10 PERCENT EXCEEDS	122	243	192
50 PERCENT EXCEEDS	21	21	24
90 PERCENT EXCEEDS	10	9.8	10

a-Also occurred Jun 16.

b-Also occurred Mar 14-17, 20, 21.

c-Many days some years.

d-Maximum daily discharge.

e-Maximum gage height recorded, present site and datum.

07087200 ARKANSAS RIVER AT BUENA VISTA, CO

LOCATION.--Lat 38°50'57", long 106°07'27", in NW1/4NW1/4 sec.9, T.14 S., R.78 W., Chaffee County, Hydrologic Unit 11020001, on right bank at northeast corner of Buena Vista city limits and 1.8 mi upstream from Cottonwood Creek.

DRAINAGE AREA.--611 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to September 1980, October 1986 to September 1993 (Discontinued).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,920 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 1 to Feb. 3. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions (see elsewhere in this report), storage reservoirs, diversions upstream from station for irrigation of 7,400 acres, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	151	170	230	230	443	244	451	2090	2350	592	412
2	145	154	180	230	235	437	227	466	2120	2270	589	422
3	143	151	190	220	240	435	226	486	1880	2100	615	406
4	140	149	170	220	244	436	236	525	1730	2090	575	374
5	140	154	180	220	246	442	238	495	1600	1820	588	363
6	140	163	185	210	251	449	232	495	1560	1590	611	363
7	139	158	190	220	250	442	221	608	1450	1270	612	368
8	138	152	190	225	254	444	227	749	1240	1250	647	386
9	144	153	195	225	278	445	150	736	1060	1710	672	320
10	144	151	190	225	296	450	147	746	964	1720	626	341
11	140	151	185	220	294	450	151	825	1050	1800	595	370
12	140	141	180	220	292	443	153	982	1360	1890	599	363
13	140	150	180	220	291	439	149	1110	1900	2020	603	384
14	140	143	175	220	288	469	235	1270	2720	1980	615	375
15	139	142	180	220	297	468	242	1340	2920	1840	604	317
16	141	132	190	215	296	451	238	1480	3010	1640	574	336
17	140	131	195	210	297	453	247	1790	2930	1590	539	346
18	135	130	200	220	290	455	252	1720	2740	1560	453	357
19	133	127	210	220	301	457	251	1840	2430	1510	418	351
20	133	130	225	220	302	455	295	1930	2250	1260	426	350
21	132	130	230	220	288	457	300	2040	2410	1390	432	350
22	133	117	235	225	293	450	353	2080	2590	1730	438	366
23	133	133	235	220	369	465	391	2070	2620	1710	419	363
24	133	122	225	220	392	468	415	1930	2610	1650	398	370
25	134	115	235	220	399	470	398	2020	2430	1560	405	389
26	155	124	230	220	436	489	408	2160	2270	1250	424	382
27	163	127	235	225	444	484	424	2200	2290	811	445	375
28	154	124	240	225	443	477	453	1750	2350	597	403	379
29	156	136	220	230	---	475	479	1740	2370	583	379	391
30	156	133	230	230	---	418	467	1850	2370	587	383	391
31	152	---	230	230	---	324	---	2030	---	606	423	---
TOTAL	4398	4174	6305	6875	8536	13940	8449	41914	63314	47734	16102	11060
MEAN	142	139	203	222	305	450	282	1352	2110	1540	519	369
MAX	163	163	240	230	444	489	479	2200	3010	2350	672	422
MIN	132	115	170	210	230	324	147	451	964	583	379	317
AC-FT	8720	8280	12510	13640	16930	27650	16760	83140	125600	94680	31940	21940

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1993, BY WATER YEAR (WY)

	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
MEAN	192	169	131	137	141	165	292	883	1627	1163	663	317																	
MAX	397	303	249	288	307	450	635	1598	2563	2302	1027	605																	
(WY)	1977	1977	1992	1992	1974	1993	1989	1970	1980	1965	1973	1970																	
MIN	127	107	86.7	63.9	64.0	84.2	137	314	629	222	210	167																	
(WY)	1992	1978	1977	1977	1977	1977	1973	1977	1977	1977	1977	1977																	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1965 - 1993
ANNUAL TOTAL	149204	231891	
ANNUAL MEAN	408	635	491
HIGHEST ANNUAL MEAN			635
LOWEST ANNUAL MEAN			225
HIGHEST DAILY MEAN	1520	Jun 27	3780
LOWEST DAILY MEAN	115	Nov 25	57
ANNUAL SEVEN-DAY MINIMUM	123	Nov 22	58
INSTANTANEOUS PEAK FLOW			3950
INSTANTANEOUS PEAK STAGE		5.80	6.55
ANNUAL RUNOFF (AC-FT)	295900	460000	355900
10 PERCENT EXCEEDS	940	1880	1300
50 PERCENT EXCEEDS	280	368	221
90 PERCENT EXCEEDS	142	142	104

a-Also occurred Jan 28, 1977.

07087200 ARKANSAS RIVER AT BUENA VISTA, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1986 to September 1993 (Discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1986 to September 1993 (Discontinued).

WATER TEMPERATURE: November 1986 to September 1993 (Discontinued).

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Records for 1992 water year for daily specific conductance and daily water temperature are good. Records for 1993 water year for daily specific conductance and daily water temperature are fair. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance and mean water temperature data are available in the district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 219 microsiemens, Aug. 29, 1991; minimum, 44 microsiemens, June 10, 1990.

WATER TEMPERATURE: Maximum, 21.0°C, Aug. 5, 1988; minimum, 0.0°C, many days during winter.

EXTREMES FOR 1992 YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 180 microsiemens, Apr. 16 and Sept. 16; minimum, 80 microsiemens, May 28, and June 27, 28.

WATER TEMPERATURE: Maximum 17.2°C, July 6; minimum, 0.0°C, many days during winter.

EXTREMES FOR 1993 YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 197 microsiemens, Nov. 27; minimum, 59 microsiemens, July 10, 11, 15.

WATER TEMPERATURE: Maximum, 17.0°C, Aug. 3; minimum, 0.0°C, on many days during winter months.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	130	---	95	102	116	---	93	92	95	144
2	---	---	127	---	95	101	117	---	97	92	95	145
3	---	---	118	99	96	100	117	---	102	97	94	145
4	---	---	117	102	95	99	118	---	102	101	92	142
5	---	---	117	103	94	100	118	---	98	104	94	141
6	---	---	---	101	92	102	117	---	94	103	94	138
7	---	---	---	100	93	101	118	---	90	101	96	131
8	---	---	---	103	94	102	119	---	91	100	94	130
9	---	155	---	101	97	---	135	---	95	101	93	131
10	---	156	---	102	97	97	139	---	103	92	93	135
11	---	156	123	105	96	93	142	---	104	94	100	141
12	---	155	124	106	97	94	143	---	103	97	103	143
13	---	154	125	109	97	94	146	---	97	97	103	150
14	---	150	---	106	97	95	150	---	96	103	101	153
15	---	148	---	102	100	96	152	---	92	103	105	163
16	---	118	---	107	99	98	155	---	87	107	108	172
17	---	116	---	96	101	102	141	---	89	100	119	169
18	---	117	---	96	100	103	142	---	91	102	128	167
19	---	126	120	96	98	102	149	---	96	96	126	165
20	---	128	120	94	100	102	150	---	90	97	125	163
21	---	130	119	94	103	102	151	---	89	97	127	168
22	---	131	116	94	103	103	156	---	87	95	111	164
23	---	132	112	95	103	104	153	---	88	92	109	165
24	---	129	118	93	106	115	154	---	88	98	110	160
25	---	125	124	95	103	114	154	---	89	104	132	158
26	---	127	108	95	102	115	155	---	90	112	138	159
27	---	127	106	95	101	114	156	---	82	107	136	155
28	---	128	104	93	101	115	143	81	82	103	140	154
29	---	127	108	93	101	115	130	82	85	101	142	154
30	---	128	106	94	---	117	120	86	90	98	141	158
31	---	---	101	95	---	118	---	92	---	101	141	---
MEAN	---	---	---	---	98	---	139	---	93	100	112	152

07087200 ARKANSAS RIVER AT BUENA VISTA, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.1	11.2	---	---	.0	.0	.0	.0	2.1	.0	4.0	.6
2	15.5	11.9	---	---	.0	.0	.0	.0	2.6	.0	4.6	.8
3	---	---	---	---	.0	.0	.0	.0	2.6	.9	4.5	1.4
4	---	---	---	---	.0	.0	.0	.0	2.1	.2	4.0	1.3
5	---	---	---	---	.1	.0	.1	.0	1.7	.0	4.6	.8
6	---	---	---	---	---	---	.1	.0	1.1	.0	4.9	.9
7	---	---	---	---	---	---	.0	.0	1.6	.0	4.2	.6
8	---	---	---	---	---	---	.0	.0	2.2	.0	5.0	1.6
9	---	---	4.3	1.7	---	---	.0	.0	2.8	.0	4.7	1.1
10	---	---	4.1	3.3	---	---	.0	.0	2.3	.0	3.7	.1
11	---	---	5.7	3.6	1.0	.0	.1	.0	2.3	.3	4.0	.1
12	---	---	3.7	1.8	1.0	.0	.2	.0	2.7	.5	5.1	.7
13	---	---	3.6	1.2	.1	.0	.0	.0	2.5	.0	5.4	1.0
14	---	---	3.4	1.3	.0	.0	.0	.0	3.2	.8	5.7	1.5
15	---	---	2.1	.7	.0	.0	.0	.0	2.3	.0	5.4	1.9
16	---	---	2.5	1.0	.0	.0	.0	.0	2.1	.0	5.9	1.9
17	---	---	3.4	1.7	.0	.0	.0	.0	1.3	.0	4.9	2.1
18	---	---	2.9	1.7	.0	.0	.0	.0	1.2	.0	4.3	2.3
19	---	---	2.0	.4	.6	.0	.0	.0	1.6	.0	4.2	.7
20	---	---	.7	.0	.7	.0	.0	.0	4.1	.1	4.8	.9
21	---	---	3.2	.3	.4	.0	.1	.0	4.0	1.1	4.9	1.8
22	---	---	2.4	.0	.0	.0	.0	.0	3.2	.0	4.9	1.9
23	---	---	.0	.0	.0	.0	.1	.0	3.3	.9	4.8	2.1
24	---	---	.1	.0	.0	.0	.4	.0	2.6	.0	5.0	2.1
25	---	---	.3	.0	.0	.0	1.0	.0	2.5	.8	5.7	1.9
26	---	---	2.3	.0	.0	.0	1.4	.0	3.0	.1	5.2	2.4
27	---	---	2.6	.7	.0	.0	1.4	.0	4.3	.5	5.5	3.6
28	---	---	2.9	1.0	.0	.0	2.0	.0	4.3	.5	5.7	3.5
29	---	---	2.0	.3	.0	.0	2.0	.0	4.1	.5	6.5	3.6
30	---	---	.3	.0	.0	.0	2.2	.0	---	---	7.6	4.1
31	---	---	---	---	.0	.0	2.2	.0	---	---	6.2	4.0
MONTH	---	---	---	---	---	---	2.2	.0	4.3	.0	7.6	.1

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.9	2.5	12.1	8.1	9.4	7.6	14.8	11.4	17.0	12.9	13.0	10.4
2	6.7	3.0	11.7	8.0	---	---	14.1	11.2	16.3	12.8	12.9	10.1
3	7.7	3.5	11.2	8.4	12.5	8.8	15.6	10.6	16.0	12.6	13.6	10.0
4	7.7	3.8	11.8	8.0	12.3	9.0	16.0	11.4	15.8	12.7	14.6	11.0
5	6.7	---	10.2	7.0	---	---	16.6	12.0	14.9	12.5	14.3	10.4
6	8.2	---	10.1	7.3	---	---	17.2	12.6	15.7	13.2	13.9	9.8
7	8.2	5.3	10.2	7.6	11.5	9.3	15.7	12.8	16.1	12.4	14.2	10.9
8	8.9	5.0	9.5	7.3	11.8	8.5	14.1	12.6	16.6	13.3	14.2	11.0
9	9.6	5.4	9.7	7.9	---	---	15.5	11.5	17.2	13.2	14.9	10.9
10	10.4	6.2	10.1	6.9	12.1	8.4	16.1	12.5	15.9	14.2	14.8	10.8
11	9.0	6.5	10.7	6.2	11.6	9.4	15.7	13.2	15.5	12.9	14.3	10.6
12	10.1	6.3	10.1	7.4	12.5	9.1	14.5	12.9	16.2	12.2	14.8	11.4
13	9.3	6.7	12.1	8.2	13.9	10.5	15.0	12.4	15.1	12.1	14.8	11.4
14	8.8	7.0	11.8	8.2	13.3	10.3	14.5	11.8	15.5	12.2	13.5	10.7
15	7.9	5.3	11.9	8.2	13.1	9.0	14.3	11.7	16.6	12.4	15.3	11.5
16	9.7	6.3	12.1	8.1	12.5	9.4	15.3	11.1	15.6	13.0	14.0	10.8
17	8.9	5.8	---	---	13.8	8.8	16.2	13.2	15.9	13.1	13.1	9.6
18	8.1	5.3	---	---	---	---	16.1	12.7	16.9	12.9	12.6	10.1
19	6.6	3.6	12.6	8.8	14.0	10.8	15.3	12.7	16.6	12.6	12.8	10.4
20	7.6	3.4	12.0	9.5	---	---	14.8	12.0	15.4	12.6	11.7	9.3
21	8.5	3.3	---	---	12.7	11.2	16.5	12.2	---	---	13.3	8.8
22	8.0	5.6	11.2	8.6	13.7	10.3	16.1	12.8	---	---	13.1	9.0
23	8.8	6.0	11.2	8.4	---	---	15.2	13.0	---	---	13.8	9.3
24	9.6	4.8	10.5	8.7	14.0	11.5	15.6	12.6	14.1	10.9	12.7	9.5
25	10.7	---	11.1	8.2	13.9	11.3	15.1	13.3	13.1	9.6	12.8	9.8
26	10.0	6.3	11.6	8.6	14.1	11.3	16.6	13.1	13.3	10.3	11.5	7.7
27	11.8	7.1	11.5	9.7	13.2	11.3	16.4	12.4	13.3	9.2	11.8	7.4
28	12.0	7.9	11.5	8.6	---	---	16.2	12.5	---	---	12.0	7.6
29	12.0	8.0	10.9	8.3	---	---	15.2	12.6	12.8	10.3	12.3	8.1
30	11.3	8.2	10.3	9.1	15.7	11.7	16.6	12.2	13.5	11.2	12.2	8.2
31	---	---	---	---	---	---	16.2	13.7	12.9	10.6	---	---
MONTH	12.0	---	---	---	---	---	17.2	10.6	---	---	15.3	7.4

07087200 ARKANSAS RIVER AT BUENA VISTA, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159	163	162	115	---	83	120	105	77	83	---	125
2	160	158	141	113	---	80	127	107	76	81	98	129
3	159	153	137	112	---	82	126	111	77	76	101	129
4	158	162	126	118	---	81	126	120	79	75	105	132
5	157	161	131	113	99	84	129	111	79	76	111	129
6	158	161	132	118	104	86	132	110	81	---	107	127
7	159	159	135	114	104	82	131	106	80	---	101	129
8	160	160	130	118	103	---	130	100	83	---	99	137
9	159	161	129	118	---	---	154	100	87	78	102	140
10	158	161	127	119	---	---	183	104	91	76	102	134
11	155	161	125	116	---	---	181	108	89	78	106	123
12	153	163	123	119	96	---	181	107	85	82	105	118
13	153	164	125	118	95	---	180	107	80	73	104	118
14	153	164	124	123	94	---	149	109	72	65	105	130
15	154	163	122	114	95	---	132	105	71	62	103	144
16	154	167	123	108	97	---	133	94	72	65	101	135
17	153	166	113	104	95	---	137	81	83	64	103	130
18	153	169	113	103	96	---	138	81	83	63	112	123
19	156	171	113	104	95	---	134	77	76	66	117	117
20	157	169	112	107	---	---	123	74	72	69	118	116
21	158	168	112	105	---	---	118	73	72	73	113	118
22	158	174	111	105	---	---	120	73	79	70	110	117
23	159	171	110	100	---	---	119	75	83	70	108	116
24	159	177	109	98	---	---	108	76	79	72	113	115
25	158	180	107	---	---	---	105	77	73	72	115	110
26	158	181	108	---	81	---	107	77	72	74	118	108
27	167	186	107	---	81	---	111	76	73	---	122	108
28	164	178	106	---	81	---	114	81	75	---	124	109
29	162	173	110	---	---	---	114	82	82	---	123	108
30	165	180	113	---	---	---	111	80	84	---	121	107
31	163	---	115	---	---	101	---	79	---	---	124	---
MEAN	158	167	121	---	---	---	132	92	79	---	---	123

07087200 ARKANSAS RIVER AT BUENA VISTA, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	12.3	8.0	4.3	2.2	.3	.0	.4	.3	1.5	.5	2.7	.7
2	12.2	8.1	3.1	.4	.2	.0	.4	.3	1.0	.0	3.0	.0
3	11.7	7.9	2.1	.1	.3	.2	.5	.3	.5	.0	3.3	.6
4	11.7	7.8	1.2	.2	.2	.0	.4	.3	---	.0	3.2	.8
5	10.7	7.5	.9	.2	.3	.0	.4	.3	.7	.5	4.0	.8
6	12.2	8.7	1.5	.2	.2	.0	.4	.3	.7	.5	4.6	1.0
7	8.8	5.0	2.9	.2	.2	.0	.4	.3	1.4	.5	---	---
8	6.6	2.8	3.6	.8	.1	.0	.4	.3	2.5	.3	5.1	---
9	8.3	4.3	4.3	1.8	.1	.0	.5	.3	2.6	---	5.7	1.3
10	8.6	4.3	3.6	1.9	.4	.0	.5	.3	2.9	.7	5.3	1.6
11	9.6	5.7	3.2	.6	.5	.3	.7	.3	2.0	.0	3.7	1.8
12	10.0	6.0	2.5	.2	.5	.3	.4	.3	1.9	.0	3.0	.9
13	9.4	6.2	3.0	.2	.4	.3	.4	.3	1.5	.0	3.4	.8
14	10.2	6.2	3.1	.4	.5	.3	.7	.3	1.1	.0	5.1	.8
15	10.3	7.3	3.5	.6	.4	.3	.9	.4	1.6	.0	5.8	2.1
16	7.9	5.8	3.1	1.0	.4	.3	1.1	.3	.3	.0	5.3	1.6
17	8.6	5.0	3.5	1.4	.4	.3	1.5	.1	2.3	.0	5.8	.0
18	8.4	5.3	2.9	1.4	.4	.3	1.1	.3	2.5	.0	6.2	2.5
19	8.4	5.7	2.6	.5	.4	.3	1.5	.6	2.5	.9	5.7	1.7
20	8.7	5.2	2.1	.6	.4	.3	1.2	.3	2.7	.2	5.8	.9
21	7.9	5.4	2.2	.2	.4	.3	2.1	.3	1.8	.0	6.0	2.1
22	8.1	5.2	.7	.2	.4	.3	1.3	.3	1.5	.0	---	1.1
23	8.6	5.5	1.5	.2	.4	.3	1.2	.3	1.9	.0	---	---
24	9.0	5.5	.3	.2	.4	.3	.5	.0	1.8	.6	6.5	1.1
25	9.1	6.1	.3	.2	.4	.3	.5	.4	1.7	.0	6.6	1.8
26	8.8	6.5	.3	.2	.4	.3	.5	.0	2.3	.0	---	---
27	8.0	5.4	.3	.2	.4	.3	.4	.0	2.5	.0	5.0	2.5
28	8.6	6.3	.3	.2	.4	.3	.1	.0	2.9	.0	6.4	2.2
29	7.8	5.8	.2	.2	.4	.3	1.5	.0	---	---	---	3.0
30	7.3	5.5	.3	.2	.4	.3	1.0	.0	---	---	---	---
31	8.0	4.3	---	---	.4	.3	1.0	.0	---	---	5.1	1.9
MONTH	12.3	2.8	4.3	.1	.5	.0	2.1	.0	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	.8	10.2	6.9	12.4	9.3	14.1	10.7	---	---	13.7	11.0
2	5.2	---	11.2	7.0	11.6	9.1	14.4	9.8	16.8	---	13.1	10.7
3	4.0	.5	11.3	7.9	10.5	8.2	---	---	17.0	13.9	14.3	9.1
4	5.6	1.7	10.8	8.3	12.2	8.6	---	---	16.1	13.2	14.7	10.5
5	5.1	3.4	10.0	6.6	11.3	8.7	---	---	16.2	13.3	14.2	11.9
6	5.1	2.7	8.9	5.8	10.5	7.6	---	---	16.4	13.2	13.5	11.1
7	4.1	.2	8.6	4.7	10.3	8.0	---	---	15.9	12.4	12.5	10.0
8	3.3	.3	9.1	5.0	11.2	7.8	---	---	15.4	13.1	---	7.8
9	9.5	---	10.3	5.0	12.8	8.2	---	---	16.4	12.9	14.6	7.6
10	10.6	---	10.9	6.1	12.6	9.6	---	---	16.4	14.2	11.6	---
11	9.8	---	11.4	6.9	13.1	9.2	---	---	16.8	13.1	14.6	7.1
12	9.5	6.1	11.4	7.5	13.1	9.5	---	---	15.9	13.1	13.2	10.0
13	9.2	---	10.3	7.4	13.2	9.3	---	---	15.2	13.3	11.0	9.7
14	7.3	---	10.9	7.2	14.2	11.0	14.2	11.9	14.5	12.2	11.6	7.9
15	5.5	---	10.4	8.6	13.3	10.1	15.2	11.9	15.8	11.6	12.1	6.8
16	5.3	---	9.7	8.6	13.0	10.0	14.8	11.7	16.4	12.1	12.1	9.7
17	---	1.3	11.2	7.5	11.9	8.4	14.9	12.2	16.1	12.6	13.4	7.8
18	---	5.4	10.8	7.9	12.8	9.0	15.3	11.7	16.5	12.6	---	---
19	9.0	6.2	11.4	7.7	12.9	9.8	14.9	12.2	16.0	13.1	12.4	---
20	10.7	5.6	11.6	6.9	12.8	10.6	14.9	12.6	15.8	12.8	11.2	5.9
21	11.1	6.2	11.1	7.7	13.4	9.9	14.5	11.3	15.1	13.3	---	---
22	11.9	7.8	12.3	8.4	13.3	10.1	14.3	11.8	15.1	12.5	---	---
23	12.1	8.2	12.0	8.6	13.3	9.2	14.2	12.2	16.1	11.4	---	---
24	9.9	7.2	12.2	8.0	12.8	9.1	15.1	12.3	16.6	12.0	---	---
25	10.8	5.4	11.7	9.9	13.3	9.0	15.3	12.4	16.1	12.6	10.1	6.5
26	12.3	6.0	11.8	7.9	13.6	9.3	16.3	11.0	14.9	13.0	11.0	6.1
27	12.4	8.8	11.0	9.0	13.3	9.6	---	---	13.6	12.5	---	7.0
28	11.7	7.6	11.7	8.8	13.5	9.9	---	---	14.6	11.7	---	---
29	10.9	7.9	12.5	9.2	14.2	10.5	---	---	14.1	11.9	11.9	---
30	10.0	6.8	12.7	9.6	13.9	10.0	---	---	14.0	12.2	10.1	6.7
31	---	---	12.9	9.5	---	---	---	---	15.1	11.6	---	---
MONTH	---	---	12.9	4.7	14.2	7.6	---	---	---	---	---	---

07091200 ARKANSAS RIVER NEAR NATHROP, CO

LOCATION.--Lat 38°39'08", long 106°03'02", in SE¹/₄SW¹/₄ sec.23, T.51 N., R.8 E., Chaffee County, Hydrologic Unit 11020001, on right bank 300 ft upstream from end of Chaffee County Road 194 in Browns Canyon, 3.7 mi downstream from Browns Creek, 6.7 mi south of Nathrop, and 9 mi north of Salida.

DRAINAGE AREA.--1,060 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to September 1982. April 1989 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,350 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Water year 1992, Dec. 2-4, Jan. 8-14, and Jan. 20-24. Estimated daily discharges: Water year 1993, Nov. 27-29, and Dec. 15 to Jan. 15. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions (see elsewhere in this report), storage reservoirs, power development, diversions for irrigation of about 15,000 acres, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	226	261	321	344	385	393	302	372	1000	1040	678	474
2	224	281	325	345	390	392	300	385	901	998	655	466
3	225	255	340	353	393	397	299	396	823	865	673	443
4	225	262	360	366	396	408	303	427	810	817	691	445
5	225	333	359	349	404	395	307	627	932	769	649	437
6	225	354	335	333	396	392	309	683	981	767	655	430
7	223	354	323	318	392	391	319	728	1020	793	655	520
8	224	329	324	320	392	397	311	817	975	825	671	513
9	223	328	311	320	392	389	254	830	917	975	669	499
10	220	330	308	320	388	377	250	871	874	1000	694	478
11	219	332	314	320	390	375	260	660	871	907	725	426
12	212	320	305	320	392	376	256	616	948	839	697	417
13	210	312	304	330	385	375	272	642	1050	917	670	333
14	218	311	333	350	386	374	293	646	1110	737	714	301
15	213	330	339	371	386	374	295	688	1190	687	685	282
16	213	404	330	393	378	369	292	796	1210	718	601	289
17	211	411	328	406	379	352	303	890	1100	700	563	282
18	213	413	318	395	381	360	291	949	1020	616	526	275
19	208	363	325	388	379	355	270	964	1010	651	501	285
20	208	343	313	380	381	356	253	1090	1140	654	472	283
21	208	366	313	380	386	360	245	1280	1180	664	448	293
22	208	362	309	380	385	371	247	1350	1240	648	563	284
23	210	330	294	330	385	358	247	1460	1180	665	595	274
24	220	336	300	330	388	314	242	1360	1200	700	824	261
25	230	350	319	388	389	311	221	1270	1250	713	889	258
26	233	344	309	378	393	311	225	1220	1330	781	630	267
27	225	343	305	383	387	311	220	1270	1510	709	594	257
28	233	342	306	387	394	317	265	1280	1430	649	524	252
29	233	338	320	384	395	312	316	1140	1310	672	487	252
30	239	330	335	385	---	312	329	1080	1140	700	477	245
31	246	---	346	385	---	311	---	1040	---	654	477	---
TOTAL	6850	10067	9971	11131	11267	11185	8296	27827	32652	23830	19352	10521
MEAN	221	336	322	359	389	361	277	898	1088	769	624	351
MAX	246	413	360	406	404	408	329	1460	1510	1040	889	520
MIN	208	255	294	318	378	311	220	372	810	616	448	245
AC-FT	13590	19970	19780	22080	22350	22190	16460	55190	64770	47270	38380	20870

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1992, BY WATER YEAR (WY)

	MEAN	320	306	247	238	237	231	330	919	1867	1382	846	459
MAX	548	444	336	402	420	388	587	1706	3518	2997	1380	880	
(WY)	1977	1976	1966	1991	1991	1980	1966	1970	1980	1965	1965	1970	
MIN	205	186	173	133	127	151	204	388	731	311	282	249	
(WY)	1978	1978	1973	1973	1977	1977	1973	1977	1977	1977	1977	1977	

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR			FOR 1992 WATER YEAR			WATER YEARS 1965 - 1992		
ANNUAL TOTAL	205128			182949			20		
ANNUAL MEAN	562			500			846		
HIGHEST ANNUAL MEAN							314		
LOWEST ANNUAL MEAN							1977		
HIGHEST DAILY MEAN	2460			Jun 13			1510		
LOWEST DAILY MEAN	208			Oct 19			Jun 27		
ANNUAL SEVEN-DAY MINIMUM	209			Oct 17			4890		
INSTANTANEOUS PEAK FLOW							95		
INSTANTANEOUS PEAK STAGE							104		
ANNUAL RUNOFF (AC-FT)	406900			362900			4960		
10 PERCENT EXCEEDS	1160			977			5.78		
50 PERCENT EXCEEDS	407			380			8.51		
90 PERCENT EXCEEDS	231			246			449000		

a-Also occurred Oct 20-22.

b-Also occurred Feb 26-27, 1977.

c-Maximum gage height, 9.94 ft, Aug 31, 1978, backwater from unnamed tributary.

07091200 ARKANSAS RIVER NEAR NATHROP, CO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244	280	274	324	349	530	427	524	2300	2670	729	548
2	244	280	291	328	350	528	352	511	2350	2610	710	551
3	245	275	303	333	348	533	332	516	2370	2390	717	541
4	247	269	317	328	345	538	330	529	2080	2410	684	499
5	250	273	322	303	338	546	336	561	1920	2100	683	480
6	249	278	319	311	348	554	337	549	1810	1860	704	481
7	244	286	312	332	350	550	326	546	1750	1550	685	488
8	247	301	312	339	352	550	315	604	1650	1410	716	548
9	248	303	320	353	372	551	316	769	1440	1880	760	461
10	252	296	331	331	400	558	242	763	1280	1870	742	459
11	250	303	329	323	397	552	229	762	1190	1940	716	488
12	249	290	328	335	389	541	232	823	1330	1980	712	485
13	244	296	334	307	388	534	235	989	1720	2170	717	501
14	244	294	313	329	389	555	228	1120	2250	2060	737	531
15	245	294	300	328	395	575	305	1300	3060	1890	734	445
16	244	277	310	358	398	555	313	1390	3400	1680	703	457
17	254	276	314	355	396	558	311	1510	3460	1630	688	468
18	254	274	347	357	395	554	317	1830	3460	1610	609	478
19	244	273	337	355	400	555	320	1780	3210	1570	551	478
20	245	276	308	352	411	554	358	1890	2990	1360	557	471
21	244	279	331	353	395	558	369	1970	2790	1370	571	464
22	242	259	330	353	387	551	408	2060	2890	1730	584	483
23	241	275	323	352	448	557	455	2060	3080	1720	571	481
24	241	266	323	351	484	559	489	2090	3100	1660	502	479
25	243	253	328	363	495	565	473	1990	2890	1590	513	505
26	279	250	315	354	523	568	473	2110	2660	1370	519	493
27	292	249	308	343	539	588	478	2240	2650	945	575	490
28	281	248	325	346	537	577	489	2370	2710	750	526	488
29	288	247	346	343	---	568	506	1970	2720	715	497	507
30	282	245	340	347	---	571	530	1950	2760	723	508	506
31	283	---	325	345	---	512	---	2080	---	744	550	---
TOTAL	7859	8265	9915	10531	11318	17145	10831	42156	73270	51957	19770	14754
MEAN	254	275	320	340	404	553	361	1360	2442	1676	638	492
MAX	292	303	347	363	539	588	530	2370	3460	2670	760	551
MIN	241	245	274	303	338	512	228	511	1190	715	497	445
AC-FT	15590	16390	19670	20890	22450	34010	21480	83620	145300	103100	39210	29260

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1993, BY WATER YEAR (WY)

MEAN	317	304	250	242	244	246	331	939	1892	1395	837	460
MAX	548	444	336	402	420	553	587	1706	3518	2997	1380	880
(WY)	1977	1976	1966	1991	1991	1993	1966	1970	1980	1965	1965	1970
MIN	205	186	173	133	127	151	204	388	731	311	282	249
(WY)	1978	1978	1973	1973	1977	1977	1973	1977	1977	1977	1977	1977

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1965 - 1993
ANNUAL TOTAL	182100	277771	
ANNUAL MEAN	498	761	626
HIGHEST ANNUAL MEAN			846
LOWEST ANNUAL MEAN			314
HIGHEST DAILY MEAN	1510	Jun 27	4890
LOWEST DAILY MEAN	220	Apr 27	95
ANNUAL SEVEN-DAY MINIMUM	235	Apr 21	104
INSTANTANEOUS PEAK FLOW		3820	4960
INSTANTANEOUS PEAK STAGE		7.52	8.51
ANNUAL RUNOFF (AC-FT)	361200	551000	453600
10 PERCENT EXCEEDS	977	1980	1470
50 PERCENT EXCEEDS	379	480	342
90 PERCENT EXCEEDS	251	257	190

a-Also occurred Feb 26-27, 1977.

b-Maximum gage height, 9.94 ft, Aug 31, 1978, backwater from unnamed tributary.

07091200 ARKANSAS RIVER NEAR NATHROP, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1989 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: April 1989 to September 1993 (Discontinued).

WATER TEMPERATURE: April 1989 to September 1993 (Discontinued).

pH: April 1989 to September 1993 (Discontinued).

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Records for 1992 water year for daily specific conductance, daily pH, and daily water temperature are good. Records for 1993 water year for daily specific conductance, daily pH, and daily water temperature are good. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance, daily mean pH, and daily mean water temperature data are available in the district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 305 microsiemens, Sept. 19, 1991; minimum, 58 microsiemens, June 11, 1989.

WATER TEMPERATURE: Maximum, 20.5°C, July 17, 1991; minimum, 0.0°C, many days during winters.

pH: Maximum, 9.7 units, Oct. 24, 26, 31, and Nov. 2, 1991; minimum, 6.4 units, Apr. 10-11, 1992.

EXTREMES FOR 1992 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 221 microsiemens, Dec. 5; minimum, 92 microsiemens, Mar. 5-6.

WATER TEMPERATURE: Maximum, 18.6°C, July 6 and Aug. 19; minimum, 0.0°C, many days during winter.

pH: Maximum, 9.7 units, Oct. 24, 26, 31, and Nov. 2; minimum, 6.4 units, Apr. 10-11.

EXTREMES FOR 1993 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 217 microsiemens, Nov. 27-28; minimum, 75 microsiemens, July 13-14.

WATER TEMPERATURE: Maximum, 18.2°C, Aug. 11, 24-25; minimum, 0.0°C, many days during winter.

pH: Maximum, 9.1 units, Oct. 30-31; minimum, 6.9 units, Dec. 3 and May 5.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	197	201	163	134	129	102	142	144	109	108	121	180
2	199	196	162	135	129	100	142	149	113	109	120	182
3	201	203	162	134	129	99	142	153	118	107	120	185
4	201	200	171	134	129	96	141	152	128	113	119	183
5	201	189	194	137	128	94	142	137	130	117	125	183
6	201	178	155	132	129	95	141	132	157	117	126	182
7	202	180	152	128	125	95	139	124	154	118	129	175
8	201	182	148	138	123	96	139	113	132	122	128	172
9	201	181	148	140	123	103	---	115	129	115	128	173
10	201	181	151	136	123	110	---	114	136	104	127	175
11	202	180	146	128	120	108	---	116	138	105	131	181
12	203	181	147	125	119	109	---	118	126	111	135	184
13	205	180	148	135	118	110	161	124	114	110	138	---
14	204	180	148	138	115	110	163	129	119	119	136	---
15	205	172	140	138	116	109	163	123	111	123	138	189
16	208	164	140	130	113	108	162	120	106	125	141	194
17	208	152	140	---	113	108	162	142	108	122	150	197
18	209	153	137	---	113	112	159	149	113	124	161	198
19	208	158	133	---	110	130	164	135	117	119	163	196
20	208	168	135	---	108	131	168	129	113	119	162	196
21	208	162	133	---	109	131	168	121	111	118	164	195
22	208	164	135	---	109	130	167	114	106	119	154	197
23	207	175	135	---	107	132	168	104	106	119	144	196
24	207	179	136	---	108	139	169	102	103	120	151	198
25	204	170	134	---	106	145	172	100	110	128	161	198
26	205	159	134	124	104	144	171	98	109	132	170	196
27	208	160	144	129	103	144	172	99	106	136	172	198
28	208	159	145	128	104	142	167	98	107	133	175	197
29	204	159	144	127	102	142	151	100	106	130	181	197
30	201	158	144	128	---	143	146	104	104	123	182	198
31	208	---	139	128	---	143	---	107	---	126	180	---
MEAN	204	174	147	---	116	118	---	121	118	119	146	---

07091200 ARKANSAS RIVER NEAR NATHROP, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.0	8.0	9.1	7.7	8.4	7.8	7.9	7.3	8.1	7.5	8.3	7.6
2	8.9	8.0	9.7	7.7	8.1	7.8	8.0	7.2	7.9	7.4	8.3	7.6
3	9.1	7.9	8.9	7.7	8.2	7.7	8.0	7.3	7.8	7.4	8.2	7.6
4	8.7	7.9	9.5	7.7	8.2	7.7	8.1	7.3	7.9	7.3	8.0	7.6
5	8.6	7.8	9.1	7.9	8.5	7.7	8.2	7.2	8.1	7.3	8.2	7.6
6	8.6	7.8	8.7	7.8	8.2	7.4	7.7	7.1	8.6	7.3	8.2	7.6
7	8.6	7.8	8.5	7.7	8.1	7.6	7.6	7.3	8.6	7.8	8.4	7.6
8	8.7	7.7	8.3	8.0	8.1	7.6	8.2	7.3	8.6	7.7	8.4	7.7
9	8.8	7.7	8.3	8.0	8.3	7.7	8.1	7.3	8.6	7.7	8.4	7.7
10	8.8	7.5	8.2	8.0	7.9	7.7	8.2	7.1	8.6	7.7	8.4	7.7
11	8.8	7.5	8.3	8.0	8.1	7.7	7.9	7.1	8.5	7.6	8.4	7.7
12	8.9	7.5	8.3	8.0	8.2	7.8	7.8	7.3	8.5	7.6	8.4	7.7
13	8.8	7.4	8.3	8.0	8.0	7.7	7.8	7.3	8.3	7.6	8.3	7.6
14	8.7	7.3	8.2	8.0	8.1	7.7	7.7	7.1	8.5	7.6	8.3	7.6
15	8.9	7.2	8.2	7.9	8.0	7.6	7.6	6.9	8.4	7.5	8.3	7.6
16	9.2	7.3	8.1	7.8	8.0	7.6	7.2	6.9	8.5	7.5	8.3	7.6
17	9.0	8.0	8.2	7.8	7.9	7.6	---	---	8.7	7.6	8.3	7.6
18	9.1	8.0	8.2	7.9	7.9	7.6	---	---	8.5	7.6	8.2	7.6
19	9.1	7.9	8.1	7.9	8.2	7.6	---	---	8.4	7.5	8.5	7.6
20	9.2	7.9	8.1	7.9	8.3	7.7	---	---	8.3	7.5	8.6	7.6
21	9.1	7.9	8.1	7.8	8.1	7.7	---	---	8.4	7.5	8.6	7.6
22	9.3	7.9	8.2	7.8	7.8	7.7	---	---	8.3	7.5	8.6	7.6
23	9.2	7.8	8.1	7.8	8.0	7.7	---	---	8.3	7.5	8.5	7.6
24	9.7	7.8	8.1	7.8	8.0	7.7	---	---	8.4	7.5	8.5	7.5
25	9.2	7.8	8.1	7.7	8.1	7.7	---	---	8.4	7.5	8.6	7.5
26	9.7	7.8	8.0	7.8	8.2	7.7	8.5	7.5	8.5	7.6	8.6	7.6
27	9.4	7.8	8.0	7.8	8.2	7.5	8.4	7.5	8.5	7.6	8.5	7.6
28	9.4	7.8	8.1	7.9	7.9	7.4	8.5	7.5	8.4	7.6	8.5	7.6
29	9.6	7.8	8.3	7.9	7.9	7.4	8.4	7.5	8.3	7.6	8.4	7.6
30	9.2	7.7	8.1	7.8	7.8	7.3	8.2	7.5	---	---	8.4	7.5
31	9.7	7.8	---	---	7.9	7.3	8.2	7.5	---	---	8.2	7.5
MONTH	9.7	7.2	9.7	7.7	8.5	7.3	---	---	8.7	7.3	8.6	7.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.4	7.5	8.2	7.5	8.2	7.5	8.0	7.4	8.2	7.5	8.2	7.7
2	8.2	7.5	8.0	7.4	8.4	7.5	8.0	7.4	8.2	7.5	8.5	7.9
3	8.2	7.5	8.0	7.3	8.3	7.5	8.1	7.7	8.2	7.5	8.5	7.9
4	8.2	7.5	8.0	7.1	8.5	7.6	8.1	7.7	8.4	7.5	8.5	7.9
5	8.1	7.4	7.6	6.9	8.6	7.6	8.2	7.8	8.4	7.7	8.6	7.9
6	8.0	7.4	7.6	6.9	8.5	7.5	8.3	7.8	8.4	7.7	8.6	7.9
7	8.0	7.4	7.6	6.9	8.2	7.5	8.3	7.7	8.5	7.7	8.7	7.9
8	7.9	7.4	7.7	6.9	8.2	7.5	8.4	7.7	8.4	7.6	8.7	8.1
9	7.9	6.8	8.0	6.9	8.3	7.5	8.6	7.7	8.3	7.6	8.8	8.1
10	8.0	6.4	8.1	7.5	8.4	7.5	8.4	7.6	8.2	7.6	8.9	8.1
11	8.1	6.4	---	---	8.3	7.6	8.4	7.6	8.2	7.7	8.8	8.1
12	8.1	6.9	---	---	8.4	7.6	8.5	7.7	8.2	7.7	8.9	8.1
13	8.4	7.0	8.2	7.5	8.4	7.5	8.4	7.6	8.2	7.7	---	---
14	8.3	7.7	8.1	7.5	8.4	7.5	8.5	7.7	8.1	7.7	---	---
15	8.3	7.6	7.9	7.4	8.2	7.5	8.6	7.6	8.1	7.7	8.4	8.0
16	8.3	7.6	7.9	7.2	8.0	7.5	8.6	7.6	8.2	7.7	8.4	8.0
17	8.3	7.6	---	---	8.0	7.5	8.5	7.6	8.2	7.8	8.2	7.9
18	8.3	7.7	---	---	8.1	7.5	8.6	7.6	8.2	7.8	8.3	7.8
19	8.2	7.7	7.4	7.2	8.3	7.5	8.6	7.6	8.2	7.8	8.3	7.9
20	8.2	7.7	7.4	7.2	8.2	7.5	8.7	7.6	8.2	7.7	8.3	7.9
21	8.3	7.7	7.2	6.9	8.3	7.5	8.6	7.6	---	---	8.2	7.8
22	8.3	7.7	7.1	6.7	8.3	7.4	8.5	7.6	8.2	7.7	8.2	7.8
23	8.4	7.8	7.7	7.1	8.4	7.4	8.5	7.6	8.2	7.6	8.3	7.7
24	8.4	7.8	7.9	7.6	8.6	7.5	8.6	7.6	7.9	7.6	8.3	7.8
25	8.5	7.8	8.0	7.7	8.4	7.5	8.4	7.6	8.3	7.7	8.3	7.8
26	8.5	7.9	8.0	7.8	8.3	7.5	8.7	7.6	8.4	7.8	8.2	7.8
27	8.5	7.9	8.0	7.8	8.0	7.5	8.6	7.6	8.2	7.8	8.3	7.8
28	8.5	7.9	7.9	7.6	8.1	7.5	8.5	7.5	8.2	7.8	8.3	7.7
29	8.2	7.7	8.0	7.5	8.0	7.5	8.4	7.5	8.2	7.7	8.4	7.7
30	8.2	7.6	7.9	7.5	8.0	7.5	8.2	7.6	8.3	7.6	8.5	7.6
31	---	---	8.1	7.5	---	---	8.3	7.7	8.1	7.8	---	---
MONTH	8.5	6.4	---	---	8.6	7.4	8.7	7.4	---	---	---	---

07091200 ARKANSAS RIVER NEAR NATHROP, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	12.8	9.0	6.1	.8	.0	.0	.0	.0	2.8	.0	4.3	1.7
2	12.7	9.1	4.3	.7	.0	.0	.0	.0	3.1	.0	6.1	1.4
3	12.7	9.2	2.4	.7	.0	.0	.0	.0	2.9	1.4	5.9	2.5
4	11.6	8.8	4.9	.5	.0	.0	.0	.0	2.7	.7	4.6	2.6
5	10.8	6.4	6.5	1.9	.2	.0	.0	.0	2.1	.0	5.6	.8
6	11.1	6.7	7.2	3.4	1.0	.0	.5	.0	1.9	.0	6.2	2.3
7	11.2	7.0	6.3	4.4	1.2	.0	.2	.0	2.5	.0	5.6	2.3
8	11.9	7.5	5.8	2.2	2.4	.0	.5	.0	3.5	.0	6.5	3.2
9	12.0	---	6.9	3.1	1.7	.0	.1	.0	3.5	.0	5.9	2.7
10	12.0	8.2	6.0	5.1	1.4	.0	.2	.0	3.1	.2	5.6	1.4
11	11.7	8.0	7.1	4.1	1.8	.1	.7	.0	2.9	.8	6.1	1.4
12	11.4	8.2	5.8	2.7	2.2	.3	1.2	.0	3.9	.0	7.0	2.2
13	11.2	8.0	5.1	1.5	1.6	.0	.0	.0	2.1	.4	7.5	2.8
14	10.7	7.9	4.9	1.6	.0	.0	.0	.0	4.0	.5	7.7	3.2
15	11.4	8.0	3.9	.9	.0	.0	.0	.0	3.2	.3	7.3	3.4
16	11.3	7.7	2.8	1.5	.0	.0	.0	.0	1.5	.0	7.7	3.0
17	11.5	8.3	4.5	1.8	.1	.0	---	---	1.9	.0	7.0	3.4
18	11.0	8.1	4.4	2.3	1.0	.0	---	---	2.1	.0	6.5	3.1
19	10.4	7.4	3.2	1.1	1.9	.0	---	---	2.2	.0	6.1	2.0
20	10.3	7.2	2.3	.0	1.7	.0	---	---	3.6	.0	7.3	2.3
21	10.2	7.0	4.3	.3	.7	.0	---	---	5.3	1.5	6.8	3.0
22	10.4	7.5	2.8	.0	.7	.0	---	---	3.9	1.4	8.2	3.4
23	10.0	7.7	.0	.0	.2	.0	---	---	4.3	1.3	7.7	3.7
24	9.6	8.0	.1	.0	.0	.0	---	---	3.9	.8	8.0	3.1
25	9.0	7.4	2.1	.0	.0	.0	---	---	3.5	1.3	8.6	3.0
26	9.1	6.7	3.2	.0	.0	.0	2.0	.0	4.3	.0	8.9	3.8
27	8.9	6.7	3.7	1.0	.0	.0	2.0	.0	5.5	1.0	7.7	5.0
28	7.8	5.5	3.4	1.0	.0	.0	2.2	.0	5.8	1.8	7.9	5.3
29	5.5	2.7	3.0	1.3	.0	.0	2.5	.0	5.8	1.7	9.6	5.1
30	3.1	1.1	1.3	.0	.0	.0	2.7	.0	---	---	10.5	5.6
31	4.7	1.3	---	---	.0	.0	3.0	.0	---	---	8.2	5.2
MONTH	12.8	---	7.2	.0	2.4	.0	---	---	5.8	.0	10.5	.8
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	9.6	4.2	15.0	8.6	10.7	8.3	15.8	12.4	18.5	13.4	15.3	10.5
2	7.6	4.4	14.7	9.3	13.7	8.4	15.9	11.5	17.5	13.7	14.5	10.5
3	10.3	4.1	14.1	9.4	13.5	10.3	16.6	11.9	17.5	13.2	15.1	10.0
4	11.0	5.0	14.9	9.3	14.0	10.6	16.7	12.5	17.1	13.4	15.5	11.2
5	10.1	5.5	13.0	9.2	12.9	10.9	17.2	12.9	16.0	13.3	15.8	10.5
6	10.5	5.1	12.5	9.2	13.3	10.6	18.6	13.4	16.2	13.6	15.5	10.3
7	10.2	6.4	12.1	8.6	11.7	10.1	16.5	13.7	17.8	13.0	15.7	11.2
8	11.2	3.0	11.1	9.0	12.3	9.6	15.5	13.5	17.9	14.4	16.0	11.3
9	14.7	.0	11.6	8.5	12.8	10.4	16.9	12.4	18.5	14.2	16.1	11.2
10	16.6	1.6	10.9	7.9	14.3	9.4	16.9	13.3	16.3	14.9	16.0	11.2
11	11.8	2.5	12.9	8.0	12.4	10.5	17.3	14.1	17.0	13.4	15.9	11.2
12	16.0	3.8	---	8.9	14.6	9.6	15.8	13.5	17.3	12.7	16.3	11.9
13	12.5	3.8	14.2	9.7	15.4	11.2	16.4	13.0	16.4	12.8	---	---
14	11.8	8.5	13.4	9.6	14.8	11.0	16.4	12.2	16.6	12.6	---	---
15	11.2	7.2	14.2	9.5	14.0	10.3	15.7	12.5	17.0	12.9	16.8	12.1
16	12.5	7.3	13.9	9.3	13.3	10.2	16.2	11.7	16.4	13.8	15.1	11.3
17	11.7	7.0	---	9.8	14.5	9.6	18.0	13.7	17.8	13.9	15.1	10.6
18	10.6	7.0	14.2	9.6	15.5	11.3	17.1	13.6	18.5	13.7	13.6	10.5
19	7.6	4.7	14.0	9.9	15.3	12.0	16.9	13.4	18.6	13.4	14.0	11.1
20	9.7	4.0	14.1	10.6	15.6	12.3	16.9	12.9	17.2	13.5	12.3	9.6
21	10.9	4.8	12.6	10.2	14.5	11.9	16.6	12.9	17.0	13.0	14.1	8.9
22	10.0	6.4	12.3	9.4	14.6	10.9	16.6	14.1	17.1	13.4	14.8	9.3
23	10.8	6.6	12.0	9.7	15.5	12.1	16.7	13.8	15.8	14.0	15.1	9.5
24	12.4	6.0	12.0	10.0	14.7	12.5	17.1	13.3	14.2	10.7	14.7	9.8
25	12.8	7.1	11.7	8.8	14.9	12.2	16.0	14.1	13.7	10.1	13.7	10.5
26	12.6	7.3	12.6	9.4	15.3	12.5	18.1	14.2	14.8	10.8	13.2	7.9
27	13.8	7.7	12.5	10.6	14.1	11.9	17.9	13.5	14.9	9.6	13.3	7.7
28	14.0	8.8	11.8	9.4	15.7	11.5	17.6	13.7	15.6	10.1	13.3	8.1
29	15.5	9.2	11.7	9.2	15.8	12.2	16.2	13.2	15.1	10.5	13.9	8.4
30	13.7	9.6	10.7	9.7	16.8	12.4	17.7	12.6	15.4	11.7	14.0	8.9
31	---	---	10.8	8.5	---	---	17.3	14.3	13.8	11.0	---	---
MONTH	16.6	.0	---	7.9	16.8	8.3	18.6	11.5	18.6	9.6	---	---

07091200 ARKANSAS RIVER NEAR NATHROP, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	195	201	155	139	108	124	125	90	83	---	146
2	201	195	182	155	140	108	139	122	87	82	---	149
3	200	194	179	153	141	106	152	122	86	82	---	149
4	200	197	172	156	141	106	150	123	89	85	---	152
5	199	198	168	155	142	105	151	125	93	86	---	154
6	199	196	169	153	140	106	153	123	94	83	117	152
7	200	195	170	152	139	107	155	122	96	88	116	152
8	200	192	170	151	138	107	155	122	97	95	112	151
9	200	192	168	152	136	109	153	105	101	83	113	159
10	199	192	166	153	132	108	160	105	108	83	115	159
11	199	191	169	151	130	108	195	105	113	83	121	151
12	198	194	170	150	129	105	197	106	110	81	121	145
13	197	193	167	154	128	105	198	102	102	79	119	144
14	198	194	174	148	128	103	198	102	94	79	121	147
15	198	192	172	148	126	109	182	99	84	81	120	160
16	197	192	168	144	128	108	157	99	81	84	120	162
17	196	193	169	139	128	107	155	100	81	83	122	156
18	196	194	157	140	128	107	156	91	84	82	128	152
19	197	195	160	138	128	107	157	88	86	83	142	147
20	197	194	164	141	129	107	150	87	88	88	146	146
21	198	193	159	140	128	107	139	85	91	92	146	146
22	198	199	160	141	127	107	139	83	89	83	143	146
23	198	197	160	139	122	107	136	84	87	83	142	145
24	198	198	160	142	115	109	128	85	86	84	147	145
25	198	203	158	140	114	111	124	84	87	84	143	140
26	199	205	157	139	112	113	123	82	87	87	140	138
27	194	206	153	142	108	115	125	84	83	101	137	137
28	197	148	154	145	108	113	128	83	86	---	145	137
29	195	202	153	144	---	112	127	90	85	---	147	137
30	195	202	153	143	---	112	126	91	83	---	146	135
31	196	---	154	142	---	116	---	89	---	---	145	---
MEAN	198	194	166	147	129	108	151	100	91	---	---	148

07091200 ARKANSAS RIVER NEAR NATHROP, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.5	7.6	8.6	7.9	8.0	7.1	8.4	8.2	8.4	7.9	8.5	8.0
2	8.5	7.5	8.4	7.8	8.2	7.0	8.4	8.2	8.3	8.0	8.5	8.1
3	8.5	7.5	8.4	7.8	8.7	6.9	8.4	8.2	8.4	7.9	8.4	7.9
4	8.5	7.5	8.7	7.8	8.6	8.4	8.4	8.2	8.3	7.8	8.4	7.9
5	8.5	7.5	8.7	7.8	8.5	8.3	8.4	8.2	8.3	7.7	8.4	7.9
6	8.5	7.5	8.6	7.8	8.4	8.3	8.4	8.2	8.3	7.6	8.5	7.9
7	8.3	7.4	8.6	7.7	8.3	8.1	8.4	8.1	8.3	7.5	8.5	7.9
8	8.4	7.4	8.4	7.7	8.2	8.0	8.3	8.1	8.6	7.5	8.6	7.9
9	8.4	7.3	8.4	7.7	8.1	7.9	8.4	8.2	8.4	7.9	8.6	7.9
10	8.3	7.3	8.3	7.6	8.0	7.7	8.3	8.1	8.6	7.7	8.5	7.9
11	8.3	7.2	8.2	7.6	8.4	7.7	8.3	8.1	8.5	7.8	8.5	7.8
12	8.3	7.2	8.1	7.5	8.4	8.2	8.3	8.1	8.3	7.6	8.7	7.9
13	8.3	7.1	8.1	7.6	8.4	8.2	8.3	8.1	8.3	7.4	8.7	7.9
14	8.2	7.1	8.0	7.6	8.4	8.2	8.3	8.1	8.3	7.3	8.6	7.8
15	8.3	7.7	8.0	7.6	8.4	8.2	8.4	8.0	8.5	7.3	8.5	7.8
16	8.2	7.7	8.1	7.7	8.4	8.2	8.4	8.2	8.5	8.0	8.5	7.9
17	8.2	7.7	8.2	7.8	8.4	8.2	8.4	8.2	8.5	8.0	8.4	7.8
18	8.3	7.6	8.1	7.9	8.4	8.2	8.4	8.2	8.4	7.9	8.6	7.9
19	8.3	7.6	8.3	7.9	8.4	8.2	8.5	8.1	8.5	7.7	8.6	7.8
20	8.3	7.6	8.1	7.8	8.3	8.2	8.4	8.1	8.6	8.1	8.5	7.8
21	8.5	7.9	8.3	7.8	8.3	8.2	8.4	8.1	8.6	8.1	8.5	7.7
22	8.6	8.0	8.5	7.9	8.3	8.2	8.4	8.1	8.5	8.1	8.4	7.6
23	8.7	8.1	8.2	7.7	8.3	8.2	8.5	8.0	8.6	8.1	8.5	7.6
24	8.7	8.1	8.6	7.8	8.3	8.2	8.4	8.0	8.5	8.1	8.5	7.5
25	8.8	8.1	8.5	7.8	8.3	8.1	8.4	8.0	8.5	8.1	8.5	7.5
26	8.9	8.0	8.7	7.8	8.3	8.1	8.4	8.0	8.5	8.1	8.4	7.5
27	8.9	8.0	8.6	7.8	8.3	8.1	8.4	8.0	8.5	8.1	8.3	8.0
28	9.0	7.9	8.4	7.6	8.3	8.1	8.3	8.0	8.5	8.0	8.6	8.0
29	9.0	8.4	8.2	7.5	8.4	8.2	8.3	7.9	---	---	8.6	8.0
30	9.1	7.9	8.0	7.5	8.4	8.2	8.3	7.8	---	---	8.5	8.0
31	9.1	7.9	---	---	8.4	8.2	8.3	7.8	---	---	8.6	8.0
MONTH	9.1	7.1	8.7	7.5	8.7	6.9	8.5	7.8	8.6	7.3	8.7	7.5
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.6	8.0	7.9	7.1	7.8	7.7	---	---	---	---	8.6	7.3
2	8.6	7.9	7.9	7.1	7.8	7.7	---	---	---	---	8.4	7.3
3	8.6	8.0	7.8	7.0	7.8	7.7	---	---	---	---	7.9	7.3
4	8.6	7.9	7.8	7.0	7.8	7.7	---	---	---	---	7.9	7.2
5	8.7	8.0	8.1	6.9	7.8	7.7	---	---	---	---	8.4	7.2
6	8.5	8.0	8.1	7.8	7.8	7.7	---	---	8.3	---	8.5	7.3
7	8.5	7.9	8.1	7.8	7.8	7.8	---	---	8.4	8.0	8.4	7.5
8	8.5	7.9	8.1	7.8	7.9	7.8	---	---	8.4	8.0	8.3	7.5
9	8.5	7.9	8.0	7.7	7.9	7.8	---	---	8.5	7.9	8.3	7.7
10	8.5	7.9	8.0	7.8	8.0	7.8	---	---	8.7	7.8	8.3	7.7
11	8.5	7.9	8.0	7.7	8.0	7.8	---	---	8.8	7.8	8.6	7.8
12	8.5	7.7	8.0	7.7	8.0	7.8	---	---	8.7	7.9	8.6	7.7
13	8.4	7.9	7.9	7.7	7.9	7.7	---	---	8.2	7.9	8.5	7.7
14	8.4	7.9	7.8	7.7	7.9	7.7	---	---	8.2	7.9	8.4	7.7
15	8.2	7.8	7.8	7.7	7.7	7.7	8.1	---	8.2	7.9	8.3	7.5
16	8.2	7.7	7.8	7.7	7.7	---	8.1	7.9	8.1	7.9	8.5	7.6
17	8.2	7.7	7.8	7.7	---	---	8.2	7.9	8.2	7.9	8.4	7.7
18	8.2	7.7	7.7	7.6	---	---	8.3	7.9	8.3	7.9	8.3	7.6
19	8.1	7.6	7.8	7.6	---	---	8.5	7.9	8.2	8.0	8.4	7.6
20	8.1	7.6	7.7	7.7	---	---	8.5	8.0	8.1	8.0	8.4	7.5
21	8.2	7.6	7.8	7.6	---	---	8.6	8.0	8.1	7.9	8.5	7.6
22	8.1	7.4	7.7	7.7	---	---	8.6	7.9	8.1	7.9	8.5	7.5
23	8.0	7.4	7.7	7.6	---	---	8.6	7.9	8.0	7.9	8.5	7.6
24	7.9	7.3	7.7	7.6	---	---	8.7	7.9	8.0	7.8	8.3	7.6
25	8.1	7.3	7.7	7.7	---	---	8.6	7.9	8.4	7.8	8.3	7.6
26	7.9	7.2	7.7	7.7	---	---	8.8	7.9	8.4	7.8	8.3	7.6
27	7.9	7.2	7.7	7.6	---	---	8.7	8.0	8.4	7.7	8.2	7.5
28	7.9	7.2	7.7	7.7	---	---	---	---	8.6	7.6	8.1	7.4
29	8.0	7.2	7.8	7.7	---	---	---	---	8.6	7.6	7.9	7.4
30	7.7	7.0	7.8	7.7	---	---	---	---	8.5	7.6	7.8	7.2
31	---	---	7.8	7.7	---	---	---	---	8.2	7.5	---	---
MONTH	8.7	7.0	8.1	6.9	---	---	---	---	---	---	8.6	7.2

07091200 ARKANSAS RIVER NEAR NATHROP, CO---Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	13.7	8.5	5.9	3.7	1.8	.0	1.4	.0	3.2	.3	3.7	2.1
2	13.5	8.4	4.6	3.3	2.6	.0	2.1	.0	2.2	.0	4.1	.9
3	12.7	8.2	3.3	1.3	2.5	.0	2.0	.0	2.5	.0	3.5	.0
4	12.9	8.0	3.0	.0	1.3	.0	.0	.0	1.4	.0	3.4	.2
5	12.6	8.3	3.1	.2	1.3	.0	.0	.0	1.2	.0	3.6	.4
6	12.6	9.4	3.7	.0	1.4	.0	.0	.0	1.7	.0	4.8	1.8
7	11.5	6.2	4.6	.5	.7	.0	2.1	.0	2.6	.0	5.3	2.0
8	8.7	3.8	4.9	1.7	1.8	.0	1.6	.0	4.1	.9	5.6	2.3
9	9.7	4.9	5.7	2.8	2.9	.0	1.4	.0	4.2	1.8	5.9	2.7
10	10.5	5.5	4.5	2.5	3.3	.5	.7	.0	4.7	1.5	5.5	3.0
11	11.2	6.1	4.6	2.4	2.9	.0	1.8	.0	3.8	1.0	3.6	2.2
12	---	---	4.0	.8	2.5	.0	.3	.0	3.7	.5	3.6	.6
13	11.3	7.0	4.5	1.5	1.5	.1	.1	.0	3.3	.0	3.3	.0
14	10.0	6.7	5.2	2.1	.1	.0	2.2	.0	2.1	.0	5.3	.6
15	11.2	8.6	5.4	2.0	.0	.0	2.5	.0	3.4	.1	6.2	3.1
16	10.0	6.7	5.1	2.3	1.1	.0	2.7	.0	.5	.0	6.1	2.7
17	10.3	5.6	5.7	2.7	.0	.0	2.3	.1	3.7	.0	5.2	2.6
18	9.6	5.9	4.7	2.5	.5	.0	2.5	.0	4.1	.5	6.6	3.8
19	9.6	6.8	4.4	2.0	.1	.0	2.4	.7	3.8	1.8	6.3	3.1
20	10.4	5.8	3.3	2.4	.0	.0	2.7	.0	4.2	1.5	6.1	2.3
21	9.4	6.0	3.0	1.3	.0	.0	3.3	.0	2.8	.7	6.2	3.5
22	10.1	6.0	3.0	.0	.1	.0	2.9	.0	2.8	.0	6.1	2.7
23	10.3	6.3	2.9	.8	.8	.0	1.7	.0	3.5	.0	7.0	2.9
24	10.4	6.4	1.6	.0	.2	.0	.0	.0	4.0	1.3	7.0	2.9
25	10.9	7.5	.7	.0	.5	.0	.4	.0	3.8	.1	7.6	3.4
26	11.0	8.0	.4	.0	.0	.0	2.6	.0	3.4	.0	6.7	4.3
27	9.8	6.4	.7	.0	.0	.0	2.6	.0	3.5	.1	5.7	3.2
28	9.7	7.5	.2	.0	1.5	.0	2.0	.0	3.1	.8	6.2	2.3
29	8.8	7.1	2.2	.0	1.8	.0	3.1	.0	---	---	7.0	4.0
30	9.4	6.3	.9	.0	2.3	.6	2.9	.0	---	---	6.3	3.9
31	7.8	5.6	---	---	2.0	.0	3.1	.0	---	---	7.2	2.9
MONTH	---	---	5.9	.0	3.3	.0	3.3	.0	4.7	.0	7.6	.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.2	3.0	9.3	5.4	12.6	10.0	14.2	11.2	---	---	15.2	12.5
2	8.1	4.4	10.3	5.8	11.9	9.7	14.3	11.4	---	---	14.6	11.6
3	6.9	3.1	10.6	6.2	11.1	9.3	14.2	11.4	---	---	15.7	10.9
4	9.3	2.8	11.2	7.3	10.6	8.2	13.0	11.2	---	---	16.7	11.3
5	9.4	5.2	9.8	8.0	12.8	9.2	14.5	11.0	---	---	16.4	12.9
6	7.5	4.9	11.1	6.1	12.0	9.5	15.6	11.8	17.5	---	16.7	12.7
7	7.2	3.0	8.7	7.1	11.0	8.8	14.8	12.1	16.7	13.6	15.0	12.5
8	7.8	1.9	9.2	5.1	11.7	8.5	14.6	12.0	16.3	13.7	15.5	10.6
9	10.2	3.1	9.6	4.7	11.2	9.0	14.3	11.4	16.5	13.2	16.5	11.3
10	9.2	5.5	10.5	5.0	12.9	8.1	14.6	11.8	17.4	15.1	15.4	12.1
11	10.9	5.2	11.3	6.5	12.7	9.4	15.8	13.2	18.2	14.3	16.3	11.6
12	9.4	5.7	12.4	7.4	13.4	9.1	15.0	13.4	17.1	14.5	16.2	11.4
13	9.7	5.0	12.0	8.2	13.1	9.4	15.1	13.2	15.9	14.4	14.0	10.7
14	7.9	4.6	11.3	8.5	13.3	9.4	16.2	13.6	16.4	13.5	13.4	9.3
15	7.6	3.9	11.3	8.2	12.6	10.6	16.2	13.8	16.8	12.7	14.0	9.0
16	8.5	3.9	11.1	9.3	12.5	10.0	15.4	13.4	17.6	13.5	14.3	10.1
17	9.6	4.2	10.0	8.8	11.2	10.0	15.3	13.9	17.4	14.3	14.6	10.4
18	10.2	6.1	11.0	7.7	10.6	8.9	16.1	13.4	18.0	14.3	13.4	10.9
19	8.9	4.3	10.8	8.3	11.8	7.9	15.7	13.6	18.0	14.5	14.3	9.7
20	9.1	3.4	11.0	8.4	12.1	9.4	15.3	13.6	16.8	14.2	13.5	9.1
21	10.4	4.2	11.0	9.0	12.2	10.1	15.0	12.8	16.0	14.6	14.2	9.5
22	11.1	5.6	10.6	8.8	12.7	9.5	15.3	12.5	16.7	13.5	14.6	9.9
23	10.1	6.6	11.8	8.3	13.0	9.6	14.9	12.8	17.4	12.2	15.5	11.6
24	8.5	6.0	11.2	9.0	12.9	8.8	15.4	13.2	18.2	13.1	14.0	10.6
25	9.7	3.9	12.5	9.4	12.9	9.1	16.6	13.3	18.2	14.0	13.1	9.1
26	10.9	5.9	11.8	10.2	14.0	10.5	17.0	13.8	15.9	14.1	13.3	9.0
27	12.0	7.8	10.8	9.2	13.4	11.1	17.2	13.5	14.2	13.4	13.4	8.9
28	12.4	8.1	10.8	9.1	13.2	10.4	---	---	15.5	12.9	13.3	9.1
29	11.7	7.1	11.7	8.8	14.2	11.2	---	---	16.7	13.2	13.7	9.7
30	9.7	7.5	12.4	9.4	13.8	10.9	---	---	15.2	13.3	13.1	9.5
31	---	---	12.7	10.0	---	---	---	---	16.5	12.5	---	---
MONTH	12.4	1.9	12.7	4.7	14.2	7.9	---	---	---	---	16.7	8.9

07093700 ARKANSAS RIVER NEAR WELLSVILLE, CO

LOCATION.--Lat 38°30'10", long 105°56'21", in SW¹/4NE¹/4 sec.14, T.49 N., R.9 E., Chaffee County, Hydrologic Unit 11020001, on right bank 50 ft upstream from Chaffee-Fremont County line, 2.0 mi northwest of Wellsville, 2.8 mi downstream from South Arkansas River, and 3.5 mi southeast of Salida.

DRAINAGE AREA.--1,485 mi².

PERIOD OF RECORD.--April 1961 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,883.4 ft above sea level, (river-profile survey).

REMARKS.--Estimated daily discharges: Dec. 20, Jan. 10, and Feb. 16-17. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, diversions for irrigation of about 26,000 acres, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	321	388	381	436	452	644	502	549	2490	2640	775	618
2	320	382	411	443	450	641	405	532	2520	2620	746	592
3	318	391	416	447	450	632	378	528	2520	2370	750	598
4	315	384	435	401	444	637	370	540	2210	2390	718	542
5	321	398	447	405	432	648	378	573	2040	2140	701	521
6	325	405	437	424	440	648	375	551	1910	1900	741	528
7	323	412	419	443	446	647	369	538	1820	1600	721	543
8	325	430	432	450	452	646	354	558	1730	1400	755	613
9	323	431	440	443	463	649	347	756	1530	1860	797	543
10	324	436	445	430	488	658	288	751	1350	1880	787	509
11	323	436	445	424	496	653	267	729	1230	1960	743	528
12	320	436	441	420	491	653	266	784	1370	2000	728	527
13	328	434	443	417	486	634	253	922	1760	2150	753	539
14	335	443	422	432	485	656	248	1050	2290	2110	784	599
15	336	433	420	430	500	675	293	1290	3210	2040	784	497
16	338	422	448	445	520	646	318	1420	3710	1820	745	495
17	349	411	440	452	500	648	318	1510	3750	1760	716	513
18	351	406	482	448	493	651	313	1870	3460	1740	684	522
19	348	404	465	450	491	651	326	1810	3170	1710	587	523
20	344	414	462	453	525	647	350	1900	2960	1510	574	509
21	342	423	460	448	500	648	374	2000	2740	1430	607	496
22	341	398	465	451	480	643	406	2100	2880	1850	618	510
23	341	404	451	449	525	645	459	2110	3030	1860	621	512
24	339	406	458	436	587	645	503	2160	3070	1790	530	500
25	342	366	456	441	596	641	496	2090	2860	1740	526	533
26	385	365	441	447	617	645	480	2260	2640	1540	527	523
27	397	366	445	444	644	672	482	2410	2620	1030	624	514
28	387	368	457	448	650	660	490	2530	2660	824	601	510
29	387	374	456	452	---	646	514	2130	2700	770	561	525
30	384	364	456	448	---	648	542	2100	2710	762	567	530
31	388	---	444	443	---	602	---	2220	---	785	597	---
TOTAL	10620	12130	13720	13600	14103	20059	11464	43271	74940	53981	20968	16012
MEAN	343	404	443	439	504	647	382	1396	2498	1741	676	534
MAX	397	443	482	453	650	675	542	2530	3750	2640	797	618
MIN	315	364	381	401	432	602	248	528	1230	762	526	495
AC-FT	21060	24060	27210	26980	27970	39790	22740	85830	148600	107100	41590	31760

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1993, BY WATER YEAR (WY)

	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
MEAN	410	416	369	336	333	323	393	1028	2063	1472	894	523																					
MAX	750	581	636	576	729	647	896	2344	3930	3066	1889	1031																					
(WY)	1985	1983	1983	1983	1985	1993	1962	1984	1980	1983	1984	1970																					
MIN	229	242	280	207	208	202	215	391	708	340	278	267																					
(WY)	1978	1978	1978	1977	1977	1978	1977	1977	1977	1977	1977	1977																					

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1961 - 1993

	1992	1993	1961-1993
ANNUAL TOTAL	213027	304868	
ANNUAL MEAN	582	835	721
HIGHEST ANNUAL MEAN			1135
LOWEST ANNUAL MEAN			358
HIGHEST DAILY MEAN	1590	3750	5980
LOWEST DAILY MEAN	247	248	110
ANNUAL SEVEN-DAY MINIMUM	276	276	147
INSTANTANEOUS PEAK FLOW		3940	6240
INSTANTANEOUS PEAK STAGE		7.18	8.02
ANNUAL RUNOFF (AC-FT)	422500	604700	522300
10 PERCENT EXCEEDS	1040	2100	1580
50 PERCENT EXCEEDS	468	514	436
90 PERCENT EXCEEDS	339	351	257

a-Maximum gage height, 8.12 ft, Jun 10, 1984.

07093740 BADGER CREEK, UPPER STATION, NEAR HOWARD, CO

LOCATION.--Lat 38°39'23", long 105°48'50", in NE¹/₄NE¹/₄ sec.24, T.51 N., R.10 E., Fremont County, Hydrologic Unit 11020001, on left bank 0.2 mi downstream from County Road 2, 0.9 mi upstream from Steer Creek, 14.2 mi north of Howard, and 14.5 mi upstream from mouth.

DRAINAGE AREA.--106 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1980 to September 1986, October 1986 to October 1988 (seasonal only), at site 1,000 ft downstream. March 1989 to current year (seasonal only). Not equivalent because of seepage at previous site.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,780 ft above sea level, from topographic map. Prior to October 28, 1988 at site 1,000 ft downstream, at different datum.

REMARKS.--Estimated daily discharges: Oct. 8, Apr. 4-7, 16-19, June 13-14, and July 16-23. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--5 years (water years 1981-86), 5.89 ft³/s; 4,270 acre-ft/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,360 ft³/s, Aug. 14, 1983, gage height, 8.22 ft, result of indirect determination of peak flow; no flow, July 17-23, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 11 ft³/s at 2245 Apr. 28, gage height, 3.21 ft; minimum daily, 0.05 ft³/s, July 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.53	---	---	---	---	---	3.1	3.5	.97	.15	.15	1.0
2	.54	---	---	---	---	---	3.3	4.1	.93	.10	.17	.92
3	.54	---	---	---	---	---	2.9	6.2	.93	.16	.17	.84
4	.57	---	---	---	---	---	3.0	6.1	.89	.27	.17	.68
5	.60	---	---	---	---	---	3.1	4.5	1.1	.21	.16	.56
6	.71	---	---	---	---	---	3.5	3.0	.84	.14	.17	.62
7	.73	---	---	---	---	---	2.8	2.8	1.1	.10	.15	.63
8	.76	---	---	---	---	---	2.2	2.7	.98	.08	.14	.74
9	.75	---	---	---	---	---	2.5	2.2	.95	.08	.17	.59
10	.75	---	---	---	---	---	3.1	2.0	1.0	.12	.16	.53
11	.74	---	---	---	---	---	3.3	1.8	.86	.16	.14	.57
12	.73	---	---	---	---	---	3.3	1.7	.72	.39	.14	.50
13	.77	---	---	---	---	---	2.4	1.6	.64	.28	.19	1.1
14	.77	---	---	---	---	---	2.0	1.6	.60	.23	.39	1.3
15	.75	---	---	---	---	---	1.9	1.7	.50	.21	.38	1.1
16	.75	---	---	---	---	---	1.9	1.5	.37	.18	.32	.75
17	.84	---	---	---	---	---	1.7	2.0	.61	.14	.26	.60
18	.82	---	---	---	---	---	2.3	4.5	2.0	.13	.39	.58
19	.82	---	---	---	---	---	2.3	2.9	1.8	.14	.99	.58
20	.87	---	---	---	---	---	2.2	2.4	1.1	.19	1.5	.59
21	.90	---	---	---	---	---	2.3	1.9	.80	.16	2.5	.58
22	.88	---	---	---	---	---	2.8	1.7	1.0	.15	1.1	.57
23	.89	---	---	---	---	---	3.0	1.5	.62	.13	.77	.51
24	.87	---	---	---	---	---	3.7	1.3	.45	.12	.57	.45
25	.93	---	---	---	---	---	3.2	1.4	.37	.10	.46	.46
26	1.8	---	---	---	---	---	3.0	1.3	.30	.09	.44	.48
27	1.8	---	---	---	---	---	4.8	2.0	.24	.06	.75	.49
28	1.3	---	---	---	---	---	7.4	1.8	.23	.05	1.2	.47
29	1.2	---	---	---	---	---	7.4	1.4	.16	.06	1.1	.50
30	1.2	---	---	---	---	---	5.3	1.3	.30	.10	1.4	.52
31	1.2	---	---	---	---	---	---	1.1	---	.16	1.3	---
TOTAL	27.31	---	---	---	---	---	95.7	75.5	23.36	4.64	17.90	19.81
MEAN	.88	---	---	---	---	---	3.19	2.44	.78	.15	.58	.66
MAX	1.8	---	---	---	---	---	7.4	6.2	2.0	.39	2.5	1.3
MIN	.53	---	---	---	---	---	1.7	1.1	.16	.05	.14	.45
AC-FT	54	---	---	---	---	---	190	150	46	9.2	36	39

07093740 BADGER CREEK, UPPER STATION, NEAR HOWARD, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1989 to current year (seasonal record only). February 1981 to October 1988 (seasonal record only) and at site 1,000 ft downstream, not equivalent because of seepage at previous site.

PERIOD OF DAILY RECORD.--Suspended sediment discharge March 1989 to current year (seasonal only). June 1981 to October 1988 (seasonal only) and at site 1,000 ft downstream, not equivalent because of seepage at previous site.

INSTRUMENTATION.--Pumping sediment sampler since June 1981.

REMARKS.--Records for the 1992 water year are fair, except those for peak flows which are poor. Records for the 1993 water year are good, except those for peak flows which are fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily, 25,800 mg/L, Aug. 20, 1982; minimum daily, 0 mg/L, many days.

SEDIMENT LOADS: Maximum daily, 15,600 tons, Aug. 14, 1983; minimum daily, 0 tons, many days.

EXTREMES FOR 1992 WATER YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,680 mg/L, Apr. 7; minimum daily mean, 8 mg/L, Oct. 2.

SEDIMENT LOADS: Maximum daily mean mean, 183 tons/day, Aug. 10; minimum daily mean, 0.01 tons/day, Oct. 2 and July 7.

EXTREMES FOR 1993 WATER YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,480 mg/L, Aug. 19; minimum daily mean, 21 mg/L, Oct. 2 and 10.

SEDIMENT LOADS: Maximum daily mean, 14 tons/day, Apr. 29; minimum daily mean, 0.01 tons/day, July 28-29.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DIS-	SEDI-	CHARGE,	MENT,	MENT,
		INST.	SEDI-	DIS-
		CUBIC	MENT,	CHARGE,
		FEET	SUS-	SUS-
DATE	TIME	PER	PENDE	PENDE
		SECOND	(MG/L)	(T/DAY)
OCT				
02...	1125	0.60	14	0.02
29...	1120	0.54	77	0.11
MAR				
31...	1050	6.6	1170	21
APR				
23...	1225	2.0	160	0.86
23...	1240	2.0	154	0.83
MAY				
05...	0945	1.3	102	0.36
05...	1010	1.3	102	0.36
22...	1110	0.53	88	0.13
22...	1115	0.53	69	0.10
JUN				
09...	0940	1.0	142	0.38
09...	0950	1.0	127	0.34
30...	1410	0.44	118	0.14
30...	1420	0.42	119	0.13
JUL				
22...	0815	0.28	103	0.08
AUG				
11...	1405	3.5	266	2.5
SEP				
01...	1050	1.8	66	0.32
01...	1100	1.8	90	0.44
21...	1250	0.73	60	0.12

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[illegible]

07093740 BADGER CREEK, UPPER STATION, NEAR HOWARD, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	3.1	130	1.1	1.2	---	.39	2.0	238	1.3
2	3.6	130	1.3	1.1	---	.33	1.5	181	.73
3	5.6	135	2.0	1.1	---	.31	1.0	126	.34
4	8.6	150	3.5	1.2	---	.39	1.0	168	.45
5	11	180	5.3	1.1	101	.30	.86	149	.35
6	15	205	8.3	1.0	108	.29	.83	167	.37
7	17	3680	180	1.0	101	.27	.78	130	.27
8	13	2030	74	1.2	---	.42	.83	126	.28
9	12	2380	81	1.5	---	.73	1.1	146	.43
10	11	2100	65	2.0	---	1.4	1.6	249	1.1
11	10	1500	42	1.6	---	.86	1.3	207	.73
12	8.6	1560	37	1.3	---	.60	1.2	169	.55
13	8.4	1380	33	1.2	---	.49	.71	133	.25
14	8.3	2030	50	1.0	---	.32	.51	100	.14
15	6.5	1350	24	.89	---	.26	.40	87	.09
16	5.5	910	14	.82	---	.22	.44	167	.22
17	4.8	402	5.2	.76	---	.26	.35	95	.09
18	4.5	325	3.9	.84	---	.34	.27	81	.06
19	3.3	377	3.4	.75	---	.20	.27	---	.06
20	2.8	422	3.2	.70	---	.17	.31	---	.07
21	2.7	377	2.7	.66	---	.15	.35	62	.06
22	2.5	228	1.5	.62	79	.13	.42	74	.08
23	2.2	179	1.1	.60	72	.12	.42	76	.09
24	2.1	179	1.0	1.0	169	.74	.94	157	.42
25	1.9	---	.87	1.4	123	.46	1.3	2060	24
26	1.8	---	.78	1.3	193	.68	2.4	712	4.6
27	1.6	---	.65	1.9	188	1.1	1.2	380	1.2
28	1.5	---	.57	1.5	105	.43	.86	258	.60
29	1.4	---	.49	1.9	133	.68	.63	202	.34
30	1.4	---	.49	1.5	132	.50	.43	135	.16
31	---	---	---	2.1	196	1.1	---	---	---
TOTAL	181.7	---	647.35	36.74	---	14.64	26.21	---	39.43
JULY			AUGUST			SEPTEMBER			
1	.35	131	.12	.27	60	.04	1.5	92	.37
2	.31	125	.10	.22	88	.05	1.2	70	.23
3	.29	122	.10	.19	81	.04	.97	40	.10
4	.23	95	.06	.17	50	.02	.82	38	.08
5	.19	81	.04	.21	36	.02	.68	46	.08
6	.14	50	.02	.23	31	.02	.60	48	.08
7	.11	48	.01	.29	50	.04	.57	46	.07
8	.20	90	.05	.27	43	.03	.53	56	.08
9	.27	114	.08	.28	62	.05	.50	40	.11
10	.19	79	.04	7.2	1900	183	.45	46	.06
11	.22	65	.04	3.3	1020	13	.45	41	.05
12	.21	49	.03	1.5	127	.51	.42	32	.04
13	.33	87	.08	1.8	145	.77	.37	31	.03
14	.30	90	.07	1.1	48	.14	.39	46	.05
15	.24	62	.04	.89	29	.07	.54	51	.07
16	.31	71	.06	1.1	84	.47	.58	46	.07
17	.25	81	.05	1.2	93	.30	.59	39	.06
18	.22	78	.05	.87	72	.17	.56	34	.05
19	.21	106	.06	.68	46	.08	.56	42	.06
20	.28	124	.09	.51	28	.04	.58	65	.10
21	.33	110	.10	.46	28	.03	.64	71	.12
22	.22	100	.06	.46	30	.04	.62	65	.11
23	.18	118	.06	.54	32	.05	.55	51	.08
24	.18	100	.05	3.7	520	9.7	.53	48	.07
25	.25	65	.04	8.1	270	5.9	.50	51	.07
26	.43	100	.12	3.5	231	2.2	.47	57	.07
27	.44	100	.12	1.9	101	.52	.51	55	.08
28	.36	75	.07	1.4	70	.26	.53	60	.09
29	.30	60	.05	1.1	49	.15	.54	61	.09
30	.28	52	.04	1.0	38	.10	.53	43	.06
31	.23	47	.03	1.2	46	.15	---	---	---
TOTAL	8.05	---	1.93	45.64	---	217.96	18.28	---	2.68

07093740 BADGER CREEK, UPPER STATION, NEAR HOWARD, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT				
07...	1530	0.71	23	0.04
07...	1540	0.71	22	0.04
23...	1010	0.97	24	0.06
NOV				
03...	1045	0.48	50	0.06
MAR				
31...	1230	4.5	606	7.4
APR				
13...	1050	2.1	227	1.3
13...	1225	3.9	450	4.7
26...	1505	2.5	204	1.4
MAY				
06...	1115	2.7	158	1.2
19...	1305	2.8	138	1.0
JUN				
09...	1205	1.1	58	0.17
15...	1205	0.51	87	0.12
15...	1225	0.48	74	0.10
30...	1245	0.42	109	0.12
JUL				
20...	1110	0.19	134	0.07
AUG				
04...	1220	0.21	93	0.05
27...	1110	0.71	98	0.19
27...	1120	0.71	108	0.21
SEP				
08...	1150	0.74	57	0.11
08...	1330	0.74	41	0.08
08...	1340	0.74	48	0.10
16...	1250	0.75	25	0.05
16...	1340	0.70	55	0.10
23...	1510	0.50	34	0.05

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
	OCTOBER			NOVEMBER			DECEMBER		
1	.53	---	.04	---	---	---	---	---	---
2	.54	21	.03	---	---	---	---	---	---
3	.54	---	.04	---	---	---	---	---	---
4	.57	45	.07	---	---	---	---	---	---
5	.60	27	.04	---	---	---	---	---	---
6	.71	---	.05	---	---	---	---	---	---
7	.73	27	.05	---	---	---	---	---	---
8	.76	---	.05	---	---	---	---	---	---
9	.75	30	.06	---	---	---	---	---	---
10	.75	21	.04	---	---	---	---	---	---
11	.74	36	.07	---	---	---	---	---	---
12	.73	36	.07	---	---	---	---	---	---
13	.77	---	.06	---	---	---	---	---	---
14	.77	30	.06	---	---	---	---	---	---
15	.75	---	.07	---	---	---	---	---	---
16	.75	42	.08	---	---	---	---	---	---
17	.84	36	.08	---	---	---	---	---	---
18	.82	---	.08	---	---	---	---	---	---
19	.82	---	.07	---	---	---	---	---	---
20	.87	---	.08	---	---	---	---	---	---
21	.90	---	.07	---	---	---	---	---	---
22	.88	---	.07	---	---	---	---	---	---
23	.89	25	.06	---	---	---	---	---	---
24	.87	63	.15	---	---	---	---	---	---
25	.93	69	.17	---	---	---	---	---	---
26	1.8	72	.35	---	---	---	---	---	---
27	1.8	63	.31	---	---	---	---	---	---
28	1.3	---	.17	---	---	---	---	---	---
29	1.2	39	.13	---	---	---	---	---	---
30	1.2	39	.13	---	---	---	---	---	---
31	1.2	---	.12	---	---	---	---	---	---
TOTAL	27.31	---	2.92	---	---	---	---	---	---

07093740 BADGER CREEK, UPPER STATION, NEAR HOWARD, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
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	---	---	---	---	---	---	---	---	---
TOTAL	---	---	---	---	---	---	---	---	---
APRIL			MAY			JUNE			
1	3.1	---	7.0	3.5	910	8.6	.97	338	.89
2	3.3	721	6.4	4.1	910	10	.93	225	.56
3	2.9	665	5.2	6.2	682	11	.93	---	.28
4	3.0	910	7.4	6.1	525	8.6	.89	80	.19
5	3.1	980	8.2	4.5	420	5.1	1.1	90	.27
6	3.5	1010	9.5	3.0	210	1.7	.84	112	.25
7	2.8	---	7.0	2.8	210	1.6	1.1	120	.36
8	2.2	735	4.4	2.7	245	1.8	.98	---	.23
9	2.5	---	4.6	2.2	---	1.6	.95	62	.16
10	3.1	763	6.4	2.0	280	1.5	1.0	75	.20
11	3.3	630	5.6	1.8	216	1.0	.86	88	.19
12	3.3	595	5.3	1.7	168	.77	.72	100	.19
13	2.4	560	3.6	1.6	120	.52	.64	---	.17
14	2.0	---	3.4	1.6	---	.48	.60	105	.17
15	1.9	574	2.9	1.7	120	.55	.50	90	.12
16	1.9	630	3.2	1.5	130	.53	.37	90	.09
17	1.7	682	3.1	2.0	170	.92	.61	135	.22
18	2.3	665	4.1	4.5	275	3.3	2.0	---	2.7
19	2.3	---	4.0	2.9	162	1.3	1.8	486	2.4
20	2.2	490	2.9	2.4	---	1.1	1.1	338	1.0
21	2.3	427	2.7	1.9	212	1.1	.80	202	.44
22	2.8	434	3.3	1.7	130	.60	1.0	158	.43
23	3.0	560	4.5	1.5	112	.45	.62	---	.49
24	3.7	---	8.7	1.3	---	.37	.45	315	.38
25	3.2	---	2.6	1.4	112	.42	.37	158	.16
26	3.0	230	1.9	1.3	112	.39	.30	135	.11
27	4.8	875	11	2.0	125	.68	.24	94	.06
28	7.4	630	13	1.8	125	.61	.23	---	.04
29	7.4	682	14	1.4	---	.47	.16	90	.04
30	5.3	756	11	1.3	150	.53	.30	112	.09
31	---	---	---	1.1	280	.83	---	---	---
TOTAL	95.7	---	176.9	75.5	---	68.42	23.36	---	12.88

07093740 BADGER CREEK, UPPER STATION, NEAR HOWARD, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
	JULY			AUGUST			SEPTEMBER		
1	.15	225	.09	.15	90	.04	1.0	180	.49
2	.10	202	.05	.17	122	.06	.92	---	.31
3	.16	---	.10	.17	63	.03	.84	108	.24
4	.27	158	.12	.17	99	.05	.68	292	.54
5	.21	135	.08	.16	135	.06	.56	279	.42
6	.14	158	.06	.17	90	.04	.62	144	.24
7	.10	112	.03	.15	72	.03	.63	---	.14
8	.08	---	.02	.14	---	.03	.74	72	.14
9	.08	81	.02	.17	68	.03	.59	81	.13
10	.12	112	.04	.16	72	.03	.53	126	.18
11	.16	202	.09	.14	108	.04	.57	112	.17
12	.39	---	.17	.14	90	.03	.50	---	.12
13	.28	---	.10	.19	---	.04	1.1	122	.50
14	.23	112	.07	.39	90	.09	1.3	136	.49
15	.21	90	.05	.38	94	.10	1.1	69	.20
16	.18	94	.05	.32	81	.07	.75	45	.09
17	.14	90	.03	.26	63	.04	.60	---	.07
18	.13	---	.03	.39	389	1.3	.58	39	.06
19	.14	90	.03	.99	1480	4.3	.58	40	.06
20	.19	135	.07	1.5	954	5.8	.59	45	.07
21	.16	---	.05	2.5	936	8.6	.58	68	.11
22	.15	---	.04	1.1	405	1.2	.57	---	.11
23	.13	99	.03	.77	---	.52	.51	51	.07
24	.12	153	.05	.57	216	.33	.45	28	.03
25	.10	153	.04	.46	180	.22	.46	28	.03
26	.09	81	.02	.44	144	.17	.48	36	.05
27	.06	---	.02	.75	117	.24	.49	---	.06
28	.05	86	.01	1.2	---	.55	.47	24	.03
29	.06	86	.01	1.1	216	.64	.50	---	.03
30	.10	94	.02	1.4	198	.75	.52	---	.03
31	.16	81	.03	1.3	207	.73	---	---	---
TOTAL	4.64	---	1.62	17.90	---	26.16	19.81	---	5.21

07093775 BADGER CREEK, LOWER STATION, NEAR HOWARD, CO

LOCATION.--Lat 38°28'02", long 105°51'34", in SW¹/4SW¹/4 sec.27, T.49 N., R.10 E., Fremont County, Hydrologic Unit 11020001, on left bank 660 ft upstream from Denver and Rio Grande Railroad bridge, 960 ft upstream from mouth, and 1.9 mi northwest of Howard.

DRAINAGE AREA.--211 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1980 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,780 ft above sea level, from topographic map. Prior to May 19, 1983, at site 360 ft downstream, at datum 5.07 ft, lower.

REMARKS.--Estimated daily discharges: Water year 1992, Nov. 1-3, 23-24, Nov. 30 to Dec.4, Dec. 6-7, 9-10, 14-18, 21, 23-30, Jan. 1-3, 5, 8-11, Jan. 13 to Feb. 3, Feb. 5-10, 12-13, 15, 17-20, 24, and Feb. 26. Records good except for estimated daily discharges, which are poor. Estimated daily discharges: Water year 1993, Nov. 3-7, 12-13, 20-29, Dec. 2-9, and Dec. 13 to Mar. 13. Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	4.7	5.7	6.2	3.5	5.5	11	9.3	9.5	7.0	5.7	7.7
2	5.2	4.7	5.5	6.1	3.6	5.5	11	9.1	9.3	6.6	5.9	7.7
3	5.2	4.7	5.4	5.9	3.7	5.5	12	9.0	8.6	6.6	5.9	7.6
4	5.2	4.8	5.3	5.8	3.8	7.3	13	9.0	8.3	6.2	5.5	7.1
5	5.2	5.4	5.2	5.4	3.7	6.6	14	8.9	7.9	5.9	5.5	7.0
6	5.2	6.9	5.5	5.0	3.8	6.3	18	8.8	7.9	5.7	6.1	6.6
7	5.2	7.0	5.7	4.8	3.8	6.4	21	9.0	7.8	5.6	6.1	6.3
8	5.2	6.8	6.0	4.5	3.9	6.3	21	9.0	8.0	6.0	5.6	6.3
9	5.2	7.0	6.2	4.3	4.0	6.5	21	9.4	8.5	6.1	5.8	6.3
10	5.2	7.0	6.4	4.2	4.0	6.2	21	9.9	9.3	5.9	6.0	6.3
11	5.2	7.0	6.7	4.0	4.1	6.5	21	9.5	9.0	5.3	11	6.3
12	5.2	7.0	6.6	3.8	4.1	6.6	20	9.0	8.8	5.3	9.5	6.1
13	5.2	7.0	6.7	3.7	4.1	6.3	20	8.7	8.2	5.7	8.5	5.6
14	5.2	7.0	6.7	3.6	4.1	6.4	20	7.8	7.7	5.4	8.2	6.0
15	5.3	7.9	6.7	3.5	4.4	6.7	19	7.8	7.4	5.2	8.1	6.5
16	5.2	7.8	6.7	3.4	4.6	7.1	18	7.9	7.2	5.2	7.4	5.9
17	5.2	7.8	6.7	3.4	4.8	7.6	16	7.9	7.3	5.2	8.6	5.9
18	5.2	7.8	6.7	3.3	4.9	7.5	16	7.7	7.0	5.2	8.4	5.9
19	5.3	7.4	6.6	3.3	5.1	7.4	14	7.5	6.8	5.1	7.8	5.9
20	5.3	8.0	5.9	3.3	5.3	7.5	13	7.4	7.2	5.5	7.8	5.9
21	5.5	6.9	5.9	3.2	5.4	7.6	12	7.6	7.1	5.4	7.7	5.9
22	5.7	6.9	5.9	3.2	5.4	7.9	12	7.9	7.3	5.4	7.3	5.9
23	5.6	6.2	6.0	3.2	5.4	7.9	12	8.6	7.4	5.4	7.8	5.9
24	5.9	5.7	6.1	3.2	5.1	8.1	11	8.6	7.9	5.5	15	5.9
25	5.9	5.4	6.1	3.2	4.9	8.0	11	9.5	8.2	5.9	17	5.7
26	5.9	6.0	6.1	3.2	5.1	8.2	10	9.4	11	7.1	14	5.6
27	6.0	6.2	6.1	3.2	5.5	8.6	10	9.5	9.6	6.2	9.8	5.9
28	6.2	6.1	6.1	3.3	5.5	9.1	10	10	9.1	5.8	9.0	5.9
29	6.2	6.0	6.2	3.3	5.3	9.3	10	11	8.8	5.6	8.6	5.9
30	5.0	5.8	6.2	3.4	---	9.3	9.7	10	7.7	5.9	11	5.9
31	4.8	---	6.4	3.4	---	10	---	9.8	---	5.5	7.9	---
TOTAL	167.1	194.9	190.0	123.3	130.9	225.7	447.7	274.5	245.8	178.4	258.5	187.4
MEAN	5.39	6.50	6.13	3.98	4.51	7.28	14.9	8.85	8.19	5.75	8.34	6.25
MAX	6.2	8.0	6.7	6.2	5.5	10	21	11	11	7.1	17	7.7
MIN	4.8	4.7	5.2	3.2	3.5	5.5	9.7	7.4	6.8	5.1	5.5	5.6
AC-FT	331	387	377	245	260	448	888	544	488	354	513	372

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1992, BY WATER YEAR (WY)

	7.12	7.47	5.86	5.56	5.74	8.76	18.3	16.9	10.9	8.31	8.89	5.86
MEAN	7.12	7.47	5.86	5.56	5.74	8.76	18.3	16.9	10.9	8.31	8.89	5.86
MAX	10.6	11.2	9.13	8.78	11.2	17.3	57.1	58.1	24.7	13.8	13.2	8.97
(WY)	1988	1988	1988	1986	1986	1986	1987	1987	1987	1984	1984	1987
MIN	3.78	5.37	3.50	3.44	3.61	4.79	5.69	6.63	4.97	5.46	5.57	2.46
(WY)	1982	1982	1983	1982	1982	1982	1982	1981	1981	1981	1989	1981

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1981 - 1992

ANNUAL TOTAL	2791.8	2624.2	
ANNUAL MEAN	7.65	7.17	9.43
HIGHEST ANNUAL MEAN			18.5
LOWEST ANNUAL MEAN			5.31
HIGHEST DAILY MEAN	26	21	153
LOWEST DAILY MEAN	4.3	3.2	5.6
ANNUAL SEVEN-DAY MINIMUM	4.5	3.2	7.3
INSTANTANEOUS PEAK FLOW		107	2470
INSTANTANEOUS PEAK STAGE		5.05	8.05
ANNUAL RUNOFF (AC-FT)	5540	5210	6830
10 PERCENT EXCEEDS	11	10	14
50 PERCENT EXCEEDS	6.8	6.2	7.0
90 PERCENT EXCEEDS	5.2	4.3	4.4

a-Also occurred Jul 20.

b-Also occurred Jan 22-27.

c-From rating curve extended above 1950 ft³/s.

d-From floodmark.

07093775 BADGER CREEK, LOWER STATION, NEAR HOWARD, CO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	7.4	5.4	4.6	5.6	3.9	11	15	9.6	5.4	4.6	5.9
2	6.0	7.4	5.3	4.7	5.6	4.0	12	15	9.7	5.2	4.6	5.8
3	6.0	7.3	5.1	4.8	5.7	4.1	12	16	9.6	5.3	4.6	5.4
4	6.3	7.2	5.0	5.0	5.8	4.0	12	16	9.4	5.9	4.8	4.9
5	6.1	7.2	4.8	5.2	5.9	4.2	12	14	9.6	5.6	4.5	4.9
6	6.4	7.1	4.9	5.4	6.0	4.1	13	13	8.7	5.6	4.5	5.0
7	6.6	6.9	5.0	5.4	6.2	4.0	12	13	9.1	5.6	4.4	5.1
8	6.7	6.8	5.2	5.0	6.4	4.0	11	12	9.1	5.5	4.4	5.2
9	6.6	6.6	5.3	3.7	5.8	4.0	11	12	8.7	5.5	4.4	5.3
10	6.6	6.6	5.4	3.8	5.6	4.0	12	11	8.8	5.2	4.3	5.3
11	6.6	6.6	5.5	3.8	5.7	4.1	12	10	8.6	5.1	4.2	5.2
12	6.6	6.7	4.9	3.8	5.5	4.2	13	9.8	8.3	5.4	4.2	5.2
13	6.6	6.8	4.6	3.8	5.5	4.3	12	9.8	7.7	5.6	4.2	6.1
14	6.6	6.9	4.3	3.9	5.6	4.4	12	10	7.5	5.5	4.9	6.6
15	6.6	6.8	4.3	4.2	4.9	4.5	12	10	7.4	5.2	4.4	6.2
16	6.6	6.9	4.4	4.4	4.4	4.4	12	10	7.7	5.0	4.3	5.9
17	6.8	7.2	4.2	4.7	3.5	4.5	11	11	7.8	4.9	3.9	5.8
18	6.8	7.3	4.2	5.0	4.3	4.5	13	14	8.2	4.9	4.1	5.6
19	6.9	7.2	4.1	5.1	5.4	4.5	13	13	8.9	4.7	5.4	5.9
20	7.1	6.9	3.4	5.0	5.3	4.9	12	13	7.8	4.8	5.5	5.7
21	6.9	6.3	3.9	4.9	5.3	5.0	12	12	7.8	5.2	6.4	5.4
22	7.0	6.1	4.2	4.9	5.3	4.9	13	11	7.6	5.0	6.1	5.2
23	7.0	5.8	4.3	4.9	5.3	5.4	13	11	7.1	4.7	5.4	5.3
24	6.8	5.5	4.4	5.0	5.3	6.6	14	11	6.8	4.7	4.9	5.2
25	7.2	5.2	4.5	5.1	4.8	8.0	13	11	6.2	4.6	5.0	5.0
26	8.4	5.3	4.7	5.3	4.4	10	13	11	6.0	4.5	4.9	5.2
27	8.2	5.3	4.8	5.3	4.1	12	14	12	5.8	4.2	6.1	5.5
28	8.1	5.4	4.9	5.4	4.0	9.9	15	12	5.5	4.2	6.8	5.2
29	7.5	5.4	5.0	5.4	---	12	16	11	5.5	4.2	6.3	5.3
30	7.4	5.5	4.7	5.5	---	11	16	10	5.3	4.9	6.4	5.4
31	7.4	---	4.6	5.5	---	11	---	9.9	---	4.9	6.6	---
TOTAL	212.3	195.6	145.3	148.5	147.2	180.4	379	369.5	235.8	157.0	155.1	163.7
MEAN	6.85	6.52	4.69	4.79	5.26	5.82	12.6	11.9	7.86	5.06	5.00	5.46
MAX	8.4	7.4	5.5	5.5	6.4	12	16	16	9.7	5.9	6.8	6.6
MIN	5.9	5.2	3.4	3.7	3.5	3.9	11	9.8	5.3	4.2	3.9	4.9
AC-FT	421	388	288	295	292	358	752	733	468	311	308	325

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1993, BY WATER YEAR (WY)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	7.10	7.39	5.76	5.50	5.70	8.53	17.9	16.5	10.7	8.06	8.59	5.83	
MAX	10.6	11.2	9.13	8.78	11.2	17.3	57.1	58.1	24.7	13.8	13.2	8.97	
(WY)	1988	1988	1988	1986	1986	1986	1987	1987	1987	1984	1984	1987	
MIN	3.78	5.37	3.50	3.44	3.61	4.79	5.69	6.63	4.97	5.06	5.00	2.46	
(WY)	1982	1982	1983	1982	1982	1982	1982	1981	1981	1993	1993	1981	

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1981 - 1993

	1992 CALENDAR YEAR	1993 WATER YEAR	1981 - 1993
ANNUAL TOTAL	2625.4	2489.4	
ANNUAL MEAN	7.17	6.82	9.22
HIGHEST ANNUAL MEAN			18.5
LOWEST ANNUAL MEAN			5.31
HIGHEST DAILY MEAN	21	16	153
LOWEST DAILY MEAN	3.2 Jan 21	3.4 Dec 20	.56 Apr 19 1987
ANNUAL SEVEN-DAY MINIMUM	3.2 Jan 21	3.9 Jan 9	.73 Sep 11 1981
INSTANTANEOUS PEAK FLOW		17	a 2470 Jul 28 1984
INSTANTANEOUS PEAK STAGE		4.34	b 8.05 Jul 28 1984
ANNUAL RUNOFF (AC-FT)	5210	4940	6680
10 PERCENT EXCEEDS	10	12	14
50 PERCENT EXCEEDS	6.6	5.6	7.0
90 PERCENT EXCEEDS	4.1	4.3	4.3

a-From rating curve extended above 1950 ft³/s.

b-From floodmark.

07093775 BADGER CREEK, LOWER STATION, NEAR HOWARD, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1981 to current year (seasonal record only).

PERIOD OF DAILY RECORD.--Suspended sediment discharge May 1981 to current year (seasonal record only).

INSTRUMENTATION.--Pumping sediment sampler since May 1981.

REMARKS.--Records for 1992 water year are good except those that are estimated, which are poor. Records for 1993 water year are good except those that are estimated, which are fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 18,200 mg/L, Apr. 18, 1987; minimum daily mean, 1 mg/L, Sept. 22, 1981, many days in water year 1986, Oct. 16, 1986, Oct. 19, 1989 and Oct. 3-15, 1989.

SEDIMENT LOADS: Maximum daily mean, 31,500 tons/day (estimated), July 28, 1984; minimum daily mean, no load Sept. 12-30, 1981.

EXTREMES FOR 1992 WATER YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 4,070 mg/L, Aug. 30; minimum daily mean, 2.8 mg/L, Sept. 27.

SEDIMENT LOADS: Maximum daily mean, 331 tons/day, Aug. 30; minimum daily mean, 0.04 tons/day, Sept. 27.

EXTREMES FOR 1993 WATER YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 104 mg/L, Apr. 6 and May 2-3; minimum daily mean, 4 mg/L, Sept. 20.

SEDIMENT LOADS: Maximum daily mean, 4.5 tons/day, May 3; minimum daily mean, 0.06 tons/day, Sept. 20.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT				
29...	1340	5.5	20	0.30
29...	1425	5.9	14	0.22
APR				
01...	0810	11	37	1.1
01...	0910	11	38	1.1
07...	1450	20	285	15
07...	1500	20	289	16
23...	0755	12	45	1.5
23...	0805	12	37	1.2
MAY				
05...	1405	9.0	21	0.51
21...	1545	7.8	15	0.32
JUN				
09...	1350	8.6	23	0.53
09...	1355	8.6	21	0.49
JUL				
01...	0755	7.0	62	1.2
01...	0800	7.0	87	1.6
21...	1225	5.5	41	0.61
21...	1235	5.5	46	0.68
AUG				
12...	0825	9.0	151	3.7
12...	0830	9.0	152	3.7
SEP				
02...	0730	7.4	23	0.46
02...	0740	7.4	20	0.40
21...	1510	5.9	6	0.09

07093775 BADGER CREEK, LOWER STATION, NEAR HOWARD, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	5.3	---	.14	4.7	---	---	5.7	---	---
2	5.2	8	.11	4.7	---	---	5.5	---	---
3	5.2	---	.10	4.7	---	---	5.4	---	---
4	5.2	8	.11	4.8	---	---	5.3	---	---
5	5.2	14	.20	5.4	---	---	5.2	---	---
6	5.2	---	.21	6.9	---	---	5.5	---	---
7	5.2	7.2	.10	7.0	---	---	5.7	---	---
8	5.2	7.2	.10	6.8	---	---	6.0	---	---
9	5.2	---	.07	7.0	---	---	6.2	---	---
10	5.2	4.8	.07	7.0	---	---	6.4	---	---
11	5.2	11	.15	7.0	---	---	6.7	---	---
12	5.2	---	.15	7.0	---	---	6.6	---	---
13	5.2	---	.18	7.0	---	---	6.7	---	---
14	5.2	17	.24	7.0	---	---	6.7	---	---
15	5.3	---	.17	7.9	---	---	6.7	---	---
16	5.2	12	.17	7.8	---	---	6.7	---	---
17	5.2	12	.17	7.8	---	---	6.7	---	---
18	5.2	---	.15	7.8	---	---	6.7	---	---
19	5.3	17	.24	7.4	---	---	6.6	---	---
20	5.3	16	.23	8.0	---	---	5.9	---	---
21	5.5	---	.46	6.9	---	---	5.9	---	---
22	5.7	64	.98	6.9	---	---	5.9	---	---
23	5.6	40	.60	6.2	---	---	6.0	---	---
24	5.9	---	.49	5.7	---	---	6.1	---	---
25	5.9	34	.54	5.4	---	---	6.1	---	---
26	5.9	26	.41	6.0	---	---	6.1	---	---
27	6.0	---	.28	6.2	---	---	6.1	---	---
28	6.2	10	.17	6.1	---	---	6.1	---	---
29	6.2	14	.23	6.0	---	---	6.2	---	---
30	5.0	---	.26	5.8	---	---	6.2	---	---
31	4.8	---	.25	---	---	---	6.4	---	---
TOTAL	167.1	---	7.73	194.9	---	---	190.0	---	---
JANUARY			FEBRUARY			MARCH			
1	6.2	---	---	3.5	---	---	5.5	---	---
2	6.1	---	---	3.6	---	---	5.5	---	---
3	5.9	---	---	3.7	---	---	5.5	---	---
4	5.8	---	---	3.8	---	---	7.3	---	---
5	5.4	---	---	3.7	---	---	6.6	---	---
6	5.0	---	---	3.8	---	---	6.3	---	---
7	4.8	---	---	3.8	---	---	6.4	---	---
8	4.5	---	---	3.9	---	---	6.3	---	---
9	4.3	---	---	4.0	---	---	6.5	---	---
10	4.2	---	---	4.0	---	---	6.2	---	---
11	4.0	---	---	4.1	---	---	6.5	---	---
12	3.8	---	---	4.1	---	---	6.6	---	---
13	3.7	---	---	4.1	---	---	6.3	---	---
14	3.6	---	---	4.1	---	---	6.4	---	---
15	3.5	---	---	4.4	---	---	6.7	---	---
16	3.4	---	---	4.6	---	---	7.1	---	---
17	3.4	---	---	4.8	---	---	7.6	---	---
18	3.3	---	---	4.9	---	---	7.5	---	---
19	3.3	---	---	5.1	---	---	7.4	---	---
20	3.3	---	---	5.3	---	---	7.5	---	---
21	3.2	---	---	5.4	---	---	7.6	---	---
22	3.2	---	---	5.4	---	---	7.9	---	---
23	3.2	---	---	5.4	---	---	7.9	---	---
24	3.2	---	---	5.1	---	---	8.1	---	---
25	3.2	---	---	4.9	---	---	8.0	---	---
26	3.2	---	---	5.1	---	---	8.2	---	---
27	3.2	---	---	5.5	---	---	8.6	---	---
28	3.3	---	---	5.5	---	---	9.1	---	---
29	3.3	---	---	5.3	---	---	9.3	---	---
30	3.4	---	---	---	---	---	9.3	---	---
31	3.4	---	---	---	---	---	10	---	---
TOTAL	123.3	---	---	130.9	---	---	225.7	---	---

07093775 BADGER CREEK, LOWER STATION, NEAR HOWARD, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	11	35	1.0	9.3	30	.75	9.5	20	.51
2	11	31	.92	9.1	19	.47	9.3	21	.53
3	12	38	1.2	9.0	33	.80	8.6	17	.39
4	13	45	1.6	9.0	30	.73	8.3	18	.40
5	14	35	1.3	8.9	20	.48	7.9	29	.62
6	18	80	3.9	8.8	15	.36	7.9	23	.49
7	21	338	19	9.0	18	.44	7.8	33	.69
8	21	456	26	9.0	20	.49	8.0	35	.76
9	21	482	27	9.4	18	.46	8.5	24	.55
10	21	566	33	9.9	14	.37	9.3	34	.85
11	21	489	28	9.5	12	.31	9.0	33	.80
12	20	314	17	9.0	12	.29	8.8	38	.90
13	20	252	14	8.7	16	.38	8.2	34	.75
14	20	203	11	7.8	12	.25	7.7	35	.73
15	19	125	6.4	7.8	15	.32	7.4	30	.60
16	18	92	4.5	7.9	23	.49	7.2	23	.45
17	16	84	3.6	7.9	16	.34	7.3	26	.51
18	16	84	3.6	7.7	9.2	.19	7.0	27	.51
19	14	60	2.3	7.5	12	.24	6.8	29	.53
20	13	72	2.5	7.4	11	.22	7.2	28	.54
21	12	60	1.9	7.6	14	.29	7.1	34	.65
22	12	44	1.4	7.9	12	.26	7.3	29	.57
23	12	48	1.6	8.6	11	.26	7.4	27	.54
24	11	55	1.6	8.6	12	.28	7.9	44	.94
25	11	64	1.9	9.5	11	.28	8.2	49	1.1
26	10	48	1.3	9.4	15	.38	11	87	2.6
27	10	37	1.0	9.5	9.9	.25	9.6	57	1.5
28	10	28	.76	10	13	.35	9.1	78	1.9
29	10	26	.70	11	31	.92	8.8	66	1.6
30	9.7	26	.68	10	19	.51	7.7	54	1.1
31	---	---	---	9.8	14	.37	---	---	---
TOTAL	447.7	---	220.66	274.5	---	12.53	245.8	---	24.61
JULY			AUGUST			SEPTEMBER			
1	7.0	82	1.5	5.7	41	.63	7.7	26	.54
2	6.6	77	1.4	5.9	45	.72	7.7	22	.46
3	6.6	70	1.2	5.9	49	.78	7.6	18	.37
4	6.2	70	1.2	5.5	38	.56	7.1	15	.29
5	5.9	80	1.3	5.5	27	.40	7.0	14	.26
6	5.7	68	1.0	6.1	20	.33	6.6	13	.23
7	5.6	65	.98	6.1	22	.36	6.3	13	.22
8	6.0	78	1.3	5.6	32	.48	6.3	9.9	.17
9	6.1	83	1.4	5.8	28	.44	6.3	5.8	.10
10	5.9	73	1.2	6.0	40	.65	6.3	6.8	.12
11	5.3	55	.79	11	520	16	6.3	6.5	.11
12	5.3	45	.64	9.5	158	4.1	6.1	6.3	.10
13	5.7	75	1.2	8.5	108	2.5	5.6	4.5	.07
14	5.4	80	1.2	8.2	92	2.0	6.0	10	.16
15	5.2	45	.63	8.1	81	1.8	6.5	14	.25
16	5.2	50	.70	7.4	67	1.3	5.9	---	.19
17	5.2	32	.45	8.6	108	2.5	5.9	---	.16
18	5.2	48	.67	8.4	62	1.4	5.9	---	.13
19	5.1	48	.66	7.8	45	.95	5.9	---	.10
20	5.5	53	.79	7.8	32	.67	5.9	---	.09
21	5.4	50	.73	7.7	20	.42	5.9	5.5	.09
22	5.4	45	.66	7.3	30	.59	5.9	7.5	.12
23	5.4	58	.85	7.8	40	.84	5.9	10	.16
24	5.5	69	1.0	15	895	59	5.9	10	.16
25	5.9	70	1.1	17	580	27	5.7	9.9	.15
26	7.1	80	1.5	14	440	17	5.6	6.6	.10
27	6.2	50	.84	9.8	322	8.5	5.9	2.8	.04
28	5.8	50	.78	9.0	252	6.1	5.9	9.4	.15
29	5.6	48	.73	8.6	192	4.5	5.9	21	.33
30	5.9	43	.68	11	4070	331	5.9	16	.25
31	5.5	38	.56	7.9	1170	26	---	---	---
TOTAL	178.4	---	29.64	258.5	---	519.52	187.4	---	5.67

07093775 BADGER CREEK, LOWER STATION, NEAR HOWARD, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT				
14...	1230	6.4	9	0.15
NOV				
05...	1030	3.0	16	0.13
05...	1040	3.2	13	0.11
APR				
01...	0840	12	80	2.6
14...	0740	12	73	2.4
MAY				
04...	1410	15	97	3.9
21...	1000	12	37	1.2
JUN				
09...	1430	9.0	27	0.66
JUL				
01...	0800	5.9	32	0.51
20...	1350	5.1	18	0.25
AUG				
11...	0930	4.4	33	0.39
27...	0700	5.1	28	0.39
27...	0710	5.1	21	0.29
SEP				
09...	0730	5.2	27	0.38
27...	1120	5.5	5	0.07

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER									
1	5.9	10	.16	7.4	---	---	5.4	---	---
2	6.0	---	.17	7.4	---	---	5.3	---	---
3	6.0	---	.15	7.3	---	---	5.1	---	---
4	6.3	---	.14	7.2	---	---	5.0	---	---
5	6.1	---	.14	7.2	---	---	4.8	---	---
6	6.4	8.0	.14	7.1	---	---	4.9	---	---
7	6.6	---	.16	6.9	---	---	5.0	---	---
8	6.7	16	.29	6.8	---	---	5.2	---	---
9	6.6	33	.59	6.6	---	---	5.3	---	---
10	6.6	28	.50	6.6	---	---	5.4	---	---
11	6.6	19	.34	6.6	---	---	5.5	---	---
12	6.6	---	.24	6.7	---	---	4.9	---	---
13	6.6	9.0	.16	6.8	---	---	4.6	---	---
14	6.6	9.0	.16	6.9	---	---	4.3	---	---
15	6.6	28	.50	6.8	---	---	4.3	---	---
16	6.6	36	.64	6.9	---	---	4.4	---	---
17	6.8	---	.57	7.2	---	---	4.2	---	---
18	6.8	30	.55	7.3	---	---	4.2	---	---
19	6.9	29	.54	7.2	---	---	4.1	---	---
20	7.1	32	.61	6.9	---	---	3.4	---	---
21	6.9	34	.63	6.3	---	---	3.9	---	---
22	7.0	---	.61	6.1	---	---	4.2	---	---
23	7.0	30	.57	5.8	---	---	4.3	---	---
24	6.8	28	.51	5.5	---	---	4.4	---	---
25	7.2	18	.35	5.2	---	---	4.5	---	---
26	8.4	19	.43	5.3	---	---	4.7	---	---
27	8.2	---	.43	5.3	---	---	4.8	---	---
28	8.1	23	.50	5.4	---	---	4.9	---	---
29	7.5	22	.45	5.4	---	---	5.0	---	---
30	7.4	14	.28	5.5	---	---	4.7	---	---
31	7.4	11	.22	---	---	---	4.6	---	---
TOTAL	212.3	---	11.73	195.6	---	---	145.3	---	---

07093775 BADGER CREEK, LOWER STATION, NEAR HOWARD, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	4.6	---	---	5.6	---	---	3.9	---	---
2	4.7	---	---	5.6	---	---	4.0	---	---
3	4.8	---	---	5.7	---	---	4.1	---	---
4	5.0	---	---	5.8	---	---	4.0	---	---
5	5.2	---	---	5.9	---	---	4.2	---	---
6	5.4	---	---	6.0	---	---	4.1	---	---
7	5.4	---	---	6.2	---	---	4.0	---	---
8	5.0	---	---	6.4	---	---	4.0	---	---
9	3.7	---	---	5.8	---	---	4.0	---	---
10	3.8	---	---	5.6	---	---	4.0	---	---
11	3.8	---	---	5.7	---	---	4.1	---	---
12	3.8	---	---	5.5	---	---	4.2	---	---
13	3.8	---	---	5.5	---	---	4.3	---	---
14	3.9	---	---	5.6	---	---	4.4	---	---
15	4.2	---	---	4.9	---	---	4.5	---	---
16	4.4	---	---	4.4	---	---	4.4	---	---
17	4.7	---	---	3.5	---	---	4.5	---	---
18	5.0	---	---	4.3	---	---	4.5	---	---
19	5.1	---	---	5.4	---	---	4.5	---	---
20	5.0	---	---	5.3	---	---	4.9	---	---
21	4.9	---	---	5.3	---	---	5.0	---	---
22	4.9	---	---	5.3	---	---	4.9	---	---
23	4.9	---	---	5.3	---	---	5.4	---	---
24	5.0	---	---	5.3	---	---	6.6	---	---
25	5.1	---	---	4.8	---	---	8.0	---	---
26	5.3	---	---	4.4	---	---	10	---	---
27	5.3	---	---	4.1	---	---	12	---	---
28	5.4	---	---	4.0	---	---	9.9	---	---
29	5.4	---	---	---	---	---	12	---	---
30	5.5	---	---	---	---	---	11	---	---
31	5.5	---	---	---	---	---	11	---	---
TOTAL	148.5	---	---	147.2	---	---	180.4	---	---
APRIL			MAY			JUNE			
1	11	80	2.4	15	76	3.1	9.6	26	.67
2	12	---	2.5	15	104	4.2	9.7	33	.86
3	12	80	2.6	16	104	4.5	9.6	30	.78
4	12	---	2.8	16	92	4.0	9.4	---	.66
5	12	---	2.8	14	---	3.2	9.6	24	.62
6	13	104	3.6	13	78	2.7	8.7	21	.49
7	12	88	2.8	13	77	2.7	9.1	24	.59
8	11	83	2.5	12	72	2.3	9.1	22	.54
9	11	68	2.0	12	64	2.1	8.7	22	.52
10	12	---	1.8	11	---	1.5	8.8	---	.64
11	12	58	1.9	10	37	1.0	8.6	33	.77
12	13	73	2.6	9.8	28	.74	8.3	34	.76
13	12	69	2.2	9.8	34	.90	7.7	36	.75
14	12	69	2.2	10	35	.94	7.5	---	.77
15	12	---	2.2	10	---	.92	7.4	38	.76
16	12	61	2.0	10	32	.86	7.7	37	.77
17	11	58	1.7	11	38	1.1	7.8	50	1.0
18	13	38	1.3	14	42	1.6	8.2	59	1.3
19	13	35	1.2	13	38	1.3	8.9	---	1.3
20	12	---	1.5	13	---	1.3	7.8	39	.82
21	12	56	1.8	12	36	1.2	7.8	31	.65
22	13	51	1.8	11	40	1.2	7.6	42	.86
23	13	38	1.3	11	35	1.0	7.1	42	.80
24	14	41	1.5	11	32	.95	6.8	---	.66
25	13	---	1.9	11	---	.95	6.2	32	.54
26	13	67	2.4	11	34	1.0	6.0	34	.55
27	14	76	2.9	12	40	1.3	5.8	31	.49
28	15	92	3.7	12	42	1.4	5.5	28	.42
29	16	87	3.8	11	39	1.2	5.5	---	.37
30	16	---	3.3	10	---	.97	5.3	26	.37
31	---	---	---	9.9	30	.80	---	---	---
TOTAL	379	---	69.0	369.5	---	52.93	235.8	---	21.08

07093775 BADGER CREEK, LOWER STATION, NEAR HOWARD, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	5.4	32	.47	4.6	15	.19	5.9	20	.32
2	5.2	44	.62	4.6	17	.21	5.8	---	.34
3	5.3	---	.72	4.6	---	.40	5.4	18	.26
4	5.9	---	.73	4.8	48	.62	4.9	11	.15
5	5.6	40	.60	4.5	26	.32	4.9	10	.13
6	5.6	50	.76	4.5	19	.23	5.0	8.0	.11
7	5.6	28	.42	4.4	28	.33	5.1	---	.10
8	5.5	28	.42	4.4	---	.45	5.2	12	.17
9	5.5	---	.68	4.4	34	.40	5.3	18	.26
10	5.2	64	.90	4.3	26	.30	5.3	11	.16
11	5.1	66	.91	4.2	37	.42	5.2	20	.28
12	5.4	40	.58	4.2	32	.36	5.2	---	.31
13	5.6	34	.51	4.2	---	.50	6.1	21	.35
14	5.5	---	.40	4.9	53	.70	6.6	14	.25
15	5.2	14	.20	4.4	28	.33	6.2	8.0	.13
16	5.0	21	.28	4.3	16	.19	5.9	7.0	.11
17	4.9	24	.32	3.9	16	.17	5.8	---	.13
18	4.9	20	.26	4.1	20	.22	5.6	8.0	.12
19	4.7	---	.22	5.4	44	.64	5.9	6.0	.10
20	4.8	20	.26	5.5	29	.43	5.7	4.0	.06
21	5.2	43	.60	6.4	42	.73	5.4	8.0	.12
22	5.0	12	.16	6.1	56	.92	5.2	---	.17
23	4.7	32	.41	5.4	---	.79	5.3	12	.17
24	4.7	---	.86	4.9	30	.40	5.2	6.0	.08
25	4.6	56	.70	5.0	20	.27	5.0	6.0	.08
26	4.5	32	.39	4.9	16	.21	5.2	6.0	.08
27	4.2	16	.18	6.1	27	.44	5.5	6.0	.09
28	4.2	24	.27	6.8	---	.40	5.2	6.0	.08
29	4.2	---	.59	6.3	27	.46	5.3	6.0	.09
30	4.9	48	.64	6.4	28	.48	5.4	5.0	.07
31	4.9	28	.37	6.6	18	.32	---	---	---
TOTAL	157.0	---	15.43	155.1	---	12.83	163.7	---	4.87

07094500 ARKANSAS RIVER AT PARKDALE, CO

LOCATION.--Lat 38°29'14", long 105°22'23", in NE¹/4NW¹/4 sec.18, T.18 S., R.71 W., Fremont County, Hydrologic Unit 11020001, on left bank at Parkdale, 100 ft upstream from Bumback Gulch, 300 ft upstream from bridge on U.S. Highway 50, and 0.9 mi upstream from Copper Gulch.

DRAINAGE AREA.--2,548 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1945 to September 1955, October 1964 to current year. Monthly discharge only for October 1945 to May 1946, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,720 ft above sea level, from topographic map. Prior to Oct. 1, 1964, at site 600 ft downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, diversions for irrigation of about 35,000 acres upstream from station, and return flow from irrigated areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	354	438	426	510	514	736	637	619	2940	3140	887	696
2	352	433	484	508	508	722	524	607	3040	3140	860	654
3	352	450	505	519	499	709	454	584	3070	2770	836	660
4	348	434	487	479	505	708	444	596	2700	2790	890	619
5	351	444	507	454	486	712	443	603	2390	2590	801	570
6	360	464	499	468	492	728	445	630	2190	2290	838	564
7	357	478	484	518	501	738	437	602	2080	1990	813	579
8	352	495	488	523	508	742	419	605	2030	1690	821	630
9	355	501	519	493	506	741	402	770	1810	1990	857	645
10	351	507	508	464	536	752	383	867	1630	2140	891	547
11	353	520	522	509	558	750	300	845	1470	2190	842	555
12	352	511	515	485	551	737	299	852	1520	2240	811	564
13	352	497	518	453	539	705	292	978	1770	2410	810	586
14	364	516	489	511	532	724	283	1170	2340	2420	865	658
15	370	508	461	515	556	770	274	1400	3500	2380	867	619
16	376	504	519	512	527	754	351	1610	4320	2120	846	543
17	384	491	474	523	535	745	351	1770	4520	2070	784	551
18	393	485	519	517	576	746	342	2150	4520	2020	763	557
19	396	483	545	524	558	744	349	2130	4120	1980	715	569
20	389	484	487	520	618	736	352	2160	3740	1850	676	563
21	389	502	509	519	593	734	393	2290	3310	1620	665	537
22	389	476	532	516	535	732	411	2390	3490	1990	684	532
23	389	469	530	510	554	726	472	2480	3700	2090	689	552
24	381	484	525	488	640	727	530	2470	3760	2020	628	546
25	386	439	527	500	670	727	562	2420	3560	1990	567	545
26	418	427	512	512	677	723	529	2540	3190	1840	556	559
27	442	414	514	513	710	767	531	2830	3100	1370	623	552
28	444	416	535	496	729	777	532	3080	3160	1040	720	545
29	438	446	558	513	---	746	555	2730	3200	891	654	545
30	445	427	540	504	---	743	584	2470	3210	874	653	554
31	437	---	522	504	---	720	---	2550	---	876	681	---
TOTAL	11819	14143	15760	15580	15713	22821	12880	49798	89380	62811	23593	17396
MEAN	381	471	508	503	561	736	429	1606	2979	2026	761	580
MAX	445	520	558	524	729	777	637	3080	4520	3140	891	696
MIN	348	414	426	453	486	705	274	584	1470	874	556	532
AC-FT	23440	28050	31260	30900	31170	45270	25550	98770	177300	124600	46800	34500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1993, BY WATER YEAR (WY)

	MEAN	446	462	414	387	380	373	467	1115	2366	1669	1005	561
MAX	801	690	735	631	757	736	908	2693	4209	3922	1969	1088	
(WY)	1971	1983	1983	1983	1985	1993	1987	1984	1980	1983	1984	1970	
MIN	261	267	304	276	264	226	273	389	705	371	319	289	
(WY)	1978	1955	1978	1977	1978	1978	1977	1977	1977	1977	1977	1977	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR				FOR 1993 WATER YEAR				WATER YEARS 1946 - 1993			
ANNUAL TOTAL	243226				351694							
ANNUAL MEAN	665				964				805			
HIGHEST ANNUAL MEAN									1269			
LOWEST ANNUAL MEAN									399			
HIGHEST DAILY MEAN	1760				a 4520				6110			
LOWEST DAILY MEAN	262				274				199			
ANNUAL SEVEN-DAY MINIMUM	298				307				204			
INSTANTANEOUS PEAK FLOW					4700				6310			
INSTANTANEOUS PEAK STAGE					6.97				b 7.76			
ANNUAL RUNOFF (AC-FT)	482400				697600				583300			
10 PERCENT EXCEEDS	1210				2400				1780			
50 PERCENT EXCEEDS	522				558				472			
90 PERCENT EXCEEDS	383				395				300			

a-Also occurred Jun 18.

b-Maximum gage height, 9.13 ft, Jun 9, 1985.

07094500 ARKANSAS RIVER AT PARKDALE, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1981 to September 1982, November 1986 to September 1993 (Discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1986 to September 1993 (Discontinued).

WATER TEMPERATURE: November 1986 to September 1993 (Discontinued).

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Records for water temperature are good; records for specific conductance are fair. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance and mean daily water temperature data are available in the district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 498 microsiemens, Aug. 6, 1990; minimum, 104 microsiemens, June 16 and 17, 1993.

WATER TEMPERATURE: Maximum, 25.5°C, July 23, 1987; minimum, 0.0°C, many days during most winters.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 343 microsiemens, Oct. 24; minimum, 104 microsiemens, June 16 and 17.

WATER TEMPERATURE: Maximum 21.2°C, Aug. 25; minimum, 0.0°C, many days during winter.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	333	309	287	242	241	184	196	205	123	112	200	245
2	335	309	282	244	237	183	211	208	120	112	217	242
3	334	309	274	241	236	182	232	204	118	114	---	259
4	333	305	267	240	239	181	250	203	119	116	---	260
5	332	306	268	249	238	182	257	202	122	118	---	257
6	333	303	264	252	236	183	254	198	126	120	---	252
7	330	302	264	243	237	182	253	198	130	126	231	260
8	332	295	265	238	235	184	254	197	132	134	240	271
9	335	287	260	241	232	183	254	190	134	141	234	258
10	333	280	258	245	229	184	257	168	141	131	236	256
11	331	273	264	241	222	185	272	166	147	122	224	266
12	329	269	269	239	218	182	287	168	156	119	212	265
13	329	270	263	252	218	179	306	166	153	118	201	259
14	325	271	263	251	217	182	305	157	137	116	201	256
15	323	271	266	246	219	180	308	152	118	114	201	257
16	324	271	270	246	219	178	298	145	107	117	197	263
17	325	272	269	245	218	184	276	141	106	123	202	263
18	326	274	272	241	215	183	265	142	108	125	200	253
19	326	275	269	238	220	182	264	137	111	127	208	248
20	332	275	262	237	222	181	261	130	113	126	236	245
21	334	271	266	234	222	181	254	122	118	131	240	245
22	337	268	267	233	219	180	250	120	120	136	254	244
23	340	270	269	232	220	180	236	118	115	124	246	241
24	342	268	271	232	210	180	225	116	111	121	247	240
25	338	272	273	232	198	181	216	116	111	122	249	241
26	333	281	277	230	196	183	215	118	114	123	242	237
27	322	286	284	234	188	186	215	120	115	---	240	235
28	316	288	284	236	184	190	210	118	115	---	233	236
29	310	285	250	238	---	189	213	119	113	---	238	239
30	311	283	231	237	---	189	213	124	112	192	242	237
31	312	---	239	238	---	189	---	125	---	195	246	---
MEAN	329	283	267	240	221	183	250	155	122	---	---	251

07094500 ARKANSAS RIVER AT PARKDALE, CO---Continued

WATER-QUALITY RECORDS

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	15.6	11.9	8.5	6.2	.4	.0	1.0	.0	3.7	1.4	4.8	3.3
2	15.3	11.5	6.7	5.0	.4	.0	2.7	.6	2.5	.4	5.7	2.3
3	14.8	11.2	5.0	3.1	.4	.1	2.9	.8	2.6	.4	5.5	2.8
4	15.2	11.4	3.4	1.8	.2	.1	.8	.0	2.8	.9	5.2	2.3
5	15.0	11.9	2.7	1.4	.1	.0	.1	.0	2.0	.0	5.4	2.3
6	14.7	12.1	3.3	.9	.2	.0	.2	.0	1.7	.0	6.8	3.2
7	12.7	9.0	4.3	1.8	.3	.0	.2	.0	2.2	.3	7.3	3.5
8	10.4	7.0	5.2	2.8	.3	.0	.0	.0	3.0	.9	7.9	4.8
9	11.4	7.5	5.9	3.6	.4	.1	.0	.0	4.7	2.0	8.5	4.9
10	11.7	8.1	4.6	2.8	1.5	.1	.0	.0	4.3	2.8	6.9	5.3
11	12.6	8.6	4.2	2.3	2.5	1.3	.0	.0	4.4	2.1	5.7	2.3
12	---	---	3.3	1.8	2.6	1.5	.2	.0	4.2	1.9	4.2	1.4
13	13.1	9.7	3.8	1.5	1.5	.3	.2	.0	3.9	1.5	4.3	.7
14	12.5	9.3	4.7	2.8	.6	.2	.2	.0	2.3	.7	5.7	2.0
15	12.6	8.7	5.0	3.3	.5	.0	.2	.0	1.4	.0	8.0	4.4
16	10.5	8.3	5.1	3.6	.3	.2	.4	.0	.1	.0	8.4	5.2
17	10.5	7.1	5.5	4.0	.4	.2	.1	.0	.2	.0	7.5	5.8
18	10.9	8.2	5.5	4.2	.4	.2	.6	.0	.5	.0	8.8	5.6
19	11.0	8.4	4.6	3.4	.4	.2	1.6	.4	5.4	.2	9.3	6.2
20	11.6	8.8	4.2	1.9	.4	.2	2.4	.7	7.2	4.2	8.1	6.0
21	11.1	8.5	3.6	1.5	.4	.2	2.9	1.1	4.2	1.6	8.7	5.9
22	11.7	9.2	2.3	.7	.4	.2	2.9	.9	3.1	.8	10.4	7.3
23	10.9	8.6	1.6	.4	.4	.2	3.1	.9	3.6	.5	10.0	6.4
24	11.5	8.8	.9	.0	.4	.2	.9	.0	4.4	1.2	10.5	6.6
25	12.6	9.6	.5	.0	.4	.2	.6	.0	4.9	2.4	10.3	6.6
26	13.5	11.4	.4	.0	.4	.2	1.7	.0	4.9	2.0	10.0	7.9
27	11.9	9.9	.4	.0	.4	.2	2.3	.4	4.7	1.1	8.6	7.0
28	11.0	9.2	.4	.1	.5	.2	1.7	.0	4.8	2.5	9.0	6.2
29	9.2	8.0	.4	.1	.3	.1	2.6	1.0	---	---	8.9	6.5
30	9.9	6.5	.3	.1	1.1	.1	3.0	.7	---	---	8.1	6.4
31	10.1	7.7	---	---	1.2	.1	2.9	.7	---	---	9.7	6.4
MONTH	---	---	8.5	.0	2.6	.0	3.1	.0	7.2	.0	10.5	.7
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.7	6.6	12.2	9.0	15.1	13.1	17.3	15.1	20.8	17.8	18.0	14.0
2	10.8	7.4	13.1	8.4	14.6	12.4	17.2	14.9	20.7	18.1	16.7	15.1
3	8.1	6.3	14.5	10.6	13.7	12.1	16.9	15.0	---	---	18.0	13.7
4	10.0	5.3	14.5	11.0	13.1	11.2	16.3	14.3	---	---	18.2	14.6
5	11.6	7.9	14.6	11.4	14.0	11.4	15.3	13.1	---	---	18.2	15.3
6	11.5	8.3	13.8	9.7	14.4	12.0	16.1	13.4	19.7	---	18.2	15.5
7	9.1	7.0	13.2	10.1	14.1	12.0	17.1	14.4	19.4	16.5	16.9	15.1
8	10.8	5.5	11.8	9.0	13.4	11.2	18.0	15.2	19.0	16.2	17.7	14.0
9	11.6	7.1	12.3	8.6	13.8	12.1	17.3	15.5	19.4	16.0	17.7	14.2
10	12.3	8.3	13.7	9.0	15.3	11.7	17.9	14.8	21.1	17.3	18.3	14.9
11	12.9	8.3	14.5	10.5	17.0	13.0	17.5	15.5	20.9	17.5	18.3	14.2
12	12.8	8.5	14.5	11.7	16.8	13.5	17.1	15.6	20.9	17.7	17.9	14.6
13	12.3	7.2	15.6	12.8	16.3	14.1	16.8	14.6	19.4	16.6	16.0	10.4
14	11.8	7.8	14.7	12.8	17.1	14.6	17.8	15.4	17.2	15.3	13.5	9.3
15	11.0	7.2	15.0	12.7	16.5	14.5	18.3	15.9	19.4	15.1	15.2	11.2
16	10.7	7.6	14.0	12.5	14.9	13.8	18.4	15.9	19.6	15.9	16.0	12.9
17	13.9	8.4	12.5	11.7	14.3	13.3	17.9	16.0	19.5	16.6	16.4	13.4
18	14.2	10.0	13.4	10.9	13.8	12.5	18.8	16.2	19.4	16.9	15.6	13.5
19	11.0	8.2	13.3	11.8	14.3	11.9	19.0	16.7	19.9	17.3	14.7	11.9
20	12.2	7.7	14.2	11.7	15.2	12.7	18.7	16.7	19.8	17.2	14.8	11.4
21	12.8	8.0	14.1	12.1	15.5	13.3	18.5	15.6	19.7	17.5	15.2	12.2
22	13.3	9.0	13.1	11.4	15.6	13.2	17.6	15.3	17.5	15.7	15.1	13.0
23	14.6	10.5	13.7	10.8	15.9	13.3	17.6	15.0	19.0	13.9	14.6	13.2
24	12.2	10.2	13.6	12.3	15.4	13.2	17.2	15.1	20.2	16.0	16.4	13.0
25	13.4	8.2	14.9	12.0	15.5	12.9	18.0	15.2	21.2	17.2	14.9	11.8
26	14.4	9.9	14.5	13.1	16.2	13.6	18.5	15.9	19.8	17.3	14.1	11.4
27	14.7	11.0	13.8	12.4	16.4	14.0	---	---	17.3	15.1	14.5	10.8
28	16.2	11.5	13.4	11.4	15.8	13.7	---	---	16.5	14.1	14.4	11.2
29	16.6	12.4	13.4	11.5	16.8	14.3	---	---	18.2	15.5	14.7	11.4
30	15.3	12.2	13.7	11.9	16.8	14.7	19.9	---	17.7	13.8	14.6	11.6
31	---	---	15.3	12.9	---	---	20.4	17.2	16.6	13.4	---	---
MONTH	16.6	5.3	15.6	8.4	17.1	11.2	---	---	---	---	18.3	9.3

07095000 GRAPE CREEK NEAR WESTCLIFFE, CO

LOCATION.--Lat 38°11'10", long 105°28'59", in NW1/4NW1/4 sec.31, T.21 S., R.72 W., Custer County, Hydrologic Unit 11020001, on left bank 0.5 mi upstream from water line of De Weese Reservoir at elevation 7,665 ft, 0.5 mi downstream from Swift Creek, and 3.6 mi northwest of Westcliffe.

DRAINAGE AREA.--320 mi².

PERIOD OF RECORD.--October 1924 to September 1961, October 1962 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1241: 1950 (M). WSP 1311: 1927 (M).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,690 ft above sea level, from topographic map. Prior to Mar. 17, 1939, at site 30 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Nov. 3, 5-8, 12-15, and Nov. 22 to Mar. 20. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 250 acres 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	25	17	20	41	52	31	195	56	10	57
2	16	16	27	18	18	40	35	39	187	47	26	48
3	16	16	30	19	17	40	29	30	170	41	17	45
4	15	16	26	16	15	41	55	24	133	37	15	36
5	15	17	23	14	16	42	115	20	106	33	17	32
6	16	18	25	17	18	40	81	22	81	22	25	32
7	15	18	26	20	26	40	44	17	75	20	18	42
8	16	18	28	22	28	44	35	17	71	22	15	45
9	15	18	27	20	26	48	31	20	58	20	12	35
10	17	18	28	17	26	50	28	22	49	21	16	29
11	16	18	30	15	25	40	25	18	34	25	18	30
12	17	20	30	14	24	37	25	14	29	32	13	26
13	17	22	25	12	22	33	24	13	42	44	12	29
14	17	22	20	13	20	35	26	13	54	34	14	49
15	16	23	17	14	19	37	27	14	73	36	16	48
16	16	25	15	12	16	40	25	21	111	31	12	37
17	15	27	14	10	16	42	24	49	143	29	9.8	34
18	14	27	15	9.4	21	44	22	160	198	35	9.8	32
19	14	27	15	9.0	28	44	20	99	162	28	12	30
20	14	27	16	9.2	30	43	19	83	124	22	12	27
21	13	26	18	9.8	29	43	18	98	123	24	13	24
22	13	25	19	11	27	41	18	115	118	21	17	22
23	13	24	18	10	33	38	17	132	117	19	18	21
24	13	21	18	9.4	37	35	24	114	99	16	14	20
25	14	18	19	9.0	36	32	30	127	74	15	13	21
26	17	20	17	10	37	31	25	149	61	13	12	21
27	16	25	14	13	37	35	23	197	53	13	19	19
28	16	28	15	15	39	33	25	260	46	12	46	17
29	16	27	15	17	---	30	26	282	45	11	53	15
30	16	24	15	19	---	30	27	237	54	10	67	15
31	16	---	17	19	---	46	---	195	---	9.9	73	---
TOTAL	476	647	647	439.8	706	1215	975	2632	2885	798.9	644.6	938
MEAN	15.4	21.6	20.9	14.2	25.2	39.2	32.5	84.9	96.2	25.8	20.8	31.3
MAX	17	28	30	22	39	50	115	282	198	56	73	57
MIN	13	16	14	9.0	15	30	17	13	29	9.9	9.8	15
AC-FT	944	1280	1280	872	1400	2410	1930	5220	5720	1580	1280	1860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1993, BY WATER YEAR (WY)

MEAN	17.4	19.0	14.9	13.3	16.3	32.4	51.8	56.8	86.1	47.9	36.4	19.4
MAX	79.6	54.5	28.2	23.5	32.3	105	332	383	374	356	177	95.6
(WY)	1971	1971	1926	1980	1992	1992	1942	1987	1957	1957	1968	1982
MIN	3.16	4.80	5.00	3.54	3.30	6.31	9.48	2.81	1.83	1.25	4.45	3.75
(WY)	1964	1964	1935	1959	1959	1959	1963	1963	1934	1946	1956	1956

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1925 - 1993

ANNUAL TOTAL	16377	13004.3	
ANNUAL MEAN	44.7	35.6	34.5
HIGHEST ANNUAL MEAN			109
LOWEST ANNUAL MEAN			7.07
HIGHEST DAILY MEAN	462	282	1740
LOWEST DAILY MEAN	13	9.0	1.10
ANNUAL SEVEN-DAY MINIMUM	13	9.6	5.56
INSTANTANEOUS PEAK FLOW		299	7460
INSTANTANEOUS PEAK STAGE		2.36	8.45
ANNUAL RUNOFF (AC-FT)	32480	25790	24970
10 PERCENT EXCEEDS	78	69	72
50 PERCENT EXCEEDS	31	24	16
90 PERCENT EXCEEDS	16	13	5.6

a-From rating curve extended above 320 ft³/s, on basis of slope-area measurement of peak flow.

b-Also occurred Oct 21-24.

c-Also occurred Jan 25.

d-Also occurred Jun 20-22, 1936.

07096000 ARKANSAS RIVER AT CANON CITY, CO

LOCATION.--Lat 38°26'02", long 105°15'24", in SE¹/4SE¹/4 sec.31, T.18 S., R.72 W., Fremont County, Hydrologic Unit 11020002, on right bank 800 ft upstream from Sand Creek, 0.7 mi downstream from Grape Creek, and 0.7 mi upstream from First Street Bridge in Canon City.

DRAINAGE AREA.--3,117 mi².

PERIOD OF RECORD.--January 1888 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as "near Canyon" 1900-1906.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1311: 1897-98.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,342.13 ft above sea level. See WSP 1711 or 1731 for history of changes prior to Oct. 1, 1957. Oct. 1, 1957 to Nov. 15, 1962, water-stage recorder at present site at datum 1.49 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 21, 23-30, Jan. 7-26, and Feb. 15-17. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 250 acres 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240	312	399	442	474	632	599	462	2850	2830	729	596
2	237	296	458	464	464	649	491	458	3000	2820	708	543
3	236	323	474	469	452	644	426	430	3040	2550	674	543
4	230	285	442	426	464	638	416	440	2750	2550	674	496
5	227	301	469	400	437	638	418	421	2410	2390	632	474
6	230	349	464	421	442	650	461	446	2190	2080	668	464
7	230	373	442	430	458	652	450	419	2050	1770	645	474
8	230	392	426	445	469	650	441	427	1910	1500	662	514
9	234	393	464	450	480	685	420	564	1660	1760	693	531
10	234	393	442	460	502	691	407	657	1510	1940	736	442
11	242	425	452	480	525	694	337	644	1320	1990	680	447
12	237	425	447	470	514	694	350	648	1340	2050	668	464
13	240	375	452	460	491	674	335	752	1590	2220	674	487
14	245	418	426	485	488	688	255	918	2160	2270	719	554
15	250	425	390	485	480	735	229	1130	3060	2230	723	517
16	256	418	447	490	465	722	294	1380	3920	2010	707	442
17	257	393	411	500	470	709	289	1570	3920	1890	656	447
18	265	383	437	490	486	701	336	1970	3920	1850	650	453
19	265	378	476	490	474	699	307	1990	3640	1800	638	478
20	265	374	437	480	474	695	259	2000	3340	1700	634	502
21	265	385	442	470	474	695	291	2120	3010	1480	561	452
22	255	363	461	460	502	692	282	2220	3100	1800	565	447
23	265	370	452	450	519	649	324	2310	3340	1910	578	476
24	265	380	452	450	596	649	397	2320	3400	1820	508	467
25	265	365	452	445	627	651	430	2300	3260	1800	452	461
26	290	365	438	455	627	656	400	2400	2990	1640	428	500
27	340	365	435	469	654	693	390	2730	2900	1200	491	480
28	334	370	462	450	652	719	379	2990	2940	855	599	474
29	306	395	514	468	---	695	387	2740	2870	715	549	486
30	306	395	491	464	---	689	404	2490	2860	694	574	502
31	303	---	464	458	---	677	---	2560	---	701	602	---
TOTAL	8044	11184	13918	14276	14160	21005	11204	44906	82250	56815	19477	14613
MEAN	259	373	449	461	506	678	373	1449	2742	1833	628	487
MAX	340	425	514	500	654	735	599	2990	3920	2830	736	596
MIN	227	285	390	400	437	632	229	419	1320	694	428	442
AC-FT	15960	22180	27610	28320	28090	41660	22220	89070	163100	112700	38630	28980

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1889 - 1993, BY WATER YEAR (WY)

	MEAN	372	374	364	340	337	345	424	1105	2269	1468	852	452
MAX	1195	620	623	609	781	711	1120	2667	4286	5541	2134	1411	
(WY)	1912	1924	1983	1983	1985	1989	1942	1984	1980	1957	1957	1909	
MIN	167	180	204	195	217	176	108	243	481	230	217	188	
(WY)	1978	1940	1940	1979	1978	1904	1940	1977	1902	1902	1977	1931	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR			FOR 1993 WATER YEAR			WATER YEARS 1889 - 1993		
ANNUAL TOTAL	213484			311852					
ANNUAL MEAN	583			854			727		
HIGHEST ANNUAL MEAN							1266		
LOWEST ANNUAL MEAN							329		
HIGHEST DAILY MEAN	1800			Jun 28			9480		
LOWEST DAILY MEAN	208			Apr 28			69		
ANNUAL SEVEN-DAY MINIMUM	231			Oct 4			87		
INSTANTANEOUS PEAK FLOW				Not determined			b 19000		
INSTANTANEOUS PEAK STAGE							c 10.70		
ANNUAL RUNOFF (AC-FT)	423400			618600			526900		
10 PERCENT EXCEEDS	1050			2250			1710		
50 PERCENT EXCEEDS	488			480			408		
90 PERCENT EXCEEDS	272			302			239		

a-Also occurred Jun 17, 18.

b-Site and datum then in use, from rating curve extended above 5000 ft³/s.

c-From floodmark.

07096250 FOURMILE CREEK BELOW CRIPPLE CREEK NEAR VICTOR, CO

LOCATION.--Lat 38°39'52", long 105°13'37", in SW1/4SE1/4 sec.9, T.16 S., R.70 W., Teller County, Hydrologic Unit 11020002, on left bank 500 ft from Teller County Route 88 and 0.2 mi downstream from Cripple Creek.

DRAINAGE AREA.--272 mi².

PERIOD OF RECORD.--September 1992 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,870 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Mar. 6, 7, and 25. Records good except for estimated daily discharges, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	9.4	7.0	7.5	7.5	8.1	9.1	22	48	8.6	5.2	6.3
2	17	9.5	7.0	7.5	7.5	8.0	10	21	58	7.8	5.5	5.8
3	17	8.1	7.0	7.0	7.5	8.5	11	22	59	7.9	5.8	5.5
4	17	7.3	7.0	6.5	7.5	8.3	10	22	54	8.1	6.0	4.3
5	17	8.2	7.0	6.0	7.5	8.4	13	20	52	7.5	5.8	4.2
6	18	8.1	7.0	6.0	7.5	8.3	15	22	49	7.7	7.5	4.5
7	18	8.4	7.0	6.0	7.5	8.4	15	20	50	9.3	5.6	5.0
8	18	8.6	7.0	6.5	7.5	8.5	15	20	48	9.5	4.9	5.6
9	19	7.9	7.0	7.0	7.5	8.5	15	20	33	10	4.6	4.2
10	19	7.6	7.0	7.5	7.0	9.2	17	20	30	10	4.5	4.1
11	19	7.8	7.0	7.5	6.5	8.4	17	21	29	11	5.2	4.3
12	19	6.7	7.0	7.5	6.0	7.8	18	20	29	11	4.2	3.5
13	19	7.5	7.0	7.5	6.0	15	18	20	26	12	4.1	7.7
14	19	8.0	7.0	7.5	6.0	9.0	17	22	26	16	5.2	9.1
15	19	7.7	6.5	7.5	6.5	8.7	21	21	28	19	4.4	6.5
16	19	7.5	6.0	7.5	7.0	8.0	20	23	27	21	3.7	5.4
17	19	7.7	6.0	7.5	7.5	8.1	20	26	28	19	3.3	5.5
18	19	7.6	6.0	7.5	8.0	8.4	16	28	35	19	8.2	5.7
19	18	7.3	6.0	7.5	8.5	8.0	15	27	31	19	6.8	5.7
20	13	8.0	6.0	7.5	8.5	8.4	15	34	27	19	4.1	5.2
21	12	6.9	6.5	7.5	8.5	8.7	15	32	24	19	4.1	4.6
22	11	6.0	6.5	7.5	8.5	8.3	16	33	26	14	4.0	4.7
23	10	6.0	6.5	7.5	8.5	8.3	16	33	24	11	3.6	5.3
24	10	7.0	6.5	7.5	8.5	8.7	18	33	24	10	2.9	5.2
25	10	8.0	6.5	7.5	8.5	8.8	16	34	24	7.5	2.6	4.8
26	9.7	8.5	7.0	7.5	8.5	9.3	16	37	16	6.3	2.7	4.7
27	9.4	8.0	7.0	7.5	8.7	11	15	45	12	5.9	4.1	4.7
28	9.1	8.0	7.0	7.5	8.7	10	16	47	11	5.8	6.0	4.5
29	9.0	7.5	7.5	7.5	---	10	18	56	9.2	5.6	4.8	4.6
30	8.6	7.0	7.5	7.5	---	9.8	19	51	8.9	5.5	6.8	4.5
31	9.0	---	7.5	7.5	---	9.3	---	48	---	5.7	7.3	---
TOTAL	467.8	231.8	210.5	225.0	213.4	276.2	472.1	900	946.1	348.7	153.5	155.7
MEAN	15.1	7.73	6.79	7.26	7.62	8.91	15.7	29.0	31.5	11.2	4.95	5.19
MAX	19	9.5	7.5	7.5	8.7	15	21	56	59	21	8.2	9.1
MIN	8.6	6.0	6.0	6.0	6.0	7.8	9.1	20	8.9	5.5	2.6	3.5
AC-FT	928	460	418	446	423	548	936	1790	1880	692	304	309

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1993, BY WATER YEAR (WY)

MEAN	15.1	7.73	6.79	7.26	7.62	8.91	15.7	29.0	31.5	11.2	4.95	5.19
MAX	15.1	7.73	6.79	7.26	7.62	8.91	15.7	29.0	31.5	11.2	4.95	5.19
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993
MIN	15.1	7.73	6.79	7.26	7.62	8.91	15.7	29.0	31.5	11.2	4.95	5.19
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993

SUMMARY STATISTICS

FOR 1993 WATER YEAR

ANNUAL TOTAL	4600.8
ANNUAL MEAN	12.6
HIGHEST DAILY MEAN	59 Jun 3
LOWEST DAILY MEAN	2.6 Aug 25
ANNUAL SEVEN-DAY MINIMUM	3.4 Aug 20
INSTANTANEOUS PEAK FLOW	a 78 Jun 2
INSTANTANEOUS PEAK STAGE	3.36 Jun 2
ANNUAL RUNOFF (AC-FT)	9130
10 PERCENT EXCEEDS	25
50 PERCENT EXCEEDS	8.2
90 PERCENT EXCEEDS	5.2

a-From rating curve extended above 54 ft³/s.

07096500 FOURMILE CREEK NEAR CANON CITY, CO

LOCATION.--Lat 38°26'11", long 105°11'27", in NE¹/4SW¹/4 sec.35, T.18 S., R.70 W., Fremont County, Hydrologic Unit 11020002, on left bank 1,000 ft downstream from railroad bridge, 0.6 mi upstream from mouth, and 2.8 mi east of courthouse in Canon City.

DRAINAGE AREA.--434 mi².

PERIOD OF RECORD.--April to October 1910 (gage heights and discharge measurements only), October 1948 to September 1953, November 1970 to current year. Published as "Oil or Fourmile Creek" in 1910 and as Oil Creek near Canon City, 1948-53.

REVISED RECORDS.--WDR CO-84-1: 1982(M), 1983 (M); WDR CO-85-1: 1984 (M).

GAGE.--Water-stage recorder with satellite telemetry. Concrete control since Oct. 1, 1974. Elevation of gage is 5,254 ft, above sea level, from topographic map. April to October 1910, nonrecording gage at site 1,200 ft upstream at different datum. October 1948 to September 1953, water-stage recorder at site 0.6 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Water year 1992, Dec. 26 to Jan. 1, and Jan. 10-27. Records good except for those above 100 ft³/s, which are fair, and for estimated daily discharges, which are poor. Estimated daily discharges: Water year 1993, Oct. 18-28, Nov. 6-15, 25, Dec. 10 to Jan. 21, Mar. 15-24, and June 14-15. Records good except for estimated daily discharges, which are poor. Diversions for irrigation of about 500 acres upstream from station. Water imported to basin from Arkansas River for irrigation of a few small orchards upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	18	22	23	22	7.8	33	31	55	46	26	36
2	21	18	16	21	23	8.2	35	31	58	41	25	33
3	22	14	13	20	23	8.2	41	32	57	39	27	32
4	25	19	14	20	24	13	34	32	71	39	25	30
5	25	19	14	18	24	14	35	32	78	39	21	32
6	26	19	12	18	24	12	42	42	63	38	28	36
7	27	19	12	18	23	11	43	49	62	37	26	34
8	25	19	12	20	23	11	41	51	61	37	25	38
9	24	19	11	21	22	14	39	54	61	34	26	40
10	23	32	11	22	23	13	42	61	61	29	24	38
11	20	40	10	22	23	16	45	63	65	29	29	37
12	22	41	12	22	23	14	49	53	70	30	30	29
13	24	43	12	20	23	8.5	51	53	64	26	29	25
14	26	43	10	17	23	9.3	58	53	52	24	30	25
15	24	43	11	15	23	9.3	74	48	49	22	28	26
16	22	41	11	18	23	8.8	89	47	47	24	26	27
17	19	43	11	20	23	7.7	91	45	49	31	128	26
18	17	41	18	20	20	9.6	86	43	48	28	60	24
19	17	39	24	21	16	10	81	44	46	27	46	24
20	15	34	24	22	18	11	80	46	56	29	38	24
21	17	39	24	22	16	12	74	50	57	32	30	19
22	24	41	24	23	13	12	68	51	57	28	28	14
23	27	36	24	24	13	14	69	53	53	28	26	14
24	36	27	23	24	14	14	71	55	57	29	55	13
25	37	31	23	23	14	14	67	59	71	34	73	13
26	31	33	23	23	13	12	61	62	83	52	57	12
27	32	33	23	23	13	13	58	73	71	42	49	14
28	32	32	23	24	14	20	53	76	69	33	44	13
29	33	32	24	25	9.8	25	42	70	68	29	42	11
30	38	28	25	23	---	24	31	58	55	27	38	11
31	22	---	25	22	---	27	---	50	---	26	41	---
TOTAL	775	936	541	654	565.8	403.4	1683	1567	1814	1009	1180	750
MEAN	25.0	31.2	17.5	21.1	19.5	13.0	56.1	50.5	60.5	32.5	38.1	25.0
MAX	38	43	25	25	24	27	91	76	83	52	128	40
MIN	15	14	10	15	9.8	7.7	31	31	46	22	21	11
AC-FT	1540	1860	1070	1300	1120	800	3340	3110	3600	2000	2340	1490

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1992, BY WATER YEAR (WY)

	MEAN	27.0	23.3	15.6	12.5	11.7	12.9	28.5	62.0	43.4	32.5	41.1	31.8
MAX	92.3	67.5	35.5	28.0	36.2	36.8	103	354	207	181	264	234	
(WY)	1985	1985	1978	1985	1983	1985	1985	1980	1983	1985	1984	1984	
MIN	1.74	3.20	3.77	3.20	2.79	.94	1.61	2.25	1.71	1.83	1.70	.85	
(WY)	1953	1953	1953	1952	1952	1953	1950	1950	1953	1952	1951	1950	

SUMMARY STATISTICS FOR 1991 CALENDAR YEAR FOR 1992 WATER YEAR WATER YEARS 1949 - 1992

	ANNUAL TOTAL	11240.4	11878.2	
ANNUAL MEAN		30.8	32.5	29.1
HIGHEST ANNUAL MEAN				95.1
LOWEST ANNUAL MEAN				3.04
HIGHEST DAILY MEAN				1110
LOWEST DAILY MEAN				b.00
ANNUAL SEVEN-DAY MINIMUM				.00
INSTANTANEOUS PEAK FLOW				c1740
INSTANTANEOUS PEAK STAGE				5.85
ANNUAL RUNOFF (AC-FT)				21100
10 PERCENT EXCEEDS				56
50 PERCENT EXCEEDS				16
90 PERCENT EXCEEDS				3.1

a-Also occurred Mar 20.

b-Also occurred Sep 4-10, 1950, and Sep 23, 1951.

c-From rating curve extended above 96 ft³/s, on basis of slope-area measurement of peak flow.

d-From floodmarks, site and datum then in use.

07096500 FOURMILE CREEK NEAR CANON CITY, CO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	20	13	11	18	9.8	5.0	30	44	12	15	16
2	14	19	13	12	16	9.5	7.0	37	45	11	11	16
3	13	18	13	12	14	8.7	6.9	34	54	13	11	13
4	12	18	13	12	16	9.1	7.6	25	50	14	13	19
5	12	18	13	11	16	9.8	6.7	20	50	17	12	29
6	13	17	14	11	15	10	6.2	18	47	16	12	37
7	15	18	14	11	14	15	6.4	17	52	17	12	40
8	17	18	14	11	14	20	7.6	19	50	18	12	39
9	21	18	12	11	15	13	9.3	23	42	14	12	39
10	20	18	12	11	18	15	8.9	21	39	15	13	36
11	15	18	12	12	16	18	12	16	33	14	12	25
12	13	17	12	12	14	18	15	13	25	13	13	13
13	14	16	11	11	13	17	14	15	23	13	14	15
14	14	15	11	12	11	18	12	16	25	15	15	26
15	17	14	11	12	13	15	11	20	27	17	17	23
16	20	13	11	13	5.9	12	9.8	25	30	12	17	20
17	22	12	11	14	7.1	10	9.4	21	29	17	17	22
18	21	12	11	15	13	11	8.0	22	42	19	18	21
19	20	12	11	16	16	10	14	22	38	16	20	21
20	20	13	11	17	16	11	17	28	35	14	17	7.3
21	19	14	11	18	13	8.7	11	34	31	14	16	11
22	18	12	10	19	8.9	6.6	13	43	28	13	15	15
23	16	12	11	18	8.5	3.9	13	42	22	12	14	15
24	16	12	11	14	8.7	3.6	9.4	37	17	12	12	15
25	17	12	12	14	8.7	3.5	12	40	17	11	13	17
26	17	11	11	16	8.7	3.4	13	38	17	12	14	17
27	18	11	12	18	8.5	3.9	16	42	14	13	15	17
28	18	11	12	19	8.4	4.6	15	41	11	13	18	19
29	19	12	12	19	---	4.1	14	53	9.4	13	16	23
30	20	12	12	19	---	4.3	18	51	10	15	14	26
31	20	---	12	18	---	3.9	---	49	---	16	11	---
TOTAL	523	443	369	439	354.4	310.4	328.2	912	956.4	441	441	652.3
MEAN	16.9	14.8	11.9	14.2	12.7	10.0	10.9	29.4	31.9	14.2	14.2	21.7
MAX	22	20	14	19	18	20	18	53	54	19	20	40
MIN	12	11	10	11	5.9	3.4	5.0	13	9.4	11	11	7.3
AC-FT	1040	879	732	871	703	616	651	1810	1900	875	875	1290

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1993, BY WATER YEAR (WY)

	MEAN	26.6	23.0	15.5	12.5	11.7	12.8	27.8	60.9	43.0	31.8	40.2	31.5
MAX	92.3	67.5	35.5	28.0	36.2	36.8	103	354	207	181	264	234	
(WY)	1985	1985	1978	1985	1983	1985	1985	1980	1983	1985	1984	1984	
MIN	1.74	3.20	3.77	3.20	2.79	.94	1.61	2.25	1.71	1.83	1.70	.85	
(WY)	1953	1953	1953	1952	1952	1953	1950	1950	1953	1952	1951	1950	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR		FOR 1993 WATER YEAR		WATER YEARS 1949 - 1993	
ANNUAL TOTAL	10961.2		6169.7			
ANNUAL MEAN	29.9		16.9		28.7	
HIGHEST ANNUAL MEAN					95.1	
LOWEST ANNUAL MEAN					3.04	
HIGHEST DAILY MEAN	128		54		1110	
LOWEST DAILY MEAN	7.7		3.4		a.00	
ANNUAL SEVEN-DAY MINIMUM	9.0		3.9		.00	
INSTANTANEOUS PEAK FLOW			70		b4260	
INSTANTANEOUS PEAK STAGE			2.49		c9.25	
ANNUAL RUNOFF (AC-FT)	21740		12240		20760	
10 PERCENT EXCEEDS	59		29		54	
50 PERCENT EXCEEDS	23		14		16	
90 PERCENT EXCEEDS	12		9.4		3.2	

a-Also occurred Sep 4-10, 1950, and Sep 23, 1951.

b-From rating curve extended above 96 ft³/s, on basis of slope-area measurement of peak flow.

c-From floodmarks, site and datum then in use.

07097000 ARKANSAS RIVER AT PORTLAND, CO

LOCATION.--Lat 38°23'18", long 105°00'56", in NE¹/4NE¹/4 sec.20, T.19 S., R.68 W., Fremont County, Hydrologic Unit 11020002, on right bank at bridge on State Highway 120 at Portland and 1 mi downstream from Hardscrabble Creek.

DRAINAGE AREA.--4,024 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1939 to September 1952, October 1974 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,021.59 ft above sea level. Prior to Oct. 1, 1974, at site 400 ft downstream at datum 0.03 ft, lower.

REMARKS.--Estimated daily discharges: Dec. 15-16. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, diversions upstream from station for irrigation of about 60,000 acres and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	252	364	365	546	429	628	541	454	2820	2870	741	636
2	241	347	398	561	428	609	437	470	3030	2850	729	604
3	237	360	416	563	417	620	365	428	3020	2580	681	592
4	234	354	416	529	421	609	346	432	2800	2540	696	564
5	238	357	429	445	406	602	342	404	2430	2450	666	534
6	255	387	436	421	401	620	384	414	2220	2130	684	529
7	262	383	410	469	420	626	388	391	2070	1820	725	551
8	252	395	412	481	420	626	375	400	1910	1510	679	569
9	261	404	418	455	419	659	347	523	1690	1690	695	584
10	259	400	436	445	445	665	336	620	1520	1940	737	497
11	266	429	429	479	469	678	288	642	1340	1990	692	481
12	260	419	416	436	460	684	289	678	1330	2080	673	479
13	255	401	427	411	451	653	285	720	1530	2240	681	524
14	267	416	408	450	449	665	230	852	2060	2440	737	601
15	280	417	410	464	470	703	207	1020	2970	2240	750	593
16	291	413	420	464	421	703	256	1290	3720	1980	756	501
17	311	399	432	485	472	678	264	1460	3870	1890	682	498
18	313	392	459	466	499	659	287	1760	4000	1840	710	509
19	316	404	501	460	493	648	271	1950	3680	1770	679	512
20	301	406	470	450	523	638	256	1940	3430	1700	668	523
21	306	424	464	436	521	632	259	2080	3090	1480	581	482
22	303	397	464	433	456	631	252	2200	3190	1740	590	494
23	302	389	518	431	448	589	269	2320	3390	1920	599	523
24	300	414	554	410	531	575	330	2280	3490	1850	552	513
25	303	382	551	418	563	572	382	2330	3350	1810	476	499
26	322	350	539	432	566	576	346	2380	3030	1680	451	525
27	350	344	533	436	603	622	343	2660	2900	1190	512	515
28	368	352	554	418	628	644	341	2950	2910	869	641	495
29	352	376	591	433	---	622	341	2770	2860	690	581	501
30	360	373	599	426	---	623	362	2460	2900	666	596	479
31	366	---	570	424	---	621	---	2510	---	666	647	---
TOTAL	8983	11648	14445	14177	13229	19680	9719	43788	82550	57111	20287	15907
MEAN	290	388	466	457	472	635	324	1413	2752	1842	654	530
MAX	368	429	599	563	628	703	541	2950	4000	2870	756	636
MIN	234	344	365	410	401	572	207	391	1330	666	451	479
AC-FT	17820	23100	28650	28120	26240	39040	19280	86850	163700	113300	40240	31550

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1993, BY WATER YEAR (WY)

	MEAN	384	406	366	342	336	354	512	1152	2461	1573	933	448
MAX	1083	748	693	626	774	683	1869	2680	4429	3636	2380	1008	
(WY)	1985	1985	1983	1983	1985	1989	1942	1984	1980	1983	1984	1982	
MIN	136	191	212	199	162	147	135	245	581	242	201	172	
(WY)	1978	1978	1978	1979	1978	1978	1981	1977	1977	1977	1977	1977	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1939 - 1993

ANNUAL TOTAL	238953	311524	
ANNUAL MEAN	653	853	780
HIGHEST ANNUAL MEAN			1315
LOWEST ANNUAL MEAN			315
HIGHEST DAILY MEAN	1940	Jun 28	4000
LOWEST DAILY MEAN	220	Apr 29	207
ANNUAL SEVEN-DAY MINIMUM	244	Sep 30	246
INSTANTANEOUS PEAK FLOW			5380
INSTANTANEOUS PEAK STAGE			7.20
ANNUAL RUNOFF (AC-FT)	474000	617900	564900
10 PERCENT EXCEEDS	1330	2260	1850
50 PERCENT EXCEEDS	540	512	445
90 PERCENT EXCEEDS	316	312	216

a-From rating curve extended above 5300 ft³/s.

07097000 ARKANSAS RIVER AT PORTLAND, CO--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1979 to current year.

WATER TEMPERATURE: October 1979 to current year.

INSTRUMENTATION.--Water-quality monitor since November 1982.

REMARKS.--Specific conductance data are considered good. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance and mean water temperature data available in district office. Specific conductance data may not be representative of the cross section at the site during flash floods.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily observed, 1,380 microsiemens, Sept. 30, 1981; minimum, 111 microsiemens, June 22, 1984.

WATER TEMPERATURES: Maximum, 26.0°C, July 27, 1987; minimum, 0.0°C, many days during winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,370 microsiemens, Dec. 15; minimum, 152 microsiemens, June 17, 30.

WATER TEMPERATURES: Maximum, 25.6°C, Aug. 25; minimum, 0.0°C, many days during the winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 28...	1030	245	600	8.6	8.5	4.4	11.2	52	100
DEC 06...	1145	499	454	8.4	3.0	2.5	12.2	K33	41
FEB 26...	1040	555	359	8.4	3.5	15	11.4	20	38
JUN 24...	1220	1360	287	8.4	19.5	6.0	8.3	120	340
AUG 31...	1000	871	390	8.3	16.0	20	9.0	K230	200

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- ^A BONATE WATER DIS IT MG/L AS HCO3	CAR- ^B BONATE WATER DIS IT MG/L AS CO3
OCT 28...	260	70	20	31	21	0.8	3.0	198	1
DEC 06...	180	49	14	22	21	0.7	2.0	141	1
FEB 26...	150	41	11	17	20	0.6	1.7	125	0
JUN 24...	110	31	7.5	10	17	0.4	1.4	72	1
AUG 31...	170	48	12	17	18	0.6	2.0	134	0

A-Field dissolved bicarbonate, determined by incremental titration method.

B-Field dissolved carbonate, determined by incremental titration method.

K-Based on non-ideal colony counts.

07097000 ARKANSAS RIVER AT PORTLAND, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	ALKA- ^A LINTY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 28...	163	160	11	0.7	12	391	408	259
DEC 06...	117	100	7.8	0.6	12	272	279	366
FEB 26...	103	67	8.5	0.4	9.5	227	219	340
JUN 24...	61	47	4.4	0.4	8.1	162	147	595
AUG 31...	110	76	7.8	0.6	12	234	243	550

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 28...	0.02	0.13	0.02	0.03	0.30	0.07	0.05	0.04
DEC 06...	<0.01	0.32	0.01	0.02	<0.20	0.06	0.05	0.03
FEB 26...	<0.01	0.09	0.02	0.02	0.80	0.11	0.02	0.02
JUN 24...	<0.01	0.07	0.03	0.02	0.20	0.05	0.05	0.04
AUG 31...	<0.01	0.17	0.03	0.01	<0.20	0.04	0.03	0.02

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM, DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
OCT 28...	<10	61	<3	19	24	42	10	1	1	<1	690	<6
FEB 26...	<10	42	<3	11	13	17	<10	<1	<1	<1	370	<6
JUN 24...	30	39	<3	23	8	8	<10	<1	<1	<1	300	<6
AUG 31...	40	53	<3	13	12	13	<10	<1	<1	<1	430	<6

CROSS-SECTION DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK)	TEMPER- ATURE WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDEd (MG/L)
OCT 28...	1113	21.0	9.0	--	8.6	11.2	7
28...	1114	48.0	8.5	--	8.7	--	18
28...	1115	64.0	8.5	--	8.7	--	9
28...	1116	74.0	8.5	--	8.7	--	12
28...	1117	83.0	9.0	--	8.7	--	13
28...	1118	92.0	9.0	--	8.7	--	10
28...	1119	102	8.5	--	8.7	--	10
JUN 24...	1221	18.0	19.5	299	8.2	8.3	55
24...	1222	32.0	19.5	294	8.4	--	47
24...	1224	47.0	19.5	282	8.4	--	71
24...	1226	62.0	19.0	276	8.4	--	73
24...	1228	76.0	19.0	288	8.4	--	81
24...	1230	98.0	19.0	284	8.3	--	70

A-Field total dissolved alkalinity, determined by incremental titration method.

07097000 ARKANSAS RIVER AT PORTLAND, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 28...	1030	245	11	7.3	--
DEC 06...	1145	499	43	58	33
FEB 26...	1040	555	87	130	--
JUN 24...	1220	1360	66	202	--
AUG 31...	1000	871	61	143	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 29...	1100	354	498	8.2	9.0	27	9.6	K27	1800
FEB 18...	0940	465	335	8.4	0.0	2.0	12.5	K7	K10
APR 21...	0940	254	506	8.1	9.0	5.8	10.6	--	--
JUN 30...	1055	2770	153	7.8	16.5	3.0	8.6	110	170
SEP 01...	0915	620	386	8.1	15.5	1.6	8.6	--	320

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- ^A BONATE WATER DIS IT (MG/L AS HCO3)	CAR- ^B BONATE WATER DIS IT FIELD (MG/L AS CO3)
OCT 29...	200	55	16	25	21	0.8	2.7	176	0
FEB 18...	140	38	10	15	19	0.6	1.6	108	10
APR 21...	200	55	16	26	22	0.8	2.4	142	0
JUN 30...	65	19	4.3	5.4	15	0.3	1.1	57	0
SEP 01...	170	47	12	17	18	0.6	2.1	146	0

DATE	ALKA- ^C LITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 29...	144	100	9.9	0.5	12	315	310	301
FEB 18...	104	62	6.4	0.4	10	212	208	266
APR 21...	116	110	11	0.5	9.3	310	301	213
JUN 30...	47	26	1.9	0.2	6.7	99	93	740
SEP 01...	120	69	6.4	0.5	12	238	239	398

A-Field dissolved bicarbonate, determined by incremental titration method.

B-Field dissolved carbonate, determined by incremental titration method.

C-Field total dissolved alkalinity, determined by incremental titration method.

K-Based on non-ideal colony counts.

ARKANSAS RIVER BASIN

07097000 ARKANSAS RIVER AT PORTLAND, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 29...	<0.01	0.24	0.02	0.02	0.30	0.10	0.03	0.03
FEB 18...	<0.01	0.17	--	0.02	<0.20	0.04	0.02	0.02
APR 21...	<0.01	0.13	--	0.03	0.13	0.23	0.03	0.03
JUN 30...	<0.01	0.08	--	0.02	<0.20	0.04	<0.01	0.01
SEP 01...	0.03	0.16	--	0.02	0.30	0.08	0.03	0.02

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
OCT 29...	<10	69	<3	10	18	22	<10	<1	1	<1	570	<6
FEB 18...	<10	40	<3	13	9	22	<10	<1	<1	<1	350	<6
JUN 30...	40	28	<3	47	<4	13	<10	<1	<1	<1	160	<6
SEP 01...	30	56	<3	34	11	19	10	<1	<1	<1	410	<6

CROSS-SECTION DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK)	TEMPER- ATURE WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, DIS- SOLVED (MG/L)
OCT 29...	1101	7.0	9.0	490	8.2	9.5	66
29...	1102	19.0	9.0	493	8.2	9.6	70
29...	1103	29.0	9.0	492	8.2	9.6	76
29...	1104	37.0	9.0	499	8.2	9.6	77
29...	1105	51.0	9.0	501	8.2	9.6	86
29...	1106	72.0	9.0	501	8.2	9.6	74
29...	1107	90.0	9.0	504	8.2	9.6	68
JUN 30...	1045	26.0	17.5	155	7.9	--	--
30...	1046	47.0	17.0	156	8.0	--	--
30...	1047	71.0	17.5	156	8.0	--	--
30...	1048	90.0	18.0	159	8.1	8.6	--

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 29...	1100	354	74	71	--
JAN 13...	1050	539	56	81	52
FEB 18...	0940	465	52	66	--
MAR 24...	0855	587	32	51	63
APR 21...	0940	254	47	32	--
JUN 30...	1055	2770	121	905	--
SEP 01...	0915	620	66	110	--

07097000 ARKANSAS RIVER AT PORTLAND, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	573	517	498	396	395	299	314	411	187	164	366	362
2	583	516	488	403	390	299	346	407	180	166	345	352
3	582	513	473	402	386	296	389	405	181	172	332	372
4	583	510	454	400	389	296	405	406	188	170	330	372
5	586	515	441	376	391	298	415	406	198	174	332	382
6	585	503	408	392	392	296	405	394	208	184	339	393
7	582	503	438	384	388	295	407	407	212	192	376	427
8	590	499	440	395	389	295	410	415	213	214	331	394
9	591	488	446	372	390	298	422	381	229	217	315	380
10	595	475	446	379	390	298	416	328	242	190	295	397
11	575	475	433	396	372	300	445	323	257	185	302	409
12	582	489	437	396	367	304	467	321	259	184	312	407
13	585	488	434	370	368	301	487	311	241	187	326	416
14	583	480	423	377	369	301	518	281	204	218	317	417
15	577	476	539	387	371	295	539	256	177	187	317	384
16	570	472	435	398	332	288	527	239	158	187	306	396
17	558	471	708	392	332	298	513	234	157	249	309	407
18	549	480	436	400	368	298	486	252	187	215	323	403
19	552	478	388	389	368	295	484	216	174	202	346	400
20	556	474	683	387	368	293	513	215	168	203	395	390
21	554	486	419	400	356	295	494	209	172	227	384	403
22	550	497	401	400	365	293	490	204	174	211	372	409
23	547	495	410	400	363	289	478	197	170	187	362	409
24	550	488	389	396	355	286	453	196	167	187	352	405
25	555	474	397	397	330	285	421	202	167	186	374	400
26	548	492	387	394	316	287	425	198	169	190	389	389
27	521	478	382	393	308	294	426	189	172	214	386	390
28	517	455	370	392	299	306	417	190	168	262	366	392
29	522	491	393	395	---	296	414	195	160	296	367	389
30	524	448	386	403	---	302	413	205	159	313	377	383
31	524	---	391	393	---	310	---	200	---	316	376	---
MEAN	563	488	444	392	365	296	445	284	190	208	346	394

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.1	12.8	11.0	7.6	4.2	.2	3.4	.7	5.5	2.0	5.8	4.6
2	18.8	12.6	8.3	6.4	3.5	.0	4.8	1.2	4.9	1.8	8.0	3.4
3	18.6	12.1	7.1	5.0	4.0	.6	4.3	1.5	4.8	1.6	8.0	3.6
4	18.5	12.0	6.9	3.3	2.0	.2	2.4	.0	4.7	2.0	8.0	3.5
5	18.1	12.5	5.6	2.6	1.0	.0	1.4	.0	5.5	.9	8.2	3.1
6	17.1	13.9	6.3	2.3	2.2	.0	.8	.0	5.6	.5	9.1	3.7
7	14.8	10.9	7.6	2.4	2.2	.0	1.1	.0	4.8	1.3	9.9	4.9
8	13.8	8.1	8.4	3.8	1.7	.0	1.0	.0	4.5	1.5	9.4	6.1
9	14.8	8.9	8.6	4.0	4.0	.2	.3	.0	6.3	2.7	10.6	5.2
10	14.8	8.8	7.1	4.7	3.6	.7	.0	.0	5.4	3.3	8.5	5.8
11	15.8	9.9	6.8	3.8	5.0	1.1	.0	.0	5.9	2.4	5.8	3.6
12	16.5	10.5	5.8	3.3	3.6	1.9	.3	.0	6.6	1.7	6.3	1.7
13	16.3	11.3	6.5	2.5	3.1	.7	.1	.0	6.3	1.8	6.3	1.1
14	15.0	10.8	7.6	3.5	2.0	.0	.2	.0	4.0	1.3	8.4	2.0
15	15.2	9.6	8.5	3.5	1.1	.0	2.3	.0	3.4	.0	10.1	5.2
16	12.2	8.9	7.9	4.4	2.0	.0	4.0	.0	.8	.0	10.1	5.9
17	13.6	7.6	8.3	4.5	.9	.0	2.1	.1	.0	.0	7.0	5.9
18	13.3	8.4	8.2	5.3	.4	.0	2.7	.4	2.6	.0	9.2	6.0
19	13.9	9.2	7.4	4.7	1.1	.0	2.4	.0	6.8	1.2	12.1	6.7
20	14.9	9.7	5.7	2.7	.3	.0	4.8	.7	9.5	4.8	10.8	6.8
21	14.4	10.2	5.5	2.4	.2	.0	6.1	2.1	7.1	2.9	10.0	6.6
22	15.0	10.8	3.8	1.5	1.2	.0	5.9	1.7	6.4	1.4	12.6	6.6
23	14.6	10.9	4.3	1.6	2.1	.0	4.6	1.5	6.0	1.1	13.2	7.4
24	14.8	10.0	2.6	.8	2.5	.0	4.0	.2	6.7	1.8	13.7	7.9
25	15.2	10.9	2.8	.0	2.5	.0	3.9	.0	7.0	3.5	14.1	8.3
26	15.7	11.7	2.7	.0	2.2	.0	4.9	.4	7.1	3.2	12.6	8.6
27	15.2	10.3	2.9	.0	1.7	.0	5.2	.8	6.8	3.1	10.4	8.4
28	12.2	10.5	1.8	.0	2.9	.0	4.9	1.0	7.1	3.0	11.6	7.4
29	10.6	9.2	3.1	.0	3.5	.8	3.7	1.8	---	---	10.9	8.7
30	11.6	7.6	2.7	.0	4.0	1.2	5.8	1.1	---	---	10.8	7.9
31	11.2	8.4	---	---	2.1	1.1	6.2	1.7	---	---	12.7	7.0
MONTH	19.1	7.6	11.0	.0	5.0	.0	6.2	.0	9.5	.0	14.1	1.1
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.4	7.0	13.3	9.9	16.6	14.1	19.3	16.6	23.4	17.4	20.9	15.3
2	13.4	8.2	15.9	8.7	16.4	14.1	19.0	16.4	24.5	19.4	19.1	15.9
3	9.8	7.9	18.1	10.4	14.8	13.5	18.8	16.6	20.4	17.9	20.5	14.3
4	12.9	6.5	18.4	11.6	13.9	12.7	16.7	15.4	21.2	16.8	21.7	15.7
5	14.2	8.9	17.4	12.7	15.1	12.2	16.9	14.3	23.3	18.4	20.2	16.3
6	12.2	9.4	17.3	11.6	16.4	13.3	17.5	14.4	23.0	18.0	20.7	16.4
7	13.4	7.9	14.7	11.4	15.5	13.0	19.1	15.5	22.7	17.7	19.1	16.0
8	13.6	6.3	17.1	10.5	14.9	11.9	20.6	16.5	21.9	17.9	20.4	14.8
9	14.2	7.7	15.5	10.0	14.5	12.9	19.6	17.0	23.0	17.5	20.8	15.4
10	15.4	9.4	16.8	9.9	17.5	12.6	19.5	16.2	24.0	19.0	21.2	15.7
11	15.9	8.8	17.3	10.9	18.4	14.5	19.3	17.3	23.9	19.5	21.7	15.8
12	14.8	9.3	18.1	12.8	19.6	15.1	19.1	16.7	23.1	19.1	20.8	15.8
13	14.6	9.1	18.9	13.2	18.9	15.5	18.9	15.9	20.6	18.4	18.3	11.9
14	13.8	8.5	17.5	13.9	18.1	16.0	19.3	16.8	19.5	16.4	15.7	10.3
15	14.5	8.1	18.1	13.6	17.8	16.1	20.5	17.3	22.2	16.3	18.0	11.6
16	12.8	8.4	15.3	13.5	16.7	14.9	20.6	17.4	21.9	17.0	19.2	13.7
17	17.0	8.3	14.1	12.4	15.8	14.3	19.1	17.6	22.4	17.6	19.1	13.7
18	16.4	10.2	15.2	11.8	14.7	13.6	21.2	17.6	22.6	18.7	17.9	14.8
19	14.2	8.6	15.4	12.9	15.9	13.0	21.4	18.3	22.0	18.4	18.2	13.4
20	15.3	7.0	15.9	12.9	16.9	13.9	20.3	18.5	21.7	18.4	18.2	12.4
21	16.1	8.2	16.0	13.8	16.8	14.2	20.9	17.1	23.3	18.9	18.5	12.9
22	16.9	9.4	15.4	12.8	17.4	14.5	19.6	16.9	19.7	17.3	16.8	13.6
23	17.5	10.4	15.4	12.1	17.7	14.9	19.6	16.7	21.8	15.8	15.2	14.0
24	13.9	10.8	14.2	13.6	16.9	14.4	19.7	16.4	23.5	16.9	19.0	13.5
25	16.6	8.9	15.9	13.1	16.9	14.0	20.2	16.4	25.6	17.1	18.2	13.2
26	18.1	10.3	16.6	14.4	18.0	15.0	20.9	16.9	21.8	17.7	16.7	12.3
27	18.6	11.7	15.8	13.4	17.7	15.7	21.5	17.5	19.2	17.5	17.1	11.4
28	19.3	12.6	14.5	12.9	17.6	15.4	22.8	17.5	17.7	16.1	17.1	12.1
29	20.1	12.6	14.7	12.5	18.5	15.6	24.3	18.8	21.6	16.0	17.1	11.9
30	17.3	13.0	15.8	13.2	18.6	16.2	24.1	18.9	18.5	15.2	17.2	12.4
31	---	---	17.1	14.1	---	---	24.7	18.6	19.3	14.3	---	---
MONTH	20.1	6.3	18.9	8.7	19.6	11.9	24.7	14.3	25.6	14.3	21.7	10.3
YEAR	25.6	.0										

07099050 BEAVER CREEK ABOVE UPPER BEAVER CEMETERY, NEAR PENROSE, CO

LOCATION.--Lat 38°33'42", long 105°01'17", in SE¹/₄NW¹/₄NE¹/₄ sec.20, T.17 S., R.68 W., Fremont County, Hydrologic Unit 11020002, on left bank 40 ft upstream from bridge on Fremont County Road 132, 1 mi downstream from Banta Gulch, 1.3 mi northeast of Upper Beaver Cemetery, and 9.2 mi north of Penrose.

DRAINAGE AREA.--122 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1991 to current year (seasonal record).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 6,020 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Natural flow of creek affected by storage reservoirs and diversions for municipal use by the City of Colorado Springs.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge during period of seasonal operation, 515 ft³/s, Sept. 4, 1991, gage height, 6.70 ft, from floodmark, from rating curve extended above 130 ft³/s, on basis of slope-area measurement of peak flow; minimum daily, 5.5 ft³/s, Aug. 17, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 114 ft³/s at 0815 May 29, gage height, 4.50 ft, maximum gage height, 4.51 ft, June 3; minimum daily discharge, 5.5 ft³/s, Aug. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	17	---	---	---	---	9.7	55	98	19	17	20
2	5.4	17	---	---	---	---	9.6	46	98	18	17	20
3	6.1	15	---	---	---	---	9.7	49	103	17	16	19
4	17	14	---	---	---	---	9.3	45	91	16	13	17
5	17	14	---	---	---	---	11	44	84	16	7.7	15
6	17	14	---	---	---	---	10	41	80	15	7.6	16
7	17	13	---	---	---	---	10	38	76	15	7.1	16
8	17	13	---	---	---	---	10	39	68	14	6.7	16
9	17	13	---	---	---	---	12	37	60	14	5.1	16
10	17	13	---	---	---	---	11	36	56	13	6.4	13
11	17	13	---	---	---	---	7.6	32	51	14	11	14
12	17	13	---	---	---	---	8.5	31	48	23	8.0	14
13	17	13	---	---	---	---	11	33	47	22	7.9	26
14	17	13	---	---	---	---	9.8	36	47	19	8.4	46
15	17	13	---	---	---	---	9.0	35	56	18	9.2	45
16	16	13	---	---	---	9.4	8.8	48	57	16	8.6	45
17	16	13	---	---	---	9.0	8.9	52	55	15	5.5	44
18	16	13	---	---	---	9.2	12	66	60	14	5.7	44
19	16	---	---	---	---	9.3	22	65	59	15	9.8	44
20	16	---	---	---	---	10	19	91	51	20	11	43
21	16	---	---	---	---	9.8	17	99	44	20	11	43
22	17	---	---	---	---	9.7	30	101	39	20	11	35
23	16	---	---	---	---	11	42	97	32	19	10	15
24	16	---	---	---	---	10	53	97	31	18	9.4	14
25	16	---	---	---	---	8.7	34	103	30	18	8.6	12
26	16	---	---	---	---	9.3	36	100	28	18	7.9	12
27	16	---	---	---	---	12	44	105	27	17	8.8	11
28	16	---	---	---	---	13	52	108	24	16	13	10
29	16	---	---	---	---	14	56	109	22	16	14	10
30	16	---	---	---	---	11	54	100	20	16	16	10
31	17	---	---	---	---	10	---	97	---	18	19	---
TOTAL	500.5	---	---	---	---	---	636.9	2035	1642	529	317.4	705
MEAN	16.1	---	---	---	---	---	21.2	65.6	54.7	17.1	10.2	23.5
MAX	27	---	---	---	---	---	56	109	103	23	19	46
MIN	5.4	---	---	---	---	---	7.6	31	20	13	5.1	10
AC-FT	993	---	---	---	---	---	1260	4040	3260	1050	630	1400

07099050 BEAVER CREEK ABOVE UPPER BEAVER CEMETERY NEAR PENROSE, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1991 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARDNESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg)	SODIUM, DIS-SOLVED (MG/L AS Na)	SODIUM PERCENT	SODIUM ADSORPTION RATIO
APR 26...	1310	41	84	7.6	10.5	--	31	9.1	2.1	4.2	22	0.3
JUN 15...	1145	56	75	7.6	16.0	8.4	28	8.2	1.8	3.8	22	0.3
AUG 09...	1100	4.9	93	8.4	18.0	8.6	38	11	2.5	4.8	21	0.3
SEP 27...	1030	11	84	7.7	9.0	9.8	31	9.3	2.0	4.4	22	0.3

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
APR 26...	1.4	31	7.2	1.4	1.7	46	<0.01	0.05	0.01	0.03	<0.01
JUN 15...	1.0	23	7.7	0.7	1.8	39	<0.01	<0.05	0.04	0.02	<0.01
AUG 09...	1.3	33	7.7	1.2	2.0	51	<0.01	0.05	0.01	0.02	<0.01
SEP 27...	1.2	29	6.9	0.9	2.1	44	<0.01	<0.05	0.02	0.02	<0.01

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
APR 26...	<1	--	1	1	470	140	<1
JUN 15...	<1	<0.1	2	<1	880	35	2
AUG 09...	<1	0.1	<1	2	80	26	<1
SEP 27...	<1	2.0	<1	<1	120	50	<1

DATE	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
APR 26...	--	50	5	<1	<1	<10	<3
JUN 15...	<1	90	7	<1	<1	<10	<3
AUG 09...	<1	10	7	<1	<1	<10	<3
SEP 27...	<1	30	4	<1	<1	<10	<3

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
NOV 19...	1045	13	--	4.0	JUL 23...	1005	20	86	14.5
MAR 15...	1035	11	91	3.5	AUG 11...	1040	16	--	18.0
MAY 27...	1335	106	80	15.5	SEP 14...	1050	0.04	122	11.0

07099060 BEAVER CREEK ABOVE HIGHWAY 115 NEAR PENROSE, CO

LOCATION.--Lat 38°29'21", long 104°59'49", in NE¹/4NE¹/4 sec.16, T.18 S., R.68 W., Fremont County, Hydrologic Unit 11020002, on left bank 300 ft downstream from Beaver Park Irrigation Company diversion dam, 1.8 mi upstream from Highway 115, and 4.7 mi north of Penrose.

DRAINAGE AREA.--138 mi².

PERIOD OF RECORD.--March 1991 to current year (seasonal record).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 5,659.08 ft above sea level.

REMARKS.--No estimated daily discharges. Records fair except for discharges below 1.5 ft³/s and those above 110 ft³/s, which are poor. Natural flow of creek is affected by storage reservoirs, diversions for municipal use by Colorado Springs, and diversions for irrigation, mainly by the Beaver Park Irrigation Company. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge during period of seasonal operation, 410 ft³/s, Sept. 4, 1991, gage height, 6.00 ft, from floodmark, from rating curve extended above 110 ft³/s; no flow many days.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period of seasonal operation, 122 ft³/s at 0330 June 3, gage height, 4.13 ft, from rating curve extended above 110 ft³/s; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	---	---	---	---	1.1	20	84	.00	3.8	.00
2	.00	.00	---	---	---	---	.02	14	89	.00	1.5	.00
3	.00	.00	---	---	---	---	.00	22	111	.00	.00	.00
4	.00	.00	---	---	---	---	.04	22	79	.00	.00	.00
5	.00	.00	---	---	---	---	2.2	22	66	.00	.00	.00
6	.00	.00	---	---	---	---	2.4	16	59	.00	.00	.00
7	.00	.00	---	---	---	---	2.0	12	52	.00	.00	.00
8	.00	.00	---	---	---	---	1.6	11	45	.00	.00	.00
9	.00	.00	---	---	---	---	2.2	7.9	37	.00	.00	.00
10	.00	.00	---	---	---	---	2.9	6.8	32	.00	.00	.00
11	.00	.00	---	---	---	---	3.6	2.1	23	.00	.00	.00
12	.00	.00	---	---	---	---	5.4	.72	14	.00	.00	.00
13	.00	13	---	---	---	---	8.6	1.5	9.7	.00	.00	.00
14	.00	17	---	---	---	---	8.5	6.5	9.0	.00	.00	6.6
15	.00	17	---	---	---	---	2.9	3.2	20	.00	.00	.00
16	.00	13	---	---	---	10	.99	20	20	.00	.00	.00
17	.00	9.0	---	---	---	8.2	.45	25	20	.00	.00	.00
18	.00	17	---	---	---	8.1	1.3	42	34	.00	.00	.00
19	.00	---	---	---	---	6.5	9.2	44	30	.00	.00	.00
20	.00	---	---	---	---	2.5	8.9	59	16	.00	.00	.00
21	.00	---	---	---	---	2.8	7.8	73	4.5	.00	.00	.00
22	.00	---	---	---	---	7.3	7.4	79	.89	.00	.00	.00
23	.00	---	---	---	---	10	6.9	77	.16	.00	.00	.00
24	.00	---	---	---	---	7.0	16	83	.15	.00	.00	.00
25	.00	---	---	---	---	2.1	4.6	96	1.4	.00	.00	.00
26	.00	---	---	---	---	.11	2.5	93	.06	.00	.00	.00
27	.00	---	---	---	---	2.7	8.3	95	.00	.00	.00	.00
28	.00	---	---	---	---	3.0	15	100	.00	.00	.00	.00
29	.00	---	---	---	---	4.9	19	105	.00	.00	.00	.00
30	.00	---	---	---	---	2.8	18	83	.00	.00	.00	.00
31	.00	---	---	---	---	2.0	---	78	---	2.2	.00	---
TOTAL	0.00	---	---	---	---	---	169.80	1319.72	856.86	2.20	5.30	6.60
MEAN	.000	---	---	---	---	---	5.66	42.6	28.6	.071	.17	.22
MAX	.00	---	---	---	---	---	19	105	111	2.2	3.8	6.6
MIN	.00	---	---	---	---	---	.00	.72	.00	.00	.00	.00
AC-FT	.00	---	---	---	---	---	337	2620	1700	4.4	11	13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 1993, BY WATER YEAR (WY)

	1991	1992	1993	1991	1992	1993	1991	1992	1993	1991	1992	1993
MEAN	.009	---	---	---	---	---	20.3	31.8	57.9	14.3	23.2	5.21
MAX	.017	---	---	---	---	---	53.4	51.3	93.4	32.3	54.8	8.34
(WY)	1992	---	---	---	---	---	1992	1992	1992	1992	1991	1992
MTN	.000	---	---	---	---	---	1.83	1.56	28.6	.071	.17	.22
(WY)	1993	---	---	---	---	---	1991	1991	1993	1993	1993	1993

07099230 TURKEY CREEK ABOVE TELLER RESERVOIR, NEAR STONE CITY, CO

LOCATION.--Lat 38°27'54", long 104°49'33", in NE1/4SW1/4 sec.19, T.18 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, on Fort Carson Military Reservation, on left bank, 0.7 mi northwest of intersection of military roads 9, and 1, 2.2 mi upstream from Teller Reservoir Dam, and 2.2 mi northeast of Stone City.

DRAINAGE AREA.--62.3 mi².

REVISED RECORDS.--WDR CO-89-1: Drainage area.

PERIOD OF RECORD.--Streamflow records, May 1978 to current year. Water-quality data available, May 1978 to September 1981. Prior to July 20, 1989, at site 0.6 mi downstream, at different datum.

GAGE.--Water-stage recorder with satellite telemetry and concrete control with V-notch sharp-crested weir. Elevation of gage is 5,520 ft above sea level, from topographic map. Prior to July 20, 1989, at site 0.6 mi downstream, at different datum.

REMARKS.--Estimated daily discharges. May 9 to June 4, June 12-14, 18-22, and July 18-20. Records fair except for estimated daily discharges, which are poor. Diversions upstream from gage for irrigation, amount unknown. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	.23	.23	.16	.20	.22	.25	.20	.15	.61	.38	.28
2	.19	.24	.22	.16	.20	.22	.26	.20	.15	.61	.38	.26
3	.18	.25	.21	.16	.21	.23	.27	.20	.15	.61	.40	.31
4	.18	.25	.20	.16	.20	.23	.26	.19	.14	.62	.44	.20
5	.17	.25	.20	.16	.21	.23	.26	.18	.13	.62	.38	.17
6	.17	.25	.19	.16	.21	.23	.25	.19	.14	.63	.34	.18
7	.16	.25	.18	.17	.21	.24	.23	.19	.17	.61	.33	.20
8	.17	.25	.18	.17	.22	.25	.23	.19	.20	.60	.31	.23
9	.17	.25	.17	.17	.22	.26	.25	.19	.24	.60	.32	.18
10	.17	.24	.16	.18	.21	.26	.26	.19	.27	.59	.32	.21
11	.17	.25	.16	.19	.22	.26	.25	.19	.27	.59	.33	.36
12	.17	.26	.16	.19	.21	.26	.21	.19	.28	.58	.32	.21
13	.17	.26	.15	.19	.19	.26	.20	.19	.30	.57	.35	.20
14	.17	.26	.14	.20	.20	.27	.20	.18	.32	.57	.33	.30
15	.18	.27	.14	.21	.20	.25	.23	.18	.35	.56	.29	.27
16	.17	.26	.14	.21	.19	.25	.21	.18	.39	.56	.28	.22
17	.18	.26	.14	.22	.22	.24	.23	.18	.48	.58	.27	.21
18	.18	.26	.13	.22	.24	.26	.23	.18	.55	.59	.28	.18
19	.18	.25	.13	.22	.24	.28	.30	.17	.70	.65	.33	.16
20	.20	.26	.13	.22	.24	.28	.32	.17	.85	.68	.33	.14
21	.20	.26	.13	.22	.23	.23	.32	.17	1.0	.62	.32	.13
22	.21	.24	.13	.22	.22	.24	.35	.16	1.1	.55	.28	.12
23	.21	.23	.12	.22	.23	.23	.31	.16	.93	.53	.28	.13
24	.21	.23	.13	.22	.23	.24	.22	.16	.88	.50	.26	.15
25	.21	.24	.13	.21	.22	.25	.20	.16	.86	.48	.24	.12
26	.21	.24	.14	.22	.22	.24	.21	.16	.82	.46	.24	.14
27	.21	.24	.14	.22	.22	.26	.20	.16	.75	.45	.27	.11
28	.21	.24	.15	.21	.22	.24	.19	.16	.72	.46	.32	.10
29	.21	.23	.15	.21	---	.24	.20	.16	.66	.43	.27	.09
30	.21	.23	.15	.20	---	.25	.20	.15	.62	.41	.25	.08
31	.24	---	.15	.20	---	.25	---	.15	---	.39	.34	---
TOTAL	5.85	7.43	4.88	6.07	6.03	7.65	7.30	5.48	14.57	17.31	9.78	5.64
MEAN	.19	.25	.16	.20	.22	.25	.24	.18	.49	.56	.32	.19
MAX	.24	.27	.23	.22	.24	.28	.35	.20	1.1	.68	.44	.36
MIN	.16	.23	.12	.16	.19	.22	.19	.15	.13	.39	.24	.08
AC-FT	12	15	9.7	12	12	15	14	11	29	34	19	11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1993, BY WATER YEAR (WY)

	MEAN	3.69	2.39	.96	.71	.68	.65	1.43	9.97	7.34	2.97	4.28	1.74
MAX	44.6	26.7	6.47	2.69	2.58	2.75	12.9	73.6	40.3	17.1	40.9	18.1	
(WY)	1985	1985	1985	1985	1985	1985	1985	1980	1983	1985	1982	1982	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
(WY)	1979	1979	1979	1979	1979	1979	1979	1979	1989	1978	1990	1978	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1978 - 1993
ANNUAL TOTAL	380.30	97.99	
ANNUAL MEAN	1.04	.27	3.17
HIGHEST ANNUAL MEAN			13.1
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	4.8 May 7	1.1 Jun 22	353 ^a Aug 20 1982
LOWEST DAILY MEAN	.12 Dec 23	.08 Sep 30	.00 May 18 1978
ANNUAL SEVEN-DAY MINIMUM	.13 Dec 18	.11 Sep 24	.00 May 18 1978
INSTANTANEOUS PEAK FLOW		1.2 Jun 22	3640 ^b Aug 20 1982
INSTANTANEOUS PEAK STAGE		5.14 Jun 22	11.51 ^c Aug 20 1982
ANNUAL RUNOFF (AC-FT)	754	194	2300
10 PERCENT EXCEEDS	3.2	.51	4.8
50 PERCENT EXCEEDS	.45	.22	.41
90 PERCENT EXCEEDS	.18	.15	.00

a-No flow many days during most years.

b-From rating curve extended above 100 ft³/s, on the basis of slope-area measurements at gage heights 8.04 ft, and 11.27 ft

c-Maximum gage height, 11.88 ft, Jun 8, 1987, site and datum then in use.

07099233 TELLER RESERVOIR NEAR STONE CITY, CO

LOCATION.--Lat 38°26'33", long 104°49'31", in SE¹/₄NW¹/₄ sec.31, T.18 S., R.66 W., in Pueblo County, Hydrologic Unit 11020002, at left upstream end of dam on Turkey Creek on Fort Carson Military Reservation, 1.4 mi upstream from Booth Gulch, and 2.0 mi east of Stone City.

DRAINAGE AREA.--71.5 mi².

PERIOD OF RECORD.--September 1978 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,453 ft above sea level, from topographic map.

REMARKS.--No estimated contents (at 2400). Records for 1992 water year are fair except Aug. 5 to Sept. 8, which are poor. Records for 1993 water year are fair except Jan. 3-29, which are poor. Reservoir is formed by an earthfill dam completed around 1908. Maximum capacity of reservoir is 1,780 acre-ft at an uncontrolled spillway elevation of about 88 ft, 1980 survey. There is a controlled outlet from reservoir, however, considerable leakage occurs. Reservoir is used for recreation and for amphibious training for Fort Carson.

EXTREMES (at 2400) FOR PERIOD OF RECORD.--Maximum contents, 2,210 acre-ft, June 21, 1980, elevation, 90.15 ft, from capacity curve extended above 88 ft; no contents during 1979, 1991-93 water years.

EXTREMES (at 2400) FOR 1992 WATER YEAR.--Maximum contents, 101 acre-ft, June 10, elevation, 71.16 ft; no contents, Oct. 1, 1991 to May 11, 1992.

EXTREMES (at 2400) FOR 1993 WATER YEAR.--Maximum contents, 34 acre-ft, Dec. 31, elevation, 68.93 ft; no contents, Oct. 11-30, and June 9 to Sept. 30.

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	78	46	16	18
2	.00	.00	.00	.00	.00	.00	.00	.00	85	45	15	18
3	.00	.00	.00	.00	.00	.00	.00	.00	90	43	14	18
4	.00	.00	.00	.00	.00	.00	.00	.00	93	42	14	17
5	.00	.00	.00	.00	.00	.00	.00	.00	96	40	14	17
6	.00	.00	.00	.00	.00	.00	.00	.00	96	37	14	16
7	.00	.00	.00	.00	.00	.00	.00	.00	97	34	14	15
8	.00	.00	.00	.00	.00	.00	.00	.00	98	31	14	14
9	.00	.00	.00	.00	.00	.00	.00	.00	101	29	13	14
10	.00	.00	.00	.00	.00	.00	.00	.00	101	27	13	13
11	.00	.00	.00	.00	.00	.00	.00	3.5	99	27	12	12
12	.00	.00	.00	.00	.00	.00	.00	6.9	97	26	12	12
13	.00	.00	.00	.00	.00	.00	.00	12	93	27	12	11
14	.00	.00	.00	.00	.00	.00	.00	15	89	27	12	11
15	.00	.00	.00	.00	.00	.00	.00	18	82	25	12	10
16	.00	.00	.00	.00	.00	.00	.00	20	74	24	12	9.8
17	.00	.00	.00	.00	.00	.00	.00	22	67	25	12	9.1
18	.00	.00	.00	.00	.00	.00	.00	24	61	24	12	8.4
19	.00	.00	.00	.00	.00	.00	.00	27	56	24	11	8.0
20	.00	.00	.00	.00	.00	.00	.00	29	52	23	11	7.6
21	.00	.00	.00	.00	.00	.00	.00	30	48	23	11	7.5
22	.00	.00	.00	.00	.00	.00	.00	33	45	22	11	6.7
23	.00	.00	.00	.00	.00	.00	.00	35	42	22	11	6.6
24	.00	.00	.00	.00	.00	.00	.00	39	40	21	21	6.0
25	.00	.00	.00	.00	.00	.00	.00	43	39	21	20	5.7
26	.00	.00	.00	.00	.00	.00	.00	46	41	22	19	5.3
27	.00	.00	.00	.00	.00	.00	.00	50	41	21	18	4.8
28	.00	.00	.00	.00	.00	.00	.00	54	42	20	20	4.4
29	.00	.00	.00	.00	.00	.00	.00	59	46	19	19	4.1
30	.00	.00	.00	.00	---	.00	.00	63	47	18	19	3.5
31	.00	---	.00	.00	---	.00	---	68	---	17	19	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	697.40	2136	852	447	313.5
MEAN	.00	.00	.00	.00	.00	.00	.00	22	71	27	14	10
MAX	.00	.00	.00	.00	.00	.00	.00	68	101	46	21	18
MIN	.00	.00	.00	.00	.00	.00	.00	.00	39	17	11	3.5

07099233 TELLER RESERVOIR NEAR STONE CITY, CO--Continued

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	.60	11	34	25	20	22	11	4.6	.00	.00	.00
2	2.8	.97	13	34	25	20	21	11	3.9	.00	.00	.00
3	2.6	.97	14	34	25	20	22	10	3.4	.00	.00	.00
4	2.2	1.4	14	33	25	19	22	9.8	2.7	.00	.00	.00
5	1.6	1.6	14	33	25	19	21	8.7	2.2	.00	.00	.00
6	1.4	1.6	15	32	25	19	21	8.4	1.6	.00	.00	.00
7	1.1	1.9	15	31	25	19	20	8.0	.75	.00	.00	.00
8	.82	2.0	16	30	25	19	20	7.5	.15	.00	.00	.00
9	.45	2.2	16	29	25	19	19	6.9	.00	.00	.00	.00
10	.15	2.2	17	28	24	19	19	6.7	.00	.00	.00	.00
11	.00	2.8	19	27	24	19	18	6.4	.00	.00	.00	.00
12	.00	3.9	20	26	24	19	17	5.9	.00	.00	.00	.00
13	.00	4.2	20	25	24	20	17	5.7	.00	.00	.00	.00
14	.00	4.8	21	24	23	21	16	5.3	.00	.00	.00	.00
15	.00	5.3	21	23	23	20	15	5.0	.00	.00	.00	.00
16	.00	5.5	22	22	22	20	15	5.5	.00	.00	.00	.00
17	.00	5.9	22	21	22	20	15	6.6	.00	.00	.00	.00
18	.00	5.9	22	20	22	20	14	7.1	.00	.00	.00	.00
19	.00	6.4	22	19	23	20	14	7.6	.00	.00	.00	.00
20	.00	7.5	22	19	23	20	13	8.0	.00	.00	.00	.00
21	.00	8.4	22	19	22	21	13	8.4	.00	.00	.00	.00
22	.00	9.1	31	19	22	21	12	8.4	.00	.00	.00	.00
23	.00	9.6	30	20	22	21	12	7.8	.00	.00	.00	.00
24	.00	9.8	30	21	21	20	12	7.5	.00	.00	.00	.00
25	.00	10	29	22	21	20	12	7.5	.00	.00	.00	.00
26	.00	11	29	23	20	20	12	6.9	.00	.00	.00	.00
27	.00	11	32	24	20	21	12	6.4	.00	.00	.00	.00
28	.00	11	33	25	20	21	11	5.9	.00	.00	.00	.00
29	.00	11	33	25	---	21	11	5.7	.00	.00	.00	.00
30	.00	10	33	25	---	23	10	5.1	.00	.00	.00	.00
31	.60	---	34	25	---	23	---	5.1	---	.00	.00	---
TOTAL	17.12	168.54	692	792	647	624	478	225.8	19.30	0.00	0.00	0.00
MEAN	.55	5.6	22	26	23	20	16	7.3	.64	.00	.00	.00
MAX	3.4	11	34	34	25	23	22	11	4.6	.00	.00	.00
MIN	.00	.60	11	19	20	19	10	5.0	.00	.00	.00	.00

07099235 TURKEY CREEK NEAR STONE CITY, CO

LOCATION.--Lat 38°26'22", long 104°9'34", in SW¹/₄SW¹/₄ sec.31, T.18 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, on Fort Carson Military Reservation, on right bank, 0.2 mi downstream from Teller Reservoir Dam, 1.1 mi upstream from military road No. 11, and 2.0 mi southeast of Stone City.

DRAINAGE AREA.--71.5 mi².

PERIOD OF RECORD.--May 1978 to November 1984; June 12, 1987 to current year.

REVISED RECORDS.--WDR CO-80-1: 1979(M).

GAGE.--Water-stage recorder and concrete control with V-notch sharp-crested weir since Dec. 6, 1989. Elevation of gage is 5,395 ft above sea level, from topographic map. Prior to June 12, 1987, at site 0.1 mi upstream at different datum.

REMARKS.--Estimated daily discharges: Water year 1992, Nov. 22-25, Apr. 9-20, and May 18 to June 17. Records poor. No estimated daily discharges, water year 1993. Records poor. Flow regulated by Teller Reservoir 0.2 mi upstream. Gage records seepage and releases from reservoir. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.01	.01	.01	.01	.01	.02	.02	.02	1.5	.24	.03
2	.01	.01	.01	.01	.01	.01	.02	.02	.02	1.4	.22	.02
3	.01	.01	.01	.01	.01	.01	.02	.02	.02	1.3	.19	.03
4	.01	.01	.01	.01	.01	.02	.02	.02	.20	1.3	.12	.04
5	.01	.01	.01	.01	.01	.01	.02	.02	1.5	1.2	.10	.03
6	.01	.01	.01	.01	.01	.01	.02	.02	3.0	1.2	.09	.04
7	.01	.01	.01	.01	.01	.01	.02	.02	3.3	1.1	.07	.04
8	.01	.01	.01	.01	.01	.01	.02	.02	3.5	.87	.07	.04
9	.01	.01	.01	.01	.01	.01	.02	.02	3.5	.68	.06	.04
10	.01	.01	.01	.01	.01	.01	.02	.02	3.5	.65	.05	.04
11	.01	.01	.01	.01	.01	.02	.02	.02	3.5	.57	.05	.04
12	.01	.01	.01	.01	.01	.02	.02	.02	3.3	.68	.05	.04
13	.01	.01	.01	.01	.01	.02	.02	.02	3.2	.65	.06	.04
14	.01	.01	.01	.01	.01	.02	.02	.02	3.0	.77	.06	.03
15	.01	.01	.01	.01	.01	.02	.02	.02	2.8	.67	.06	.03
16	.01	.01	.01	.01	.01	.02	.02	.02	2.6	.55	.06	.02
17	.01	.01	.01	.01	.01	.02	.02	.02	2.4	.56	.05	.02
18	.01	.01	.01	.01	.01	.02	.02	.02	2.3	.57	.05	.01
19	.01	.01	.01	.01	.01	.02	.02	.02	2.3	.50	.05	.02
20	.01	.01	.01	.01	.01	.01	.02	.02	2.4	.46	.03	.02
21	.01	.01	.01	.01	.01	.01	.02	.02	2.1	.45	.03	.02
22	.01	.01	.01	.01	.01	.01	.02	.02	2.0	.43	.03	.01
23	.01	.01	.01	.01	.01	.02	.02	.02	1.9	.39	.03	.01
24	.01	.01	.01	.01	.01	.01	.02	.02	1.7	.39	.03	.01
25	.01	.01	.01	.01	.01	.01	.02	.02	1.7	.36	.04	.01
26	.01	.01	.01	.01	.01	.01	.02	.02	1.6	.37	.06	.01
27	.01	.01	.01	.01	.01	.01	.02	.02	1.6	.39	.06	.01
28	.01	.01	.01	.01	.01	.01	.02	.02	1.6	.33	.06	.01
29	.01	.01	.01	.01	.01	.02	.02	.02	1.5	.28	.05	.01
30	.01	.01	.01	.01	---	.02	.02	.02	1.6	.29	.05	.01
31	.01	---	.01	.01	---	.02	---	.02	---	.27	.03	---
TOTAL	0.31	0.30	0.31	0.31	0.29	0.45	0.60	0.62	63.68	21.13	2.20	0.73
MEAN	.010	.010	.010	.010	.010	.015	.020	.020	2.12	.68	.071	.024
MAX	.01	.01	.01	.01	.01	.02	.02	.02	3.5	1.5	.24	.04
MIN	.01	.01	.01	.01	.01	.01	.02	.02	.02	.27	.03	.01
AC-FT	.6	.6	.6	.6	.6	.9	1.2	1.2	126	42	4.4	1.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1992, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
MEAN	.38	.39	.31	.28	.28	.28	.23	.42	.68	.74	.58	.47			
MAX	1.64	1.57	1.47	1.49	1.54	1.36	.92	1.52	2.12	2.92	1.88	1.34			
(WY)	1983	1983	1983	1983	1983	1983	1983	1980	1992	1987	1987	1983			
MIN.	.010	.010	.010	.010	.010	.015	.015	.011	.010	.010	.010	.010			
(WY)	1992	1992	1992	1979	1979	1992	1979	1979	1978	1991	1991	1991			

SUMMARY STATISTICS FOR 1991 CALENDAR YEAR FOR 1992 WATER YEAR WATER YEARS 1978 - 1992

	1991 CALENDAR YEAR	1992 WATER YEAR	1978 - 1992
ANNUAL TOTAL	8.49	90.93	
ANNUAL MEAN	.023	.25	
HIGHEST ANNUAL MEAN			.41
LOWEST ANNUAL MEAN			1.49
HIGHEST DAILY MEAN	a .04 Jan 1	b 3.5 Jun 8	.024 1979
LOWEST DAILY MEAN	c .01 Jun 29	c .01 Oct 1	.00 Sep 17 1989
ANNUAL SEVEN-DAY MINIMUM	.01 Jun 29	b .01 Oct 1	.01 May 31 1978
INSTANTANEOUS PEAK FLOW		b 3.5 Jun 8	d 3.8 Jun 3 1982
INSTANTANEOUS PEAK STAGE		b 4.25 Jun 8	b 4.25 Jun 8 1992
ANNUAL RUNOFF (AC-FT)	17	180	294
10 PERCENT EXCEEDS	.04	.68	1.5
50 PERCENT EXCEEDS	.01	.02	.08
90 PERCENT EXCEEDS	.01	.01	.01

a-Also occurred Jan 2 to May 26.

b-Also occurred Jun 9-11.

c-Occurred many days during year.

d-Gage height, 0.80 ft, at different datum.

07099235 TURKEY CREEK NEAR STONE CITY, CO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.05	.09	.14	.21	.22	.20	.08	.05	.02	.01	.03
2	.01	.05	.10	.16	.22	.22	.14	.09	.04	.01	.01	.02
3	.01	.05	.10	.17	.22	.22	.15	.10	.04	.01	.01	.02
4	.01	.05	.10	.17	.22	.22	.14	.07	.04	.01	.04	.02
5	.01	.05	.10	.18	.22	.22	.11	.07	.05	.01	.04	.02
6	.01	.05	.10	.17	.28	.21	.08	.06	.04	.01	.03	.02
7	.01	.05	.10	.14	.28	.20	.06	.06	.04	.01	.03	.02
8	.02	.06	.10	.13	.24	.19	.04	.06	.04	.01	.03	.02
9	.02	.06	.11	.12	.29	.16	.04	.07	.04	.01	.02	.02
10	.02	.06	.11	.13	.29	.15	.05	.04	.04	.01	.02	.02
11	.02	.06	.11	.13	.28	.20	.04	.06	.03	.01	.02	.01
12	.02	.06	.11	.13	.31	.20	.07	.06	.04	.01	.03	.01
13	.02	.06	.11	.12	.32	.19	.10	.02	.03	.01	.02	.01
14	.02	.07	.11	.12	.25	.20	.08	.02	.03	.01	.02	.02
15	.02	.06	.11	.12	.23	.20	.06	.03	.05	.01	.02	.02
16	.02	.06	.12	.13	.24	.18	.05	.05	.04	.01	.02	.02
17	.02	.06	.14	.13	.22	.18	.05	.02	.06	.01	.02	.02
18	.02	.06	.14	.13	.22	.17	.04	.03	.11	.02	.01	.02
19	.02	.06	.14	.14	.27	.18	.03	.05	.06	.02	.01	.02
20	.02	.06	.14	.15	.29	.17	.04	.10	.05	.01	.02	.02
21	.02	.07	.14	.16	.27	.16	.05	.07	.05	.01	.02	.02
22	.02	.07	.11	.21	.25	.18	.05	.06	.04	.01	.02	.02
23	.02	.07	.11	.24	.24	.21	.07	.06	.04	.01	.02	.02
24	.02	.07	.10	.22	.23	.20	.07	.05	.04	.01	.02	.02
25	.02	.08	.10	.22	.21	.17	.05	.05	.03	.01	.01	.02
26	.02	.08	.09	.19	.21	.16	.04	.05	.03	.01	.01	.02
27	.02	.08	.10	.21	.20	.16	.06	.05	.02	.01	.02	.02
28	.02	.08	.10	.22	.20	.22	.05	.04	.02	.01	.02	.02
29	.03	.09	.10	.21	---	.19	.06	.07	.02	.03	.02	.02
30	.04	.09	.12	.21	---	.20	.06	.08	.02	.02	.03	.02
31	.05	---	.13	.21	---	.22	---	.05	---	.01	.03	---
TOTAL	0.61	1.92	3.44	5.11	6.91	5.95	2.13	1.77	1.23	0.37	0.65	0.58
MEAN	.020	.064	.11	.16	.25	.19	.071	.057	.041	.012	.021	.019
MAX	.05	.09	.14	.24	.32	.22	.20	.10	.11	.03	.04	.03
MIN	.01	.05	.09	.12	.20	.15	.03	.02	.02	.01	.01	.01
AC-FT	1.2	3.8	6.8	10	14	12	4.2	3.5	2.4	.7	1.3	1.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1993, BY WATER YEAR (WY)

MEAN	.35	.36	.29	.27	.28	.27	.22	.39	.63	.69	.54	.44
MAX	1.64	1.57	1.47	1.49	1.54	1.36	.92	1.52	2.12	2.92	1.88	1.34
(WY)	1983	1983	1983	1983	1983	1983	1983	1980	1992	1987	1987	1983
MIN	.010	.010	.010	.010	.010	.015	.015	.011	.010	.010	.010	.010
(WY)	1992	1992	1992	1979	1979	1992	1979	1979	1978	1991	1991	1991

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1978 - 1993

ANNUAL TOTAL	95.98	30.67	
ANNUAL MEAN	.26	.084	
HIGHEST ANNUAL MEAN			.38
LOWEST ANNUAL MEAN			1.49
HIGHEST DAILY MEAN	a 3.5	b .32	.024
LOWEST DAILY MEAN	b .01	.01	
ANNUAL SEVEN-DAY MINIMUM	.01	.01	
INSTANTANEOUS PEAK FLOW		.36	
INSTANTANEOUS PEAK STAGE		4.45	
ANNUAL RUNOFF (AC-FT)	190	61	273
10 PERCENT EXCEEDS	.68	.21	1.5
50 PERCENT EXCEEDS	.02	.05	.08
90 PERCENT EXCEEDS	.01	.01	.01

a-Also occurred Jun 9-11.

b-Occurred many days during year.

c-Gage height, 0.80 ft, at different datum.

07099350 PUEBLO RESERVOIR NEAR PUEBLO, CO

LOCATION.--Lat 38°16'15", long 104°43'30", in NE1/4 sec.36, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, at dam on Arkansas River, 7 mi west of Pueblo.

DRAINAGE AREA.--4,669 mi².

PERIOD OF RECORD.--January 1974 to current year.

GAGE.--Nonrecording gage. Datum of gage is 4,898.70 ft above sea level, (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above sea level.

REMARKS.--Reservoir is formed by concrete and earthfill dam. Storage began Jan. 9, 1974; dam completed in August 1975. Capacity, 357,700 acre-ft at elevation 4,898.70 ft, crest of spillway. Dead storage, 3,730 acre-ft, below elevation 4,764.00 ft, invert of river outlet. Reservoir is terminal reservoir of the Fryingpan-Arkansas project and is used to provide flood control, municipal and industrial supplies, and to fulfill irrigation requirements in the Arkansas River valley. Figures given are total contents.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 295,480 acre-ft, Feb. 12, 1985, elevation, 4,886.94 ft; minimum since appreciable storage was attained, 22,680 acre-ft, Nov. 13, 1974, elevation, 4,790.50 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 195,290 acre-ft, Apr. 10, elevation, 4,864.05 ft; minimum contents, 102,100 acre-ft, Oct. 27, elevation, 4,834.32 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	4,834.93	103,780	-
Oct. 31.	4,834.47	102,570	-1,210
Nov. 30.	4,837.91	111,750	+9,180
Dec. 31.	4,844.98	131,660	+19,910
CAL YR 1992.			-11,910
Jan. 31.	4,850.94	149,830	+18,170
Feb. 28.	4,856.25	167,330	+17,500
Mar. 31.	4,863.67	193,970	+26,640
Apr. 30.	4,858.89	176,510	+17,460
May 31.	4,858.72	175,910	-600
June 30.	4,860.44	182,050	+6,140
July 31.	4,856.05	166,650	-15,400
Aug. 31.	4,840.55	119,010	-47,640
Sept. 30.	4,839.30	115,550	-3,460
WTR YR 1993.			+46,690

07099350 PUEBLO RESERVOIR NEAR PUEBLO CO--Continued

WATER-QUALITY RECORDS

REMARKS.--Samples and field measurements were collected at a number of transects located along the length of the reservoir.

381754104504000 PUEBLO RESERVOIR SITE 2B

LOCATION.--Lat 38°17'54", long 104°50'40", in SW¹/₄NW¹/₄, sec.24, T.20 S., R.67 W., Pueblo County, Hydrologic Unit 11020002, at approximate center of transect, approximately 1.1 mi downstream from Rush Creek, 1.1 mi upstream from Turkey Creek, and 7.8 mi upstream from Pueblo Dam.

PERIOD OF RECORD.--June 1988 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)
MAY 1993							
26...	1450	--	--	--	--	<0.3	--
26...	1451	0.0	211	7.6	18.0	--	7.2
26...	1452	3.0	211	7.6	17.5	--	7.2
26...	1453	6.0	211	7.7	17.5	--	7.0
JUN							
24...	1330	--	--	--	--	0.2	--
24...	1331	0.0	165	8.2	17.5	--	7.1
24...	1332	3.0	166	8.2	17.0	--	7.0
24...	1333	6.0	170	8.2	16.5	--	7.0
24...	1334	9.0	170	8.2	16.0	--	6.8
24...	1335	12	172	8.2	15.5	--	6.5

381725104494400 PUEBLO RESERVOIR SITE 3B

LOCATION.--Lat 38°17'25", long 104°49'44", in SW¹/₄SW¹/₄, sec.19, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, at approximate center of transect, approximately 100 ft downstream from Turkey Creek, and 6.7 mi upstream from Pueblo Dam.

PERIOD OF RECORD.--June 1988 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)
MAY 1993							
26...	1345	--	--	--	--	0.3	--
26...	1346	0.0	228	7.6	17.5	--	6.8
26...	1347	3.0	218	7.6	16.5	--	6.6
26...	1348	6.0	212	7.7	16.0	--	6.8
26...	1349	9.0	212	7.7	16.0	--	6.8
26...	1350	12	212	7.7	16.0	--	6.8
26...	1351	15	212	7.7	16.0	--	6.8
26...	1352	18	212	7.7	15.5	--	6.6
26...	1353	21	213	7.7	15.5	--	6.6
JUN							
24...	1300	--	--	--	--	0.6	--
24...	1301	0.0	221	8.5	21.5	--	7.7
24...	1302	3.0	220	8.5	21.0	--	7.7
24...	1303	6.0	196	8.5	19.0	--	6.8
24...	1304	9.0	182	8.3	17.0	--	6.5
24...	1305	12	176	8.2	16.0	--	6.3
24...	1306	15	176	8.2	16.0	--	6.4
24...	1307	18	175	8.2	16.0	--	6.4
24...	1308	21	175	8.2	16.0	--	6.5
24...	1309	24	175	8.2	16.0	--	6.3
AUG							
09...	1150	--	--	--	--	0.3	--
09...	1151	0.0	426	8.1	23.0	--	6.4
09...	1152	3.0	402	8.2	21.5	--	6.4
09...	1153	6.0	379	8.1	20.5	--	6.3
09...	1154	9.0	373	8.0	19.0	--	6.5
09...	1155	12	375	7.9	19.0	--	6.1

07099350 PUEBLO RESERVOIR NEAR PUEBLO CO--Continued

WATER-QUALITY RECORDS

381647104475300 PUEBLO RESERVOIR SITE 4B

LOCATION.--Lat 38°16'47", long 104°47'53", in NW¹/₄SE¹/₄, sec.29, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, at approximate center of transect, approximately 1.3 mi upstream from Peck Creek, 2.2 mi downstream from Turkey Creek, and 4.5 mi upstream from Pueblo Dam.

PERIOD OF RECORD.--June 1988 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)
MAY 1993							
26...	1520	--	--	--	--	0.5	--
26...	1521	0.0	245	7.7	18.5	--	7.0
26...	1522	6.0	267	7.7	17.5	--	7.0
26...	1523	12	297	7.8	17.0	--	7.0
26...	1524	18	310	7.8	16.5	--	6.8
26...	1525	24	245	7.7	15.0	--	6.4
26...	1526	30	440	7.8	14.5	--	6.0
26...	1527	36	449	7.8	14.0	--	5.8
26...	1528	42	452	7.8	14.0	--	5.8
26...	1529	46	451	7.8	14.0	--	5.6
JUN							
24...	1435	--	--	--	--	1.7	--
24...	1436	0.0	295	8.5	21.5	--	8.0
24...	1437	6.0	282	8.5	21.0	--	8.2
24...	1438	12	286	8.5	21.0	--	7.8
24...	1439	18	278	8.4	20.5	--	7.7
24...	1440	24	281	8.3	20.5	--	7.2
24...	1441	30	272	8.3	20.0	--	7.0
24...	1442	36	208	7.9	18.5	--	6.2
24...	1443	42	209	7.8	17.5	--	6.0
24...	1444	46	196	7.7	17.5	--	5.6
AUG							
09...	1330	--	--	--	--	1.7	--
09...	1331	0.0	303	8.6	23.5	--	7.7
09...	1332	6.0	304	8.5	22.5	--	7.4
09...	1333	12	299	8.3	22.5	--	6.6
09...	1334	18	287	8.0	22.0	--	5.3
09...	1335	24	287	7.9	22.0	--	5.1
09...	1336	30	290	7.8	22.0	--	5.0
09...	1337	36	413	7.7	21.5	--	4.2
09...	1338	39	417	7.6	21.5	--	3.9
SEP							
30...	1250	--	--	--	--	1.1	--
30...	1251	0.0	386	8.4	18.0	--	8.1
30...	1252	6.0	387	8.4	18.0	--	8.0
30...	1253	12	386	8.4	18.0	--	7.9
30...	1254	18	387	8.4	17.5	--	7.7
30...	1255	24	386	8.4	17.5	--	7.8
30...	1256	27	438	8.3	16.5	--	6.8

ARKANSAS RIVER BASIN

07099350 PUEBLO RESERVOIR NEAR PUEBLO CO--Continued

WATER-QUALITY RECORDS

381559104465500 PUEBLO RESERVOIR SITE 5C

LOCATION.--Lat 38°15'59", long 104°46'55", in SW¹/₄NE¹/₄, sec.33, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, at approximate center of transect, approximately 0.1 mi upstream from Peck Creek, 1.2 mi upstream from Rock Creek, and 3.2 mi upstream from Pueblo Dam.

PERIOD OF RECORD.--June 1988 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)
MAY 1993							
26...	1220	--	--	--	--	1.4	--
26...	1221	0.0	370	7.8	17.0	--	7.0
26...	1222	3.0	372	7.8	17.0	--	7.0
26...	1223	6.0	376	7.8	16.5	--	7.0
26...	1224	9.0	381	7.8	16.5	--	6.8
26...	1225	12	387	7.9	16.5	--	6.8
26...	1226	15	395	7.8	16.5	--	7.0
26...	1227	18	398	7.8	16.5	--	6.8
26...	1228	21	394	7.8	16.5	--	6.8
26...	1229	24	342	7.8	15.5	--	6.6
26...	1230	27	281	7.7	15.0	--	6.2
26...	1231	30	284	7.6	14.5	--	6.0
26...	1232	33	305	7.6	14.5	--	6.0
26...	1233	36	340	7.6	14.5	--	5.8
26...	1234	39	395	7.7	14.5	--	5.8
26...	1235	42	410	7.6	14.0	--	5.6
26...	1236	45	461	7.6	13.5	--	5.4
26...	1237	48	481	7.7	13.0	--	5.2
26...	1238	51	481	7.6	13.0	--	5.2
JUN							
24...	1200	--	--	--	--	1.5	--
24...	1201	0.0	303	8.6	21.0	--	7.8
24...	1202	3.0	303	8.6	21.0	--	7.8
24...	1203	6.0	310	8.6	21.0	--	7.8
24...	1204	9.0	320	8.5	20.5	--	7.7
24...	1205	12	321	8.5	20.5	--	7.7
24...	1206	15	322	8.5	20.0	--	7.5
24...	1207	18	323	8.4	20.0	--	7.0
24...	1208	21	296	8.3	19.0	--	6.4
24...	1209	24	273	8.2	19.0	--	6.0
24...	1210	27	265	8.2	18.5	--	6.0
24...	1211	30	250	8.1	18.0	--	5.9
24...	1212	33	240	8.1	18.0	--	5.8
24...	1213	36	239	8.1	18.0	--	5.8
24...	1214	39	235	8.1	18.0	--	5.8
24...	1215	42	230	8.1	18.0	--	5.7
24...	1216	45	219	8.1	17.5	--	5.7
24...	1217	48	222	8.1	17.0	--	5.4
24...	1218	51	222	8.0	16.5	--	5.3
24...	1219	53	222	8.1	16.5	--	5.2
AUG							
09...	1240	--	--	--	--	2.0	--
09...	1241	0.0	294	8.5	23.5	--	7.2
09...	1242	3.0	294	8.5	23.0	--	7.4
09...	1243	6.0	293	8.5	23.0	--	7.1
09...	1244	9.0	292	8.4	22.5	--	6.8
09...	1245	12	291	8.3	22.5	--	6.8
09...	1246	15	289	8.3	22.5	--	6.6
09...	1247	18	287	8.2	22.5	--	6.4
09...	1248	21	286	8.2	22.5	--	6.3
09...	1249	24	283	8.1	22.5	--	6.1
09...	1250	27	283	8.0	22.5	--	5.8
09...	1251	30	287	8.0	22.5	--	5.7
09...	1252	33	291	7.9	22.0	--	5.5
09...	1253	36	291	7.7	22.0	--	4.4
09...	1254	39	311	7.6	22.0	--	4.1
09...	1255	42	323	7.6	22.0	--	3.1
09...	1256	43	319	7.5	21.5	--	3.2
SEP							
30...	1125	--	--	--	--	1.1	--
30...	1126	0.0	382	8.4	18.0	--	7.9
30...	1127	3.0	382	8.4	18.0	--	7.8
30...	1128	6.0	382	8.4	18.0	--	7.8
30...	1129	9.0	383	8.3	17.5	--	7.4
30...	1130	12	382	8.3	17.5	--	7.3
30...	1131	15	382	8.2	17.5	--	7.3
30...	1132	18	381	8.2	17.5	--	7.3
30...	1133	21	382	8.2	17.5	--	7.3
30...	1134	24	383	8.2	17.5	--	7.2
30...	1135	27	381	8.2	17.5	--	7.3
30...	1136	30	384	8.2	17.5	--	6.9
30...	1137	32	392	8.1	17.5	--	6.5

07099350 PUEBLO RESERVOIR NEAR PUEBLO CO--Continued

WATER-QUALITY RECORDS

381548104453300 PUEBLO RESERVOIR SITE 6C

LOCATION.--Lat 38°15'48", long 104°45'33", in NE¹/₄SE¹/₄, sec.34, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, at approximate center of transect, approximately 0.2 mi downstream from Rock Creek, 1.2 mi downstream from Peck Creek, and 2.0 mi upstream from Pueblo Dam.

PERIOD OF RECORD.--June 1988 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)
MAY 1993							
26...	1545	--	--	--	--	2.1	--
26...	1546	0.0	401	8.0	18.0	--	7.4
26...	1547	6.0	401	8.0	17.5	--	7.4
26...	1548	12	421	8.0	17.0	--	7.2
26...	1549	18	427	8.1	17.0	--	7.2
26...	1550	24	434	8.1	17.0	--	7.2
26...	1551	30	407	8.0	16.0	--	7.0
26...	1552	36	380	7.9	15.5	--	6.4
26...	1553	42	460	8.0	15.0	--	6.6
26...	1554	48	476	8.0	14.0	--	6.6
26...	1555	54	475	7.9	14.0	--	6.4
26...	1556	60	490	8.0	13.0	--	6.2
26...	1557	66	492	7.9	12.5	--	5.8
26...	1558	72	492	7.9	12.0	--	5.4
26...	1559	78	493	7.9	11.5	--	5.4
26...	1600	81	492	7.9	11.5	--	5.4
JUN							
24...	1510	--	--	--	--	2.0	--
24...	1511	0.0	323	8.3	21.5	--	7.7
24...	1512	6.0	323	8.3	21.0	--	7.7
24...	1513	12	330	8.1	19.5	--	6.8
24...	1514	18	326	8.0	19.5	--	6.5
24...	1515	24	321	7.9	19.0	--	6.2
24...	1516	30	297	7.7	18.0	--	5.8
24...	1517	36	282	7.6	18.0	--	5.6
24...	1518	42	266	7.6	17.5	--	5.4
24...	1519	48	263	7.6	17.0	--	5.3
24...	1520	54	268	7.6	17.0	--	5.3
24...	1521	60	273	7.6	17.0	--	5.3
24...	1522	66	242	8.0	16.5	--	5.4
24...	1523	72	244	8.0	16.0	--	5.1
24...	1524	78	244	8.0	16.0	--	4.9
24...	1525	84	244	8.0	16.0	--	5.0
24...	1526	90	263	8.0	15.5	--	4.5
AUG							
09...	1400	--	--	--	--	2.1	--
09...	1401	0.0	285	8.4	24.0	--	7.1
09...	1402	6.0	285	8.4	23.0	--	7.1
09...	1403	12	287	8.4	22.5	--	7.1
09...	1404	18	288	8.3	22.5	--	6.7
09...	1405	24	284	8.1	22.5	--	6.3
09...	1406	30	283	8.0	22.5	--	5.9
09...	1407	36	281	7.9	22.0	--	5.8
09...	1408	42	282	7.9	22.0	--	5.5
09...	1409	48	286	7.8	22.0	--	4.7
09...	1410	54	317	7.5	21.5	--	3.3
09...	1411	60	313	7.5	21.0	--	3.0
09...	1412	66	306	7.5	20.5	--	2.3
09...	1413	72	286	7.5	20.0	--	1.3
09...	1414	74	289	7.4	20.0	--	1.0
SEP							
30...	1320	--	--	--	--	1.1	--
30...	1321	0.0	378	8.3	18.0	--	7.2
30...	1322	6.0	378	8.2	18.0	--	7.1
30...	1323	12	378	8.2	18.0	--	7.1
30...	1324	18	378	8.2	17.5	--	6.7
30...	1325	24	380	8.1	17.5	--	6.6
30...	1326	30	380	8.1	17.5	--	6.7
30...	1327	36	379	8.1	17.5	--	6.8
30...	1328	42	382	8.2	17.5	--	6.9
30...	1329	48	396	8.1	17.5	--	6.1
30...	1330	54	401	8.1	17.0	--	6.4
30...	1331	60	409	8.1	17.0	--	5.7
30...	1332	62	412	7.9	17.0	--	5.1

ARKANSAS RIVER BASIN

07099350 PUEBLO RESERVOIR NEAR PUEBLO CO--Continued

WATER-QUALITY RECORDS

381602104435200 PUEBLO RESERVOIR SITE 7B

LOCATION.--Lat 38°16'02", long 104°43'52", in SW¹/₄, NE¹/₄, sec.36, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, at approximate center of transect, approximately 0.3 mi downstream from Boggs Creek, and 0.4 mi upstream from Pueblo Dam.

PERIOD OF RECORD.--June 1988 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)
MAY 1993							
26...	1001	0.0	456	8.0	16.0	--	7.4
26...	1002	3.0	457	8.0	16.0	--	7.4
26...	1003	6.0	458	8.0	16.0	--	7.4
26...	1004	9.0	455	8.0	16.0	--	7.4
26...	1005	12	450	8.0	15.5	--	7.2
26...	1006	15	448	8.0	15.5	--	7.0
26...	1007	18	451	8.0	15.5	--	7.2
26...	1008	21	454	8.0	15.5	--	7.2
26...	1009	24	455	8.0	15.5	--	7.2
26...	1010	27	455	8.0	15.5	--	7.0
26...	1011	30	447	7.9	15.5	--	7.0
26...	1012	33	452	7.9	15.0	--	6.8
26...	1013	36	452	7.9	15.0	--	6.8
26...	1014	39	462	7.9	15.0	--	6.8
26...	1015	42	472	7.9	14.5	--	6.8
26...	1016	45	477	7.9	14.5	--	6.8
26...	1017	48	478	7.9	14.0	--	6.8
26...	1018	51	486	7.9	13.5	--	6.6
26...	1019	54	494	7.9	13.5	--	6.6
26...	1020	57	490	7.8	13.0	--	6.4
26...	1021	60	491	7.8	12.5	--	6.0
26...	1022	63	492	7.8	12.5	--	6.0
26...	1023	66	495	7.9	12.0	--	6.2
26...	1024	69	496	7.8	11.5	--	6.0
26...	1025	72	495	7.8	11.5	--	6.0
26...	1026	75	495	7.8	11.0	--	6.2
26...	1027	78	494	7.8	10.5	--	6.0
26...	1028	81	494	7.8	10.5	--	6.0
26...	1029	84	493	7.8	10.5	--	5.8
26...	1030	87	492	7.8	10.5	--	5.8
26...	1031	90	493	7.8	10.0	--	5.6
26...	1032	93	492	7.8	10.0	--	5.6
26...	1033	96	493	7.8	10.0	--	5.6
26...	1034	99	492	7.8	10.0	--	5.4
26...	1035	102	493	7.8	10.0	--	5.2
JUN							
24...	0935	--	--	--	--	1.5	--
24...	0936	0.0	334	8.5	19.5	--	8.0
24...	0937	3.0	334	8.5	19.5	--	8.0
24...	0938	6.0	335	8.5	19.5	--	8.0
24...	0939	9.0	336	8.5	19.5	--	8.0
24...	0940	12	337	8.5	19.5	--	7.9
24...	0941	15	338	8.5	19.5	--	7.6
24...	0942	18	341	8.5	19.0	--	7.5
24...	0943	21	339	8.4	18.5	--	6.9
24...	0944	24	338	8.3	18.5	--	6.7
24...	0945	27	318	8.2	18.5	--	6.3
24...	0946	30	316	8.2	17.5	--	5.8
24...	0947	33	319	8.2	17.5	--	5.8
24...	0948	36	318	8.1	17.5	--	5.8
24...	0949	39	315	8.1	17.5	--	5.8
24...	0950	42	319	8.1	17.5	--	5.8
24...	0951	45	315	8.1	17.0	--	5.8
24...	0952	48	301	8.1	17.0	--	5.9
24...	0953	51	268	8.1	17.0	--	6.1
24...	0954	54	255	8.1	16.5	--	6.2
24...	0955	57	259	8.1	16.5	--	6.2
24...	0956	60	262	8.1	16.5	--	6.1
24...	0957	63	275	8.0	16.5	--	6.1
24...	0958	66	266	8.0	16.5	--	6.2
24...	0959	69	267	8.0	16.5	--	6.2
24...	1000	72	267	8.0	16.5	--	6.1
24...	1001	75	260	8.0	16.0	--	6.1
24...	1002	78	269	8.0	16.0	--	6.0
24...	1003	81	264	8.0	16.0	--	6.1
24...	1004	84	285	8.0	16.0	--	5.9
24...	1005	87	286	8.0	16.0	--	5.7
24...	1006	90	303	7.9	15.5	--	5.4
24...	1007	93	310	7.9	15.0	--	5.1
24...	1008	96	328	7.9	14.5	--	4.8
24...	1009	99	358	7.9	14.5	--	4.3
24...	1010	102	380	7.9	14.0	--	3.7
24...	1011	105	405	7.8	13.5	--	2.6
24...	1012	108	405	7.8	13.5	--	2.6
24...	1013	110	405	7.8	13.5	--	2.6

07099350 PUEBLO RESERVOIR NEAR PUEBLO CO--Continued

WATER-QUALITY RECORDS

381602104435200 PUEBLO RESERVOIR SITE 7B--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAM- PLING DEPTH (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TRANS- PAR- ENCY (SECCHI DISK) (M)	OXYGEN, DIS- SOLVED (MG/L)
AUG 1993							
09...	1445	--	--	--	--	2.4	--
09...	1446	0.0	280	8.3	24.0	--	7.1
09...	1447	3.0	280	8.3	23.5	--	7.2
09...	1448	6.0	280	8.3	23.5	--	7.0
09...	1449	9.0	280	8.3	23.0	--	7.0
09...	1450	12	280	8.2	23.0	--	6.9
09...	1451	15	280	8.2	22.5	--	6.9
09...	1452	18	280	8.2	22.5	--	6.7
09...	1453	21	280	8.1	22.5	--	6.6
09...	1454	24	280	8.1	22.5	--	6.5
09...	1455	27	280	8.1	22.5	--	6.5
09...	1456	30	280	8.1	22.5	--	6.5
09...	1457	33	280	8.1	22.5	--	6.6
09...	1458	36	280	8.0	22.5	--	6.3
09...	1459	39	280	8.0	22.5	--	6.2
09...	1500	42	279	8.0	22.0	--	6.1
09...	1501	45	279	7.9	22.0	--	5.9
09...	1502	48	281	7.9	22.0	--	5.5
09...	1503	51	290	7.7	21.5	--	4.3
09...	1504	54	296	7.6	21.5	--	3.9
09...	1505	57	292	7.6	21.0	--	3.3
09...	1506	60	282	7.6	21.0	--	3.2
09...	1507	63	277	7.6	20.5	--	2.9
09...	1508	66	271	7.6	20.0	--	2.9
09...	1509	69	271	7.6	20.0	--	2.7
09...	1510	72	271	7.6	20.0	--	2.7
09...	1511	75	270	7.6	20.0	--	2.7
09...	1512	78	273	7.6	19.5	--	2.4
09...	1513	81	276	7.6	19.0	--	2.1
09...	1514	84	282	7.6	19.0	--	1.6
09...	1515	87	285	7.6	18.5	--	1.3
09...	1516	90	288	7.5	18.5	--	0.8
09...	1517	93	296	7.5	18.0	--	0.1
09...	1518	96	296	7.5	17.5	--	0.1
SEP							
30...	0945	--	--	--	--	0.8	--
30...	0946	0.0	380	7.9	17.5	--	6.6
30...	0947	3.0	380	8.0	17.5	--	6.6
30...	0948	6.0	380	7.9	17.5	--	6.5
30...	0949	9.0	380	8.0	17.5	--	6.4
30...	0950	12	381	7.9	17.5	--	6.3
30...	0951	15	381	7.9	17.5	--	6.3
30...	0952	18	380	7.9	17.5	--	6.3
30...	0953	21	380	7.9	17.5	--	6.3
30...	0954	24	380	7.9	17.5	--	6.2
30...	0955	27	381	7.9	17.5	--	6.2
30...	0956	30	380	7.9	17.5	--	6.2
30...	0957	33	380	7.9	17.5	--	6.2
30...	0958	36	380	7.9	17.5	--	6.2
30...	0959	39	380	7.9	17.5	--	6.2
30...	1000	42	380	7.9	17.5	--	6.2
30...	1001	45	379	7.9	17.5	--	6.2
30...	1002	48	379	7.9	17.5	--	6.1
30...	1003	51	379	7.9	17.5	--	6.1
30...	1004	54	379	7.9	17.5	--	6.1
30...	1005	57	379	7.9	17.5	--	6.1
30...	1006	60	378	7.9	17.5	--	6.1
30...	1007	63	378	7.9	17.5	--	6.1
30...	1008	66	378	7.9	17.0	--	6.1
30...	1009	69	379	7.8	17.0	--	6.0
30...	1010	72	379	7.8	17.0	--	5.9
30...	1011	75	379	7.8	17.0	--	5.8
30...	1012	78	379	7.8	17.0	--	5.8
30...	1013	81	393	7.8	17.0	--	4.0
30...	1014	84	402	7.6	17.0	--	3.6

07099400 ARKANSAS RIVER ABOVE PUEBLO, CO

LOCATION.--Lat 38°16'18", long 104°43'03", in SE¹/4NE¹/4 sec.36, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, on left bank 200 ft downstream from NE corner of Arkansas River bridge, 0.4 mi downstream from Pueblo Dam, and 7 mi west of Pueblo.

DRAINAGE AREA.--4,670 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Streamflow records, October 1965 to current year. Water-quality data available, October 1965 to September 1970, Dec. 1985 to current year. Sediment data available October 1965 to September 1970. Statistical summary computed for 1975 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 4,740 ft above sea level, from topographic map. Prior to Mar. 23, 1967, at site 730 ft upstream at datum 1.23 ft, higher. May 24, 1974 to Feb. 24, 1975, at site 1,500 ft downstream, at different datum. Since Feb. 25, 1975, at or within 50 ft of present location at present datum.

REMARKS.--Estimated daily discharges: Nov. 21 to Dec. 1. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, diversions upstream from station for irrigation of about 88,000 acres and return flow from irrigated areas. Flow completely regulated by Pueblo Reservoir (station 07099350) since Jan. 9, 1974.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	201	332	98	288	203	106	239	566	2720	2470	1260	742
2	213	331	98	285	203	106	296	347	2400	2310	1280	822
3	213	344	98	289	204	106	318	222	2330	2280	1290	832
4	240	355	98	290	204	128	319	233	2310	2280	1290	708
5	256	364	98	291	204	156	295	253	1780	2210	1280	597
6	250	396	98	291	204	156	279	286	1420	2120	1470	568
7	247	438	98	292	204	158	281	550	1350	1910	1620	580
8	233	437	98	292	205	156	281	466	1330	1570	1820	654
9	213	483	100	293	205	156	312	523	1460	1540	1500	651
10	205	509	101	294	205	156	331	950	1490	1870	1330	621
11	205	506	101	297	205	188	399	977	1370	1790	1360	534
12	206	562	101	275	205	210	738	973	1240	1770	1420	482
13	192	536	101	222	205	211	814	922	1320	1760	1450	478
14	184	492	101	174	205	210	881	884	1420	1770	1440	540
15	198	296	101	146	205	261	861	972	2150	2040	1460	582
16	212	217	101	146	205	345	810	1130	3210	2010	1480	565
17	216	219	100	146	205	370	754	1400	3740	1770	1440	495
18	215	223	100	146	205	373	730	1910	2500	1710	1400	440
19	260	225	100	146	204	338	728	2240	4180	1960	1290	421
20	288	182	100	146	204	302	767	1950	3920	2140	1200	377
21	290	98	100	146	205	303	786	1530	3420	1800	1170	319
22	282	98	99	147	204	299	748	1380	3250	1810	1010	257
23	272	98	100	148	205	273	728	1410	3220	2000	1010	238
24	265	98	98	148	173	254	730	1570	3200	2020	996	238
25	266	98	98	147	130	212	729	1770	3120	1940	954	237
26	266	98	98	147	106	157	803	1970	2880	1970	904	254
27	344	98	131	169	107	143	815	2270	2660	1990	891	266
28	367	98	284	204	107	142	518	2540	2620	1590	704	281
29	352	98	278	205	---	142	530	2750	2720	1410	538	266
30	339	98	286	205	---	142	552	2850	2640	1290	503	255
31	332	---	287	204	---	182	---	2880	---	1270	523	---
TOTAL	7822	8427	3850	6619	5326	6441	17372	40674	73370	58370	37283	14300
MEAN	252	281	124	214	190	208	579	1312	2446	1883	1203	477
MAX	367	562	287	297	205	373	881	2880	4180	2470	1820	832
MIN	184	98	98	146	106	106	239	222	1240	1270	503	237
AC-FT	15510	16710	7640	13130	10560	12780	34460	80680	145500	115800	73950	28360

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1993, BY WATER YEAR (WY)

	MEAN	251	151	190	233	292	549	1123	2314	1663	1046	464
MAX	1103	505	553	558	837	718	1389	2564	4219	3204	2716	1040
(WY)	1985	1985	1987	1985	1985	1985	1985	1984	1980	1983	1984	1982
MIN	121	77.0	58.8	55.6	55.9	81.1	125	374	645	428	200	118
(WY)	1979	1979	1980	1980	1979	1978	1978	1978	1977	1977	1977	1977

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1975 - 1993

ANNUAL TOTAL	211851	279854	
ANNUAL MEAN	579	767	a 722
HIGHEST ANNUAL MEAN			1227 1984
LOWEST ANNUAL MEAN			265 1977
HIGHEST DAILY MEAN	1750	Jun 17	b 5640 Jul 8 1983
LOWEST DAILY MEAN	c 98	Nov 21	d 47 Jan 10 1980
ANNUAL SEVEN-DAY MINIMUM	98	Nov 21	e 49 Jan 10 1980
INSTANTANEOUS PEAK FLOW			f 10100 Aug 1 1966
INSTANTANEOUS PEAK STAGE		6.44 Jun 19	9.40 Aug 1 1966
ANNUAL RUNOFF (AC-FT)	420200	555100	523100
10 PERCENT EXCEEDS	1280	2000	1830
50 PERCENT EXCEEDS	395	331	380
90 PERCENT EXCEEDS	122	104	88

a-Average discharge for 8 years (water years 1966-73), 643 ft³/s; 465900 acre-ft/yr, prior to completion of Pueblo Dam.

b-Also the maximum daily discharge for period of record.

c-Also occurred Nov 22 to Dec 8, and Dec 24-26.

d-Minimum daily discharge for period of record, 28 ft³/s, May 11, 1967.

e-Present site and datum, from rating curve extended above 1600 ft³/s, on basis of slope-area measurement of peak flow.

f-From floodmarks.

07099400 ARKANSAS RIVER ABOVE PUEBLO, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1985 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1985 to current year.

WATER TEMPERATURE: December 1985 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Records for daily specific conductance and water temperature are excellent. Daily data not published is either missing or of unacceptable quality. Daily maximum and minimum specific conductance and daily mean water temperature data are available in the district office. Specific conductance data may not be representative of the river at the site during periods of transient hydrologic conditions caused by abrupt flow changes from Pueblo Reservoir.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 814 microsiemens, Nov. 14, 1990; minimum, 223 microsiemens, July 13, 1986.

WATER TEMPERATURE: Maximum, 22.1°C, Aug. 30, 1989, Aug. 31 and Sept. 17, 1991; minimum, 1.4°C, Feb. 7, 8, 1989, and Jan. 22, 1992.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 586 microsiemens, Jan. 21; minimum, 250 microsiemens, July 11.

WATER TEMPERATURE: Maximum, 21.5°C, Aug. 14, 22; minimum, 2.0°C, Dec. 27, and Jan. 12-13.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	482	528	550	559	569	549	522	500	455	274	280	354
2	486	530	550	560	566	547	517	---	445	270	280	364
3	487	531	550	560	568	547	513	---	407	270	279	358
4	486	537	550	560	570	545	512	---	410	269	280	364
5	483	537	550	560	569	542	514	499	412	269	281	371
6	485	535	550	560	568	540	516	504	415	267	282	375
7	487	539	550	561	570	539	---	503	414	269	285	369
8	490	537	550	561	567	541	---	500	413	263	289	365
9	490	536	550	560	567	534	---	499	396	259	295	368
10	490	540	551	560	568	534	---	495	386	259	302	372
11	493	541	551	560	569	536	---	497	356	254	303	369
12	512	540	552	561	562	532	---	501	360	255	305	373
13	511	540	553	565	560	531	---	505	340	254	307	379
14	511	540	553	568	565	532	---	505	348	255	300	375
15	514	546	553	571	563	530	---	503	338	259	304	380
16	513	545	553	571	560	516	---	505	327	259	309	395
17	513	544	553	573	558	528	---	504	330	264	315	401
18	516	545	554	575	551	528	---	504	338	268	321	403
19	513	546	554	576	547	525	---	504	333	270	318	395
20	526	551	556	578	544	527	---	504	326	271	328	399
21	530	552	556	580	544	527	---	505	307	273	328	404
22	534	548	557	581	540	526	498	505	296	276	325	414
23	541	549	556	579	540	526	490	505	282	277	328	420
24	544	550	557	578	542	525	494	504	287	278	334	409
25	540	549	558	578	546	531	497	504	281	279	335	402
26	538	548	558	580	548	535	497	503	282	278	338	402
27	524	548	557	577	546	535	497	501	281	278	340	405
28	529	549	550	573	546	531	500	495	282	279	345	405
29	529	550	555	573	---	531	499	488	272	280	349	407
30	531	549	558	572	---	530	498	484	271	277	356	404
31	530	---	559	572	---	527	---	468	---	279	356	---
MEAN	512	543	553	569	558	533	---	---	346	269	313	387

07099400 ARKANSAS RIVER ABOVE PUEBLO, CO---Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.1	17.1	13.2	12.5	6.5	5.5	2.9	2.5	3.4	2.7	3.5	3.2
2	17.9	17.1	12.9	12.3	6.3	5.5	3.0	2.5	3.4	2.7	4.4	3.0
3	17.9	16.9	12.7	12.1	5.9	5.3	2.9	2.4	3.3	2.7	4.3	3.2
4	18.0	16.9	12.4	11.6	5.7	5.2	2.5	2.2	3.3	2.7	4.4	3.2
5	17.5	16.9	11.7	11.2	5.4	4.7	2.9	2.2	3.4	2.5	4.3	3.2
6	17.3	16.7	11.5	10.7	5.4	4.4	2.9	2.4	3.5	2.7	4.4	3.4
7	16.9	15.7	11.0	10.5	5.2	4.2	3.0	2.5	3.5	2.9	4.6	3.5
8	16.2	15.4	11.1	10.5	5.0	4.2	2.7	2.5	3.2	2.7	5.0	3.7
9	16.6	15.7	10.8	10.3	5.3	4.2	2.7	2.4	3.5	2.9	5.2	4.0
10	16.3	14.7	10.4	9.9	5.0	4.4	2.8	2.2	3.2	3.0	4.9	4.2
11	16.0	14.7	10.3	9.9	5.2	4.2	2.7	2.2	3.5	2.9	4.4	3.9
12	15.9	14.6	10.0	9.5	4.7	4.0	2.8	2.0	3.8	2.7	4.7	3.9
13	15.5	14.6	9.9	9.5	4.5	3.7	2.5	2.0	3.9	3.0	4.7	3.7
14	15.7	14.7	9.8	9.2	4.2	3.4	2.7	2.2	3.2	3.0	4.7	3.9
15	15.3	14.5	9.7	8.9	3.9	3.3	3.0	2.2	3.4	2.7	5.7	4.2
16	14.9	---	9.3	8.7	4.0	3.3	3.0	2.2	3.5	2.7	5.2	4.5
17	15.3	---	9.0	8.4	3.7	2.9	2.7	2.2	3.5	2.7	4.7	4.5
18	14.9	---	8.8	8.2	3.9	2.7	2.7	2.4	3.7	2.7	4.9	4.5
19	14.8	---	8.7	8.2	3.7	2.7	2.8	2.4	3.7	2.5	5.2	4.5
20	14.7	13.7	8.3	7.5	3.5	2.5	3.2	2.4	3.5	2.7	5.4	4.5
21	14.5	13.7	8.5	7.7	3.5	2.5	3.3	2.5	3.6	2.7	5.5	4.7
22	14.5	13.7	8.3	7.7	3.5	2.5	3.4	2.5	3.5	2.7	5.5	4.5
23	14.3	13.6	8.2	7.2	3.2	2.4	3.0	2.4	3.5	2.7	5.7	4.7
24	14.3	13.5	7.7	7.0	3.5	2.5	3.2	2.4	3.9	2.9	6.0	4.7
25	14.4	13.5	7.8	6.7	3.3	2.4	3.2	2.5	3.5	3.0	5.9	4.7
26	14.2	13.5	7.5	6.5	3.2	2.4	3.2	2.5	4.0	3.0	6.0	4.7
27	14.1	13.4	7.2	6.2	3.0	2.0	3.3	2.5	4.2	3.0	5.9	5.0
28	13.9	13.3	7.0	6.2	2.8	2.4	3.2	2.5	4.0	2.9	6.2	5.2
29	13.5	13.2	6.8	5.7	3.0	2.5	3.0	2.7	---	---	5.9	5.2
30	13.7	13.1	6.5	5.5	2.9	2.5	3.3	2.5	---	---	6.2	5.2
31	13.4	12.9	---	---	2.7	2.5	3.3	2.5	---	---	6.2	5.0
MONTH	18.1	---	13.2	5.5	6.5	2.0	3.4	2.0	4.2	2.5	6.2	3.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	6.2	5.0	9.9	8.9	14.2	13.7	17.0	---	19.5	18.9	21.0	20.4
2	6.0	5.4	10.2	9.0	14.4	13.5	17.0	16.5	19.5	19.0	20.5	20.0
3	6.7	5.4	10.3	9.0	14.9	13.9	17.2	16.7	19.5	19.2	20.5	20.0
4	7.0	6.2	10.0	9.0	14.7	14.0	17.0	16.5	19.7	19.2	20.5	19.9
5	7.0	6.0	10.2	9.2	14.9	14.2	17.4	16.7	20.0	19.2	20.2	19.7
6	7.2	6.2	10.2	9.2	14.5	14.0	17.2	16.7	20.0	19.5	20.0	19.5
7	7.0	6.2	10.2	9.2	15.7	14.0	17.2	17.0	20.2	19.5	20.0	19.5
8	7.5	6.5	10.5	9.5	15.2	14.4	17.4	17.0	20.5	19.7	20.0	19.4
9	8.2	6.5	10.4	9.5	15.5	14.5	17.5	17.0	20.5	19.7	20.0	19.4
10	7.7	6.7	10.5	9.7	15.2	14.7	17.7	17.2	20.7	20.0	19.9	19.2
11	7.7	6.7	10.9	9.7	15.2	14.4	17.7	17.0	20.9	20.0	20.0	19.0
12	7.5	6.9	10.7	9.9	14.9	13.0	17.7	17.2	20.7	20.2	20.2	19.2
13	8.0	7.0	10.7	10.0	14.0	13.0	17.9	17.2	21.2	20.4	19.2	18.9
14	8.0	7.0	11.0	10.0	14.4	13.7	17.9	17.4	21.5	20.7	19.5	18.7
15	8.0	7.5	11.0	10.0	14.4	10.7	18.0	17.0	21.2	20.5	19.2	18.2
16	8.2	7.5	11.2	10.4	15.2	11.0	18.0	17.4	21.0	20.7	18.7	17.9
17	8.4	7.5	11.2	10.5	14.2	13.5	18.2	17.5	21.0	20.5	18.7	17.7
18	9.2	7.5	11.0	10.5	14.2	13.4	18.2	17.7	21.2	20.5	18.4	17.7
19	9.7	8.7	12.0	10.9	14.2	13.7	18.2	17.7	21.2	20.5	18.5	17.7
20	9.5	8.7	11.7	11.0	15.4	13.9	18.5	18.0	21.2	20.7	18.7	17.5
21	9.0	8.5	11.7	11.0	15.5	14.7	18.4	18.0	21.2	20.7	18.5	17.5
22	9.2	8.5	12.0	10.7	15.9	15.0	18.5	18.2	21.5	21.0	18.2	17.5
23	10.0	8.5	12.0	10.9	16.0	15.5	18.7	18.2	21.4	20.9	17.7	17.5
24	9.5	9.0	12.2	11.7	16.5	15.5	18.9	18.5	21.4	20.7	18.4	17.5
25	9.7	8.9	12.0	11.5	16.2	15.7	19.0	18.5	21.2	20.7	18.4	17.2
26	9.9	8.7	12.7	11.7	16.2	15.7	19.0	18.5	21.4	20.5	18.0	17.2
27	9.9	9.2	13.0	11.7	16.4	---	19.2	18.5	21.2	20.9	18.2	17.2
28	10.2	9.2	13.5	12.0	16.5	---	19.2	18.5	21.0	20.7	18.0	17.0
29	10.2	9.0	13.4	12.5	16.4	---	19.4	18.7	21.2	20.7	18.0	17.0
30	10.0	9.0	13.5	13.0	16.5	---	19.4	18.7	20.9	20.5	17.7	16.9
31	---	---	14.0	13.2	---	---	19.4	18.7	21.0	20.5	---	---
MONTH	10.2	5.0	14.0	8.9	16.5	---	19.4	---	21.5	18.9	21.0	16.9

07099969 ARKANSAS RIVER AT ST CHARLES MESA DIVERSION AT PUEBLO, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°15'13", long 104°36'20", in SW¹/4NW¹/4 sec.6, T.21 S., R.64 W., Pueblo County, Hydrologic Unit 11020002, on right bank 10 ft upstream from intake of Saint Charles Mesa Water Association, 150 ft downstream from Santa Fe Avenue bridge, and 1.1 mi upstream from Fountain Creek.

DRAINAGE AREA.--4,778 mi².

PERIOD OF RECORD.--October 1988 to current year. Prior to October 1989, published as Arkansas River at Moffat Street at Pueblo (07099970).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1988 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Daily data not published is either missing or of poor quality. Daily maximum and minimum specific conductance data available in the district office. Specific conductance data is not representative of the cross section at the site. Specific conductance data representative of the cross section at the site is published as Arkansas River at Moffat Street at Pueblo (07099970) for water year 1991.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,980 microsiemens Nov. 24, 1988; minimum, 236 microsiemens July 14, 1993.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 978 microsiemens Dec. 21; minimum, 236 microsiemens July 14.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	653	710	830	690	704	---	668	620	518	320	366	480
2	650	690	841	695	704	832	718	684	538	322	368	472
3	657	673	806	685	687	804	709	749	494	323	370	467
4	654	665	778	690	693	743	696	751	499	318	369	479
5	651	693	805	691	702	686	703	716	530	321	376	496
6	660	708	869	706	704	681	692	707	562	324	368	496
7	636	675	844	700	702	681	666	644	550	336	361	500
8	645	680	855	702	710	690	665	630	552	347	353	487
9	655	681	875	699	712	690	662	640	523	349	370	489
10	647	682	819	723	719	681	648	658	509	324	376	493
11	653	688	846	725	717	672	644	698	490	325	391	504
12	669	694	784	704	719	660	572	625	495	318	391	507
13	690	691	830	737	689	664	582	614	475	319	394	492
14	660	672	812	734	699	670	589	618	491	307	384	490
15	673	694	809	750	696	704	651	610	460	322	384	496
16	665	748	776	744	693	637	636	583	372	318	390	505
17	653	718	811	734	686	634	613	605	356	333	398	524
18	657	733	838	741	699	641	617	623	429	340	404	526
19	674	742	813	740	713	674	624	584	378	331	410	527
20	653	743	805	785	714	673	624	610	364	317	428	526
21	667	775	829	765	716	662	618	615	349	354	425	538
22	670	815	852	751	714	665	615	611	344	366	434	554
23	672	815	802	747	692	668	613	602	330	356	432	556
24	679	857	846	743	681	667	575	644	337	345	435	560
25	691	842	805	742	680	663	605	672	334	348	436	589
26	675	845	825	742	711	684	628	608	330	342	433	573
27	668	849	851	742	710	685	601	564	324	339	443	569
28	655	839	721	710	710	684	685	551	326	357	466	563
29	650	794	708	713	---	673	677	522	311	368	492	565
30	667	840	696	712	---	677	657	529	314	373	491	578
31	642	---	688	708	---	690	---	515	---	368	487	---
MEAN	661	742	809	724	703	---	642	626	429	336	407	520

07099970 ARKANSAS RIVER AT MOFFAT STREET, AT PUEBLO, CO

LOCATION.--Lat 38°15'13", long 104°36'20", in SW¹/4NW¹/4 sec.6, T.21 S., R.64 W., Pueblo County, Hydrologic Unit 11020002, on right bank 10 ft upstream from intake of Saint Charles Mesa Water Association, 150 ft downstream from Santa Fe Avenue bridge, and 1.1 mi upstream from Fountain Creek.

DRAINAGE AREA.--4,778 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1988 to current year.

REVISED RECORDS: WDR CO-90-1: 1989(M).

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 4,653 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 12-15, Feb. 19 to Mar. 10. Records good except for July 29 to Aug. 31, and estimated daily discharges, which are fair. Records do not include diversion for municipal supply of Saint Charles Mesa Water Association. Natural flow of stream affected by storage reservoirs, power developments, transbasin and transmountain diversions, and diversions for irrigation and municipal use. Flow almost completely regulated by Pueblo Reservoir.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	257	58	223	147	52	189	561	3030	2750	1250	608
2	134	252	59	226	146	52	226	377	2610	2560	1300	712
3	138	257	60	228	148	52	272	178	2520	2510	1350	732
4	151	281	64	229	150	74	272	187	2480	2520	1380	629
5	164	286	56	227	150	102	243	204	1970	2450	1350	498
6	168	316	57	227	150	102	224	213	1460	2340	1570	475
7	187	373	56	229	149	104	221	450	1300	2120	1780	489
8	170	365	57	230	150	104	227	443	1230	1720	1990	559
9	153	402	57	234	150	104	234	411	1400	1550	1630	545
10	142	442	54	232	152	104	255	904	1490	1940	1400	533
11	142	449	57	231	153	133	276	975	1270	1860	1610	439
12	132	482	56	214	151	161	678	957	1080	1860	1630	379
13	133	478	58	152	151	160	758	929	1130	1870	1700	384
14	120	427	54	111	151	160	832	823	1310	1910	1680	447
15	131	281	50	105	153	185	819	945	2010	2140	1690	502
16	152	163	54	105	150	276	781	1210	3320	2090	1700	486
17	157	155	49	104	150	312	702	1610	4170	1910	1650	398
18	154	153	49	104	151	312	668	2160	2840	1800	1580	353
19	178	157	50	107	150	291	680	2560	4640	2010	1520	353
20	207	145	51	105	150	248	710	2290	4660	2260	1300	363
21	207	97	52	101	151	246	740	1800	3940	1950	1290	291
22	191	75	50	100	150	248	711	1510	3690	1890	1000	214
23	189	71	50	103	151	234	680	1540	3630	2100	973	200
24	187	59	49	104	119	200	744	1730	3620	2130	943	187
25	187	62	52	102	76	182	721	1970	3530	2070	888	154
26	188	61	53	105	52	134	762	2160	3270	2060	824	159
27	241	61	51	111	53	120	912	2450	3010	2140	823	170
28	294	60	214	147	53	122	476	2810	2900	1670	693	170
29	275	57	218	149	---	126	495	3120	3020	1450	484	171
30	263	57	220	147	---	130	505	3280	2930	1270	467	156
31	312	---	222	147	---	146	---	3280	---	1240	447	---
TOTAL	5558	6781	2337	4939	3807	4976	16013	44037	79460	62140	39892	11756
MEAN	179	226	75.4	159	136	161	534	1421	2649	2005	1287	392
MAX	312	482	222	234	153	312	912	3280	4660	2750	1990	732
MIN	111	57	49	100	52	52	189	178	1080	1240	447	154
AC-FT	11020	13450	4640	9800	7550	9870	31760	87350	157600	123300	79130	23320

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1993, BY WATER YEAR (WY)

	MEAN	202	166	41.3	93.5	159	236	401	878	1754	1472	889	313
MAX	375	265	75.4	161	178	409	574	1421	2649	2005	1287	522	
(WY)	1991	1991	1993	1991	1990	1989	1989	1993	1993	1993	1993	1992	
MIN	125	87.9	16.1	16.7	136	159	217	491	970	970	545	134	
(WY)	1990	1989	1990	1989	1993	1990	1991	1989	1989	1992	1990	1989	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1989 - 1993

ANNUAL TOTAL	185212					281696							
ANNUAL MEAN	506					772				552			
HIGHEST ANNUAL MEAN										772		1993	
LOWEST ANNUAL MEAN										444		1990	
HIGHEST DAILY MEAN	1910	Aug 26				4660	Jun 20			4660	Jun 20	1993	
LOWEST DAILY MEAN	^a 49	Dec 17				^a 49	Dec 17			3.6	Dec 12	1989	
ANNUAL SEVEN-DAY MINIMUM	50	Dec 17				50	Dec 17			^b 8.2	Dec 11	1989	
INSTANTANEOUS PEAK FLOW						^b 5350	Jun 19			^b 5350	Jun 19	1993	
INSTANTANEOUS PEAK STAGE						12.12	Jun 19			12.12	Jun 19	1993	
ANNUAL RUNOFF (AC-FT)	367400					558700				400000			
10 PERCENT EXCEEDS	1220					2140				1580			
50 PERCENT EXCEEDS	327					257				254			
90 PERCENT EXCEEDS	70					61				37			

a-Also occurred Dec 18 and 24.

b-From rating curve extended above 3900 ft³/s.

WATER-QUALITY RECORDS

WATER TEMPERATURE: October 1988 to current year.

WATER TEMPERATURE: Maximum, 26.3°C, Aug. 31, 1990; minimum, 0.0°C, on many days during winter.

WATER TEMPERATURE: Maximum, 24.2°C, Aug. 25; minimum, 0.0°C, Jan. 10-11, 13.

[illegible]

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.4	14.1	13.3	10.9	6.7	2.9	3.7	2.0	5.9	1.7	5.6	3.5
2	20.2	13.9	12.2	10.0	6.1	2.9	4.2	1.9	5.6	1.5	7.4	2.0
3	19.7	13.9	11.2	9.4	4.4	2.9	3.9	1.6	5.2	2.4	9.3	4.3
4	19.8	13.8	11.9	9.1	3.8	2.1	3.2	.8	4.7	2.5	9.2	3.4
5	19.4	14.7	11.0	8.6	3.0	1.4	3.1	.4	5.6	.9	7.9	1.6
6	18.0	14.7	11.7	8.6	4.9	1.0	3.1	.5	6.0	.8	7.5	2.6
7	16.2	11.1	11.9	8.3	4.6	.9	3.4	.8	5.4	1.8	9.8	2.8
8	16.7	11.1	11.8	8.4	4.9	1.7	2.1	1.2	4.2	2.1	9.7	3.6
9	17.1	12.5	11.5	8.5	6.6	2.4	2.2	.5	5.5	2.4	10.7	3.8
10	17.3	11.9	10.8	8.8	5.9	3.0	1.7	.0	4.6	2.6	7.8	4.1
11	18.3	12.3	10.8	8.2	6.3	2.5	2.8	.0	5.6	1.8	5.8	2.2
12	18.0	12.6	10.0	7.9	4.5	2.6	2.7	.4	6.0	1.0	4.9	1.5
13	17.9	12.7	10.7	7.9	3.5	1.2	1.6	.0	5.5	1.4	7.5	1.0
14	15.9	12.2	11.0	7.7	3.3	.9	2.6	.2	3.8	1.2	8.8	2.0
15	16.0	11.4	11.4	7.6	3.1	.6	4.3	.2	3.2	.8	9.7	3.9
16	13.7	10.9	10.3	6.9	4.1	1.6	5.2	1.2	2.1	.1	9.0	3.8
17	15.9	10.5	10.1	7.0	2.6	.7	3.4	1.4	3.1	.1	5.6	3.8
18	15.5	10.9	10.0	7.6	3.5	.4	3.1	1.1	5.3	.1	7.2	3.9
19	15.5	11.5	9.1	7.0	3.7	1.0	3.2	.8	8.3	2.7	10.2	3.4
20	16.4	11.6	7.8	4.3	2.9	.5	5.0	1.1	8.0	3.2	9.0	3.8
21	16.2	11.6	7.0	4.3	4.0	.7	6.6	2.4	6.2	1.7	8.9	4.4
22	16.4	12.1	6.4	3.7	3.9	.7	5.7	1.2	6.0	1.0	10.2	4.3
23	16.4	12.0	6.2	2.8	3.7	.6	4.2	1.0	6.1	1.3	11.1	3.9
24	16.0	11.7	4.7	1.9	4.7	1.0	3.3	.1	7.4	1.7	11.6	4.2
25	16.4	12.3	5.8	2.7	4.7	1.4	4.2	.3	5.1	2.5	11.9	4.2
26	15.7	12.1	6.2	2.2	4.2	.6	5.2	1.1	6.9	2.0	10.4	4.9
27	15.6	11.1	6.5	2.4	4.7	.8	5.5	1.3	7.8	1.5	9.4	6.8
28	14.0	12.1	5.8	2.0	3.6	1.4	4.9	1.1	7.4	2.3	12.1	5.6
29	12.7	11.3	6.2	3.2	4.1	1.7	4.2	2.2	---	---	9.9	6.5
30	14.4	11.7	5.4	1.4	4.0	2.5	5.4	1.3	---	---	9.4	6.1
31	13.1	10.5	---	---	3.0	1.7	5.7	1.1	---	---	11.7	5.6
MONTH	20.4	10.5	13.3	1.4	6.7	.4	6.6	.0	8.3	.1	12.1	1.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	11.7	5.2	11.6	7.8	15.8	14.0	19.3	16.5	22.2	18.5	23.4	18.7
2	10.6	5.0	15.7	8.2	16.6	13.6	19.5	16.5	22.6	18.8	21.2	18.7
3	7.0	5.8	17.3	8.6	16.8	14.3	19.2	16.6	20.0	18.8	23.0	18.2
4	11.2	5.4	15.0	9.4	16.1	14.1	18.7	16.2	22.0	18.8	23.3	18.3
5	12.2	6.3	15.3	9.7	17.4	14.5	19.6	16.7	22.7	18.8	21.8	18.1
6	10.4	6.8	16.1	9.2	17.5	14.0	19.6	16.5	22.4	18.9	20.9	18.0
7	9.4	5.2	13.6	9.3	17.8	13.3	20.0	16.9	22.4	19.1	21.2	17.7
8	12.8	5.3	15.4	9.1	18.4	13.7	20.6	16.9	22.3	19.4	22.6	17.5
9	13.1	5.9	14.7	9.2	17.7	14.4	19.7	16.7	22.9	19.4	22.2	17.5
10	13.0	6.6	14.3	9.1	18.4	14.4	20.6	17.1	23.5	19.8	22.3	17.8
11	12.6	6.2	13.8	9.4	18.9	14.5	19.5	16.9	23.6	19.6	22.9	17.6
12	11.5	6.7	14.0	10.2	18.9	14.4	20.6	17.3	23.3	19.8	23.0	17.4
13	11.2	6.9	15.1	9.9	18.4	14.3	20.7	17.1	21.9	19.8	19.4	15.8
14	10.3	6.9	13.7	9.9	18.7	15.0	20.5	17.5	22.1	19.6	21.1	15.6
15	11.2	6.9	15.1	10.1	18.1	15.1	20.5	17.0	23.6	20.1	21.6	16.0
16	10.2	7.0	13.0	11.0	17.3	15.3	20.4	17.3	23.3	19.9	21.1	16.5
17	12.5	7.2	12.7	10.8	17.1	15.5	20.3	17.4	23.0	19.9	21.2	16.1
18	13.0	7.1	13.6	10.8	16.3	15.6	20.9	18.0	22.7	20.2	20.0	16.5
19	12.3	7.8	13.9	10.8	17.5	15.6	20.7	17.6	22.5	20.3	20.4	15.4
20	12.9	7.8	14.5	11.2	17.9	15.8	20.6	18.0	23.0	20.1	21.1	15.4
21	13.1	7.6	14.0	11.1	17.7	15.7	21.1	17.8	23.5	20.3	21.4	15.2
22	13.2	8.0	14.9	11.0	17.8	15.8	21.2	17.9	22.4	19.9	19.3	15.6
23	14.2	8.5	15.3	11.0	18.1	15.8	20.8	18.1	24.0	19.4	17.7	15.5
24	11.8	9.2	13.5	11.8	18.2	15.6	21.0	18.2	24.0	19.6	20.6	15.7
25	14.1	8.4	14.1	12.1	18.2	15.8	21.2	18.2	24.2	19.6	20.5	14.7
26	14.3	8.4	15.2	12.0	18.6	16.1	21.2	18.6	23.3	19.5	20.1	14.3
27	14.1	9.1	14.5	12.0	18.8	16.3	21.1	18.2	21.0	20.0	20.5	13.9
28	15.3	9.6	15.0	12.0	18.3	16.2	21.9	18.3	22.3	20.0	19.6	14.0
29	15.5	9.1	14.9	12.6	18.8	16.4	22.5	18.4	24.1	19.2	19.9	14.4
30	14.1	9.1	15.6	13.2	18.8	16.3	22.5	18.5	20.5	18.3	19.8	14.2
31	---	---	16.1	13.4	---	---	22.7	18.4	23.2	17.8	---	---
MONTH	15.5	5.0	17.3	7.8	18.9	13.3	22.7	16.2	24.2	17.8	23.4	13.9
YEAR	24.2	.0										

07103700 FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO

LOCATION.--Lat 38°51'17", long 104°52'39", in SE1/4SW1/4 sec.3, T.14 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on left bank 200 ft upstream from diversion to city of Colorado Springs, 0.5 mi east of bridge on U.S. Highway 24 near west city limits of Colorado Springs, and 1.0 mi downstream from Sutherland Creek.

DRAINAGE AREA.--103 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1958 to current year.

GAGE.--Water-stage recorder with satellite telemetry, and v-notch weir. Elevation of gage is 6,110 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Water year 1992, Jan. 28 to Feb. 4, and Apr. 2. Estimated daily discharges: Water year 1993, Dec. 14-16, 20, Jan. 5, 25, and Feb. 17. Records for water year 1992 are fair except for estimated daily discharges, which are poor. Records for water year 1993 are poor. Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation and municipal use, and at times, transbasin diversion from Beaver Creek drainage and transmountain diversions from Colorado River basin.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	8.5	8.1	10	8.3	12	12	21	19	24	8.5	19
2	8.9	7.3	9.4	9.9	8.2	12	13	21	18	22	7.5	19
3	8.8	6.7	10	10	8.2	12	13	21	17	24	11	18
4	8.5	11	13	11	8.2	14	14	20	16	23	9.7	18
5	9.2	12	15	10	9.4	13	16	21	15	21	8.1	17
6	9.0	12	13	10	9.2	11	16	18	15	20	8.5	18
7	9.1	12	12	11	8.8	11	15	18	15	19	8.0	17
8	8.6	11	12	9.1	8.9	11	13	17	17	18	6.2	19
9	8.3	11	12	9.0	7.8	7.5	14	19	16	14	7.8	17
10	8.4	12	11	9.1	7.5	7.6	16	21	16	13	12	19
11	8.5	12	12	9.3	8.1	8.1	17	19	16	12	16	18
12	8.5	11	12	9.4	8.3	8.2	18	22	15	11	17	17
13	31	10	9.8	8.3	7.4	8.4	17	21	14	12	19	16
14	39	10	8.0	7.8	7.5	8.8	20	18	14	11	16	16
15	7.9	11	10	6.5	7.2	9.2	26	17	17	11	14	16
16	8.4	14	11	10	7.1	9.4	33	14	16	12	14	16
17	8.2	14	11	10	7.2	9.8	35	12	14	15	16	16
18	7.5	15	11	9.0	7.9	9.9	37	12	13	12	14	15
19	7.9	14	10	8.8	8.4	10	35	13	19	12	12	20
20	7.8	11	10	9.0	8.1	10	29	18	16	13	12	21
21	8.5	11	9.8	9.0	8.7	10	26	9.5	16	13	12	15
22	7.9	10	9.8	8.6	8.8	11	25	11	15	12	11	10
23	7.9	7.2	9.6	8.8	8.8	11	25	14	19	12	11	7.8
24	8.9	10	9.0	9.2	8.7	11	24	12	19	11	65	7.7
25	9.2	11	9.3	8.4	8.5	11	24	12	26	16	40	7.2
26	8.0	12	8.6	8.5	7.9	12	23	17	20	15	29	7.1
27	8.1	12	8.1	8.4	7.7	12	22	28	36	12	23	6.7
28	9.0	12	7.7	8.4	10	12	21	18	25	10	21	6.7
29	7.9	12	9.4	8.4	12	12	21	15	25	10	19	6.7
30	8.2	8.7	9.2	8.3	---	12	21	14	25	9.6	21	6.7
31	9.3	---	9.6	8.3	---	12	---	16	---	9.6	20	---
TOTAL	315.7	331.4	320.4	281.5	242.8	328.9	641	529.5	544	449.2	509.3	433.6
MEAN	10.2	11.0	10.3	9.08	8.37	10.6	21.4	17.1	18.1	14.5	16.4	14.5
MAX	39	15	15	11	12	14	37	28	36	24	65	21
MIN	7.5	6.7	7.7	6.5	7.1	7.5	12	9.5	13	9.6	6.2	6.7
AC-FT	626	657	636	558	482	652	1270	1050	1080	891	1010	860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1992, BY WATER YEAR (WY)

	MEAN	12.4	10.3	8.21	7.79	7.39	8.76	12.9	26.9	25.4	18.8	17.9	13.2
MAX	44.0	34.6	18.8	18.5	13.6	15.2	33.4	172	127	100	60.9	34.0	
(WY)	1985	1985	1985	1985	1986	1985	1985	1980	1983	1983	1965	1983	
MIN	5.29	4.98	4.14	4.46	4.44	4.91	5.90	6.37	6.69	6.48	5.48	5.00	
(WY)	1979	1965	1990	1990	1972	1965	1963	1989	1989	1964	1974	1978	

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1958 - 1992
ANNUAL TOTAL	4459.7	4927.3	
ANNUAL MEAN	12.2	13.5	14.1
HIGHEST ANNUAL MEAN			38.6
LOWEST ANNUAL MEAN			7.29
HIGHEST DAILY MEAN	88	65	267
LOWEST DAILY MEAN	4.7	6.2	2.0
ANNUAL SEVEN-DAY MINIMUM	5.0	7.0	3.0
INSTANTANEOUS PEAK FLOW		a299	b2630
INSTANTANEOUS PEAK STAGE		4.04	5.27
ANNUAL RUNOFF (AC-FT)	8850	9770	10210
10 PERCENT EXCEEDS	23	21	25
50 PERCENT EXCEEDS	9.2	12	9.4
90 PERCENT EXCEEDS	5.6	8.0	5.4

a-From rating curve extended above 175 ft³/s, on basis of slope-area measurements of peak flow at gage heights, 4.00 ft, 4.25 ft, and 6.15 ft.

b-From rating curve extended above 190 ft³/s, on basis of slope-area measurements of peak flow at gage heights, 3.87 ft, 4.52 ft, and 5.27 ft.

07103700 FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1974 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT 24...	1010	9.8	336	8.2	6.5	9.4	>6.6	K9300	8400	38	7.2
NOV 21...	0955	12	286	8.2	3.0	10.6	0.8	K300	K300	31	5.8
DEC 12...	1105	12	346	8.3	2.5	11.1	1.0	460	280	30	5.7
JAN 09...	1040	7.6	339	8.2	0.0	11.6	1.0	K32	K40	38	6.8
FEB 20...	1005	9.1	304	8.4	2.5	11.0	1.0	4600	100	33	6.2
MAR 26...	0950	12	302	8.1	4.5	10.3	0.9	360	K50	35	6.7
APR 16...	1050	26	183	8.3	7.5	9.4	1.8	K9300	270	21	3.6
MAY 14...	0945	18	230	8.2	9.5	9.2	1.0	K1900	380	25	4.7
JUN 04...	1000	16	267	8.2	10.0	8.7	1.9	5700	1200	28	5.3
JUL 09...	0935	15	230	8.1	13.5	8.6	0.5	K420	520	26	4.7
AUG 20...	1020	12	250	8.4	14.0	7.9	0.3	380	660	28	5.2
SEP 17...	0720	15	237	8.2	11.0	7.9	0.4	270	K430	25	4.5

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)
OCT 24...	130	16	19	2.5	6	0.02	0.87	0.17	0.60	0.06
NOV 21...	102	14	16	2.6	3	<0.01	0.77	0.04	<0.20	0.01
DEC 12...	105	14	34	2.6	3	0.01	0.08	0.01	<0.20	<0.01
JAN 09...	125	16	19	2.6	5	0.01	0.91	<0.01	<0.20	0.01
FEB 20...	110	14	16	2.5	9	<0.01	0.91	<0.01	<0.20	<0.01
MAR 26...	103	18	21	2.5	6	<0.01	0.88	0.07	<0.20	0.03
APR 16...	64	11	9.6	2.5	179	<0.01	0.46	0.01	0.70	0.01
MAY 14...	82	12	14	2.7	16	0.02	0.57	0.04	<0.20	0.03
JUN 04...	91	12	15	2.4	132	0.03	0.69	0.04	<0.20	0.08
JUL 09...	84	10	11	2.8	24	<0.01	0.54	0.02	<0.20	0.02
AUG 20...	95	12	14	2.6	10	<0.01	0.61	0.01	<0.20	0.02
SEP 17...	84	9.1	13	2.0	13	<0.01	0.47	<0.01	<0.20	<0.01

K-Based on non-ideal colony counts.

07103700 FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 24...	<1	<1	6	7	<1	7	3	720	60
NOV 21...	<1	<1	2	<1	<1	<1	<1	590	21
DEC 12...	<1	<1	<1	<1	<1	6	2	400	18
JAN 09...	<1	<1	<1	<1	<1	2	1	220	59
FEB 20...	<1	<1	1	<1	<1	<1	<1	290	19
MAR 26...	<1	<1	<1	<1	<1	2	<1	370	29
APR 16...	<1	<1	2	<1	<1	<1	<1	7800	38
MAY 14...	<1	<1	<1	<1	<1	<1	<1	720	44
JUN 04...	<1	<1	<1	<1	<1	4	<1	3500	26
JUL 09...	<1	<1	<1	<1	<1	1	<1	760	47
AUG 20...	<1	<1	1	<1	<1	2	<1	760	30
SEP 17...	<1	<1	<1	<1	<1	1	1	2400	58

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS 2N)	ZINC, DIS- SOLVED (UG/L AS 2N)
OCT 24...	5	<1	110	47	3	2	40	<3
NOV 21...	<1	<1	90	33	2	<1	10	7
DEC 12...	4	<1	70	42	<1	<1	20	<3
JAN 09...	2	<1	50	42	<1	<1	40	14
FEB 20...	<1	<1	60	30	<1	<1	<10	<3
MAR 26...	1	<1	90	48	<1	<1	<10	7
APR 16...	17	<1	380	47	3	<1	60	6
MAY 14...	2	<1	90	28	<1	1	20	<3
JUN 04...	8	<1	180	28	1	<1	30	<3
JUL 09...	2	<1	90	27	<1	<1	<10	12
AUG 20...	2	<1	60	19	<1	<1	20	4
SEP 17...	1	<1	50	20	3	<1	<10	<3

07103700 FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT				
02...	1215	8.8	296	11.5
NOV				
14...	1315	10	296	6.0
DEC				
17...	1605	13	306	2.0
JAN				
22...	1245	9.3	317	0.5
FEB				
04...	1630	8.2	329	2.0
28...	1030	9.4	304	4.0
MAR				
05...	1255	13	309	6.0
10...	1000	5.9	442	1.0
APR				
03...	1145	13	290	9.5
30...	1400	22	219	14.0
MAY				
07...	1030	18	242	10.0
JUN				
03...	1545	18	--	--
04...	0920	16	250	10.0
29...	1305	25	--	--
AUG				
24...	1410	80	--	--
SEP				
10...	0738	19	220	9.0

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
24...	1010	9.8	23	0.61	--
NOV					
21...	0955	12	25	0.81	--
DEC					
12...	1105	12	21	0.68	--
JAN					
09...	1040	7.6	8	0.16	--
FEB					
20...	1005	9.1	12	0.29	--
MAR					
26...	0950	12	9	0.29	--
APR					
16...	1050	26	164	12	--
MAY					
14...	0945	18	41	2.0	--
JUN					
03...	1545	18	1030	50	98
04...	1000	16	201	8.7	78
29...	1305	25	138	9.3	--
JUL					
09...	0935	15	61	2.5	--
AUG					
20...	1020	12	27	0.87	78
24...	1410	80	1760	380	70
SEP					
17...	0720	15	17	0.69	--

07103700 FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT								
15...	0750	7.2	382	8.3	6.0	9.5	0.6	83
NOV								
12...	0940	18	211	8.2	1.0	10.4	0.3	39
DEC								
17...	0915	2.1	226	8.4	0.0	11.6	0.5	K8
JAN								
28...	0855	8.8	291	8.3	0.0	11.0	<0.5	64
FEB								
18...	0830	11	313	8.1	0.0	11.4	0.3	23
MAR								
25...	0730	7.2	418	8.4	3.5	10.4	0.5	100
APR								
29...	0715	8.2	386	8.2	6.5	9.6	0.6	K120
MAY								
20...	0710	9.4	346	8.2	9.0	8.8	1.2	K710
JUN								
10...	0735	7.2	395	8.4	9.0	8.6	0.8	K690
JUL								
29...	0800	15	252	8.3	14.0	7.9	0.9	>400
AUG								
26...	0740	9.4	306	8.4	14.0	7.9	1.4	1500
SEP								
23...	0750	4.6	440	8.5	10.5	9.2	0.8	550

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT							
15...	370	43	8.3	146	17	20	2.6
NOV							
12...	190	21	3.8	72	9.0	10	2.9
DEC							
17...	--	24	4.7	82	9.7	11	2.7
JAN							
28...	150	31	6.0	105	13	15	2.8
FEB							
18...	58	31	6.2	105	14	16	2.9
MAR							
25...	170	43	8.6	154	19	24	2.6
APR							
29...	280	43	8.6	137	17	21	2.6
MAY							
20...	650	36	7.4	128	15	18	2.6
JUN							
10...	640	43	8.6	149	17	24	2.6
JUL							
29...	K1400	29	5.6	95	13	10	1.6
AUG							
26...	K4700	35	6.8	120	13	14	2.2
SEP							
23...	730	50	10	151	19	23	2.6

K- Based on non-ideal colony counts.

07103700 FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 15...	<0.01	--	0.74	--	0.01	--	<0.2	<0.01	--
NOV 12...	<0.01	--	0.49	--	0.02	--	<0.2	<0.01	--
DEC 17...	0.02	--	0.58	--	0.02	--	<0.2	0.01	--
JAN 28...	--	<0.01	0.77	0.77	--	<0.01	<0.2	--	<0.01
FEB 18...	--	0.01	0.97	0.97	--	<0.01	<0.2	--	<0.01
MAR 25...	--	<0.01	0.99	0.99	--	<0.01	<0.2	--	<0.01
APR 29...	--	<0.01	0.77	0.77	--	0.03	<0.2	--	<0.01
MAY 20...	--	<0.01	0.82	0.82	--	0.04	<0.2	--	<0.01
JUN 10...	--	<0.01	0.95	0.95	--	0.04	<0.2	--	0.01
JUL 29...	--	<0.01	0.51	0.51	--	0.03	<0.2	--	0.01
AUG 26...	--	<0.01	0.65	0.650	--	0.02	<0.2	--	0.01
SEP 23...	--	<0.01	0.98	0.980	--	0.02	<0.2	--	0.02

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 15...	<1	<1	1	<1	<1	<1	1	310	100
NOV 12...	<1	<1	<1	<1	<1	<1	<1	340	47
DEC 17...	<1	<1	<1	<1	<1	<1	<1	210	48
JAN 28...	<1	<1	2	<1	<1	<1	<1	190	190
FEB 18...	<1	<1	<1	<1	<1	<1	<1	170	16
MAR 25...	<1	<1	<1	3	<1	<1	<1	200	31
APR 29...	<1	<1	<1	<1	<1	1	<1	380	58
MAY 20...	<1	<1	<1	<1	<1	3	1	2300	49
JUN 10...	<1	<1	<1	<1	<1	1	<1	630	25
JUL 29...	<1	<1	<1	<1	<1	2	<1	1300	43
AUG 26...	<1	<1	<1	<1	<1	2	<1	4300	41
SEP 23...	<1	<1	<1	<1	<1	1	<1	530	34

07103700 FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 15...	<1	<1	50	39	<1	<1	<10	4
NOV 12...	<1	<1	60	26	<1	<1	<10	7
DEC 17...	<1	<1	50	31	<1	<1	30	6
JAN 28...	<1	<1	50	37	1	<1	<10	4
FEB 18...	<1	<1	40	29	1	<1	30	5
MAR 25...	<1	<1	60	43	2	<1	<10	<3
APR 29...	<1	<1	70	38	<1	<1	<10	<3
MAY 20...	5	<1	180	41	1	<1	20	<3
JUN 10...	2	<1	80	33	1	<1	10	4
JUL 29...	3	<1	120	16	2	<1	20	<3
AUG 26...	9	<1	280	17	1	<1	40	3
SEP 23...	1	<1	70	40	<1	<1	10	<3

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 02...	1020	6.2	397	9.0	JUN 16...	0700	5.6	526	7.0
MAR 11...	0748	10	283	1.5	JUL 23...	0815	11	274	13.0
APR 13...	1410	8.3	387	11.0	AUG 13...	0725	5.9	342	15.0
MAY 06...	0800	8.1	390	7.0	SEP 09...	0855	7.2	351	11.0
26...	0650	9.2	332	10.5					

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
NOV 12...	0940	18	10	0.47
DEC 17...	0915	11	10	0.29
JAN 28...	0855	8.8	7	0.17
FEB 18...	0830	11	11	0.33
MAR 25...	0730	7.2	6	0.11
APR 29...	0715	8.2	12	0.27
MAY 20...	0710	9.4	82	2.1
JUN 10...	0735	7.2	34	0.66
JUL 29...	0800	15	118	4.8
SEP 23...	0750	4.6	17	0.21

07103703 CAMP CREEK AT GARDEN OF THE GODS, CO

LOCATION.--Lat 38°52'37", long 104°52'20", in SE1/4NE1/4 sec.34, T.13 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on right bank, 70 ft downstream from county road bridge at east entrance to Garden of the Gods Park, and 1.9 mi upstream from mouth.

DRAINAGE AREA.--9.45 mi².

PERIOD OF RECORD.--April 1992 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,310 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Water year 1992, Aug. 8-10. No estimated daily discharges during water year 1993. Records for water year 1992 are poor. Records for water year 1993 are fair. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period April to September, 2.8 ft³/s at 2030 June 5, gage height, 2.74 ft; no flow many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	2.5	.70	.79	.04	.20
2	---	---	---	---	---	---	---	2.4	.76	.67	.04	.17
3	---	---	---	---	---	---	---	2.1	2.1	.53	.04	.16
4	---	---	---	---	---	---	---	1.9	2.5	.46	.04	.14
5	---	---	---	---	---	---	---	1.8	2.6	.43	.04	.15
6	---	---	---	---	---	---	---	1.6	2.7	.40	.04	.15
7	---	---	---	---	---	---	---	1.4	2.3	.39	.03	.14
8	---	---	---	---	---	---	---	1.2	2.1	.38	.03	.14
9	---	---	---	---	---	---	---	1.0	2.1	.36	.02	.13
10	---	---	---	---	---	---	---	.78	2.1	.31	.02	.13
11	---	---	---	---	---	---	---	.57	2.0	.23	.02	.23
12	---	---	---	---	---	---	---	.46	1.8	.19	.02	.33
13	---	---	---	---	---	---	---	.45	1.7	.16	.02	.30
14	---	---	---	---	---	---	---	.48	1.5	.13	.01	.28
15	---	---	---	---	---	---	---	.46	1.4	.13	.00	.26
16	---	---	---	---	---	---	---	.42	1.2	.12	.00	.24
17	---	---	---	---	---	---	---	.36	1.0	.12	.00	.21
18	---	---	---	---	---	---	---	.32	.81	.10	.00	.20
19	---	---	---	---	---	---	---	.29	.65	.08	.00	.19
20	---	---	---	---	---	---	---	.26	.57	.10	.00	.17
21	---	---	---	---	---	---	---	.23	.73	.09	.00	.15
22	---	---	---	---	---	---	---	.19	.78	.08	.00	.13
23	---	---	---	---	---	---	---	.18	.74	.07	.00	.12
24	---	---	---	---	---	---	---	.19	.70	.06	.09	.09
25	---	---	---	---	---	---	---	.20	.71	.07	.00	.06
26	---	---	---	---	---	---	---	.23	.67	.06	.00	.04
27	---	---	---	---	---	---	---	.25	.92	.05	.20	.02
28	---	---	---	---	---	---	---	.22	1.1	.05	.35	.01
29	---	---	---	---	---	---	---	.22	1.1	.06	.29	.01
30	---	---	---	---	---	---	2.6	.34	1.0	.05	.26	.00
31	---	---	---	---	---	---	---	.61	---	.04	.22	---
TOTAL	---	---	---	---	---	---	---	23.61	41.04	6.76	1.82	4.55
MEAN	---	---	---	---	---	---	---	.76	1.37	.22	.059	.15
MAX	---	---	---	---	---	---	---	2.5	2.7	.79	.35	.33
MIN	---	---	---	---	---	---	---	.18	.57	.04	.00	.00
AC-FT	---	---	---	---	---	---	---	47	81	13	3.6	9.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1992, BY WATER YEAR (WY)

MEAN	---	---	---	---	---	---	---	.76	1.37	.22	.059	.15
MAX	---	---	---	---	---	---	---	.76	1.37	.22	.059	.15
(WY)	---	---	---	---	---	---	---	1992	1992	1992	1992	1992
MIN	---	---	---	---	---	---	---	.76	1.37	.22	.059	.15
(WY)	---	---	---	---	---	---	---	1992	1992	1992	1992	1992

07103703 CAMP CREEK AT GARDEN OF THE GODS, CO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	1.1	.16	.06	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	1.1	.15	.07	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	1.0	.14	.05	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.93	.13	.05	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.84	.13	.03	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.80	.13	.02	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.79	.13	.01	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.81	.12	.02	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.77	.12	.04	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.69	.11	.02	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.60	.11	.01	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.53	.10	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.48	.10	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.39	.10	.00	.00	.00	.00
15	.00	.00	.02	.00	.00	.00	.35	.10	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.43	.10	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.55	.10	.01	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.56	.09	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.48	.09	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.41	.09	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.35	.09	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.35	.09	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.35	.08	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.31	.09	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.25	.09	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.03	.21	.08	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.47	.18	.08	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.81	.16	.09	.00	.00	.00	.00
29	.00	.00	.00	.00	---	1.0	.16	.08	.00	.00	.00	.00
30	.00	.00	.00	.00	---	1.1	.15	.07	.00	.00	.00	.00
31	.00	---	.00	.00	---	1.1	---	.07	---	.00	.00	---
TOTAL	0.00	0.00	0.02	0.00	0.00	4.51	16.08	3.21	0.39	0.00	0.00	0.00
MEAN	.000	.000	.001	.000	.000	.15	.54	.10	.013	.000	.000	.000
MAX	.00	.00	.02	.00	.00	1.1	1.1	.16	.07	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.15	.07	.00	.00	.00	.00
AC-FT	.00	.00	.04	.00	.00	8.9	32	6.4	.8	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1993, BY WATER YEAR (WY)

MEAN	.000	.000	.001	.000	.000	.15	.54	.43	.69	.11	.029	.076
MAX	.000	.000	.001	.000	.000	.15	.54	.76	1.37	.22	.059	.15
(WY)	1993	1993	1993	1993	1993	1993	1993	1992	1992	1992	1992	1992
MIN	.000	.000	.001	.000	.000	.15	.54	.10	.013	.000	.000	.000
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993

SUMMARY STATISTICS

FOR 1993 WATER YEAR

WATER YEARS 1992 - 1993

ANNUAL TOTAL	24.21		
ANNUAL MEAN	.066		
HIGHEST ANNUAL MEAN			.066 1993
LOWEST ANNUAL MEAN			.066 1993
HIGHEST DAILY MEAN	1.1	Mar 30	2.7 Jun 6 1992
LOWEST DAILY MEAN	a .00	Oct 1	a .00 Aug 15 1992
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 1	.00 Aug 15 1992
INSTANTANEOUS PEAK FLOW	1.2	Mar 29	2.8 Jun 5 1992
INSTANTANEOUS PEAK STAGE	2.57	Mar 29	2.74 Jun 5 1992
ANNUAL RUNOFF (AC-FT)	48		48
10 PERCENT EXCEEDS	.15		.70
50 PERCENT EXCEEDS	.00		.00
90 PERCENT EXCEEDS	.00		.00

a-No flow most of time most years.

07103747 MONUMENT CREEK AT PALMER LAKE, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 39°06'07", long 104°53'27", in SE¹/4SE¹/4 sec.9, T.11 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on left bank 0.9 mi upstream from Monument Lake, 1.5 mi downstream from North Monument Creek, and 1.9 mi southeast of town of Palmer Lake.

PERIOD OF RECORD.--April 1977 to September 1980; January 1984 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 14...	0845	0.76	180	8.1	7.0	8.8	0.6	37
NOV 10...	0845	1.1	155	8.2	2.5	10.0	0.1	K16
DEC 16...	0830	1.4	146	8.0	0.0	10.8	0.5	K12
JAN 27...	0845	0.72	151	8.0	0.0	11.0	0.1	K5
FEB 17...	0850	0.49	165	7.7	0.0	--	0.4	K2
MAR 24...	0805	2.0	135	7.8	3.0	9.8	0.4	K13
APR 28...	0805	9.2	94	7.9	6.0	9.6	0.5	K6
MAY 19...	0805	6.3	95	7.9	7.5	9.2	0.4	K15
JUN 09...	0800	2.6	137	8.0	10.0	8.7	0.9	36
JUL 28...	0815	0.32	189	8.2	13.5	7.5	0.4	K180
AUG 25...	0825	0.39	210	8.1	14.0	7.0	0.4	32
SEP 22...	0820	0.87	196	8.1	12.0	8.1	0.4	45

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 14...	83	24	4.1	79	7.0	4.0	1.7
NOV 10...	61	19	3.2	63	7.4	3.5	1.8
DEC 16...	77	18	3.0	57	8.6	3.1	1.7
JAN 27...	K25	19	3.2	58	9.2	4.0	1.6
FEB 17...	K7	20	3.4	58	10	4.6	1.7
MAR 24...	130	16	2.6	51	8.4	3.3	1.7
APR 28...	51	12	1.6	34	6.8	1.4	1.5
MAY 19...	34	12	1.7	37	6.6	1.5	1.5
JUN 09...	140	17	2.7	54	6.4	3.0	1.6
JUL 28...	97	26	4.3	86	3.7	3.9	1.8
AUG 25...	90	29	4.8	96	6.9	4.7	1.8
SEP 22...	150	25	4.5	79	9.4	4.9	1.9

K Based on non-ideal colony counts.

07103747 MONUMENT CREEK AT PALMER LAKE, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 14...	<0.01	--	<0.05	--	0.02	--	<0.2	<0.01	--
NOV 10...	<0.01	--	<0.05	--	0.02	--	<0.2	<0.01	--
DEC 16...	<0.01	--	0.062	--	0.02	--	<0.2	<0.01	--
JAN 27...	--	0.01	0.068	0.068	--	0.01	<0.2	--	0.01
FEB 17...	--	<0.01	0.065	0.065	--	<0.01	<0.2	--	<0.01
MAR 24...	--	<0.01	--	<0.05	--	<0.01	0.4	--	<0.01
APR 28...	--	<0.01	--	<0.05	--	0.02	<0.2	--	<0.01
MAY 19...	--	<0.01	--	<0.05	--	0.01	<0.2	--	<0.01
JUN 09...	--	<0.01	--	<0.05	--	0.02	<0.2	--	0.02
JUL 28...	--	<0.01	--	<0.05	--	0.02	<0.2	--	0.01
AUG 25...	--	<0.01	--	<0.05	--	0.02	<0.2	--	<0.01
SEP 22...	--	<0.01	--	<0.05	--	0.01	<0.2	--	<0.01

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 14...	<1	<1	3	1	<1	<1	<1	590	300
NOV 10...	<1	<1	<1	<1	<1	<1	<1	500	220
DEC 16...	<1	<1	<1	1	<1	<1	<1	320	100
JAN 27...	<1	<1	3	<1	<1	<1	<1	310	93
FEB 17...	<1	<1	4	6	<1	<1	<1	360	200
MAR 24...	<1	<1	<1	<1	<1	1	1	400	67
APR 28...	<1	<1	<1	<1	<1	<1	<1	550	110
MAY 19...	<1	<1	<1	<1	<1	1	2	440	110
JUN 09...	<1	<1	<1	<1	<1	7	1	500	120
JUL 28...	<1	<1	<1	<1	<1	1	2	330	150
AUG 25...	<1	<1	<1	<1	<1	<1	<1	480	190
SEP 22...	<1	<1	<1	<1	<1	3	1	470	190

07103747 MONUMENT CREEK AT PALMER LAKE, CO--Continued
 WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 14...	<1	<1	120	120	1	<1	<10	<3
NOV 10...	<1	<1	100	69	<1	<1	<10	4
DEC 16...	<1	<1	60	47	<1	<1	30	11
JAN 27...	<1	<1	60	43	<1	<1	<10	7
FEB 17...	<1	<1	70	51	1	<1	10	7
MAR 24...	<1	<1	40	21	1	<1	10	<3
APR 28...	<1	<1	30	12	<1	<1	<10	<3
MAY 19...	<1	<1	30	15	<1	<1	<10	<3
JUN 09...	<1	<1	40	25	<1	<1	<10	14
JUL 28...	<1	<1	180	170	<1	<1	<10	<3
AUG 25...	<1	<1	240	230	<1	<1	<10	<3
SEP 22...	<1	<1	140	120	<1	<1	<10	<3

07103780 MONUMENT CREEK ABOVE NORTH GATE BOULEVARD, AT U.S. AIR FORCE ACADEMY, CO

LOCATION.--Lat 39°01'52", long 104°50'52", in SW¹/4SW¹/4 sec.1, T.12 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on right bank, at U.S. Air Force Academy, 50 ft upstream from Denver and Rio Grande Western Railroad bridge, 0.8 mi upstream from North Gate Boulevard, and 1.5 mi downstream from Beaver Creek.

DRAINAGE AREA.--81.7 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,640 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-2, and Nov. 21 to Mar. 1. Records fair except for estimated daily discharges, which are poor. Storage and diversions upstream from station for municipal supply of Monument and Palmer Lake.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	4.9	3.0	2.4	2.4	2.7	12	18	18	1.9	1.5	2.1
2	2.0	4.9	3.0	2.4	2.5	4.0	12	18	21	1.7	1.6	2.6
3	2.3	4.9	3.0	2.5	2.5	3.7	14	16	19	1.5	1.8	2.4
4	2.3	7.3	3.1	2.6	2.6	4.0	13	14	10	3.2	1.8	1.8
5	2.3	8.3	3.0	2.6	2.6	5.3	12	14	8.8	2.0	1.8	2.0
6	3.1	4.7	3.5	2.5	2.6	4.3	14	13	8.2	1.8	1.7	3.8
7	5.0	5.7	3.4	2.4	2.5	4.5	16	13	11	2.0	1.4	7.6
8	4.9	4.7	3.1	2.4	2.4	4.5	15	13	7.2	2.1	1.4	6.9
9	4.8	4.6	2.8	2.5	2.4	4.4	14	13	5.8	2.5	1.6	3.1
10	4.3	4.5	2.6	2.6	2.3	4.6	14	13	5.6	2.1	1.7	2.7
11	2.9	4.7	2.5	2.6	2.4	4.6	15	12	5.4	2.8	1.8	2.3
12	3.3	5.6	2.3	2.5	2.5	9.9	16	12	5.1	2.9	13	2.6
13	3.1	7.2	2.2	2.5	2.5	11	19	12	4.9	3.1	5.3	3.1
14	2.8	4.8	2.2	2.4	2.6	8.7	20	12	5.0	3.1	2.4	2.9
15	2.2	3.8	2.3	2.4	2.5	4.2	23	12	4.8	2.9	2.0	2.7
16	2.2	3.9	2.5	2.4	2.5	4.2	23	13	6.5	2.1	1.9	2.9
17	2.2	3.9	2.4	2.4	2.5	3.9	22	16	7.2	2.6	1.2	2.7
18	2.2	3.9	2.4	2.4	2.5	3.8	27	17	11	2.7	1.9	3.2
19	2.2	3.9	2.3	2.4	2.5	3.8	24	15	12	3.4	2.2	4.0
20	2.2	4.1	2.3	2.4	2.5	3.7	20	15	12	8.8	1.9	3.9
21	2.1	4.5	2.4	2.4	2.6	3.8	14	16	12	2.7	3.5	3.6
22	2.0	4.5	2.4	2.4	2.7	4.5	12	15	8.8	2.2	2.7	3.7
23	2.1	4.5	2.4	2.5	2.8	4.5	13	15	5.5	2.2	1.9	4.7
24	2.1	4.3	2.5	2.4	2.8	4.6	15	16	5.1	1.9	1.5	4.2
25	2.5	3.9	2.6	2.3	2.8	4.3	15	18	3.5	1.8	1.7	3.6
26	2.5	3.8	2.7	2.3	2.8	4.9	16	18	2.5	1.2	2.4	2.6
27	2.4	3.9	2.7	2.3	2.7	6.4	17	17	2.6	1.4	2.4	2.6
28	3.1	3.8	2.7	2.3	2.7	9.3	19	14	2.1	1.3	2.5	2.6
29	4.6	3.5	2.6	2.3	---	10	18	15	2.1	1.3	2.2	2.6
30	4.6	3.2	2.6	2.3	---	10	20	14	2.1	1.1	2.7	2.5
31	5.0	---	2.5	2.3	---	12	---	14	---	1.1	2.5	---
TOTAL	91.3	140.2	82.0	75.1	71.7	174.1	504	453	234.8	73.4	75.9	98.0
MEAN	2.95	4.67	2.65	2.42	2.56	5.62	16.8	14.6	7.83	2.37	2.45	3.27
MAX	5.0	8.3	3.5	2.6	2.8	12	27	18	21	8.8	13	7.6
MIN	2.0	3.2	2.2	2.3	2.3	2.7	12	12	2.1	1.1	1.2	1.8
AC-FT	181	278	163	149	142	345	1000	899	466	146	151	194

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1993, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
MEAN	4.21	5.31	4.76	4.31	4.74	8.13	21.9	36.0	19.0	7.53	5.70	4.22
MAX	9.71	9.37	9.00	9.51	8.85	14.8	46.2	105	36.5	20.3	13.0	12.7
(WY)	1986	1986	1986	1986	1986	1986	1992	1985	1991	1985	1985	1985
MIN	.95	1.63	1.54	1.08	1.81	2.38	7.04	6.57	4.49	1.04	.90	1.16
(WY)	1990	1990	1990	1990	1990	1991	1989	1989	1989	1989	1989	1989

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1985 - 1993

ANNUAL TOTAL	4113.8	2073.5	9.34
ANNUAL MEAN	11.2	5.68	17.9
HIGHEST ANNUAL MEAN			3.82
LOWEST ANNUAL MEAN			1987
HIGHEST DAILY MEAN	95	27	345
LOWEST DAILY MEAN	1.1	1.1	.58
ANNUAL SEVEN-DAY MINIMUM	1.5	1.3	.69
INSTANTANEOUS PEAK FLOW		253	372
INSTANTANEOUS PEAK STAGE		5.51	6.05
ANNUAL RUNOFF (AC-FT)	8160	4110	6770
10 PERCENT EXCEEDS	26	15	24
50 PERCENT EXCEEDS	5.7	3.0	5.3
90 PERCENT EXCEEDS	2.1	2.0	1.7

a-Also occurred Jul 31.

07103780 MONUMENT CREEK ABOVE NORTH GATE BOULEVARD, AT U.S. AIR FORCE ACADEMY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1984 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT											
23...	1235	1.8	290	8.8	11.0	10.9	0.9	<3	K52	28	4.5
NOV											
20...	1250	6.0	308	8.1	1.0	11.2	1.5	K1	26	28	4.5
DEC											
11...	1245	0.61	292	8.1	1.0	10.9	1.2	76	K8	27	4.4
JAN											
08...	1250	33	268	7.9	0.0	11.0	2.1	<1	K15	26	4.1
FEB											
19...	1135	7.1	310	8.0	1.0	10.9	1.4	<1	K2	30	4.9
MAR											
25...	1145	15	201	8.1	8.5	9.7	3.0	<1	K6	23	4.3
APR											
15...	1340	74	121	7.8	13.0	8.0	1.3	K2	54	14	2.0
MAY											
13...	1140	26	144	8.0	17.0	7.5	1.1	K7	K13	17	2.5
JUN											
03...	1200	25	164	8.1	18.0	7.8	1.3	38	31	18	2.8
JUL											
08...	1145	2.7	275	8.2	20.0	8.3	E1.0	K110	93	26	4.1
AUG											
19...	1200	1.5	323	--	22.5	8.2	1.4	K17	38	27	4.5
SEP											
16...	1030	1.4	344	8.4	17.0	8.4	0.9	78	82	28	4.6

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)
OCT										
23...	89	26	21	1.6	<1	<0.01	0.13	0.02	0.50	0.93
NOV										
20...	87	29	23	1.3	10	0.02	0.40	0.36	0.80	1.2
DEC										
11...	79	26	23	1.3	5	0.03	0.49	0.55	1.0	1.1
JAN										
08...	78	21	19	1.4	37	0.01	0.50	0.19	0.70	0.98
FEB										
19...	85	27	25	1.3	16	<0.01	0.42	0.16	0.60	1.1
MAR										
25...	55	19	17	1.3	16	<0.01	0.37	0.05	0.30	0.53
APR										
15...	42	10	4.9	1.5	156	<0.01	0.05	0.04	0.60	0.11
MAY										
13...	46	12	5.6	1.7	25	0.02	0.10	0.05	<0.20	0.34
JUN										
03...	51	12	9.2	1.5	37	0.01	<0.05	0.02	0.30	0.33
JUL										
08...	74	25	21	1.5	10	0.04	0.64	0.03	0.30	1.3
AUG										
19...	64	27	27	1.5	6	0.04	0.50	0.03	0.40	2.3
SEP										
16...	99	19	22	1.1	17	0.03	0.49	0.01	0.40	1.8

E-Estimated.

K-Based on non-ideal colony counts.

07103780 MONUMENT CREEK ABOVE NORTH GATE BOULEVARD, AT U.S. AIR FORCE ACADEMY, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 23...	<1	<1	<1	<1	<1	3	1	660	35
NOV 20...	<1	<1	<1	<1	<1	<1	1	860	36
DEC 11...	<1	<1	<1	<1	<1	1	1	590	53
JAN 08...	<1	<1	<1	<1	<1	4	1	1100	45
FEB 19...	<1	<1	1	<1	<1	2	2	640	31
MAR 25...	<1	<1	<1	<1	<1	2	1	950	68
APR 15...	<1	<1	1	<1	<1	<1	<1	4000	44
MAY 13...	<1	<1	<1	<1	<1	<1	<1	890	53
JUN 03...	<1	<1	<1	<1	<1	<1	<1	1100	100
JUL 08...	<1	<1	1	<1	<1	2	1	440	66
AUG 19...	<1	2	1	<1	<1	2	1	720	76
SEP 16...	<1	<1	<1	<1	<1	2	1	680	72

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 23...	3	1	90	54	4	<1	<10	6
NOV 20...	3	<1	120	71	3	<1	20	11
DEC 11...	3	<1	100	75	<1	1	10	4
JAN 08...	3	<1	170	77	<1	1	30	8
FEB 19...	<1	<1	110	81	2	2	<10	5
MAR 25...	1	<1	150	82	1	<1	<10	6
APR 15...	5	<1	190	40	2	<1	30	5
MAY 13...	1	<1	90	37	<1	2	10	5
JUN 03...	1	<1	100	39	1	<1	<10	<3
JUL 08...	<1	<1	90	76	3	1	<10	7
AUG 19...	1	<1	80	42	4	2	30	10
SEP 16...	2	<1	100	60	3	4	10	10

07103780 MONUMENT CREEK ABOVE NORTH GATE BOULEVARD, AT U.S. AIR FORCE ACADEMY, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT								
14...	1045	2.7	282	8.7	7.0	9.3	0.8	K4
NOV								
10...	1050	4.0	286	8.5	2.5	11.8	0.8	K8
DEC								
16...	1055	4.6	311	7.8	0.0	11.1	0.7	K3
JAN								
27...	1045	7.1	309	8.0	0.0	10.6	0.6	29
FEB								
17...	1125	6.2	351	7.8	0.0	11.7	1.3	K4
MAR								
24...	1000	5.1	240	8.3	5.5	10.4	1.0	K2
APR								
28...	1015	18	161	8.1	11.0	8.7	1.1	K14
MAY								
19...	1030	16	155	8.2	12.5	8.6	1.4	51
JUN								
09...	1020	5.7	212	8.2	14.0	8.0	1.0	43
JUL								
28...	1030	1.6	329	8.4	19.5	7.7	1.2	K340
AUG								
25...	1100	1.4	347	8.4	20.5	7.4	0.9	74
SEP								
22...	1040	3.4	290	8.4	13.0	9.3	1.5	56

DATE	STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT							
14...	K19	28	4.5	90	23	19	1.6
NOV							
10...	K9	26	4.3	82	20	18	1.5
DEC							
16...	K3	27	4.7	78	28	22	1.3
JAN							
27...	K4	29	4.8	82	28	22	1.3
FEB							
17...	K15	31	5.2	89	31	27	1.4
MAR							
24...	K3	23	3.7	74	18	15	1.4
APR							
28...	29	19	2.9	52	10	7.4	1.5
MAY							
19...	23	17	2.7	56	10	6.3	1.6
JUN							
09...	71	21	3.3	67	15	11	1.5
JUL							
28...	110	27	4.5	100	24	25	1.6
AUG							
25...	84	29	4.7	104	25	27	1.4
SEP							
22...	27	27	4.5	89	21	19	1.6

K-Based on non-ideal colony counts.

07103780 MONUMENT CREEK ABOVE NORTH GATE BOULEVARD, AT U.S. AIR FORCE ACADEMY, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 14...	<0.01	--	<0.05	--	0.02	--	0.3	1.2	--
NOV 10...	0.01	--	0.33	--	0.87	--	1.2	0.99	--
DEC 16...	0.02	--	0.82	--	0.98	--	1.5	1.1	--
JAN 27...	--	0.02	1.40	1.4	--	0.13	0.5	--	0.88
FEB 17...	--	0.02	1.20	1.2	--	0.15	0.6	--	1.2
MAR 24...	--	<0.01	0.14	0.14	--	0.04	0.4	--	0.63
APR 28...	--	<0.01	0.10	0.10	--	0.06	0.4	--	0.19
MAY 19...	--	<0.01	--	<0.05	--	0.02	0.2	--	0.22
JUN 09...	--	0.01	0.60	0.60	--	0.04	0.4	--	0.45
JUL 28...	--	<0.01	--	<0.05	--	0.03	0.4	--	1.1
AUG 25...	--	<0.01	--	<0.05	--	0.02	0.3	--	1.1
SEP 22...	--	<0.01	0.13	0.13	--	0.02	0.4	--	0.67

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 14...	<1	<1	<1	<1	<1	2	2	460	130
NOV 10...	<1	<1	<1	<1	<1	<1	<1	380	110
DEC 16...	<1	<1	<1	<1	<1	2	1	330	110
JAN 27...	<1	<1	--	<1	<1	2	2	410	87
FEB 17...	<1	<1	<1	<1	<1	3	3	360	61
MAR 24...	<1	<1	2	4	<1	2	1	450	61
APR 28...	<1	<1	<1	<1	<1	<1	<1	840	110
MAY 19...	<1	<1	2	<1	<1	2	1	1100	92
JUN 09...	<1	<1	<1	<1	<1	16	1	580	90
JUL 28...	<1	<1	<1	<1	<1	1	1	670	98
AUG 25...	<1	<1	<1	<1	<1	1	<1	610	28
SEP 22...	<1	<1	<1	<1	<1	2	1	640	76

07103780 MONUMENT CREEK ABOVE NORTH GATE BOULEVARD, AT U.S. AIR FORCE ACADEMY, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 14...	<1	<1	50	35	3	2	<10	7
NOV 10...	<1	<1	60	34	2	2	10	6
DEC 16...	<1	<1	80	61	2	3	20	13
JAN 27...	<1	<1	80	55	3	2	<10	10
FEB 17...	<1	<1	80	55	3	2	20	11
MAR 24...	<1	<1	90	44	2	1	20	7
APR 28...	<1	<1	100	33	1	1	<10	<3
MAY 19...	1	<1	110	41	<1	<1	<10	<3
JUN 09...	<1	<1	90	71	2	2	<10	5
JUL 28...	<1	<1	110	76	3	2	<10	<3
AUG 25...	<1	<1	80	74	2	1	<10	8
SEP 22...	1	<1	80	53	<1	<1	10	5

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 01...	0815	2.0	335	7.0	MAY 05...	0940	14	171	9.0
NOV 06...	0830	5.0	383	2.0	25...	0735	19	173	11.5
DEC 23...	0800	2.4	337	0.0	JUN 15...	0720	5.7	221	12.5
JAN 26...	0920	2.3	319	0.0	JUL 22...	0800	2.1	262	14.0
MAR 10...	0740	4.3	289	2.0	AUG 12...	0745	1.8	337	15.0
APR 13...	0830	20	198	7.0	SEP 08...	0915	7.2	264	10.5

07103800 WEST MONUMENT CREEK AT U.S. AIR FORCE ACADEMY, CO

LOCATION.--Lat 38°58'14", long 104°54'08", in SW¹/4SW¹/4 sec.28, T.12 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on left bank 500 ft upstream from diversion to city of Colorado Springs water-treatment plant, 2.7 mi south of U.S. Air Force Academy chapel, and 4.4 mi upstream from mouth.

DRAINAGE AREA.--14.9 mi².

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

GAGE.--Water-stage recorder with satellite telemetry and concrete control. Elevation of gage is 7,180 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Water year 1992, Nov. 30 to Dec. 5, and Dec. 12 to Jan. 23. Records fair, except for daily discharges below 0.4 ft³/s, which are poor. Estimated daily discharges: Water year 1993, Dec. 10-23. Records fair, except for daily discharges below 0.4 ft³/s, which are poor. Natural flow of stream affected by trans-mountain diversions from Colorado River basin, storage reservoirs, and operation of water-supply system. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	.05	.10	.06	.00	.00	.58	2.5	1.4	.17	.02	.13
2	.20	.06	.08	.06	.00	.00	.58	2.4	1.3	.16	.00	.06
3	.16	.11	.08	.06	.00	.00	.68	2.3	1.1	.17	.01	.02
4	.16	.11	.08	.06	.00	.02	.86	2.1	.97	.11	.10	.02
5	.18	.07	.08	.06	.00	.02	.91	2.0	.88	.06	.03	.01
6	.16	.11	.07	.06	.00	.02	1.0	1.9	.85	.05	.02	.00
7	.14	.10	.07	.06	.00	.02	1.3	1.8	.83	.02	.02	.00
8	.11	.10	.07	.06	.00	.03	1.6	1.7	.82	.04	.00	.00
9	.10	.18	.07	.07	.00	.06	1.9	1.6	.83	.04	.00	.00
10	.11	.31	.08	.07	.00	.04	2.3	1.7	.73	.02	.00	.00
11	.11	.25	.08	.07	.01	.08	2.6	1.5	.66	.02	.08	.00
12	.09	.18	.08	.08	.01	.06	3.0	1.4	.63	.02	.10	.00
13	.09	.15	.08	.08	.00	.13	3.4	1.3	.54	.03	.01	.00
14	.09	.13	.07	.08	.00	.21	3.9	1.2	.46	.02	.00	.00
15	.09	.14	.07	.08	.00	.31	4.3	1.1	.39	.02	.00	.00
16	.07	.15	.07	.09	.00	.38	4.6	1.0	.35	.07	.00	.00
17	.05	.16	.07	.09	.00	.42	4.6	.97	.31	.16	.00	.00
18	.05	.20	.07	.09	.00	.44	4.6	.91	.29	.09	.00	.00
19	.05	.21	.07	.09	.00	.34	4.4	.81	.31	.03	.00	.00
20	.05	.19	.07	.09	.00	.30	4.3	.76	.40	.04	.00	.00
21	.06	.24	.07	.09	.00	.28	4.0	.73	.41	.05	.00	.00
22	.05	.19	.07	.07	.00	.25	3.8	.73	.33	.59	.00	.00
23	.04	.15	.07	.06	.00	.23	3.6	.73	.36	.57	.00	.00
24	.06	.19	.07	.05	.00	.23	3.4	.73	.43	.21	1.4	.00
25	.09	.15	.07	.03	.00	.25	3.2	.76	.32	.16	1.3	.00
26	.08	.14	.07	.04	.00	.28	2.9	.86	.31	.27	.84	.00
27	.07	.14	.07	.03	.00	.37	2.9	1.1	.44	.14	.57	.00
28	.08	.14	.07	.02	.00	.56	2.8	.96	.31	.05	.37	.00
29	.07	.14	.07	.00	.00	.47	2.7	.79	.28	.05	.26	.00
30	.08	.12	.07	.00	---	.55	2.6	.85	.24	.07	.23	.00
31	.07	---	.07	.00	---	.58	---	1.1	---	.04	.20	---
TOTAL	3.09	4.56	2.28	1.85	0.02	6.93	83.31	40.29	17.48	3.54	5.56	0.24
MEAN	.10	.15	.074	.060	.001	.22	2.78	1.30	.58	.11	.18	.008
MAX	.28	.31	.10	.09	.01	.58	4.6	2.5	1.4	.59	1.4	.13
MIN	.04	.05	.07	.00	.00	.00	.58	.73	.24	.02	.00	.00
AC-FT	6.1	9.0	4.5	3.7	.04	14	165	80	35	7.0	11	.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1992, BY WATER YEAR (WY)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
MEAN	1.90	1.24	1.01	.67	.33	.42	1.96	5.98	3.67	2.63	2.89	1.99											
MAX	11.7	7.74	8.62	8.78	3.63	2.46	12.4	30.5	27.9	23.3	23.8	20.3											
(WY)	1972	1971	1971	1971	1971	1971	1971	1980	1971	1970	1970	1970											
MIN	.068	.080	.043	.046	.000	.001	.11	.20	.031	.071	.097	.008											
(WY)	1979	1979	1990	1990	1976	1991	1989	1976	1976	1976	1978	1992											

SUMMARY STATISTICS

FOR 1991 CALENDAR YEAR

FOR 1992 WATER YEAR

WATER YEARS 1970 - 1992

ANNUAL TOTAL	242.05	169.15	
ANNUAL MEAN	.66	.46	1.73
HIGHEST ANNUAL MEAN			13.4
LOWEST ANNUAL MEAN			.17
HIGHEST DAILY MEAN	12	May 5	a 4.6 Apr 16
LOWEST DAILY MEAN	.00	Feb 3	b .00 Jan 29
ANNUAL SEVEN-DAY MINIMUM	.00	Feb 12	c .00 Jan 29
INSTANTANEOUS PEAK FLOW			d 4.9 Apr 15
INSTANTANEOUS PEAK STAGE			e 1.51 Apr 15
ANNUAL RUNOFF (AC-FT)	480		1250
10 PERCENT EXCEEDS	1.4		5.4
50 PERCENT EXCEEDS	.18		.39
90 PERCENT EXCEEDS	.00		.07

a-Also occurred Apr 17-18.

b-No flow many days during the year.

c-No flow many days during 1976, 1991-92.

d-From rating curve extended above 34 ft³/s.

e-Maximum gage height, 3.88 ft, Dec 22, 1983, backwater from ice.

07103800 WEST MONUMENT CREEK AT U.S. AIR FORCE ACADEMY, CO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.01	.19	.90	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.15	.82	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.13	.78	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.17	.75	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.04	.20	.67	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.13	.18	.55	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.01	.22	.49	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.01	.18	.43	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.04	.12	.45	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.13	.08	.40	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.15	.05	.29	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.21	.04	.25	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.17	.04	.21	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.06	.03	.16	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.02	.91	.12	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.01	1.7	.09	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	1.6	.10	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.08	1.3	.26	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.13	1.2	.29	.20	.00	.00
20	.00	.00	.00	.00	.00	.00	.02	1.1	.13	.28	.00	.00
21	.00	.00	.00	.00	.00	.00	.38	.96	.15	.06	.00	.00
22	.00	.00	.00	.00	.00	.00	2.3	.83	.03	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.28	.74	.01	.00	.00	.00
24	.00	.00	.00	.00	.20	.00	.17	.80	.00	.00	.00	.00
25	.00	.00	.00	.00	1.1	.00	.07	.99	.00	.00	.00	.00
26	.00	.00	.00	.00	.14	.00	.08	.85	.00	.00	.00	.00
27	.00	.00	.13	.00	.04	.02	.18	.82	.00	.00	.00	.00
28	.00	.00	.24	.00	.03	.01	.29	.94	.00	.00	.00	.00
29	.00	.00	.00	.00	---	.20	.26	1.1	.00	.00	.00	.00
30	.00	.00	.00	.00	---	1.4	.25	1.0	.00	.00	.00	.00
31	.00	---	.00	.00	---	.33	---	.97	---	.00	.00	---
TOTAL	0.00	0.00	0.37	0.00	1.51	1.96	5.48	19.59	8.33	0.54	0.00	0.00
MEAN	.000	.000	.012	.000	.054	.063	.18	.63	.28	.017	.000	.000
MAX	.00	.00	.24	.00	1.1	1.4	2.3	1.7	.90	.28	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00
AC-FT	.00	.00	.7	.00	3.0	3.9	11	39	17	1.1	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1993, BY WATER YEAR (WY)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	1.82	1.19	.97	.64	.32	.40	1.88	5.75	3.53	2.53	2.77	1.91												
MAX	11.7	7.74	8.62	8.78	3.63	2.46	12.4	30.5	27.9	23.3	23.8	20.3												
(WY)	1972	1971	1971	1971	1971	1971	1971	1980	1971	1970	1970	1970												
MIN	.000	.000	.012	.000	.000	.001	.11	.20	.031	.017	.000	.000												
(WY)	1993	1993	1993	1993	1976	1991	1989	1976	1976	1993	1993	1993												

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1970 - 1993
ANNUAL TOTAL	159.59	37.78	
ANNUAL MEAN	.44	.10	1.66
HIGHEST ANNUAL MEAN			13.4
LOWEST ANNUAL MEAN			.10
HIGHEST DAILY MEAN	4.6 Apr 16	2.3 Apr 22	5.9 May 9 1980
LOWEST DAILY MEAN	a .00 Jan 29	a .00 Oct 1	b .00 Jan 29 1976
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 29	.00 Oct 1	c .00 Jan 29 1976
INSTANTANEOUS PEAK FLOW		5.7 May 15	d 8.0 May 8 1980
INSTANTANEOUS PEAK STAGE		1.54 May 15	d 2.73 May 8 1980
ANNUAL RUNOFF (AC-FT)	317	75	1200
10 PERCENT EXCEEDS	1.4	.28	4.9
50 PERCENT EXCEEDS	.02	.00	.36
90 PERCENT EXCEEDS	.00	.00	.05

a-No flow many days during the year.

b-No flow many days in 1976, 1991-93.

c-From rating curve extended above 34 ft³/s.

d-Maximum gage height, 3.88 ft, Dec 22, 1983, backwater from ice.

07103980 COTTONWOOD CREEK AT WOODMEN ROAD NEAR COLORADO SPRINGS, CO

LOCATION.--Lat 38°56'22", long 104°44'26", in NE¹/4NE¹/4 sec.11, T.13 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on right bank, 100 ft downstream from Woodmen Road, 4.0 mi east of Interstate 25, and 5.0 mi upstream from mouth.

DRAINAGE AREA.--10.3 mi² (revised).

PERIOD OF RECORD.--May 1992 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,680 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 23, 24, Dec. 13, 14, Jan. 5-8, 23-25, Feb. 4-6, 10, 11, 13-17, 21-23, 27, Mar. 4, 5, 11-14, June 10-13, 18-24, June 28 to July 2, and July 5-29. Records poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.35	.47	.36	.29	.39	.63	.66	.44	.52	.30	1.4	.42
2	.36	.50	.28	.25	.38	.73	.43	.45	.70	.30	1.6	.94
3	.34	.46	.24	.24	.36	.65	1.0	.41	.76	.25	.48	.37
4	.34	.48	.25	.39	.40	1.0	.60	.44	.71	.36	.34	.34
5	.35	.46	.36	.54	.40	1.5	.71	.41	.66	.27	.24	.40
6	.41	.47	.37	.82	.40	.92	.91	.35	.61	.27	.22	12
7	.41	.46	.33	.41	.40	.91	.66	.47	.57	.27	.26	4.9
8	.41	.43	.30	.76	.35	.84	.56	.37	.55	.26	.23	.48
9	.40	.44	.34	.53	.40	.88	.52	.29	.87	.25	.26	.33
10	.37	.43	.34	.47	.40	.66	.51	.42	.60	.25	2.0	.41
11	.32	.78	.36	.49	.45	.70	.52	.32	.45	.50	.78	.36
12	.37	.48	.29	.42	.50	.65	.85	.31	.30	.45	.70	.35
13	.34	.49	.30	.39	.52	.60	.56	.28	.25	.38	.59	.40
14	.36	.48	.30	.33	.50	.65	.47	1.1	.20	.37	.45	.49
15	.37	.45	.31	.43	.45	.65	.57	3.5	.20	1.0	.48	.51
16	.32	.48	.32	.31	.40	.59	.62	1.0	.27	.50	.36	.50
17	.25	.47	.34	.26	.30	.58	.52	.68	9.7	.45	.38	.70
18	.25	.43	.37	.42	.27	.69	.54	.47	2.3	.43	.36	.58
19	.25	.39	.35	.36	.72	.69	.53	.36	1.1	20	.27	.46
20	.28	.47	.33	.43	.64	.71	.56	.37	.90	1.1	.40	.47
21	.42	.62	.33	.45	.60	.68	.52	.40	.70	.70	2.2	.47
22	.33	.62	.33	.46	.50	.60	.49	.36	.60	.44	.92	.48
23	.30	.55	.33	.77	.60	.53	.48	.33	.50	.41	.46	.53
24	.30	.45	.36	2.6	.73	.55	1.2	.84	.40	.39	.34	.45
25	.29	.40	.38	2.5	.69	.59	.66	.84	.36	.37	.44	.42
26	.30	.35	.41	.39	.68	.75	.50	.54	.29	.36	.36	.41
27	.39	.37	.39	.45	.68	1.1	.61	.64	.23	.34	1.0	.42
28	.39	.36	.33	.43	.69	.87	.50	1.0	.20	.50	.71	.39
29	.37	.36	.33	.38	---	.87	.44	1.1	.25	.25	.48	.41
30	.40	.36	.33	.45	---	.67	.45	.68	.30	.29	1.2	.42
31	.57	---	.36	.42	---	.77	---	.74	---	.43	.46	---
TOTAL	10.91	13.96	10.32	17.84	13.80	23.21	18.15	19.91	26.05	32.44	20.37	29.81
MEAN	.35	.47	.33	.58	.49	.75	.60	.64	.87	1.05	.66	.99
MAX	.57	.78	.41	2.6	.73	1.5	1.2	3.5	9.7	20	2.2	12
MIN	.25	.35	.24	.24	.27	.53	.43	.28	.20	.25	.22	.33
AC-FT	22	28	20	35	27	46	36	39	52	64	40	59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1993, BY WATER YEAR (WY)

	1992	1993	1993	1993	1993	1993	1993	1993	1992	1992	1993	1992
MEAN	.35	.47	.33	.58	.49	.75	.60	.64	.73	.81	1.72	.73
MAX	.35	.47	.33	.58	.49	.75	.60	.64	.87	1.05	2.78	.99
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1992	1993
MIN	.35	.47	.33	.58	.49	.75	.60	.64	.60	.57	.66	.47
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1992	1992	1993	1992

SUMMARY STATISTICS

FOR 1993 WATER YEAR

WATER YEARS 1992 - 1993

ANNUAL TOTAL	236.77		
ANNUAL MEAN	.65	.65	1993
HIGHEST ANNUAL MEAN		.65	1993
LOWEST ANNUAL MEAN			
HIGHEST DAILY MEAN	20 ^a	25 ^b	Aug 24 1992
LOWEST DAILY MEAN	.20	.18	Aug 16 1992
ANNUAL SEVEN-DAY MINIMUM	.26	.25	Aug 14 1992
INSTANTANEOUS PEAK FLOW	c ^c 1090	c ^c 1090	Jul 19 1993
INSTANTANEOUS PEAK STAGE	5.57	5.57	Jul 19 1993
ANNUAL RUNOFF (AC-FT)	470	470	
10 PERCENT EXCEEDS	.86	.91	
50 PERCENT EXCEEDS	.44	.45	
90 PERCENT EXCEEDS	.29	.29	

a-Also occurred Jun 15, 28.

b-Also occurred Aug 17.

c-From rating curve extended above 1.1 ft³/s, on basis of slope-area measurement of peak flow.

07103990 COTTONWOOD CREEK AT MOUTH AT PIKEVIEW, CO

LOCATION.--Lat 38°55'41", long 104°38'35", in SW¹/4SW¹/4 sec.8, T.13 S, R.67 W., El Paso County, Hydrologic Unit 11020003, on left bank 70 ft upstream from Vincent Drive bridge, 0.3 mi south of Woodmen Valley Road, and 0.3 mi upstream from mouth.

DRAINAGE AREA.--18.7 mi².

PERIOD OF RECORD.--December 1985 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 6,265 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Water year 1992, Oct. 30 to Nov. 5, and Jan. 15-20. Records poor. Estimated daily discharges: Water year 1993, Nov. 25 to Jan. 23, Feb. 7 to Mar. 10, Mar. 31 to Apr. 6, May 21-23, and June 13, 17-25. Records poor. Natural flow of stream affected by runoff from industrial and residential areas of northeast Colorado Springs. Several measurements of water temperature and specific conductance were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	2.4	2.4	1.7	4.8	3.7	3.8	2.8	18	1.5	.95	2.9
2	3.4	2.3	2.3	1.9	4.5	3.7	3.7	2.9	4.7	1.7	.78	2.7
3	3.4	2.6	2.4	2.0	4.2	3.9	4.0	3.0	4.7	1.9	1.1	2.7
4	3.4	2.9	2.6	1.9	4.0	69	3.7	3.0	4.4	2.0	2.4	2.7
5	3.3	3.3	2.4	1.8	4.1	8.8	3.8	2.9	4.7	2.2	2.2	2.6
6	3.0	4.1	2.4	2.0	4.2	6.1	3.6	2.9	4.9	2.3	1.7	2.8
7	3.0	4.6	2.3	1.9	4.1	5.3	3.6	2.8	4.5	2.4	1.4	3.3
8	2.5	3.7	2.1	2.0	4.2	63	3.4	2.9	3.8	1.8	.98	3.2
9	3.0	3.7	2.0	2.1	4.2	29	3.4	3.0	4.3	2.0	1.4	3.9
10	3.1	4.8	2.0	2.2	4.2	40	3.3	4.4	3.7	2.5	14	4.9
11	2.8	3.7	2.1	2.3	4.0	10	3.5	3.2	3.7	1.7	1.4	5.3
12	3.9	3.7	2.5	2.0	3.8	8.5	3.7	3.8	3.6	1.8	40	6.9
13	3.3	3.9	1.8	2.1	4.0	7.6	3.3	3.6	3.5	3.8	3.9	5.7
14	2.8	3.5	1.8	1.9	4.0	6.5	3.3	3.4	3.2	2.2	2.6	5.5
15	2.9	3.9	1.8	1.8	4.2	6.9	17	3.0	3.2	1.1	2.5	4.6
16	2.7	4.4	1.8	1.7	4.2	5.1	11	2.6	3.1	.99	2.3	6.0
17	2.5	5.3	1.6	1.6	4.3	4.8	3.3	2.6	3.1	1.3	2.1	4.5
18	2.3	4.2	1.5	1.8	4.5	4.7	3.5	2.6	3.1	1.1	3.1	2.9
19	2.1	4.3	1.7	2.1	4.6	4.4	2.9	2.5	6.9	1.4	3.1	6.4
20	2.0	3.9	1.6	2.3	4.3	4.1	2.9	2.5	40	1.8	2.4	6.8
21	1.9	4.2	1.6	2.5	4.4	4.6	3.0	3.3	3.5	1.8	9.0	6.1
22	1.9	3.0	1.6	3.3	4.5	5.4	3.1	2.7	2.4	3.8	4.0	4.8
23	2.4	2.6	1.6	3.9	4.6	4.7	2.8	2.9	21	3.6	2.9	4.1
24	3.3	2.8	1.6	4.8	4.7	4.7	2.6	2.9	4.5	1.4	68	3.1
25	3.3	2.9	1.7	4.0	4.3	4.4	2.6	3.4	42	13	6.4	3.0
26	3.1	3.0	1.7	4.8	3.8	4.2	2.6	42	15	6.0	4.9	3.1
27	3.0	2.7	1.7	4.6	3.7	4.3	2.6	31	4.4	1.1	3.7	3.2
28	2.7	2.6	1.7	4.5	3.7	5.4	2.7	4.6	2.6	.83	3.4	2.9
29	3.1	2.6	1.7	4.7	3.8	4.5	2.7	17	2.2	1.2	2.9	2.4
30	3.0	2.2	1.8	4.4	---	4.3	2.9	4.7	1.9	1.2	3.5	2.2
31	2.6	---	1.6	4.8	---	4.0	---	5.1	---	1.0	4.8	---
TOTAL	89.1	103.8	59.4	85.4	121.9	345.6	118.3	180.0	230.6	72.42	203.81	121.2
MEAN	2.87	3.46	1.92	2.75	4.20	11.1	3.94	5.81	7.69	2.34	6.57	4.04
MAX	3.9	5.3	2.6	4.8	4.8	69	17	42	42	13	68	6.9
MIN	1.9	2.2	1.5	1.6	3.7	3.7	2.6	2.5	1.9	.83	.78	2.2
AC-FT	177	206	118	169	242	685	235	357	457	144	404	240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1992, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992
MEAN	4.05	3.97	3.19	3.30	3.63	6.18	4.79
MAX	6.90	6.30	4.53	4.16	6.26	11.1	7.01
(WY)	1991	1991	1991	1986	1988	1992	1990
MIN	1.93	2.90	1.92	2.30	2.28	2.67	3.31
(WY)	1987	1987	1992	1987	1990	1991	1986

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1986 - 1992
ANNUAL TOTAL	1883.4	1731.53	
ANNUAL MEAN	5.16	4.73	5.11
HIGHEST ANNUAL MEAN			5.96
LOWEST ANNUAL MEAN			4.01
HIGHEST DAILY MEAN	125 Jun 6	69 Mar 4	125 Jun 6 1991
LOWEST DAILY MEAN	1.3 Apr 11	.78 Aug 2	.01 Jul 10 1989
ANNUAL SEVEN-DAY MINIMUM	1.4 May 26	1.0 Jul 27	.12 Jul 5 1989
INSTANTANEOUS PEAK FLOW		b ₆₅₁ Jun 26	b ₈₃₀ Aug 21 1986
INSTANTANEOUS PEAK STAGE		c _{7.74} Jun 26	c _{7.68} Aug 21 1986
ANNUAL RUNOFF (AC-FT)	3740	3430	3700
10 PERCENT EXCEEDS	8.8	5.4	7.5
50 PERCENT EXCEEDS	3.2	3.2	3.6
90 PERCENT EXCEEDS	1.7	1.7	1.9

a-Also occurred May 29-31.

b-From rating curve extended above 60 ft³/s, on basis of culvert measurement of peak flow.

c-Maximum gage height, 7.81 ft, Aug 12, 1992.

07103990 COTTONWOOD CREEK AT MOUTH AT PIKEVIEW, CO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	3.6	2.8	4.5	2.1	3.3	3.8	2.2	3.7	2.0	9.0	4.7
2	4.6	3.5	2.9	4.2	2.4	3.2	3.9	2.3	6.2	2.3	5.1	8.4
3	4.0	3.8	3.0	3.8	2.4	3.2	3.8	2.4	4.1	2.3	4.0	4.5
4	4.3	6.0	3.1	3.8	2.1	3.2	3.7	2.2	3.5	2.4	7.7	4.6
5	3.5	5.2	3.0	3.5	3.3	3.2	3.4	2.6	3.2	2.1	5.9	4.7
6	3.5	4.2	3.0	3.5	5.8	3.1	3.3	2.3	3.0	2.2	3.4	57
7	3.0	2.8	3.1	3.3	4.7	3.1	3.1	2.5	2.9	2.1	3.2	37
8	2.9	2.9	3.0	3.3	4.2	3.1	4.2	2.3	2.7	2.0	2.9	6.7
9	3.0	2.7	3.4	3.3	3.9	3.0	4.0	2.5	4.5	2.0	2.8	5.2
10	3.5	2.6	3.3	3.3	3.8	3.0	3.7	2.5	3.0	2.1	13	5.0
11	4.6	4.7	3.2	3.4	3.7	2.9	3.6	2.5	3.1	2.2	5.1	5.1
12	3.9	3.3	3.2	3.5	4.0	2.7	9.2	2.2	3.0	2.6	5.1	4.3
13	3.9	2.4	3.3	3.7	4.2	2.7	4.1	1.8	2.8	2.5	3.4	3.7
14	4.7	2.5	3.4	3.9	3.9	3.0	3.6	2.9	2.7	2.4	3.5	4.7
15	4.4	2.2	3.2	4.1	3.7	4.5	3.4	18	3.0	6.7	3.4	4.9
16	4.0	2.5	3.0	4.1	3.6	5.5	3.3	2.6	3.3	3.5	3.9	4.2
17	3.9	2.0	2.9	4.1	3.4	5.8	3.1	3.9	60	3.8	4.3	3.2
18	4.0	1.8	2.9	4.1	3.3	5.5	3.6	3.2	30	3.7	4.3	3.6
19	4.5	2.4	3.0	4.2	3.2	5.4	3.6	2.9	10	24	4.5	3.8
20	4.5	2.1	3.2	4.2	3.1	5.8	3.6	2.3	5.0	4.7	4.5	3.7
21	3.7	2.2	3.6	4.8	3.0	5.6	2.7	2.0	4.5	3.9	6.5	3.8
22	4.1	3.2	3.9	4.0	3.1	5.2	2.7	2.2	4.0	5.1	4.9	2.8
23	3.6	2.2	3.8	3.0	3.4	4.1	2.3	2.1	3.6	5.4	5.5	3.0
24	3.2	2.4	3.9	3.3	3.8	4.0	11	5.1	3.2	4.7	5.5	3.4
25	3.1	2.5	4.0	6.2	3.9	3.5	19	5.0	3.0	3.7	5.9	3.3
26	3.0	2.6	4.1	4.0	3.9	2.9	2.2	4.5	2.9	3.7	5.5	3.2
27	2.7	2.6	4.2	3.7	3.8	5.2	1.9	6.6	4.0	3.4	9.2	3.5
28	6.2	2.6	4.4	3.3	3.7	4.9	2.3	8.7	3.6	6.1	5.8	4.1
29	5.4	2.7	4.6	2.8	---	5.2	2.6	6.5	3.1	3.5	5.2	5.2
30	4.3	2.7	4.7	3.3	---	3.9	2.5	4.1	2.3	3.2	10	4.2
31	5.1	---	4.4	2.5	---	3.6	---	6.6	---	3.3	4.8	---
TOTAL	123.9	88.9	107.5	116.7	99.4	123.3	127.2	119.5	193.9	123.6	167.8	215.5
MEAN	4.00	2.96	3.47	3.76	3.55	3.98	4.24	3.85	6.46	3.99	5.41	7.18
MAX	6.2	6.0	4.7	6.2	5.8	5.8	19	18	60	24	13	57
MIN	2.7	1.8	2.8	2.5	2.1	2.7	1.9	1.8	2.3	2.0	2.8	2.8
AC-FT	246	176	213	231	197	245	252	237	385	245	333	427

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1993, BY WATER YEAR (WY)

	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	4.04	3.83	3.23	3.36	3.62	5.91	4.72	5.66
MAX	6.90	6.30	4.53	4.16	6.26	11.1	7.01	9.45
(WY)	1991	1991	1991	1986	1988	1992	1990	1987
MIN	1.93	2.90	1.92	2.30	2.28	2.67	3.31	2.71
(WY)	1987	1987	1992	1987	1990	1991	1989	1986

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1986 - 1993
ANNUAL TOTAL	1799.53	1607.2	
ANNUAL MEAN	4.92	4.40	5.01
HIGHEST ANNUAL MEAN			5.96
LOWEST ANNUAL MEAN			4.01
HIGHEST DAILY MEAN	69 Mar 4	60 Jun 17	125 Jun 6 1991
LOWEST DAILY MEAN	.78 Aug 2	1.8 Nov 18	.01 Jul 10 1989
ANNUAL SEVEN-DAY MINIMUM	1.0 Jul 27	2.1 Jul 5	.12 Jul 5 1989
INSTANTANEOUS PEAK FLOW		a,b 2380 Jun 17	a,b 2380 Jun 17 1993
INSTANTANEOUS PEAK STAGE			c 7.81 Aug 12 1992
ANNUAL RUNOFF (AC-FT)	3570	3190	3630
10 PERCENT EXCEEDS	5.8	5.5	7.3
50 PERCENT EXCEEDS	3.4	3.6	3.6
90 PERCENT EXCEEDS	1.9	2.4	2.0

a-From rating curve extended above 60 ft³/s, on basis of culvert measurement of peak flow.

b-Gage height not determined.

c-Maximum gage height determined.

07104000 MONUMENT CREEK AT PIKEVIEW, CO

LOCATION.--Lat 38°55'04", long 104°49'05", in NW¹/4SE¹/4 sec.18, T.13 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on right bank 0.1 mi west of U.S. Interstate Highway I-25, 0.9 mi downstream from Cottonwood Creek, and 1.3 mi downstream from Woodmen Valley Road.

DRAINAGE AREA.--204 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1938 to September 1949, January 1976 to current year.

REVISED RECORDS.--WDR CO-90-1: 1989 (M).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,203.26 ft above sea level. September 1938 to October 1949, nonrecording gage at present site at datum 0.10 ft lower.

REMARKS.--Estimated daily discharges: Water year 1992, Oct. 29 to Nov. 4, Dec. 1-6, Dec. 22-Jan. 24, and May 13-14. Records fair except for estimated daily discharges and those above 200 ft³/s, which are poor. Estimated daily discharges: Water year 1993, Nov. 24 to Feb. 28. Records fair except for estimated daily discharges and those above 200 ft³/s, which are poor. Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation, municipal use and return flow from irrigation, and sewage-effluent discharge.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1935, reached a stage of about 14 ft, present datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	18	21	15	19	17	47	50	52	26	17	19
2	17	17	22	15	18	17	46	49	47	25	16	20
3	17	20	21	16	17	17	45	48	41	26	18	20
4	17	22	22	15	16	33	41	47	37	24	18	19
5	17	20	20	14	17	28	39	47	40	24	18	16
6	18	19	19	14	20	32	36	44	43	17	19	14
7	18	20	18	14	18	34	38	56	39	15	18	14
8	19	18	17	14	17	45	37	62	38	16	16	13
9	18	18	17	15	16	48	39	60	29	16	15	14
10	18	20	18	15	16	52	44	44	24	15	22	14
11	17	20	18	14	14	51	46	61	22	16	14	14
12	17	20	20	14	14	50	49	45	21	20	33	13
13	17	20	18	15	14	48	49	50	19	19	17	13
14	17	20	21	14	14	47	48	40	19	21	20	14
15	17	21	22	14	14	48	50	37	19	22	21	13
16	18	22	21	15	14	46	82	35	17	22	21	15
17	17	25	19	15	13	46	86	33	18	23	19	13
18	17	22	23	15	15	45	82	32	20	16	22	13
19	17	23	20	16	15	45	83	31	25	16	17	15
20	17	22	20	17	14	44	82	30	36	15	17	15
21	17	23	19	18	14	46	77	23	24	15	22	14
22	18	22	18	19	13	45	75	20	25	25	18	14
23	18	20	17	19	15	44	72	20	27	25	18	14
24	18	23	19	18	13	43	66	20	23	20	85	13
25	17	21	18	18	15	44	58	22	26	29	49	13
26	17	20	18	18	16	43	56	41	101	20	45	12
27	17	20	18	18	16	43	55	58	75	19	37	11
28	17	19	16	20	17	51	54	45	43	18	32	11
29	19	19	15	19	17	47	54	55	32	18	24	10
30	17	20	14	19	---	46	53	44	27	18	21	10
31	18	---	14	19	---	46	---	44	---	17	23	---
TOTAL	541	614	583	501	451	1291	1689	1293	1009	618	752	423
MEAN	17.5	20.5	18.8	16.2	15.6	41.6	56.3	41.7	33.6	19.9	24.3	14.1
MAX	19	25	23	20	20	52	86	62	101	29	85	20
MIN	17	17	14	14	13	17	36	20	17	15	14	10
AC-FT	1070	1220	1160	994	895	2560	3350	2560	2000	1230	1490	839

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1992, BY WATER YEAR (WY)

MEAN	16.9	16.4	13.4	12.2	13.7	21.0	47.5	87.4	40.1	22.7	25.4	13.7
MAX	82.8	55.3	29.5	26.8	28.7	46.2	259	338	127	80.1	80.6	46.7
(WY)	1985	1985	1986	1986	1991	1984	1942	1947	1983	1947	1945	1985
MIN	1.90	4.27	3.95	4.40	4.06	6.67	10.2	12.7	5.20	2.01	1.11	1.74
(WY)	1940	1979	1979	1979	1940	1944	1978	1946	1976	1939	1940	1939

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1939 - 1992
ANNUAL TOTAL	10039	9765	
ANNUAL MEAN	27.5	26.7	28.2
HIGHEST ANNUAL MEAN			72.1
LOWEST ANNUAL MEAN			8.21
HIGHEST DAILY MEAN	203	Jun 6	1140
LOWEST DAILY MEAN	a11	Jan 20	.00
ANNUAL SEVEN-DAY MINIMUM	11	Jan 19	.21
INSTANTANEOUS PEAK FLOW			c3750
INSTANTANEOUS PEAK STAGE			3.73
ANNUAL RUNOFF (AC-FT)	19910	19370	20450
10 PERCENT EXCEEDS	37	48	57
50 PERCENT EXCEEDS	23	19	15
90 PERCENT EXCEEDS	16	14	4.2

a-Also occurred Jan 21-23, and Jul 16, 17.

b-Also occurred Sep 30.

c-From rating curve extended above 100 ft³/s, on basis of a slope-area measurement of peak flow.

ARKANSAS RIVER BASIN

07104000 MONUMENT CREEK AT PIKEVIEW, CO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	20	19	18	18	16	19	28	28	14	11	15
2	12	20	18	15	17	17	20	28	41	13	9.5	17
3	12	19	17	15	17	16	24	29	34	13	9.4	16
4	12	19	17	16	18	15	22	27	23	13	11	14
5	12	19	18	14	20	16	23	26	20	13	11	15
6	12	20	19	13	21	14	27	24	19	12	11	83
7	13	19	20	13	20	14	28	26	20	12	10	50
8	14	19	19	15	18	15	28	25	18	12	10	38
9	14	19	18	17	18	15	30	24	21	12	10	36
10	13	19	18	19	18	14	30	24	14	13	13	34
11	14	22	17	19	18	13	32	24	14	15	11	31
12	14	19	17	19	18	12	41	24	14	16	11	26
13	15	20	17	18	18	13	36	26	14	16	13	23
14	15	20	17	16	17	13	33	26	14	16	9.5	21
15	15	20	18	16	14	13	32	53	14	32	9.0	20
16	14	19	19	16	13	12	31	45	15	15	9.3	19
17	15	19	20	17	12	12	31	45	281	11	9.7	19
18	15	18	20	17	15	12	33	40	76	12	9.9	19
19	16	18	20	17	18	12	32	37	37	67	10	17
20	16	18	20	18	18	12	30	34	43	21	10	16
21	17	20	20	20	19	12	24	34	33	12	12	15
22	17	17	20	18	19	13	25	33	28	12	11	14
23	17	15	21	17	19	13	26	33	23	14	10	13
24	17	16	21	18	18	13	36	43	20	14	10	14
25	17	17	21	19	17	14	29	44	18	13	10	13
26	17	18	21	18	17	13	29	40	17	11	10	12
27	17	20	21	18	16	15	32	41	16	10	13	12
28	17	19	20	18	16	16	33	46	15	11	14	12
29	18	19	19	17	---	20	32	40	15	9.2	14	12
30	19	19	18	18	---	19	31	32	15	10	17	12
31	20	---	18	18	---	19	---	31	---	9.6	14	---
TOTAL	467	566	588	527	487	443	879	1032	960	473.8	343.3	658
MEAN	15.1	18.9	19.0	17.0	17.4	14.3	29.3	33.3	32.0	15.3	11.1	21.9
MAX	20	22	21	20	21	20	41	53	281	67	17	83
MIN	11	15	17	13	12	12	19	24	14	9.2	9.0	12
AC-FT	926	1120	1170	1050	966	879	1740	2050	1900	940	681	1310

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1993, BY WATER YEAR (WY)

MEAN	16.9	16.5	13.6	12.4	13.9	20.8	46.9	85.5	39.8	22.5	24.9	14.0
MAX	82.8	55.3	29.5	26.8	28.7	46.2	259	338	127	80.1	80.6	46.7
(WY)	1985	1985	1986	1986	1991	1984	1942	1947	1983	1947	1945	1985
MIN	1.90	4.27	3.95	4.40	4.06	6.67	10.2	12.7	5.20	2.01	1.11	1.74
(WY)	1940	1979	1979	1979	1940	1944	1978	1946	1976	1939	1940	1939

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1939 - 1993
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ANNUAL TOTAL	9648		7424.1						
ANNUAL MEAN	26.4		20.3			27.9			
HIGHEST ANNUAL MEAN						72.1		1942	
LOWEST ANNUAL MEAN						8.21		1978	
HIGHEST DAILY MEAN	101	Jun 26	281	Jun 17		1140		May 11	1947
LOWEST DAILY MEAN	10	Sep 29	9.0	Aug 15		.00		Jul 24	1939
ANNUAL SEVEN-DAY MINIMUM	11	Sep 26	9.6	Aug 14		.21		Jul 20	1939
INSTANTANEOUS PEAK FLOW			3430	Jun 17		b3750		Aug 5	1981
INSTANTANEOUS PEAK STAGE			-7.12	Jun 17		7.48		Aug 5	1981
ANNUAL RUNOFF (AC-FT)	19140		14730			20250			
10 PERCENT EXCEEDS	48		32			56			
50 PERCENT EXCEEDS	19		18			15			
90 PERCENT EXCEEDS	14		12			4.3			

a-Also occurred Sep 30.

b-From rating curve extended above 100 ft³/s, on basis of a slope-area measurement of peak flow.

07104000 MONUMENT CREEK AT PIKEVIEW, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1975 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT											
23...	1400	18	428	8.8	15.5	8.0	0.8	K47	88	57	7.1
NOV											
20...	1355	25	506	8.3	4.0	10.4	2.4	300	1200	55	6.5
DEC											
11...	1430	18	418	8.4	2.0	10.7	1.0	K310	92	48	6.2
JAN											
08...	1420	28	434	8.3	1.0	10.8	1.1	K1200	960	52	5.8
FEB											
19...	1325	20	453	8.4	3.5	10.8	1.1	<10	K250	56	6.3
MAR											
25...	1330	37	359	8.4	12.5	8.7	0.9	<3	K17	46	5.9
APR											
15...	1455	113	180	8.1	13.0	8.3	1.2	22	69	21	2.8
MAY											
13...	1350	127	267	8.5	19.0	7.6	1.0	K66	87	34	4.4
JUN											
03...	1330	36	296	8.4	18.0	7.6	1.1	K96	140	35	4.6
JUL											
08...	1445	15	419	8.8	22.0	7.5	E1.1	190	240	55	7.0
AUG											
19...	1305	14	468	--	25.0	6.8	1.8	K570	660	60	7.4
SEP											
16...	1300	14	499	8.6	23.0	6.9	0.8	250	400	63	7.9

DATE	ALKA- LINIT LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)
OCT										
23...	134	69	18	1.8	<33	0.02	1.5	0.01	0.30	0.08
NOV										
20...	124	69	40	1.1	442	0.06	2.0	0.09	0.20	0.11
DEC										
11...	119	60	20	1.5	69	0.02	1.7	0.08	0.40	0.16
JAN										
08...	112	35	11	0.7	222	0.03	1.9	0.07	0.40	0.14
FEB										
19...	110	85	18	1.3	418	0.02	1.8	0.03	0.40	0.14
MAR										
25...	80	57	22	1.1	163	0.04	1.1	0.09	0.20	0.22
APR										
15...	51	28	6.9	1.4	328	0.01	0.33	0.04	0.80	0.09
MAY										
13...	71	39	13	1.5	72	0.03	0.80	0.04	<0.20	0.28
JUN										
03...	75	43	14	1.5	114	0.03	0.64	0.03	0.20	0.25
JUL										
08...	112	70	19	1.2	58	0.03	1.5	0.05	0.40	0.13
AUG										
19...	128	75	21	1.0	144	0.01	1.7	<0.01	0.40	0.08
SEP										
16...	138	80	22	1.0	82	0.01	2.0	0.02	0.30	0.06

E-Estimated.

K-Based on non-ideal colony counts.

ARKANSAS RIVER BASIN

07104000 MONUMENT CREEK AT PIKEVIEW, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 23...	<1	<1	<1	<1	<1	2	<1	880	11
NOV 20...	<1	<1	6	<1	<1	9	<1	7600	32
DEC 11...	<1	<1	<1	<1	<1	4	1	1600	21
JAN 08...	<1	<1	4	<1	<1	9	<1	8100	7
FEB 19...	<1	<1	5	<1	<1	4	<1	6400	11
MAR 25...	<1	<1	<1	<1	<1	2	1	3200	6
APR 15...	<1	<1	2	<1	<1	<1	<1	6000	42
MAY 13...	<1	<1	<1	<1	<1	2	<1	1500	19
JUN 03...	<1	<1	<1	<1	<1	2	<1	1900	18
JUL 08...	<1	<1	<1	<1	<1	2	<1	800	7
AUG 19...	<1	<1	<1	<1	<1	4	1	2100	4
SEP 16...	<1	<1	<1	<1	<1	3	2	1200	11

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 23...	2	<1	80	21	2	1	<10	7
NOV 20...	15	<1	220	25	6	<1	70	9
DEC 11...	2	<1	70	34	<1	<1	10	4
JAN 08...	14	<1	230	25	7	<1	80	13
FEB 19...	7	<1	170	31	4	1	30	<3
MAR 25...	4	<1	120	42	3	1	20	6
APR 15...	10	<1	220	30	3	<1	50	4
MAY 13...	2	<1	100	19	1	1	30	<3
JUN 03...	3	<1	90	15	2	<1	20	<3
JUL 08...	2	<1	40	12	1	2	<10	<3
AUG 19...	4	<1	70	7	3	<1	40	<3
SEP 16...	4	<1	50	7	2	2	10	<3

07104000 MONUMENT CREEK AT PIKEVIEW, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 01...	1520	17	403	20.0	APR 02...	1525	46	310	11.0
NOV 12...	1545	20	419	9.0	MAY 20...	1500	86	187	12.0
DEC 17...	1350	21	444	1.5	JUN 01...	1400	53	238	19.0
JAN 21...	1530	31	391	1.0	JUL 02...	1600	46	292	20.5
FEB 25...	1050	16	445	5.0	SEP 23...	1330	25	405	24.0
MAR 10...	1330	60	388	7.0	SEP 09...	1215	13	511	20.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 14...	1225	15	474	8.6	12.5	8.6	0.8	100
NOV 10...	1245	19	455	8.6	5.0	10.6	0.3	K40
DEC 16...	1250	19	468	8.4	0.0	12.0	0.4	K38
JAN 27...	1245	18	413	8.3	0.5	11.6	0.9	K10
FEB 17...	1330	13	486	8.2	0.0	11.1	0.6	<2
MAR 24...	1150	14	409	8.6	12.5	9.0	0.6	<1
APR 28...	1225	33	271	8.5	15.5	8.3	0.8	K5
MAY 19...	1245	37	277	8.5	17.5	7.6	0.9	K21
JUN 09...	1240	16	345	8.5	17.5	7.4	0.7	130
JUL 28...	1235	11	475	8.6	26.0	6.5	1.4	K900
AUG 25...	1300	10	491	8.6	27.0	6.4	0.8	K430
SEP 22...	1250	15	454	8.5	18.0	7.6	0.6	140

K-Based on non-ideal colony counts.

07104000 MONUMENT CREEK AT PIKEVIEW, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 14...	150	63	7.8	133	73	20	1.1
NOV 10...	230	55	7.1	122	66	21	1.1
DEC 16...	88	59	7.9	123	73	22	1.0
JAN 27...	K56	52	6.6	101	71	19	1.1
FEB 17...	K12	60	8.0	121	81	22	1.0
MAR 24...	K9	48	6.4	105	66	19	1.1
APR 28...	56	32	4.5	74	34	12	1.4
MAY 19...	60	32	4.6	80	38	11	1.5
JUN 09...	220	42	5.7	97	50	13	1.4
JUL 28...	K650	62	7.6	136	73	18	1.1
AUG 25...	200	62	7.7	142	73	20	1.1
SEP 22...	120	56	7.4	132	68	20	1.1

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 14...	0.02	--	1.9	--	0.02	--	0.3	0.10	--
NOV 10...	0.04	--	1.9	--	0.04	--	0.3	0.16	--
DEC 16...	0.04	--	2.3	--	0.20	--	0.4	0.16	--
JAN 27...	--	0.02	2.2	2.2	--	0.08	0.7	--	0.12
FEB 17...	--	0.02	2.7	2.7	--	0.05	0.3	--	0.13
MAR 24...	--	<0.01	1.4	1.4	--	0.01	<0.2	--	0.15
APR 28...	--	<0.01	0.63	0.63	--	0.02	<0.2	--	0.14
MAY 19...	--	<0.01	0.59	0.59	--	0.02	0.3	--	0.12
JUN 09...	--	<0.01	1.2	1.2	--	0.02	0.2	--	0.10
JUL 28...	--	0.01	1.8	1.8	--	0.03	0.2	--	0.05
AUG 25...	--	0.01	2.0	2.0	--	0.03	0.2	--	0.06
SEP 22...	--	<0.01	1.8	1.8	--	0.02	0.2	--	0.08

K-Based on non-ideal colony counts

07104000 MONUMENT CREEK AT PIKEVIEW, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 14...	<1	<1	<1	<1	<1	2	<1	1200	9
NOV 10...	<1	<1	<1	<1	<1	3	<1	1800	12
DEC 16...	<1	<1	1	<1	<1	3	<1	1300	8
JAN 27...	<1	<1	--	<1	<1	5	<1	9200	10
FEB 17...	<1	<1	<1	<1	<1	3	1	2100	9
MAR 24...	<1	<1	2	<1	<1	2	<1	1200	10
APR 28...	<1	<1	<1	<1	<1	2	<1	1700	11
MAY 19...	<1	<1	<1	<1	<1	3	1	2000	7
JUN 09...	<1	<1	<1	<1	<1	2	1	1000	9
JUL 28...	<1	<1	<1	<1	<1	3	<1	1800	<3
AUG 25...	<1	<1	2	1	<1	4	<1	2100	7
SEP 22...	<1	<1	<1	<1	<1	4	<1	1700	3

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 14...	1	<1	60	17	2	<1	<10	<3
NOV 10...	3	<1	100	28	3	1	20	5
DEC 16...	3	<1	80	31	2	2	20	4
JAN 27...	18	<1	360	24	7	1	80	<3
FEB 17...	3	<1	100	33	3	1	30	5
MAR 24...	2	<1	80	34	3	<1	20	<3
APR 28...	3	<1	100	17	2	<1	20	<3
MAY 19...	2	<1	80	16	1	<1	10	<3
JUN 09...	1	<1	50	23	2	1	<10	3
JUL 28...	2	<1	60	6	3	<1	10	<3
AUG 25...	3	<1	60	5	2	<1	<10	<3
SEP 22...	3	<1	50	9	2	<1	20	<3

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT 01...	1120	12	497	15.5	MAY 05...	1245	27	291	13.5
NOV 06...	1330	20	517	8.5	25...	1140	41	273	12.5
DEC 23...	1458	21	436	0.0	JUN 15...	1240	16	357	25.0
JAN 26...	1330	31	414	0.5	22...	1250	13	428	25.5
MAR 10...	1145	15	435	4.0	AUG 12...	1115	9.9	470	23.5
APR 13...	1240	35	298	13.0	SEP 08...	1255	37	342	18.5

07104905 MONUMENT CREEK AT BIJOU STREET, AT COLORADO SPRINGS, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°50'14", long 104°49'44", in NW¹/₄NW¹/₄ sec.18, T.14 S., R.66 W., El Paso County, Hydrologic Unit 11020003 at bridge on Bijou Street in Colorado Springs.

PERIOD OF RECORD.--December 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT											
23...	1530	16	661	8.6	16.5	7.6	0.7	K100	K180	82	14
NOV											
20...	1550	54	597	8.3	4.5	10.4	3.2	K400	1600	64	10
DEC											
11...	1610	28	614	8.4	0.0	11.5	0.9	120	K200	69	12
JAN											
08...	1605	37	570	8.4	1.0	11.1	2.0	K6600	8500	64	9.7
FEB											
19...	1500	39	628	8.4	7.0	9.6	1.5	<100	K300	73	12
MAR											
25...	1515	36	500	8.4	16.0	8.2	1.1	K40	47	62	9.8
APR											
15...	1735	170	233	8.3	12.5	8.4	2.9	K280	1300	26	3.9
MAY											
13...	1545	42	391	8.4	22.5	7.0	0.9	200	K280	46	7.2
JUN											
03...	1520	78	307	8.3	20.0	7.1	12	K4700	K8900	35	5.4
JUL											
08...	1600	22	658	8.4	21.5	6.9	E15	>2000	>2000	80	14
AUG											
19...	1445	18	630	--	28.0	6.2	1.0	K130	K1100	77	13
SEP											
16...	1500	15	742	8.4	24.0	--	0.4	590	K3000	89	15

DATE	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	RESIDUE TOTAL AT 105 DEC. C, SUS- PENDE (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)
OCT										
23...	169	150	24	1.8	39	0.02	3.1	0.02	0.40	0.06
NOV										
20...	136	110	39	1.3	330	0.05	2.7	0.05	0.30	0.09
DEC										
11...	149	130	25	1.6	200	0.02	3.0	0.05	0.50	0.10
JAN										
08...	128	120	22	1.3	696	0.07	3.0	0.12	0.90	0.19
FEB										
19...	134	140	23	1.4	580	0.02	3.2	0.02	0.50	0.16
MAR										
25...	102	99	25	1.1	202	0.05	1.9	0.08	0.30	0.21
APR										
15...	65	38	8.2	1.7	825	0.02	0.60	0.02	1.0	0.10
MAY										
13...	90	71	16	1.4	104	0.04	1.2	0.05	0.20	0.22
JUN										
03...	87	54	12	1.0	720	0.03	1.2	0.08	0.40	0.14
JUL										
08...	119	150	26	1.2	162	0.06	3.0	0.20	1.0	0.16
AUG										
19...	147	140	22	1.1	150	0.06	2.7	0.05	0.30	0.12
SEP										
16...	168	110	16	1.1	38	<0.01	3.5	0.02	0.30	0.06

E-Estimated.

K-Based on non-ideal colony counts.

07104905 MONUMENT CREEK AT BIJOU STREET, AT COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 23...	<1	<1	<1	<1	<1	4	<1	1500	9
NOV 20...	<1	<1	6	<1	<1	10	2	8800	19
DEC 11...	<1	<1	3	<1	<1	3	1	4800	21
JAN 08...	<1	<1	7	<1	<1	12	1	10000	7
FEB 19...	<1	<1	7	<1	<1	9	1	11000	10
MAR 25...	<1	<1	<1	<1	<1	3	<1	3800	10
APR 15...	<1	<1	15	<1	<1	8	<1	31000	52
MAY 13...	<1	<1	<1	<1	<1	2	1	1800	10
JUN 03...	<1	<1	9	1	<1	17	1	12000	17
JUL 08...	<1	<1	1	<1	1	5	2	2500	14
AUG 19...	<1	<1	3	<1	<1	6	2	2200	<3
SEP 16...	<1	<1	<1	<1	<1	2	2	640	<3

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 23...	4	<1	50	2	3	1	10	4
NOV 20...	18	<1	260	3	9	<1	80	6
DEC 11...	4	<1	120	2	3	2	30	<3
JAN 08...	16	<1	250	2	8	<1	80	12
FEB 19...	13	<1	250	3	8	2	70	<3
MAR 25...	6	<1	110	2	3	1	30	4
APR 15...	43	<1	740	8	16	<1	170	25
MAY 13...	3	<1	80	1	2	5	20	12
JUN 03...	55	<1	400	7	10	<1	150	<3
JUL 08...	9	<1	90	8	3	2	30	6
AUG 19...	5	<1	50	1	4	<1	40	4
SEP 16...	1	<1	30	1	2	1	<10	<3

07104905 MONUMENT CREEK AT BIJOU STREET, AT COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT								
14...	1445	20	687	8.6	15.0	7.9	2.5	870
NOV								
10...	1450	20	678	8.6	5.5	12.6	0.1	K150
DEC								
16...	1510	16	693	8.4	0.0	10.4	0.2	K31
JAN								
27...	1510	12	709	8.4	0.0	11.8	0.5	93
FEB								
17...	1545	16	847	8.5	0.0	11.5	0.4	K43
MAR								
24...	1415	18	645	8.5	18.0	7.5	0.4	K30
APR								
28...	1440	39	402	8.4	22.0	7.0	1.2	K37
MAY								
19...	1510	37	416	8.4	17.0	7.5	1.1	91
JUN								
09...	1510	19	539	8.6	18.5	7.2	0.8	180
JUL								
28...	1530	8.4	796	8.5	28.5	6.2	E0.8	K220
AUG								
25...	1510	6.1	825	8.5	29.0	6.1	0.4	240
SEP								
22...	1515	14	678	8.6	21.5	7.4	0.8	120

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT							
14...	1400	87	14	164	150	24	1.3
NOV							
10...	K400	80	13	158	140	25	1.2
DEC							
16...	K410	86	15	157	160	25	1.2
JAN							
27...	130	85	15	149	160	25	1.1
FEB							
17...	100	98	20	180	210	30	1.3
MAR							
24...	K36	72	13	137	150	25	1.2
APR							
28...	190	47	8.0	93	74	15	1.4
MAY							
19...	430	46	8.1	99	83	15	1.5
JUN							
09...	K440	61	11	121	120	19	1.5
JUL							
28...	110	91	17	155	210	25	1.4
AUG							
25...	83	96	18	172	210	26	1.3
SEP							
22...	120	80	14	156	150	23	1.2

E-Estimated.

K-Based on non-ideal colony counts.

07104905 MONUMENT CREEK AT BIJOU STREET, AT COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 14...	0.02	--	3.2	--	0.02	--	0.7	0.06	--
NOV 10...	0.02	--	3.4	--	0.02	--	0.3	0.11	--
DEC 16...	0.02	--	3.9	--	0.09	--	0.2	0.10	--
JAN 27...	--	0.02	4.0	4.0	--	0.04	0.3	--	0.08
FEB 17...	--	0.02	4.5	4.5	--	0.02	0.3	--	0.09
MAR 24...	--	0.01	2.9	2.9	--	0.02	<0.2	--	0.11
APR 28...	--	<0.01	1.3	1.3	--	0.02	0.2	--	0.11
MAY 19...	--	<0.01	1.3	1.3	--	0.02	<0.2	--	0.10
JUN 09...	--	<0.01	2.3	2.3	--	0.04	0.3	--	0.09
JUL 28...	--	0.01	3.6	3.6	--	0.02	0.2	--	0.05
AUG 25...	--	0.01	4.1	4.1	--	0.02	0.2	--	0.04
SEP 22...	--	<0.01	3.3	3.3	--	0.02	0.2	--	0.05

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS- (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 14...	<1	2	5	<1	<1	6	1	4100	7
NOV 10...	<1	<1	<1	<1	<1	2	<1	1600	4
DEC 16...	<1	<1	<1	<1	<1	2	<1	560	3
JAN 27...	<1	<1	--	<1	<1	5	<1	3500	16
FEB 17...	<1	<1	<1	<1	<1	3	<1	1900	4
MAR 24...	<1	<1	3	3	<1	3	1	2200	<3
APR 28...	<1	<1	<1	<1	<1	5	1	3900	7
MAY 19...	<1	<1	2	<1	<1	5	1	4200	5
JUN 09...	<1	<1	2	<1	<1	3	2	1800	<3
JUL 28...	<1	<1	<1	<1	<1	2	2	520	5
AUG 25...	<1	<1	<1	<1	<1	2	<1	470	4
SEP 22...	<1	<1	<1	<1	<1	3	1	1500	<3

07104905 MONUMENT CREEK AT BIJOU STREET, AT COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS 2N)	ZINC, DIS- SOLVED (UG/L AS 2N)
OCT								
14...	6	<1	150	3	4	<1	30	14
NOV								
10...	2	<1	80	3	2	2	10	<3
DEC								
16...	1	<1	30	4	2	2	20	3
JAN								
27...	5	<1	120	5	5	2	20	3
FEB								
17...	3	<1	70	3	3	2	30	4
MAR								
24...	3	<1	90	1	3	<1	20	<3
APR								
28...	7	<1	140	1	4	1	30	<3
MAY								
19...	5	<1	130	1	4	<1	30	<3
JUN								
09...	5	<1	60	<1	3	<1	20	<3
JUL								
28...	<1	<1	20	2	2	<1	<10	<3
AUG								
25...	2	<1	10	2	1	<1	<10	6
SEP								
22...	2	<1	40	1	2	<1	10	<3

07105000 BEAR CREEK NEAR COLORADO SPRINGS, CO

LOCATION.--Lat 38°49'21", long 104°53'17", in NE1/4NE1/4 sec.21, T.14 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on left bank, 30 ft east of 26th Street, 0.6 mi southwest of Bear Creek Nature Center, and 3.4 mi upstream from mouth.

DRAINAGE AREA.--6.89 mi².

PERIOD OF RECORD.--May 1992 to September 1992.

GAGE.--Water-stage recorder. Elevation of gage is 6,520 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 13 to Mar. 18, Apr. 22-23, June 20-26, Aug. 16-22, Aug. 29 to Sept. 2, Sept. 9-13, and Sept. 21-29. Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.20	.08	.22	.33	.39	.44	.54	.59	.07	.51	.50
2	.17	.11	.09	.30	.33	.39	.36	.30	1.6	.05	.44	.70
3	.16	.14	.12	.29	.32	.38	.33	.21	1.7	.05	.32	.60
4	.42	.06	.09	.27	.32	.37	.44	.19	.30	.09	.57	1.3
5	.46	.30	.36	.24	.32	.36	.50	.20	.37	.08	.42	.95
6	.16	.25	.23	.22	.33	.36	.51	.22	.65	.07	.55	1.6
7	.49	.04	.09	.21	.34	.35	.51	.19	.66	.11	.40	1.3
8	.13	.04	.11	.20	.36	.34	.41	.22	.79	.11	.45	1.8
9	.13	.05	.25	.21	.38	.33	.47	.23	.54	.08	.67	1.0
10	.31	.05	.08	.22	.39	.32	.49	.28	.41	.08	1.3	.75
11	.12	.06	.12	.24	.42	.32	.32	.38	.20	.58	2.0	.54
12	.12	.07	.11	.25	.39	.31	.41	.64	.16	.21	2.1	.40
13	.29	.04	.11	.27	.37	.31	.25	1.0	.15	.17	.55	.50
14	.11	.06	.16	.29	.36	.30	.27	.99	.24	.28	.50	.54
15	.13	.07	.17	.28	.34	.33	.22	.77	.26	.22	.49	.62
16	1.2	.09	.19	.26	.33	.42	.22	.74	.22	.91	.35	.27
17	1.1	.14	.20	.25	.32	.50	.20	.93	.71	1.4	.21	.25
18	.14	.72	.22	.27	.31	.70	.17	2.1	.70	.37	.20	.22
19	.11	.33	.21	.28	.32	.97	.22	1.2	.90	.34	.22	.20
20	.12	.42	.20	.30	.33	1.3	.26	1.1	.50	.39	.20	.24
21	1.3	.12	.20	.39	.35	.93	.23	.86	.40	.23	.21	.20
22	.72	.08	.20	.37	.36	.59	.20	.86	.30	.23	.20	.30
23	.12	.20	.19	.36	.38	.40	.22	1.1	.25	.17	.22	.35
24	1.1	.04	.19	.36	.39	.32	.28	1.8	.50	.24	.45	.40
25	.04	.03	.19	.37	.40	.33	.31	4.0	.30	.18	.55	.30
26	.55	.03	.19	.37	.40	.44	.24	3.0	.20	.44	.33	.20
27	.43	.09	.19	.39	.40	1.3	.20	.86	.17	.46	.60	.20
28	.52	.09	.19	.40	.40	.89	.20	.52	.14	.30	.95	.25
29	.10	.18	.20	.38	---	.50	.21	.31	.08	.44	.50	.20
30	.10	.16	.20	.36	---	.52	.20	.41	.06	.48	.25	.20
31	.36	---	.21	.34	---	.78	---	.69	---	.45	.20	---
TOTAL	11.38	4.26	5.34	9.16	9.99	16.05	9.29	26.84	14.05	9.28	16.91	16.88
MEAN	.37	.14	.17	.30	.36	.52	.31	.87	.47	.30	.55	.56
MAX	1.3	.72	.36	.40	.42	1.3	.51	4.0	1.7	1.4	2.1	1.8
MIN	.04	.03	.08	.20	.31	.30	.17	.19	.06	.05	.20	.20
AC-FT	23	8.4	11	18	20	32	18	53	28	18	34	33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1993, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1992	.37	.37	1993	.37	1993
1993	.14	.14	1993	.14	1993
1994	.17	.17	1993	.17	1993
1995	.30	.30	1993	.30	1993
1996	.36	.36	1993	.36	1993
1997	.52	.52	1993	.52	1993
1998	.31	.31	1993	.31	1993
1999	.87	.87	1993	.87	1993
2000	.97	1.48	1992	.47	1993
2001	.55	.81	1992	.30	1993
2002	.78	1.02	1992	.55	1993
2003	.43	.56	1993	.30	1992

SUMMARY STATISTICS

FOR 1993 WATER YEAR

WATER YEARS 1992 - 1993

ANNUAL TOTAL	149.43	
ANNUAL MEAN	.41	.41
HIGHEST ANNUAL MEAN		.41
LOWEST ANNUAL MEAN		.41
HIGHEST DAILY MEAN	4.0	5.4
LOWEST DAILY MEAN	.03	.02
ANNUAL SEVEN-DAY MINIMUM	.05	.05
INSTANTANEOUS PEAK FLOW	13	13
INSTANTANEOUS PEAK STAGE	1.36	1.36
ANNUAL RUNOFF (AC-FT)	296	297
10 PERCENT EXCEEDS	.86	1.5
50 PERCENT EXCEEDS	.31	.37
90 PERCENT EXCEEDS	.11	.11

a-Also occurred Nov 26.

07105490 CHEYENNE CREEK AT EVANS AVENUE AT COLORADO SPRINGS, CO

LOCATION.--Lat 38°47'26", Long 104°51'49", SW¹/₄NW¹/₄ sec.35, T.14 S., R.67W., El Paso County, Hydrologic Unit 11020003, on right bank 23 ft upstream from Evans Avenue, 30 ft downstream from the confluence of North and South Cheyenne Creeks, and 3.1 mi upstream from the mouth.

DRAINAGE AREA.--21.7 mi² (revised).

PERIOD OF RECORD.--April to September 1992.

GAGE.--Water-stage recorder. Elevation of gage is 6,280 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 30 to Feb. 8. Records good except for discharges below 1.5 ft³/s and estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.74	.67	.54	.98	.44	.23	2.4	2.0	.64	1.2	1.4
2	2.3	1.0	.60	.58	.92	.42	.56	1.1	5.6	.46	2.2	3.8
3	1.6	1.2	.57	.56	.86	.32	.86	2.2	7.1	.36	1.2	2.8
4	.88	.96	.44	.54	.84	.31	.66	1.5	3.6	.33	.92	1.4
5	.91	.77	.44	.54	.82	.35	.81	1.6	2.7	.49	2.3	2.6
6	.64	.73	.44	.54	.82	.25	.97	1.8	2.5	.44	3.0	2.9
7	.88	.79	.46	.54	.84	.22	.38	1.6	2.9	.73	1.7	3.6
8	.69	.74	.44	.54	.86	.23	.10	1.7	2.3	.90	1.6	2.3
9	.80	.73	.44	.54	1.2	.22	.11	1.8	2.7	.76	1.4	1.0
10	.71	.73	.44	.53	2.0	.22	.26	1.2	2.4	.94	7.1	2.1
11	.63	.73	.44	.52	2.0	.22	.88	1.1	1.7	3.5	5.9	1.9
12	.52	.77	.44	.52	2.0	.23	1.3	.67	1.3	3.9	2.7	.40
13	.44	.88	.44	.51	2.1	.31	2.5	.84	1.0	1.7	2.5	.39
14	.50	.91	.41	.50	2.1	.22	.94	1.1	1.3	1.4	2.0	.35
15	.55	.95	.44	.52	2.0	.22	.65	1.5	1.4	1.2	1.6	.31
16	.60	1.2	.44	.58	2.0	.22	.75	5.2	1.1	.85	1.5	.29
17	.63	1.4	.44	.80	2.0	.22	1.1	4.1	7.9	.64	1.6	.29
18	.61	.91	.44	1.0	2.0	.53	.22	5.0	8.3	1.1	2.6	.30
19	.61	.73	.44	1.3	2.1	.57	.34	3.1	4.7	1.1	2.6	.28
20	.53	.64	.44	1.4	2.5	.85	.35	5.5	4.1	.67	1.7	.27
21	.46	1.0	.44	1.6	2.4	.55	.92	4.5	4.1	.70	1.6	.29
22	.46	.91	.44	1.6	2.3	.62	.99	4.2	2.3	.78	1.6	.52
23	.60	.64	.44	1.6	2.3	.72	.91	2.0	1.0	.88	2.0	.44
24	.61	.69	.44	1.6	2.1	.71	.65	6.8	.56	.71	2.3	.44
25	.60	.71	.44	1.5	1.1	1.6	1.0	8.3	.49	.52	1.8	.37
26	.61	.70	.44	1.3	.55	1.9	1.2	6.1	.46	.50	1.4	.37
27	.53	.73	.44	1.2	.54	2.0	2.0	12	.60	.75	1.3	.36
28	.60	.73	.44	1.3	.51	.60	2.0	10	.68	1.3	.68	.33
29	.61	.73	.44	1.2	---	.44	1.2	14	.49	1.3	.55	.37
30	.61	.73	.46	1.1	---	.39	1.5	8.0	.57	1.2	2.3	1.5
31	.86	---	.50	1.0	---	.36	---	5.7	---	1.1	1.8	---
TOTAL	22.68	25.08	14.23	28.10	42.74	16.46	26.34	126.61	77.85	31.85	64.65	33.67
MEAN	.73	.84	.46	.91	1.53	.53	.88	4.08	2.59	1.03	2.09	1.12
MAX	2.3	1.4	.67	1.6	2.5	2.0	2.5	14	8.3	3.9	7.1	3.8
MIN	.44	.64	.41	.50	.51	.22	.10	.67	.46	.33	.55	.27
AC-FT	45	50	28	56	85	33	52	251	154	63	128	67

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 1993, BY WATER YEAR (WY)

	MEAN	.73	.84	.46	.91	1.53	.53	.88	12.2	7.43	1.83	3.68	1.44
	MAX	.73	.84	.46	.91	1.53	.53	.88	20.3	12.3	2.63	5.28	1.75
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1992	1992	1992	1992	1992
	MIN	.73	.84	.46	.91	1.53	.53	.88	4.08	2.59	1.03	2.09	1.12
(WY)	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993	1993

SUMMARY STATISTICS

FOR 1993 WATER YEAR

WATER YEARS 1992 - 1993

ANNUAL TOTAL	510.26		
ANNUAL MEAN	1.40	1.40	
HIGHEST ANNUAL MEAN		1.40	1993
LOWEST ANNUAL MEAN		1.40	1993
HIGHEST DAILY MEAN	14	May 29	28
LOWEST DAILY MEAN	.10	Apr 8	.10
ANNUAL SEVEN-DAY MINIMUM	.23	Mar 6	.23
INSTANTANEOUS PEAK FLOW	54	Jun 17	54
INSTANTANEOUS PEAK STAGE	1.19	Jun 17	1.19
ANNUAL RUNOFF (AC-FT)	1010		1010
10 PERCENT EXCEEDS	2.6		14
50 PERCENT EXCEEDS	.84		1.2
90 PERCENT EXCEEDS	.37		.44

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO

LOCATION.--Lat 38°48'59", long 104°49'20", in NE1/4SW1/4 sec.19, T.14 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on left bank 31 ft upstream from bridge on Nevada Ave. in Colorado Springs, 100 ft downstream from mouth of Cheyenne Creek, and 1.3 mi downstream from Monument Creek.

DRAINAGE AREA.--392 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to September 1924, January 1976 to current year. Monthly discharge only for some periods, published in WSP 1311. Statistical summary computed for 1976 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,900 ft above sea level, from topographic map. Prior to Oct. 1, 1972, nonrecording gage at same site at different datum.

REMARKS.--Estimated daily discharges: Dec. 7-9, Jan. 16-17, and Feb. 6-8. Records good except for estimated daily discharges and those above 1000 ft³/s, which are poor. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation and municipal use, return flow from irrigated areas and discharges from sewage treatment plants.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	43	35	30	23	23	22	38	52	15	47	19
2	23	36	32	33	22	22	21	34	80	13	43	26
3	23	35	31	21	19	24	34	32	61	12	23	22
4	21	33	29	9.1	22	24	29	29	37	12	47	18
5	24	34	23	9.7	22	25	31	29	33	13	31	42
6	27	35	27	12	24	27	47	28	27	11	21	218
7	26	32	30	8.7	26	26	47	30	25	11	18	86
8	25	33	32	8.1	26	27	35	28	23	9.6	17	57
9	26	33	30	10	26	26	34	28	42	9.5	15	34
10	25	31	29	32	28	25	34	29	25	9.8	26	34
11	24	47	30	25	23	20	34	27	16	107	24	27
12	23	35	28	21	28	22	57	29	15	35	17	22
13	23	31	23	19	26	25	67	30	15	35	21	21
14	23	32	19	19	24	26	39	34	16	31	17	22
15	24	31	20	15	20	25	40	79	15	47	15	20
16	24	31	24	16	13	22	39	75	15	34	13	16
17	26	31	26	18	17	21	39	62	686	26	11	16
18	26	33	25	18	30	22	40	56	221	35	13	20
19	27	32	23	20	32	23	39	46	59	142	13	20
20	27	35	23	23	26	22	39	44	63	63	13	18
21	27	57	23	21	20	21	32	40	102	36	18	18
22	27	47	24	19	21	23	31	41	56	23	17	18
23	26	36	25	17	22	21	28	33	38	22	13	18
24	27	18	30	15	23	19	58	77	25	18	12	19
25	30	23	30	22	22	18	47	88	22	16	11	18
26	33	31	28	18	21	20	31	53	18	14	11	17
27	32	35	30	18	23	27	38	71	21	11	21	16
28	28	40	28	19	25	24	51	90	19	27	24	16
29	30	35	29	18	---	36	42	88	16	31	17	15
30	31	34	35	21	---	42	39	59	17	19	37	15
31	46	---	30	24	---	26	---	71	---	20	23	---
TOTAL	826	1039	851	579.6	654	754	1164	1498	1860	907.9	649	928
MEAN	26.6	34.6	27.5	18.7	23.4	24.3	38.8	48.3	62.0	29.3	20.9	30.9
MAX	46	57	35	33	32	42	67	90	686	142	47	218
MIN	21	18	19	8.1	13	18	21	27	15	9.5	11	15
AC-FT	1640	2060	1690	1150	1300	1500	2310	2970	3690	1800	1290	1840

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1993, BY WATER YEAR (WY)

	MEAN	40.8	35.4	28.8	26.4	25.8	37.8	70.4	155	94.2	63.6	73.6	37.7
MAX	212	143	81.3	61.6	56.6	83.6	166	767	350	227	167	76.0	
(WY)	1985	1985	1985	1985	1985	1985	1985	1985	1980	1983	1983	1983	1985
MIN	10.6	11.4	11.8	5.12	6.27	11.4	14.8	23.5	16.3	12.9	20.9	7.98	
(WY)	1978	1979	1979	1979	1979	1979	1978	1976	1976	1976	1993	1978	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1976 - 1993
ANNUAL TOTAL	20501	11710.5	
ANNUAL MEAN	56.0	32.1	59.6
HIGHEST ANNUAL MEAN			141
LOWEST ANNUAL MEAN			23.2
HIGHEST DAILY MEAN	508	686	1810
LOWEST DAILY MEAN	^a 17	8.1	2.0
ANNUAL SEVEN-DAY MINIMUM	20	11	3.3
INSTANTANEOUS PEAK FLOW		^b 5750	^c 6000
INSTANTANEOUS PEAK STAGE		9.18	^d 7.15
ANNUAL RUNOFF (AC-FT)	40660	23230	43150
10 PERCENT EXCEEDS	112	47	122
50 PERCENT EXCEEDS	36	26	31
90 PERCENT EXCEEDS	23	15	13

a-Also occurred Jan 15.

b-From rating curve extended on basis of slope-area measurement of peak flow.

c-From rating curve extended above 2,400 ft³/s.

d-Maximum gage height, 9.18 ft, Jun 17, 1993.

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1975 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT											
24...	1140	35	700	8.2	10.0	8.6	22	K8300	7300	66	18
NOV											
21...	1145	49	508	8.2	8.0	9.2	0.9	K200	K500	53	11
DEC											
12...	1245	55	1300	8.1	4.5	10.8	--	K1300	3100	57	11
JAN											
09...	1225	14	726	8.2	2.5	10.8	1.4	K250	1300	77	16
FEB											
20...	1220	36	607	8.4	9.0	10.2	1.0	K30	K150	68	14
MAR											
26...	1130	72	453	8.3	13.5	9.2	1.4	90	110	52	10
APR											
16...	1245	181	240	8.1	12.0	8.4	1.6	K270	600	26	4.6
MAY											
14...	1120	63	376	8.3	19.0	8.1	1.2	300	360	42	8.2
JUN											
04...	1205	82	304	8.2	20.0	8.0	1.9	550	K1300	33	6.4
JUL											
09...	1105	38	524	8.3	18.5	9.8	1.0	1000	780	57	12
AUG											
20...	1220	28	621	8.4	23.5	6.7	0.5	490	K380	70	14
SEP											
17...	0945	32	612	8.2	14.5	7.8	0.5	K440	1300	64	14

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SULFIDE TOTAL (MG/L AS S)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)
OCT											
24...	145	180	19	2.4	--	156	0.05	2.2	0.26	1.2	0.08
NOV											
21...	120	99	26	2.0	<0.5	65	0.02	1.7	0.02	0.20	0.04
DEC											
12...	131	110	260	1.5	--	450	0.05	2.1	0.14	1.1	0.10
JAN											
09...	155	170	31	1.6	--	137	0.03	2.8	0.05	0.30	0.08
FEB											
20...	137	130	24	1.8	--	157	0.02	2.3	0.02	0.30	0.11
MAR											
26...	98	89	21	1.9	--	122	0.04	1.4	0.06	0.30	0.12
APR											
16...	65	38	8.7	2.2	--	403	0.01	0.57	0.02	0.70	0.06
MAY											
14...	87	67	16	2.2	<0.5	64	0.03	1.2	0.04	<0.20	0.11
JUN											
04...	71	54	11	2.6	--	89	0.03	0.80	0.04	<0.20	0.11
JUL											
09...	123	110	19	2.4	--	64	0.03	1.6	0.04	0.20	0.07
AUG											
20...	146	130	24	1.9	--	58	0.03	2.1	0.04	0.20	0.07
SEP											
17...	139	130	21	2.0	--	44	<0.01	2.0	<0.01	<0.20	0.03

K-Based on non-ideal colony counts.

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 24...	--	--	--	--	<1	<1	<1	<1	<1	9	4
NOV 21...	<1	<1	60	60	<1	<1	2	1	<1	<1	1
DEC 12...	--	--	--	--	<1	<1	14	<1	<1	12	2
JAN 09...	--	--	--	--	<1	<1	2	<1	<1	5	1
FEB 20...	--	--	--	--	<1	<1	3	<1	<1	8	1
MAR 26...	--	--	--	--	<1	<1	2	<1	<1	2	1
APR 16...	--	--	--	--	<1	<1	4	<1	<1	<1	<1
MAY 14...	1	<1	50	50	<1	<1	<1	<1	<1	2	<1
JUN 04...	--	--	--	--	<1	<1	<1	<1	<1	3	<1
JUL 09...	--	--	--	--	<1	<1	<1	<1	<1	3	1
AUG 20...	--	--	--	--	<1	<1	3	<1	<1	3	1
SEP 17...	--	--	--	--	<1	<1	1	<1	<1	3	1

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
OCT 24...	3700	48	11	1	200	59	5	2	50	20	--
NOV 21...	2200	12	3	<1	80	17	3	2	20	6	<0.01
DEC 12...	11000	15	42	<1	290	29	10	<1	130	10	--
JAN 09...	3000	6	7	<1	120	31	3	<1	30	9	--
FEB 20...	3800	7	5	<1	110	19	3	<1	40	4	--
MAR 26...	2900	12	4	<1	90	12	2	<1	30	6	--
APR 16...	9800	17	16	<1	290	4	5	<1	80	10	--
MAY 14...	1800	15	3	<1	100	11	1	2	20	<3	<0.01
JUN 04...	2400	6	5	<1	100	6	2	<1	30	<3	--
JUL 09...	1000	13	3	<1	60	11	1	<1	<10	6	--
AUG 20...	1400	<3	4	<1	60	10	2	<1	40	<3	--
SEP 17...	1300	6	13	<1	70	19	2	<1	20	3	--

ARKANSAS RIVER BASIN

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
24...	1140	35	214	20	--
NOV					
21...	1145	49	162	21	57
DEC					
12...	1245	55	729	108	76
JAN					
09...	1225	14	257	9.7	--
FEB					
20...	1220	36	213	21	--
MAR					
26...	1130	72	198	38	--
APR					
16...	1245	181	1010	494	43
MAY					
14...	1120	63	276	47	--
27...	1145	109	391	115	--
JUN					
03...	1620	98	555	147	72
04...	1205	82	194	43	75
26...	1830	1310	10300	36400	--
26...	1850	1030	9680	26900	--
26...	1905	958	9910	25600	--
29...	1350	66	242	43	--
JUL					
09...	1105	38	77	7.9	--
AUG					
13...	1225	55	614	91	--
20...	1220	28	296	22	98
SEP					
17...	0945	32	55	4.8	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT								
15...	1020	26	717	8.3	7.5	9.6	E0.8	K92
NOV								
12...	1155	41	549	8.3	3.0	10.4	1.4	410
DEC								
17...	1110	30	706	8.2	0.0	11.4	E0.7	K25
JAN								
28...	1105	15	758	8.3	0.0	11.6	0.2	K28
FEB								
18...	1130	19	761	8.2	0.0	11.0	0.5	K11
MAR								
25...	0950	18	709	8.4	8.5	9.7	0.4	59
APR								
29...	1005	46	490	8.4	11.0	9.6	0.6	75
MAY								
20...	1020	51	445	8.3	10.5	8.8	1.1	230
JUN								
10...	1040	25	572	8.3	15.0	8.1	1.0	K470
JUL								
29...	1035	26	578	8.1	20.5	6.8	E3.0	>400
AUG								
26...	1030	12	984	8.3	18.5	8.1	0.5	720
SEP								
23...	1030	18	789	8.4	12.0	8.8	1.0	600

E-Estimated.

K-Based on non-ideal colony counts.

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SULFIDE TOTAL (MG/L AS S)
OCT 15...	K450	84	17	173	160	26	1.7	--
NOV 12...	880	57	12	125	98	28	1.9	0.8
DEC 17...	--	80	17	156	160	25	1.7	--
JAN 28...	120	82	19	155	190	28	1.8	--
FEB 18...	K60	81	18	157	180	34	1.8	--
MAR 25...	K50	74	16	149	170	27	1.5	--
APR 29...	200	53	11	113	96	18	1.7	--
MAY 20...	450	47	9.6	103	94	16	1.9	<0.5
JUN 10...	980	61	13	85	130	19	1.6	--
JUL 29...	K1600	61	13	122	140	20	1.3	--
AUG 26...	570	100	25	191	270	31	1.6	--
SEP 23...	620	86	19	170	190	27	1.4	--

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 15...	0.02	--	2.6	--	0.02	--	0.2	0.04	--
NOV 12...	0.03	--	1.8	--	0.05	--	0.4	0.07	--
DEC 17...	0.02	--	3.2	--	0.05	--	0.2	0.06	--
JAN 28...	--	0.02	3.1	3.1	--	0.03	<0.2	--	0.05
FEB 18...	--	0.03	3.7	3.7	--	0.02	0.3	--	0.06
MAR 25...	--	0.02	2.6	2.6	--	0.02	0.4	--	0.08
APR 29...	--	<0.01	1.3	1.3	--	0.02	<0.2	--	0.08
MAY 20...	--	<0.01	1.4	1.4	--	0.02	<0.2	--	0.07
JUN 10...	--	0.02	1.8	1.8	--	0.02	0.2	--	0.05
JUL 29...	--	0.06	1.8	1.8	--	0.03	0.5	--	0.02
AUG 26...	--	0.02	3.5	3.5	--	0.09	0.2	--	0.04
SEP 23...	--	<0.01	3.0	3.0	--	0.02	0.2	--	0.04

K-Based on non-ideal colony counts.

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 15...	--	--	--	--	<1	<1	<1	<1	<1	2	1
NOV 12...	3	<1	70	60	<1	<1	<1	<1	<1	4	1
DEC 17...	--	--	--	--	<1	<1	<1	1	<1	2	<1
JAN 28...	--	--	--	--	<1	<1	--	<1	<1	2	2
FEB 18...	--	--	--	--	<1	<1	2	<1	<1	3	1
MAR 25...	--	--	--	--	<1	<1	<1	<1	<1	2	<1
APR 29...	--	--	--	--	<1	<1	<1	<1	<1	4	<1
MAY 20...	2	<1	60	60	<1	<1	2	<1	<1	4	1
JUN 10...	--	--	--	--	<1	<1	<1	<1	<1	3	2
JUL 29...	--	--	--	--	<1	<1	<1	<1	<1	7	2
AUG 26...	--	--	--	--	<1	<1	<1	<1	<1	3	<1
SEP 23...	--	--	--	--	<1	<1	<1	<1	<1	4	1

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
OCT 15...	970	11	3	<1	80	34	2	<1	<10	<3	--
NOV 12...	2900	9	12	<1	170	25	3	<1	30	5	<0.01
DEC 17...	850	6	4	<1	80	36	2	1	20	8	--
JAN 28...	1300	8	4	<1	100	47	3	1	20	10	--
FEB 18...	2100	7	6	<1	110	30	3	1	40	6	--
MAR 25...	1600	6	2	<1	90	25	3	1	20	5	--
APR 29...	3100	9	7	<1	130	8	3	1	20	<3	--
MAY 20...	3100	6	5	<1	110	8	3	<1	30	4	<0.01
JUN 10...	1700	5	3	<1	50	11	3	1	20	6	--
JUL 29...	2700	12	48	<1	150	60	3	2	60	12	--
AUG 26...	640	7	3	<1	70	40	2	1	<10	5	--
SEP 23...	1800	5	5	<1	90	27	3	<1	20	4	--

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT					MAY				
01...	1145	23	740	17.0	14...	1205	29	587	21.0
20...	1040	26	690	8.0	27...	1525	48	525	20.0
NOV					JUN				
04...	1015	33	570	0.0	21...	1150	66	--	21.5
16...	1010	35	615	3.0	28...	1015	20	--	20.5
DEC					JUL				
02...	1015	28	690	0.0	09...	1035	9.4	900	21.5
JAN					12...	1115	18	687	23.0
05...	0950	8.8	820	0.0	12...	1420	35	570	22.0
20...	1230	25	890	0.0	20...	1045	43	430	17.5
FEB					28...	1130	10	900	23.5
18...	1010	28	--	0.0	AUG				
MAR					23...	1440	14	790	27.0
09...	1250	26	663	12.5	SEP				
APR					07...	1440	38	570	19.0
06...	1125	34	582	9.5	15...	1350	20	774	20.0
20...	0935	40	503	4.0	24...	1215	21	745	17.0

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
15...	1020	26	53	3.7
NOV				
12...	1155	41	168	19
DEC				
17...	1110	30	58	4.7
JAN				
28...	1105	15	94	3.8
FEB				
18...	1130	19	144	7.4
MAR				
25...	0950	18	94	4.6
APR				
29...	1005	46	201	25
MAY				
20...	0955	51	209	29
JUN				
10...	1110	25	82	5.5
17...	2330	733	10200	20200
18...	1245	130	1590	558
JUL				
12...	1310	35	170	16
20...	1020	43	358	42
29...	1035	26	149	10
AUG				
26...	1040	12	44	1.4
SEP				
07...	1435	38	219	22
23...	1030	18	112	5.4

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD BELOW COLORADO SPRINGS, CO

LOCATION.--Lat 38°48'11", long 104°47'43", in NE¹/4SE¹/4 sec.29, T.14 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on right bank at upstream side of bridge on Janitell Road below Colorado Springs.

DRAINAGE AREA.--413 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,840 ft above sea level, from topographic map. Prior to July 10, 1990, at site 500 ft upstream, at datum 2.00 ft, higher.

REMARKS.--No estimated daily discharges. Records good except those above 500 ft³/s which are poor. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation and municipal use, return flow from irrigated areas, and flows from sewage treatment plants.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	76	84	43	104	77	67	73	59	54	111	71
2	51	75	81	47	106	78	60	73	101	47	115	88
3	53	75	76	45	108	76	78	70	78	43	61	87
4	54	74	76	39	110	79	87	77	56	47	97	60
5	52	70	73	37	102	73	92	80	48	56	84	97
6	63	74	78	44	102	78	97	77	48	51	65	353
7	56	73	83	49	96	78	96	76	73	50	55	138
8	59	75	86	45	82	80	89	78	72	46	52	130
9	56	80	61	44	78	80	91	74	86	39	54	99
10	51	74	51	48	81	78	95	73	77	37	99	103
11	51	87	50	57	72	76	100	67	68	269	89	98
12	51	78	49	62	74	76	113	67	70	97	69	88
13	45	74	43	46	76	77	124	79	72	80	74	92
14	47	78	31	49	73	79	107	80	72	82	62	103
15	45	75	35	47	73	78	110	108	71	84	54	91
16	42	68	34	49	64	74	69	118	70	76	51	80
17	44	65	45	44	68	73	64	80	945	48	44	80
18	44	65	54	47	82	76	76	86	253	67	73	84
19	41	63	45	42	89	76	87	68	109	163	84	84
20	43	60	49	47	86	76	87	63	119	109	72	78
21	41	81	43	50	82	74	75	66	208	82	73	77
22	39	78	38	62	79	76	72	67	133	54	74	74
23	39	81	44	87	79	73	77	54	89	53	63	72
24	34	67	51	84	78	70	100	104	78	48	62	70
25	37	71	48	91	77	72	103	123	76	45	57	66
26	39	77	46	89	77	73	78	63	72	51	52	63
27	41	76	46	81	76	81	75	70	73	47	85	61
28	39	76	42	79	80	85	78	86	69	65	96	63
29	44	80	40	89	---	105	68	87	64	82	71	59
30	46	73	48	95	---	114	69	65	62	49	113	58
31	69	---	44	101	---	94	---	86	---	51	90	---
TOTAL	1466	2219	1674	1839	2354	2455	2584	2438	3471	2172	2301	2767
MEAN	47.3	74.0	54.0	59.3	84.1	79.2	86.1	78.6	116	70.1	74.2	92.2
MAX	69	87	86	101	110	114	124	123	945	269	115	353
MIN	34	60	31	37	64	70	60	54	48	37	44	58
AC-FT	2910	4400	3320	3650	4670	4870	5130	4840	6880	4310	4560	5490

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1993, BY WATER YEAR (WY)

	1990	1991	1992	1993
MEAN	60.2	76.8	56.0	67.3
MAX	71.7	106	68.4	90.8
(WY)	1991	1992	1992	1992
MIN	47.3	48.6	39.5	46.2
(WY)	1993	1990	1990	1990

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1990 - 1993
ANNUAL TOTAL	35066	27740	
ANNUAL MEAN	95.8	76.0	89.3
HIGHEST ANNUAL MEAN			101
LOWEST ANNUAL MEAN			76.0
HIGHEST DAILY MEAN	796	Aug 24	945 Jun 17 1993
LOWEST DAILY MEAN	31	Dec 14	31 Dec 14 1992
ANNUAL SEVEN-DAY MINIMUM	38	Oct 22	38 Oct 22 1989
INSTANTANEOUS PEAK FLOW			a 8140 Jun 17 1993
INSTANTANEOUS PEAK STAGE			b 9.43 Jun 17 1993
ANNUAL RUNOFF (AC-FT)	69550	55020	64660
10 PERCENT EXCEEDS	140	100	129
50 PERCENT EXCEEDS	90	73	77
90 PERCENT EXCEEDS	46	45	46

a-From rating curve extended above 7000 ft³/s.
b-From floodmarks.

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD, BELOW COLORADO SPRINGS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1975 to June 1976, May 1979 to September 1979, December 1979 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1990 to current year.
 WATER TEMPERATURE: October 1990 to current year.
 pH: October 1990 to current year.
 DISSOLVED OXYGEN: October 1990 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Records for 1992 water year for daily specific conductance, daily pH, daily water temperature, and daily dissolved oxygen are good. Records for 1993 water year for daily specific conductance, daily pH, daily water temperature, and daily dissolved oxygen are fair. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance, daily mean water temperature, pH, and dissolved oxygen data available in the district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,480 microsiemens, Nov. 21, 1993; minimum, 125 microsiemens, Aug. 8, 1991.
 WATER TEMPERATURE: Maximum, 25.1°C, July 16, 1993; minimum, 0.5°C, Jan. 15, 1992 and Mar. 10, 1992.
 pH: Maximum, 8.4 units, Oct. 7-8, 17, 1991 and June 26, 1992; minimum, 6.9 units, June 17, 1993.
 DISSOLVED OXYGEN: Maximum, 11.3 mg/l, May 5, 1991; minimum, 4.4 mg/l, Mar. 28, 1991.

EXTREMES FOR 1992 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,450 microsiemens, Dec. 12; minimum, 129 microsiemens, Sept. 14.
 WATER TEMPERATURE: Maximum, 23.9°C, Aug. 15, 20, 22; minimum, 0.5°C, Jan. 15 and Mar. 10.
 pH: Maximum, 8.4 units, Oct. 7-8, 17, June 26; minimum, 7.2 units, Aug. 21.
 DISSOLVED OXYGEN: Maximum, 10.7 mg/l, Jan. 15, Feb. 19; minimum, 5.1 mg/l, Sept. 9-10.

EXTREMES FOR 1993 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,480 microsiemens, Nov. 21; minimum, 158 microsiemens, July 11.
 WATER TEMPERATURE: Maximum, 25.1°C, July 16; minimum, 2.5°C, Jan. 19 and Feb. 16.
 pH: Maximum, 8.3 units, on several days; minimum, 6.9 units, June 17.
 DISSOLVED OXYGEN: Maximum, 10.6 mg/l, Nov. 29 and Feb. 21; minimum, 4.5 mg/l, Aug. 17, 20-21.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	pH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT											
24...	1300	77	898	8.0	14.0	7.7	28	K1900	4300	62	21
NOV											
21...	1315	118	727	7.8	11.0	8.2	16	K230	3000	50	14
DEC											
12...	1405	131	1340	8.0	6.0	9.2	20	K130	3100	52	14
JAN											
09...	1340	112	845	7.8	8.5	8.2	15	K100	780	55	15
FEB											
20...	1345	110	761	7.8	11.5	8.6	12	<10	420	52	14
MAR											
26...	1300	138	712	7.9	13.0	8.1	10	<33	K320	54	16
APR											
16...	1350	166	335	7.9	11.5	8.8	5.6	K250	360	29	6.3
MAY											
14...	1300	110	544	7.9	18.5	7.4	E6.7	290	400	40	11
JUN											
04...	1310	126	603	7.8	17.5	6.9	16	600	650	41	11
JUL											
09...	1245	87	788	7.8	21.0	6.5	13	550	380	53	16
AUG											
20...	1330	78	820	7.9	23.0	6.4	9.4	370	440	55	17
SEP											
17...	1240	103	832	7.8	20.5	6.3	10	K150	K500	53	17

E-Estimated.

K-Based on non-ideal colony counts.

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD, BELOW COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SULFIDE TOTAL (MG/L AS S)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)
OCT 24...	120	210	28	1.7	--	75	0.28	2.3	7.4	9.4	2.2
NOV 21...	93	150	43	1.7	<0.5	47	0.12	1.2	7.1	9.7	2.1
DEC 12...	123	160	230	1.5	--	310	0.10	1.9	4.8	6.7	1.2
JAN 09...	116	170	47	1.6	--	45	0.10	1.2	11	14	3.3
FEB 20...	122	150	43	1.7	--	41	0.04	1.1	9.3	11	2.8
MAR 26...	112	170	51	1.6	--	54	0.06	1.3	8.7	11	2.5
APR 16...	64	58	15	2.3	--	347	0.03	0.55	2.0	3.2	0.59
MAY 14...	77	100	25	2.0	<0.5	58	0.11	1.1	4.6	5.9	1.5
JUN 04...	76	120	28	2.3	--	102	0.16	1.1	6.0	7.5	1.8
JUL 09...	93	170	50	1.6	--	52	0.25	1.6	7.7	11	2.4
AUG 20...	92	180	44	1.6	--	66	0.14	2.2	7.9	10	2.3
SEP 17...	96	180	35	1.7	--	107	0.18	2.9	8.1	9.8	2.7

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 24...	--	--	--	--	<1	<1	1	1	<1	11	6
NOV 21...	<1	1	140	140	<1	<1	2	<1	<1	3	5
DEC 12...	--	--	--	--	<1	<1	14	<1	<1	19	4
JAN 09...	--	--	--	--	<1	<1	1	2	<1	12	7
FEB 20...	--	--	--	--	<1	<1	2	<1	<1	7	5
MAR 26...	--	--	--	--	<1	<1	<1	<1	<1	6	2
APR 16...	--	--	--	--	<1	<1	6	<1	<1	<1	2
MAY 14...	1	<1	110	100	<1	<1	<1	<1	<1	5	3
JUN 04...	--	--	--	--	<1	<1	<1	<1	<1	8	2
JUL 09...	--	--	--	--	<1	<1	1	1	<1	6	4
AUG 20...	--	--	--	--	<1	<1	2	<1	<1	7	6
SEP 17...	--	--	--	--	<1	<1	2	<1	<1	9	4

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD, BELOW COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
OCT 24...	2300	67	7	<1	160	84	7	<1	60	33	--
NOV 21...	1500	43	3	1	110	56	5	2	40	24	<0.01
DEC 12...	9800	30	39	<1	290	48	10	2	130	21	--
JAN 09...	1200	50	4	1	130	77	5	3	80	51	--
FEB 20...	1500	43	2	<1	110	63	4	3	40	33	--
MAR 26...	1300	36	2	<1	100	54	4	3	40	31	--
APR 16...	8300	20	14	<1	250	11	5	1	70	5	--
MAY 14...	1400	27	3	<1	100	30	2	2	30	17	<0.01
JUN 04...	2300	50	7	<1	140	48	3	1	50	15	--
JUL 09...	880	45	4	<1	100	57	3	<1	40	25	--
AUG 20...	1400	40	4	<1	90	58	3	2	50	20	--
SEP 17...	2100	33	11	<1	140	70	4	3	50	23	--

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	695	785	739	780	741	710	570	399	410	609	784	664
2	723	765	764	782	726	705	572	405	445	591	800	684
3	740	834	798	770	727	714	581	406	466	603	776	690
4	762	879	862	743	738	427	598	412	528	595	674	700
5	740	828	800	708	757	579	578	414	546	614	751	708
6	681	759	775	744	757	636	557	415	555	630	783	709
7	669	762	771	770	756	667	553	462	513	683	777	717
8	671	734	738	792	760	518	547	494	538	679	807	711
9	695	769	734	796	744	634	522	498	546	694	805	709
10	710	730	731	782	738	677	454	450	571	734	637	748
11	712	758	759	768	733	651	395	492	600	745	667	755
12	669	782	867	760	726	675	385	500	638	724	639	742
13	635	789	798	779	733	674	360	427	637	715	493	744
14	582	770	825	790	739	672	324	484	657	709	582	658
15	---	732	777	797	749	646	306	---	631	705	647	641
16	766	736	760	775	733	643	297	---	641	684	676	750
17	757	727	789	764	740	633	328	---	655	648	650	767
18	747	638	801	776	738	643	339	---	658	686	708	801
19	750	723	910	776	743	637	345	---	613	745	688	644
20	738	725	846	768	737	639	378	512	531	761	748	617
21	740	687	822	756	744	652	406	559	531	756	685	728
22	744	737	818	773	737	663	417	553	620	747	609	791
23	745	798	806	785	731	648	417	547	623	673	689	818
24	750	792	806	769	729	658	428	567	586	781	426	828
25	726	727	798	755	735	664	---	567	508	647	463	850
26	766	738	757	736	731	669	439	503	457	659	511	813
27	763	760	776	739	725	667	424	329	375	740	582	786
28	797	764	781	742	722	570	426	428	422	782	647	756
29	821	729	798	747	725	571	407	465	456	746	683	760
30	796	739	828	748	---	582	403	447	537	768	679	760
31	815	---	804	744	---	590	---	441	---	785	671	---
MEAN	---	757	795	765	738	636	---	---	550	698	669	735

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD, BELOW COLORADO SPRINGS, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.9	7.7	8.0	7.7	8.1	7.9	8.1	8.0	8.0	7.7	8.1	7.9
2	8.0	7.8	8.0	7.8	8.1	7.8	8.1	7.9	8.0	7.8	8.1	7.8
3	8.2	7.9	8.0	7.8	8.0	7.8	8.1	7.9	8.0	7.8	8.1	7.8
4	8.2	8.0	8.0	7.8	8.0	7.8	8.2	7.9	8.0	7.8	8.2	7.9
5	8.3	8.1	8.0	7.8	8.0	7.8	8.2	8.0	8.1	7.8	8.1	7.9
6	8.3	8.1	8.0	7.8	8.0	7.8	8.1	7.9	8.0	7.7	8.1	7.9
7	8.4	8.1	8.0	7.9	8.1	7.8	8.1	7.9	8.0	7.7	8.1	7.9
8	8.4	8.2	8.0	7.7	8.0	7.9	8.1	7.8	8.0	7.7	8.2	7.8
9	8.0	7.9	8.0	7.8	8.1	7.9	8.0	7.8	8.0	7.7	8.1	7.9
10	8.1	7.8	8.1	7.8	8.1	7.9	8.0	7.8	8.0	7.7	8.1	7.7
11	8.2	7.9	8.0	7.8	8.2	7.9	8.1	7.9	8.0	7.8	8.1	7.8
12	8.2	7.9	8.0	7.8	8.1	7.9	8.1	7.9	8.1	7.8	8.1	7.8
13	8.1	7.8	8.0	7.8	8.1	7.9	8.1	7.8	8.0	7.8	8.1	7.8
14	8.1	7.9	8.0	7.8	8.1	7.9	8.1	7.8	8.0	7.8	8.1	7.8
15	---	---	8.1	7.8	8.2	7.8	8.1	7.8	8.1	7.8	8.1	7.8
16	8.2	7.9	8.0	7.9	8.1	7.9	8.0	7.7	8.0	7.8	8.0	7.8
17	8.4	8.0	8.0	7.9	8.2	7.9	7.9	7.6	8.0	7.7	8.1	7.8
18	8.3	8.0	8.0	7.8	8.2	7.9	7.9	7.6	8.0	7.7	8.1	7.8
19	8.3	8.1	8.0	7.9	8.2	7.9	7.8	7.6	8.0	7.7	8.1	7.8
20	8.3	7.9	8.0	7.8	8.1	8.0	7.9	7.6	8.0	7.8	8.1	7.8
21	8.1	7.9	8.0	7.8	8.2	7.9	7.9	7.6	8.1	7.8	8.1	7.9
22	8.1	7.9	8.0	7.8	8.2	7.9	7.9	7.6	8.1	7.8	8.1	7.9
23	8.1	7.8	8.0	7.8	8.2	7.9	7.8	7.6	8.1	7.9	8.0	7.8
24	8.1	7.9	8.0	7.8	8.1	7.9	7.8	7.6	8.1	7.8	8.2	7.9
25	8.1	7.9	8.0	7.8	8.1	8.0	7.9	7.6	8.1	7.8	8.2	7.9
26	8.1	7.9	8.0	7.8	8.2	7.9	7.9	7.7	8.1	7.8	8.1	7.9
27	8.1	7.8	8.0	7.8	8.1	8.0	7.9	7.6	8.1	7.8	8.2	8.0
28	8.1	7.9	8.0	7.8	8.2	7.9	8.0	7.7	8.1	7.8	8.2	8.0
29	8.1	7.9	8.1	7.9	8.0	7.9	8.0	7.7	8.1	7.8	8.2	8.0
30	8.1	7.9	8.0	7.9	8.1	7.9	8.0	7.7	---	---	8.1	7.9
31	8.0	7.8	---	---	8.1	7.9	8.0	7.7	---	---	8.1	7.9
MONTH	---	---	8.1	7.7	8.2	7.8	8.2	7.6	8.1	7.7	8.2	7.7
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.1	7.9	8.1	7.9	8.1	7.8	8.2	8.0	8.0	7.7	8.0	7.7
2	8.1	8.0	8.0	7.9	8.0	7.8	8.1	7.7	7.9	7.7	8.1	7.9
3	8.1	7.9	8.0	7.7	8.0	7.3	7.8	7.6	7.9	7.7	8.0	7.7
4	8.2	7.8	7.9	7.7	7.9	7.7	7.8	7.5	7.9	7.7	7.9	7.7
5	8.0	7.8	7.9	7.8	7.9	7.6	7.8	7.6	8.0	7.7	8.0	7.7
6	8.0	7.8	7.9	7.8	7.9	7.7	7.8	7.5	8.0	7.7	8.0	7.7
7	8.0	7.8	7.9	7.7	7.9	7.7	7.8	7.6	8.0	7.7	7.9	7.7
8	8.0	7.7	8.0	7.8	7.9	7.7	7.8	7.6	7.9	7.7	7.9	7.6
9	7.9	7.7	8.1	7.8	7.9	7.7	7.9	7.6	7.9	7.7	7.8	7.6
10	7.9	7.7	8.0	7.8	7.9	7.7	7.9	7.7	7.9	7.6	7.7	7.6
11	8.0	7.8	8.0	7.7	8.0	7.7	8.1	7.7	7.9	7.7	7.8	7.7
12	8.0	7.8	7.9	7.5	8.2	7.7	8.0	7.7	8.2	7.9	7.8	7.6
13	7.9	7.7	7.9	7.6	8.0	7.7	7.9	7.6	8.0	7.7	7.8	7.7
14	7.9	7.8	7.9	7.7	8.0	7.6	7.9	7.6	7.9	7.7	7.8	7.4
15	7.9	7.7	7.9	7.8	7.9	7.6	8.0	7.7	8.0	7.7	7.8	7.6
16	8.1	7.9	---	---	7.9	7.5	7.9	7.7	8.1	7.7	7.8	7.7
17	8.1	7.9	---	---	7.8	7.5	8.0	7.8	8.0	7.9	7.8	7.7
18	8.1	7.9	---	---	7.8	7.4	8.0	7.8	8.0	7.7	8.0	7.7
19	8.0	7.9	---	---	7.7	7.5	8.1	7.8	7.8	7.6	8.0	7.6
20	8.0	7.9	8.0	7.6	7.8	7.7	8.1	7.8	7.8	7.5	7.8	7.7
21	8.1	7.9	8.0	7.7	7.8	7.5	7.9	7.7	7.9	7.2	7.9	7.7
22	8.1	7.9	8.0	7.9	7.9	7.5	8.0	7.7	7.7	7.6	8.0	7.7
23	8.0	7.9	8.0	7.9	7.7	7.5	7.9	7.7	7.7	7.5	8.3	7.7
24	8.1	7.9	8.0	7.7	7.7	7.5	8.0	7.7	7.9	7.5	8.0	7.7
25	7.9	7.9	8.1	7.9	8.2	7.4	8.0	7.5	7.8	7.6	7.9	7.7
26	8.0	7.8	8.0	7.8	8.4	7.6	7.9	7.7	7.8	7.3	7.9	7.7
27	8.0	7.8	8.1	7.7	8.2	7.6	7.9	7.7	7.7	7.5	8.0	7.6
28	8.1	7.9	8.1	7.9	8.1	7.8	8.0	7.7	7.8	7.5	7.8	7.6
29	8.0	7.8	8.2	7.9	8.1	7.8	7.9	7.6	7.9	7.7	7.8	7.6
30	8.0	7.8	8.1	7.9	8.2	8.0	7.9	7.7	7.9	7.3	7.9	7.7
31	---	---	8.1	7.8	---	---	7.9	7.7	7.8	7.6	---	---
MONTH	8.2	7.7	---	---	8.4	7.3	8.2	7.5	8.2	7.2	8.3	7.4

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD, BELOW COLORADO SPRINGS, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.1	11.6	8.9	4.5	7.4	2.7	8.3	4.7	10.2	3.3	12.0	4.8
2	18.5	13.0	9.2	3.8	8.5	2.6	9.0	3.5	9.5	3.5	13.3	5.6
3	19.1	12.7	10.4	4.5	8.3	2.4	8.3	3.4	7.7	3.8	10.3	5.3
4	15.6	12.5	9.8	4.6	8.4	3.4	8.4	3.5	9.2	3.5	7.0	3.2
5	16.6	9.8	10.7	5.4	8.2	3.7	7.9	2.0	8.0	2.5	11.1	3.2
6	16.2	9.0	12.1	5.5	8.7	3.2	8.6	3.7	9.4	2.7	12.7	4.2
7	16.8	9.4	10.7	5.7	10.1	3.9	7.7	5.0	9.2	2.9	11.8	4.6
8	16.4	11.5	12.1	4.8	8.5	4.6	8.1	3.1	9.2	2.6	12.1	1.9
9	17.5	11.8	14.0	7.4	8.8	2.6	8.1	3.8	9.1	2.8	7.5	.6
10	18.4	11.5	11.8	7.7	7.7	2.5	8.9	3.7	9.8	2.8	9.9	.5
11	18.6	11.4	12.6	8.5	6.7	3.1	9.0	2.7	10.3	4.8	11.3	1.5
12	18.6	11.8	12.9	5.9	7.2	2.9	7.6	3.7	11.0	5.2	12.1	4.0
13	17.8	13.0	12.8	6.3	7.5	2.3	8.0	2.0	9.2	3.8	13.5	4.5
14	16.7	10.9	12.3	6.4	8.3	3.1	7.8	2.7	10.9	4.2	14.1	4.7
15	---	---	10.4	6.4	8.2	2.1	7.6	.5	10.5	2.9	13.3	5.5
16	17.7	---	8.6	4.7	7.7	3.2	8.0	3.1	8.3	2.8	13.7	5.1
17	17.8	10.9	8.3	3.5	7.9	3.3	7.3	2.6	10.3	3.2	13.2	5.2
18	16.0	10.4	9.0	3.8	7.3	2.6	7.7	1.4	10.0	2.6	10.6	6.2
19	16.1	9.4	7.9	3.7	7.9	4.1	9.0	2.1	10.3	2.2	10.7	5.3
20	15.5	8.8	10.4	2.9	7.6	4.4	8.9	1.9	11.2	3.3	12.3	3.2
21	16.5	9.8	10.6	5.4	9.3	4.6	8.7	2.5	12.2	5.1	11.3	4.3
22	16.4	9.5	9.0	5.2	7.9	4.6	8.6	2.5	10.8	4.3	8.7	3.0
23	15.9	9.7	9.6	3.8	8.2	3.1	9.1	2.7	10.8	4.8	11.0	2.8
24	13.5	10.2	10.0	5.2	8.5	2.5	8.8	3.2	11.0	2.7	11.9	3.7
25	14.1	8.0	9.3	3.8	8.1	2.7	9.1	2.5	10.5	5.2	13.6	4.3
26	14.7	7.6	10.4	4.9	7.9	1.2	9.3	3.0	10.8	3.5	13.1	5.6
27	15.1	8.8	10.3	5.0	7.5	1.8	8.9	2.3	12.4	5.9	12.3	6.3
28	12.1	7.9	9.8	5.0	7.5	2.5	9.3	2.7	12.8	4.9	10.6	7.9
29	9.4	5.9	7.8	4.1	8.9	3.3	9.7	2.7	12.9	4.7	14.1	6.2
30	8.8	4.0	7.4	1.4	9.3	3.3	9.8	2.5	---	---	14.9	5.6
31	8.4	3.8	---	---	8.2	4.3	10.5	3.0	---	---	11.7	6.3
MONTH	---	---	14.0	1.4	10.1	1.2	10.5	.5	12.9	2.2	14.9	.5
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.9	4.4	19.0	9.3	13.3	8.2	21.9	14.5	22.2	15.6	19.3	13.4
2	12.7	4.5	16.2	9.4	18.7	8.4	19.6	13.7	22.4	16.2	19.1	13.2
3	15.4	4.9	16.9	8.4	17.9	10.2	21.4	13.8	21.3	16.1	20.3	13.0
4	14.3	6.2	16.8	9.3	18.2	10.9	21.3	14.3	22.2	15.6	20.2	14.7
5	14.3	6.3	18.1	8.4	18.8	12.5	22.4	14.5	20.9	15.9	19.9	13.2
6	15.4	6.3	17.7	9.3	---	12.7	23.6	15.8	20.0	16.8	20.1	13.3
7	13.8	7.2	17.9	9.3	16.9	11.6	20.2	16.6	22.4	15.8	19.3	13.5
8	15.0	6.0	18.0	10.5	18.6	11.3	20.1	16.3	21.6	17.4	20.2	13.6
9	16.0	7.0	18.6	9.9	16.4	13.1	21.6	16.4	22.7	17.1	20.0	13.9
10	16.3	7.5	12.6	9.8	18.9	10.9	21.0	16.0	19.9	17.6	19.2	13.5
11	13.8	7.3	18.3	7.1	17.4	12.0	21.4	16.5	20.9	15.7	20.5	12.8
12	10.3	7.5	15.9	10.3	20.0	12.4	19.2	16.1	20.5	15.7	21.0	14.7
13	16.0	6.0	17.7	9.8	20.9	14.0	20.1	15.3	21.5	15.6	19.4	15.0
14	14.3	8.1	17.8	10.0	20.5	13.7	21.5	14.9	22.7	15.3	20.1	14.3
15	13.6	7.6	---	---	20.0	13.0	20.5	15.4	23.9	15.8	21.2	15.1
16	11.1	7.5	---	---	19.5	12.4	18.1	14.4	21.4	17.2	21.2	15.3
17	14.6	6.8	---	---	20.2	11.7	20.2	14.4	23.2	16.6	21.3	14.7
18	10.5	7.3	---	---	20.6	13.2	21.6	14.0	23.0	16.1	18.8	13.1
19	9.9	4.8	---	---	21.3	15.1	22.2	14.5	23.7	17.0	18.3	13.5
20	11.1	4.8	20.5	12.2	18.3	13.3	19.6	15.7	23.9	17.0	18.7	12.6
21	14.8	4.9	19.4	12.8	18.0	13.5	21.6	16.0	---	17.1	19.2	13.0
22	11.0	6.5	16.2	11.7	20.4	12.6	20.5	15.2	23.9	17.2	19.6	11.6
23	14.9	6.2	14.7	11.0	21.4	14.5	22.0	15.8	21.0	17.9	20.4	10.5
24	14.9	6.5	15.9	10.7	21.1	14.8	21.9	16.3	19.0	13.8	20.8	13.8
25	15.0	---	13.9	10.7	19.9	5.4	19.6	17.0	16.5	12.6	18.8	14.9
26	15.3	6.4	15.7	9.5	20.3	5.7	21.6	16.5	18.7	10.4	18.5	12.5
27	16.3	7.2	12.1	8.2	18.4	10.7	23.4	16.0	19.9	11.4	18.7	11.0
28	19.1	8.4	12.9	6.7	19.4	12.6	21.7	15.8	20.0	12.8	18.2	13.0
29	18.9	8.9	17.4	8.4	22.1	12.6	21.2	16.1	20.2	13.2	19.3	11.7
30	19.8	9.5	16.4	9.5	23.0	14.2	22.0	15.8	19.1	14.3	19.4	12.6
31	---	---	15.8	8.6	---	---	21.6	16.5	19.2	13.5	---	---
MONTH	19.8	---	---	---	---	5.4	23.6	13.7	---	10.4	21.3	10.5

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD, BELOW COLORADO SPRINGS, CO--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.9	6.3	9.5	8.5	9.8	8.9	9.3	8.3	9.7	8.0	9.9	7.8
2	7.4	6.3	9.8	8.4	9.3	8.1	9.4	8.0	10.0	8.2	9.4	7.7
3	7.4	6.1	9.4	8.2	9.2	7.9	9.4	8.2	10.0	8.5	9.4	7.9
4	7.2	6.4	9.8	8.3	9.5	8.2	9.6	8.4	10.0	8.3	10.9	9.2
5	7.9	6.5	9.6	8.3	9.2	8.2	10.2	8.7	9.9	8.6	10.1	8.0
6	8.4	6.7	9.6	7.9	9.3	8.2	9.7	8.3	9.9	8.2	9.8	7.4
7	8.2	6.5	9.4	8.2	9.3	7.6	9.4	8.5	9.8	8.3	9.2	7.4
8	7.7	6.5	9.8	7.9	9.4	8.5	9.6	8.2	10.0	8.3	---	7.2
9	---	6.6	9.0	7.3	10.0	8.5	9.9	8.2	9.9	8.4	---	---
10	9.7	6.5	9.3	7.8	9.8	8.5	9.7	8.3	9.9	8.3	---	---
11	7.6	6.4	8.8	7.8	9.9	8.6	10.2	8.4	9.7	8.1	9.0	---
12	7.6	6.3	9.4	7.7	10.0	8.9	10.1	8.9	9.6	8.1	9.8	7.9
13	7.4	6.4	9.2	7.7	9.8	8.7	10.3	8.4	10.0	8.4	9.8	7.7
14	7.8	6.7	9.0	7.2	10.0	8.5	10.0	8.4	9.9	8.2	10.0	7.5
15	---	---	8.5	7.4	10.1	8.6	10.7	8.8	10.4	8.3	9.8	7.7
16	---	6.8	9.2	8.0	9.9	8.8	10.0	8.4	10.4	8.7	9.9	7.7
17	7.9	6.4	9.4	8.4	10.1	9.0	9.5	8.0	10.2	8.2	9.9	7.8
18	7.6	6.8	9.3	8.1	10.2	8.1	9.6	8.0	10.4	8.7	9.4	8.1
19	7.7	6.6	9.8	8.9	9.0	8.2	9.2	7.6	10.7	8.6	9.7	8.2
20	8.3	6.3	9.8	8.0	9.1	8.4	9.1	7.5	10.4	8.3	10.3	8.0
21	7.4	6.1	9.5	8.3	9.1	8.1	9.0	7.4	9.9	8.2	10.1	8.0
22	7.2	5.8	9.7	8.6	9.0	8.0	8.9	7.4	10.3	8.3	10.5	8.8
23	7.0	5.6	9.4	8.3	9.4	8.3	8.6	7.0	10.2	8.6	10.3	8.2
24	7.7	6.8	9.3	8.2	9.2	7.9	8.9	7.3	10.4	8.4	10.1	8.1
25	8.7	7.5	9.8	8.4	9.4	8.4	9.1	7.4	9.7	8.5	10.2	7.8
26	8.8	7.4	9.5	8.1	9.9	8.3	9.0	7.5	10.0	8.3	9.7	8.0
27	8.7	7.1	9.4	8.0	9.7	8.5	9.2	7.7	9.4	8.0	9.7	7.9
28	8.7	7.4	9.2	8.0	9.6	8.3	9.6	7.9	9.8	7.9	9.3	8.4
29	9.2	8.2	9.3	8.3	9.1	7.9	9.8	8.1	9.9	7.7	9.8	7.8
30	10.0	8.9	10.0	8.4	9.2	7.7	9.8	8.0	---	---	9.7	7.7
31	10.5	9.1	---	---	9.2	8.1	9.8	7.8	---	---	9.6	8.1
MONTH	---	---	10.0	7.2	10.2	7.6	10.7	7.0	10.7	7.7	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.1	7.8	8.5	6.9	9.3	7.9	7.5	6.3	6.8	5.8	7.6	6.0
2	10.0	7.6	8.6	7.4	9.0	7.0	7.8	6.6	6.7	5.6	7.2	6.2
3	10.0	7.7	8.8	7.2	8.7	6.7	7.9	6.3	6.9	5.8	7.2	5.7
4	9.6	7.6	8.5	7.3	8.4	6.6	7.9	6.5	7.3	5.7	6.8	6.0
5	9.6	7.7	8.8	7.1	8.0	6.7	7.8	6.4	6.7	5.9	7.0	5.9
6	9.4	7.5	8.6	7.2	8.0	7.2	7.5	6.0	6.5	5.2	7.0	6.0
7	9.3	7.7	8.5	6.9	8.4	7.1	7.0	6.4	6.4	5.5	6.9	5.9
8	9.4	7.4	8.2	6.9	8.5	6.7	7.2	5.9	6.5	5.5	6.8	5.4
9	9.0	7.3	8.1	6.4	7.9	7.3	6.7	5.7	6.8	5.3	6.6	5.1
10	8.8	7.5	8.3	7.4	8.5	6.8	6.8	5.9	7.8	5.3	7.6	5.1
11	9.3	8.0	9.5	6.7	8.4	7.1	6.7	6.0	7.4	6.5	7.5	6.2
12	9.6	8.6	8.5	7.3	8.5	6.8	7.1	6.3	8.3	6.2	7.2	5.9
13	9.8	7.7	8.9	7.1	7.9	6.4	7.1	6.2	8.1	6.4	6.9	5.9
14	9.6	8.0	8.9	7.1	7.8	6.5	7.2	5.9	7.2	6.2	7.8	6.0
15	9.9	8.2	---	---	7.8	6.6	6.8	6.1	6.9	6.0	7.6	6.5
16	9.3	8.2	---	---	8.0	6.5	7.2	6.3	7.4	6.1	7.3	6.5
17	9.6	7.7	---	---	8.0	6.4	8.0	6.7	7.4	6.4	7.3	6.1
18	10.0	8.4	---	---	7.7	6.2	7.7	6.4	7.3	6.0	7.2	6.1
19	9.9	8.5	---	---	7.3	6.2	7.3	6.3	7.3	5.7	7.8	6.4
20	10.1	8.2	8.0	6.7	8.1	6.9	6.9	6.4	6.5	5.5	8.0	6.6
21	10.0	7.6	7.5	6.4	8.1	7.2	6.7	5.9	7.5	5.5	7.4	6.5
22	9.6	8.2	8.0	7.1	8.0	6.4	6.8	5.8	7.5	6.2	7.3	5.8
23	9.9	7.7	8.3	7.6	7.5	6.2	7.3	5.5	6.7	6.1	6.7	---
24	9.4	7.6	8.3	7.0	7.4	6.3	6.8	5.9	8.7	6.1	---	---
25	---	7.5	8.1	7.5	9.9	6.2	7.2	6.1	8.7	7.8	---	---
26	9.6	7.8	8.4	7.2	10.0	6.3	7.2	6.4	10.1	7.2	---	---
27	9.4	7.6	9.3	8.3	8.2	6.8	7.1	5.8	8.8	6.9	---	---
28	9.1	7.1	9.6	7.8	8.1	6.9	6.8	5.8	8.1	6.6	---	---
29	9.0	7.2	9.1	7.3	8.0	6.5	6.8	6.0	7.8	6.5	---	---
30	8.6	6.8	8.9	7.5	7.8	6.3	6.8	5.9	7.6	6.6	---	---
31	---	---	9.3	7.5	---	---	6.7	5.6	7.6	6.5	---	---
MONTH	---	6.8	---	---	10.0	6.2	8.0	5.5	10.1	5.2	---	---

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD, BELOW COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT								
15...	1220	54	893	8.0	15.5	7.4	16	K760
NOV								
12...	1410	83	783	8.1	10.0	8.7	19	280
DEC								
17...	1310	68	820	8.1	8.5	8.5	16	K60
JAN								
28...	1315	87	839	7.9	9.0	8.2	11	K13
FEB								
18...	1330	92	810	8.0	8.5	8.6	11	K40
MAR								
25...	1200	91	799	7.9	14.0	7.8	>19	110
APR								
29...	1245	78	684	8.0	17.0	--	9.2	39
MAY								
20...	1245	78	674	8.0	18.5	6.7	11	110
JUN								
10...	1315	84	745	7.9	19.0	6.6	15	K240
JUL								
29...	1250	74	782	8.0	23.5	6.1	E20	>600
AUG								
26...	1245	68	867	8.0	21.5	7.2	15	520
SEP								
23...	1300	83	816	8.0	16.5	7.8	>22	650

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SULFIDE TOTAL (MG/L AS S)
OCT								
15...	K300	67	18	107	170	53	1.4	--
NOV								
12...	K510	52	15	88	160	42	1.9	<0.5
DEC								
17...	--	59	18	96	180	40	1.5	--
JAN								
28...	110	59	17	130	170	51	1.7	--
FEB								
18...	200	53	16	95	170	43	1.8	--
MAR								
25...	240	48	14	122	150	48	1.5	--
APR								
29...	K48	50	14	87	140	35	1.4	--
MAY								
20...	300	47	14	94	140	33	1.8	<0.5
JUN								
10...	230	45	14	75	160	40	1.7	--
JUL								
29...	640	57	15	88	160	48	1.4	--
AUG								
26...	590	52	17	92	200	39	1.5	--
SEP								
23...	420	53	16	95	180	41	1.3	--

E-Estimated.

K-Based on non-ideal colony counts.

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD, BELOW COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 15...	0.11	--	2.3	--	9.3	--	9.6	2.9	--
NOV 12...	0.15	--	3.4	--	7.9	--	10	2.7	--
DEC 17...	0.26	--	2.8	--	8.9	--	12	2.6	--
JAN 28...	--	0.11	2.5	2.5	--	10	12	--	2.7
FEB 18...	--	0.12	2.8	2.8	--	9.7	13	--	2.8
MAR 25...	--	0.08	1.6	1.6	--	8.0	14	--	2.8
APR 29...	--	0.11	2.2	2.2	--	7.0	8.7	--	1.9
MAY 20...	--	0.10	1.8	1.8	--	6.0	7.7	--	1.5
JUN 10...	--	0.20	1.8	1.8	--	10	13	--	2.4
JUL 29...	--	0.19	1.2	1.2	--	8.8	13	--	1.9
AUG 26...	--	0.20	2.0	2.0	--	9.8	15	--	2.4
SEP 23...	--	0.37	3.3	3.3	--	7.8	9.3	--	2.2

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 15...	--	--	--	--	<1	2	<1	<1	<1	7	4
NOV 12...	3	1	170	160	<1	<1	<1	<1	<1	8	4
DEC 17...	--	--	--	--	<1	<1	<1	<1	<1	9	4
JAN 28...	--	--	--	--	<1	<1	2	<1	<1	8	5
FEB 18...	--	--	--	--	<1	<1	3	<1	<1	11	5
MAR 25...	--	--	--	--	<1	<1	2	3	<1	14	7
APR 29...	--	--	--	--	<1	<1	<1	<1	<1	8	4
MAY 20...	2	1	160	160	<1	<1	<1	<1	<1	8	5
JUN 10...	--	--	--	--	<1	<1	<1	<1	<1	13	7
JUL 29...	--	--	--	--	<1	<1	<1	<1	<1	9	4
AUG 26...	--	--	--	--	<1	<1	1	<1	<1	8	5
SEP 23...	--	--	--	--	<1	<1	3	1	<1	9	5

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD, BELOW COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
OCT 15...	380	48	2	<1	90	71	3	3	20	29	--
NOV 12...	1200	47	5	<1	130	65	4	3	50	34	<0.01
DEC 17...	880	40	5	<1	120	74	3	3	60	29	--
JAN 28...	860	42	5	1	110	71	5	4	70	50	--
FEB 18...	3600	32	8	<1	170	57	7	3	60	31	--
MAR 25...	720	58	4	<1	110	59	5	4	60	38	--
APR 29...	1100	34	2	<1	110	52	8	9	40	23	--
MAY 20...	1500	33	3	<1	100	48	3	2	40	21	<0.01
JUN 10...	1300	40	6	1	120	72	4	3	50	36	--
JUL 29...	1600	30	33	<1	140	85	6	4	60	37	--
AUG 26...	280	79	2	<1	110	93	3	3	30	30	--
SEP 23...	1300	39	7	<1	110	68	4	3	50	31	--

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	765	764	727	745	742	782	701	667	538	799	817	795
2	799	770	745	723	759	796	730	644	500	813	612	762
3	808	752	752	736	777	779	712	646	491	817	816	750
4	795	751	769	789	829	779	668	670	---	790	719	839
5	780	727	772	826	814	809	---	670	---	782	676	790
6	751	713	777	829	786	780	---	678	---	796	741	417
7	799	726	773	791	744	768	---	693	---	837	807	590
8	821	711	730	807	744	745	---	672	---	851	716	555
9	825	---	755	812	777	758	---	660	---	850	698	712
10	830	---	766	789	863	767	703	665	---	849	610	---
11	814	---	764	772	819	790	683	701	738	753	---	---
12	---	742	779	798	782	786	687	682	753	653	---	---
13	840	758	803	822	783	792	649	711	---	733	---	---
14	855	747	812	891	777	760	664	714	737	672	---	---
15	909	732	797	860	785	752	666	667	758	744	---	---
16	888	742	795	873	811	783	670	534	752	669	---	827
17	839	762	810	842	813	774	694	543	---	799	---	839
18	833	756	817	843	783	778	658	537	---	757	---	828
19	835	746	824	829	763	752	640	602	---	550	833	798
20	838	750	797	911	753	771	671	588	---	512	865	794
21	799	867	791	875	751	743	707	643	---	670	782	801
22	825	809	775	857	744	748	725	661	706	784	705	803
23	832	766	773	830	753	786	726	718	736	806	804	808
24	838	831	698	850	758	756	657	643	766	805	859	816
25	843	823	665	830	778	751	625	490	783	715	866	826
26	809	798	680	765	789	750	666	590	808	686	878	816
27	814	783	699	833	809	756	673	531	798	719	837	811
28	821	782	701	800	760	719	620	445	803	710	729	---
29	803	---	741	763	---	662	659	411	798	674	833	---
30	822	760	738	758	---	636	679	494	774	848	709	---
31	809	---	754	758	---	683	---	482	---	863	741	---
MEAN	---	---	761	813	780	758	---	615	---	752	---	---

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD, BELOW COLORADO SPRINGS, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.9	7.7	7.9	7.8	8.1	7.7	8.1	7.9	7.9	7.6	7.8	7.5
2	7.9	7.7	8.0	7.8	8.2	7.9	8.1	7.7	7.9	7.6	7.8	7.5
3	7.9	7.7	8.0	7.9	8.0	7.8	8.0	7.7	7.9	7.6	7.9	7.6
4	7.9	7.6	8.0	7.9	8.0	7.7	8.0	7.7	7.9	7.6	7.9	7.6
5	7.9	7.6	8.0	7.9	7.7	7.6	8.0	7.7	8.0	7.7	7.9	7.6
6	7.9	7.7	8.1	7.8	7.8	7.6	8.0	7.6	8.1	7.8	7.9	7.6
7	8.0	7.7	8.0	7.7	7.7	7.5	7.9	7.7	8.1	7.8	7.8	7.6
8	8.1	7.8	8.0	7.8	7.7	7.5	7.9	7.7	8.1	7.7	7.8	7.5
9	8.0	7.8	8.0	7.8	7.7	7.5	7.9	7.7	8.1	7.8	7.8	7.5
10	8.0	7.8	8.0	7.9	7.8	7.5	7.9	7.7	8.0	7.8	7.8	7.5
11	8.0	7.7	8.1	7.9	7.8	7.5	7.9	7.7	8.1	7.8	7.8	7.5
12	7.9	7.7	8.1	7.7	7.9	7.6	7.9	7.7	8.1	7.7	7.7	7.5
13	7.9	7.7	8.0	7.8	---	---	7.9	7.7	7.9	7.7	7.8	7.4
14	7.9	7.7	8.0	7.9	---	---	7.9	7.7	7.9	7.6	7.7	7.5
15	7.9	7.7	8.0	7.7	---	---	7.9	7.7	7.9	7.6	7.7	7.5
16	7.9	7.7	8.0	7.7	---	---	8.0	7.7	7.9	7.6	7.7	7.4
17	7.9	7.7	7.9	7.7	---	---	7.9	7.7	7.9	7.7	7.8	7.5
18	7.9	7.7	8.0	7.7	8.1	7.8	8.0	7.7	7.9	7.7	7.7	7.5
19	7.9	7.7	8.1	7.7	8.1	7.8	8.0	7.7	8.0	7.7	7.7	7.5
20	7.8	7.6	8.1	7.8	8.0	7.9	8.0	7.7	7.9	7.6	7.8	7.6
21	7.9	7.7	8.2	8.0	8.0	7.8	8.0	7.7	7.8	7.5	7.7	7.6
22	8.0	7.7	8.2	8.1	8.0	7.8	8.0	7.7	7.8	7.5	7.8	7.6
23	8.1	7.8	8.2	7.9	8.2	7.8	7.9	7.6	7.8	7.6	8.0	7.7
24	8.0	7.8	8.0	7.9	8.2	7.9	7.8	7.6	7.8	7.5	7.9	7.7
25	7.9	7.4	8.1	7.8	8.2	8.0	7.8	7.5	7.9	7.5	7.8	7.7
26	7.8	7.5	8.1	7.9	8.2	7.9	7.8	7.5	7.8	7.5	7.9	7.7
27	7.8	7.6	8.1	7.9	8.1	7.9	7.8	7.5	7.8	7.5	7.9	7.7
28	7.9	7.6	8.1	7.9	8.1	7.9	7.9	7.6	7.8	7.5	7.9	7.7
29	8.0	7.7	8.0	7.8	8.2	7.9	7.9	7.6	---	---	7.9	7.6
30	8.1	7.9	7.9	7.8	8.1	7.9	7.8	7.6	---	---	7.9	7.6
31	8.1	7.8	---	---	8.1	7.9	8.0	7.6	---	---	7.9	7.6
MONTH	8.1	7.4	8.2	7.7	---	---	8.1	7.5	8.1	7.5	8.0	7.4
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.9	7.7	8.0	7.7	7.9	7.8	8.1	7.9	8.0	7.7	8.1	7.8
2	8.0	7.8	8.0	7.6	7.9	---	8.2	7.9	7.8	7.7	8.2	7.9
3	8.0	7.7	8.0	7.6	7.9	---	8.2	7.8	7.9	7.7	8.0	7.9
4	7.9	7.6	8.1	7.8	8.0	7.8	8.2	7.9	8.0	7.7	8.2	7.9
5	7.8	7.6	8.0	7.7	8.0	7.8	8.3	7.8	7.9	7.7	8.2	7.8
6	7.8	7.6	8.0	7.6	8.0	7.6	8.1	7.8	8.0	7.8	8.3	7.7
7	7.8	7.6	7.9	7.6	7.8	7.6	8.2	7.8	8.1	7.9	8.0	7.8
8	7.8	7.6	7.9	7.7	7.9	7.7	8.2	7.8	8.1	7.9	8.0	7.8
9	7.8	7.6	7.9	7.6	7.9	7.7	8.2	7.8	8.1	7.8	8.0	7.7
10	7.9	7.7	7.9	7.6	7.8	7.5	8.3	7.8	8.0	7.8	7.9	7.6
11	7.8	7.7	7.8	7.6	7.8	7.7	8.3	7.8	8.0	7.8	7.9	7.6
12	7.9	7.7	7.9	7.6	7.8	7.7	8.0	7.9	8.0	7.8	7.9	7.7
13	7.9	7.7	7.8	7.6	---	---	8.0	7.8	8.2	7.8	7.9	7.7
14	7.9	7.7	7.8	7.6	7.8	7.7	8.0	7.8	8.1	7.8	7.9	7.6
15	8.0	7.7	8.0	7.6	7.8	7.7	8.1	7.8	8.1	7.8	7.8	7.5
16	8.0	7.7	7.9	7.7	7.8	7.7	8.0	7.8	8.0	7.8	7.8	7.5
17	8.0	7.8	8.0	7.8	8.3	6.9	8.1	7.8	8.0	7.8	7.8	7.7
18	7.9	7.8	8.0	7.8	7.7	7.1	8.2	7.9	8.0	7.8	7.9	7.7
19	7.9	7.8	8.0	7.8	7.9	7.5	8.1	7.8	7.9	7.7	8.0	7.4
20	7.9	7.7	8.0	7.9	7.9	7.4	8.0	7.8	7.9	7.7	7.8	7.4
21	8.0	7.8	8.0	7.9	---	---	8.0	7.7	8.2	7.8	7.8	7.5
22	8.0	7.8	8.0	7.8	7.9	7.8	8.1	7.7	8.2	7.8	7.9	7.7
23	8.1	7.9	8.1	7.9	8.0	7.8	8.1	7.8	8.1	7.8	7.9	7.7
24	8.1	7.9	8.0	7.5	8.0	7.8	8.1	7.8	8.1	7.8	8.0	7.7
25	8.1	7.9	7.9	7.7	8.0	7.8	8.2	7.8	8.1	7.8	8.1	7.8
26	8.0	7.9	8.0	7.8	8.0	7.8	8.1	7.7	8.0	7.8	8.1	7.8
27	8.0	7.8	7.9	7.5	8.0	7.8	8.0	7.7	8.0	7.8	8.0	7.8
28	8.1	7.9	7.9	7.8	8.0	7.8	8.1	7.1	8.0	7.9	8.1	7.8
29	8.0	7.9	8.0	7.8	8.0	7.8	7.9	7.7	8.0	7.8	8.0	7.7
30	8.0	7.8	7.9	7.8	8.0	7.8	8.0	7.7	8.0	7.8	8.1	7.8
31	---	---	8.0	7.7	---	---	8.0	7.7	8.1	7.8	---	---
MONTH	8.1	7.6	8.1	7.5	---	---	8.3	7.1	8.2	7.7	8.3	7.4

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD, BELOW COLORADO SPRINGS, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.3	12.6	14.0	7.9	9.2	3.9	8.8	4.5	10.3	4.9	10.2	5.8
2	19.1	12.6	12.8	9.0	9.5	4.1	9.9	4.5	9.5	4.2	11.6	5.1
3	18.4	12.6	10.7	5.8	9.1	4.0	8.9	4.0	9.2	5.0	11.7	4.9
4	18.1	12.6	10.8	5.1	8.7	3.5	8.6	4.1	9.0	5.2	11.2	4.0
5	18.5	12.9	9.9	5.0	---	---	8.7	3.2	10.2	4.7	11.3	4.8
6	17.2	13.3	11.9	5.6	8.7	5.7	8.8	2.8	10.3	4.6	12.0	5.3
7	15.7	10.6	11.8	5.4	8.9	5.1	8.3	3.9	9.9	5.3	12.8	5.5
8	15.3	7.9	12.9	5.5	8.6	4.8	7.6	4.2	9.3	4.5	12.7	6.9
9	16.0	10.5	---	6.2	9.0	4.9	7.7	3.7	10.6	5.5	13.3	6.3
10	16.7	9.8	10.9	7.0	9.2	4.6	7.0	3.4	8.9	5.4	10.2	6.8
11	17.4	10.3	10.4	6.0	10.5	4.9	8.3	3.4	9.9	4.8	10.1	6.7
12	---	---	10.3	5.4	8.9	4.8	7.7	3.7	10.3	3.8	9.6	4.6
13	18.6	11.3	11.6	6.4	---	3.3	7.5	4.3	9.8	4.1	10.3	3.7
14	16.2	10.8	12.7	6.2	8.2	3.4	8.3	4.0	9.5	4.2	12.1	4.0
15	16.2	10.3	13.2	6.4	7.9	---	8.7	4.1	8.4	4.6	13.1	5.8
16	14.2	9.4	12.8	6.6	7.8	3.1	9.3	4.1	8.5	2.5	12.4	6.6
17	16.2	8.5	12.5	6.1	7.9	3.4	8.2	4.2	7.6	4.9	9.3	5.7
18	15.7	8.9	12.7	6.8	8.7	4.6	9.0	4.0	8.4	4.5	11.8	6.3
19	16.1	10.5	11.7	5.8	8.2	4.0	7.5	2.5	9.0	4.5	13.8	6.2
20	16.6	10.0	10.2	5.6	8.1	4.8	8.7	3.9	10.6	4.5	13.4	6.9
21	16.8	10.4	8.8	4.0	8.7	5.0	9.1	3.5	9.8	3.1	12.2	7.5
22	17.5	11.6	10.5	2.7	7.8	3.8	9.6	4.3	10.3	3.4	13.8	6.0
23	17.1	11.6	9.6	3.5	8.0	3.5	8.9	4.6	9.7	3.9	14.4	5.9
24	16.5	10.4	9.3	3.7	8.1	3.8	9.4	5.7	10.4	4.1	14.8	7.1
25	16.5	11.2	9.8	4.5	8.0	3.5	8.9	4.9	8.9	4.0	15.2	7.6
26	16.3	11.1	9.5	4.7	7.8	3.4	9.3	4.8	9.8	4.9	14.6	8.2
27	16.0	9.4	9.5	4.6	8.5	3.3	9.8	5.4	10.6	3.1	11.6	9.5
28	14.3	11.2	9.2	4.7	8.8	4.3	9.1	5.1	10.9	4.8	13.2	7.9
29	12.2	9.1	8.6	3.4	9.9	4.3	7.6	4.3	---	---	12.8	7.6
30	14.7	9.3	9.7	4.6	9.9	4.6	9.3	4.7	---	---	12.3	7.2
31	14.3	9.2	---	---	9.0	4.2	10.2	3.7	---	---	13.5	6.6
MONTH	---	---	---	2.7	---	---	10.2	2.5	10.9	2.5	15.2	3.7
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.7	6.3	14.1	7.5	21.5	13.1	24.1	17.2	22.4	17.2	21.5	13.1
2	13.4	7.3	16.7	6.8	19.6	13.2	23.9	16.5	23.7	17.0	19.4	13.6
3	11.1	6.5	18.5	8.6	19.3	12.4	23.4	16.3	20.2	16.9	21.5	13.3
4	14.1	5.7	17.7	9.8	18.9	11.8	21.1	14.9	22.3	15.8	22.7	13.5
5	14.5	8.8	17.2	11.3	20.1	12.5	22.2	14.1	22.9	15.6	21.5	15.1
6	12.6	8.2	17.6	9.8	20.5	12.5	22.2	13.9	23.2	14.9	16.5	12.0
7	12.9	5.1	15.8	10.9	19.6	12.8	22.9	14.2	22.8	15.6	19.6	12.7
8	14.8	5.3	16.2	10.0	18.1	12.0	23.8	15.0	22.2	16.2	---	---
9	15.2	7.2	15.4	8.6	18.3	13.0	23.0	15.9	23.7	15.8	---	---
10	15.1	8.0	17.4	8.4	19.3	12.6	22.8	15.2	23.6	17.7	---	---
11	15.7	7.6	16.5	8.9	20.9	14.2	22.4	13.9	24.1	16.9	---	---
12	15.2	7.6	18.1	11.0	21.0	14.1	21.8	15.0	23.9	16.4	---	---
13	14.8	8.0	19.0	11.6	---	---	22.9	15.5	20.9	17.4	---	---
14	14.7	7.1	18.3	11.9	20.3	---	23.8	16.8	22.1	16.0	---	---
15	12.6	6.5	18.5	12.0	22.3	16.3	24.6	16.7	23.5	15.6	20.2	---
16	12.6	6.9	14.5	12.9	20.6	15.6	25.1	16.4	23.2	15.4	20.5	12.4
17	15.8	7.0	15.5	11.1	19.3	10.4	23.3	16.8	24.0	15.8	20.3	13.2
18	16.6	8.1	19.1	10.1	---	12.8	23.7	17.5	23.5	18.1	19.7	14.4
19	14.4	6.4	17.5	10.5	---	---	24.2	14.6	22.6	18.0	19.3	11.3
20	13.2	6.3	20.7	10.9	---	---	20.2	15.5	23.5	18.0	20.3	11.9
21	15.2	6.4	18.8	11.9	---	---	24.0	14.8	23.5	17.0	21.5	12.0
22	16.5	8.3	18.7	11.5	22.1	---	23.3	15.1	22.5	16.0	20.1	13.2
23	17.5	9.7	20.9	10.6	22.1	15.3	23.1	15.9	24.0	14.8	17.4	13.0
24	13.2	8.4	15.9	13.1	20.5	14.2	23.9	16.2	24.2	15.5	20.5	14.1
25	16.3	6.7	15.2	11.8	21.6	13.8	23.5	15.9	24.4	16.6	19.6	12.5
26	17.7	8.4	20.8	12.9	22.4	16.2	24.5	16.1	21.6	16.3	19.5	12.2
27	16.9	10.4	19.1	12.8	21.4	15.9	23.4	16.0	19.9	16.5	20.5	11.5
28	18.7	11.1	20.9	11.7	22.7	15.8	24.3	13.4	20.8	15.5	20.1	11.7
29	17.6	9.4	16.3	11.1	23.6	16.8	24.5	15.5	21.8	15.0	20.0	11.6
30	16.6	10.6	19.3	10.5	23.0	15.6	23.4	16.5	19.1	14.6	20.0	12.0
31	---	---	20.9	13.0	---	---	23.9	16.8	19.9	13.0	---	---
MONTH	18.7	5.1	20.9	6.8	---	---	25.1	13.4	24.4	13.0	---	---

07105530 FOUNTAIN CREEK BELOW JANITELL ROAD, BELOW COLORADO SPRINGS, CO--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	8.2	6.6	10.4	9.2	---	---	10.1	8.3	9.5	8.1
2	---	---	8.0	6.9	10.4	9.1	---	---	10.2	8.5	9.5	8.1
3	---	---	9.2	7.9	10.2	9.2	---	---	10.0	8.5	9.7	8.2
4	---	---	9.5	8.2	10.4	8.8	---	---	10.1	8.8	9.8	8.0
5	---	---	9.3	8.5	---	---	8.9	---	10.1	8.6	9.5	8.2
6	---	---	9.6	8.1	9.7	8.7	9.6	7.8	10.2	8.4	9.9	8.0
7	8.0	---	9.6	8.1	10.1	9.0	9.6	8.4	10.1	8.7	9.9	7.6
8	8.7	6.8	9.7	7.9	10.2	9.0	9.4	8.4	10.5	8.2	9.3	7.5
9	8.3	6.6	9.3	8.0	10.2	8.6	9.7	8.4	9.9	8.7	9.3	7.6
10	---	---	9.3	8.4	10.0	9.2	10.0	8.4	10.1	8.9	9.2	8.0
11	---	---	9.7	8.7	9.5	8.6	9.8	8.4	9.8	8.8	9.2	8.2
12	---	---	9.9	8.6	9.7	8.9	9.8	8.0	10.2	8.6	9.7	8.3
13	---	---	9.6	8.5	9.9	8.4	---	---	10.2	8.4	10.3	8.2
14	---	---	9.7	8.3	9.5	8.0	---	---	10.0	8.5	10.0	7.5
15	7.2	---	9.7	8.0	9.6	8.0	9.5	8.4	10.0	8.5	9.5	7.5
16	7.4	5.8	9.4	8.0	9.5	8.3	9.5	8.1	10.3	8.4	9.3	7.8
17	7.5	5.1	9.7	8.1	8.9	---	9.2	8.3	9.9	8.8	9.5	8.0
18	---	---	9.5	8.2	8.8	---	9.6	8.3	10.2	9.1	9.1	7.7
19	---	---	9.8	8.2	9.5	---	9.8	6.7	10.3	8.9	9.4	7.5
20	---	---	9.5	8.4	9.2	---	9.5	8.5	10.3	8.4	9.6	7.3
21	---	---	10.2	9.2	9.2	---	10.2	8.6	10.6	8.4	9.4	7.7
22	7.6	---	10.4	8.8	8.5	---	9.8	8.3	10.3	8.5	9.6	7.6
23	---	---	10.3	8.9	9.0	---	10.0	8.5	10.2	8.1	9.6	7.4
24	---	---	10.4	8.8	9.0	7.9	9.4	8.3	9.5	8.0	9.3	7.3
25	---	---	9.8	8.9	9.1	8.4	9.8	8.4	9.8	8.3	9.3	7.3
26	---	---	10.0	9.2	9.5	8.3	10.0	8.5	9.4	8.4	9.0	7.2
27	---	---	9.8	8.7	9.6	---	9.7	8.2	10.0	8.0	8.6	7.5
28	---	---	9.8	8.7	---	---	9.9	8.4	9.8	8.0	9.2	7.3
29	7.9	---	10.6	9.3	---	---	10.3	8.9	---	---	9.2	7.6
30	7.7	6.4	9.7	8.6	---	---	10.1	8.5	---	---	9.6	8.0
31	7.9	6.5	---	---	---	---	10.5	8.3	---	---	9.6	7.9
MONTH	---	---	10.6	6.6	---	---	---	---	10.6	8.0	10.3	7.2
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.6	7.8	---	---	8.1	6.8	7.4	5.9	8.0	5.3	7.8	5.5
2	9.1	7.7	---	---	8.3	6.9	7.6	5.9	8.2	5.9	8.5	5.7
3	9.4	8.3	---	---	8.4	7.0	7.7	5.9	6.7	6.1	8.0	6.0
4	9.8	7.6	8.1	---	8.2	6.8	8.2	6.2	7.3	5.9	7.3	5.8
5	8.7	7.5	8.6	6.4	8.0	6.6	8.4	6.1	7.8	6.3	8.0	5.9
6	9.1	7.6	8.7	6.6	8.0	6.6	8.4	5.7	7.4	5.5	8.4	7.0
7	9.7	8.2	8.7	6.6	7.5	6.7	8.3	5.7	6.2	5.4	8.2	6.8
8	9.8	7.7	9.0	6.9	8.1	6.8	8.1	5.7	6.3	5.5	---	---
9	9.2	7.4	9.5	7.1	7.9	6.7	8.4	5.7	6.4	5.3	---	---
10	8.6	7.3	9.2	6.8	7.7	6.9	8.3	5.5	6.8	5.5	---	---
11	8.7	7.2	9.0	6.6	7.6	6.6	8.9	5.7	6.9	5.8	---	---
12	8.8	6.6	8.7	6.4	7.6	6.8	---	6.7	7.0	5.8	---	---
13	9.1	7.0	8.5	6.5	---	---	9.0	6.6	7.1	5.8	---	---
14	---	---	8.6	6.5	7.5	6.6	8.4	7.2	7.1	5.9	---	---
15	---	---	8.5	6.3	7.4	6.4	8.2	6.9	6.9	6.0	---	6.0
16	---	---	8.5	7.6	7.3	6.2	8.3	6.7	7.0	5.4	7.4	6.3
17	---	---	8.7	7.8	8.8	4.9	7.7	6.6	6.9	4.5	7.2	5.9
18	---	---	8.9	7.3	---	---	7.3	6.5	7.5	4.7	7.3	5.9
19	---	---	8.5	7.3	---	---	9.1	6.2	6.0	4.8	7.4	5.9
20	8.4	---	8.5	6.8	---	---	7.5	6.5	6.0	4.5	7.7	6.0
21	9.4	6.9	8.1	7.1	---	---	7.3	5.8	6.6	4.5	7.9	5.8
22	---	---	8.4	7.0	---	6.2	7.2	5.5	7.1	5.8	8.1	6.1
23	---	---	8.4	6.9	7.0	6.0	6.4	5.4	6.8	5.6	8.0	6.1
24	---	---	8.7	7.2	7.2	6.1	6.0	5.3	7.1	5.2	7.8	5.0
25	---	---	8.9	7.7	7.3	6.1	6.3	5.3	7.0	5.0	6.6	5.1
26	---	---	8.2	7.1	6.9	6.0	6.2	5.0	7.2	5.0	7.2	5.2
27	---	---	8.4	7.2	6.9	6.2	6.0	5.1	7.7	5.1	7.2	5.2
28	---	---	8.6	7.0	6.8	5.6	7.3	5.1	8.2	5.8	7.8	5.3
29	---	---	8.9	7.9	6.7	5.9	6.8	5.7	7.1	4.9	8.2	5.5
30	---	---	9.0	7.4	7.2	6.2	6.6	5.7	8.9	4.9	8.4	5.5
31	---	---	8.4	7.0	---	---	6.1	5.3	8.1	6.7	---	---
MONTH	---	---	---	---	---	---	---	5.0	8.9	4.5	---	---

07105533 FOUNTAIN CREEK AT CIRCLE DRIVE BELOW COLORADO SPRINGS, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°47'49", long 104°47'06", in SE¹/4SW¹/4 sec.28, T.14 S., R.66 W., El Paso County, Hydrologic Unit 11020003, approximately 100 ft downstream from Circle Drive below Colorado Springs.

PERIOD OF RECORD.--October 1989 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT											
24...	1445	96	856	8.0	14.0	7.8	19	K10000	>2000	61	19
NOV											
21...	1500	148	818	8.0	11.0	8.0	18	K200	3500	57	18
DEC											
12...	1545	167	1200	8.0	5.0	9.3	--	1200	K22000	49	13
JAN											
09...	1515	94	853	7.9	8.0	8.5	15	K33	640	57	17
FEB											
20...	1530	9.8	817	7.9	12.0	8.5	14	K45	360	53	15
MAR											
26...	1500	129	768	8.0	14.5	8.0	10	K27	200	51	14
APR											
17...	1030	300	441	8.0	10.5	8.5	7.2	200	340	32	8.4
MAY											
14...	1440	103	610	8.0	18.5	6.9	E7.9	100	220	44	13
JUN											
04...	1450	162	655	7.9	18.5	6.8	19	630	620	44	13
JUL											
09...	1345	84	773	7.8	22.5	6.6	13	670	1100	53	16
AUG											
20...	1430	75	824	8.0	24.0	6.3	14	K270	200	55	17
SEP											
17...	1445	94	835	8.0	22.5	6.3	12	K200	K400	54	17

DATE	ALKA- LINIT LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)
OCT										
24...	124	200	36	1.6	74	0.32	2.6	7.1	9.0	2.0
NOV										
21...	109	190	43	1.5	76	0.12	2.1	1.6	8.3	1.1
DEC										
12...	124	130	210	1.1	646	0.12	1.9	3.6	5.3	0.95
JAN										
09...	111	180	46	1.7	58	0.11	1.6	11	14	3.1
FEB										
20...	133	160	43	1.7	60	0.05	1.5	9.2	12	2.7
MAR										
26...	109	150	46	1.7	65	0.07	0.98	7.5	9.2	2.3
APR										
17...	68	83	21	2.2	321	0.04	0.71	4.0	4.9	1.3
MAY										
14...	84	130	25	1.9	69	0.15	1.6	4.7	6.4	1.5
JUN										
04...	79	140	29	2.3	93	0.19	1.5	6.2	7.7	1.8
JUL										
09...	91	170	51	1.7	64	0.32	1.7	7.6	10	2.3
AUG										
20...	94	180	44	1.6	46	0.25	2.5	7.2	9.9	2.3
SEP										
17...	94	180	38	1.6	84	0.29	3.3	7.6	9.3	2.9

E-Estimated.

K-Based on non-ideal colony counts.

07105533 FOUNTAIN CREEK AT CIRCLE DRIVE BELOW COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 24...	<1	<1	3	1	<1	11	6	3400	54
NOV 21...	<1	<1	3	<1	<1	7	5	2000	42
DEC 12...	1	<1	24	<1	<1	31	4	17000	53
JAN 09...	<1	<1	2	1	<1	14	7	880	48
FEB 20...	<1	<1	2	<1	<1	7	4	1400	48
MAR 26...	<1	<1	<1	<1	<1	7	4	1600	33
APR 17...	<1	<1	4	<1	<1	<1	2	7200	33
MAY 14...	<1	<1	<1	<1	<1	5	4	1200	28
JUN 04...	<1	<1	<1	<1	<1	8	2	2000	40
JUL 09...	<1	<1	<1	<1	<1	6	5	900	32
AUG 20...	<1	<1	2	<1	<1	5	4	930	47
SEP 17...	<1	<1	2	<1	<1	<1	4	1900	27

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 24...	8	<1	170	81	7	2	50	28
NOV 21...	7	<1	120	53	5	2	50	24
DEC 12...	75	1	440	42	16	2	200	15
JAN 09...	4	2	110	75	5	2	70	41
FEB 20...	2	<1	100	61	4	3	40	33
MAR 26...	3	<1	100	52	4	3	40	29
APR 17...	13	49	240	25	5	2	70	23
MAY 14...	2	<1	90	28	3	3	30	20
JUN 04...	7	<1	110	38	4	2	40	14
JUL 09...	4	<1	100	59	3	3	30	27
AUG 20...	4	<1	90	56	3	2	30	29
SEP 17...	<1	<1	130	64	<1	3	50	20

07105533 FOUNTAIN CREEK AT CIRCLE DRIVE BELOW COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT								
15...	1420	62	910	8.1	16.5	7.3	18	K190
NOV								
12...	1615	105	795	8.1	10.0	8.2	20	290
DEC								
17...	1500	73	785	8.1	8.0	9.0	14	K100
JAN								
28...	1510	89	820	8.0	9.0	8.4	12	K24
FEB								
18...	1530	103	807	8.1	8.5	8.7	9.4	75
MAR								
25...	1400	89	795	8.0	15.5	8.5	18	80
APR								
29...	1445	67	691	8.2	17.5	--	11	54
MAY								
20...	1500	58	701	8.2	21.0	6.4	14	120
JUN								
10...	1530	103	727	8.0	19.0	--	19	240
JUL								
29...	1510	83	798	8.0	24.5	5.5	E33	K1500
AUG								
26...	1505	62	884	8.0	21.0	6.1	18	470
SEP								
23...	1515	75	826	8.1	16.5	7.8	>27	470

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT							
15...	K50	72	19	116	190	58	1.6
NOV							
12...	1100	51	15	85	160	41	1.9
DEC							
17...	--	58	17	94	170	37	1.6
JAN							
28...	K110	56	16	128	160	50	1.7
FEB							
18...	310	53	16	119	170	44	1.8
MAR							
25...	180	48	14	88	160	46	1.5
APR							
29...	K41	50	14	86	140	35	1.5
MAY							
20...	250	49	14	96	150	34	1.8
JUN							
10...	450	46	14	78	150	38	1.7
JUL							
29...	620	57	15	86	170	49	1.4
AUG							
26...	640	53	17	88	200	41	1.5
SEP							
23...	200	56	17	89	180	44	1.4

E-Estimated.

K-Based on non-ideal colony counts.

07105533 FOUNTAIN CREEK AT CIRCLE DRIVE BELOW COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 15...	0.19	--	2.6	--	8.7	--	10	2.7	--
NOV 12...	0.20	--	3.4	--	8.9	--	11	2.7	--
DEC 17...	0.23	--	2.8	--	8.2	--	11	2.3	--
JAN 28...	--	0.12	2.6	2.6	--	11	13	--	2.8
FEB 18...	--	0.13	2.8	2.8	--	10	14	--	2.8
MAR 25...	--	0.13	3.7	3.7	--	7.0	13	--	2.3
APR 29...	--	0.16	2.4	2.4	--	7.0	8.5	--	1.9
MAY 20...	--	0.13	1.9	1.9	--	6.5	7.4	--	1.7
JUN 10...	--	0.22	1.8	1.8	--	10	12	--	2.3
JUL 29...	--	0.28	1.3	1.3	--	9.4	13	--	1.8
AUG 26...	--	0.29	2.1	2.1	--	10	14	--	2.3
SEP 23...	--	0.47	3.6	3.6	--	9.0	10	--	2.2

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 15...	<1	<1	3	<1	<1	7	4	420	43
NOV 12...	<1	<1	<1	<1	<1	8	3	950	44
DEC 17...	<1	<1	<1	2	<1	9	4	1100	38
JAN 28...	<1	<1	--	<1	<1	9	5	870	46
FEB 18...	<1	<1	2	<1	<1	10	5	2000	37
MAR 25...	<1	<1	2	1	<1	13	8	580	41
APR 29...	<1	<1	<1	<1	<1	7	4	870	36
MAY 20...	<1	<1	1	<1	<1	8	5	1400	29
JUN 10...	<1	<1	2	<1	<1	11	7	1800	37
JUL 29...	<1	<1	<1	<1	<1	8	5	1700	23
AUG 26...	<1	<1	2	<1	<1	8	5	350	87
SEP 23...	<1	<1	1	1	<1	8	5	680	46

07105533 FOUNTAIN CREEK AT CIRCLE DRIVE BELOW COLORADO SPRINGS, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS 2N)	ZINC, DIS- SOLVED (UG/L AS 2N)
OCT 15...	2	<1	90	72	3	3	20	26
NOV 12...	4	<1	110	63	3	3	40	30
DEC 17...	6	<1	120	69	4	3	50	23
JAN 28...	4	<1	110	69	4	4	60	46
FEB 18...	5	1	130	59	6	4	60	31
MAR 25...	3	<1	90	60	5	3	50	40
APR 29...	2	<1	90	50	9	9	30	22
MAY 20...	3	<1	90	49	4	3	30	18
JUN 10...	6	<1	140	63	4	3	60	32
JUL 29...	14	<1	140	81	5	4	70	35
AUG 26...	2	<1	130	100	3	2	30	32
SEP 23...	3	<1	110	73	4	3	50	31

07105800 FOUNTAIN CREEK AT SECURITY, CO

LOCATION.--Lat 38°43'46", long 104°44'00", in NE¹/4SW¹/4 sec.24, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on left bank on upstream side of Carson Road bridge, 0.9 mi southwest of South Security School, 3.5 mi northeast of Fountain, and 5.5 mi upstream from Jimmy Camp Creek.

DRAINAGE AREA.--495 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year.

REVISED RECORDS.--WDR CO-85-1: 1984 (M).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,640 ft above sea level, from topographic map. Prior to Oct. 26, 1966, at site 1,040 ft upstream at datum 6.00 ft higher. Oct. 26, 1966, to July 18, 1972, at site 980 ft upstream at datum 6.00 ft higher, July 19, 1972, to Feb. 20 1980, at site 980 ft downstream at datum 6.00 ft lower. Feb. 21, 1980 to June 30, 1986 at present site at datum 3.00 ft lower.

REMARKS.--Estimated daily discharges: Oct. 10-13, July 11-12, Aug. 18, and Aug. 26-31. Records good except for estimated daily discharges and daily discharges above 500 ft³/s, which are poor. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation of about 5,100 acres and municipal use, return flow from irrigated areas and flows from sewage treatment plants.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69	110	109	67	84	73	65	69	91	59	105	64
2	72	107	105	76	80	74	65	71	198	53	259	71
3	70	109	102	71	77	72	70	70	144	47	81	74
4	69	107	94	63	80	74	81	75	71	49	111	55
5	64	105	95	60	77	69	92	83	57	49	103	110
6	82	110	93	66	79	72	99	80	52	53	83	382
7	70	107	103	67	84	73	109	77	89	49	68	148
8	72	111	106	63	80	76	96	82	84	45	62	144
9	80	115	82	61	78	75	96	77	101	40	62	102
10	80	105	69	65	83	72	96	78	99	41	95	101
11	75	118	62	75	70	68	96	70	75	300	112	106
12	70	110	60	86	74	69	103	70	76	120	73	86
13	68	107	51	63	76	73	139	83	75	86	74	88
14	67	110	41	65	72	77	97	88	76	92	68	93
15	64	114	44	68	71	77	99	107	76	91	66	90
16	58	107	48	67	63	72	67	135	72	97	63	75
17	61	106	57	63	65	73	46	76	865	78	41	78
18	60	110	77	67	80	76	58	78	384	87	55	78
19	57	112	69	61	91	78	75	56	145	150	76	82
20	57	109	72	61	84	79	88	56	134	116	55	78
21	54	135	69	64	78	78	81	54	186	97	53	77
22	52	116	64	65	74	80	74	56	124	73	57	75
23	52	108	70	80	75	80	80	45	114	69	48	75
24	48	84	78	71	79	73	103	90	96	66	48	65
25	46	85	72	78	74	76	101	133	74	65	52	60
26	51	94	69	82	74	76	74	66	78	65	58	58
27	53	97	71	80	75	83	69	87	77	61	80	59
28	52	98	67	78	76	88	79	109	75	62	90	60
29	59	104	62	81	---	103	67	114	70	111	80	56
30	59	93	72	82	---	116	67	81	68	72	110	59
31	82	---	68	83	---	79	---	90	---	71	72	---
TOTAL	1973	3203	2301	2179	2153	2404	2532	2506	3926	2514	2460	2749
MEAN	63.6	107	74.2	70.3	76.9	77.5	84.4	80.8	131	81.1	79.4	91.6
MAX	82	135	109	86	91	116	139	135	865	300	259	382
MIN	46	84	41	60	63	68	46	45	52	40	41	55
AC-FT	3910	6350	4560	4320	4270	4770	5020	4970	7790	4990	4880	5450

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1993, BY WATER YEAR (WY)

	MEAN	66.0	59.0	50.1	56.0	62.5	73.7	91.9	159	145	97.5	106	68.1
MAX	317	188	133	115	115	162	250	795	487	317	234	170	
(WY)	1985	1985	1986	1985	1992	1992	1985	1980	1965	1983	1983	1982	
MIN	12.6	15.1	17.8	11.9	14.1	21.3	23.7	24.7	17.8	30.1	23.5	13.1	
(WY)	1965	1965	1976	1976	1972	1965	1978	1966	1968	1972	1974	1968	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1965 - 1993

ANNUAL TOTAL	40807	30900	86.3	
ANNUAL MEAN	111	84.7	203	1985
HIGHEST ANNUAL MEAN			31.5	1968
LOWEST ANNUAL MEAN			5650	Jun 17 1965
HIGHEST DAILY MEAN	824	Aug 24	865	Jun 17
LOWEST DAILY MEAN	36	Sep 18	40	Jul 9
ANNUAL SEVEN-DAY MINIMUM	47	Sep 7	47	Jul 4
INSTANTANEOUS PEAK FLOW			^a 8930	Jun 17
INSTANTANEOUS PEAK STAGE			8.52	Jun 17
ANNUAL RUNOFF (AC-FT)	80940	61290	25000	^b 25000
10 PERCENT EXCEEDS	160	110	151	^c 11.30
50 PERCENT EXCEEDS	103	76	63	
90 PERCENT EXCEEDS	62	56	21	

a-From rating curve extended above 2600 ft³/s.

b-From rating curve extended above 2900 ft³/s, on basis of slope-area measurement of peak flow.

c-From floodmarks, site and datum then in use.

07105800 FOUNTAIN CREEK AT SECURITY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1984 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1990 to current year.
 WATER TEMPERATURE: October 1990 to current year.
 pH: October 1990 to current year.
 DISSOLVED OXYGEN: October 1990 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Records for water temperature are good, those for specific conductance and pH are fair, and those for dissolved oxygen are poor. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance and mean water temperature, pH and dissolved oxygen data available in the district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,270 microsiemens, Dec. 12, 1991; minimum, 114 microsiemens, June 2, 1993.
 pH: Maximum, 8.4 units, on several days; minimum 6.9 units, Nov. 7, 1990.
 WATER TEMPERATURE: Maximum, 29.8°C, July 17, 1991; minimum, 0.0°C, on many days during winter months.
 DISSOLVED OXYGEN: Maximum, 11.8 mg/L, Feb. 17, 1993; minimum, 3.5 mg/L, Aug. 9, 1992.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,220 microsiemens, Nov. 21; minimum, 114 microsiemens, June 2.
 pH: Maximum, 8.3 units, on many days; minimum, 7.5 units, June 26-27.
 WATER TEMPERATURE: Maximum, 28.7°C, July 16; minimum, 0.0°C, Feb. 16-17.
 DISSOLVED OXYGEN: Maximum, 11.8 mg/L, Feb. 17; minimum, 3.7 mg/L, Aug. 19.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT					
08...	1010	70	122	23	--
NOV					
07...	1130	136	465	171	--
DEC					
13...	1150	62	210	35	--
JAN					
02...	1200	76	104	21	--
APR					
15...	1255	210	713	404	--
15...	1300	217	813	476	--
16...	1710	402	4710	5110	57
MAY					
27...	1220	140	744	281	--
JUN					
03...	1700	252	1440	980	32
26...	1155	140	1010	382	--
26...	2005	1950	11200	59000	--
26...	2020	2010	10500	57000	62
29...	1140	188	606	308	--
JUL					
31...	1155	83	152	34	--
AUG					
13...	1015	89	703	169	--
SEP					
15...	1200	120	383	124	--

07105800 FOUNTAIN CREEK AT SECURITY, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV					
04...	1115	103	162	45	--
JAN					
05...	1205	41	91	10	--
MAR					
24...	1125	71	68	13	--
APR					
02...	1210	77	489	102	--
MAY					
28...	1035	59	154	25	--
JUN					
03...	1015	118	381	121	--
18...	1440	234	1640	1040	--
18...	1445	229	1510	934	--
JUL					
09...	1240	35	56	5.3	--
12...	1225	99	531	142	--
14...	1300	89	654	157	--
20...	1200	105	1020	289	--
AUG					
23...	1535	56	150	23	--
31...	1340	77	348	72	54
SEP					
07...	1250	139	849	319	--
08...	0950	125	1040	351	--
23...	1215	84	341	77	--

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	838	---	834	876	815	850	774	797	633	869	869	---
2	---	---	844	857	840	858	839	774	635	---	---	---
3	---	---	851	869	852	847	853	770	623	---	---	---
4	---	---	857	913	891	841	814	782	754	---	---	---
5	---	---	839	943	896	873	808	824	809	---	---	---
6	---	773	880	900	865	856	820	---	802	---	---	---
7	871	---	873	895	824	839	761	---	779	829	---	---
8	860	---	846	890	819	821	806	---	779	---	---	---
9	872	---	851	887	850	836	816	---	780	---	---	758
10	892	---	866	---	920	831	817	---	738	---	---	791
11	871	---	884	---	906	844	788	---	799	---	---	765
12	887	---	880	---	862	864	793	---	812	---	---	836
13	908	---	893	---	861	873	694	837	803	839	795	815
14	908	---	929	---	869	857	765	804	804	---	842	839
15	942	---	951	---	863	851	780	779	836	775	877	826
16	963	---	953	---	894	871	821	599	827	619	875	848
17	918	---	948	---	893	857	846	---	690	805	907	880
18	904	---	919	---	884	850	810	---	---	830	852	873
19	890	745	929	---	855	826	785	---	---	626	696	844
20	906	817	901	---	847	829	782	---	---	---	---	850
21	887	881	896	---	840	795	823	772	---	---	---	862
22	896	883	904	986	830	838	844	789	785	848	---	858
23	---	852	894	---	828	879	846	825	827	855	---	898
24	---	898	847	---	818	855	839	812	828	878	---	898
25	---	907	831	---	843	842	703	575	844	874	896	881
26	---	880	845	---	847	862	795	742	857	872	883	824
27	---	863	840	---	870	871	810	698	839	906	---	817
28	905	869	849	885	828	827	766	562	850	923	---	830
29	900	828	906	844	---	768	779	558	760	699	---	823
30	901	855	891	865	---	695	788	644	828	889	---	836
31	871	---	878	841	---	748	---	660	---	893	---	---
MEAN	---	---	881	---	857	837	799	---	---	---	---	---

PH (STANDARD UNITS), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	7.9	7.6	8.1	7.9	8.1	8.0	8.2	8.1	---	7.9
2	---	---	7.9	7.8	8.1	8.0	8.1	7.9	8.3	8.1	---	7.9
3	---	---	8.0	7.9	8.1	8.0	8.1	8.0	8.3	8.1	---	7.9
4	---	---	8.0	7.9	8.1	8.0	8.1	8.0	8.3	8.1	---	7.8
5	---	---	8.0	7.9	8.1	8.0	8.1	8.0	8.2	8.1	---	7.9
6	---	---	8.0	7.9	8.1	8.0	8.2	8.0	8.3	8.1	---	---
7	8.1	7.6	8.1	7.9	8.0	7.9	8.1	8.0	8.3	8.1	---	---
8	8.1	7.6	8.0	7.8	8.0	7.9	8.2	8.0	8.2	8.1	---	---
9	8.0	7.6	8.0	7.8	8.0	8.0	8.2	8.1	8.3	8.1	8.2	7.9
10	8.1	7.9	8.0	7.8	8.1	8.0	8.2	8.0	8.2	8.1	8.3	8.2
11	8.0	7.8	8.0	7.8	8.1	8.0	8.1	8.0	8.3	8.0	8.3	8.2
12	8.0	7.8	8.0	7.9	8.2	8.0	8.1	8.0	8.3	7.9	8.2	7.7
13	8.0	7.8	8.0	7.9	8.2	8.0	8.2	8.1	8.2	7.8	8.2	7.9
14	8.0	7.8	7.9	7.8	8.1	8.0	8.2	8.0	8.2	8.1	8.2	7.7
15	8.0	7.8	7.9	7.8	8.2	8.0	8.1	8.0	8.3	8.2	8.1	7.7
16	8.1	7.9	7.9	7.7	8.2	7.9	8.1	8.0	8.3	7.9	8.1	7.6
17	8.0	7.8	7.9	7.8	8.2	8.1	8.2	8.0	8.3	7.8	8.1	7.6
18	8.0	7.8	7.9	7.8	8.1	8.1	8.1	8.0	8.2	7.9	7.7	7.6
19	7.9	7.7	7.9	7.8	8.2	8.0	8.2	8.0	8.1	7.8	8.0	7.6
20	7.9	7.7	7.9	7.8	8.1	8.1	8.2	8.0	8.1	7.8	8.1	7.6
21	7.9	7.7	8.0	7.8	8.1	8.1	8.1	8.0	8.2	7.8	7.9	7.6
22	7.9	7.7	8.0	7.9	8.1	8.1	8.2	8.0	8.2	7.7	8.2	7.7
23	7.9	7.7	8.1	7.9	8.2	8.0	8.1	8.0	8.2	7.8	8.1	7.7
24	8.0	7.7	8.2	8.0	8.1	8.0	8.1	8.0	---	---	8.2	7.8
25	8.2	7.8	8.1	8.0	8.1	8.0	8.1	8.0	---	---	8.2	7.9
26	7.9	7.7	8.1	7.9	8.1	8.0	8.1	7.9	---	---	8.3	7.6
27	8.0	7.7	8.1	8.0	8.1	8.0	8.2	8.0	---	---	8.0	7.6
28	8.0	7.8	8.1	8.0	8.1	8.0	8.2	8.1	---	---	---	---
29	8.0	7.8	8.1	8.0	8.1	8.0	8.3	8.2	---	---	---	---
30	8.0	7.8	8.1	8.0	8.1	8.0	8.2	8.1	---	---	---	---
31	8.0	7.6	---	---	8.1	8.0	8.2	8.1	---	---	---	---
MONTH	---	---	8.2	7.6	8.2	7.9	8.3	7.9	---	---	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	8.1	7.9	8.0	7.7	7.8	7.6	8.0	7.6	8.0	7.6
2	8.0	7.9	8.2	7.9	8.1	7.8	7.6	---	---	---	7.7	---
3	8.1	8.0	8.1	7.9	8.1	7.8	7.7	---	---	---	7.7	---
4	8.0	7.9	8.2	7.9	8.3	7.9	7.8	7.6	7.9	7.6	8.0	---
5	8.0	7.9	8.1	7.9	8.2	8.0	8.2	7.6	8.0	7.6	7.7	---
6	7.9	7.8	8.1	7.8	8.2	8.0	8.2	7.8	8.0	7.6	---	---
7	8.0	7.8	8.1	7.8	8.2	7.9	8.2	7.7	7.8	---	---	---
8	8.0	7.8	8.1	7.8	8.2	7.9	8.0	7.7	---	---	8.0	7.6
9	8.0	7.8	8.1	7.8	8.2	7.8	8.2	7.6	---	---	7.9	7.6
10	7.9	7.8	8.1	7.7	8.2	7.8	8.0	7.6	---	---	---	---
11	7.9	7.8	8.2	7.7	8.2	8.0	---	---	---	---	7.8	---
12	8.0	7.7	8.0	7.7	8.2	8.0	---	---	---	---	7.8	---
13	7.9	7.7	8.1	7.7	8.2	8.0	8.2	8.1	7.9	---	---	---
14	8.0	7.9	8.0	7.7	8.1	8.0	8.2	8.1	---	---	---	---
15	8.0	7.9	8.1	7.7	8.0	8.0	8.3	8.0	7.7	---	8.0	---
16	8.0	7.9	7.9	7.7	8.1	7.9	8.2	8.0	7.7	---	8.1	7.6
17	8.0	7.8	7.9	7.8	8.1	---	8.3	8.1	7.6	---	8.2	7.6
18	7.9	7.7	8.0	7.7	---	---	8.2	7.7	---	---	8.1	8.0
19	7.9	7.7	8.0	7.8	---	---	8.1	7.6	7.9	---	8.2	7.9
20	8.1	7.8	8.0	7.9	---	---	8.1	7.7	7.8	---	8.1	7.9
21	8.1	7.9	8.1	8.0	8.0	---	8.1	7.6	7.7	---	8.1	7.8
22	8.0	7.9	8.1	7.9	8.1	8.0	8.1	7.7	---	---	8.0	7.8
23	8.0	7.8	8.2	8.0	8.1	7.8	8.1	7.6	8.0	---	8.0	7.9
24	8.1	7.8	8.1	7.6	8.1	7.7	8.0	7.6	7.9	7.6	8.1	7.9
25	8.0	7.8	8.0	7.6	8.0	7.6	---	---	7.8	7.6	8.1	7.9
26	8.1	7.9	8.0	8.0	7.9	7.5	---	---	7.8	7.6	8.1	7.9
27	8.0	7.9	8.0	7.7	7.9	7.5	---	---	---	---	8.1	7.9
28	8.0	7.9	8.0	7.7	7.9	7.7	---	---	---	---	8.1	7.8
29	8.0	7.8	8.0	7.8	8.0	7.7	---	---	---	---	8.0	7.9
30	8.1	7.8	8.1	7.8	7.8	7.7	8.2	7.7	---	---	8.1	7.7
31	---	---	8.0	7.7	---	---	8.2	7.6	---	---	---	---
MONTH	---	---	8.2	7.6	---	---	---	---	---	---	---	---

07105800 FOUNTAIN CREEK AT SECURITY, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.9	10.8	12.0	5.9	9.3	2.9	7.4	1.5	10.1	3.7	8.5	5.5
2	20.6	10.8	---	---	9.5	1.9	8.9	3.8	8.8	2.8	12.5	3.8
3	19.5	10.6	---	---	8.9	2.9	6.1	2.3	8.1	3.6	11.3	4.6
4	20.1	10.5	---	---	6.1	2.1	6.4	1.0	8.4	3.3	12.0	3.5
5	19.8	11.8	9.2	---	4.4	.5	5.1	.8	10.7	1.5	12.8	3.0
6	16.9	13.1	11.1	4.7	7.9	1.7	7.0	.8	10.6	1.6	13.1	5.1
7	14.0	8.1	11.0	3.8	8.7	1.2	7.1	1.1	9.6	3.4	14.5	4.8
8	14.9	5.7	12.3	4.7	7.5	2.2	3.5	.9	8.0	3.9	13.0	5.5
9	15.5	9.2	12.8	5.5	8.6	2.3	3.6	.7	11.3	4.5	14.1	5.3
10	17.5	7.8	9.3	6.2	8.1	2.5	3.8	.8	7.5	3.2	9.4	5.4
11	18.7	8.3	9.9	5.3	10.3	2.4	6.8	.8	10.0	2.0	8.3	3.8
12	18.5	9.4	8.3	4.0	4.6	1.7	6.0	.8	10.1	1.7	10.5	1.5
13	19.8	10.1	11.6	4.1	1.7	.5	5.4	.7	9.5	2.1	11.5	.9
14	16.6	9.1	12.2	5.1	4.9	.5	7.7	.8	7.3	1.9	13.9	2.9
15	16.4	8.1	13.0	5.6	5.5	.5	8.7	1.1	5.5	.7	14.6	5.6
16	11.5	4.3	12.8	6.1	3.6	.7	8.8	1.0	6.0	.0	12.0	5.7
17	16.7	6.4	12.6	6.6	5.8	.5	4.3	2.4	7.6	.0	6.9	4.5
18	14.4	6.0	12.5	7.5	7.1	1.2	8.0	2.0	10.4	1.0	11.9	5.6
19	16.8	9.1	11.5	6.1	5.5	.6	3.6	1.7	11.0	3.4	15.3	5.5
20	16.7	7.8	8.3	3.5	6.5	.7	8.8	.9	11.5	4.5	14.6	6.2
21	---	---	8.1	3.3	7.2	1.2	10.3	3.0	9.7	2.4	12.1	6.9
22	---	---	7.9	1.5	6.7	.7	9.8	2.1	10.6	1.7	16.1	5.9
23	17.6	---	7.5	1.3	6.4	.8	7.4	3.0	9.5	1.5	17.2	6.0
24	15.6	7.7	3.3	.5	7.8	.8	7.8	1.7	11.1	3.1	17.8	6.8
25	14.6	7.7	7.7	.8	6.7	.8	9.6	2.0	6.8	3.7	18.2	7.1
26	15.8	9.3	8.4	.6	7.5	.8	10.7	3.1	10.4	2.8	16.9	8.2
27	16.7	7.3	8.9	1.1	7.6	.8	11.0	3.3	11.6	2.2	12.1	9.2
28	---	---	8.2	1.4	7.6	2.8	9.3	2.7	11.1	3.7	14.1	8.1
29	---	---	5.8	1.9	8.2	3.2	5.2	2.5	---	---	12.8	7.9
30	13.4	7.6	8.9	.5	9.0	3.4	9.6	2.0	---	---	12.0	7.0
31	12.4	6.3	---	---	5.8	3.1	10.4	2.7	---	---	14.9	6.8
MONTH	---	---	---	---	10.3	.5	11.0	.7	11.6	.0	18.2	.9
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.4	6.2	14.6	6.7	22.9	13.9	28.0	16.9	26.7	16.9	23.2	13.2
2	16.2	6.9	18.7	6.0	20.6	13.0	25.0	15.8	25.4	17.7	18.7	13.7
3	9.6	5.6	20.9	8.1	21.3	12.7	23.3	14.2	20.3	16.8	23.0	11.9
4	15.2	5.7	19.2	9.5	19.6	11.4	27.0	14.2	23.2	15.5	25.5	13.0
5	15.8	8.3	17.7	11.1	22.3	12.2	26.1	13.6	24.2	16.4	22.3	14.3
6	13.7	7.1	21.0	9.5	23.1	12.2	26.1	14.4	26.1	15.5	16.2	13.2
7	13.2	4.1	18.5	10.5	21.7	11.5	26.6	14.4	26.2	15.4	19.7	13.9
8	16.7	4.7	15.9	9.5	20.1	11.3	25.8	15.3	25.3	15.7	22.4	12.0
9	16.7	6.6	16.4	7.9	20.9	12.9	27.3	15.5	27.5	15.6	23.5	13.2
10	16.3	7.6	19.7	7.7	21.8	11.7	25.5	14.7	27.3	18.2	23.1	14.0
11	17.7	7.0	18.0	8.3	24.0	13.3	23.9	16.0	27.2	17.7	24.8	13.5
12	16.0	7.2	20.5	10.9	24.7	13.3	---	---	27.0	16.8	24.0	13.5
13	16.3	7.4	22.1	10.7	24.2	13.3	28.4	---	21.3	17.7	16.5	10.2
14	15.3	6.9	20.1	11.3	23.1	15.4	26.5	18.0	23.3	16.2	19.7	9.6
15	13.6	7.0	21.3	11.6	25.7	15.3	28.0	17.3	27.9	15.4	22.5	10.1
16	12.7	7.1	15.4	12.7	22.9	14.5	28.7	17.4	25.4	15.3	22.2	12.2
17	17.5	6.3	15.4	11.6	21.3	13.3	24.4	17.1	27.7	15.8	22.2	12.7
18	18.5	7.8	20.6	10.5	---	---	27.9	16.2	26.0	18.0	21.1	14.4
19	15.7	5.6	18.6	10.5	---	---	26.7	16.1	24.5	17.9	21.9	11.4
20	13.7	6.5	23.3	11.2	---	---	21.3	16.2	25.8	18.4	21.9	11.5
21	17.0	5.6	21.4	12.0	25.3	---	25.7	15.5	26.6	18.3	22.2	11.7
22	17.9	7.3	21.5	11.6	25.9	15.4	26.0	15.3	23.9	16.6	21.3	12.8
23	20.2	8.9	22.7	10.5	23.1	13.7	26.9	16.0	26.8	14.5	15.8	12.7
24	12.0	8.5	15.5	13.1	25.4	13.5	27.4	15.9	26.8	15.1	22.3	13.4
25	18.0	6.2	15.3	12.2	27.8	16.5	26.8	15.7	27.6	15.9	21.2	11.0
26	19.9	8.0	23.2	13.2	25.1	15.7	27.2	15.9	23.0	15.9	20.7	10.8
27	18.0	10.1	23.0	13.2	25.9	15.3	25.3	15.4	19.6	16.8	22.3	10.6
28	21.4	11.0	23.4	12.2	27.4	16.1	28.0	15.4	21.3	16.2	21.8	11.5
29	19.4	9.1	17.8	12.1	27.2	15.3	28.2	16.2	24.3	15.0	21.4	11.2
30	16.7	9.9	20.2	11.0	28.0	17.8	26.3	16.8	18.2	13.4	21.0	11.3
31	---	---	22.6	13.7	---	---	28.2	16.8	18.5	13.3	---	---
MONTH	21.4	4.1	23.4	6.0	---	---	---	---	27.9	13.3	25.5	9.6

07105900 JIMMY CAMP CREEK AT FOUNTAIN, CO

LOCATION.--Lat 38°41'04", long 104°41'17", in NW1/4SE1/4 sec.5, T.16 S., R.65 W., El Paso County, Hydrologic Unit 11020003, on right bank at downstream side of bridge on county road, 1,000 ft east of Fountain, and 1.5 mi upstream from mouth. Prior to Aug. 14, 1991, at site 110 ft upstream.

DRAINAGE AREA.--65.6 mi².

PERIOD OF RECORD.--January 1976 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,530 ft above sea level, from topographic map. January 1976 to Sept. 3, 1986 at datum 4.0 ft, higher. Prior to Aug. 14, 1991, at site 110 ft upstream, at same datum.

REMARKS.--Estimated daily discharges: Oct. 14-19, Dec. 19, 21-24, 26, 27, Jan. 5-13, 20, 24-27, 29, 30, Feb. 1, 2, 4, 8, 10, 12-14, 16-20, and Mar. 12-23. Records fair except for estimated daily discharges, and those above 5 ft³/s, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	3.4	1.8	1.7	1.1	2.3	3.7	2.5	1.5	2.3	2.7	.75
2	1.1	3.2	2.0	1.7	1.1	2.6	5.0	2.5	1.5	2.7	.74	.84
3	1.1	3.0	2.0	1.6	1.1	2.3	4.1	2.4	5.6	2.6	.57	.74
4	1.0	3.0	2.0	1.6	1.1	2.9	3.1	2.8	2.6	2.6	.56	.70
5	.87	3.1	2.3	1.7	1.1	3.0	2.4	2.7	2.4	2.6	.51	1.3
6	.88	3.3	2.4	1.8	1.2	2.6	1.9	2.3	2.0	2.3	.60	1.7
7	1.1	3.0	2.1	1.7	1.1	1.7	1.6	2.1	2.4	2.6	.74	1.2
8	1.2	3.2	1.9	1.6	1.1	1.6	1.4	2.2	3.1	2.5	.80	1.0
9	1.5	3.0	1.9	1.7	1.1	1.6	1.3	2.2	2.1	2.2	.92	.85
10	2.5	2.8	1.8	1.7	1.1	1.8	1.4	2.2	1.8	2.0	1.2	.88
11	3.5	2.9	1.9	1.7	1.1	1.6	1.7	2.3	1.5	2.1	1.7	2.0
12	3.2	2.7	2.1	1.6	1.2	1.6	1.8	2.1	1.5	3.3	1.5	1.5
13	2.6	2.3	2.4	1.6	1.2	1.6	1.7	2.1	1.4	4.1	1.4	1.4
14	2.5	2.2	2.1	1.7	1.2	1.5	1.8	2.1	1.4	5.1	1.2	1.4
15	2.3	2.1	1.9	1.6	1.3	1.5	1.9	2.2	1.6	6.1	1.2	1.4
16	2.3	2.2	1.7	1.4	1.3	1.6	2.2	2.4	1.5	5.8	.90	1.4
17	2.2	2.0	1.7	1.4	1.3	1.3	2.6	2.3	1.7	6.0	.66	1.4
18	2.1	1.9	1.8	1.4	1.4	1.2	2.8	2.3	2.7	12	.75	1.4
19	2.2	2.0	1.7	1.5	1.4	1.2	2.8	2.2	2.7	5.0	.59	1.6
20	2.2	2.1	1.7	1.4	1.4	1.4	2.8	2.2	2.6	1.5	.58	1.6
21	1.9	2.1	1.7	1.6	1.5	1.8	3.1	2.1	2.2	1.8	.59	1.4
22	1.8	1.9	1.7	1.8	1.4	1.8	3.4	2.1	2.1	1.5	.54	1.4
23	1.7	1.9	1.7	1.4	1.8	1.7	3.7	2.0	2.2	1.3	.46	1.5
24	1.9	1.9	1.7	1.3	2.0	1.7	3.9	2.2	2.3	1.3	.38	1.6
25	2.2	1.6	1.6	1.2	2.3	1.3	4.0	2.4	2.4	1.2	.33	1.6
26	2.4	1.6	1.6	1.2	2.1	1.6	3.6	2.2	2.4	1.0	.41	1.6
27	2.5	1.8	1.6	1.2	2.5	1.5	3.1	1.9	2.4	1.0	.67	1.6
28	2.5	1.9	1.6	1.3	2.7	1.9	2.8	1.7	2.2	1.1	.64	1.6
29	2.8	1.9	1.8	1.3	---	2.4	2.8	2.9	2.0	1.5	.58	1.9
30	2.6	1.7	1.9	1.2	---	3.6	3.1	1.6	2.1	1.7	.79	2.2
31	3.3	---	1.8	1.2	---	4.3	---	1.6	---	1.7	.79	---
TOTAL	63.35	71.7	57.9	46.8	40.2	60.5	81.5	68.8	65.9	90.5	26.00	41.46
MEAN	2.04	2.39	1.87	1.51	1.44	1.95	2.72	2.22	2.20	2.92	.84	1.38
MAX	3.5	3.4	2.4	1.8	2.7	4.3	5.0	2.9	5.6	12	2.7	2.2
MIN	.87	1.6	1.6	1.2	1.1	1.2	1.3	1.6	1.4	1.0	.33	.70
AC-FT	126	142	115	93	80	120	162	136	131	180	52	82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1993, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	2.06	2.35	1.72	1.71	1.65	1.85	1.68	2.08	2.05	3.28	4.68	1.62						
MAX	3.55	6.49	2.35	2.74	2.39	3.54	2.72	4.77	5.15	27.9	13.4	3.46						
(WY)	1985	1982	1982	1986	1977	1980	1993	1980	1982	1985	1984	1982						
MIN	1.20	1.58	.87	1.01	.79	1.05	.56	.91	.98	.96	.84	.68						
(WY)	1979	1984	1988	1988	1990	1990	1990	1986	1989	1989	1993	1990						

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1976 - 1993
ANNUAL TOTAL	669.37	714.61	
ANNUAL MEAN	1.83	1.96	2.21
HIGHEST ANNUAL MEAN			4.03
LOWEST ANNUAL MEAN			1.20
HIGHEST DAILY MEAN	6.0 Jun 1	12 Jul 18	700 Jul 28 1985
LOWEST DAILY MEAN	.71 Aug 23	.33 Aug 25	a .00 Apr 12 1990
ANNUAL SEVEN-DAY MINIMUM	.87 Sep 6	.47 Aug 20	b .07 Apr 10 1990
INSTANTANEOUS PEAK FLOW		199 Jul 18	b 3600 Jul 28 1985
INSTANTANEOUS PEAK STAGE		6.78 Jul 18	c, d 6.25 Jul 28 1985
ANNUAL RUNOFF (AC-FT)	1330	1420	1600
10 PERCENT EXCEEDS	2.7	3.0	2.8
50 PERCENT EXCEEDS	1.8	1.8	1.7
90 PERCENT EXCEEDS	.99	1.1	.90

a-Also occurred Apr 13 and 15, 1990.

b-From rating curve extended above 1300 ft³/s, on basis of slope-area measurement of peak flow.

c-From floodmark.

d-Maximum gage height, 6.78 ft, Jul 18, 1993.

07105905 FOUNTAIN CREEK ABOVE LITTLE FOUNTAIN CREEK, BELOW FOUNTAIN, CO

WATER-QUALITY RECORDS

LOCATION.--Lat 38°37'50", long 104°40'50", in SW¹/4NW¹/4 sec.28, T.16 S., R.65 W., El Paso County, Hydrologic Unit 11020003, approximately 1 mi upstream from mouth of Little Fountain Creek below Fountain.

PERIOD OF RECORD.--April 1975 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)
OCT											
25...	1025	62	1100	7.8	9.5	7.5	18	550	400	86	27
NOV											
22...	1345	133	974	8.0	7.0	8.2	16	K50	110	70	22
DEC											
13...	1015	92	1040	8.0	3.0	9.6	--	130	230	69	21
JAN											
10...	1050	88	991	8.0	3.5	9.0	>36	90	210	72	21
FEB											
21...	1335	95	992	7.9	12.5	6.6	28	170	K27	74	22
MAR											
27...	1030	122	891	7.8	10.0	7.3	27	K38	K57	66	21
APR											
17...	1255	305	572	7.9	14.0	7.5	5.7	K530	460	39	12
MAY											
15...	1425	60	875	7.9	24.5	5.4	2.9	250	150	66	21
JUN											
05...	1015	366	710	7.7	17.0	6.0	8.4	590	420	53	16
JUL											
10...	1150	33	1040	8.0	21.5	6.6	2.0	K120	K200	84	26
AUG											
21...	1315	26	1260	7.9	25.5	6.1	2.2	K60	390	110	34
SEP											
18...	0835	47	1100	8.0	12.5	7.4	4.3	K930	K730	83	26

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SULFIDE TOTAL (MG/L AS S)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)
OCT											
25...	171	310	48	1.6	--	51	0.14	5.1	0.91	2.1	1.5
NOV											
22...	145	250	50	1.5	--	95	0.11	4.6	2.0	3.5	1.6
DEC											
13...	144	240	74	1.5	--	158	0.04	3.7	2.6	3.8	1.4
JAN											
10...	136	240	46	1.5	--	67	0.06	3.8	5.5	8.0	2.2
FEB											
21...	139	240	52	1.5	--	58	0.17	4.6	3.8	5.3	1.8
MAR											
27...	120	220	45	1.7	--	66	0.14	4.2	3.2	4.3	1.9
APR											
17...	90	140	22	1.9	--	484	0.09	2.9	0.21	1.6	0.70
MAY											
15...	135	220	37	1.7	<0.5	46	0.06	3.9	0.08	0.50	1.1
JUN											
05...	100	160	33	1.9	--	203	0.26	4.9	0.46	1.0	1.4
JUL											
10...	165	300	45	1.7	--	34	0.10	4.0	0.13	0.50	1.2
AUG											
21...	199	390	51	1.6	--	16	0.03	4.2	0.05	0.50	0.97
SEP											
18...	173	300	50	1.5	--	21	0.12	5.0	0.12	0.60	1.4

K Based on non-ideal colony counts.

07105905 FOUNTAIN CREEK ABOVE LITTLE FOUNTAIN CREEK, BELOW FOUNTAIN, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 25...	--	--	--	--	<1	<1	1	<1	<1	7	3
NOV 22...	<1	1	210	180	<1	2	2	<1	<1	<1	3
DEC 13...	--	--	--	--	<1	<1	5	<1	<1	7	3
JAN 10...	--	--	--	--	<1	<1	<1	2	<1	5	7
FEB 21...	--	--	--	--	<1	<1	1	<1	<1	3	4
MAR 27...	--	--	--	--	<1	<1	1	<1	<1	7	6
APR 17...	--	--	--	--	<1	<1	11	<1	<1	<1	1
MAY 15...	2	2	160	150	<1	<1	<1	<1	<1	3	3
JUN 05...	--	--	--	--	<1	<1	<1	<1	<1	8	2
JUL 10...	--	--	--	--	<1	<1	<1	<1	<1	2	2
AUG 21...	--	--	--	--	<1	<1	<1	<1	<1	2	2
SEP 18...	--	--	--	--	<1	<1	<1	<1	<1	6	3

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
OCT 25...	2400	24	6	<1	230	140	6	3	30	20	--
NOV 22...	2400	21	3	<1	150	64	6	4	30	18	<0.01
DEC 13...	4900	23	7	<1	230	97	7	3	50	17	--
JAN 10...	2400	37	2	3	120	110	5	4	40	29	--
FEB 21...	1600	26	<1	<1	180	120	5	3	30	21	--
MAR 27...	2500	27	4	1	140	68	5	4	40	18	--
APR 17...	17000	22	23	<1	410	16	12	2	100	8	--
MAY 15...	1100	8	2	<1	70	20	3	3	20	9	<0.01
JUN 05...	3700	18	9	<1	140	16	5	2	50	9	--
JUL 10...	400	10	1	<1	80	62	3	2	<10	10	--
AUG 21...	630	4	2	<1	60	29	3	3	10	7	--
SEP 18...	850	9	5	<1	100	46	5	4	70	16	--

07105905 FOUNTAIN CREEK ABOVE LITTLE FOUNTAIN CREEK, BELOW FOUNTAIN, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT								
16...	1000	43	1230	8.0	7.0	8.2	7.1	200
NOV								
13...	1245	105	1010	8.0	8.0	8.3	6.9	K180
DEC								
18...	0905	90	1100	8.1	0.0	10.0	25	--
JAN								
29...	0910	114	1010	8.1	2.0	9.3	32	290
FEB								
19...	1230	107	1040	8.1	9.0	7.5	22	58
MAR								
26...	0745	106	981	7.9	7.5	7.2	32	110
APR								
30...	0800	46	1060	8.0	10.0	7.2	5.9	200
MAY								
21...	1230	24	1220	8.0	21.5	6.0	2.4	58
JUN								
11...	0755	89	944	8.0	14.0	6.3	22	290
JUL								
30...	0755	26	1160	7.9	17.0	6.0	4.8	K950
AUG								
27...	0730	60	1070	7.9	17.0	5.9	15	>600
SEP								
24...	0750	66	1040	7.9	12.5	7.0	13	1000

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SULFIDE TOTAL (MG/L AS S)
OCT								
16...	K140	100	30	189	340	58	1.7	--
NOV								
13...	260	76	24	149	250	53	1.6	0.8
DEC								
18...	--	83	28	157	280	52	1.5	--
JAN								
29...	400	75	23	133	240	54	1.5	--
FEB								
19...	81	74	24	140	250	59	1.5	--
MAR								
26...	150	67	21	132	240	52	1.4	--
APR								
30...	100	84	28	158	300	48	1.4	--
MAY								
21...	190	96	33	191	380	51	1.5	<0.5
JUN								
11...	560	67	21	133	240	45	1.7	--
JUL								
30...	890	98	30	186	330	49	1.4	--
AUG								
27...	1000	78	25	158	290	52	1.5	--
SEP								
24...	390	77	25	152	280	47	1.5	--

K Based on non-ideal colony counts.

07105905 FOUNTAIN CREEK ABOVE LITTLE FOUNTAIN CREEK, BELOW FOUNTAIN, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 16...	0.11	--	5.1	--	0.74	--	1.4	1.5	--
NOV 13...	0.15	--	5.9	--	2.2	--	3.5	1.8	--
DEC 18...	0.05	--	5.1	--	4.0	--	4.4	1.8	--
JAN 29...	--	0.06	4.6	4.6	--	5.4	6.5	--	1.8
FEB 19...	--	0.16	5.2	5.2	--	4.3	5.5	--	1.8
MAR 26...	--	0.15	6.1	6.1	--	3.7	5.4	--	2.3
APR 30...	--	0.17	4.8	4.8	--	0.47	1.0	--	1.3
MAY 21...	--	0.08	3.8	3.8	--	0.08	0.4	--	0.98
JUN 11...	--	0.23	4.7	4.7	--	2.7	4.0	--	1.7
JUL 30...	--	0.09	3.1	3.1	--	0.16	0.5	--	0.75
AUG 27...	--	0.27	5.2	5.2	--	1.8	2.3	--	1.6
SEP 24...	--	0.24	6.3	6.3	--	1.5	2.3	--	1.5

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	BORON, DIS- SOLVED (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS. (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)
OCT 16...	--	--	--	--	<1	<1	2	<1	<1	4	2
NOV 13...	3	2	--	220	<1	<1	<1	<1	<1	6	3
DEC 18...	--	--	--	--	<1	<1	<1	<1	<1	7	2
JAN 29...	--	--	--	--	<1	<1	--	<1	<1	8	3
FEB 19...	--	--	--	--	<1	<1	1	<1	<1	7	3
MAR 26...	--	--	--	--	<1	<1	2	2	<1	9	4
APR 30...	--	--	--	--	<1	<1	<1	<1	<1	4	2
MAY 21...	2	2	230	230	<1	<1	1	<1	<1	3	2
JUN 11...	--	--	--	--	<1	<1	2	<1	<1	8	4
JUL 30...	--	--	--	--	<1	<1	<1	<1	<1	4	2
AUG 27...	--	--	--	--	<1	<1	1	<1	<1	9	2
SEP 24...	--	--	--	--	<1	<1	2	<1	<1	8	3

07105905 FOUNTAIN CREEK ABOVE LITTLE FOUNTAIN CREEK, BELOW FOUNTAIN, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CYANIDE TOTAL (MG/L AS CN)
OCT 16...	710	16	2	<1	120	82	6	3	20	14	--
NOV 13...	1500	25	5	<1	170	64	5	3	40	24	<0.01
DEC 18...	1500	33	5	<1	150	77	4	4	50	18	--
JAN 29...	2100	38	4	<1	170	85	7	4	50	30	--
FEB 19...	1800	24	4	<1	170	92	5	4	50	22	--
MAR 26...	1300	46	4	<1	170	110	6	4	40	28	--
APR 30...	1000	17	2	<1	140	85	5	5	20	14	--
MAY 21...	550	6	1	<1	90	67	4	3	20	8	<0.01
JUN 11...	2900	24	7	<1	170	56	6	4	50	20	--
JUL 30...	1600	5	12	<1	200	150	5	3	40	18	--
AUG 27...	2500	31	6	<1	270	140	6	3	40	20	--
SEP 24...	2300	29	5	<1	180	79	5	4	40	20	--

07105945 ROCK CREEK ABOVE FORT CARSON RESERVATION, CO

LOCATION.--Lat 38°42'27", long 104°50'46", in NW1/4NW1/4 sec.36, T.15 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on right bank 20 ft upstream from county road bridge, 0.6 mi northwest of Rock Creek Park, 1.2 mi upstream from State Highway 115, and 3.2 mi southwest of Ft. Carson.

DRAINAGE AREA.--6.79 mi².

PERIOD OF RECORD.--Streamflow records, May 1978 to current year. Water-quality data available, May to September 1978.

REVISED RECORDS.--WDR CO-85-1: 1982.

GAGE.--Water-stage recorder. Elevation of gage is 6,390 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 25-30, Dec. 1-3, 7, 13-15, 17, 19-20, Jan. 1, Jan. 4 to Feb. 14, Feb. 16, 22-28, and Mar. 1, 5. Records fair except for estimated daily discharges, and those above 40 ft³/s, which are poor. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.26	.36	.31	.43	.44	.40	2.6	4.4	2.0	.93	.06	.18
2	.26	.32	.32	.51	.43	.38	2.4	4.0	2.1	.84	.07	.19
3	.25	.32	.33	.52	.42	.37	2.6	3.7	2.5	.77	.09	.19
4	.25	.32	.37	.52	.41	.38	2.4	3.4	2.3	.74	.14	.13
5	.26	.32	.43	.50	.44	.38	2.5	3.3	2.3	.74	.10	.55
6	.33	.32	.36	.47	.48	.39	3.0	3.3	2.1	.68	.11	2.5
7	.43	.32	.35	.43	.47	.41	2.6	3.1	1.9	.65	.08	.47
8	.50	.32	.38	.40	.45	.41	2.5	3.0	1.9	.59	.07	.28
9	.49	.33	.37	.37	.43	.40	2.5	2.9	1.9	.56	.06	.23
10	.42	.35	.36	.35	.41	.41	2.6	2.7	1.8	.52	.28	.21
11	.39	.37	.40	.34	.40	.41	2.8	2.5	1.7	.55	.53	.19
12	.33	.37	.36	.33	.40	.43	5.4	2.4	1.5	1.7	.23	.15
13	.29	.37	.38	.33	.41	.44	3.5	2.3	1.4	.67	.21	.20
14	.26	.38	.40	.32	.42	1.0	3.3	2.2	1.4	.35	.17	.25
15	.28	.38	.43	.33	.43	.38	3.2	2.2	1.5	.32	.14	.22
16	.29	.38	.42	.33	.45	.37	3.2	2.5	1.3	.29	.12	.19
17	.31	.35	.38	.33	.47	.35	3.2	2.4	1.5	.23	.09	.18
18	.30	.32	.35	.34	.44	.37	3.1	2.3	2.3	.28	.12	.19
19	.30	.32	.35	.34	.50	.35	3.3	2.5	2.0	.48	.15	.19
20	.30	.64	.36	.35	.53	.37	3.3	2.7	1.8	.27	.13	.17
21	.29	.50	.37	.36	.57	.40	3.2	2.7	1.7	.25	.12	.16
22	.29	.42	.37	.36	.60	.38	3.1	2.5	1.6	.20	.09	.16
23	.29	.42	.37	.37	.66	.38	3.0	2.3	1.5	.17	.07	.21
24	.30	.38	.41	.39	.77	.40	5.2	2.3	1.4	.15	.05	.22
25	.30	.36	.36	.41	.65	.41	3.6	2.4	1.4	.13	.04	.20
26	.31	.35	.35	.47	.58	.40	3.4	2.2	1.3	.10	.04	.18
27	.31	.34	.36	.48	.50	.48	3.4	2.0	1.2	.08	.07	.17
28	.32	.32	.38	.48	.44	2.2	3.7	2.3	1.1	.25	.15	.16
29	.34	.32	.38	.47	---	3.1	4.3	2.6	1.0	.16	.11	.18
30	.36	.31	.35	.46	---	3.8	4.2	2.4	.96	.09	.19	.18
31	.69	---	.39	.45	---	3.0	---	2.2	---	.08	.22	---
TOTAL	10.30	10.88	11.50	12.54	13.60	23.35	97.1	83.7	50.36	13.82	4.10	8.68
MEAN	.33	.36	.37	.40	.49	.75	3.24	2.70	1.68	.45	.13	.29
MAX	.69	.64	.43	.52	.77	3.8	5.4	4.4	2.5	1.7	.53	2.5
MIN	.25	.31	.31	.32	.40	.35	2.4	2.0	.96	.08	.04	.13
AC-FT	20	22	23	25	27	46	193	166	100	27	8.1	17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1993, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	1.91	1.19	.53	.49	.51	1.03	4.37	8.10	3.56	1.99	3.02	1.38				
MAX	20.7	10.7	2.25	1.42	1.33	2.43	12.3	39.0	8.74	7.23	14.8	7.75				
(WY)	1985	1985	1985	1985	1985	1987	1985	1980	1983	1985	1982	1982				
MIN	.000	.028	.051	.073	.12	.29	.34	.56	.32	.010	.000	.000				
(WY)	1979	1979	1979	1979	1979	1981	1981	1981	1988	1978	1978	1978				

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1978 - 1993

	1992 CALENDAR YEAR	1993 WATER YEAR	1978 - 1993
ANNUAL TOTAL	792.34	339.93	
ANNUAL MEAN	2.16	.93	2.40
HIGHEST ANNUAL MEAN			7.70 1985
LOWEST ANNUAL MEAN			.36 1989
HIGHEST DAILY MEAN	28 Aug 24	5.4 Apr 12	113 Oct 4 1984
LOWEST DAILY MEAN	a .25 Oct 3	b .04 Aug 25	c .00 Jul 6 1978
ANNUAL SEVEN-DAY MINIMUM	.26 Sep 29	.07 Aug 21	d .00 Jul 6 1978
INSTANTANEOUS PEAK FLOW		36 Apr 12	d 276 Jul 28 1982
INSTANTANEOUS PEAK STAGE		2.50 Apr 12	4.73 Jul 28 1982
ANNUAL RUNOFF (AC-FT)	1570	674	1740
10 PERCENT EXCEEDS	5.0	2.6	5.6
50 PERCENT EXCEEDS	.55	.40	.65
90 PERCENT EXCEEDS	.32	.17	.12

a-Also occurred Oct 4.

b-Also occurred Aug 26.

c-No flow many days in most years.

d-From rating curve extended above 60 ft³/s.

07105950 ROCK CREEK NEAR FORT CARSON, CO

LOCATION.--Lat 38°41'49", long 104°49'39", in SW¹/4SW¹/4 sec.31, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on left bank at Fort Carson Girl Scout Camp, 0.2 mi downstream from bridge on State Highway 115 and 2.9 mi southwest of Fort Carson.

DRAINAGE AREA.--7.79 mi².

PERIOD OF RECORD.--Streamflow records, May 1978 to current year. Water quality data available, May 1978 to September 1981.

GAGE.--Water-stage recorder. Elevation of gage is 6,150 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records fair except for discharges above 30 ft³/s, which are poor. Some diversions upstream from station for irrigation and other uses, amounts unknown. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00
4	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00
8	.00	.00	.00	.00	.00	.00	.00	.01	.02	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.02	.02	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.02	.02	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.03	.02	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.03	.01	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.03	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
29	.00	.00	.00	.00	.00	.00	.00	.05	.00	.00	.00	.00
30	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00
31	.00	.00	.00	.00	.00	.00	.00	.04	.00	.00	.00	.00
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.99	0.34	0.00	0.00	0.00
MEAN	.000	.000	.000	.000	.000	.000	.000	.032	.011	.000	.000	.000
MAX	.00	.00	.00	.00	.00	.00	.00	.05	.04	.00	.00	.00
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.00	2.0	.7	.00	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1993, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	1.34	.67	.11	.064	.048	.18	2.80	6.75	2.46	1.14	1.68	.70				
MAX	18.6	9.66	1.43	.81	.67	1.28	10.0	42.8	10.7	6.57	15.4	6.75				
(WY)	1985	1985	1985	1985	1985	1985	1985	1980	1982	1982	1982	1982				
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000				
(WY)	1979	1979	1979	1979	1979	1979	1981	1989	1989	1978	1978	1978				

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1978 - 1993
ANNUAL TOTAL	298.85	1.33	
ANNUAL MEAN	.82	.004	1.54
HIGHEST ANNUAL MEAN			6.24
LOWEST ANNUAL MEAN			.000
HIGHEST DAILY MEAN	22 Apr 17	.05 May 16	122 May 8 1980
LOWEST DAILY MEAN	a .00 Jan 1	a .00 Oct 1	a .00 Jun 15 1978
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	b .00 Jun 15 1978
INSTANTANEOUS PEAK FLOW		.06 May 19	b ³ 353 Jul 28 1982
INSTANTANEOUS PEAK STAGE		3.26 May 19	c 6.09 Jul 28 1982
ANNUAL RUNOFF (AC-FT)	593	2.6	1110
10 PERCENT EXCEEDS	1.9	.00	3.4
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

a-No flow most of time.

b-From rating curve extended above 50 ft³/s

c-From floodmark.

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, CO

LOCATION.--Lat 38°36'06", long 104°40'11", in SW¹/₄NE¹/₄ sec.4, T.17 S., R.65 W., El Paso County, Hydrologic Unit 11020003, at left upstream end of Old Pueblo Road bridge, 100 ft downstream from Denver & Rio Grande Railroad bridge, 0.90 mi downstream from Little Fountain Creek, and 5.6 mi south of Fountain.

DRAINAGE AREA.--681 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1938 to March 1, 1940 (monthly records only), March 2, 1940 to September 1954; July 2, 1985 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,355 ft above sea level, from topographic map. Sept. 18, 1938 to Mar. 1, 1940, nonrecording gage, and Mar. 2, 1940 to Sept. 30, 1954, recording gage, both at different datum and at site 200 ft downstream. July 2, 1985 to Sept. 2, 1987, recording gage at site 500 ft downstream, at different datum. Sept. 3, 1987 to Mar. 13, 1990, recording gage at site 1,100 ft upstream at different datums.

REMARKS.--Estimated daily discharges: Jan. 7-8, 10-12, and June 17-18. Records good except those above about 800 ft³/s, which are poor. Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation, municipal use, and return flows from irrigation and sewage effluent discharges.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 14.4 ft, at different datum, May 30, 1935, but was probably exceeded by the flood of June 1965.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	117	114	69	107	106	108	38	108	52	40	48
2	54	102	111	72	104	102	99	36	164	28	414	30
3	50	115	111	73	102	98	111	44	168	21	62	81
4	52	121	102	72	103	102	116	36	57	21	61	33
5	55	117	105	71	102	95	136	35	49	22	131	38
6	71	125	109	83	101	99	125	51	53	24	68	763
7	62	124	121	85	103	102	158	34	82	25	48	126
8	56	125	117	85	104	105	117	37	90	33	48	185
9	43	124	102	82	100	105	119	38	87	26	46	100
10	46	116	88	85	110	108	106	36	110	28	47	91
11	54	131	83	98	91	101	94	31	71	282	153	111
12	51	119	81	100	97	95	83	29	53	242	52	67
13	59	106	83	86	101	99	214	34	61	38	45	64
14	56	113	90	87	96	99	105	34	66	51	40	84
15	52	114	68	94	91	102	74	39	72	31	33	86
16	44	112	69	86	81	97	78	168	71	121	33	77
17	97	106	72	75	92	88	43	52	600	17	30	71
18	99	99	90	75	100	87	56	46	350	24	40	73
19	92	102	73	72	119	82	79	47	170	241	95	86
20	77	96	79	72	113	84	75	45	150	185	48	69
21	80	123	70	78	102	91	62	31	228	69	42	46
22	71	119	63	79	104	89	54	33	160	29	46	51
23	71	109	69	100	101	87	50	28	102	26	39	61
24	74	97	76	86	105	82	62	37	83	24	33	61
25	72	93	75	94	98	89	110	255	70	30	35	68
26	74	102	70	98	96	89	59	60	52	32	47	75
27	68	109	71	94	97	90	61	65	72	25	47	79
28	58	106	69	96	106	102	61	144	61	30	93	63
29	57	112	64	100	---	140	39	114	54	91	37	61
30	72	109	69	98	---	172	44	82	50	30	67	59
31	81	---	71	108	---	130	---	58	---	30	79	---
TOTAL	2001	3363	2635	2653	2826	3117	2698	1817	3564	1928	2099	2907
MEAN	64.5	112	85.0	85.6	101	101	89.9	58.6	119	62.2	67.7	96.9
MAX	99	131	121	108	119	172	214	255	600	282	414	763
MIN	43	93	63	69	81	82	39	28	49	17	30	30
AC-FT	3970	6670	5230	5260	5610	6180	5350	3600	7070	3820	4160	5770

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1993, BY WATER YEAR (WY)

	MEAN	42.5	61.0	49.8	50.7	56.3	64.8	88.6	146	102	76.0	102	41.3
MAX	117	137	155	117	139	199	590	736	329	306	476	146	
(WY)	1986	1986	1986	1988	1988	1987	1942	1947	1942	1947	1945	1985	
MIN	3.70	10.0	5.14	6.99	6.07	6.39	4.30	9.78	4.50	3.47	3.15	1.31	
(WY)	1954	1940	1953	1952	1941	1941	1954	1950	1953	1952	1954	1939	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1939 - 1993

ANNUAL TOTAL	42568		31608										
ANNUAL MEAN	116		86.6										
HIGHEST ANNUAL MEAN										72.8			
LOWEST ANNUAL MEAN										189			1942
HIGHEST DAILY MEAN	1100									10.3			1953
LOWEST DAILY MEAN	18									2660			May 11 1947
ANNUAL SEVEN-DAY MINIMUM	30									a.00			Sep 24 1939
INSTANTANEOUS PEAK FLOW										.27			Jul 18 1939
INSTANTANEOUS PEAK STAGE										b,22100			May 28 1940
ANNUAL RUNOFF (AC-FT)	84430									c,d,9.19			May 28 1940
10 PERCENT EXCEEDS	189									52770			
50 PERCENT EXCEEDS	105									149			
90 PERCENT EXCEEDS	44									36			
										5.6			

a-Also occurred Sep 30, 1939.

b-From rating curve extended above 3000 ft³/s, on basis of slope-area measurement of peak flow.

c-At different datum.

d-Maximum gage height, 9.60 ft, Jun 17, 1993, present datum.

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1987 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1987 to current year.

WATER TEMPERATURE: November 1987 to current year.

pH: November 1987 to current year.

DISSOLVED OXYGEN: November 1987 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Records for 1992 water year for daily specific conductance, daily pH, daily water temperature are good, and daily dissolved oxygen are fair. Records for 1993 water year for daily specific conductance, daily pH, and daily water temperature are fair. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance and mean water temperature, pH and dissolved oxygen data available in the district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,560 microsiemens, Mar. 13, 1988; minimum, 141 microsiemens, Aug. 8, 1991.

pH: Maximum, 8.5 units, July 15, Sept. 4, 1991; minimum 7.2 units, Sept. 9, 1993.

WATER TEMPERATURE: Maximum, 31.8°C, July 9, 1990; minimum, 0.0°C, on many days during winter months.

DISSOLVED OXYGEN: Maximum, 12.6 mg/L, Dec. 20, 1987; minimum, 3.7 mg/L, July 9, 1993.

EXTREMES FOR 1992 YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,250 microsiemens, Oct. 12, Dec. 12, and Sept. 25, 27; minimum, 191 microsiemens, Mar. 8.

pH: Maximum, 8.4 units, May 24, Aug. 9, and Sept. 14; minimum, 7.3 units, June 20.

WATER TEMPERATURE: Maximum, 28.9°C, July 11; minimum, 0.0°C, on many days during winter months.

DISSOLVED OXYGEN: Maximum, 11.2 mg/L, Nov. 3; minimum, 5.3 mg/L, May 26.

EXTREMES FOR 1993 YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,280 microsiemens, May 23; minimum, 263 microsiemens, June 17.

pH: Maximum, 8.4 units, on many days; minimum, 7.2 units, Sept. 9.

WATER TEMPERATURE: Maximum, 28.8°C, Aug. 11; minimum, 0.0°C, on many days during winter months.

DISSOLVED OXYGEN: Maximum, 11.0 mg/L, Nov. 26-27, 30, and Dec. 25; minimum, 3.7 mg/L, July 9.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	895	1030	978	981	---	927	797	761	642	838	1080	890
2	992	979	985	961	---	916	787	777	694	830	1080	959
3	1020	1010	964	967	---	908	787	760	751	780	1060	1020
4	1010	1030	971	---	---	798	791	721	730	783	968	1030
5	1030	1040	1030	---	1000	882	794	756	735	807	1110	1050
6	1010	960	1010	983	987	885	776	829	746	842	1110	1070
7	1000	921	1040	980	984	877	766	807	714	890	1120	1080
8	1030	---	1000	1010	982	733	752	853	731	906	1160	1080
9	1120	---	1040	1020	971	---	744	881	709	1000	1140	1100
10	1150	---	1060	999	972	---	716	812	759	1030	973	1110
11	1140	---	1020	998	976	---	681	779	784	1070	906	1090
12	1170	978	1030	994	969	886	664	933	822	989	995	1090
13	1160	990	1080	993	956	890	625	701	825	941	645	1080
14	1120	1000	1070	1010	958	895	589	835	852	969	941	1060
15	1110	977	1050	970	953	878	586	868	853	1060	1010	843
16	1120	929	1050	1010	936	872	486	892	817	1020	1100	982
17	1130	877	1080	993	934	871	622	947	847	908	1020	1020
18	1100	817	1100	989	941	851	564	933	858	922	1060	1110
19	1140	848	1100	993	953	855	558	979	838	979	1030	1120
20	1140	912	1160	982	955	844	599	1020	675	967	1130	882
21	1120	922	1120	998	983	848	633	1000	608	1020	1160	1040
22	1120	949	1110	982	973	818	651	941	744	1090	818	1110
23	1110	1010	1090	980	965	848	661	939	825	1020	1010	1160
24	1050	1020	1080	990	963	844	662	949	759	1050	606	1170
25	1060	977	1100	999	965	854	675	930	676	1020	621	1180
26	1100	972	1080	975	968	853	653	896	603	809	736	1170
27	1130	1000	1020	975	962	883	664	567	445	1010	746	1170
28	1070	1010	978	948	948	782	727	617	636	1080	921	1140
29	1050	967	966	---	951	762	749	770	586	1120	916	1150
30	1050	965	978	---	---	785	769	808	763	1020	929	1140
31	1050	---	992	---	---	797	---	788	---	1060	900	---
MEAN	1080	---	1040	---	---	---	684	840	734	962	968	1070

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.1	7.8	---	---	8.2	7.9	---	---	8.0	7.9	8.0	8.0
2	8.1	8.0	---	---	8.1	7.9	---	---	8.0	7.9	8.0	8.0
3	8.1	7.9	---	---	8.1	8.0	---	---	8.0	7.9	8.1	8.0
4	8.1	7.9	8.3	---	8.1	8.0	---	---	8.0	8.0	8.2	7.9
5	8.1	8.0	8.3	8.1	8.1	7.9	---	---	8.2	8.0	8.1	7.7
6	8.1	7.9	8.2	8.1	8.1	7.8	---	---	8.0	8.0	7.9	7.8
7	8.1	7.9	8.2	8.1	8.0	7.8	---	---	8.0	8.0	7.9	7.8
8	8.0	7.9	8.3	8.0	8.1	7.9	---	---	8.0	8.0	8.0	7.7
9	8.1	7.9	8.1	7.9	8.1	7.9	---	---	8.0	8.0	7.8	7.7
10	8.3	8.0	8.1	7.9	8.0	7.7	---	---	8.0	8.0	7.8	7.7
11	8.2	8.1	8.1	7.9	8.0	7.6	---	---	8.0	8.0	7.8	7.7
12	8.2	8.1	8.1	7.9	8.0	7.8	---	---	8.1	8.0	7.9	7.7
13	8.3	8.1	8.0	7.9	8.0	7.7	---	---	8.1	8.0	7.8	7.7
14	8.2	8.0	8.0	7.9	8.1	7.6	8.2	8.1	8.1	8.0	7.8	7.7
15	8.1	8.0	8.0	7.9	8.0	7.6	8.2	8.2	8.1	8.0	7.8	7.7
16	8.1	7.9	8.0	7.9	8.1	7.7	8.2	8.1	8.0	8.0	7.7	7.6
17	8.2	7.9	8.0	7.8	8.1	7.9	8.1	8.1	8.1	8.0	7.7	7.6
18	8.3	8.0	8.0	7.9	8.1	7.6	8.1	8.1	8.0	7.9	7.7	7.6
19	8.2	8.0	8.0	7.9	8.1	7.7	8.1	8.0	8.1	7.9	7.8	7.6
20	8.2	8.0	8.1	7.9	7.9	7.6	8.1	8.0	8.0	7.9	7.8	7.6
21	8.2	8.0	8.0	8.0	7.9	7.6	8.0	8.0	8.1	7.9	7.7	7.7
22	8.2	7.9	8.1	8.0	8.1	7.6	8.0	7.9	8.1	8.0	7.8	7.7
23	8.2	8.0	8.1	8.0	8.1	7.6	8.0	7.9	8.1	8.1	7.8	7.7
24	8.1	7.8	8.1	8.0	8.2	7.6	8.0	8.0	8.1	8.0	7.9	7.7
25	8.0	7.9	8.2	8.0	8.2	7.8	8.1	8.0	8.1	8.0	7.9	7.8
26	8.0	7.9	8.1	8.0	8.2	7.7	8.0	8.0	8.1	8.0	7.9	7.8
27	7.9	7.8	8.2	8.0	8.1	7.6	8.1	8.0	8.1	8.0	7.8	7.7
28	7.9	7.7	8.1	7.9	8.0	7.6	8.1	8.0	8.0	8.0	7.8	7.6
29	7.8	7.8	8.2	8.0	8.0	7.6	8.0	8.0	8.0	7.9	7.8	7.7
30	7.8	---	8.1	7.9	---	---	8.0	7.9	---	---	7.8	7.7
31	---	---	---	---	---	---	8.0	7.9	---	---	7.8	7.7
MONTH	---	---	---	---	---	---	---	---	8.2	7.9	8.2	7.6
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.9	7.7	8.1	7.9	8.0	7.8	8.0	7.8	8.0	7.9	8.0	7.8
2	7.7	7.7	8.1	7.9	8.0	7.8	8.0	7.9	8.1	7.9	8.0	7.9
3	7.7	7.7	8.1	7.8	8.1	7.8	7.9	7.6	8.1	7.9	8.1	8.0
4	7.7	7.7	8.0	7.6	8.0	7.8	8.0	7.7	8.0	7.8	8.2	8.0
5	7.7	7.6	8.1	7.8	8.0	7.8	8.0	7.7	8.2	8.0	8.2	8.0
6	7.7	7.6	8.2	8.0	8.0	7.7	8.0	7.8	8.2	8.0	8.2	8.0
7	7.7	7.5	8.2	7.9	8.0	7.7	8.0	7.8	8.2	8.0	8.3	8.0
8	7.7	7.5	8.3	7.9	8.0	7.7	8.1	7.9	8.2	7.8	8.3	8.0
9	7.7	7.5	8.3	8.0	7.9	7.7	8.1	7.9	8.4	8.0	8.3	8.0
10	7.9	7.5	8.2	7.8	8.0	7.7	8.1	7.9	8.3	7.8	8.2	8.0
11	7.9	7.6	8.1	7.7	8.0	7.7	8.2	8.0	8.1	8.0	8.3	8.0
12	7.8	7.6	8.2	7.9	7.9	7.7	8.2	7.9	8.2	7.8	8.3	8.0
13	7.8	7.6	8.1	7.8	8.1	7.7	8.2	7.9	8.1	7.9	8.3	8.0
14	7.8	7.5	8.2	8.0	8.0	7.6	8.2	7.9	8.2	8.1	8.4	7.8
15	7.8	7.6	8.3	8.0	8.1	7.7	8.2	8.0	8.2	8.1	8.0	7.6
16	7.9	7.6	8.3	8.1	8.1	7.6	8.2	8.0	8.2	8.1	8.0	7.9
17	7.8	7.7	8.3	8.0	8.1	7.7	8.1	7.8	8.2	8.0	8.0	7.9
18	7.8	7.6	8.2	7.9	8.0	7.6	8.1	8.0	8.2	8.1	8.1	7.9
19	7.7	7.6	8.2	8.0	8.1	7.6	8.2	8.0	8.2	8.1	8.2	7.8
20	7.9	7.7	8.3	7.9	7.8	7.3	8.2	8.0	8.2	8.1	8.0	7.7
21	7.9	7.7	8.3	8.1	7.9	7.4	8.2	8.0	8.2	8.1	8.0	7.9
22	8.0	7.7	8.2	8.0	7.9	7.6	8.2	8.0	8.1	7.7	8.1	7.9
23	8.0	7.8	8.3	8.0	7.9	7.7	8.2	7.9	8.1	8.0	8.1	8.0
24	7.9	7.7	8.4	8.1	7.9	7.6	8.1	7.9	8.1	7.7	8.1	8.0
25	7.9	7.7	8.2	7.9	7.9	7.4	8.1	7.6	8.0	7.8	8.2	7.9
26	7.9	7.7	8.1	7.9	7.9	7.5	8.0	7.7	8.1	7.8	8.2	7.9
27	7.9	7.6	8.1	7.7	7.7	7.6	8.1	8.0	8.1	7.8	8.2	7.8
28	8.1	7.9	8.1	7.9	7.8	7.4	8.1	8.0	8.1	7.9	8.0	7.8
29	8.1	7.9	8.1	8.0	7.9	7.5	8.1	7.8	8.1	7.9	8.2	7.8
30	8.2	7.9	8.1	8.0	8.0	7.7	8.1	7.8	8.1	7.9	8.1	7.8
31	---	---	8.2	7.8	---	---	8.1	7.9	8.1	7.8	---	---
MONTH	8.2	7.5	8.4	7.6	8.1	7.3	8.2	7.6	8.4	7.7	8.4	7.6

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	22.2	10.7	7.9	.2	4.2	.0	6.1	1.0	9.6	1.6	12.4	3.3
2	21.7	11.0	4.9	.0	---	.0	6.6	.0	9.0	2.5	15.3	4.1
3	20.7	10.5	6.2	.0	5.2	.0	6.4	.0	4.5	2.7	10.3	4.5
4	12.2	9.4	9.8	.1	6.9	.0	7.0	.8	8.1	1.0	7.6	4.8
5	17.6	6.5	11.5	3.2	6.3	.6	6.7	.7	7.3	.0	11.7	3.8
6	18.2	6.4	11.4	4.2	8.5	.7	7.7	1.8	8.9	.1	14.5	4.6
7	20.2	7.4	10.0	5.2	9.0	1.6	5.9	1.0	8.7	.3	13.3	4.7
8	18.2	9.5	12.1	3.3	8.1	2.6	6.3	.0	8.1	.4	14.0	2.7
9	19.8	10.3	13.9	5.6	7.7	.9	5.9	.0	8.5	.8	6.9	.7
10	20.9	9.5	11.1	8.2	5.8	.3	7.2	.0	9.3	1.2	11.4	.5
11	20.8	9.6	10.5	5.8	3.8	.9	7.1	.3	10.0	4.1	12.5	2.9
12	20.1	9.4	11.7	3.4	6.9	.6	4.2	.0	11.5	4.1	13.2	4.1
13	18.6	10.3	12.3	3.6	6.1	.0	4.8	.0	7.7	1.9	15.4	4.5
14	17.9	7.8	10.2	3.9	4.8	.0	5.2	.0	11.2	2.2	16.1	4.9
15	18.9	8.1	6.7	5.3	5.9	.0	2.8	.0	10.3	.9	14.6	5.4
16	20.4	8.2	5.9	2.1	7.9	.0	6.3	.0	5.3	1.7	15.1	5.0
17	19.7	8.1	9.2	.8	5.5	.4	3.7	.0	8.7	1.7	14.7	5.5
18	17.3	8.3	8.0	2.2	4.5	.0	5.4	.0	9.7	.0	12.3	6.3
19	17.2	7.4	7.8	2.7	7.1	1.8	6.5	.0	10.0	.0	11.4	5.5
20	16.2	7.0	8.6	.0	5.1	2.4	7.4	.0	11.5	1.6	13.6	3.4
21	17.3	7.0	10.5	3.5	7.3	1.7	8.2	.0	13.0	4.2	13.6	4.4
22	17.9	7.6	6.3	2.2	4.2	1.1	6.5	.0	11.4	2.6	7.8	3.6
23	16.5	7.4	6.6	.0	6.3	.1	6.8	.0	9.8	2.9	13.5	2.7
24	14.3	8.0	7.7	.0	5.9	.0	8.3	.2	11.4	.9	12.9	4.6
25	14.9	5.9	8.3	1.8	6.6	.0	7.7	.7	9.7	3.5	15.9	4.4
26	14.9	5.6	9.3	2.4	6.6	.0	9.1	.8	10.1	1.2	15.4	5.9
27	15.6	6.6	10.2	2.4	5.5	.0	8.1	.8	13.4	4.5	12.5	5.9
28	8.9	1.6	7.3	2.8	5.9	1.1	9.1	.3	14.4	3.0	9.4	6.9
29	6.1	1.5	4.7	.2	6.5	.0	9.3	1.3	14.1	3.2	14.4	5.6
30	5.6	.1	3.6	.0	6.3	.0	9.7	1.1	---	---	16.9	4.9
31	6.4	.0	---	---	4.9	1.5	10.6	1.6	---	---	10.1	5.6
MONTH	22.2	.0	13.9	.0	---	.0	10.6	.0	14.4	.0	16.9	.5
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	15.1	4.0	23.7	11.0	14.4	9.6	26.0	15.0	27.2	14.3	22.4	13.2
2	12.6	4.9	21.8	10.6	22.5	9.7	23.8	15.1	27.9	14.7	23.4	13.1
3	17.5	5.3	22.1	10.2	19.3	11.6	25.9	14.6	25.3	15.2	23.1	12.7
4	18.2	7.2	22.0	10.2	22.1	11.5	24.9	15.2	27.0	15.7	21.7	14.1
5	18.1	6.8	22.2	9.9	20.3	13.9	27.0	14.7	27.3	15.0	22.6	12.3
6	18.3	7.2	23.6	10.7	21.6	13.1	28.4	16.6	23.0	16.6	23.1	12.3
7	18.2	7.6	22.0	10.4	21.2	12.4	24.3	16.6	27.2	14.8	22.8	12.5
8	18.0	6.6	22.4	11.8	22.3	12.1	28.1	16.0	27.7	16.5	22.7	12.3
9	18.8	7.7	22.9	11.2	17.5	13.7	27.4	16.5	28.2	15.8	22.6	12.6
10	18.1	8.2	14.1	11.0	24.7	11.5	25.6	15.8	24.1	17.4	22.0	12.0
11	18.5	8.6	23.3	8.4	24.3	13.3	28.9	16.5	27.0	15.2	22.7	11.8
12	12.0	9.0	22.4	10.6	22.5	12.6	24.7	16.3	23.1	14.8	22.7	13.5
13	18.9	7.2	22.5	11.6	26.3	15.2	25.1	15.3	23.8	15.4	22.2	13.5
14	17.7	9.9	22.5	11.0	25.8	13.9	27.3	14.4	26.8	15.5	23.1	12.9
15	19.6	10.3	25.4	11.9	24.8	13.2	24.9	15.0	27.1	15.0	23.5	14.8
16	14.3	9.9	24.8	11.7	22.9	12.4	21.0	14.5	23.8	16.1	23.1	13.7
17	16.2	8.5	24.3	11.7	25.3	11.2	22.3	14.3	24.8	15.8	23.5	13.5
18	12.2	7.9	25.0	11.7	25.8	13.5	25.7	13.4	26.7	14.2	20.1	12.2
19	9.5	5.8	25.8	12.4	24.3	15.3	27.0	13.4	27.0	14.9	21.3	12.8
20	15.6	6.1	25.6	13.0	24.7	16.0	22.3	14.7	27.9	15.1	21.2	12.1
21	18.0	5.6	25.9	13.2	23.7	14.5	25.8	15.5	27.1	16.0	19.8	11.6
22	16.0	7.4	18.0	12.7	25.3	12.7	26.2	13.9	27.2	16.7	21.6	10.8
23	18.4	6.9	17.6	12.5	26.9	15.2	26.5	15.7	22.4	16.4	22.7	11.5
24	18.4	7.4	20.4	12.1	26.0	15.0	28.4	15.5	17.7	14.3	22.3	11.8
25	19.3	7.7	15.0	11.5	25.2	11.5	20.9	16.7	17.4	13.1	20.6	12.4
26	19.9	7.3	21.5	9.8	24.2	10.6	24.7	16.8	20.2	13.4	20.1	10.0
27	20.9	8.0	13.1	8.8	18.5	10.6	27.6	15.6	21.5	10.8	20.6	9.0
28	23.3	9.5	14.1	7.7	23.7	13.7	26.7	15.3	23.6	12.0	15.3	12.5
29	23.9	10.1	21.0	9.5	25.8	14.0	24.8	15.3	22.8	13.0	20.7	10.2
30	23.5	10.9	19.5	10.5	26.3	15.5	26.5	14.7	23.2	14.2	20.3	11.3
31	---	---	19.7	10.8	---	---	24.8	15.5	21.2	13.4	---	---
MONTH	23.9	4.0	25.9	7.7	26.9	9.6	28.9	13.4	28.2	10.8	23.5	9.0

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, CO--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	7.8	6.3	11.0	8.6	10.5	9.3	10.2	8.8	9.6	7.5	9.0	6.6
2	7.9	6.4	10.8	9.3	10.1	9.3	10.5	8.5	9.2	7.5	8.6	6.0
3	8.0	6.1	11.2	9.2	10.4	8.8	10.6	8.7	9.2	8.4	8.4	6.7
4	8.2	6.8	11.1	8.4	10.5	8.4	10.2	8.4	10.0	8.0	9.2	6.8
5	8.8	6.7	9.4	7.5	10.1	8.5	10.2	8.6	10.5	8.2	9.1	6.6
6	8.7	6.6	9.0	7.2	10.0	7.8	9.8	8.1	10.1	7.7	8.4	6.2
7	8.4	6.3	8.8	7.9	9.8	7.7	9.9	8.5	10.1	7.8	8.5	6.7
8	7.7	6.5	9.3	7.3	9.5	7.9	10.5	8.7	10.1	7.9	9.8	6.4
9	8.0	6.5	8.6	6.8	10.1	8.2	10.5	8.9	9.9	7.7	9.9	7.9
10	8.2	6.9	7.9	7.2	10.2	8.6	10.6	8.4	9.8	7.7	10.2	7.1
11	8.3	6.9	8.4	7.4	10.1	9.3	10.3	8.3	8.9	7.6	9.4	6.8
12	8.3	6.9	9.1	7.1	9.9	8.4	10.3	9.0	9.0	7.2	9.0	6.7
13	8.0	7.1	8.9	6.8	10.4	8.6	10.3	9.0	9.9	8.0	8.9	6.4
14	8.4	6.8	8.7	7.2	10.5	9.1	10.4	8.5	9.6	7.3	8.9	6.4
15	8.5	7.2	8.5	7.9	10.6	8.9	9.9	9.2	10.3	7.7	8.6	6.4
16	8.6	6.7	9.3	8.4	10.6	8.3	9.8	8.1	9.9	8.7	8.5	6.2
17	---	---	9.8	7.7	10.5	8.9	9.9	8.7	9.9	7.9	8.3	6.3
18	8.9	7.0	9.6	8.1	10.6	9.2	10.1	8.6	10.4	7.4	8.1	6.3
19	8.5	7.1	9.6	8.5	9.9	8.4	9.8	8.1	10.6	7.3	8.1	6.9
20	8.7	7.4	10.7	8.1	9.7	9.0	9.9	7.9	9.9	6.9	8.9	6.3
21	8.4	6.1	10.1	7.9	10.1	8.4	9.8	7.6	8.7	6.6	8.6	6.3
22	7.9	5.8	10.1	8.9	10.1	9.0	9.9	8.1	9.3	6.9	8.7	7.6
23	8.0	6.4	10.8	8.8	10.4	8.8	10.0	8.0	8.9	7.3	9.0	6.3
24	8.8	6.6	10.7	8.4	10.5	8.9	9.8	7.5	9.9	7.0	8.5	6.3
25	8.8	7.3	10.0	8.1	10.6	8.7	9.7	8.0	9.1	7.5	8.7	5.8
26	9.1	7.3	9.6	7.7	10.8	8.9	9.6	7.6	9.9	7.3	8.0	5.9
27	8.7	7.3	9.6	7.4	10.7	9.1	9.9	7.7	8.6	6.6	7.9	6.0
28	10.2	7.8	9.4	8.1	10.2	8.8	9.9	7.5	9.3	6.3	---	---
29	10.5	9.1	10.3	8.6	10.3	8.6	9.7	7.5	9.1	6.2	---	---
30	11.0	9.4	10.6	9.3	10.6	8.8	9.9	7.5	---	---	---	---
31	11.0	9.1	---	---	10.0	9.1	9.6	7.3	---	---	---	---
MONTH	---	---	11.2	6.8	10.8	7.7	10.6	7.3	10.6	6.2	---	---
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	8.2	6.2	8.9	7.5	7.1	5.6	7.2	6.0	7.4	6.5
2	---	---	8.4	6.5	8.4	7.0	7.4	6.3	7.6	6.2	7.3	6.1
3	---	---	8.4	6.6	8.9	6.7	7.4	6.3	7.4	5.6	7.9	6.5
4	---	---	7.7	6.1	8.1	6.6	6.9	6.1	---	---	7.6	6.7
5	---	---	8.0	6.2	7.3	6.0	7.3	6.4	7.3	5.7	8.0	6.9
6	---	---	8.3	6.3	7.0	6.4	7.1	6.4	7.3	6.3	8.1	6.7
7	---	---	8.1	5.9	6.9	6.2	7.2	6.6	7.8	6.2	8.1	6.9
8	---	---	7.7	6.0	7.0	6.2	---	---	8.0	6.0	8.4	6.9
9	---	---	7.5	5.7	7.3	6.4	---	---	8.2	6.3	8.3	6.8
10	---	---	---	---	7.2	6.1	---	---	7.8	5.6	8.5	6.6
11	7.2	6.0	---	---	7.1	6.1	---	---	7.7	5.9	---	---
12	7.8	6.3	---	---	7.0	6.0	---	---	7.6	6.0	---	---
13	7.4	6.2	---	---	6.5	6.0	---	---	7.7	6.5	---	---
14	7.6	6.8	---	---	7.1	6.2	---	---	7.5	6.2	---	---
15	8.2	6.8	---	---	7.5	6.5	---	---	7.8	6.2	---	---
16	8.3	7.2	---	---	7.7	6.8	---	---	7.6	6.6	---	---
17	8.2	6.6	---	---	8.1	6.4	---	---	7.8	6.3	7.3	5.8
18	8.2	7.0	---	---	7.8	5.6	---	---	8.0	6.3	8.0	6.7
19	8.6	7.8	---	---	7.3	6.0	---	---	7.7	5.9	7.8	6.4
20	8.7	6.9	---	---	7.3	5.8	7.5	6.6	7.6	5.8	7.6	6.7
21	8.7	6.9	7.5	5.5	7.8	5.6	7.6	6.4	7.3	6.2	8.5	7.1
22	8.2	6.9	7.6	5.4	7.2	5.6	7.8	6.3	7.2	5.7	9.4	7.3
23	8.5	6.8	7.3	5.8	6.7	5.5	7.6	6.4	7.0	6.3	8.6	6.9
24	8.3	6.5	7.2	5.6	6.7	5.6	7.3	5.9	7.9	6.6	8.2	6.8
25	8.1	6.6	6.9	5.5	7.6	5.5	7.2	5.8	7.9	7.4	8.1	7.1
26	8.2	6.8	7.0	5.3	7.7	6.0	7.2	5.9	7.8	7.1	8.4	6.0
27	7.9	6.6	8.6	5.6	7.5	6.5	7.3	5.7	8.4	6.8	8.2	5.7
28	8.6	6.6	8.8	7.7	6.7	5.8	7.4	5.7	7.9	6.3	---	---
29	8.7	6.8	8.4	7.0	7.4	6.1	7.5	6.1	7.7	6.6	---	---
30	8.6	6.4	8.6	7.3	6.8	5.5	7.1	5.6	7.5	6.6	---	---
31	---	---	8.4	7.3	---	---	7.2	5.9	7.3	6.0	---	---
MONTH	---	---	---	---	8.9	5.5	---	---	---	---	---	---

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1140	871	995	1080	986	1000	997	1150	861	1030	1140	1040
2	1130	943	1000	1050	1000	1030	1030	1150	962	1050	---	1090
3	1130	920	1010	1010	1010	1020	1040	1150	755	1040	---	926
4	1130	956	1020	1030	1010	1010	986	1160	964	1010	---	1070
5	1120	993	1020	1110	1050	1030	952	1160	1030	1050	759	1110
6	1110	963	1050	1110	1030	1010	943	1110	1050	1100	972	490
7	1110	982	1050	1080	1000	1010	891	1110	1020	---	1060	850
8	1120	977	1010	1070	979	990	938	1100	1010	---	1090	728
9	1120	972	1020	1090	999	1000	956	1100	991	---	1100	944
10	1150	967	1080	1090	1020	1010	994	1110	911	---	1070	995
11	1140	976	1100	1050	1060	1010	987	1120	1010	---	803	956
12	1150	988	1110	1040	1020	1020	990	1170	1040	---	1030	1030
13	1160	1010	1140	1100	1000	1010	752	1150	1010	---	1070	1020
14	1160	1010	1150	1110	999	998	920	1110	931	---	1090	1020
15	1160	1010	1120	1140	997	981	975	1090	944	---	1140	1000
16	1200	997	1150	1150	1030	999	1000	802	932	---	1140	---
17	1130	999	1150	1130	1050	1010	1150	1000	839	---	1150	---
18	1110	986	1100	1130	1030	1000	1100	1050	---	---	1120	---
19	1100	981	1100	1130	1000	999	1050	1050	---	---	981	---
20	1110	981	1110	1130	977	994	1020	1070	---	---	1070	---
21	1100	983	1080	1180	999	985	1070	1140	---	---	1110	---
22	1110	968	1080	1160	992	999	1100	1150	---	1100	1040	---
23	1130	950	1090	1070	993	1010	1120	1170	---	---	1060	---
24	1140	982	1100	1080	989	1010	1030	1060	984	---	1100	---
25	1140	1000	1050	1060	1000	984	872	704	1020	---	1110	1070
26	1110	978	1060	1030	1010	940	1010	1020	1020	---	1100	1070
27	1100	994	1040	1020	1030	902	1060	1030	1010	---	1090	1060
28	1120	1010	1080	1050	1010	829	1060	834	1020	---	923	---
29	1120	995	1090	1010	---	704	1120	845	981	---	1080	---
30	1100	1010	1100	1020	---	769	1130	912	979	---	1010	1100
31	1100	---	1070	1020	---	951	---	995	---	1170	930	---
MEAN	1130	978	1070	1080	1010	975	1010	1060	---	---	---	---

PH (STANDARD UNITS), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.2	7.8	8.1	7.9	8.0	7.8	7.9	7.7	8.0	7.9	7.9	7.9
2	8.3	7.8	8.0	7.9	7.8	7.7	8.0	7.8	8.0	7.9	7.9	7.8
3	8.3	7.9	8.0	7.9	7.9	7.7	8.0	7.8	8.0	7.9	7.9	7.8
4	8.2	7.9	8.0	7.9	7.8	7.7	8.0	7.8	8.0	7.9	8.0	7.8
5	8.2	8.0	8.1	7.8	7.8	7.7	8.0	7.7	8.0	7.8	8.0	7.8
6	8.2	7.9	7.9	7.8	8.0	7.7	7.8	7.7	7.9	7.8	7.9	7.8
7	8.1	7.8	7.8	7.7	7.9	7.7	7.7	7.7	7.9	7.8	7.9	7.8
8	7.9	7.5	7.8	7.7	7.9	7.7	7.9	7.7	7.9	7.8	7.9	7.8
9	8.1	7.5	7.8	7.7	7.9	7.7	7.8	7.6	7.9	7.8	7.9	7.8
10	8.1	7.6	7.8	7.6	8.0	7.8	7.8	7.6	7.9	7.8	7.9	7.8
11	8.1	7.7	7.9	7.6	8.0	7.8	8.0	7.6	8.0	7.9	7.9	7.8
12	8.1	7.7	7.9	7.8	7.9	7.8	8.0	7.8	8.0	7.8	7.9	7.8
13	8.2	7.7	7.9	7.6	7.9	7.8	7.9	7.8	8.0	7.9	7.9	7.8
14	8.1	7.6	7.9	7.7	8.0	7.8	8.0	7.7	8.0	7.9	7.9	7.8
15	8.1	7.7	7.8	7.7	7.9	7.8	8.0	7.8	8.0	7.9	7.9	7.8
16	8.0	7.7	7.8	7.7	8.2	7.9	7.9	7.8	8.0	7.8	7.9	7.8
17	7.8	7.7	7.9	7.7	8.2	8.0	7.8	7.8	8.0	7.7	7.9	7.9
18	7.8	7.6	7.9	7.7	8.2	8.0	8.1	7.8	7.9	7.8	7.9	7.8
19	7.8	7.6	7.9	7.8	8.0	7.8	7.9	7.9	7.9	7.8	7.9	7.7
20	7.8	7.6	8.0	7.8	8.0	7.8	8.1	7.9	7.9	7.8	7.9	7.7
21	7.9	7.6	8.0	7.7	7.9	7.8	8.1	8.0	7.9	7.8	7.8	7.7
22	8.0	7.6	7.9	7.7	8.0	7.8	8.0	7.9	7.9	7.8	7.9	7.7
23	7.9	7.6	8.0	7.7	8.1	7.8	8.0	7.8	8.0	7.9	7.9	7.7
24	8.0	7.7	7.9	7.7	7.9	7.7	8.0	7.8	8.0	7.9	7.8	7.7
25	8.0	7.7	7.9	7.7	7.8	7.8	8.0	7.8	7.9	7.9	7.8	7.6
26	8.1	7.8	7.9	7.7	7.9	7.8	7.9	7.8	8.0	7.9	7.8	7.7
27	8.1	7.8	7.9	7.7	7.9	7.8	8.0	7.9	7.9	7.8	7.8	7.7
28	8.2	7.9	8.0	7.7	7.9	7.7	8.1	8.0	7.9	7.9	7.8	7.7
29	8.1	7.9	8.0	7.8	7.9	7.8	8.1	8.0	---	---	7.7	7.6
30	8.0	7.8	7.9	7.8	7.9	7.7	8.1	7.9	---	---	7.9	7.6
31	8.2	7.8	---	---	7.9	7.7	8.0	7.9	---	---	7.9	7.8
MONTH	8.3	7.5	8.1	7.6	8.2	7.7	8.1	7.6	8.0	7.7	8.0	7.6
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.0	7.9	8.2	8.0	8.2	7.8	8.2	8.0	8.1	7.9	8.0	7.9
2	8.0	7.9	8.2	7.9	8.3	7.8	8.2	8.0	8.0	7.7	8.0	7.8
3	8.0	7.9	8.3	7.9	8.2	7.9	8.2	8.1	8.0	7.7	7.9	7.7
4	7.9	7.8	8.3	8.0	8.2	8.1	8.4	8.1	8.0	7.6	8.0	7.8
5	7.9	7.8	8.4	8.0	8.2	8.1	8.4	8.1	8.0	7.7	8.0	7.8
6	7.9	7.8	8.3	8.0	8.2	8.1	8.4	8.1	8.0	7.7	8.1	7.4
7	7.9	7.8	8.3	8.0	8.1	8.1	8.4	8.1	8.3	7.8	7.9	7.8
8	7.9	7.8	8.2	8.0	8.1	8.0	8.2	7.9	---	---	8.1	7.5
9	7.9	7.7	8.2	7.9	8.1	7.9	8.3	8.0	---	---	7.6	7.2
10	7.9	7.7	8.3	7.9	8.1	7.9	8.4	8.1	---	---	7.8	7.5
11	7.9	7.8	8.3	7.9	8.2	8.0	8.4	7.8	---	---	7.9	7.7
12	7.9	7.8	8.4	8.0	8.2	8.0	---	---	8.1	8.0	7.9	7.7
13	7.9	7.6	8.4	8.0	8.3	8.0	8.2	---	8.1	8.0	7.9	7.7
14	7.9	7.8	8.3	8.0	8.2	8.0	8.2	7.6	8.1	7.7	7.8	7.7
15	8.0	7.7	8.3	8.0	8.2	8.0	7.9	7.7	---	---	7.8	7.7
16	8.0	7.9	8.1	7.7	8.2	8.1	7.9	7.6	---	---	7.8	7.7
17	8.1	8.0	8.1	8.0	8.3	7.8	7.8	7.6	---	---	7.8	7.6
18	8.1	8.0	8.2	7.9	8.4	---	7.7	7.6	7.9	---	7.8	7.7
19	8.1	7.9	8.2	7.9	---	---	---	---	7.8	7.6	7.8	7.7
20	8.1	7.9	8.2	8.0	---	---	---	---	7.8	7.7	7.8	7.7
21	8.1	7.9	8.3	8.1	---	---	---	---	8.0	7.8	7.9	7.7
22	8.1	7.9	8.3	7.8	---	---	8.2	8.0	8.0	7.8	7.8	7.7
23	8.2	7.9	8.3	7.8	---	---	---	---	8.0	7.6	7.9	7.7
24	8.1	7.9	8.3	8.1	7.9	7.8	---	---	8.0	7.7	7.9	7.7
25	8.1	7.8	8.1	7.7	7.9	7.8	---	---	8.0	7.9	7.8	7.7
26	8.0	7.9	8.2	8.0	7.9	7.8	---	---	8.0	7.9	7.9	7.7
27	8.1	7.9	8.2	8.0	7.9	7.8	---	---	7.9	7.8	7.9	7.7
28	8.2	7.9	8.2	7.8	8.0	7.8	---	---	7.9	7.7	7.9	7.8
29	8.3	8.0	8.2	8.0	8.1	7.9	---	---	8.0	7.8	7.9	7.6
30	8.1	8.0	8.2	8.0	8.1	7.9	8.2	8.0	8.0	7.7	7.9	7.6
31	---	---	8.3	8.1	---	---	8.2	8.0	7.9	7.7	---	---
MONTH	8.3	7.6	8.4	7.7	---	---	---	---	---	---	8.1	7.2

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.3	10.3	12.9	5.9	7.8	1.4	6.2	.9	9.4	2.0	6.5	3.8
2	21.5	10.0	11.2	5.1	7.3	.5	8.2	1.3	8.6	.9	11.9	1.6
3	20.4	9.8	7.0	3.6	7.1	1.8	4.8	.0	7.0	1.9	10.9	3.1
4	20.2	9.7	9.6	2.2	4.2	.5	4.8	.0	7.5	1.7	11.9	2.0
5	20.2	11.0	8.1	2.2	1.1	.0	3.3	.0	9.2	.0	12.8	1.0
6	18.1	11.2	10.2	3.9	5.4	.0	4.0	.0	9.8	.0	13.1	3.4
7	12.4	6.9	9.8	2.7	5.9	.0	4.8	.0	9.4	1.9	15.5	3.2
8	16.0	4.5	11.7	3.8	5.3	.0	.3	.0	8.1	2.1	12.2	4.0
9	13.5	8.5	10.0	4.1	6.3	.1	1.2	.0	10.6	2.6	15.2	4.0
10	17.6	6.8	9.0	4.9	7.3	.8	.5	.0	6.5	1.0	12.3	4.9
11	19.1	8.4	8.7	4.2	8.5	.7	1.2	.0	8.5	.2	5.3	1.4
12	18.7	8.6	6.8	2.6	3.9	.6	1.7	.0	9.9	.0	7.7	.0
13	19.0	9.0	9.6	2.2	.9	.0	1.5	.0	8.9	.4	11.3	.0
14	16.4	8.3	10.9	3.4	2.9	.0	3.3	.0	5.8	.0	13.6	.6
15	16.3	7.4	12.0	4.2	3.5	.0	6.2	.0	3.5	.0	14.7	4.2
16	14.4	6.6	11.5	4.8	2.8	.0	7.5	.0	2.5	.0	12.6	3.4
17	16.5	5.6	11.7	5.2	4.9	.0	3.2	.4	3.5	.0	5.6	3.0
18	15.6	6.4	11.0	6.5	4.7	.0	5.5	.1	8.1	.0	10.3	3.1
19	16.8	8.1	9.1	5.0	3.9	.0	2.1	.0	11.4	2.2	16.2	2.9
20	17.3	7.4	6.6	2.1	4.6	.0	7.1	.0	12.0	3.3	14.6	4.2
21	16.7	7.8	7.9	2.3	5.3	.0	9.0	.5	9.4	1.2	11.5	5.3
22	17.0	9.1	5.9	.1	4.8	.0	9.0	.1	9.4	.0	16.5	4.2
23	17.6	9.3	6.3	.0	4.5	.0	5.6	.8	9.1	.1	17.6	4.1
24	17.3	8.5	1.7	.0	4.9	.0	5.7	.0	10.3	1.5	18.3	5.0
25	16.8	9.4	4.5	.0	5.2	.0	6.9	.0	5.7	2.0	18.8	5.4
26	16.2	9.2	6.1	.0	5.1	.0	9.0	.8	9.4	.8	17.5	6.7
27	16.6	7.4	6.9	.0	5.6	.0	9.3	1.1	11.3	.0	12.0	7.5
28	13.9	8.3	5.9	.0	6.4	.3	7.8	.7	11.4	1.6	14.3	6.6
29	8.6	7.1	4.8	.0	7.2	1.5	3.2	1.4	---	---	11.9	7.5
30	13.8	7.3	6.0	.0	7.9	2.1	8.7	.1	---	---	11.7	6.6
31	13.3	6.1	---	---	5.0	1.3	10.0	.8	---	---	12.8	5.1
MONTH	21.5	4.5	12.9	.0	8.5	.0	10.0	.0	12.0	.0	18.8	.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.6	4.3	15.9	6.7	23.3	14.1	27.0	16.7	25.7	16.8	24.4	12.6
2	16.9	5.4	20.1	5.3	23.7	13.3	24.9	15.9	26.7	17.7	19.3	13.0
3	9.4	5.4	21.3	7.5	21.8	13.2	23.3	14.8	20.5	16.4	23.7	10.8
4	15.5	5.2	20.8	8.7	20.7	11.8	25.0	14.6	25.1	15.2	24.8	12.6
5	17.7	7.5	18.4	10.2	23.4	12.5	25.6	14.1	25.8	16.6	23.1	12.4
6	15.7	6.7	22.1	8.7	23.3	12.5	25.6	14.2	26.3	15.2	15.8	12.4
7	12.8	3.9	20.8	9.3	21.5	10.7	---	---	26.6	15.1	19.9	13.1
8	17.0	3.9	19.0	8.4	22.6	10.4	---	---	27.0	15.4	23.1	12.1
9	18.3	5.7	15.5	7.0	21.8	12.8	---	---	27.2	15.0	23.6	12.6
10	16.7	7.2	19.7	6.7	24.0	11.3	---	---	27.4	18.0	23.8	13.4
11	18.5	6.0	18.4	7.2	23.8	13.0	---	---	28.8	17.7	25.7	13.1
12	18.1	6.4	17.6	10.1	25.4	13.1	---	---	25.7	16.6	23.5	13.1
13	17.9	7.6	24.0	9.6	25.4	13.1	27.1	---	21.3	16.8	16.4	9.1
14	16.3	6.9	22.3	10.5	24.5	16.0	24.2	17.1	21.8	15.0	19.6	8.2
15	14.7	6.1	23.3	10.7	26.7	15.0	24.5	17.6	25.9	14.9	22.2	8.8
16	14.2	6.0	16.2	13.3	25.6	14.5	27.4	18.2	25.1	14.6	22.3	11.2
17	18.2	5.7	15.1	11.6	22.3	12.5	21.6	19.0	27.3	15.2	22.2	11.5
18	18.0	6.6	22.7	10.6	---	12.1	20.0	18.8	24.6	17.1	21.7	13.6
19	16.4	5.3	20.8	10.8	---	---	22.9	18.2	25.1	17.3	20.4	10.7
20	18.3	5.3	23.9	10.7	---	---	24.6	16.7	25.7	17.5	21.7	10.6
21	17.8	4.5	23.1	11.7	---	---	22.7	16.0	27.0	17.7	21.7	10.9
22	18.0	6.3	20.4	12.2	---	---	26.1	17.8	23.6	16.1	21.3	12.1
23	19.8	7.8	21.4	11.1	---	---	---	---	23.4	13.6	---	12.7
24	13.4	8.4	15.7	12.4	25.2	---	---	---	24.4	14.6	21.7	12.3
25	19.1	6.2	15.7	12.6	27.7	17.3	---	---	26.3	15.3	21.0	10.1
26	20.8	7.2	24.8	12.8	25.4	16.2	---	---	22.3	15.1	20.8	10.4
27	21.8	9.3	25.2	13.4	25.1	15.1	---	---	19.2	16.3	22.0	9.3
28	23.3	11.1	24.7	12.8	26.1	15.8	---	---	20.8	15.7	20.6	10.1
29	22.2	8.9	20.6	13.1	26.5	15.2	---	---	24.7	14.5	20.6	10.1
30	17.4	9.6	21.5	11.6	27.3	17.5	28.2	---	18.3	13.3	21.2	10.0
31	---	---	26.9	14.5	---	---	28.5	16.1	20.8	12.9	---	---
MONTH	23.3	3.9	26.9	5.3	---	---	---	---	28.8	12.9	---	8.2

07106000 FOUNTAIN CREEK NEAR FOUNTAIN, CO--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.7	7.0	7.6	6.3	10.4	8.6	10.4	8.9	9.5	7.4	8.4	7.6
2	8.1	6.7	8.7	6.7	10.7	8.6	10.2	8.3	9.5	7.3	9.3	6.8
3	8.5	6.7	9.4	8.6	10.0	8.6	10.5	9.1	8.8	6.4	9.1	7.3
4	8.5	6.6	10.3	8.2	10.7	9.6	10.7	9.2	9.9	6.2	9.6	7.2
5	7.5	6.6	10.4	8.5	10.9	10.4	10.7	10.1	10.7	8.0	9.9	7.0
6	7.2	5.7	9.6	7.9	10.6	8.9	10.6	9.2	10.7	7.7	9.2	6.8
7	8.5	6.4	10.0	8.0	10.7	9.0	10.3	9.1	10.0	8.3	9.2	6.4
8	9.4	5.8	9.4	7.0	10.5	8.9	10.4	9.4	9.8	7.8	9.1	6.7
9	---	---	9.0	7.3	10.5	8.8	10.5	8.9	8.8	6.9	9.0	6.3
10	8.8	---	9.5	7.6	10.4	8.4	10.3	8.6	8.8	7.4	8.7	6.9
11	8.2	---	10.1	8.4	10.3	8.0	10.2	8.6	9.3	6.8	9.3	8.2
12	7.7	---	10.2	8.1	10.0	9.0	10.3	8.5	9.8	7.2	10.5	8.1
13	8.1	---	9.7	7.3	10.7	9.0	10.4	8.6	9.6	7.5	10.5	7.1
14	---	---	9.2	6.5	10.5	9.6	10.3	8.7	9.1	7.1	9.9	6.2
15	8.4	---	9.2	6.4	10.6	9.3	10.2	8.4	9.7	7.9	8.7	6.2
16	9.3	7.6	8.5	6.6	10.7	9.8	10.3	8.3	9.6	8.6	9.1	7.0
17	8.9	6.8	8.2	6.3	10.6	9.0	10.2	9.4	9.2	6.8	9.3	8.1
18	9.1	7.6	8.5	6.7	10.4	9.1	10.4	9.0	9.4	7.3	8.8	6.1
19	8.4	7.2	8.8	7.1	10.7	9.6	10.5	9.8	---	---	9.3	6.0
20	8.8	7.1	10.0	8.2	10.6	9.2	10.7	9.0	---	---	9.1	6.5
21	8.2	6.8	10.0	8.3	10.7	9.1	10.7	7.8	---	---	8.5	6.9
22	8.3	7.2	10.7	8.8	10.5	9.0	10.0	7.7	---	---	8.8	6.0
23	8.4	7.1	10.7	8.6	10.9	9.5	9.7	8.8	10.2	---	8.5	5.7
24	8.8	6.7	10.9	9.8	10.9	9.1	10.2	8.4	9.1	7.0	8.3	5.6
25	9.4	7.3	10.6	9.3	11.0	9.4	10.2	8.1	8.9	7.9	8.4	5.7
26	9.5	7.2	11.0	8.8	10.7	9.2	10.1	7.9	9.7	7.4	7.9	5.7
27	9.9	7.2	11.0	8.9	10.7	8.9	10.0	8.0	9.9	7.0	7.5	6.1
28	9.0	7.0	10.9	9.0	10.5	8.9	10.2	8.1	9.3	6.9	7.5	6.0
29	9.3	7.0	10.9	9.4	10.1	8.5	10.0	9.2	---	---	7.1	6.2
30	7.6	6.7	11.0	9.0	9.8	8.4	10.3	8.1	---	---	7.6	6.5
31	7.8	6.5	---	---	10.3	9.4	10.0	7.5	---	---	8.0	5.9
MONTH	---	---	11.0	6.3	11.0	8.0	10.7	7.5	---	---	10.5	5.6
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.5	5.7	9.7	8.3	7.8	5.6	6.4	5.4	6.6	4.0	7.3	5.6
2	8.4	5.7	9.8	7.6	8.3	5.9	6.6	5.3	6.4	5.7	7.4	6.2
3	8.5	7.3	9.1	6.4	8.0	6.8	6.9	4.9	6.8	5.7	6.8	4.7
4	8.5	6.1	9.2	7.1	7.9	6.6	6.4	5.1	6.9	5.2	6.2	4.7
5	7.6	5.7	8.7	6.7	7.7	6.6	7.0	4.8	7.1	5.7	8.0	5.9
6	7.3	6.0	7.8	5.6	7.7	6.6	7.0	5.2	6.8	5.2	8.0	6.0
7	8.5	6.4	6.8	5.3	7.8	5.8	7.6	5.6	6.6	5.1	7.0	5.7
8	8.8	5.6	7.3	6.1	7.7	5.3	7.4	4.6	6.5	5.3	7.5	6.3
9	8.2	5.9	7.9	6.3	7.0	4.9	6.8	3.7	7.0	5.4	7.2	4.8
10	7.7	6.0	8.2	6.8	6.7	5.2	7.4	5.0	6.5	5.3	7.4	5.2
11	7.9	5.9	9.0	6.7	6.7	5.2	6.6	3.8	6.5	5.4	7.5	6.1
12	7.8	6.0	8.3	4.8	6.6	5.4	---	---	6.4	4.8	7.5	5.5
13	7.2	5.6	9.2	6.0	6.7	5.5	6.8	---	6.3	5.8	8.8	6.5
14	7.8	5.7	8.0	6.4	6.3	5.2	6.8	---	6.5	5.8	9.0	6.5
15	7.4	5.6	8.2	5.2	6.0	5.3	---	---	6.8	5.3	9.0	5.2
16	8.2	6.6	---	4.9	6.2	5.2	---	---	6.8	4.6	7.0	4.8
17	8.8	7.0	7.3	---	7.7	5.3	---	---	6.8	4.4	7.1	5.9
18	8.5	6.8	7.8	6.2	7.7	---	---	---	6.6	4.8	7.2	5.9
19	8.6	6.7	7.4	6.3	---	---	---	---	5.8	4.5	8.0	6.5
20	8.7	6.9	8.2	6.1	---	---	---	---	5.9	5.0	8.2	5.7
21	9.2	7.2	8.2	---	---	---	---	---	6.4	5.4	8.5	7.1
22	8.6	6.8	---	---	---	---	7.0	---	6.7	4.0	8.5	7.5
23	8.4	7.1	---	---	---	---	6.9	4.6	7.3	4.0	9.3	7.1
24	8.2	7.3	---	---	7.0	4.7	7.0	5.6	7.7	4.9	7.4	6.1
25	8.2	7.0	---	---	6.4	4.8	6.7	5.0	7.7	5.3	7.3	6.1
26	8.3	5.9	7.7	6.4	6.5	4.9	6.8	5.1	7.2	6.3	7.6	6.5
27	8.2	7.0	8.1	5.9	6.7	4.8	7.3	5.5	7.3	6.5	7.9	6.5
28	7.8	6.6	8.2	6.3	6.1	4.8	6.4	3.8	6.8	5.5	7.9	7.0
29	8.9	7.3	8.2	7.0	6.2	5.0	---	---	6.7	5.9	8.3	7.0
30	8.8	7.5	8.6	6.3	6.4	4.4	6.8	---	7.7	5.9	8.2	6.5
31	---	---	7.6	5.4	---	---	7.0	5.8	7.2	6.4	---	---
MONTH	9.2	5.6	---	---	---	---	---	---	7.7	4.0	9.3	4.7

07106300 FOUNTAIN CREEK NEAR PINON, CO

LOCATION.--Lat 38°26'50", long 104°35'28", in NE1/4NE1/4 sec.31, T.18 S., R.64 W., Pueblo County, Hydrologic Unit 11020003, near left bank on downstream side of county road bridge, 1.2 mi northeast of Pinon, and 3.2 mi upstream from Steele Hollow Creek.

DRAINAGE AREA.--849 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--April 1973 to current year.

REVISED RECORDS.--WDR CO-80-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 5,005 ft above sea level, from topographic map. Prior to Apr. 23, 1976, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 9-12, 15, and Aug. 2. Records fair except for discharges above about 1,500 ft³/s, which are poor. Natural flow of stream affected by storage reservoirs, power developments, transbasin and transmountain diversions municipal use, diversions upstream from station for irrigation of about 10,000 acres and municipal use, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	144	117	82	115	126	124	27	87	23	2.8	29
2	22	118	121	87	108	112	104	27	26	20	200	19
3	26	119	124	94	103	112	81	26	237	16	43	61
4	32	114	117	93	104	112	103	16	65	15	14	49
5	41	118	104	87	108	109	115	11	37	13	66	15
6	44	123	102	83	108	111	115	27	39	11	42	671
7	57	114	122	97	115	115	135	24	39	4.9	30	115
8	47	123	124	90	121	117	117	31	60	4.4	25	144
9	46	122	121	100	111	113	117	44	57	4.1	15	70
10	48	113	91	90	119	108	108	43	71	3.6	11	52
11	53	122	92	80	107	101	86	15	47	6.7	94	73
12	50	130	95	78	112	97	82	14	30	288	30	52
13	49	110	85	76	116	97	165	12	18	47	18	28
14	43	112	75	75	116	110	77	22	24	54	17	55
15	40	116	67	77	110	115	66	22	40	24	13	49
16	34	124	70	82	100	102	68	138	21	55	12	41
17	54	115	70	82	83	91	47	99	36	18	10	36
18	67	118	91	84	103	97	40	66	1110	5.8	11	27
19	65	122	90	84	146	97	47	60	190	84	52	29
20	61	117	88	74	144	97	52	41	136	150	20	31
21	69	131	93	81	118	99	53	24	158	69	13	29
22	64	161	73	83	119	105	38	23	154	26	19	29
23	61	135	73	104	111	106	29	12	89	6.1	22	39
24	64	90	79	96	115	100	34	7.4	74	3.1	14	41
25	61	73	86	93	121	97	101	192	57	4.7	10	32
26	59	86	76	104	116	98	68	77	49	5.6	12	30
27	71	105	80	102	111	101	60	39	46	3.4	16	29
28	70	106	83	104	118	127	61	90	38	2.6	52	27
29	69	114	81	106	---	152	32	73	23	49	50	30
30	81	103	82	102	---	178	30	80	23	3.4	22	32
31	85	---	88	111	---	148	---	65	---	2.8	70	---
TOTAL	1656	3498	2860	2781	3178	3450	2355	1447.4	3081	1023.2	1025.8	1964
MEAN	53.4	117	92.3	89.7	113	111	78.5	46.7	103	33.0	33.1	65.5
MAX	85	161	124	111	146	178	165	192	1110	288	200	671
MIN	22	73	67	74	83	91	29	7.4	18	2.6	2.8	15
AC-FT	3280	6940	5670	5520	6300	6840	4670	2870	6110	2030	2030	3900

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1993, BY WATER YEAR (WY)

	MEAN	60.3	78.5	76.4	84.8	91.7	99.3	102	213	120	77.0	116	51.1
MAX	457	289	155	158	141	207	299	1349	385	365	385	205	
(WY)	1985	1985	1985	1985	1985	1992	1985	1980	1983	1985	1982	1982	
MIN	.81	5.77	30.0	19.0	35.2	20.0	3.36	.96	8.39	4.34	3.87	.000	
(WY)	1976	1979	1977	1979	1978	1978	1975	1975	1978	1976	1974	1975	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1973 - 1993

ANNUAL TOTAL	38939.6	28319.4	
ANNUAL MEAN	106	77.6	95.5
HIGHEST ANNUAL MEAN			261
LOWEST ANNUAL MEAN			29.4
HIGHEST DAILY MEAN	664	Aug 24	1110 Jun 18
LOWEST DAILY MEAN	7.3	Sep 14	2.6 Jul 28
ANNUAL SEVEN-DAY MINIMUM	16	Sep 8	6.8 Jul 5
INSTANTANEOUS PEAK FLOW			3050 Jun 18
INSTANTANEOUS PEAK STAGE			3.89 Jun 18
ANNUAL RUNOFF (AC-FT)	77240	56170	69160
10 PERCENT EXCEEDS	180	122	187
50 PERCENT EXCEEDS	102	75	65
90 PERCENT EXCEEDS	26	16	.50

a-No flow at times most years.

b-From rating curve extended above 7300 ft³/s.

07106300 FOUNTAIN CREEK NEAR PINON, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1976 to December 1983, December 1990 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
DEC 18...	1100	99	1220	8.1	0.0	10.6	13	--
MAR 26...	1015	99	1090	8.3	10.5	9.4	7.8	42
JUN 11...	1000	60	1100	8.3	17.0	8.0	4.3	K610
SEP 24...	1005	48	1220	8.4	13.5	9.2	4.3	430

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
DEC 18...	--	97	31	190	330	54	1.7
MAR 26...	K53	81	25	163	290	56	1.6
JUN 11...	550	87	27	180	310	51	1.9
SEP 24...	1400	100	32	205	360	53	1.8

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
DEC 18...	0.07	--	5.5	--	1.1	--	2.2	1.3	--
MAR 26...	--	0.02	6.2	6.2	--	0.03	1.0	--	1.5
JUN 11...	--	0.01	4.3	4.3	--	0.02	0.3	--	0.98
SEP 24...	--	<0.01	3.8	3.8	--	0.03	0.8	--	0.82

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, HEXA- VALENT, DIS- SOLVED (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
DEC 18...	<1	<1	2	<1	<1	9	2	3700	15
MAR 26...	<1	<1	1	<1	<1	13	3	2500	21
JUN 11...	<1	<1	2	<1	<1	9	3	5200	3
SEP 24...	<1	<1	2	<1	<1	6	1	2400	6

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
DEC 18...	10	<1	210	13	7	3	50	10
MAR 26...	6	<1	150	7	6	3	40	14
JUN 11...	13	<1	190	4	6	3	60	12
SEP 24...	7	<1	120	8	5	3	40	7

K-Based on non-ideal colony counts.

07106300 FOUNTAIN CREEK NEAR PINON, CO--Continued

MISCELLANEOUS FIELD MEASUREMENTS, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
OCT					MAY				
06...	1110	37	1240	13.5	13...	1215	14	--	22.5
19...	1420	70	1210	15.0	24...	1230	9.8	1320	15.5
NOV					28...	1345	131	827	23.0
03...	1215	133	1070	5.5	JUN				
17...	1125	121	1080	7.5	10...	1150	104	1150	19.0
DEC					14...	1130	34	1200	17.5
01...	1020	129	1120	2.0	21...	1520	191	840	23.5
11...	1415	91	1160	7.0	28...	1140	48	--	24.0
23...	1010	74	1280	0.0	JUL				
JAN					06...	1555	10	1260	27.5
21...	1305	89	1240	6.0	13...	1200	48	1070	25.5
FEB					19...	0930	193	610	18.0
08...	1300	129	1020	4.5	27...	0955	4.4	1320	20.5
16...	1555	98	1130	0.0	AUG				
MAR					02...	1435	242	630	25.5
09...	1135	123	1090	10.0	09...	0835	20	1250	16.0
22...	1515	104	1130	15.5	24...	1015	17	1390	20.0
31...	1150	155	980	12.5	SEP				
APR					01...	1030	29	1200	18.5
07...	1140	167	1140	8.5	08...	0955	283	740	14.0
13...	1025	297	890	9.5	10...	1145	56	1130	20.0
26...	1220	70	--	17.0	15...	1040	62	1220	12.5
MAY					20...	1000	32	1230	12.5
04...	1210	22	1280	19.5	24...	1000	--	--	13.5

07106500 FOUNTAIN CREEK AT PUEBLO, CO

LOCATION.--Lat 38°17'16", long 104°36'02", in SE¹/4SW¹/4 sec.19, T.20 S., R.64 W., Pueblo County, Hydrologic Unit 11020003, on left bank at upstream side of bridge on U.S. Highway 50 at Pueblo and 2.6 mi upstream from mouth.

DRAINAGE AREA.--926 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1922 to September 1925, October 1940 to September 1965, February 1971 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WDR CO-79-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,705 ft above sea level, from topographic map. See WSP 1711 or 1731 for history of changes prior to Oct. 1, 1940, and WSP 1921 for changes prior to Sept. 30, 1965. Feb. 1, 1971 to Sept. 30, 1976, water-stage recorder at site 1.4 mi upstream at datum 4,725.30 ft, above sea level (unadjusted).

REMARKS.--Estimated daily discharges: Dec. 18-22, 25-29, and Jan. 12-15, 20-26. Records fair except for estimated daily discharges and those above 1,000 ft³/s, which are poor. Natural flow of stream affected by storage reservoirs, power developments, transbasin and transmountain diversions for municipal use, diversions for irrigation of about 14,000 acres upstream from station and municipal use, and return flow from irrigated areas.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1903, that of June 17, 1965. Flood of June 4, 1921, reached a discharge of 34,000 ft³/s, by slope-area measurement. Flood of May 30, 1935, reached a discharge of 35,000 ft³/s, by slope-area measurement.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	124	122	95	125	138	121	23	71	19	3.0	29
2	23	124	116	93	123	123	100	24	54	13	164	16
3	30	116	115	102	121	117	81	25	282	8.9	42	24
4	36	112	113	101	113	121	93	24	115	7.4	38	34
5	44	121	119	90	125	119	114	22	60	6.9	45	20
6	41	124	111	83	132	113	132	19	44	5.8	41	467
7	39	123	125	87	137	118	160	20	41	5.6	38	196
8	39	127	134	97	147	118	152	20	44	5.7	38	157
9	43	125	140	81	142	117	144	27	58	5.3	21	96
10	43	125	116	70	137	111	127	28	87	3.9	30	68
11	47	129	114	69	140	100	99	26	72	3.4	60	91
12	47	143	113	80	125	94	94	23	44	215	43	74
13	48	127	109	85	130	91	193	18	35	61	25	53
14	48	119	100	85	132	100	147	16	32	69	20	63
15	45	121	92	80	128	111	83	12	31	58	18	55
16	43	126	95	72	76	107	72	88	22	47	15	55
17	49	125	106	68	71	105	57	92	20	44	13	51
18	81	125	110	80	136	104	35	49	1100	24	13	39
19	85	134	110	106	156	104	33	41	236	60	31	36
20	80	137	110	110	163	106	36	32	101	125	34	36
21	72	163	105	115	144	111	49	26	114	54	22	39
22	68	186	100	115	134	116	46	20	138	26	18	37
23	68	143	92	110	128	112	41	18	63	12	18	47
24	68	116	104	110	128	106	48	17	47	6.6	13	55
25	63	94	105	115	130	101	102	121	49	4.6	9.6	42
26	61	106	105	120	127	101	83	90	44	3.6	9.2	37
27	67	115	100	126	126	104	61	32	40	2.8	15	34
28	69	113	100	122	132	121	54	87	35	2.6	27	30
29	62	118	100	123	---	152	35	89	23	9.5	35	31
30	66	122	99	123	---	213	26	75	20	11	19	34
31	91	---	100	120	---	154	---	59	---	4.2	35	---
TOTAL	1699	3783	3380	3033	3608	3608	2618	1263	3122	924.8	952.8	2046
MEAN	54.8	126	109	97.8	129	116	87.3	40.7	104	29.8	30.7	68.2
MAX	91	186	140	126	163	213	193	121	1100	215	164	467
MIN	23	94	92	68	71	91	26	12	20	2.6	3.0	16
AC-FT	3370	7500	6700	6020	7160	7160	5190	2510	6190	1830	1890	4060

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1993, BY WATER YEAR (WY)

	MEAN	42.2	55.3	55.2	57.5	62.6	59.7	70.9	151	105	64.2	109	36.4
MAX	513	303	193	185	174	217	564	970	859	388	650	241	
(WY)	1985	1985	1985	1985	1985	1992	1942	1980	1965	1923	1965	1982	
MIN	.61	.90	1.10	1.90	1.40	1.00	1.10	.28	.71	.96	.71	.37	
(WY)	1963	1955	1955	1954	1954	1954	1955	1950	1963	1964	1960	1978	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1922 - 1993
ANNUAL TOTAL	41986.0	30037.6	
ANNUAL MEAN	115	82.3	73.9
HIGHEST ANNUAL MEAN			276
LOWEST ANNUAL MEAN			4.42
HIGHEST DAILY MEAN	908	1100	10000
LOWEST DAILY MEAN	8.0	2.6	.00
ANNUAL SEVEN-DAY MINIMUM	18	5.2	.00
INSTANTANEOUS PEAK FLOW		2880	b 47000
INSTANTANEOUS PEAK STAGE		6.79	c 19.00
ANNUAL RUNOFF (AC-FT)	83280	59580	53560
10 PERCENT EXCEEDS	188	133	154
50 PERCENT EXCEEDS	112	81	28
90 PERCENT EXCEEDS	28	19	1.0

a-No flow at times many years.

b-Site and datum then in use, from rating curve extended above 400 ft³/s, on basis of contracted-opening measurement of peak flow.

c-From floodmarks.

07106500 FOUNTAIN CREEK AT PUEBLO, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1981 to current year.

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, with satellite telemetry.

REMARKS.--Records for daily water temperature are fair, except July 22 to Aug. 10, and Aug. 23 to Sept. 1, which are poor. Records for daily specific conductance are fair. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance and daily mean water temperature data are available in district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 3,460 microsiemens, July 7, 1989; minimum, 203 microsiemens, June 6, 1991.

WATER TEMPERATURE: Maximum, 33.1°C, July 17, 1991; minimum, 0.0°C, many days during the winter months.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,870 microsiemens, July 29; minimum, 394 microsiemens, Aug. 4.

WATER TEMPERATURE: Maximum, 32.1°C, Aug. 10; minimum, 0.0°C, many days during winter.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML)
OCT 25...	1225	85	1430	8.5	11.5	9.3	4.8	670
NOV 22...	1520	180	1180	8.3	6.0	9.8	8.7	K180
DEC 13...	1345	194	1300	8.3	4.5	10.8	--	K310
JAN 10...	1355	132	1260	8.3	3.0	10.8	20	73
FEB 21...	1455	157	1190	8.4	12.0	9.1	9.2	K3
MAR 27...	1340	152	1120	8.4	14.0	9.6	2.8	K12
APR 17...	1440	325	756	8.2	16.5	8.0	5.6	K650
MAY 15...	1615	52	1250	8.4	28.5	6.1	1.5	K270
JUN 05...	1400	132	1030	8.4	24.0	7.0	2.6	K340
JUL 10...	1330	47	1380	8.4	25.0	6.8	0.5	K85
AUG 21...	1430	25	1520	8.5	30.0	6.5	0.8	K190
SEP 18...	1310	32	1440	8.4	20.5	7.1	1.0	550

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)
OCT 25...	980	34	0.04	5.2	0.03	1.4	0.78
NOV 22...	540	250	0.11	5.5	0.58	1.9	1.1
DEC 13...	500	395	0.06	5.8	0.63	2.1	1.1
JAN 10...	200	--	0.05	5.9	1.6	3.4	1.5
FEB 21...	K17	162	0.02	7.1	0.02	1.2	1.5
MAR 27...	K47	166	0.05	6.3	0.04	0.80	1.4
APR 17...	K730	1600	<0.01	3.3	0.01	2.0	0.51
MAY 15...	290	168	0.02	3.7	0.02	0.40	0.70
JUN 05...	240	245	<0.01	4.7	0.01	0.30	0.90
JUL 10...	240	47	0.02	4.2	0.02	0.30	0.66
AUG 21...	220	58	0.03	4.1	0.02	0.40	0.53
SEP 18...	K160	115	<0.01	4.8	0.02	0.50	0.64

K-Based on non-ideal colony counts.

07106500 FOUNTAIN CREEK AT PUEBLO, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT									
16...	1230	42	1510	8.5	9.5	9.8	E1.0	K48	K110
NOV									
13...	1500	137	1200	8.4	9.0	9.6	6.6	110	240
DEC									
18...	1315	96	1360	8.4	2.5	11.2	4.0	--	--
JAN									
29...	1115	122	1260	8.4	3.5	10.8	7.6	76	100
FEB									
19...	1430	170	1200	8.2	10.5	8.7	17	K60	120
MAR									
26...	1230	104	1220	8.4	15.5	8.6	4.8	K17	K22
APR									
30...	1040	20	1510	8.4	16.0	7.8	0.4	K13	84
MAY									
21...	1440	26	1540	8.4	22.0	6.5	0.8	110	220
JUN									
11...	1300	84	1310	8.4	26.5	6.2	2.1	290	620
JUL									
30...	1030	11	1740	8.4	24.0	6.9	2.4	K1700	K2000
AUG									
27...	1335	17	2030	8.5	20.0	7.5	1.8	K2800	K3200
SEP									
24...	1215	57	1470	8.5	18.0	8.3	1.7	1000	420

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT									
16...	0.01	--	4.5	--	0.04	--	0.5	0.61	--
NOV									
13...	0.08	--	5.8	--	0.44	--	1.3	1.2	--
DEC									
18...	0.05	--	6.1	--	0.20	--	1.2	0.93	--
JAN									
29...	--	0.05	7.1	7.1	--	0.63	1.7	--	1.4
FEB									
19...	--	0.09	7.4	7.4	--	1.2	3.3	--	1.5
MAR									
26...	--	0.01	6.9	6.9	--	0.03	0.8	--	1.4
APR									
30...	--	<0.01	5.9	5.9	--	0.02	0.2	--	0.66
MAY									
21...	--	0.01	5.4	5.4	--	0.06	0.3	--	0.56
JUN									
11...	--	<0.01	4.7	4.7	--	0.02	0.3	--	0.69
JUL									
30...	--	0.05	5.3	5.3	--	0.03	0.4	--	0.32
AUG									
27...	--	0.03	7.4	7.4	--	0.02	0.6	--	0.30
SEP									
24...	--	<0.01	4.6	4.6	--	0.02	0.8	--	0.48

E-Estimated.

K-Based on non-ideal colony counts.

07106500 FOUNTAIN CREEK AT PUEBLO, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1550	1310	1280	1300	1190	1250	1150	---	1120	1550	2370	1510
2	1580	1250	1280	1300	1180	1250	1240	---	1200	1550	1260	1590
3	1540	1230	1290	1310	1190	1240	1290	---	952	1670	1080	1450
4	1520	1220	1310	1380	1200	1240	1260	---	1150	1810	1370	1450
5	1500	1220	1290	1370	---	1230	1220	1670	1320	1820	1410	1670
6	1500	1220	1320	1430	---	1240	1170	1610	1370	1840	1290	---
7	1450	1210	1280	1360	---	1230	1110	1560	1400	1860	1450	---
8	1450	1200	1210	1320	---	1220	1110	1530	1350	1930	1490	---
9	1460	1200	1210	1400	---	1220	1140	1480	1340	1940	1720	---
10	1460	1190	1270	1390	---	1220	1160	1470	1280	2040	1750	1260
11	1510	1200	1290	---	---	1220	1220	1520	1280	2080	1620	1300
12	1470	1190	1300	---	---	1230	1250	1570	1400	1020	1360	1370
13	1480	1190	1320	---	---	1220	1120	1630	1470	1170	1650	1480
14	1490	1200	1350	---	---	1210	1090	1620	1440	1350	1780	1430
15	1500	1200	1360	---	---	1210	1220	1560	1370	1510	1810	1290
16	1490	1190	1360	---	---	1210	1250	1300	1490	1540	1900	1310
17	1500	1200	1340	---	1420	1220	1350	1170	1470	1470	1990	1330
18	1410	1360	1320	---	---	1220	1430	1360	753	1840	2050	1440
19	1370	1410	1330	1300	1220	1220	1410	1430	855	1470	1710	1480
20	1280	1380	1360	1350	---	1210	1390	1580	1030	965	1520	1460
21	1370	1350	1320	1360	---	1200	1370	1540	1030	1140	1610	1430
22	1390	1310	1320	1350	---	1200	1370	1590	931	1410	1650	1430
23	1390	1280	1370	1330	1230	1220	1370	1540	1130	1750	1660	1440
24	1380	1280	1370	1310	1230	1230	1460	1650	1260	2070	1790	1360
25	1400	1260	1320	1270	1220	1220	1260	---	1290	2240	1900	1400
26	1400	1240	1350	1230	1230	1220	1230	---	1380	2360	1940	1460
27	1390	1210	1310	1190	1240	1200	1320	1460	1410	2550	1770	1500
28	1370	1190	1250	1200	1240	1160	1440	1240	1420	2570	1520	1550
29	1390	1280	1290	1220	---	1100	---	1190	1530	2350	1430	1550
30	1370	1340	1390	1210	---	990	---	1190	1570	1750	1590	1520
31	1330	---	1310	1200	---	1010	---	1170	---	2280	1380	---
MEAN	1440	1250	1310	---	---	1200	---	---	1270	1770	1640	---
MAX	1580	1410	1390	---	---	1250	---	---	1570	2570	2370	---
MIN	1280	1190	1210	---	---	990	---	---	753	965	1080	---

07106500 FOUNTAIN CREEK AT PUEBLO, CO--Continued

TEMPERATURE WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	23.0	9.7	11.8	5.6	6.6	1.9	3.4	.5	8.5	1.0	5.6	3.1
2	22.7	9.8	9.5	5.0	5.8	.0	5.1	.1	7.9	.6	9.5	.9
3	21.7	9.7	6.9	3.3	4.6	.6	5.2	.0	7.3	2.0	11.7	3.2
4	21.4	9.9	8.6	1.8	2.4	.0	2.9	.0	6.6	.3	11.7	2.4
5	20.6	11.6	6.6	1.9	.1	.0	1.1	.0	7.5	.0	12.0	.4
6	18.5	11.6	9.0	3.1	3.3	.0	.6	.0	8.2	.1	11.1	1.9
7	13.7	6.9	9.4	3.0	2.4	.0	1.5	.0	7.0	1.0	14.2	2.3
8	14.7	5.1	10.2	3.3	16.4	.0	.0	.0	5.1	1.8	12.3	3.3
9	15.9	7.9	9.1	4.2	6.4	.0	.0	.0	6.6	2.5	15.1	3.6
10	16.1	8.1	8.8	5.1	6.5	.8	.0	.0	5.2	2.4	11.1	4.8
11	17.5	9.2	8.5	4.4	7.5	.0	.0	.0	5.2	1.3	5.4	1.3
12	16.3	10.3	6.4	2.2	3.8	1.5	.0	.0	5.1	1.4	5.5	.0
13	15.7	10.9	9.1	1.6	1.5	.0	.0	.0	4.8	1.6	9.0	.0
14	15.9	9.9	10.2	2.8	1.4	.0	.0	.0	3.3	1.6	11.6	.0
15	16.5	6.6	10.8	3.7	2.1	.0	.0	.0	2.6	1.0	14.0	4.1
16	12.3	6.1	10.1	4.3	4.6	.0	.2	.0	1.0	.2	12.8	3.6
17	16.3	4.7	10.9	5.1	2.3	.0	.1	.0	1.3	.0	6.5	3.2
18	15.4	5.6	10.2	5.6	3.4	.0	1.1	.0	1.5	.3	9.4	2.2
19	15.8	7.0	8.5	4.7	3.8	.0	2.2	.0	11.3	1.2	15.0	1.7
20	17.5	6.5	5.5	1.6	2.6	.0	5.9	.0	11.2	5.1	13.8	4.0
21	16.9	6.7	7.3	1.8	3.7	.0	8.6	1.2	9.0	4.4	13.5	4.9
22	17.8	8.0	3.9	.3	3.5	.0	8.2	.0	8.1	1.8	15.8	4.1
23	18.1	8.0	4.1	.4	3.2	.0	5.1	.0	8.5	.0	17.0	3.8
24	17.1	7.7	1.8	1.0	4.3	.0	3.6	.0	10.0	1.0	17.9	4.5
25	17.7	9.0	3.1	1.0	4.7	.0	4.5	.0	6.6	1.9	18.2	4.7
26	16.5	9.5	3.3	1.2	3.7	.0	7.3	.0	8.2	.7	16.2	6.3
27	15.7	7.6	3.9	1.5	4.3	.0	7.7	.0	9.8	.0	12.1	7.2
28	12.2	8.4	3.6	1.8	4.6	.0	7.1	.0	9.4	.4	17.0	5.9
29	9.4	7.4	4.4	2.6	5.6	.0	4.9	1.5	---	---	11.6	7.0
30	12.8	7.4	3.6	2.1	6.1	1.7	7.5	.0	---	---	10.6	6.8
31	10.6	7.7	---	---	3.3	.7	8.4	.0	---	---	10.5	6.2
MONTH	23.0	4.7	11.8	.3	16.4	.0	8.6	.0	11.3	.0	18.2	.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.8	6.7	---	---	25.9	13.9	31.1	17.9	23.2	16.5	29.0	13.7
2	15.2	7.3	---	---	26.9	13.5	30.7	17.2	26.3	16.7	24.2	12.1
3	8.7	5.5	---	---	24.3	14.5	28.7	16.5	22.2	15.9	26.4	12.0
4	15.1	3.9	---	---	22.7	13.7	26.1	16.7	26.7	13.3	27.6	13.8
5	17.3	7.0	---	---	25.7	13.3	28.1	15.8	28.3	13.3	25.5	14.6
6	16.0	7.9	22.8	---	24.7	13.1	28.7	15.0	29.0	15.9	18.3	15.3
7	11.5	4.3	21.8	9.2	23.7	10.7	29.5	16.0	29.9	13.5	20.1	13.7
8	17.4	3.8	23.8	8.6	24.5	10.5	30.8	16.6	29.3	15.7	20.5	12.6
9	18.6	5.7	19.9	8.5	24.4	13.2	29.0	16.7	31.5	16.7	22.7	12.4
10	19.0	7.0	22.0	6.5	26.0	11.1	30.3	15.8	32.1	13.2	23.7	12.5
11	19.0	5.7	20.2	7.2	27.8	13.0	26.9	17.4	30.1	17.6	24.5	12.1
12	18.9	6.3	21.7	11.0	29.6	13.0	26.3	17.3	29.9	17.6	24.9	12.5
13	16.2	7.6	26.1	9.8	28.1	13.5	29.4	16.3	25.2	17.0	15.3	9.4
14	16.4	6.9	22.4	10.5	28.5	16.9	28.2	18.0	24.2	15.6	20.3	7.6
15	18.7	5.2	26.6	10.6	30.7	15.2	30.7	17.1	29.0	15.2	22.2	8.3
16	14.7	5.9	18.0	13.3	27.8	15.2	29.5	17.4	28.4	15.1	23.2	10.7
17	20.3	5.7	15.5	12.5	24.2	14.7	27.6	17.4	28.4	15.7	23.6	7.7
18	20.9	6.6	24.3	11.2	16.5	14.0	30.3	18.7	28.1	17.4	21.1	12.5
19	17.5	5.6	24.1	10.4	23.9	12.8	28.0	17.3	25.0	15.3	22.6	10.4
20	19.3	4.4	26.3	11.6	27.2	15.2	26.1	18.2	28.1	17.4	23.6	10.3
21	19.6	4.6	24.8	12.6	24.5	15.3	30.2	16.1	30.4	13.5	24.0	10.5
22	14.4	7.8	25.1	11.7	27.4	15.5	29.6	15.0	25.5	15.6	20.3	10.8
23	12.6	9.8	27.0	11.3	28.8	15.9	29.4	17.1	28.6	13.1	14.9	10.7
24	16.2	8.6	20.0	13.1	26.2	13.9	29.2	18.8	29.7	14.3	21.9	11.7
25	19.1	5.5	18.7	13.1	28.1	13.4	27.2	18.5	30.0	13.1	22.5	10.3
26	22.8	7.2	26.6	13.9	30.9	18.4	25.3	18.1	29.8	11.5	22.3	10.9
27	23.3	9.6	25.3	14.0	31.0	16.7	27.1	16.5	21.0	15.8	23.5	9.4
28	24.3	11.6	23.5	12.4	29.3	15.9	27.7	15.3	24.0	15.1	21.7	10.0
29	---	---	22.8	12.6	30.3	16.8	27.5	15.8	28.1	13.6	20.5	10.7
30	---	---	26.0	12.1	29.9	16.3	31.2	15.1	19.9	14.4	20.7	10.9
31	---	---	28.4	14.2	---	---	25.8	11.4	25.0	12.6	---	---
MONTH	---	---	---	---	31.0	10.5	31.2	11.4	32.1	11.5	29.0	7.6

07108900 ST. CHARLES RIVER AT VINELAND, CO

LOCATION.--Lat 38°14'44", long 104°29'09", in NE1/4SW1/4 sec.6, T.21 S., R.63 W., Pueblo County, Hydrologic Unit 11020002, on right bank at right downstream end of downstream bridge on U.S. Highway 50C, 1.6 mi west of Vineland, and 3.0 mi upstream from mouth.

DRAINAGE AREA.--474 mi².

PERIOD OF RECORD.--October 1978 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,581.58 ft above sea level, (Colorado Division of Highways benchmark).

REMARKS.--Estimated daily discharge: Jan. 9-15, Feb. 16-18, May 18-21, and July 22-23. Records good except for Nov. 14 to Jan. 8, Jan. 16 to Feb. 15, Feb. 19 to Mar. 14, May 18-21, and July 22-23, which are fair, and those above 1,500 ft³/s, Jan. 9-15, Feb. 16-18, and Mar. 16 to Apr. 1, which are poor. Natural flow of stream affected by diversions upstream from station for irrigation of about 8,500 acres, and for industrial uses, and return flow from land irrigated by Bessemer Ditch. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1901, 56,000 ft³/s, at site 5.0 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	15	16	19	13	17	8.8	130	334	42	9.6	10
2	9.0	13	16	16	13	14	9.3	132	306	41	61	10
3	9.1	13	15	17	13	19	11	139	279	37	23	11
4	7.7	13	14	14	13	17	18	180	223	33	18	10
5	7.5	14	12	13	13	16	23	182	213	32	13	9.7
6	6.9	12	12	14	12	16	64	187	202	33	13	37
7	7.3	12	12	15	12	13	178	182	184	24	166	18
8	8.4	13	12	14	13	13	171	172	169	18	22	19
9	8.7	13	12	14	13	13	165	166	125	16	16	21
10	8.5	13	15	14	13	13	167	157	115	13	15	22
11	9.5	15	13	14	11	13	171	117	106	11	15	21
12	9.5	15	15	14	12	12	173	112	101	20	14	21
13	9.0	14	14	13	12	12	173	106	99	24	14	20
14	9.8	13	12	13	11	12	165	102	99	56	14	21
15	11	14	15	13	11	13	148	109	103	242	13	18
16	11	14	17	13	12	11	125	163	87	51	13	12
17	14	13	14	14	13	6.5	112	295	81	40	13	11
18	11	12	17	13	13	7.1	90	602	126	33	19	11
19	9.7	13	15	14	14	6.9	90	701	128	35	51	11
20	9.6	15	15	15	18	6.8	92	716	111	34	15	11
21	8.9	16	14	16	15	6.9	89	632	121	52	11	9.3
22	9.2	15	13	15	15	7.4	88	573	107	34	11	15
23	9.7	15	14	17	14	6.4	89	505	87	20	9.5	17
24	9.4	15	14	13	14	5.9	99	474	71	14	9.9	18
25	11	16	14	14	13	5.7	106	461	64	13	9.4	17
26	10	14	13	17	13	5.8	99	479	60	11	12	18
27	10	15	13	17	13	6.0	102	503	55	11	52	16
28	9.4	15	14	16	13	6.6	107	420	50	10	19	15
29	11	19	16	17	---	6.9	111	374	48	9.9	13	14
30	12	16	19	14	---	7.6	118	350	47	9.3	10	13
31	13	---	18	13	---	8.9	---	327	---	9.4	10	---
TOTAL	299.7	425	445	455	365	325.4	3162.1	9748	3901	1028.6	704.4	477.0
MEAN	9.67	14.2	14.4	14.7	13.0	10.5	105	314	130	33.2	22.7	15.9
MAX	14	19	19	19	18	19	178	716	334	242	166	37
MIN	6.9	12	12	13	11	5.7	8.8	102	47	9.3	9.4	9.3
AC-FT	594	843	883	902	724	645	6270	19340	7740	2040	1400	946

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1993, BY WATER YEAR (WY)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	13.8	14.1	12.5	12.5	13.3	18.7	62.0	138	81.8	35.1	54.1	22.2			
MAX	39.5	31.8	22.4	16.6	22.5	45.3	306	484	358	84.0	207	120			
(WY)	1983	1983	1983	1984	1987	1987	1987	1980	1983	1982	1982	1982			
MIN	3.50	5.59	6.81	6.75	7.89	7.25	5.02	6.06	8.79	7.60	10.2	6.36			
(WY)	1979	1979	1981	1981	1990	1981	1981	1991	1990	1981	1989	1980			

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1979 - 1993

	1992 CALENDAR YEAR	1993 WATER YEAR	1979 - 1993
ANNUAL TOTAL	10515.0	21336.2	
ANNUAL MEAN	28.7	58.5	
HIGHEST ANNUAL MEAN			88.4
LOWEST ANNUAL MEAN			9.52
HIGHEST DAILY MEAN	607	716	1550
LOWEST DAILY MEAN	3.3	5.7	.25
ANNUAL SEVEN-DAY MINIMUM	4.4	6.2	2.7
INSTANTANEOUS PEAK FLOW		a 1960	b 7560
INSTANTANEOUS PEAK STAGE		c 8.11	12.70
ANNUAL RUNOFF (AC-FT)	20860	42320	28980
10 PERCENT EXCEEDS	53	166	76
50 PERCENT EXCEEDS	13	15	14
90 PERCENT EXCEEDS	8.2	9.5	6.2

a-From rating curve extended above 811 ft³/s.

b-From rating curve extended above 1800 ft³/s.

c-From crest-stage gage reading.

07109500 ARKANSAS RIVER NEAR AVONDALE, CO

LOCATION.--Lat 38°14'53", long 104°23'55", in NE1/4SW1/4 sec.1, T.21 S., R.63 W., Pueblo County, Hydrologic Unit 11020002, on right bank 15 ft downstream from bridge on Sixmile Road, 0.3 mi upstream from Sixmile Creek, and 2.6 mi west of Avondale.

DRAINAGE AREA.--6,327 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1939 to September 1951, February 1965 to current year. Statistical summary computed for 1975 to current year.

REVISED RECORDS.--WSP 1087: 1942. WSP 1311: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,509.53 ft above sea level. Prior to January 21, 1965, at site 550 ft downstream at datum 1.37 ft lower. January 21, 1965 to September 30, 1991, at datum 1.00 ft higher.

REMARKS.--Estimated daily discharges: Oct. 4-5, Dec. 15, 27-29, Jan. 4, 9-10, 18, Mar. 7, and June 13. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation of about 123,000 acres and municipal use, and return flow from irrigated areas. Flow partly regulated by Pueblo Reservoir (station 07099350) since Jan. 9, 1974.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	287	598	341	510	445	415	452	805	3540	2880	1360	744
2	309	553	355	502	452	377	467	732	3060	2670	1550	899
3	317	558	348	501	447	344	520	453	2930	2580	1530	939
4	326	575	347	496	443	341	516	481	2830	2560	1480	908
5	330	583	333	492	443	414	522	513	2450	2510	1550	691
6	342	605	338	488	442	409	532	513	1850	2390	1540	857
7	351	677	337	498	438	405	634	673	1660	2200	1860	970
8	364	675	345	516	440	404	629	783	1580	1870	1970	852
9	347	690	349	525	448	407	612	642	1580	1580	1780	859
10	324	747	337	531	454	408	621	1040	1700	1990	1440	764
11	320	770	314	539	458	422	615	1140	1570	1940	1530	712
12	320	788	304	525	447	480	923	1130	1420	2060	1540	640
13	315	820	301	480	445	469	1130	1120	1450	2000	1570	585
14	291	733	278	425	440	478	1170	997	1490	2110	1570	666
15	294	665	270	360	445	489	1120	1110	1820	2430	1560	735
16	319	459	283	359	434	600	1060	1340	3060	2250	1570	701
17	335	458	261	352	429	645	960	1840	4000	2150	1550	666
18	348	450	266	355	437	613	856	2580	4120	1850	1570	570
19	358	463	282	358	469	591	861	3120	4600	2090	1590	539
20	428	491	273	360	472	502	903	3040	5040	2560	1320	526
21	428	447	278	364	464	492	932	2520	4290	2300	1310	473
22	412	434	280	364	458	496	914	2120	4030	1950	1140	405
23	406	397	278	370	458	504	871	2030	3850	2180	1110	337
24	401	372	281	387	442	447	929	2120	3810	2210	1090	364
25	405	350	290	374	391	440	993	2400	3740	2160	1050	354
26	400	349	289	384	339	377	962	2660	3570	2090	1010	350
27	433	354	276	394	330	337	1100	2870	3240	2190	1090	354
28	536	351	375	440	329	355	854	3140	3060	1840	1000	352
29	504	348	491	446	---	356	721	3370	3160	1590	680	355
30	501	344	504	444	---	439	721	3580	3050	1420	629	343
31	561	---	508	442	---	438	---	3570	---	1380	601	---
TOTAL	11612	16104	10112	13581	12139	13894	24100	54432	87550	65980	42140	18510
MEAN	375	537	326	438	434	448	803	1756	2918	2128	1359	617
MAX	561	820	508	539	472	645	1170	3580	5040	2880	1970	970
MIN	287	344	261	352	329	337	452	453	1420	1380	601	337
AC-FT	23030	31940	20060	26940	24080	27560	47800	108000	173700	130900	83580	36710

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1993, BY WATER YEAR (WY)

	MEAN	516	447	332	384	431	505	788	1502	2576	1880	1318	616
MAX	1631	985	718	770	1103	994	1884	4170	4397	3771	3210	1511	
(WY)	1985	1985	1987	1985	1985	1985	1987	1980	1980	1983	1984	1982	
MIN	187	170	197	190	223	219	220	517	638	562	423	200	
(WY)	1979	1979	1979	1979	1979	1979	1978	1977	1977	1977	1977	1977	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1975 - 1993

ANNUAL TOTAL	288722	370154	
ANNUAL MEAN	789	1014	a 943
HIGHEST ANNUAL MEAN			1626 1985
LOWEST ANNUAL MEAN			411 1977
HIGHEST DAILY MEAN	2630	Aug 25	5040 Jun 20 b 6880 Aug 21 1982
LOWEST DAILY MEAN	261	Dec 17	261 Dec 17 c 90 Nov 19 1978
ANNUAL SEVEN-DAY MINIMUM	273	Dec 14	273 Dec 14 d 118 Nov 16 1978
INSTANTANEOUS PEAK FLOW			5350 Jun 18 d 15400 Jul 30 1978
INSTANTANEOUS PEAK STAGE			6.04 Jun 18 8.93 Jul 30 1978
ANNUAL RUNOFF (AC-FT)	572700	734200	683500
10 PERCENT EXCEEDS	1550	2440	2200
50 PERCENT EXCEEDS	653	539	560
90 PERCENT EXCEEDS	333	337	260

a-Average discharge for 20 years (water years 1940-51, 1966-73), 867 ft³/s; 628100 acre-ft/yr, prior to completion of Pueblo Reservoir.

b-Maximum daily discharge for period of record, 12100 ft³/s, Apr 24, 1942.

c-Minimum daily discharge for period of record, 50 ft³/s, Apr 2, 1940.

d-Maximum discharge and stage for period of record, about 50000 ft³/s, Jun 18, 1965, gage height, 9.77 ft, from rating curve extended above 6700 ft³/s, on basis of records for station near Pueblo and indirect measurements of peak flow on Fountain Creek at Pueblo, Chico Creek near North Avondale, and Arkansas River near North Avondale.

07109500 ARKANSAS RIVER NEAR AVONDALE, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to October 1976, April 1979 to September 1980, December 1985 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1979 to September 1980, December 1985 to current year.

WATER TEMPERATURE: July 1979 to September 1980, December 1985 to current year.

pH: July 1979 to September 1980, August 1988 to current year.

DISSOLVED OXYGEN: July 1979 to September 1980, August 1988 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Records for daily specific conductance, pH, water temperature, and dissolved oxygen for the 1992 water year are good, those for the 1993 water year are fair. Daily data that are not published are either missing or of unacceptable quality. Water-quality data prior to December 1985 are published in other reports. Daily maximum and minimum specific conductance, daily mean pH, daily mean water temperature, and daily mean dissolved oxygen data available in the district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,380 microsiemens, Jan. 24, 25, 1980; minimum, 246 microsiemens, June 16, 1980.

WATER TEMPERATURE: Maximum, 31.5°C, Aug. 6, 1980; minimum, 0.0°C, many days during winters.

pH: Maximum, 9.1 units, Dec. 3, 1989; minimum, 7.2 units, May 17 and July 14, 1992.

DISSOLVED OXYGEN: Maximum, 13.0 mg/L, Jan. 21, Dec. 15, 1990, Dec. 13, 1992, and Jan. 6, 1993; minimum, 2.6 mg/L, July 14, 1992.

EXTREMES FOR 1992 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,230 microsiemens, Jan. 4-5; minimum, 417 microsiemens, May 30.

WATER TEMPERATURE: Maximum, 26.7°C, Aug. 9; minimum, 0.0°C, many days during winter.

pH: Maximum, 9.0 units, Oct. 24; minimum, 7.2 units, May 17 and July 14.

DISSOLVED OXYGEN: Maximum, 12.3 mg/L, Oct. 23, 31; minimum, 2.6 mg/L, July 14.

EXTREMES FOR 1993 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1230 microsiemens, Dec. 6-7; minimum, 312 microsiemens, July 5.

WATER TEMPERATURE: Maximum, 24.8°C, Aug. 25; minimum, 0.0°C, many days during winter.

pH: Maximum, 8.8 units, several days; minimum, 7.6 units, July 20, Aug. 27, and Sept. 6.

DISSOLVED OXYGEN: Maximum, 13.0 mg/L, Dec. 13 and Jan. 6; minimum, 5.5 mg/L, Sept. 6, 30.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	966	990	1110	---	976	991	771	730	---	556	579	679
2	964	936	1100	---	980	1000	778	693	---	551	558	644
3	966	924	1110	---	972	970	790	709	683	551	535	644
4	969	926	1100	---	989	806	786	718	677	558	546	663
5	962	899	1110	---	996	713	788	695	683	563	565	686
6	953	888	1130	1100	989	---	796	697	682	545	555	681
7	921	857	1130	1080	974	---	827	665	754	560	539	682
8	925	861	1130	1030	965	---	844	656	697	564	532	618
9	951	868	1110	834	977	879	839	635	685	540	557	611
10	895	863	1130	869	982	951	840	629	673	491	567	630
11	896	864	1110	919	985	844	856	630	652	495	598	608
12	921	867	1100	1030	983	797	832	613	667	471	617	607
13	927	915	1110	1010	974	827	779	660	685	482	624	599
14	922	968	1120	1000	980	952	---	702	669	528	632	686
15	898	1090	1120	996	979	878	---	711	662	505	663	762
16	848	1110	1130	1000	967	878	---	712	644	511	626	637
17	837	1090	1130	996	969	911	---	---	606	525	645	619
18	887	1080	1130	996	961	898	---	689	591	580	634	628
19	917	1040	1140	991	972	876	---	666	580	598	606	625
20	918	1090	1130	997	935	868	---	646	572	587	607	648
21	964	1110	---	995	944	855	---	---	615	---	616	646
22	1010	1080	---	993	977	848	---	---	590	---	619	776
23	1040	1080	---	988	973	854	---	---	592	---	---	764
24	1020	1100	---	996	950	823	672	---	562	611	623	753
25	1010	1120	---	1000	967	797	676	---	542	586	596	778
26	1000	1130	---	997	979	788	677	---	536	615	566	776
27	1000	1130	---	990	988	772	701	---	541	598	619	775
28	1040	1120	1140	997	1030	778	727	642	516	558	616	783
29	1050	1110	---	1010	1040	783	730	668	532	543	649	808
30	1040	1100	---	1010	---	807	714	533	551	553	694	826
31	1020	---	---	976	---	787	---	570	---	548	695	---
MEAN	956	1010	---	---	978	---	---	---	---	---	---	688

07109500 ARKANSAS RIVER NEAR AVONDALE, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.7	8.0	8.5	8.1	8.3	8.1	---	---	8.4	8.0	8.7	8.1
2	8.7	8.0	8.4	8.2	8.3	8.2	8.4	8.0	8.4	8.0	8.7	8.1
3	8.5	8.0	8.4	8.2	8.3	8.2	8.4	8.0	8.4	8.2	8.5	8.1
4	8.3	7.9	8.3	8.2	8.3	8.2	8.4	8.0	8.4	8.0	8.7	8.0
5	8.3	7.9	8.2	8.1	8.4	8.2	8.4	8.0	8.5	8.2	8.4	8.1
6	8.3	7.9	8.3	8.2	8.3	8.2	8.4	7.9	8.5	8.2	8.4	8.3
7	8.2	7.9	8.3	8.2	8.4	8.1	8.3	8.0	8.5	8.1	8.4	8.3
8	8.3	7.8	8.3	8.2	8.5	8.2	8.4	8.0	8.5	8.2	8.4	8.3
9	8.4	7.8	8.3	8.2	8.4	8.2	8.3	8.0	8.6	8.2	8.3	7.9
10	8.3	7.9	8.3	8.2	8.4	8.0	8.3	8.0	8.6	8.2	8.2	8.0
11	8.3	7.8	8.3	8.1	8.4	8.2	8.3	8.0	8.6	8.2	8.3	8.1
12	8.5	7.9	8.3	8.2	8.5	8.2	8.3	8.1	8.7	8.2	8.3	8.1
13	8.5	7.9	8.4	8.2	8.4	8.0	8.3	8.0	8.6	8.3	8.2	8.1
14	8.5	7.9	8.4	8.2	8.4	8.2	8.3	8.0	8.7	8.2	8.2	8.0
15	8.5	8.0	8.3	8.2	8.4	8.1	8.3	8.0	8.7	8.3	8.1	8.0
16	8.5	7.9	8.3	8.2	8.5	8.2	8.3	8.0	8.6	8.3	8.1	7.9
17	8.5	8.0	8.2	8.0	8.4	8.2	8.3	8.1	8.7	8.3	8.1	7.8
18	8.6	7.9	8.2	8.1	8.4	8.2	8.3	8.1	8.7	8.2	8.2	7.9
19	8.7	8.1	8.2	8.0	8.5	8.2	8.3	8.0	8.6	8.1	8.2	7.9
20	8.7	8.1	8.3	8.1	8.4	8.2	8.3	8.0	8.7	8.2	8.2	7.9
21	8.8	8.1	8.3	8.2	8.5	8.2	8.3	8.0	8.7	8.2	8.3	8.0
22	8.8	8.0	8.3	8.2	8.4	8.2	8.3	8.0	8.6	8.1	8.3	8.1
23	8.9	8.0	8.3	8.2	8.5	8.2	8.3	8.0	8.7	8.1	8.4	8.1
24	9.0	8.0	8.3	8.1	8.4	8.0	8.4	8.0	8.7	8.2	8.4	8.1
25	8.9	8.1	8.3	8.1	8.5	8.0	8.4	8.1	8.5	8.1	8.5	8.2
26	8.9	8.1	8.3	8.2	8.5	8.2	8.4	8.0	8.6	8.0	8.6	8.3
27	8.9	8.1	8.3	8.2	8.5	8.1	8.4	8.1	8.7	8.2	8.5	8.2
28	8.6	8.1	8.4	8.2	8.5	8.2	8.4	8.0	8.7	8.1	8.5	8.2
29	8.6	8.1	8.4	8.2	8.4	8.2	8.4	7.9	8.7	8.1	8.5	8.1
30	8.5	8.1	8.4	8.2	8.4	8.2	8.4	8.0	---	---	8.5	8.2
31	8.5	8.1	---	---	8.4	8.2	8.4	8.0	---	---	8.4	8.0
MONTH	9.0	7.8	8.5	8.0	8.5	8.0	---	---	8.7	8.0	8.7	7.8

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.4	8.2	8.3	8.3	8.1	7.8	8.6	8.0	8.4	8.2	8.1	8.0
2	8.5	8.2	8.3	8.3	8.3	7.9	8.5	8.0	8.3	8.1	8.3	8.0
3	8.5	8.2	8.3	8.1	8.4	8.1	8.5	8.0	8.2	7.8	8.3	8.1
4	8.4	8.1	8.3	8.0	8.4	8.1	8.5	7.9	7.9	7.6	8.2	8.1
5	8.4	8.1	8.2	7.8	8.3	8.2	8.5	7.9	7.6	7.4	8.2	8.1
6	8.4	8.1	8.3	8.0	8.4	8.2	8.5	7.8	7.6	7.4	8.2	8.1
7	8.4	8.0	8.5	7.8	8.3	8.2	8.4	7.7	7.7	7.5	8.2	8.1
8	8.4	7.9	---	---	8.3	8.2	8.5	7.7	8.1	7.5	8.2	8.0
9	8.4	7.9	---	---	8.2	8.2	8.4	7.7	8.2	7.9	8.3	8.0
10	8.5	7.9	---	---	8.2	8.2	8.1	7.6	8.4	8.0	8.3	8.0
11	8.4	---	---	---	8.4	8.2	7.9	7.5	8.2	7.9	8.7	8.0
12	8.1	---	---	---	8.2	8.1	8.2	7.5	8.1	8.0	8.8	8.2
13	8.2	---	---	---	8.2	8.2	8.1	7.6	8.1	7.9	8.8	8.3
14	8.3	---	8.3	8.0	8.2	8.2	8.0	7.2	8.1	7.9	8.6	8.3
15	---	---	8.3	7.8	8.4	8.2	8.1	7.4	8.1	7.9	8.6	8.2
16	8.4	---	8.3	7.4	8.3	8.2	8.0	7.3	8.2	8.0	8.6	8.2
17	8.3	8.1	8.2	7.2	8.3	8.2	8.3	7.4	8.3	8.0	8.7	8.2
18	8.5	8.3	8.8	7.6	8.2	8.2	8.2	7.7	8.2	7.9	8.6	8.2
19	8.5	8.4	8.7	8.2	8.8	8.1	8.1	7.4	8.1	7.9	8.6	8.2
20	---	---	8.6	8.2	8.7	8.4	8.1	7.4	8.0	7.9	8.5	8.0
21	---	---	8.6	8.2	8.5	8.1	---	---	8.0	7.9	8.5	8.2
22	---	---	8.5	8.2	8.5	7.8	---	---	7.9	7.8	8.4	8.1
23	---	---	8.3	8.1	8.2	7.4	---	---	---	---	8.5	8.2
24	8.5	8.2	8.4	8.2	8.2	7.6	8.2	7.9	8.1	7.8	8.6	8.2
25	8.5	8.3	8.5	8.2	8.4	7.6	8.4	8.1	8.2	7.9	8.5	8.2
26	8.5	8.3	8.3	8.1	8.4	7.9	8.3	8.0	8.1	8.0	8.6	8.2
27	8.4	8.3	8.3	8.1	8.2	7.9	8.3	8.1	8.1	7.9	8.7	8.2
28	8.3	8.3	8.2	8.0	8.3	7.7	8.4	8.1	8.1	7.9	8.7	8.2
29	8.3	8.3	8.2	8.0	8.3	7.8	8.5	8.2	8.0	7.8	8.7	8.1
30	8.3	8.1	8.2	8.0	8.4	8.1	8.4	7.9	8.0	7.9	8.8	8.1
31	---	---	8.6	8.0	---	---	8.5	8.2	8.0	7.9	---	---
MONTH	---	---	---	---	8.8	7.4	---	---	---	---	8.8	8.0

07109500 ARKANSAS RIVER NEAR AVONDALE, CO---Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.6	14.5	7.4	3.6	3.3	.2	---	---	6.0	2.4	10.4	5.2
2	21.7	14.9	5.4	2.4	1.1	.0	4.4	.5	6.3	2.8	12.1	6.1
3	21.6	14.4	4.5	.2	2.4	.0	3.8	.6	5.4	3.6	9.6	6.3
4	17.2	13.2	7.3	2.6	4.0	.1	5.3	2.1	6.0	2.9	9.9	7.4
5	17.3	10.7	9.6	5.7	5.3	1.5	5.2	1.7	5.7	.9	9.0	6.1
6	17.7	10.6	9.8	6.3	6.3	2.3	5.5	2.2	6.3	2.2	11.1	5.8
7	18.9	11.7	9.6	6.3	6.8	2.7	4.6	2.2	5.6	1.7	11.0	6.2
8	19.5	12.8	9.9	5.6	6.9	3.5	3.9	.9	4.2	1.8	10.5	6.9
9	19.8	14.1	11.4	6.8	6.0	2.8	3.4	.4	6.1	1.2	7.1	4.5
10	19.9	13.5	10.4	8.9	6.2	2.4	3.9	.2	6.3	2.3	8.4	3.0
11	19.7	13.5	9.5	7.6	4.5	2.6	4.2	1.1	7.3	4.1	10.0	4.9
12	19.6	13.1	10.0	5.5	5.0	1.8	3.9	1.9	8.3	4.3	10.4	5.7
13	18.7	13.9	9.7	5.7	4.5	.9	3.5	.4	5.7	3.1	12.0	5.8
14	17.4	11.9	9.7	6.6	3.5	.3	2.8	.0	7.9	2.7	12.5	6.4
15	18.0	11.9	8.0	7.1	4.1	.2	1.1	.0	7.2	2.8	12.3	6.9
16	18.7	12.1	7.0	4.4	5.9	.4	2.8	.0	5.1	2.7	12.3	7.1
17	18.7	13.0	7.3	3.8	4.2	2.3	2.5	.8	6.9	2.6	11.5	7.1
18	16.0	12.2	7.5	4.6	3.8	1.3	3.7	.7	6.4	1.4	10.7	7.1
19	15.9	10.6	7.7	5.2	4.9	3.3	3.1	.0	6.5	1.1	11.6	6.8
20	16.0	10.9	6.5	3.0	4.7	3.2	4.3	.1	7.8	2.8	11.9	5.7
21	16.5	10.8	9.0	5.1	5.0	1.8	4.5	.6	8.7	4.3	11.5	6.1
22	17.1	11.1	6.6	3.9	4.2	3.3	4.2	.6	7.7	3.7	8.3	5.7
23	16.4	10.9	5.2	2.4	5.0	1.9	4.0	.0	8.8	5.1	11.6	4.8
24	14.8	11.0	4.6	.6	4.8	1.3	5.8	.8	8.2	2.6	10.6	6.2
25	14.0	9.3	6.4	2.5	5.0	1.2	5.6	1.6	6.5	4.7	12.4	6.6
26	14.3	9.0	7.9	3.4	5.0	1.4	5.5	1.4	7.0	2.7	12.3	6.9
27	15.0	9.7	7.2	3.8	4.4	1.1	5.1	1.4	9.9	4.8	11.0	7.0
28	12.2	6.6	6.6	4.2	3.1	.6	5.6	1.1	10.9	4.8	10.1	8.5
29	7.8	4.8	5.8	3.3	4.3	1.2	6.3	1.8	11.3	4.9	12.6	7.1
30	5.7	3.3	3.2	1.0	4.0	.8	6.3	1.8	---	---	13.3	6.9
31	6.4	3.4	---	---	4.1	2.3	6.6	2.1	---	---	10.6	7.4
MONTH	21.7	3.3	11.4	.2	6.9	.0	---	---	11.3	.9	13.3	3.0

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.5	5.9	18.5	10.8	14.3	12.8	22.8	17.2	24.5	18.4	22.7	17.3
2	10.6	6.8	16.5	10.9	19.4	12.6	22.3	17.1	25.6	18.7	22.9	17.3
3	14.1	6.4	16.7	10.6	18.4	13.7	23.1	17.1	23.7	19.1	23.1	17.2
4	13.8	8.0	18.0	10.6	19.8	13.8	23.1	17.3	24.9	19.2	21.2	17.9
5	13.7	7.7	17.3	10.3	19.8	14.8	23.9	17.1	24.7	19.1	22.4	16.4
6	14.4	8.0	17.9	10.5	18.3	14.5	25.3	18.1	23.5	20.0	23.0	16.6
7	15.0	8.9	16.9	11.1	19.2	13.8	23.4	18.0	25.8	19.1	22.5	16.7
8	16.0	8.9	16.8	11.2	19.0	14.5	23.9	18.0	26.1	19.9	23.0	17.5
9	16.6	10.0	16.2	10.7	17.8	14.8	21.9	18.2	26.7	19.6	22.1	17.3
10	16.1	10.1	13.4	11.3	20.8	14.3	21.4	17.8	24.0	20.6	22.0	16.6
11	16.0	10.5	17.6	9.8	20.2	15.3	23.2	18.0	25.1	19.2	22.7	16.5
12	13.1	10.2	15.1	10.8	21.7	15.0	22.0	17.9	23.4	19.2	24.0	17.5
13	17.0	9.4	19.4	11.6	22.1	16.1	22.5	18.1	22.1	19.7	22.8	17.7
14	17.0	---	20.0	12.5	21.5	15.6	23.8	16.7	24.6	19.5	23.0	17.5
15	16.0	---	19.9	12.7	21.4	15.1	23.6	17.9	25.9	19.3	23.9	18.3
16	14.9	11.2	20.0	12.6	20.4	15.6	22.8	18.0	23.7	19.6	23.5	17.6
17	14.4	10.0	---	12.5	21.4	15.3	23.1	18.2	24.0	19.7	23.1	17.7
18	13.1	9.1	20.2	11.9	22.2	15.6	23.6	17.8	24.5	19.1	20.6	16.5
19	10.2	7.6	19.6	12.4	21.7	16.7	24.9	17.1	25.2	19.0	21.7	17.0
20	13.7	7.6	18.4	12.3	20.7	16.8	23.8	17.9	25.9	19.3	21.7	16.6
21	14.6	7.8	---	12.2	20.7	16.2	---	---	25.9	19.9	19.3	16.4
22	14.1	8.3	---	12.0	22.9	16.1	---	---	---	19.6	21.8	15.4
23	14.7	8.9	---	12.6	23.2	17.2	---	---	---	---	22.4	15.9
24	15.0	8.8	---	12.8	21.8	17.2	26.4	18.9	20.5	17.9	22.9	16.2
25	15.0	9.0	---	12.8	21.0	16.7	22.9	19.7	20.7	16.6	19.7	16.0
26	15.5	8.7	18.0	12.7	21.9	16.9	25.0	19.4	21.7	18.7	20.2	13.7
27	16.1	9.2	15.3	12.3	19.6	16.6	25.9	19.1	21.7	16.2	20.6	13.6
28	17.7	10.2	14.9	11.7	20.6	16.6	25.5	19.1	22.5	17.4	19.8	14.4
29	18.1	10.5	17.5	12.2	22.3	16.8	24.1	19.0	21.9	17.2	20.9	13.6
30	17.8	10.4	16.4	13.0	23.2	---	25.0	18.4	21.6	17.4	21.3	14.4
31	---	---	17.0	13.3	---	---	24.2	19.2	22.7	17.1	---	---
MONTH	18.1	---	---	9.8	23.2	---	---	---	---	---	24.0	13.6

07109500 ARKANSAS RIVER NEAR AVONDALE, CO--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	10.2	5.7	11.4	9.4	11.5	10.5	---	---	10.9	8.5	11.4	7.5
2	9.3	5.9	11.2	9.6	11.4	9.3	11.8	9.6	11.0	8.3	11.5	7.6
3	9.3	5.9	11.9	10.0	11.2	8.9	11.6	9.4	10.7	8.4	11.0	7.7
4	9.4	6.0	11.0	9.0	11.1	9.5	11.3	9.0	10.8	9.0	11.2	7.4
5	9.5	6.6	9.7	8.5	10.7	9.2	11.5	9.1	11.0	9.1	9.1	6.7
6	9.5	6.7	9.6	8.5	10.5	8.9	11.1	8.7	11.3	8.8	9.5	7.9
7	9.2	6.3	10.0	8.9	10.4	8.8	10.4	8.7	11.2	8.7	9.6	7.8
8	8.9	6.1	10.0	8.4	10.8	9.0	11.3	9.5	11.2	8.9	9.8	8.2
9	9.1	6.2	9.6	8.2	11.0	9.4	11.6	9.7	11.4	8.7	9.8	8.9
10	9.2	6.6	9.6	8.3	10.6	8.9	11.5	9.3	11.3	8.6	10.8	8.8
11	9.1	6.5	9.6	8.7	10.4	8.9	11.1	8.9	10.9	8.5	10.3	8.5
12	9.1	6.4	10.3	8.5	10.9	9.0	11.1	8.9	11.0	8.4	10.2	8.7
13	9.3	6.5	9.8	8.5	10.6	9.1	11.5	9.8	11.1	8.5	10.1	8.2
14	9.6	6.9	10.0	8.8	11.1	9.4	11.5	9.8	10.9	8.2	10.0	7.9
15	9.7	6.9	9.6	8.6	11.2	9.8	11.6	10.1	11.0	8.2	10.1	8.0
16	9.7	6.7	10.0	8.8	11.1	8.9	11.5	9.6	10.9	8.4	9.8	7.9
17	9.4	6.8	9.9	8.3	10.6	8.9	10.8	9.5	11.2	8.5	9.7	8.0
18	9.9	6.8	9.4	8.3	10.6	9.0	10.8	9.3	11.3	8.5	9.8	8.2
19	10.3	7.3	9.4	8.5	11.5	9.0	11.1	9.3	11.6	8.6	10.1	8.3
20	10.7	7.3	10.3	8.9	11.4	9.7	11.0	9.0	11.3	8.3	10.2	8.0
21	11.0	7.0	9.5	8.6	11.8	9.5	10.9	8.8	11.0	8.0	10.2	8.1
22	11.3	6.9	10.1	8.7	10.8	9.5	10.8	8.9	11.0	7.9	10.5	8.5
23	12.3	6.8	10.7	9.5	11.7	9.7	11.2	9.1	11.1	8.1	10.4	8.0
24	12.1	7.2	11.0	9.8	11.3	9.6	10.9	8.5	11.6	8.3	10.1	8.1
25	12.0	7.1	10.4	9.2	11.7	9.6	11.0	8.7	11.0	8.4	10.4	8.0
26	12.0	7.1	9.9	8.9	11.8	9.7	11.1	8.8	11.3	8.6	10.4	8.0
27	12.0	7.1	10.1	8.9	11.9	9.8	11.4	9.1	11.4	7.8	10.3	7.8
28	11.2	7.2	10.1	8.9	11.8	9.7	11.2	8.5	11.2	7.7	9.7	7.9
29	12.0	8.8	10.5	9.0	11.5	9.5	11.2	8.5	11.2	7.3	10.0	8.0
30	12.1	9.4	11.2	9.8	11.6	9.6	11.4	9.0	---	---	10.2	7.7
31	12.3	9.6	---	---	11.2	9.4	11.0	8.5	---	---	9.7	7.7
MONTH	12.3	5.7	11.9	8.2	11.9	8.8	---	---	11.6	7.3	11.5	6.7

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.3	8.1	8.9	7.0	8.0	7.1	7.6	6.4	8.6	6.1	8.1	6.9
2	10.2	8.3	9.2	7.1	7.8	6.8	7.8	6.8	8.6	6.3	8.4	7.1
3	10.1	7.4	9.8	7.2	8.0	7.1	7.7	6.5	8.4	5.9	8.6	6.9
4	9.6	7.4	9.8	7.1	8.4	6.6	7.9	6.5	8.2	5.5	8.4	7.0
5	10.0	7.5	9.5	7.0	7.4	6.2	8.0	6.4	8.2	5.8	8.6	6.9
6	10.1	7.2	9.7	7.4	7.7	6.5	7.7	5.7	8.3	6.1	8.8	6.7
7	10.1	7.2	9.6	7.5	7.7	5.9	7.1	5.7	8.7	5.7	8.6	6.9
8	10.1	7.2	9.2	7.5	7.9	7.0	7.6	5.7	8.5	5.6	8.6	6.6
9	10.1	7.1	9.1	7.5	7.9	7.1	7.9	6.2	8.6	5.8	8.5	6.8
10	9.8	6.7	9.2	7.7	8.1	7.1	7.3	6.2	8.5	5.8	8.9	6.8
11	9.6	6.7	9.4	7.3	8.2	6.4	6.7	5.9	8.2	4.9	9.0	6.4
12	9.1	7.0	9.1	7.4	8.2	6.6	7.2	6.0	7.9	6.0	9.2	6.3
13	9.0	6.5	9.1	6.8	7.8	6.6	7.3	5.2	7.7	6.0	9.2	6.3
14	8.4	6.5	9.1	6.8	8.1	6.8	6.7	2.6	7.3	6.0	8.3	6.1
15	8.6	6.9	9.3	6.7	8.3	6.8	7.2	5.9	7.7	5.9	8.8	5.9
16	8.7	7.1	9.8	6.9	8.5	6.9	7.4	6.0	7.6	6.0	8.4	5.9
17	8.6	7.1	10.2	6.9	8.7	7.0	7.4	6.0	7.9	6.2	9.0	6.4
18	8.9	7.5	10.0	6.9	8.8	6.6	7.2	6.1	7.2	5.3	9.1	6.7
19	9.4	8.6	9.6	6.9	8.5	5.9	7.4	6.0	7.1	6.0	8.8	5.8
20	9.5	8.1	9.0	6.9	8.5	6.2	7.5	6.1	7.4	5.7	8.4	5.4
21	9.4	7.8	9.0	7.0	6.5	3.7	---	---	7.6	5.8	8.3	6.7
22	9.3	8.0	8.4	7.2	7.5	5.9	---	---	7.5	5.9	8.1	6.7
23	9.4	8.2	8.1	7.3	7.7	6.3	---	---	---	---	8.6	6.7
24	9.5	7.6	8.0	7.3	7.7	6.4	7.3	5.4	7.7	6.5	8.8	6.1
25	9.4	7.7	8.1	7.5	7.5	6.4	7.4	5.4	7.9	6.4	8.5	6.4
26	9.5	7.6	8.2	7.0	7.1	5.4	7.3	5.4	7.6	6.9	9.3	6.8
27	9.1	7.5	8.1	7.1	6.7	3.7	7.2	5.4	7.7	5.7	9.4	6.6
28	9.0	7.4	8.0	7.3	7.1	6.3	7.1	5.3	7.4	5.6	9.9	6.4
29	9.1	6.8	7.9	6.9	7.1	6.4	7.2	5.6	7.3	6.1	9.8	6.2
30	9.4	7.1	7.8	7.0	7.5	6.4	7.4	5.4	7.7	6.3	9.8	6.0
31	---	---	7.9	7.2	---	---	7.5	5.3	8.1	6.7	---	---
MONTH	10.3	6.5	10.2	6.7	8.8	3.7	---	---	---	---	9.9	5.4

07109500 ARKANSAS RIVER NEAR AVONDALE, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	939	867	1120	905	990	997	868	656	499	333	390	593
2	921	890	1120	909	977	1030	876	667	502	352	465	545
3	---	882	1130	---	961	1070	863	779	472	351	429	546
4	---	852	1130	---	952	1070	856	727	480	341	421	562
5	---	870	1140	---	950	1020	867	708	482	324	---	590
6	---	883	1150	871	958	1050	881	696	506	329	---	643
7	---	843	1170	896	955	1040	770	659	505	335	---	609
8	---	839	1190	903	946	1050	755	631	511	355	---	644
9	897	832	1180	---	952	1070	760	668	518	399	---	619
10	908	808	1160	---	949	1060	746	615	508	351	---	619
11	904	807	1160	---	965	1060	732	617	498	368	---	644
12	922	813	1140	913	986	1010	660	611	492	---	451	666
13	933	792	1110	887	979	1020	629	607	484	---	440	666
14	946	816	1110	949	970	1020	610	618	463	---	430	659
15	952	840	---	1030	963	1020	621	608	455	---	425	632
16	960	974	---	1040	901	879	639	602	395	355	426	638
17	943	975	1140	1030	885	807	644	594	384	366	429	648
18	964	983	1160	1040	900	831	652	543	477	369	443	680
19	979	986	1130	1030	961	839	659	531	429	364	475	692
20	928	967	1110	1050	983	876	659	523	410	372	490	683
21	928	1020	1120	1070	969	870	659	524	402	386	478	718
22	949	1060	---	1070	969	867	655	524	408	387	488	777
23	931	1090	1120	1060	969	854	658	525	400	366	490	832
24	897	---	1150	1040	970	877	647	525	395	358	492	818
25	903	1120	1150	1040	1010	865	664	532	393	356	492	821
26	908	1110	1120	1040	1060	921	666	535	391	357	494	811
27	909	1100	---	1040	1060	963	644	522	377	356	549	783
28	827	1100	---	1010	1050	945	684	529	382	372	528	787
29	848	1110	936	1000	---	938	704	524	367	384	633	763
30	855	1100	929	994	---	891	683	524	343	410	---	795
31	850	---	918	989	---	885	---	516	---	396	---	---
MEAN	---	---	---	---	969	958	714	595	444	---	---	683

07109500 ARKANSAS RIVER NEAR AVONDALE, CO--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.7	8.1	8.5	8.1	8.4	8.2	8.5	8.3	8.5	8.3	8.3	8.0
2	8.8	8.1	8.4	8.2	8.4	8.3	8.5	8.3	8.5	8.3	8.3	8.0
3	---	---	8.4	8.2	8.4	8.3	---	---	8.5	8.3	8.4	8.1
4	---	---	8.4	8.3	8.5	8.3	---	---	8.6	8.3	8.2	7.9
5	---	---	8.4	8.2	8.4	8.3	---	---	8.5	8.3	8.5	7.9
6	---	---	8.4	8.2	8.4	8.3	8.5	8.3	8.5	8.3	8.6	8.2
7	---	---	8.4	8.2	8.4	8.3	8.6	8.3	8.6	8.3	8.7	8.2
8	---	---	8.4	8.2	8.4	8.3	8.6	8.5	8.6	8.3	8.7	8.3
9	8.7	8.1	8.4	8.2	8.4	8.2	---	---	8.6	8.3	8.6	8.2
10	8.7	8.1	8.5	8.2	8.5	8.2	---	---	8.6	8.3	8.6	8.2
11	8.8	8.1	8.5	8.3	8.5	8.2	8.5	8.3	8.5	8.3	8.5	8.2
12	8.7	8.0	8.5	8.1	8.5	8.2	8.5	8.2	8.4	8.2	8.4	8.3
13	8.7	8.0	8.5	8.3	8.5	8.3	8.5	8.2	8.4	8.2	8.5	8.2
14	8.7	7.9	8.5	8.3	---	---	8.4	8.2	8.3	8.1	8.5	8.2
15	8.6	7.9	8.5	8.3	---	---	8.5	8.2	8.3	8.1	8.5	8.2
16	8.7	7.9	8.4	8.2	---	---	8.4	8.3	---	---	8.3	8.1
17	8.7	8.0	8.4	8.2	8.4	8.1	8.4	8.3	---	---	8.3	8.2
18	8.8	8.0	8.4	8.2	8.4	8.1	8.4	8.3	---	---	8.3	8.0
19	8.7	8.1	8.5	8.3	8.4	8.1	8.4	8.3	8.3	7.9	8.4	8.2
20	8.7	8.1	8.4	8.3	8.4	8.1	8.6	8.2	8.4	8.2	8.5	8.2
21	8.6	8.2	8.5	8.0	8.4	8.1	8.6	8.4	8.5	8.2	8.5	8.2
22	8.7	8.2	8.4	8.3	---	---	8.5	8.3	8.5	8.3	8.6	8.2
23	8.7	8.2	---	---	---	---	8.5	8.3	8.5	8.3	8.6	8.2
24	8.7	8.2	---	---	8.4	8.1	8.5	8.4	8.6	8.3	8.6	8.1
25	8.8	8.2	8.4	8.3	8.4	8.2	8.5	8.3	8.5	8.3	8.7	8.1
26	8.8	8.2	8.4	8.3	8.4	8.1	8.4	8.2	8.5	8.2	8.5	8.0
27	8.8	8.2	8.4	8.3	---	---	8.5	8.2	8.5	8.1	8.6	8.0
28	8.6	8.2	8.4	8.3	---	---	8.4	8.2	8.5	8.1	8.7	8.1
29	8.6	8.3	8.4	8.3	---	---	8.4	8.3	---	---	8.7	8.1
30	8.7	8.3	8.4	8.3	8.4	8.2	8.4	8.3	---	---	8.3	8.0
31	8.6	8.1	---	---	8.5	8.3	8.5	8.3	---	---	8.2	8.0
MONTH	---	---	---	---	---	---	---	---	---	---	8.7	7.9
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	8.4	8.1	8.4	8.1	8.2	8.0	8.2	7.9	8.4	7.9	8.0	7.7
2	8.4	8.1	8.5	8.1	8.5	8.0	8.1	7.9	8.1	7.8	7.9	7.7
3	8.4	8.1	8.4	8.1	8.4	8.2	8.1	7.9	8.0	7.8	8.0	7.7
4	8.5	8.2	8.4	8.1	8.4	8.2	8.1	8.0	8.1	7.9	8.0	7.7
5	8.5	8.2	8.5	8.1	8.4	8.2	8.2	7.9	---	---	8.0	7.7
6	8.4	8.0	8.5	8.2	8.4	8.2	8.1	7.9	---	---	8.0	7.6
7	8.3	8.2	8.4	8.1	8.4	8.2	8.1	7.9	---	---	7.9	7.7
8	8.3	8.1	8.4	8.1	8.4	8.2	8.5	7.9	---	---	8.1	7.7
9	8.3	8.1	8.5	8.2	8.4	8.1	8.5	8.3	---	---	8.2	7.9
10	8.3	8.1	8.5	8.2	8.5	8.2	8.6	8.3	---	---	8.1	7.9
11	8.4	8.1	8.5	8.2	8.4	8.2	8.5	8.3	---	---	8.1	7.8
12	8.2	8.1	8.6	8.1	8.4	8.1	---	---	8.1	7.8	8.2	7.9
13	8.2	8.1	8.6	8.3	8.5	8.2	---	---	8.1	7.8	8.1	7.9
14	8.2	8.0	8.5	8.1	8.5	8.1	---	---	8.3	7.9	8.1	7.7
15	8.2	8.0	8.5	8.1	8.4	8.1	---	---	8.4	7.9	8.2	7.9
16	8.2	8.0	8.5	7.9	8.2	8.1	8.2	8.0	8.3	7.9	8.2	7.8
17	8.2	8.0	8.3	8.0	8.1	8.0	8.1	7.9	8.3	7.8	8.2	7.8
18	8.2	8.0	8.2	8.0	8.1	7.9	8.2	7.9	8.2	7.8	8.2	7.8
19	8.6	8.0	8.2	8.1	8.1	8.0	8.2	7.9	8.1	7.7	8.2	7.8
20	8.6	8.3	8.3	8.1	8.1	8.0	8.1	7.6	8.1	7.8	8.3	7.8
21	8.6	8.3	8.3	8.0	8.1	8.0	8.1	7.9	8.1	7.8	8.3	7.8
22	8.6	8.0	8.3	8.0	8.1	8.0	8.1	7.9	8.1	7.8	8.2	7.8
23	8.6	8.1	8.3	8.1	8.2	8.1	8.1	7.9	8.2	7.7	8.1	7.8
24	8.5	8.2	8.3	8.0	8.1	8.0	8.2	7.9	8.3	7.8	8.3	7.8
25	8.6	8.1	8.3	8.0	8.1	8.0	8.2	7.9	8.3	7.8	8.4	7.8
26	8.6	8.2	8.3	8.0	8.1	8.0	8.2	7.9	8.1	7.7	8.5	7.8
27	8.5	8.0	8.3	7.9	8.2	8.0	8.3	7.9	8.0	7.6	8.5	7.8
28	8.4	8.1	8.3	7.9	8.1	7.9	8.3	7.8	8.0	7.7	8.6	7.8
29	8.5	8.2	8.1	7.9	8.1	7.9	8.3	7.8	8.0	7.7	8.6	7.8
30	8.5	8.1	8.1	8.0	8.1	8.0	8.3	7.9	7.9	7.7	8.6	7.7
31	---	---	8.1	8.0	---	---	8.4	7.9	8.0	7.7	---	---
MONTH	8.6	8.0	8.6	7.9	8.5	7.9	---	---	---	---	8.6	7.6

07109500 ARKANSAS RIVER NEAR AVONDALE, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.7	13.7	13.0	9.2	5.4	1.7	4.1	1.9	6.1	2.9	6.9	4.4
2	21.3	13.7	10.4	8.4	4.6	1.6	4.6	1.9	6.9	2.5	9.5	3.1
3	---	---	8.9	6.9	3.2	1.7	---	---	6.7	3.9	10.9	5.0
4	---	---	9.2	5.8	2.8	1.3	---	---	5.7	3.5	10.1	4.3
5	---	---	8.1	5.7	1.8	.0	---	---	6.4	1.8	10.1	3.4
6	---	---	9.7	6.3	2.8	.0	1.6	.0	6.8	1.9	9.3	4.7
7	---	---	10.0	5.9	2.7	.0	2.2	.0	6.4	3.0	11.7	4.5
8	---	---	10.3	6.4	3.6	.1	---	---	5.2	3.3	11.6	5.6
9	16.3	10.6	10.1	6.6	5.3	.7	---	---	5.9	3.4	12.0	5.8
10	16.7	10.0	9.1	7.1	5.4	2.4	---	---	5.6	2.8	9.4	6.4
11	18.0	10.8	8.9	6.7	5.7	1.6	.3	.0	5.9	2.1	6.9	3.9
12	17.9	11.6	7.9	5.7	4.6	2.7	1.1	.0	6.8	1.7	5.2	1.9
13	18.2	11.7	9.1	5.4	2.8	1.1	.0	.0	6.1	2.2	7.6	.9
14	16.1	11.2	9.5	5.8	2.6	.0	1.0	.0	4.3	2.1	9.7	2.7
15	15.7	10.2	10.1	6.1	---	---	3.5	.0	3.4	.0	11.7	6.0
16	13.1	9.7	9.9	6.4	---	---	5.1	.3	.7	.0	10.6	5.6
17	15.5	8.6	9.7	6.7	2.2	.0	2.3	1.2	1.0	.0	7.7	4.5
18	14.8	9.5	8.9	7.6	3.7	.0	2.9	.8	3.5	.0	7.5	4.1
19	15.4	10.3	8.9	7.0	3.2	.3	3.0	.8	8.6	1.9	11.5	4.0
20	16.1	10.6	7.2	3.7	2.3	.0	5.2	1.3	9.4	4.7	10.5	6.1
21	15.9	10.8	6.9	3.6	3.9	.1	7.2	2.8	7.0	3.3	10.3	6.4
22	16.4	11.6	4.8	3.1	---	---	6.6	2.0	6.6	1.6	12.8	6.2
23	16.7	11.8	---	---	3.6	.0	4.6	2.2	6.9	1.8	13.3	6.1
24	16.0	11.5	---	---	4.7	1.0	3.1	.0	8.0	3.0	14.2	6.9
25	16.9	12.0	4.0	.7	4.7	1.4	4.4	.1	6.0	3.8	14.5	7.4
26	15.8	11.9	4.0	.0	3.9	.0	5.7	1.2	7.4	2.6	13.6	8.5
27	15.5	10.5	4.2	.0	---	---	6.1	1.9	8.6	2.6	11.8	9.5
28	13.2	11.2	4.0	.0	---	---	5.2	1.9	8.5	2.9	15.2	7.9
29	11.2	9.9	5.2	1.8	---	---	5.4	3.1	---	---	12.3	9.4
30	13.4	10.1	3.6	.0	4.8	3.0	6.0	1.7	---	---	11.9	8.7
31	12.5	10.3	---	---	3.1	1.7	6.6	2.1	---	---	13.4	8.1
MONTH	---	---	---	---	---	---	---	---	9.4	.0	15.2	.9
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	14.5	8.1	13.1	9.3	18.4	14.1	21.8	16.9	23.4	18.7	23.8	17.9
2	13.0	8.3	16.2	8.5	18.8	14.1	22.1	16.7	24.1	18.9	21.2	18.0
3	10.2	6.9	19.5	10.8	18.9	14.1	21.3	16.3	21.5	18.8	23.1	16.7
4	11.8	5.5	16.7	12.4	17.1	13.9	20.3	16.4	---	---	23.3	17.4
5	14.7	8.3	17.1	12.1	19.6	14.1	21.7	15.6	---	---	21.3	17.8
6	13.1	9.6	18.4	11.9	19.8	14.9	21.7	16.4	---	---	20.3	17.6
7	10.6	6.8	16.2	12.0	19.0	13.9	22.1	16.8	---	---	19.9	16.2
8	13.4	6.6	16.6	10.6	19.4	13.7	23.0	16.6	---	---	22.1	16.3
9	14.3	7.7	15.0	10.8	19.0	14.7	21.8	17.3	---	---	22.0	16.6
10	14.7	9.0	16.3	9.7	20.4	14.4	23.3	17.2	---	---	22.1	17.1
11	15.2	8.5	14.2	9.6	20.8	14.6	20.6	17.2	---	---	22.9	17.0
12	13.6	8.3	16.3	11.0	21.7	14.8	---	---	---	---	23.2	17.0
13	13.4	8.1	18.0	11.0	21.1	14.8	---	---	22.2	19.5	20.5	14.5
14	12.5	7.7	15.6	11.6	20.3	15.8	---	---	22.6	19.0	19.9	13.4
15	13.0	7.1	17.2	10.2	20.5	14.8	---	---	24.4	19.2	20.7	14.4
16	10.9	7.4	15.1	12.2	19.5	15.5	22.5	17.3	24.2	19.0	21.1	15.7
17	14.2	7.6	13.5	11.8	17.8	15.2	20.4	17.5	24.2	19.4	21.2	15.8
18	14.7	8.2	15.4	11.2	16.3	15.6	22.8	18.0	23.5	19.4	19.9	16.5
19	13.4	8.2	14.9	10.8	19.8	15.4	22.1	17.5	22.8	19.7	20.6	14.9
20	14.3	7.6	16.3	11.9	20.3	16.0	21.9	17.9	23.5	19.8	20.8	14.8
21	14.6	7.8	15.4	11.8	19.9	15.8	23.0	17.5	24.0	20.2	21.1	15.1
22	15.0	9.2	16.3	11.6	20.8	16.1	23.0	17.3	22.4	19.4	19.4	15.8
23	16.0	9.7	17.5	11.9	20.7	15.9	22.1	17.7	24.3	18.4	17.3	15.0
24	13.3	9.5	14.9	12.5	19.9	15.4	22.7	17.8	24.6	18.8	20.0	14.7
25	15.8	8.5	15.2	12.2	20.6	14.8	22.8	17.8	24.8	19.1	20.6	14.3
26	16.5	9.3	17.3	12.7	21.4	16.7	23.4	17.9	24.0	18.7	20.3	14.4
27	16.1	10.2	16.7	12.8	21.3	15.4	22.5	17.7	21.2	19.6	20.8	13.6
28	18.3	11.5	16.6	12.8	20.3	16.3	23.5	17.8	22.7	19.2	20.0	14.2
29	18.5	11.1	16.1	12.9	20.8	16.7	23.9	18.0	24.0	19.0	20.3	14.1
30	16.7	11.7	18.0	13.3	21.2	16.5	23.9	18.3	---	---	20.5	14.2
31	---	---	18.8	14.0	---	---	24.7	18.5	---	---	---	---
MONTH	18.5	5.5	19.5	8.5	21.7	13.7	---	---	---	---	23.8	13.4

07109500 ARKANSAS RIVER NEAR AVONDALE, CO--Continued

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER			NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.3	6.1	9.7	7.3	11.0	9.2	12.0	10.4	10.1	7.9	10.3	8.3
2	10.0	6.3	9.7	8.2	11.3	9.4	12.0	10.0	9.9	7.9	10.4	8.0
3	---	---	10.1	8.5	11.3	9.5	---	---	10.0	8.0	10.8	8.0
4	---	---	10.5	8.9	12.0	10.2	---	---	10.0	8.3	11.0	8.0
5	---	---	10.5	8.2	12.0	10.5	---	---	10.1	7.7	11.2	7.9
6	---	---	10.4	8.2	12.2	10.3	13.0	11.1	9.9	7.4	11.2	8.0
7	---	---	10.0	8.4	12.5	10.5	12.5	10.7	9.9	7.6	11.8	7.7
8	---	---	10.3	8.1	12.2	10.0	12.1	10.6	9.8	7.7	11.9	7.7
9	10.4	7.1	10.4	8.3	11.9	9.6	---	---	9.5	7.5	11.9	7.7
10	10.8	7.1	10.4	8.3	12.1	9.8	---	---	9.4	7.5	11.9	7.7
11	11.1	6.8	10.5	8.7	12.0	9.6	---	---	10.1	8.1	11.4	8.4
12	11.5	6.8	11.0	9.1	12.2	9.6	12.3	10.3	10.3	8.0	12.4	9.5
13	11.6	6.5	10.5	8.9	13.0	10.5	12.3	9.6	10.3	8.0	12.4	8.7
14	10.7	6.5	10.5	8.9	---	---	11.9	10.9	10.8	8.3	12.0	8.1
15	11.3	6.6	10.6	8.8	---	---	12.0	10.3	11.2	8.8	11.7	7.9
16	11.0	7.0	10.3	8.5	---	---	11.4	9.8	11.3	9.2	11.0	8.0
17	11.0	6.9	10.1	8.6	12.8	10.6	11.7	10.3	11.5	9.6	10.8	8.4
18	10.8	7.0	10.3	8.7	12.4	10.1	11.8	10.7	11.5	9.1	10.7	8.8
19	10.3	6.6	10.7	9.1	12.4	10.4	12.4	10.5	10.4	7.9	10.7	8.0
20	10.0	6.6	10.4	9.1	12.6	10.3	11.5	9.6	10.2	8.0	10.7	8.0
21	10.1	7.1	11.2	9.2	12.3	10.2	11.3	9.2	11.1	8.3	10.7	8.1
22	10.6	7.2	11.1	9.3	---	---	11.3	9.0	11.4	9.1	11.0	7.7
23	10.9	7.2	---	---	12.8	10.5	11.6	9.1	11.2	8.9	11.0	7.4
24	10.6	7.5	---	---	12.3	9.6	12.0	10.1	11.2	8.3	10.8	7.1
25	10.6	7.5	11.4	10.2	12.3	10.0	11.7	9.6	10.8	8.3	10.9	6.9
26	10.8	7.4	11.7	10.2	12.7	10.2	11.2	9.0	11.2	8.7	11.0	6.8
27	11.0	7.2	11.8	10.0	---	---	11.2	8.9	11.1	8.0	10.5	7.0
28	9.7	7.2	11.6	9.8	---	---	10.4	8.5	11.5	8.2	11.5	6.9
29	10.0	8.0	11.2	9.8	---	---	10.1	8.6	---	---	11.1	6.9
30	10.7	8.0	11.8	10.0	11.7	10.2	10.2	8.0	---	---	9.3	6.7
31	10.2	7.3	---	---	12.3	10.4	10.2	7.9	---	---	9.0	7.2
MONTH	---	---	---	---	---	---	---	---	11.5	7.4	12.4	6.7
APRIL			MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	9.6	7.2	9.3	7.7	8.3	7.5	8.3	6.6	7.6	6.4	7.7	5.8
2	10.0	7.4	9.6	7.6	8.3	7.6	8.4	6.7	7.4	---	7.6	5.7
3	9.8	7.7	8.9	6.8	8.2	7.4	8.1	6.6	7.4	---	7.6	5.9
4	10.6	8.0	8.4	6.8	8.4	7.6	8.1	6.6	7.5	---	7.8	5.8
5	10.3	7.3	8.9	7.0	8.3	7.1	7.9	6.5	---	---	7.9	6.2
6	9.4	7.3	9.0	7.0	8.1	6.6	---	---	---	---	7.3	5.5
7	9.5	7.5	8.9	7.0	8.1	6.7	---	---	---	---	7.4	6.1
8	9.7	7.5	9.2	7.3	8.1	6.8	---	---	---	---	7.7	5.9
9	9.3	7.3	9.4	7.4	8.1	7.1	---	---	---	---	7.7	6.4
10	9.3	7.3	9.6	7.7	8.1	6.8	---	---	---	---	7.8	6.3
11	9.7	7.6	9.2	7.8	8.0	6.5	---	---	---	---	7.8	6.1
12	9.1	7.6	9.0	7.8	8.0	6.5	---	---	---	---	7.7	5.9
13	9.2	7.8	9.1	7.2	8.2	6.5	---	---	7.5	6.3	8.0	6.3
14	9.3	8.0	8.9	7.1	8.1	6.5	---	---	7.7	6.4	8.4	6.8
15	9.6	8.1	8.9	7.1	8.0	6.8	---	---	7.6	6.1	8.3	6.6
16	9.6	8.3	8.9	7.2	8.3	6.8	---	---	7.5	6.1	8.4	6.5
17	9.5	7.8	8.0	6.9	8.0	6.8	---	---	7.7	6.1	8.4	6.6
18	9.2	7.7	7.8	7.0	7.8	6.8	---	---	7.6	5.7	8.4	6.6
19	9.6	7.9	8.2	7.3	7.8	6.8	7.5	6.5	7.2	5.7	8.7	6.6
20	9.8	8.3	8.1	6.8	8.1	6.9	7.5	6.7	7.2	6.2	8.6	6.4
21	10.0	8.0	7.8	6.8	7.9	6.7	7.4	6.3	7.5	6.1	8.6	6.4
22	9.8	7.6	7.7	6.8	8.2	6.9	7.6	6.6	7.8	6.2	8.6	6.3
23	9.5	7.5	7.9	6.9	8.2	7.2	7.5	6.7	7.8	6.0	8.5	6.4
24	9.6	7.5	8.0	6.9	8.6	7.1	7.5	6.6	7.9	6.0	8.7	6.0
25	9.7	7.6	8.1	7.2	8.6	7.5	7.7	6.8	7.8	5.8	8.7	6.0
26	9.6	7.5	8.0	7.1	8.5	7.2	7.8	6.7	7.9	5.6	8.6	6.2
27	9.4	7.2	8.0	7.1	8.5	7.0	7.7	6.7	---	---	8.7	5.9
28	8.8	7.2	8.0	7.1	8.5	7.2	7.8	6.6	---	---	9.2	5.6
29	9.0	7.1	8.1	7.0	8.6	6.9	7.6	6.4	---	---	9.1	5.8
30	8.9	7.2	8.2	7.3	8.6	6.5	7.5	6.4	---	---	9.2	5.5
31	---	---	8.3	7.2	---	---	7.6	6.4	---	---	---	---
MONTH	10.6	7.1	9.6	6.8	8.6	6.5	---	---	---	---	9.2	5.5

07116500 HUERFANO RIVER NEAR BOONE, CO

LOCATION.--Lat 38°13'30", long 104°15'37", in NE¹/4NE¹/4 sec.18, T.21 S., R.61 W., Pueblo County, Hydrologic Unit 11020006, at right upstream end of bridge on U.S. Highway 50, 0.8 mi upstream from mouth, and 1.6 mi south of Boone.

DRAINAGE AREA.--1,875 mi².

PERIOD OF RECORD.--January 1922 to September 1925 (monthly and annual discharge only, published in WSP 1311 as near Nepesta), October 1979 to current year.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gages. Datum of gage is 4,443.75 ft above sea level.

REMARKS.--Estimated daily discharges: Nov. 23 to Feb. 1, Feb. 9 to Mar. 9, and Mar. 14-16. Records poor. Natural flow of stream affected by diversions for irrigation of about 48,000 acres, and return flow from irrigated areas. Several measurements of water temperature and specific conductance were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	29	6.0	17	27	18	29	12	559	.34	.00	1.2
2	.00	14	6.4	15	14	16	16	119	600	.11	133	1.0
3	.00	6.4	6.2	16	11	17	23	177	634	.00	3.2	1.8
4	.00	14	6.6	15	11	16	84	195	506	.00	1.6	3.4
5	.00	15	6.2	14	12	15	63	138	399	.00	1.0	3.3
6	.00	11	7.0	13	13	17	33	64	343	.00	.46	4.1
7	.00	8.4	9.0	14	11	19	20	98	269	.00	.21	2.9
8	.00	1.6	11	15	8.5	17	11	81	207	.00	.00	3.5
9	.00	1.2	13	14	9.7	18	42	145	163	.00	.00	1.7
10	.00	1.4	18	13	12	16	40	202	192	.00	.00	.77
11	.00	3.4	20	14	7.5	17	29	229	181	.00	.00	1.0
12	.00	3.6	19	14	9.1	18	29	234	80	26	.00	.67
13	.00	3.7	17	13	11	19	62	252	46	60	.00	1.3
14	.00	2.7	14	14	8.3	20	135	182	17	29	.00	3.4
15	.00	2.4	12	16	8.7	23	147	98	12	40	.00	3.1
16	.00	1.6	14	15	10	25	178	124	8.8	36	.00	17
17	.00	1.5	15	14	9	24	177	247	7.7	21	.00	14
18	.00	1.5	14	15	14	54	171	303	21	460	7.1	4.0
19	.00	1.1	16	18	16	70	114	446	48	14	45	3.2
20	.00	1.5	14	23	19	63	131	431	20	7.7	33	3.1
21	.00	3.2	15	30	17	59	165	408	31	69	5.6	3.6
22	.00	2.9	15	28	16	62	241	492	37	17	.74	2.9
23	1.7	4.0	14	29	17	63	148	228	9.7	11	.32	3.1
24	2.3	4.8	15	38	15	51	19	173	3.7	5.3	.06	3.9
25	5.5	5.3	14	47	16	31	12	287	2.2	3.1	.03	3.5
26	3.9	5.0	16	50	16	18	13	1230	1.6	2.0	.09	3.1
27	7.0	4.9	17	54	17	28	15	594	1.2	1.1	1.8	3.4
28	8.1	5.4	16	45	19	31	28	322	.88	.83	5.5	2.0
29	8.7	5.6	18	35	---	26	19	721	.54	.47	10	.88
30	9.2	5.0	17	30	---	29	11	835	.33	.04	6.7	.66
31	19	---	19	26	---	30	---	811	---	.00	1.8	---
TOTAL	65.40	171.1	420.4	714	374.8	930	2205	9878	4401.65	803.99	257.21	101.48
MEAN	2.11	5.70	13.6	23.0	13.4	30.0	73.5	319	147	25.9	8.30	3.38
MAX	19	29	20	54	27	70	241	1230	634	460	133	17
MIN	.00	1.1	6.0	13	7.5	15	11	12	.33	.00	.00	.66
AC-FT	130	339	834	1420	743	1840	4370	19590	8730	1590	510	201

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1993, BY WATER YEAR (WY)

	MEAN	8.08	14.2	13.8	21.3	26.1	22.4	24.9	163	110	20.8	36.5	5.22
MAX	46.7	46.0	34.2	65.1	64.5	129	94.3	1113	667	110	254	23.9	
(WY)	1985	1986	1987	1984	1984	1984	1988	1987	1983	1983	1981	1982	
MIN	.000	.000	.000	.000	.13	2.12	.47	.53	.16	.000	.36	.000	
(WY)	1990	1990	1990	1990	1990	1990	1990	1992	1981	1989	1988	1980	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1980 - 1993

ANNUAL TOTAL	3341.95	20323.03	
ANNUAL MEAN	9.13	55.7	39.0
HIGHEST ANNUAL MEAN			153
LOWEST ANNUAL MEAN			5.09
HIGHEST DAILY MEAN	331	Aug 31	2900
LOWEST DAILY MEAN	a.00	May 21	a.00
ANNUAL SEVEN-DAY MINIMUM	.00	May 21	.00
INSTANTANEOUS PEAK FLOW			b.00
INSTANTANEOUS PEAK STAGE			c.10.35
ANNUAL RUNOFF (AC-FT)	6630	40310	28220
10 PERCENT EXCEEDS	16	172	60
50 PERCENT EXCEEDS	3.9	14	4.3
90 PERCENT EXCEEDS	.00	.00	.00

a-No flow many days each year.

b-Maximum discharge for period of record, 19400 ft³/s, Aug 1, 1923, gage height, 9.4 ft, datum then in use, from rating curve extended above 1200 ft³/s, on the basis of slope-area measurement of peak flow.

c-From crest-stage reading.

07117000 ARKANSAS RIVER NEAR NEPESTA, CO

LOCATION.--Lat 38°11'03", long 104°10'22", in SW¹/4SW¹/4 sec.25, T.21 S., R.61 W., Pueblo County, Hydrologic Unit 110200005, on right bank 0.7 mi upstream from headgate of Oxford Farmers Co. canal, 1.9 mi northwest of Nepesta, 2.7 mi upstream from Kramer Creek, and 6.6 mi downstream from Huerfano River.

DRAINAGE AREA.--9,345 mi², of which 54 mi² is probably noncontributing.

PERIOD OF RECORD.--April to October 1903, April to November 1912, October 1913 to September 1984. Monthly discharge only for some periods, published in WSP 1311. Records originally published for October 1933 to June 1936 did not include diversions to Oxford Farmers Co. canal, but monthly figures only for this period have been adjusted for diversion, and published in WSP 1311. Statistical summary computed for 1975 to current year. Records for river below Oxford Farmers Co. canal (diversion to canal not included), published as "at Nepesta" September 1897 to October 1903 (irrigation seasons only), April to October 1904, June 1906 to September 1908 (irrigation seasons only), September 1909 to December 1910, February to September 1911 (gage heights and discharge measurements only), October 1913 to November 1912, March to August 1913 (discharge measurements only), October 1913 to September 1936. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1341: Drainage area, WDR CO-79-1: 1965.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,385 ft above sea level, from topographic map. Prior to June 5, 1921, nonrecording gages or water-stage recorders at various sites within 4.5 mi upstream and 3.0 mi downstream at different datums. June 5, 1921 to Apr. 4, 1966, water-stage recorders at sites on river or river and canal within 0.7 mi downstream at various datums.

REMARKS.--Estimated daily discharges: Dec. 4, 5, Jan. 9-24, and Feb. 17-20. Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation of about 230,000 acres, and return flow from irrigated areas. Flow partly regulated by Pueblo Reservoir (station 07099350) since Jan. 9, 1974.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	223	479	346	265	212	259	354	583	2800	1970	1030	452
2	204	445	353	270	232	314	352	690	2500	1820	1220	447
3	204	450	365	274	244	263	383	497	2340	2010	1250	506
4	212	461	360	264	238	259	432	484	2230	2020	1190	507
5	226	492	340	270	222	277	462	457	1950	2020	1300	380
6	231	506	326	263	210	290	470	370	1250	1900	1260	365
7	251	536	326	265	199	264	519	408	877	1910	1600	663
8	258	529	336	285	210	259	526	602	758	1720	1380	481
9	263	494	361	270	216	255	516	571	1010	1310	1290	653
10	250	546	364	250	231	245	570	495	1710	1360	875	640
11	241	600	335	240	240	249	567	545	1620	1290	956	595
12	235	595	331	230	235	275	483	535	1360	1410	901	479
13	212	644	327	230	235	296	492	512	1250	1600	908	422
14	190	596	286	240	230	325	702	404	1340	1610	950	502
15	182	687	275	260	228	461	668	391	1450	1540	950	589
16	189	507	291	260	178	496	586	515	2380	1560	986	604
17	206	463	278	250	160	563	496	1150	2680	1720	973	571
18	220	449	305	240	170	408	389	1880	2830	1600	1030	475
19	214	448	347	245	260	307	334	2370	2540	1440	1570	413
20	247	440	309	250	340	268	351	2210	3570	1450	1260	382
21	282	413	316	260	318	456	432	2170	2870	1630	1160	344
22	272	371	288	260	299	487	468	1810	2590	1100	987	293
23	265	362	289	240	303	514	397	1680	2290	1690	890	233
24	275	367	297	215	316	473	323	1660	2120	1870	865	272
25	280	367	295	185	286	424	397	1830	2080	1800	820	259
26	277	364	296	181	241	366	357	2390	1950	1660	792	248
27	302	359	317	217	213	328	411	2320	1860	1790	893	245
28	368	360	255	220	205	330	596	2240	1640	1690	891	262
29	370	376	275	208	---	338	513	2740	1860	1390	597	289
30	360	353	318	200	---	400	508	2960	1930	1140	483	278
31	375	---	288	179	---	418	---	2920	---	1060	421	---
TOTAL	7884	14059	9795	7486	6671	10867	14054	40389	59635	50080	31678	12849
MEAN	254	469	316	241	238	351	468	1303	1988	1615	1022	428
MAX	375	687	365	285	340	563	702	2960	3570	2020	1600	663
MIN	182	353	255	179	160	245	323	370	758	1060	421	233
AC-FT	15640	27890	19430	14850	13230	21550	27880	80110	118300	99330	62830	25490

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1993, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	399	393	341	391	382	393	567	1191	2062	1440	977	424							
MAX	1433	909	772	818	1134	1040	1568	3763	3831	2909	2565	1223							
(WY)	1985	1985	1987	1985	1985	1985	1987	1980	1983	1983	1984	1982							
MIN	104	149	110	124	209	168	99.3	254	518	307	372	93.1							
(WY)	1979	1979	1991	1990	1978	1978	1978	1981	1977	1977	1977	1977							

SUMMARY STATISTICS

	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1975 - 1993
ANNUAL TOTAL	220449	265447	
ANNUAL MEAN	602	727	a 748
HIGHEST ANNUAL MEAN			1356
LOWEST ANNUAL MEAN			349
HIGHEST DAILY MEAN	1960	Jun 29	b 8770
LOWEST DAILY MEAN	182	Oct 15	c 33
ANNUAL SEVEN-DAY MINIMUM	202	Oct 13	d 38
INSTANTANEOUS PEAK FLOW		3770	13600
INSTANTANEOUS PEAK STAGE		4.40	9.45
ANNUAL RUNOFF (AC-FT)	437300	526500	542000
10 PERCENT EXCEEDS	1170	1840	1660
50 PERCENT EXCEEDS	475	418	428
90 PERCENT EXCEEDS	254	231	178

a-Average discharge for 60 years (water years 1914-73), 684 ft³/s; 495600 acre-ft/yr, prior to completion of Pueblo Dam.

b-Maximum daily discharge for period of record, 26600 ft³/s, May 16, 1957.

c-Minimum daily discharge for period of record, no flow at times in 1902, 1910 1931, and 1934.

d-Maximum discharge for period of record, 180000 ft³/s, Jun 4, 1921, by slope-area measurement of peak flow at a point 8 mi upstream; gage height not determined.

07119500 APISHAPA RIVER NEAR FOWLER, CO

LOCATION.--Lat 38°05'28", long 103°58'52", in SE1/4NW1/4 sec.35, T.22 S., R.59 W, Otero Country, Hydrologic Unit 11020007, near right bank on downstream side of county highway bridge, 3.5 mi southeast of Fowler, and 5.4 mi upstream from mouth.

DRAINAGE AREA.--1,125 mi².

PERIOD OF RECORD.--Streamflow records, April 1922 to September 1925, May 1939 to September 1993 (discontinued). Monthly discharge only for some periods, published in WSP 1311. Water-quality data available, November 1963 to September 1967, January to April 1969.

REVISED RECORDS.--WSP 957: 1939, 1941. WSP 1117: Drainage area. WSP 1241: 1923(M). WRD Colo. 1974: 1973(M).

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gages. Datum of gage is 4,317.05 ft above sea level. Prior to Aug. 29, 1923, at site 3 mi downstream at different datum. Aug. 29, 1923, to Sept. 30, 1925, at present site at different datum. May 27, 1939 to July 30, 1940, at present site at different datum. July 30, 1940 to Sept. 30, 1985, at datum 2.0 ft, higher.

REMARKS.--Estimated daily discharges: Aug. 27 to Sept. 3. Records fair except for estimated daily discharges, which are poor. Waste water from Oxford Farmers Co., and Rocky Ford Highline canals enters river upstream from station. Diversions upstream from station for irrigation of about 4,700 acres. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	5.0	4.4	3.5	3.3	4.2	24	20	46	23	11	15
2	5.2	8.7	4.4	3.5	3.3	3.1	29	16	34	24	15	17
3	5.2	7.6	4.4	3.5	3.3	2.6	33	24	44	24	44	16
4	5.0	14	4.2	3.5	3.3	2.7	32	19	55	28	21	14
5	5.0	17	4.2	3.5	3.3	2.8	35	31	47	29	12	11
6	4.6	15	4.2	3.5	3.3	2.9	36	33	40	27	8.2	12
7	4.4	14	4.0	3.5	3.3	3.0	33	28	43	24	11	13
8	4.6	13	3.9	3.5	3.3	4.2	35	20	43	24	10	12
9	5.3	13	4.6	3.5	3.3	3.9	44	18	40	22	8.8	19
10	3.5	17	3.9	3.5	3.7	3.3	41	14	39	23	7.3	21
11	4.5	18	3.9	3.3	3.9	3.3	45	14	32	24	6.4	20
12	4.5	21	3.9	3.3	3.7	3.3	49	15	30	25	5.5	19
13	3.7	14	3.9	3.3	3.7	3.1	43	12	34	21	6.3	16
14	3.5	18	3.9	3.3	3.7	3.1	39	8.3	16	36	6.6	14
15	3.9	7.0	3.9	3.3	3.7	3.1	41	7.4	18	32	11	14
16	5.9	6.2	3.9	3.3	3.5	3.0	32	7.7	25	33	6.9	14
17	7.6	5.1	3.5	3.3	3.5	2.9	33	6.9	21	34	4.7	13
18	4.3	4.4	3.5	3.3	3.5	2.9	38	16	20	35	4.6	13
19	4.7	4.4	3.5	3.3	3.5	3.2	39	33	22	28	6.4	13
20	4.5	4.6	3.5	3.3	4.0	7.9	36	42	23	21	8.0	13
21	5.3	4.9	3.5	3.3	4.0	3.7	36	52	25	31	8.9	13
22	5.5	4.4	3.5	3.3	3.7	11	32	46	20	28	11	13
23	6.8	4.4	3.5	3.3	3.7	29	30	46	19	23	17	13
24	6.3	4.4	3.5	3.3	3.7	32	4.1	54	22	21	13	13
25	4.5	4.4	3.5	3.3	3.7	28	17	56	19	23	12	13
26	4.4	4.4	3.5	3.3	3.7	27	19	141	17	25	11	12
27	5.6	4.4	3.5	3.3	3.7	32	17	99	12	18	13	12
28	7.2	4.4	3.5	3.3	3.7	31	32	86	16	17	12	12
29	6.6	4.4	3.5	3.3	---	27	27	92	17	15	11	12
30	4.8	4.4	3.6	3.3	---	26	16	84	18	14	12	12
31	4.9	---	3.6	3.3	---	28	---	85	---	13	13	---
TOTAL	157.0	271.5	118.3	104.3	100.0	343.2	967.1	1226.3	857	765	348.6	424
MEAN	5.06	9.05	3.82	3.36	3.57	11.1	32.2	39.6	28.6	24.7	11.2	14.1
MAX	7.6	21	4.6	3.5	4.0	32	49	141	55	36	44	21
MIN	3.5	4.4	3.5	3.3	3.3	2.6	4.1	6.9	12	13	4.6	11
AC-FT	311	539	235	207	198	681	1920	2430	1700	1520	691	841

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1993, BY WATER YEAR (WY)

	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
MEAN	15.3	17.3	11.7	7.34	9.91	11.8	22.3	43.5	47.4	55.7	68.5	19.9
MAX	87.2	83.1	54.7	30.4	54.0	59.6	529	576	290	306	628	154
(WY)	1924	1966	1966	1966	1971	1924	1942	1955	1948	1958	1923	1940
MIN	1.06	.90	1.33	2.37	1.85	1.35	.94	1.65	1.13	1.53	1.56	1.07
(WY)	1965	1940	1955	1976	1976	1955	1955	1975	1954	1974	1974	1956

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1922 - 1993
ANNUAL TOTAL	4754.2	5682.3	
ANNUAL MEAN	13.0	15.6	27.8
HIGHEST ANNUAL MEAN			105
LOWEST ANNUAL MEAN			5.73
HIGHEST DAILY MEAN	223	141	10100
LOWEST DAILY MEAN	a 2.2	2.6	.00
ANNUAL SEVEN-DAY MINIMUM	2.4	3.0	.16
INSTANTANEOUS PEAK FLOW		170	b 83000
INSTANTANEOUS PEAK STAGE		4.17	
ANNUAL RUNOFF (AC-FT)	9430	11270	20150
10 PERCENT EXCEEDS	22	35	45
50 PERCENT EXCEEDS	5.4	11	6.6
90 PERCENT EXCEEDS	2.7	3.3	1.8

a-Also occurred May 19-20.

b-From slope-area measurement of peak flow, at site 2 mi upstream from present site, caused by failure of Apishapa Dam 31 mi upstream.

07119700 ARKANSAS RIVER AT CATLIN DAM, NEAR FOWLER, CO

LOCATION.--Lat 38°07'33", long 103°54'41", in NW¹/4NW¹/4 sec.21, T.22 S., R.58 W., Otero County, Hydrologic Unit 11020005, 600 ft downstream from gage on Catlin Canal, on right bank 2.2 mi downstream from diversion dam for Catlin Canal, 2.3 mi downstream from Apishapa River, and 6.0 mi east of Fowler.

DRAINAGE AREA.--10,901 mi², of which 54 mi² is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1964 to current year. Statistical summary computed for 1975 to current year.

GAGE.--Water-stage recorders with satellite telemetry on river and on Catlin Canal. Datum of river gage is 4,245.92 ft above sea level. Datum of canal gage is 4,257.87 ft above sea level. Prior to May 13, 1971, river gage at site 2.2 mi upstream at datum 24.08 ft, higher, and canal gage at site 1.7 mi upstream at datum 3.26 ft, higher.

REMARKS.--Estimated daily discharges: Jan. 4-7, 9-20, 22, Jan. 29 to Feb. 2, Feb. 15-23, Mar. 7-9, May 3, 4, 24, 26-31, and July 10-17. Records good except for estimated daily discharges, which are poor. Discharge computed by combining discharge of river below canal with that of Catlin Canal. Natural flow of stream affected by transmountain diversions, storage reservoirs, ground-water withdrawals, diversions for irrigation, and return flow from irrigated areas. Flow partly regulated by Pueblo Reservoir (station 07099350) since Jan. 9, 1974. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	308	444	374	310	310	279	377	524	3230	1840	1020	450
2	250	433	355	301	306	346	335	619	2760	1660	1080	500
3	249	409	347	284	290	317	342	568	2540	1720	1290	510
4	242	422	348	283	275	272	379	411	2350	1730	1160	526
5	234	478	348	280	271	258	411	445	2010	1740	1210	494
6	249	491	344	275	263	266	413	405	1470	1630	1120	407
7	272	507	330	280	265	272	409	382	1030	1600	1270	530
8	292	552	334	281	246	302	475	556	825	1580	1290	572
9	300	555	358	280	241	269	492	630	761	1290	1150	582
10	286	560	368	270	257	233	502	579	1440	1200	919	718
11	271	638	369	250	251	204	490	565	1510	1220	861	678
12	264	654	365	240	249	208	494	604	1290	1270	867	619
13	261	675	378	250	242	217	436	601	1220	1610	842	556
14	239	678	353	260	242	226	542	576	1250	1710	858	537
15	218	707	352	290	250	317	626	443	1280	1450	813	592
16	213	621	394	280	180	422	601	510	1770	1250	869	650
17	231	446	380	280	150	495	544	755	2430	1550	881	623
18	250	430	379	260	160	489	479	1380	2680	1550	896	562
19	267	427	398	260	180	321	410	2050	2370	1420	1690	490
20	263	433	398	270	270	264	378	2050	3650	1220	1280	443
21	293	461	393	299	380	365	418	1930	3030	1500	1180	420
22	302	414	389	280	380	439	453	1810	2560	1200	1090	376
23	305	397	396	276	370	467	437	1310	2220	1260	935	317
24	301	406	387	238	360	464	419	1490	1990	1630	889	286
25	309	421	389	246	356	414	416	1420	1960	1620	861	306
26	314	392	372	247	302	399	425	2120	1920	1550	810	283
27	316	386	363	261	305	375	384	2390	1850	1560	866	268
28	332	376	342	277	260	348	560	2150	1560	1680	938	277
29	384	379	241	283	---	351	590	2710	1680	1270	758	268
30	375	350	280	294	---	352	533	3300	1600	1080	522	284
31	390	---	318	310	---	420	---	3280	---	986	479	---
TOTAL	8780	14542	11142	8495	7611	10371	13770	38563	58236	45576	30694	14124
MEAN	283	485	359	274	272	335	459	1244	1941	1470	990	471
MAX	390	707	398	310	380	495	626	3300	3650	1840	1690	718
MIN	213	350	241	238	150	204	335	382	761	986	479	268
AC-FT	17420	28840	22100	16850	15100	20570	27310	76490	115500	90400	60880	28010

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1993, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	399	406	360	428	428	383	534	1142	2004	1368	974	423							
MAX	1234	925	773	854	1249	867	1526	3888	3971	2705	2384	1209							
(WY)	1985	1985	1987	1985	1985	1985	1987	1987	1983	1983	1984	1982							
MIN	91.0	152	133	175	249	175	86.6	212	432	286	526	84.5							
(WY)	1979	1979	1991	1990	1978	1978	1978	1981	1977	1977	1978	1977							

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1975 - 1993
ANNUAL TOTAL	231786	261904	
ANNUAL MEAN	633	718	
HIGHEST ANNUAL MEAN			^a 739
LOWEST ANNUAL MEAN			1292
HIGHEST DAILY MEAN	1960	3650	Jun 20
LOWEST DAILY MEAN	146	150	Feb 17
ANNUAL SEVEN-DAY MINIMUM	214	201	Feb 13
INSTANTANEOUS PEAK FLOW		^d 4010	
INSTANTANEOUS PEAK STAGE			^e 23300
ANNUAL RUNOFF (AC-FT)	459700	519500	
10 PERCENT EXCEEDS	1260	1640	
50 PERCENT EXCEEDS	511	421	
90 PERCENT EXCEEDS	301	260	

a-Average discharge for 9 years (water years 1965-73), 636 ft³/s, 460800 acre-ft/yr, prior to completion of Pueblo Dam.

b-Maximum daily discharge for period of record, 43200 ft³/s, Jun 18, 1965.

c-Also occurred Aug 14, 1977.

d-Maximum combined instantaneous discharge, gage height, not determined.

e-Maximum discharge and stage for period of record, 43200 ft³/s, Jun 18, 1965, gage height, 7.95 ft, site and datum then in use, from rating curve extended above 13000 ft³/s, on basis of flow-over-dam computation of peak flow.

07119700 ARKANSAS RIVER AT CATLIN DAM NEAR FOWLER, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1990 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: May 1990 to current year.

WATER TEMPERATURE: May 1990 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Records for daily specific conductance and water temperature for the 1992 water year are good, those for the 1993 water year are good. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance and daily mean water temperature data are available in the district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,800 microsiemens, Apr. 27, 1991; minimum, 244 microsiemens, May 25, 1993.

WATER TEMPERATURE: Maximum, 30.9°C, Aug. 9, 1992; minimum, 0.0°C, many days during the winter months.

EXTREMES FOR 1992 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,600 microsiemens, Dec. 17; minimum, 566 microsiemens, July 13.

WATER TEMPERATURE: Maximum, 30.9°C, Aug. 9; minimum, 0.0°C, many days during winter.

EXTREMES FOR 1993 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 1,460 microsiemens, Mar. 4-5; minimum, 244 microsiemens, May 25.

WATER TEMPERATURE: Maximum, 28.2°C, July 31; minimum, 0.0°C, many days during winter.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1210	---	1450	1320	---	1230	964	987	741	---	---	822
2	1200	---	1500	1330	1190	1250	941	979	720	---	---	792
3	1210	1170	1460	1340	1190	1260	932	977	761	---	---	800
4	1230	1080	1420	1340	1170	1220	952	967	737	---	692	---
5	1250	1050	1410	1330	1200	1150	930	961	714	---	691	---
6	1230	1070	1410	1330	1170	1010	926	910	766	777	720	---
7	1200	1150	1400	1310	---	1120	944	890	847	711	734	845
8	1140	1310	1410	1320	---	1210	919	850	956	720	755	857
9	1140	1500	1430	1280	---	1200	928	814	766	765	772	843
10	1170	1520	1410	1270	---	1110	960	799	---	716	901	801
11	1150	1250	1410	1260	1160	1190	939	793	870	609	908	841
12	1130	1170	1390	1250	1140	1320	961	783	807	598	788	871
13	1150	1160	1440	1260	---	1330	865	780	811	576	839	896
14	1180	1230	1440	1270	---	1360	835	831	840	608	728	894
15	1150	1280	1480	1270	---	1290	906	859	791	676	757	887
16	1090	1210	1500	1270	---	1130	898	866	762	630	809	975
17	1070	1270	1510	1240	---	1090	882	865	737	636	822	833
18	1030	1280	1530	1260	1120	1080	790	822	708	652	826	776
19	1010	1250	1520	1260	1130	1090	807	751	711	717	783	773
20	1010	1290	1530	1260	1130	1060	806	736	709	764	744	753
21	995	1350	1520	1260	1100	1030	807	699	769	829	768	747
22	1070	1360	1500	1260	1100	1000	808	693	868	778	791	780
23	1140	1360	1500	1250	1160	993	816	697	824	784	825	916
24	1160	1380	1510	1250	1260	990	830	685	779	773	852	996
25	1170	1380	1520	1250	1250	973	850	678	737	851	785	1020
26	1170	1420	1530	1240	1230	978	876	688	743	769	740	1020
27	1160	1450	1450	1250	1220	977	897	687	750	680	677	1020
28	1090	1480	1380	1260	1200	965	899	699	778	841	720	1020
29	1030	1460	1370	1260	1200	971	922	704	719	854	754	1040
30	1010	1450	1360	1250	---	979	965	721	725	---	766	1080
31	1050	---	1320	1260	---	978	---	732	---	---	813	---
MEAN	1130	---	1450	1280	---	1110	892	803	---	---	---	---

07119700 ARKANSAS RIVER AT CATLIN DAM NEAR FOWLER, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.8	13.3	4.0	.0	3.3	.0	4.0	.0	6.7	2.7	13.8	4.9
2	21.7	13.6	1.5	.0	1.0	.0	2.7	.0	7.7	3.6	15.9	6.0
3	21.3	13.2	2.3	.0	2.5	.0	2.5	.0	6.0	3.1	12.9	6.6
4	16.1	12.1	2.6	.0	3.7	.0	4.9	1.2	5.5	2.4	14.6	8.0
5	16.7	8.5	5.8	.0	5.4	.0	4.9	.6	7.3	2.4	12.6	7.7
6	16.9	8.6	9.5	4.1	7.0	1.1	5.2	1.0	7.3	2.6	13.6	6.9
7	18.7	9.3	9.5	4.7	7.2	1.6	4.2	1.2	6.7	2.0	14.6	6.8
8	19.5	10.6	11.1	3.0	7.3	2.3	3.3	.0	3.7	1.7	16.7	7.0
9	20.0	12.9	14.3	4.9	7.0	1.7	2.9	.0	6.3	.4	8.1	2.6
10	20.1	11.8	10.5	8.0	6.4	1.2	3.0	.0	7.3	2.3	10.3	2.4
11	20.0	11.9	9.6	6.1	3.2	1.2	3.7	.3	9.0	4.5	12.5	4.7
12	20.0	11.9	10.5	3.4	5.1	.0	3.6	.9	9.3	5.2	12.9	5.0
13	18.1	12.8	10.3	3.6	4.3	.0	2.7	.0	6.2	4.1	16.9	5.3
14	16.5	10.1	11.6	4.5	2.3	.0	1.6	.0	8.0	3.2	15.6	7.2
15	17.9	9.5	7.2	5.7	3.0	.0	.2	.0	8.7	3.4	14.9	7.7
16	19.0	9.9	5.6	3.4	4.8	.0	.2	.0	6.1	3.8	15.1	8.7
17	19.2	11.0	8.0	3.5	3.2	.4	2.0	.0	6.6	3.1	12.0	8.8
18	15.4	10.5	7.4	3.3	3.0	.0	3.8	.1	7.7	2.0	11.3	8.0
19	15.1	8.5	6.8	4.0	4.9	1.2	2.3	.0	7.7	1.6	12.0	7.7
20	14.9	8.7	6.0	1.8	5.0	1.8	3.4	.0	8.7	3.1	13.5	7.4
21	15.8	8.7	8.5	3.5	5.1	.0	4.1	.0	8.9	5.2	13.1	7.7
22	15.1	9.8	5.6	3.1	3.4	2.5	3.6	.0	9.2	4.2	10.6	6.9
23	14.9	11.6	4.1	.6	5.3	.8	3.1	.0	9.1	5.7	12.7	5.9
24	14.1	9.9	2.5	.0	4.9	.0	5.1	.2	10.3	2.7	11.2	7.7
25	12.8	7.4	5.5	.6	5.0	.0	6.0	1.4	7.6	4.5	14.6	8.0
26	13.4	6.5	7.6	2.0	4.2	.0	5.7	1.5	8.7	1.8	14.3	9.2
27	14.4	7.6	6.5	2.9	2.9	.0	5.7	1.2	12.1	4.9	13.2	8.7
28	10.9	3.9	5.7	3.3	2.5	.9	6.0	.9	13.7	4.3	11.9	9.8
29	6.9	2.0	4.7	2.1	4.4	.8	6.8	1.6	14.3	4.6	14.7	8.3
30	2.4	.0	2.4	.0	3.5	.1	7.0	1.7	---	---	15.8	8.6
31	.9	.0	---	---	1.8	.1	7.8	2.2	---	---	12.7	8.7
MONTH	21.8	.0	14.3	.0	7.3	.0	7.8	.0	14.3	.4	16.9	2.4
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.9	6.5	25.4	16.0	16.4	13.7	25.0	20.3	26.3	19.7	22.6	18.3
2	11.1	8.8	21.9	14.6	18.4	12.6	23.9	19.5	26.8	20.3	23.2	18.2
3	15.5	7.0	23.7	15.1	21.2	16.3	24.7	19.4	27.0	21.2	23.5	18.5
4	17.4	10.8	24.2	15.4	20.4	16.8	25.3	20.9	26.8	20.5	21.8	19.3
5	18.3	11.5	24.0	15.1	21.6	17.2	26.3	20.5	29.7	20.7	21.9	16.8
6	18.4	12.0	23.1	13.6	---	17.6	29.3	22.0	25.3	21.4	23.0	16.4
7	18.1	11.5	24.1	16.2	---	---	27.9	22.8	28.6	19.9	22.5	17.1
8	19.7	11.4	24.1	17.1	---	---	26.8	21.2	30.4	21.4	23.8	16.7
9	20.4	12.5	22.4	17.3	---	---	26.0	20.6	30.9	21.4	22.8	17.7
10	20.0	12.2	17.9	14.2	---	---	23.9	20.4	26.4	21.6	21.9	16.0
11	19.5	12.5	20.0	12.3	22.4	18.6	25.7	20.4	28.4	19.1	23.7	15.2
12	15.3	11.3	19.6	15.6	22.5	17.7	25.0	21.5	25.2	20.7	25.8	17.7
13	20.4	11.3	22.3	15.2	24.9	19.2	25.4	21.4	24.0	19.3	26.1	17.8
14	21.0	14.4	23.7	16.8	25.5	20.0	26.0	20.5	24.3	19.9	25.0	17.7
15	20.2	14.2	24.1	18.0	23.4	18.9	25.0	20.7	26.6	20.5	24.8	18.8
16	18.4	14.5	25.3	16.9	21.1	18.0	23.7	20.3	24.6	20.9	24.9	17.5
17	18.8	13.1	23.3	17.1	21.7	16.6	25.1	19.6	25.9	20.3	23.6	18.7
18	16.7	10.8	24.9	17.1	23.5	17.8	25.7	20.5	22.2	10.5	21.3	17.2
19	10.7	9.0	25.0	17.7	24.5	20.1	26.7	19.4	23.9	19.3	21.3	16.7
20	13.5	8.7	23.5	18.2	23.4	19.0	24.8	19.8	26.9	20.0	21.7	16.5
21	16.4	10.2	22.7	17.9	23.2	19.1	25.9	19.5	27.4	21.2	19.2	16.7
22	17.2	12.1	20.6	17.5	24.1	18.5	24.3	19.3	27.0	20.9	20.1	14.5
23	18.2	12.9	17.3	14.7	25.7	20.9	26.2	20.5	26.5	20.2	22.8	15.2
24	17.8	12.2	19.8	15.5	25.1	21.1	28.5	20.6	22.5	15.9	23.8	15.9
25	18.2	11.8	17.5	13.8	23.1	19.1	26.4	21.9	19.3	15.6	20.1	15.6
26	18.3	12.5	18.0	12.0	22.6	18.2	25.2	20.7	20.3	17.0	20.3	11.9
27	19.8	12.8	17.2	12.2	22.4	19.3	27.7	20.4	21.8	17.6	21.2	11.4
28	21.3	15.2	13.8	10.6	23.1	18.3	28.5	21.5	22.5	17.1	19.9	12.7
29	23.0	15.1	16.8	12.1	23.7	19.5	27.0	21.4	22.1	18.3	20.9	11.7
30	24.9	16.3	17.2	14.6	24.2	20.0	25.9	19.1	22.3	18.3	21.9	12.7
31	---	---	18.7	15.3	---	---	26.4	20.6	24.0	18.2	---	---
MONTH	24.9	6.5	25.4	10.6	---	---	29.3	19.1	30.9	10.5	26.1	11.4

07119700 ARKANSAS RIVER AT CATLIN DAM NEAR FOWLER, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	1030	1320	1230	1340	---	1110	831	521	404	531	870
2	1170	1040	1310	1220	1330	---	1120	783	568	402	521	883
3	1220	1050	1310	1240	1320	1410	1080	---	585	408	616	844
4	1210	1080	1310	1250	1330	1430	1060	---	492	404	563	790
5	1210	1040	1320	1260	1320	1450	1050	1010	417	409	545	817
6	1180	1040	1320	1270	1300	1390	1050	914	417	411	564	931
7	1130	1030	1320	1260	1250	---	1060	890	462	414	556	912
8	1130	993	1310	1270	1240	---	988	786	487	450	617	807
9	1100	990	1300	1310	1180	1400	982	794	494	399	534	799
10	1100	1040	1280	1340	1130	1370	975	889	476	422	550	718
11	1130	992	1280	1350	1120	1370	940	880	434	443	603	782
12	1140	979	1260	1290	1110	1340	925	839	445	473	619	794
13	1170	956	1210	1270	1120	1330	929	831	455	457	605	822
14	1200	920	1230	1290	1130	1320	871	816	453	470	618	859
15	1230	906	1230	1290	1130	1260	851	866	439	542	624	868
16	1250	944	1210	1240	1130	1180	846	812	425	526	607	831
17	1230	1110	1280	1290	1150	1130	885	762	370	444	614	876
18	1180	1140	1280	1340	1220	1060	923	717	365	411	605	887
19	1180	1150	1270	1350	---	1110	979	642	425	458	633	909
20	1190	---	1320	1360	---	1170	999	627	421	439	667	947
21	1140	---	1290	1330	---	1140	962	627	419	435	636	899
22	1100	---	1250	1340	---	1040	930	622	421	447	598	1020
23	1110	---	1250	1350	---	1040	923	637	426	464	638	1040
24	1120	---	1250	1420	---	1010	922	545	413	442	642	1030
25	1090	---	1250	1420	---	1040	918	388	401	424	679	1030
26	1120	---	1260	1370	---	1070	868	593	393	423	678	1070
27	1150	---	1250	1400	---	1100	904	599	404	425	682	1090
28	1180	---	1260	1390	---	1130	811	579	416	417	672	1070
29	1100	---	1300	1390	---	1140	802	557	421	449	648	1060
30	1060	---	1240	1380	---	1150	848	564	409	530	697	1030
31	1040	---	1210	1350	---	1080	---	574	---	558	745	---
MEAN	1150	---	1270	1320	---	---	950	---	442	445	616	909

07119700 ARKANSAS RIVER AT CATLIN DAM NEAR FOWLER, CO--Continued
 TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.7	12.6	12.5	8.9	5.2	.6	3.2	.0	8.1	1.8	6.5	3.7
2	21.9	12.2	10.3	7.6	4.5	.8	5.6	1.4	7.5	1.8	9.7	2.3
3	21.2	12.1	7.6	4.4	2.9	.8	4.1	1.3	6.5	3.7	9.4	5.5
4	21.4	11.9	7.9	2.7	1.6	.0	1.3	.0	7.1	.1	9.7	4.0
5	20.5	12.9	5.7	2.6	.8	.0	1.0	.0	7.6	.5	11.5	2.0
6	16.6	12.6	8.5	4.3	.9	.0	.9	.0	8.3	.6	8.4	4.8
7	13.8	7.9	8.7	3.9	.6	.0	1.3	.0	7.1	1.8	11.6	3.8
8	14.1	5.6	9.3	4.7	1.1	.0	.1	.0	6.1	2.5	12.0	6.0
9	15.3	8.0	9.7	5.4	4.1	.0	.2	.0	5.6	3.5	14.3	7.5
10	16.8	8.3	8.1	5.9	5.2	1.4	.1	.0	4.9	.0	9.8	4.7
11	18.2	9.3	6.8	4.7	5.3	.7	.2	.1	6.3	.0	7.3	3.0
12	18.8	10.5	6.5	3.8	3.9	1.5	.2	.1	6.2	.0	6.7	.3
13	19.5	10.6	6.6	3.2	2.3	.4	.2	.1	7.5	.3	9.0	.0
14	16.9	10.7	7.8	4.3	.6	.0	.4	.1	5.5	1.6	12.0	1.3
15	16.2	8.6	8.6	4.9	.8	.0	.6	.1	3.6	.0	12.0	6.5
16	11.6	7.4	9.1	6.2	3.1	.3	.6	.1	1.7	.0	11.2	6.4
17	15.5	6.1	9.7	6.2	.3	.0	.4	.2	.2	.0	8.1	5.2
18	14.6	7.6	8.0	7.0	1.0	.0	.4	.0	.7	.0	6.7	3.9
19	15.4	8.5	8.8	6.2	1.2	.0	.4	.1	6.2	.2	13.0	3.7
20	16.9	8.9	6.2	2.7	.1	.0	.4	.0	8.6	1.7	11.9	7.6
21	16.6	9.8	6.3	2.5	1.0	.0	.5	.0	7.3	3.1	12.5	7.7
22	16.2	11.0	5.1	1.5	1.3	.0	2.1	.0	6.4	3.5	14.3	8.3
23	17.4	10.7	3.7	1.1	1.3	.0	2.9	.0	6.8	5.0	15.3	8.3
24	17.1	10.9	1.5	.1	2.8	.0	1.9	.0	8.2	2.4	16.3	9.0
25	17.6	11.5	2.7	.0	4.3	.1	4.4	.0	6.2	3.8	17.2	9.5
26	16.3	11.2	1.7	.0	2.9	.0	6.5	.0	9.5	1.7	16.9	11.0
27	15.7	9.1	1.7	.0	3.3	.0	7.4	.7	10.0	2.9	13.9	10.6
28	12.6	9.2	1.6	.1	3.7	.6	5.0	.9	10.4	3.0	15.8	8.6
29	9.9	7.8	5.1	.8	5.0	1.0	6.2	1.6	---	---	12.9	9.2
30	12.1	8.0	2.1	.0	7.3	2.7	6.6	.0	---	---	12.8	9.1
31	12.5	9.2	---	---	3.2	.9	8.0	.9	---	---	13.1	7.9
MONTH	21.9	5.6	12.5	.0	7.3	.0	8.0	.0	10.4	.0	17.2	.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.3	8.1	14.7	10.2	21.1	17.8	25.1	20.0	26.5	23.0	25.2	15.8
2	14.7	9.0	16.2	8.3	20.4	17.7	25.2	20.6	26.6	21.3	21.7	16.7
3	11.4	6.4	20.3	12.1	20.2	15.7	23.5	20.5	22.9	19.1	23.2	14.2
4	12.3	6.0	20.3	13.6	18.7	16.7	22.8	18.3	23.0	18.0	24.9	17.1
5	16.1	8.3	19.1	12.9	19.6	15.2	23.3	18.3	24.6	20.4	22.8	18.4
6	14.4	10.4	22.2	12.9	22.3	17.4	23.7	18.6	---	19.9	21.1	16.9
7	13.6	7.9	20.9	13.3	21.0	15.6	24.5	19.7	24.9	20.2	19.9	15.7
8	14.4	6.9	20.2	13.6	22.2	15.5	25.5	19.8	25.0	20.2	22.5	15.7
9	16.2	8.6	17.2	13.1	21.5	16.9	24.9	20.2	25.9	20.8	22.0	15.6
10	17.7	10.2	19.0	12.2	21.3	16.2	25.6	19.6	27.0	22.4	22.3	16.3
11	18.3	10.6	15.3	11.8	22.4	17.3	23.8	20.3	27.8	21.9	23.8	16.8
12	16.5	10.4	17.8	12.1	24.0	18.1	22.5	19.2	25.3	22.6	23.9	17.8
13	17.2	9.6	22.2	13.8	23.8	18.6	23.2	18.8	23.4	20.8	20.6	11.4
14	14.6	9.4	21.0	16.2	22.8	18.9	23.4	19.7	22.9	19.0	17.9	9.6
15	15.0	8.6	23.9	15.3	24.2	19.5	25.8	20.7	26.0	19.2	19.8	12.2
16	12.5	9.6	20.0	16.3	21.8	18.4	25.9	20.8	25.7	20.4	20.7	15.0
17	17.0	9.3	17.0	15.1	20.4	17.8	24.6	21.4	24.9	20.7	21.1	15.3
18	18.2	11.0	17.9	13.8	18.2	16.9	25.4	20.2	25.9	22.2	18.3	16.1
19	15.8	9.8	17.5	14.6	20.2	15.8	24.8	20.9	22.2	19.9	21.1	13.6
20	17.1	7.5	18.5	14.3	21.1	18.0	25.4	20.8	23.6	20.3	21.7	14.0
21	18.1	8.9	19.4	15.4	22.1	18.2	24.7	20.0	25.4	21.1	21.3	14.2
22	18.3	10.7	19.5	15.2	22.7	18.4	25.5	20.1	24.7	21.1	19.7	15.5
23	19.5	12.4	20.4	15.2	23.4	18.9	24.9	20.8	24.8	18.1	16.8	13.2
24	15.7	11.8	18.4	15.1	21.7	17.6	25.3	20.1	25.8	19.9	19.6	12.4
25	20.3	9.4	17.4	14.0	22.4	17.0	25.2	21.2	26.2	20.8	21.0	12.1
26	21.5	11.1	19.5	15.4	24.4	19.6	25.9	20.6	25.6	20.7	19.6	12.7
27	22.0	13.3	20.1	16.9	24.6	20.4	24.6	19.9	22.9	19.4	20.7	11.5
28	20.8	14.2	19.7	16.5	25.1	19.4	24.9	19.9	21.6	18.4	19.3	12.6
29	20.8	14.7	19.0	15.8	23.4	20.7	26.3	20.9	25.6	19.6	19.7	11.8
30	19.7	14.6	19.3	15.2	24.2	19.0	27.6	21.7	22.4	15.4	20.2	12.0
31	---	---	20.9	17.4	---	---	28.2	21.9	21.8	13.6	---	---
MONTH	22.0	6.0	23.9	8.3	25.1	15.2	28.2	18.3	---	13.6	25.2	9.6

07121500 TIMPAS CREEK AT MOUTH, NEAR SWINK, CO

LOCATION.--Lat 38°00'11", long 103°39'20", in NW¹/4SW¹/4 sec.35, T.23 S., R.56 W., Otero County, Hydrologic Unit 11020005, on left bank 40 ft shoreward, 125 ft upstream from left end of 20th Rd. Bridge, 1.7 mi southwest of Swink, and 2.9 mi upstream from mouth.

DRAINAGE AREA.--496 mi².

PERIOD OF RECORD.--January 1922 to September 1925, March 1968 to current year.

REVISED RECORDS.--WDR CO 76-1: 1975.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,120 ft above sea level, from topographic map. Prior to May 29, 1975, at site 140 ft downstream at datum 0.13 ft, lower.

REMARKS.--Estimated daily discharges: Nov. 28-30, and Dec. 3-8. Records good, except for estimated daily discharges, which are fair. Natural flow of stream affected by minor diversions upstream from station for irrigation, water imported from Arkansas River and Crooked Arroyo for irrigation upstream from station, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1922, 21,400 ft³/s, June 17, 1965.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	118	21	17	16	18	69	83	166	56	50	100
2	57	117	20	16	16	19	48	107	135	57	49	90
3	47	118	20	16	16	19	114	111	110	56	44	74
4	45	114	18	16	16	21	175	80	91	71	52	87
5	54	112	19	16	16	22	163	66	101	69	49	127
6	57	103	19	16	15	19	149	68	113	79	51	141
7	64	118	19	16	16	17	142	72	113	76	52	134
8	94	129	18	16	16	18	121	83	70	74	61	95
9	104	129	19	16	16	18	108	68	54	52	78	94
10	87	118	19	15	16	17	95	67	49	47	70	81
11	66	118	19	15	16	17	105	77	45	50	50	103
12	77	116	19	15	16	17	105	68	45	46	43	97
13	104	123	18	15	16	18	98	66	47	41	47	107
14	103	117	18	15	16	22	84	71	47	92	56	119
15	108	92	18	15	16	31	80	71	41	149	65	86
16	87	51	18	15	15	43	86	77	46	57	62	67
17	89	45	18	15	14	67	89	71	58	45	55	59
18	102	39	18	16	15	57	84	70	63	52	54	58
19	95	34	18	16	15	69	90	75	77	53	52	42
20	79	31	17	16	18	68	95	91	96	55	55	52
21	66	29	17	16	22	56	73	85	87	74	61	60
22	78	26	17	16	22	41	66	97	56	85	58	60
23	78	25	17	16	21	81	66	85	55	84	54	70
24	82	21	17	16	19	109	67	110	59	71	54	91
25	87	21	17	16	18	105	78	119	55	66	58	90
26	95	21	17	16	17	93	69	157	77	54	62	91
27	108	20	17	16	17	79	71	171	68	39	69	89
28	112	20	17	16	17	105	111	144	66	40	71	77
29	102	20	17	16	---	99	129	109	65	39	82	79
30	100	20	17	16	---	78	103	135	55	38	96	81
31	108	---	17	16	---	65	---	150	---	42	96	---
TOTAL	2597	2165	560	489	469	1508	2933	2904	2210	1909	1856	2601
MEAN	83.8	72.2	18.1	15.8	16.7	48.6	97.8	93.7	73.7	61.6	59.9	86.7
MAX	112	129	21	17	22	109	175	171	166	149	96	141
MIN	45	20	17	15	14	17	48	66	41	38	43	42
AC-FT	5150	4290	1110	970	930	2990	5820	5760	4380	3790	3680	5160

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1993, BY WATER YEAR (WY)

	MEAN	89.3	78.5	38.2	25.0	33.9	64.1	62.1	69.3	79.8	70.2	85.0	71.0
MAX	265	210	109	60.4	84.6	201	170	150	318	200	401	159	
(WY)	1924	1924	1971	1923	1924	1924	1924	1987	1923	1923	1923	1986	
MIN	27.4	30.4	9.80	7.87	11.4	24.8	11.0	14.0	24.5	18.1	15.8	15.7	
(WY)	1979	1992	1979	1975	1976	1981	1978	1981	1981	1974	1974	1974	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1922 - 1993

ANNUAL TOTAL	20769	22201	
ANNUAL MEAN	56.7	60.8	64.0
HIGHEST ANNUAL MEAN			130
LOWEST ANNUAL MEAN			25.2
HIGHEST DAILY MEAN	277	175	2670
LOWEST DAILY MEAN	^a 12	14	3.3
ANNUAL SEVEN-DAY MINIMUM		15	5.7
INSTANTANEOUS PEAK FLOW	13	257	^b 12300
INSTANTANEOUS PEAK STAGE		4.23	^c 21.11
ANNUAL RUNOFF (AC-FT)	41200	44040	46400
10 PERCENT EXCEEDS	109	111	125
50 PERCENT EXCEEDS	48	58	48
90 PERCENT EXCEEDS	14	16	15

a-Also occurred Feb 19.

b-From rating curve extended above 250 ft³/s, on basis of contracted-opening measurement of peak flow.

c-From floodmark.

07122400 CROOKED ARROYO NEAR SWINK, CO

LOCATION.--Lat 37°58'56", long 103°35'52", in SW¹/4SW¹/4 sec.5, T.24 S., R.55 W., Otero County, Hydrologic Unit 11020005, on right bank 54 ft downstream from bridge on State Highway 10, 2.0 mi upstream from mouth, and 2.8 mi southeast of Swink.

DRAINAGE AREA.--108 mi².

PERIOD OF RECORD.--February 1968 to September 1993 (Discontinued).

REVISED RECORDS.--WDR CO-76-1: 1975.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,100 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good except for discharges above 30 ft³/s, which are fair. Natural flow of stream affected by minor diversions upstream from station for irrigation, water exported upstream from station to Timpas Creek, water imported from Arkansas River for irrigation upstream from station, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	13	4.7	3.0	2.3	1.9	7.7	13	18	15	14	21
2	12	13	4.5	3.0	2.3	2.0	5.1	16	10	13	15	18
3	10	13	4.4	3.0	2.4	2.0	12	9.0	12	14	13	24
4	7.8	17	4.3	3.0	2.2	2.1	4.8	11	15	16	13	30
5	8.3	14	4.3	3.0	2.2	2.1	5.1	9.5	17	22	17	26
6	9.4	18	4.1	2.8	2.2	2.0	9.2	11	25	13	25	18
7	16	12	3.9	2.6	2.2	2.0	7.8	12	15	13	27	15
8	26	11	3.9	2.6	2.2	2.1	12	10	13	17	28	24
9	14	8.9	3.9	2.6	2.2	2.1	9.6	11	15	15	28	17
10	9.6	8.8	3.9	2.6	2.2	2.0	12	13	14	9.8	13	18
11	20	10	3.9	2.6	2.3	2.0	15	9.7	10	8.4	14	22
12	26	13	3.8	2.6	2.2	2.0	14	11	8.0	9.0	14	20
13	8.7	15	3.6	2.5	2.2	2.0	7.6	9.1	7.8	8.8	12	18
14	9.6	15	3.5	2.5	2.2	2.1	6.6	7.2	11	18	13	15
15	8.5	12	3.5	2.5	2.2	2.4	9.2	6.9	10	31	10	21
16	10	8.0	3.5	2.5	2.0	2.4	11	5.8	7.9	21	12	23
17	12	7.4	3.4	2.5	2.0	8.9	9.0	11	10	16	11	22
18	11	7.1	3.4	2.6	2.0	17	9.5	12	12	15	12	23
19	7.7	7.0	3.3	2.5	2.1	17	16	11	16	15	12	22
20	8.0	7.1	3.3	2.5	2.2	13	11	8.0	15	14	13	19
21	13	7.3	3.3	2.5	2.2	17	10	8.3	14	20	13	16
22	10	7.3	3.3	2.5	2.0	6.8	11	8.3	13	24	15	18
23	12	7.4	3.3	2.6	2.0	7.5	12	7.3	11	32	16	27
24	15	6.8	3.3	2.4	2.1	20	8.2	9.9	12	25	15	28
25	16	6.2	3.3	2.3	2.1	13	5.6	15	15	17	15	26
26	16	6.0	3.3	2.3	2.0	11	6.7	18	17	19	14	25
27	18	6.2	3.3	2.3	1.9	16	9.0	11	15	17	15	25
28	13	5.4	3.2	2.3	1.9	13	14	11	14	14	16	26
29	13	5.1	3.1	2.3	---	5.1	15	27	13	13	25	15
30	13	4.7	3.2	2.3	---	7.7	5.8	15	16	13	29	15
31	14	---	3.0	2.3	---	8.0	---	17	---	13	18	---
TOTAL	398.6	292.7	112.7	79.6	60.0	214.2	291.5	355.0	401.7	511.0	507	637
MEAN	12.9	9.76	3.64	2.57	2.14	6.91	9.72	11.5	13.4	16.5	16.4	21.2
MAX	26	18	4.7	3.0	2.4	20	16	27	25	32	29	30
MIN	7.7	4.7	3.0	2.3	1.9	1.9	4.8	5.8	7.8	8.4	10	15
AC-FT	791	581	224	158	119	425	578	704	797	1010	1010	1260

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1993, BY WATER YEAR (WY)

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
MEAN	14.6	13.0	5.59	2.93	4.22	8.47	10.3	14.5	18.2	16.0	15.2	14.3
MAX	40.1	32.9	25.8	9.53	22.4	19.3	31.6	46.3	47.2	40.5	37.3	30.9
(WY)	1985	1980	1970	1969	1971	1970	1984	1985	1983	1983	1984	1986
MIN	.062	.56	.59	.45	.23	2.75	.33	.64	2.69	1.38	.50	.003
(WY)	1979	1979	1979	1979	1979	1983	1978	1981	1977	1977	1974	1974

SUMMARY STATISTICS

	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1968 - 1993
ANNUAL TOTAL	3553.6	3861.0	
ANNUAL MEAN	9.71	10.6	11.5
HIGHEST ANNUAL MEAN			21.5
LOWEST ANNUAL MEAN			5.24
HIGHEST DAILY MEAN	54	32	354
LOWEST DAILY MEAN	a 2.2	b 1.9	c .00
ANNUAL SEVEN-DAY MINIMUM	2.2	2.0	d .00
INSTANTANEOUS PEAK FLOW		46	1200
INSTANTANEOUS PEAK STAGE		2.41	7.91
ANNUAL RUNOFF (AC-FT)	7050	7660	8300
10 PERCENT EXCEEDS	18	20	27
50 PERCENT EXCEEDS	9.0	10	7.6
90 PERCENT EXCEEDS	3.1	2.2	1.2

a-Also occurred Feb 25-29.

b-Also occurred Feb 28 and Mar 1.

c-No flow at times most years.

d-From rating curve extended above 87 ft³/s.

07123000 ARKANSAS RIVER AT LA JUNTA, CO

LOCATION.--Lat 37°59'26", long 103°31'55", in SE¹/₄NE¹/₄ sec.2, T.24 S., R.55 W., Otero County, Hydrologic Unit 11020005, on right bank at upstream side of bridge on State Highway 109 in La Junta, 450 ft upstream from King Arroyo.

DRAINAGE AREA.--12,210 mi², of which 115 mi² is probably noncontributing.

PERIOD OF RECORD.--May to August 1889, September 1893 to December 1895 (gage heights, discharge measurements, and flood data only), April to October 1903, June to November 1908 (gage heights and discharge measurements only), April 1912 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as "near La Junta" in 1903. Statistical summary computed for 1975 to current year.

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1731: 1922.

GAGE.--Water-stage recorder with satellite telemetry, and nonrecording gage read twice daily. Datum of gage is 4,039.60 ft above sea level. See WSP 1711 or 1731 for history of changes prior to June 13, 1940. June 13, 1940, to June 6, 1967, water-stage recorder at site 300 ft upstream at present datum.

REMARKS.--Estimated daily discharges: Jan. 15-19, 21-23. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 400,000 acres, and return flow from irrigated areas. Flow partly regulated by Pueblo Reservoir (station 07099350) since Jan. 9, 1974.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	49	157	105	105	228	26	121	1120	649	270	221
2	59	44	107	106	103	268	20	267	884	752	328	230
3	43	40	95	108	102	328	35	229	1410	821	433	234
4	38	39	93	105	99	265	28	242	1130	782	565	269
5	34	39	90	104	98	161	22	238	1310	695	542	265
6	33	39	89	108	98	143	30	208	1100	734	597	171
7	46	38	201	117	99	133	35	164	788	558	415	76
8	63	36	192	121	101	127	37	138	576	624	519	208
9	82	36	177	129	101	121	34	221	377	533	667	280
10	85	35	166	116	105	114	35	187	444	508	638	368
11	75	37	140	131	107	108	38	148	442	516	364	322
12	67	38	111	142	112	110	38	170	413	504	343	286
13	76	39	103	120	94	111	29	190	416	608	343	242
14	70	40	95	127	89	105	27	166	428	752	328	230
15	68	352	98	128	81	43	26	171	508	805	197	183
16	48	174	215	126	69	68	25	151	425	390	136	186
17	48	137	285	128	106	64	22	259	631	488	194	233
18	58	124	270	131	154	157	22	420	679	718	149	242
19	73	123	313	116	171	135	32	706	1300	648	246	312
20	76	119	353	117	193	46	30	767	1310	493	475	260
21	65	122	341	111	205	34	32	607	1570	394	371	212
22	94	112	292	108	217	44	32	590	1070	581	254	175
23	114	110	261	113	208	23	73	427	1180	366	159	155
24	116	104	243	110	211	36	33	485	789	836	154	139
25	124	100	223	114	217	30	27	495	900	1110	123	121
26	125	101	135	113	257	27	34	537	949	1110	153	128
27	144	181	111	113	236	32	39	895	930	1140	133	112
28	149	157	111	112	227	30	64	766	807	1140	157	93
29	160	145	111	110	---	23	58	915	482	785	80	88
30	212	108	109	106	---	23	32	1450	609	497	71	87
31	131	---	109	108	---	25	---	1320	---	216	160	---
TOTAL	2648	2818	5396	3603	3965	3162	1015	13650	24977	20753	9564	6128
MEAN	85.4	93.9	174	116	142	102	33.8	440	833	669	309	204
MAX	212	352	353	142	257	328	73	1450	1570	1140	667	368
MIN	33	35	89	104	69	23	20	121	377	216	71	76
AC-FT	5250	5590	10700	7150	7860	6270	2010	27070	49540	41160	18970	12150

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1993, BY WATER YEAR (WY)

	MEAN	189	119	121	150	146	97.8	119	509	731	473	301	137
MAX	1189	545	335	453	620	400	770	3082	1581	1299	1345	463	
(WY)	1985	1987	1987	1987	1985	1987	1987	1987	1987	1987	1984	1982	
MIN	8.82	4.21	13.5	9.50	6.37	19.6	6.67	21.9	103	80.2	66.2	9.59	
(WY)	1978	1979	1976	1976	1976	1978	1978	1981	1988	1981	1987	1977	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1975 - 1993
ANNUAL TOTAL	79902	97679	
ANNUAL MEAN	218	268	^a 258
HIGHEST ANNUAL MEAN			659
LOWEST ANNUAL MEAN			107
HIGHEST DAILY MEAN	817	Jun 29	^b 9790
LOWEST DAILY MEAN	15	Mar 19	^c 2.5
ANNUAL SEVEN-DAY MINIMUM	21	Mar 16	^d 3.0
INSTANTANEOUS PEAK FLOW		1990	^d 18000
INSTANTANEOUS PEAK STAGE		8.75	^e 11.09
ANNUAL RUNOFF (AC-FT)	158500	193700	187200
10 PERCENT EXCEEDS	479	711	603
50 PERCENT EXCEEDS	166	139	105
90 PERCENT EXCEEDS	33	36	18

a-Average discharge for 61 years (water years 1913-73), 244 ft³/s; 176800 acre-ft/yr, prior to completion of Pueblo Dam.

b-Maximum daily discharge for period of record, 61100 ft³/s, Jun 4, 1921.

c-Minimum daily discharge for period of record, no flow, Jan 20-22 and Mar 20-22, 1915.

d-Maximum discharge and stage for period of record, 200000 ft³/s, Jun 4, 1921, gage height, 18.40 ft, site and datum then in use, from rating curve extended above 15000 ft³/s, on basis of slope-area measurement of peak flow.

e-Maximum gage height for statistical period, 11.87 ft, Jul 10, 1978.

07123675 HORSE CREEK NEAR LAS ANIMAS, CO

LOCATION.--Lat 38°05'06", long 103°21'12", in SE¹/4SW¹/4 sec.33, T.22 S., R.53 W., Bent County, Hydrologic Unit 11020008, 15 ft right of right upstream end of box culverts on State Highway 194, 3.2 mi upstream of mouth, 3.4 mi downstream from Fort Lyon Canal Aqueduct, and 7.5 mi west of Las Animas.

DRAINAGE AREA.--1,403 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1979 to September 1993 (Discontinued).

REVISED RECORDS.--WDR CO-91-1: 1989 (M).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 3,975 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Jan. 13, and Feb. 15-18. Records fair except for estimated daily discharges, which are poor. Natural flow of stream affected by seepage and sluicing from Fort Lyon Canal. There is some irrigation upstream, however, amounts are unknown.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	5.0	4.7	4.2	6.0	6.6	5.2	6.2	36	6.7	5.2	5.2
2	2.6	5.0	4.9	4.3	6.7	10	5.1	5.2	24	5.9	3.5	4.4
3	2.6	4.8	4.9	4.5	6.9	12	5.4	5.3	16	5.1	3.5	4.3
4	2.6	4.5	4.9	4.6	6.8	11	6.5	5.4	15	4.0	5.1	4.0
5	2.6	4.4	4.9	4.7	6.5	8.4	7.5	5.2	16	3.5	8.2	3.8
6	2.7	4.5	4.9	4.4	6.4	7.2	8.4	4.9	22	3.5	8.1	3.9
7	2.7	5.2	4.8	4.6	6.4	6.8	12	4.7	22	4.3	5.8	4.3
8	2.9	5.6	4.9	4.5	6.3	6.3	13	4.5	17	5.2	5.6	8.2
9	3.0	4.8	4.8	4.3	6.1	5.9	11	4.6	17	3.4	6.4	5.6
10	3.1	5.0	4.8	4.2	6.1	5.7	11	4.8	12	3.8	6.9	4.4
11	3.1	5.1	5.0	4.1	5.5	5.5	8.2	4.8	9.7	3.9	8.0	4.1
12	3.2	5.6	5.1	3.8	5.0	5.3	7.3	7.9	9.3	3.6	4.8	3.8
13	3.2	6.3	4.9	3.6	5.2	5.2	7.1	9.8	10	4.6	4.7	4.5
14	3.3	5.6	4.9	3.4	5.9	5.5	6.7	7.1	9.7	5.6	6.7	6.4
15	3.4	5.6	4.9	3.4	5.0	5.8	6.3	6.0	8.7	6.5	11	5.9
16	3.5	5.1	4.7	3.3	4.5	6.3	6.4	5.8	7.2	4.8	11	4.9
17	3.7	4.7	4.7	3.1	4.5	5.8	8.0	9.4	5.7	7.1	5.9	5.3
18	3.7	4.5	4.7	3.1	5.0	5.6	8.3	16	5.7	11	4.2	6.0
19	3.8	4.6	4.7	3.1	5.2	5.3	6.0	14	8.6	8.8	3.8	6.0
20	4.0	5.1	4.6	3.1	6.8	5.1	5.3	12	11	5.8	4.3	5.7
21	4.1	5.0	4.6	3.1	9.0	5.2	5.1	12	7.8	5.7	4.9	4.8
22	4.2	5.1	4.4	3.3	9.8	5.2	5.0	12	12	7.3	6.2	4.5
23	4.3	4.9	4.2	3.6	7.1	5.5	5.1	13	12	7.4	7.9	4.5
24	4.5	4.6	4.2	3.6	6.9	5.4	4.9	11	10	5.8	6.6	4.7
25	5.2	4.5	4.2	3.7	6.7	5.2	4.7	16	10	7.4	5.1	4.7
26	5.5	4.4	4.2	4.0	6.3	5.1	4.6	20	12	7.7	4.1	4.5
27	5.0	4.3	4.1	4.3	5.6	5.1	4.7	23	8.1	7.2	4.1	4.4
28	4.8	4.6	4.1	4.3	5.4	5.4	4.8	19	6.2	5.5	4.3	4.2
29	5.0	5.3	4.0	5.0	---	5.6	5.4	17	5.9	4.0	4.7	4.2
30	4.9	4.9	4.1	5.4	---	5.5	7.0	21	5.6	4.5	7.9	4.4
31	4.7	---	4.2	5.6	---	5.2	---	42	---	4.5	8.7	---
TOTAL	114.5	148.6	143.0	124.2	173.6	193.7	206.0	349.6	372.2	174.1	187.2	145.6
MEAN	3.69	4.95	4.61	4.01	6.20	6.25	6.87	11.3	12.4	5.62	6.04	4.85
MAX	5.5	6.3	5.1	5.6	9.8	12	13	42	36	11	11	8.2
MIN	2.6	4.3	4.0	3.1	4.5	5.1	4.6	4.5	5.6	3.4	3.5	3.8
AC-FT	227	295	284	246	344	384	409	693	738	345	371	289

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1993, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	10.4	7.57	7.32	10.8	9.63	9.84	10.8	20.6	22.0	20.7	15.2	10.2		
MAX	32.4	14.4	20.3	46.2	28.1	23.2	27.9	67.5	51.8	55.4	49.3	33.3		
(WY)	1985	1986	1987	1986	1986	1983	1985	1987	1983	1985	1984	1984		
MIN	.84	2.02	2.98	2.52	3.02	3.80	1.87	2.86	1.79	.16	2.60	1.78		
(WY)	1980	1980	1980	1982	1981	1982	1982	1981	1981	1981	1990	1990		

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1980 - 1993

	1979.3	2332.3	12.9
ANNUAL TOTAL	1709.3	2332.3	12.9
ANNUAL MEAN	4.67	6.39	26.9
HIGHEST ANNUAL MEAN			3.37
LOWEST ANNUAL MEAN			1985
HIGHEST DAILY MEAN	25	May 31	585
LOWEST DAILY MEAN	2.2	Oct 1	.00
ANNUAL SEVEN-DAY MINIMUM	2.4	May 17	.00
INSTANTANEOUS PEAK FLOW		49	1210
INSTANTANEOUS PEAK STAGE		2.81	6.61
ANNUAL RUNOFF (AC-FT)	3390	4630	9370
10 PERCENT EXCEEDS	6.4	11	32
50 PERCENT EXCEEDS	4.5	5.1	6.5
90 PERCENT EXCEEDS	2.9	3.7	2.7

a-Also occurred Oct 2-5.

b-No flow many days in 1981.

c-From rating curve extended above 240 ft³/s, on basis of culvert and flow-over-road measurement of peak flow

07123675 HORSE CREEK NEAR LAS ANIMAS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1987 to September 1993 (Discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1987 to September 1993 (Discontinued).

WATER TEMPERATURE: December 1987 to September 1993 (Discontinued).

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Records for 1992 water year for daily specific conductance are fair; daily water temperature are good.
 Records for 1993 water year for daily specific conductance are fair; daily water temperature are good. Daily maximum and minimum specific conductance and mean water temperature data are available in district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 9,330 microsiemens, May 1, 1988; minimum, 796 microsiemens, July 21, 1990.

WATER TEMPERATURE: Maximum, 33.3°C, July 10, 1989; minimum, 0.0°C, many days during most winters.

EXTREMES FOR 1992 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 6,400 microsiemens, May 27; minimum, 1,440 microsiemens, Nov. 5.

WATER TEMPERATURE: Maximum, 32.3°C, Aug. 8; minimum, 0.0°C, many days during winter.

EXTREMES FOR 1993 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 5,670 microsiemens, Feb. 2; minimum, 2,030 microsiemens, May 31.

WATER TEMPERATURE: Maximum, 31.2°C, July 31; minimum, 0.0°C, many days during winter.

 SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2960	4300	4430	4480	4320	4210	4400	3910	4110	2920	3230	3430
2	2980	3040	4360	4380	4340	4220	4400	3830	4930	2940	3460	3190
3	2960	3670	4440	4390	4410	4370	4220	4180	4680	2710	3380	2980
4	2970	3770	4390	4430	4660	4640	4040	4770	3710	2790	3230	2740
5	2990	3100	4430	4480	4790	4850	4030	4530	3370	3160	3130	2890
6	3030	2010	4500	4530	5010	4740	4100	3980	4090	3200	3100	2920
7	3070	3710	4480	4540	4620	4650	4200	3570	2910	3040	3020	3150
8	3130	4290	4460	4580	4490	4600	4320	3550	3130	2970	2800	3240
9	3150	4470	4430	4470	4410	4650	4240	3550	3800	2720	2770	3230
10	3170	4470	4350	4500	4440	4820	4060	3580	4380	2680	2810	3170
11	3190	4280	4290	4500	4470	4710	3710	3710	4270	2580	2900	3040
12	3120	4270	4410	4540	4500	4660	4200	3950	4070	2470	2590	3020
13	3170	4230	4500	4570	4450	4570	4190	3960	3240	2470	3700	3170
14	3310	4220	----	4430	4410	4500	4100	3780	2830	2850	3490	3100
15	3350	4240	----	4430	4390	4610	4050	3460	3540	2610	3040	2960
16	3340	4160	4510	4180	4350	3770	4210	3550	3710	2880	2860	2970
17	3370	4280	4530	4310	4310	3780	4530	3720	3130	3260	2850	3000
18	3410	4370	4510	4410	4330	4110	4400	3590	3300	3000	3500	3060
19	3410	4430	4520	4380	4300	3830	4150	3580	3180	3130	3750	2710
20	3390	4450	4540	4460	4240	3420	3890	3520	2660	2920	2830	2370
21	3380	4640	4480	4530	4270	3590	4100	3260	2390	3400	2760	2420
22	3470	4600	4500	4570	4280	3610	3670	3250	3020	4060	2880	2430
23	3450	4440	4560	4490	4240	3380	3610	3270	2940	3910	2740	2630
24	3450	4330	4540	4540	4210	3540	4110	3100	3090	3480	2610	2520
25	3520	4320	4460	4500	4260	3360	3780	2420	3140	2900	3230	2660
26	3430	4410	4390	4430	4310	3620	3720	2410	3050	3380	3760	2630
27	3600	4500	4410	4400	4280	3620	3910	4500	2680	3970	2890	2780
28	3630	4480	4420	4370	4270	3710	4020	2530	2380	3600	2110	2820
29	3690	4450	4510	4350	4260	3910	3960	2630	2500	3050	3630	2860
30	3620	4500	4550	4300	----	3910	3940	3120	2850	3260	3860	2850
31	3600	----	4550	4310	----	4010	----	3160	----	3110	3530	----
MEAN	3300	4150	----	4440	4400	4130	4080	3550	3370	3080	3110	2900

07123675 HORSE CREEK NEAR LAS ANIMAS, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.2	11.3	9.7	3.8	6.6	2.3	6.4	2.6	8.9	2.4	14.4	5.1
2	22.2	11.6	4.1	.0	6.8	1.3	6.7	1.2	9.5	4.3	16.2	6.2
3	22.1	11.2	4.2	.0	7.5	2.8	6.8	1.3	6.7	4.1	12.8	6.0
4	16.4	11.1	8.2	1.5	8.2	2.7	7.5	3.5	6.7	3.0	14.6	8.6
5	18.0	8.2	8.9	.0	8.4	3.4	7.5	2.1	7.5	1.7	13.8	8.1
6	18.3	7.8	3.8	.0	9.1	3.3	8.4	2.6	8.3	2.8	15.8	6.0
7	20.0	8.6	7.9	3.4	9.0	3.0	6.4	2.7	8.7	2.0	15.4	6.4
8	20.9	9.6	9.7	3.7	8.6	3.9	5.7	1.3	6.6	2.0	16.9	7.3
9	20.8	11.4	12.1	5.6	7.9	3.2	6.6	1.4	9.6	1.6	8.7	3.6
10	20.5	10.1	8.9	7.5	7.3	2.8	7.5	1.5	9.8	2.5	12.0	2.2
11	20.6	10.0	9.8	6.7	6.0	2.8	7.2	2.1	10.2	4.5	11.5	4.5
12	20.4	9.6	11.7	5.4	7.1	3.1	5.7	2.2	10.0	4.5	12.6	5.6
13	19.2	11.5	11.4	5.1	6.6	2.1	6.5	1.1	8.4	4.3	16.3	5.5
14	17.5	9.2	11.6	5.7	---	1.5	6.2	.5	10.8	4.9	17.2	5.9
15	18.7	9.2	8.8	7.7	---	---	4.9	.2	11.4	2.9	16.6	6.3
16	19.7	9.5	7.6	4.1	7.9	---	7.7	.4	9.6	3.9	14.5	7.3
17	19.9	9.4	10.4	5.5	5.7	2.5	7.8	2.8	9.0	4.4	10.1	7.5
18	16.3	9.1	9.0	4.1	6.2	2.4	7.4	2.2	10.5	2.5	12.2	7.2
19	20.4	7.5	8.3	5.0	6.7	3.5	7.6	1.1	10.8	1.4	16.3	6.0
20	16.8	8.4	8.3	3.7	6.6	3.2	8.3	1.4	11.1	2.8	16.1	5.4
21	17.2	8.6	10.0	4.7	7.2	2.2	8.2	1.6	10.3	4.8	16.3	6.1
22	18.1	9.0	7.5	4.5	6.3	4.4	6.9	1.6	12.5	3.4	15.1	6.2
23	17.2	8.5	7.7	3.4	6.9	2.9	7.9	.9	11.0	6.0	17.1	4.6
24	16.0	8.6	8.0	2.6	6.7	1.9	9.1	1.7	11.7	3.6	15.0	6.6
25	15.0	7.5	8.9	3.9	6.8	2.0	8.6	1.7	9.3	4.7	17.7	5.9
26	15.4	7.3	9.8	4.2	6.4	2.5	8.3	2.1	11.1	3.2	17.2	6.1
27	16.2	8.1	8.7	4.2	6.8	2.1	8.4	1.7	11.7	5.8	16.2	7.4
28	11.2	5.1	7.0	5.1	5.6	2.5	8.6	1.5	14.8	4.4	14.3	7.7
29	9.9	3.9	6.3	4.3	7.4	3.1	8.8	1.9	15.1	4.4	17.4	7.1
30	6.7	2.3	5.8	3.0	7.1	1.8	9.3	2.1	---	---	19.1	5.8
31	4.9	2.3	---	---	5.1	3.4	9.8	2.5	---	---	13.6	7.3
MONTH	22.2	2.3	12.1	.0	---	---	9.8	.2	15.1	1.4	19.1	2.2

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	18.0	5.4	26.4	11.8	15.4	12.6	29.0	15.4	27.3	15.7	23.7	15.4
2	14.6	6.5	22.3	11.5	20.6	12.1	27.3	16.5	27.9	16.2	23.9	14.7
3	20.0	6.2	23.9	11.9	24.3	14.0	27.3	15.4	27.8	16.6	23.7	14.2
4	21.3	7.7	24.2	11.7	20.9	14.3	24.4	16.5	27.6	16.3	22.4	16.5
5	21.0	8.4	23.8	12.1	24.6	14.9	29.2	15.6	27.5	16.0	22.0	14.2
6	21.3	8.5	24.8	11.5	23.4	14.7	31.3	18.5	27.0	17.1	23.3	13.7
7	20.9	8.7	26.1	12.6	21.8	14.9	29.0	17.1	30.6	16.3	22.6	13.7
8	22.2	8.7	25.4	12.9	23.6	15.0	29.4	16.1	32.3	16.9	23.5	14.6
9	21.7	9.8	22.6	12.9	21.3	15.2	26.7	16.5	31.4	17.6	22.5	13.5
10	21.9	9.8	16.1	12.3	24.0	14.2	24.7	16.9	28.3	17.5	21.6	12.9
11	21.7	9.7	24.2	11.0	24.8	15.8	29.9	16.9	26.0	16.4	23.6	12.8
12	17.6	9.5	23.5	12.0	24.9	15.3	27.7	17.1	22.7	17.2	24.8	15.0
13	23.2	9.0	25.9	12.7	27.2	16.1	28.0	17.4	26.3	17.0	24.4	14.6
14	20.8	11.5	26.2	13.3	26.3	16.6	29.6	16.3	26.0	16.6	24.0	14.4
15	21.8	11.1	24.1	15.1	25.4	15.6	28.2	16.7	26.9	16.1	22.7	16.0
16	19.2	12.3	26.9	13.7	25.2	14.3	26.5	17.7	25.5	16.3	24.6	15.1
17	21.6	11.5	24.6	14.1	25.0	13.6	27.5	17.3	23.9	16.5	24.2	14.7
18	13.9	9.0	25.9	13.8	26.1	14.3	29.1	17.5	24.4	15.7	20.8	12.9
19	9.7	7.3	26.9	14.1	27.3	16.3	28.5	16.2	25.2	15.7	22.1	14.1
20	14.5	6.6	25.6	14.6	24.4	16.8	26.7	17.7	28.3	15.4	22.4	13.8
21	20.6	6.6	25.8	15.1	26.0	16.5	27.1	16.4	27.1	17.9	19.7	14.3
22	16.8	8.3	20.3	14.6	27.5	15.5	27.3	16.2	26.8	17.4	21.1	12.1
23	20.5	9.0	23.4	12.7	27.5	17.5	28.3	17.6	26.3	17.0	21.8	12.8
24	21.2	8.5	21.0	14.2	28.1	17.3	29.4	17.8	19.4	15.6	22.2	13.3
25	22.4	9.0	16.2	13.8	27.4	16.4	27.1	18.3	20.1	15.0	20.0	13.5
26	21.5	8.9	21.7	11.3	27.6	16.3	23.7	18.5	21.2	15.5	19.7	11.1
27	22.1	9.8	14.5	10.5	25.3	16.5	27.4	17.3	22.4	15.0	20.6	10.4
28	23.7	11.5	15.2	9.5	27.3	15.8	27.3	17.3	23.6	14.8	18.9	11.1
29	25.3	10.4	20.3	9.0	27.9	16.8	28.4	16.9	22.5	15.0	20.3	10.7
30	25.0	11.5	16.0	12.1	26.8	16.9	26.5	16.5	22.0	15.4	20.8	10.7
31	---	---	20.2	12.9	---	---	27.3	16.6	23.3	15.4	---	---
MONTH	25.3	5.4	26.9	9.0	28.1	12.1	31.3	15.4	32.3	14.8	24.8	10.4

07123675 HORSE CREEK NEAR LAS ANIMAS, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2830	4080	4150	4060	4940	4020	4270	3640	3490	3290	2840	3420
2	2830	4100	4140	4090	5050	4410	4180	3910	3120	3570	3260	3470
3	2820	3980	4180	4300	5000	4980	4140	3900	3260	3890	3380	3460
4	2810	3870	4200	4300	4910	5170	4570	3850	3110	3610	3130	3510
5	2810	3760	4120	4270	4800	4770	4870	3900	3300	3690	2500	3710
6	2820	3660	4080	4270	4820	4530	4820	3880	3100	3640	2660	3720
7	2840	3430	4070	4300	4820	4380	4890	3860	2830	3200	3130	3580
8	2950	3510	4000	4280	4730	4180	5440	3870	2870	2890	2980	2850
9	3010	3690	3940	4190	4650	4190	4720	4000	2840	3310	2730	3180
10	3120	3620	4030	3940	4570	4240	4050	4090	3460	3680	2690	3380
11	3160	3630	4100	3850	4530	4190	4470	3880	3730	3720	2450	3440
12	3210	3480	4090	3760	4440	4170	4460	3100	3950	3500	3150	3500
13	3270	3570	4120	3530	4790	4160	4430	3190	3430	3020	3370	3920
14	3300	3880	4120	3400	5090	4350	4420	3900	3190	2540	3350	4050
15	3280	3510	4060	3340	4910	4470	4390	3800	3170	2660	2660	3380
16	3320	3800	4070	3280	4690	4580	4180	3680	3370	3280	2570	3260
17	3310	3970	4100	3270	4300	4410	3650	3450	3890	2990	3250	3130
18	3360	3930	4040	3330	4420	4210	3670	4630	3910	2680	3110	3060
19	3400	3950	4020	3390	4550	4300	4040	4390	3410	2610	3260	3330
20	3490	3720	3980	3380	4430	4360	4070	4150	3360	2890	3400	3410
21	3590	4120	3990	3350	4500	4380	4060	4250	3410	3040	3310	3670
22	3590	4280	3950	3390	4560	4440	4020	3600	3000	2660	3050	3570
23	3610	4180	3880	3730	4350	4420	4050	3400	2700	2790	3070	3520
24	3540	4110	3810	3940	4390	4380	3980	4490	2940	3190	3390	3640
25	3400	3980	3770	4030	4450	4290	3960	4720	3010	3580	3320	3600
26	4070	3990	3770	4100	4400	4240	3970	4140	2820	3110	3160	3550
27	3530	3990	3770	4100	4310	4160	4040	3030	2950	2800	3080	3400
28	3670	4140	3780	4240	4220	4370	4160	2940	3280	2800	3250	3410
29	3670	4560	3810	4920	---	4450	4030	3060	3230	2880	2980	3370
30	3720	4240	3820	5100	---	4410	3580	3010	3380	2740	2340	3380
31	3800	---	3990	4930	---	4370	---	2920	---	2830	2650	---
MEAN	3290	3890	4000	3950	4630	4390	4250	3760	3250	3130	3020	3460

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.4	10.4	13.2	9.4	8.3	3.5	7.0	2.0	8.3	1.6	5.7	3.4
2	20.2	10.3	12.1	8.6	7.5	2.9	8.2	4.1	8.5	1.4	9.1	2.0
3	19.9	10.2	9.2	6.1	7.1	3.7	6.0	3.6	6.3	2.6	8.0	3.7
4	20.2	10.5	10.0	5.2	6.4	3.2	5.9	1.0	6.9	1.6	8.8	3.4
5	19.3	11.5	9.5	4.4	5.2	2.4	6.6	1.9	7.8	1.1	11.1	2.8
6	15.4	11.4	11.2	6.6	6.2	.9	5.7	1.4	8.3	1.2	8.9	5.0
7	13.5	8.8	9.9	4.9	5.6	.4	6.7	3.1	7.6	1.5	13.5	4.2
8	15.4	6.9	11.1	5.0	6.5	.7	3.7	1.1	7.5	2.6	14.6	4.9
9	16.4	8.4	11.4	6.6	8.2	1.8	4.6	.2	6.4	4.2	15.8	5.7
10	16.9	8.6	10.6	6.7	7.9	3.4	4.0	.2	5.1	.2	10.5	5.2
11	17.9	9.4	9.2	6.7	7.8	2.0	5.6	.9	6.5	.3	7.7	4.2
12	17.5	9.5	9.6	5.5	7.3	3.8	5.8	.2	8.2	.1	10.8	1.8
13	18.5	10.1	8.9	4.2	5.0	2.5	4.9	.0	8.5	.7	10.7	1.0
14	16.9	9.9	9.8	4.7	5.8	1.7	5.3	.5	6.8	2.2	12.5	2.4
15	15.8	9.1	10.7	5.5	7.5	1.3	7.1	1.0	3.9	.0	14.1	5.4
16	12.2	8.5	11.0	6.0	7.2	3.8	7.1	1.7	4.8	.0	11.8	4.9
17	15.5	7.4	11.5	6.4	5.8	1.3	3.6	2.8	6.7	.0	7.0	3.8
18	14.9	8.3	9.3	8.6	7.5	1.1	5.4	2.8	7.6	.0	8.7	4.1
19	15.7	9.0	9.8	6.6	6.6	2.0	6.6	2.6	10.6	1.6	15.6	4.0
20	16.4	8.8	8.0	5.6	5.6	1.5	8.5	3.0	10.5	2.2	15.7	5.6
21	16.8	9.6	8.4	5.0	6.7	2.1	9.1	2.6	7.5	1.9	16.2	7.4
22	17.5	11.9	7.4	3.4	7.5	1.5	9.5	3.1	7.5	1.7	16.9	6.9
23	17.4	10.5	7.0	4.0	6.6	1.6	7.0	3.3	8.2	1.9	17.6	5.8
24	16.7	10.1	4.6	1.4	6.8	2.5	6.3	1.9	8.6	1.8	18.2	6.1
25	17.5	11.8	6.8	1.5	7.7	2.2	8.0	2.0	7.4	2.4	18.8	6.8
26	15.7	10.6	6.7	1.1	7.3	.9	9.3	3.2	8.0	2.1	18.3	8.5
27	15.3	8.6	7.2	1.8	7.2	1.0	10.1	2.6	9.9	3.1	14.8	8.9
28	14.3	10.0	6.4	1.2	7.3	2.4	7.8	1.7	11.1	2.7	18.2	8.0
29	11.3	9.3	7.2	1.2	6.8	3.7	6.7	1.7	---	---	13.9	8.3
30	13.5	9.3	6.9	1.2	8.9	3.8	7.4	1.1	---	---	13.7	7.9
31	13.0	9.6	---	---	5.9	2.7	8.3	1.4	---	---	15.7	6.3
MONTH	20.4	6.9	13.2	1.1	8.9	.4	10.1	.0	11.1	.0	18.8	1.0
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.7	6.0	12.6	8.5	23.7	19.6	28.2	18.1	28.1	18.9	24.6	14.2
2	16.9	7.0	20.7	6.7	23.4	19.5	28.5	18.4	29.3	16.9	21.0	14.4
3	9.6	4.0	22.3	8.5	22.3	17.2	28.0	19.1	18.4	16.1	24.0	12.7
4	13.6	6.0	19.9	10.5	19.3	16.6	25.8	16.9	25.4	15.6	25.1	13.2
5	17.2	6.9	19.3	10.4	20.1	15.4	26.9	16.2	26.0	18.8	23.1	14.5
6	16.4	8.1	22.9	11.4	23.6	18.2	27.0	15.6	26.7	17.5	21.3	14.9
7	12.2	6.6	21.1	10.5	21.5	17.0	26.3	16.6	27.5	16.3	21.1	13.8
8	13.8	6.1	22.6	11.1	22.2	16.2	29.1	17.4	28.6	17.5	23.5	14.1
9	17.7	6.6	18.2	10.1	22.6	18.4	26.9	16.7	28.6	17.8	23.3	13.5
10	19.6	7.7	21.8	10.0	22.6	16.6	29.3	16.7	28.7	19.2	23.5	14.3
11	18.9	8.2	14.7	9.1	23.2	16.4	24.6	18.2	28.7	19.0	25.0	14.3
12	17.7	8.6	23.2	11.0	24.8	17.0	29.2	17.8	27.5	17.3	24.2	14.0
13	16.6	8.9	25.2	11.3	24.6	17.7	28.7	18.0	24.9	17.7	16.5	10.7
14	17.2	7.3	23.2	12.2	23.2	18.1	27.3	18.7	24.7	16.3	18.0	9.8
15	18.1	7.6	25.5	12.5	24.3	17.6	28.3	18.4	28.8	17.0	20.5	10.8
16	13.9	6.9	20.0	13.8	23.4	16.5	29.0	18.4	27.8	17.5	21.6	12.2
17	18.4	7.7	17.3	13.4	18.6	16.4	23.9	19.0	27.8	17.9	22.1	13.2
18	20.4	8.7	21.9	12.5	18.6	15.7	28.5	19.1	26.4	17.7	17.6	14.1
19	16.6	7.9	23.2	14.1	24.1	14.9	27.1	19.9	20.5	17.5	20.9	11.7
20	18.3	6.9	24.5	14.1	24.6	16.1	26.9	18.2	26.4	16.9	21.3	11.9
21	19.0	7.2	25.1	14.4	25.0	17.9	29.2	17.3	27.7	17.6	20.8	12.6
22	20.3	8.7	25.2	14.8	26.7	18.2	27.7	18.3	26.4	17.3	18.1	13.9
23	20.4	10.0	24.9	13.9	27.1	19.4	26.7	18.2	26.5	15.9	15.1	13.2
24	17.1	10.6	17.4	14.2	24.1	18.7	26.6	18.0	26.0	16.5	17.8	13.1
25	20.1	8.5	17.8	12.8	25.0	18.2	26.3	19.1	27.3	17.2	20.6	11.8
26	23.0	8.7	22.9	14.7	27.6	21.2	27.4	20.4	27.1	16.9	19.7	12.4
27	22.2	10.7	24.7	16.5	27.6	20.8	27.6	19.4	20.1	17.5	20.4	10.4
28	22.9	11.9	24.7	17.4	27.7	19.1	27.5	16.8	24.3	16.4	19.6	10.9
29	22.3	12.3	23.7	16.5	24.7	19.8	28.9	16.5	24.3	16.5	20.0	11.2
30	22.4	11.5	24.2	16.1	26.7	17.0	30.2	17.6	18.8	14.1	20.7	11.7
31	---	---	24.9	16.8	---	---	31.2	18.0	21.9	12.1	---	---
MONTH	23.0	4.0	25.5	6.7	27.7	14.9	31.2	15.6	29.3	12.1	25.1	9.8
YEAR	31.2	.0										

07124000 ARKANSAS RIVER AT LAS ANIMAS, CO

LOCATION.--Lat 38°04'51", long 103°13'09", in SE¹/₄NE¹/₄ sec.3, T.23 S., R.52 W., Bent County, Hydrologic Unit 11020009, on right bank at upstream side of bridge on U.S. Highway 50, 1.1 mi north of courthouse in Las Animas, and 4.2 mi upstream from Purgatoire River.

DRAINAGE AREA.--14,417 mi², of which 441 mi² are probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to November 1898 (gage heights only), August to November 1909 (gage heights and discharge measurements only), May 1939 to current year. Statistical summary computed for 1975 to current year.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 3,883.97 ft above sea level. May 13 to Nov. 12, 1898, and Aug. 1 to Nov. 10, 1909, nonrecording gages near present site at different datums. May 23, 1939 to Apr. 27, 1967, water-stage recorder at site 0.4 mi downstream at datum 9.00 ft, lower.

REMARKS.--Estimated daily discharges: Nov. 27-29, Dec. 7-10, 16-29, Jan. 10-23, and Feb. 15-16. Records good except for estimated daily discharges, which are poor. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 412,000 acres, and return flow from irrigated areas. Flow partly regulated by Pueblo Reservoir (station 07099350) since Jan. 9, 1974.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	96	194	151	113	249	30	52	1180	394	94	152
2	74	58	216	153	118	271	30	156	918	564	121	180
3	66	49	172	158	118	311	34	219	1080	636	125	194
4	54	45	157	153	118	362	36	206	1110	664	299	210
5	46	42	155	154	117	227	36	216	1250	505	304	241
6	42	40	154	144	120	181	36	198	1150	527	399	205
7	40	37	145	133	126	164	44	170	837	450	348	89
8	41	40	140	125	118	152	46	140	672	375	255	87
9	54	36	160	120	112	143	45	139	398	411	443	217
10	75	34	200	110	113	134	48	193	342	365	567	270
11	82	33	237	90	113	123	47	154	397	334	484	390
12	78	33	197	90	114	124	44	137	342	323	263	360
13	70	33	168	95	123	124	41	164	316	331	279	322
14	72	39	150	95	121	128	37	161	353	581	274	284
15	69	202	142	95	115	130	33	145	441	737	236	240
16	66	268	140	95	110	97	32	152	419	437	159	185
17	57	199	130	95	107	125	32	159	473	227	126	193
18	53	178	130	95	102	96	34	347	584	413	151	244
19	52	172	120	100	127	203	35	497	890	450	120	298
20	64	171	110	100	197	156	38	784	1030	389	323	339
21	70	172	120	110	226	99	35	648	1530	283	436	276
22	63	174	130	120	235	67	33	528	1080	331	322	222
23	77	170	130	110	244	45	31	494	1160	310	228	198
24	91	167	130	104	229	33	47	350	716	338	140	184
25	102	184	130	120	231	27	31	530	678	806	125	171
26	111	166	130	117	251	24	29	437	762	878	94	144
27	114	165	140	108	271	21	29	625	736	890	126	133
28	130	170	140	107	229	24	34	858	652	890	130	127
29	128	180	155	111	---	31	49	680	481	789	108	103
30	141	190	166	111	---	32	53	1200	418	341	47	92
31	178	---	158	109	---	32	---	1430	---	235	60	---
TOTAL	2441	3543	4746	3578	4318	3935	1129	12169	22395	15204	7186	6350
MEAN	78.7	118	153	115	154	127	37.6	393	746	490	232	212
MAX	178	268	237	158	271	362	53	1430	1530	890	567	390
MIN	40	33	110	90	102	21	29	52	316	227	47	87
AC-FT	4840	7030	9410	7100	8560	7810	2240	24140	44420	30160	14250	12600

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1993, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	162	119	131	165	178	108	115	480	700	429	247	117							
MAX	1092	532	378	453	761	405	877	3205	1807	1705	1051	373							
(WY)	1985	1987	1987	1985	1985	1987	1987	1987	1987	1983	1984	1984							
MIN	5.13	6.05	8.40	8.45	18.5	9.44	10.8	14.1	36.4	30.5	55.2	9.12							
(WY)	1978	1975	1978	1978	1978	1975	1978	1981	1988	1981	1987	1977							

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1975 - 1993

	1992 CALENDAR YEAR	1993 WATER YEAR	1975 - 1993
ANNUAL TOTAL	76610	86994	
ANNUAL MEAN	209	238	
HIGHEST ANNUAL MEAN			^a 246
LOWEST ANNUAL MEAN			700
HIGHEST DAILY MEAN	760	1530	^b 84.1
LOWEST DAILY MEAN	21	21	^c 3.0
ANNUAL SEVEN-DAY MINIMUM	22	27	^d 4.1
INSTANTANEOUS PEAK FLOW		1700	^e 7150
INSTANTANEOUS PEAK STAGE		^e 6.93	^f 7.38
ANNUAL RUNOFF (AC-FT)	152000	172600	178400
10 PERCENT EXCEEDS	452	565	524
50 PERCENT EXCEEDS	166	151	110
90 PERCENT EXCEEDS	37	40	13

a-Average discharge for 34 years (water years 1940-73), 203 ft³/s; 147100 acre-ft/yr, prior to completion of Pueblo Dam.

b-Maximum daily discharge for period of record, 25800 ft³/s, May 20, 1955.

c-Minimum daily discharge for period of record, 0.9 ft³/s, Jul 31, Aug 1, and 3, 1964.

d-Maximum discharge and stage for period of record, 44000 ft³/s, May 20, 1955, gage height, 15.03 ft, site and datum then in use, from rating curve extended above 24000 ft³/s, on basis of slope-area measurement of peak flow.

e-Maximum gage height for current year, 7.74 Dec 23.

f-Maximum gage height for statistical period, 7.81 ft, May 24, 1987.

07124000 ARKANSAS RIVER AT LAS ANIMAS, CO---Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2380	2180	2420	2590	---	1860	3150	3030	941	1040	1930	---
2	2410	---	2320	2610	---	---	3100	2420	1000	881	1730	---
3	2510	3000	2430	2610	---	1960	2980	1570	922	885	1620	---
4	---	2970	2460	2610	---	1950	2950	1630	936	892	1230	---
5	---	3080	2560	2690	2740	2210	2990	1690	923	910	1250	---
6	3460	3070	2590	2640	2760	2520	3140	1850	937	869	1190	---
7	3420	3090	2630	2660	2730	2570	3110	1970	1040	915	1220	2180
8	---	2980	2110	2640	2730	2550	---	2150	1130	1030	1410	2340
9	---	3050	2120	2680	2700	2540	3480	2230	1360	971	1130	1600
10	---	3150	2110	2640	2630	2520	3300	1810	1450	1060	1080	1500
11	---	3140	2130	---	2550	---	3210	1940	1360	1160	1160	1420
12	---	3170	2320	---	2560	---	3100	2150	1310	1120	1530	1450
13	2520	3150	2510	---	2520	---	3060	1950	1320	---	1480	1500
14	2530	3010	2590	---	2540	2510	3190	1820	1260	1010	1470	1600
15	2640	1890	2630	---	2510	2490	3310	2010	1220	949	1550	1740
16	2650	1420	2560	---	2570	2640	3300	1920	1190	1090	1800	1880
17	2830	2080	---	---	2720	2420	3250	1910	1120	1420	2060	1850
18	2900	2200	---	---	2800	2280	3200	1530	936	1130	1770	1670
19	2800	2330	---	---	2570	1780	3210	1390	857	1030	2010	1620
20	2510	2360	---	---	2170	1830	3070	1040	919	1120	1610	1510
21	2480	2260	---	---	1960	2210	3120	987	773	1320	---	1670
22	2520	2210	---	---	2030	---	3330	1070	825	1290	1240	1800
23	---	2410	---	---	2060	2960	3530	1080	841	1240	1440	1860
24	---	2390	---	---	2150	3090	3080	1280	972	1360	1810	1910
25	---	2380	---	---	2080	3100	3420	1110	889	858	1850	1990
26	---	2470	2070	---	1980	3070	3450	1190	829	811	2060	2110
27	2130	2480	2310	---	1880	3060	3450	1070	831	788	1860	2100
28	2120	2120	2440	---	---	3130	3520	980	861	804	1860	2180
29	2090	2170	2500	---	---	3140	2890	1050	983	796	---	2340
30	2010	2330	2560	---	---	3140	2980	896	1060	1070	2840	2380
31	1820	---	2590	---	---	3180	---	883	---	1280	2630	---
MEAN	---	---	---	---	---	---	---	1600	1030	---	---	---

07124000 ARKANSAS RIVER AT LAS ANIMAS, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	21.0	11.7	12.3	7.6	3.0	.0	3.2	.0	8.0	1.7	5.9	2.4
2	21.2	12.1	---	---	3.3	.0	4.9	1.3	8.1	2.9	7.3	1.2
3	21.1	12.0	8.5	---	3.4	.1	3.6	1.7	7.0	4.5	9.2	5.1
4	---	---	9.2	1.7	2.5	.1	2.6	.0	---	---	8.2	4.8
5	---	---	9.8	1.5	.9	.2	3.1	.0	8.8	---	9.9	3.0
6	16.0	---	11.8	4.9	.2	.2	1.9	.0	8.6	.8	8.4	5.1
7	12.9	6.6	10.9	2.2	.3	.2	3.5	.0	7.9	1.7	12.3	3.7
8	16.6	5.7	12.0	2.8	.3	.3	.9	.0	8.2	3.1	14.2	5.7
9	15.6	7.1	12.4	4.2	.4	.3	.0	.0	6.5	4.4	15.5	7.0
10	14.7	9.7	10.6	4.3	.4	.0	.0	.0	5.8	.0	10.0	5.5
11	---	---	8.3	4.0	2.2	.0	.0	.0	4.6	.0	5.6	2.5
12	---	---	10.2	2.5	3.4	.7	.0	.0	5.5	.0	8.0	.8
13	19.8	---	10.0	1.8	2.1	.0	.0	.0	7.0	.0	8.7	.5
14	17.8	9.6	10.9	2.5	.3	.0	.0	.0	6.3	2.2	11.1	1.8
15	15.9	7.7	9.5	3.3	1.3	.0	.0	.0	4.3	.0	15.0	6.2
16	11.3	6.7	7.7	4.2	3.7	.2	.0	.0	1.3	.0	12.6	5.9
17	16.3	5.1	8.6	---	.8	.0	.0	.0	3.5	.0	6.0	3.0
18	15.3	6.6	6.9	6.1	.0	.0	.0	.0	4.7	.0	8.0	2.4
19	16.1	7.5	7.1	4.4	.0	.0	.0	.0	8.7	.0	12.6	4.0
20	17.2	7.6	4.8	2.2	.0	.0	.0	.0	8.7	1.4	14.7	7.0
21	17.6	9.1	4.4	1.7	.0	.0	.0	.0	8.0	3.4	17.0	8.5
22	18.7	11.3	3.6	.0	.0	.0	.0	.0	8.2	3.1	---	---
23	17.9	10.8	2.9	.9	.0	.0	5.1	.0	7.3	2.5	20.7	---
24	17.2	10.5	.9	.0	.0	.0	3.0	.0	7.4	1.7	21.6	5.9
25	---	---	1.1	.0	.0	.0	4.3	.0	5.6	2.9	22.3	6.6
26	---	---	.0	.0	.0	.0	6.5	.0	5.1	1.5	20.9	7.9
27	15.2	---	.0	.0	.0	.0	7.9	1.5	6.6	1.9	16.4	8.7
28	13.8	8.9	.0	.0	1.3	.0	5.9	1.3	8.9	2.4	20.2	7.2
29	9.5	7.5	.6	.0	2.5	.7	6.0	1.6	---	---	15.8	8.3
30	11.5	7.4	.0	.0	5.2	1.2	6.7	.0	---	---	16.1	7.7
31	10.4	8.3	---	---	3.0	.2	7.1	1.0	---	---	16.9	5.5
MONTH	---	---	---	---	5.2	.0	7.9	.0	---	---	---	---
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	21.2	5.0	13.5	8.3	22.4	19.5	28.1	21.1	29.5	21.8	25.3	15.4
2	19.3	6.3	17.2	5.5	23.0	19.8	27.6	22.7	29.2	20.2	21.9	17.3
3	9.9	3.0	21.6	11.0	21.5	18.6	26.5	22.7	21.6	18.2	23.3	15.1
4	16.9	5.1	20.8	14.0	19.5	17.6	24.6	21.1	23.6	17.9	25.0	16.8
5	21.4	5.9	19.9	13.9	19.7	16.7	25.1	20.1	25.3	20.9	23.7	18.9
6	19.2	7.1	22.1	14.0	22.0	18.1	24.9	19.9	26.2	21.1	22.2	18.2
7	16.0	5.3	21.5	14.1	20.4	17.5	25.5	20.5	27.0	20.6	22.9	15.8
8	19.5	4.8	21.7	13.6	21.6	16.5	27.9	21.1	28.4	21.6	25.5	15.7
9	22.5	5.7	18.3	12.1	23.4	17.7	26.2	22.2	27.3	22.9	21.9	15.2
10	23.2	7.7	20.5	12.2	23.8	17.7	27.4	21.0	26.9	23.7	---	---
11	22.6	7.8	14.3	11.6	24.1	18.3	24.2	21.3	---	---	---	---
12	20.4	8.2	20.2	11.6	26.3	19.1	27.3	21.2	---	---	---	---
13	20.0	7.9	24.1	13.6	26.4	20.6	27.2	21.7	---	---	20.3	13.0
14	20.1	5.8	24.6	15.3	24.5	20.7	25.1	22.4	---	---	17.9	11.2
15	21.5	6.0	26.2	15.6	25.2	19.9	25.3	21.4	---	---	20.5	12.5
16	17.1	5.4	21.3	16.4	24.7	19.6	28.2	22.6	---	---	22.0	14.6
17	22.2	7.3	19.0	15.3	20.8	19.0	25.6	21.6	---	---	22.5	15.5
18	23.5	8.5	21.5	14.5	20.0	17.8	25.8	20.6	---	---	18.7	16.4
19	17.8	6.9	22.0	16.7	21.1	16.9	27.1	23.1	---	---	20.5	14.2
20	21.7	5.6	21.5	17.5	23.6	19.1	26.6	22.7	---	---	21.2	15.2
21	22.6	6.4	22.8	18.5	23.3	20.4	28.4	21.7	25.6	---	21.5	15.7
22	23.6	---	23.3	18.9	24.5	20.7	26.7	21.3	---	---	18.9	16.3
23	22.0	---	23.5	18.4	24.8	21.6	27.3	20.8	26.7	---	16.7	13.7
24	17.9	9.8	20.0	16.5	23.7	20.6	26.9	20.3	28.7	---	17.6	13.2
25	25.1	7.6	18.2	15.6	23.7	19.3	26.4	22.8	28.7	20.5	20.7	12.7
26	26.8	8.1	22.6	16.3	25.9	21.2	26.2	22.5	28.4	19.2	20.1	13.5
27	25.3	10.6	23.1	18.5	27.2	22.8	25.7	22.2	23.7	20.4	20.8	11.5
28	25.5	11.9	23.2	19.6	27.3	22.7	25.2	21.9	25.9	18.9	19.5	12.1
29	25.2	13.0	23.1	19.4	26.0	22.2	26.4	22.1	26.3	19.7	20.5	11.7
30	24.0	11.5	22.2	19.2	26.0	20.1	29.3	22.7	---	---	19.1	12.0
31	---	---	22.4	19.1	---	---	30.6	23.3	---	---	---	---
MONTH	26.8	---	26.2	5.5	27.3	16.5	30.6	19.9	---	---	---	---

07124200 PURGATOIRE RIVER AT MADRID, CO

LOCATION.--Lat 37°07'46", long 104°38'20", in SW¹/₄NE¹/₄ sec.35, T.33 S., R.65 W., Las Animas County, Hydrologic Unit 11020010, on left bank 70 ft downstream from county bridge, 0.3 mi northeast of Madrid, and 1.0 mi downstream from Burro Canyon.

DRAINAGE AREA.--505 mi².

PERIOD OF RECORD.--Streamflow records, March 1972 to current year. Water-quality data available October 1978 to September 1981.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,261.61 ft above sea level, (U.S. Army, Corps of Engineers bench mark).

REMARKS.--Estimated daily discharges: Nov. 11-12, Nov. 22 to Jan. 28, Feb. 18-20, July 21-22, 30, Aug. 3, 11-16, 21, Sept. 8-10, 12-18, 22, 26-27. Records good except for those above 600 ft³/s, and estimated daily discharges, which are poor. Diversions for irrigation of about 6,000 acres upstream from station. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	22	29	21	19	21	37	104	370	281	105	119
2	22	20	29	21	17	20	34	88	345	259	108	110
3	21	22	29	20	18	20	46	96	328	231	89	112
4	21	20	29	19	16	17	63	84	297	226	143	95
5	20	20	28	18	16	16	93	97	271	207	129	91
6	20	22	27	17	24	18	78	96	250	184	163	105
7	23	22	25	16	22	18	68	89	237	171	149	88
8	23	25	25	16	21	19	75	91	216	157	108	110
9	22	24	25	15	22	20	94	98	201	151	110	103
10	22	23	24	15	21	21	89	84	188	146	137	96
11	21	23	23	15	20	22	83	72	151	139	89	87
12	21	25	21	15	22	27	82	76	131	156	92	84
13	20	29	20	16	22	19	78	86	139	173	113	80
14	19	28	19	16	18	22	80	100	168	168	150	75
15	18	29	17	17	21	25	73	103	193	153	117	70
16	19	28	17	18	14	22	63	145	229	134	96	66
17	20	28	18	19	17	21	58	188	319	476	92	65
18	19	26	19	20	19	22	53	232	312	212	89	64
19	19	25	19	20	20	22	51	241	298	168	92	64
20	19	26	20	20	23	22	49	235	290	155	93	61
21	19	26	20	20	22	24	47	290	285	140	105	57
22	20	25	20	19	19	23	50	341	291	129	98	48
23	20	25	20	19	24	23	59	321	260	119	92	39
24	19	25	20	19	20	23	72	356	239	107	76	33
25	20	25	20	19	19	23	66	529	453	103	61	35
26	19	25	20	20	19	25	55	359	292	89	287	44
27	20	26	20	20	18	36	60	301	244	81	252	45
28	20	26	21	21	17	35	71	395	244	77	197	42
29	22	27	21	21	---	30	86	420	245	81	141	41
30	22	28	21	23	---	33	95	365	264	86	128	39
31	21	---	21	21	---	38	---	376	---	99	132	---
TOTAL	633	745	687	576	550	727	2008	6458	7750	5058	3833	2168
MEAN	20.4	24.8	22.2	18.6	19.6	23.5	66.9	208	258	163	124	72.3
MAX	23	29	29	23	24	38	95	529	453	476	287	119
MIN	18	20	17	15	14	16	34	72	131	77	61	33
AC-FT	1260	1480	1360	1140	1090	1440	3980	12810	15370	10030	7600	4300

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1993, BY WATER YEAR (WY)

	MEAN	28.8	24.4	21.0	18.2	19.9	20.5	47.1	125	194	127	117	57.5
MAX	78.5	37.7	40.3	36.6	37.2	55.9	203	413	589	313	342	232	
(WY)	1983	1983	1984	1984	1983	1987	1987	1980	1983	1983	1981	1981	
MIN	9.89	12.7	8.47	7.60	5.80	9.72	12.4	26.6	34.8	18.6	18.9	11.0	
(WY)	1973	1977	1977	1973	1977	1979	1981	1981	1972	1972	1972	1978	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1972 - 1993

ANNUAL TOTAL	26767	31193	
ANNUAL MEAN	73.1	85.5	69.0
HIGHEST ANNUAL MEAN			145
LOWEST ANNUAL MEAN			21.6
HIGHEST DAILY MEAN	694	Jul 31	1640
LOWEST DAILY MEAN	12	Feb 4	3.0
ANNUAL SEVEN-DAY MINIMUM	17	Feb 2	3.0
INSTANTANEOUS PEAK FLOW		15	Jan 7
INSTANTANEOUS PEAK STAGE		4680	Jul 17
ANNUAL RUNOFF (AC-FT)	53090	7.37	Jul 17
10 PERCENT EXCEEDS	191	61870	50010
50 PERCENT EXCEEDS	26	240	176
90 PERCENT EXCEEDS	19	35	29
		19	12

a-Also occurred Feb 24 to Mar 2, 1977.

b-From rating curve extended above 300 ft³/s, on basis of drift-timed measurement, and slope-area measurements of peak flow.

c-From floodmarks.

07124400 TRINIDAD LAKE NEAR TRINIDAD, CO

LOCATION.--Lat 37°08'27", long 104°33'03", in NE1/4SW1/4 sec.27, T.33 S., R.64 W., Las Animas County, Hydrologic Unit 11020010, in valve house near center of dam on Purgatoire River and 3.2 mi southwest of courthouse in Trinidad.

DRAINAGE AREA.--672 mi².

PERIOD OF RECORD.--August 1977 to current year.

REVISED RECORDS.--WDR CO-78-1: 1977(M). WDR CO-83-1: 1981-82 (contents). WDR CO-89-1: 1988 (contents).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 6,073.64 ft above sea level, (levels by U.S. Army, Corps of Engineers).

REMARKS.--No estimated midnight contents. Records good. Reservoir is formed by a rock and earthfill dam completed in 1977. Storage began Aug. 19, 1977. Reservoir area-capacity tables were revised beginning Nov. 1, 1987 after a resurvey by the Corp of Engineers. Total capacity, 185,000 acre-ft, at elevation 6,284.99 ft. Elevation of high crest of spillway, 6,258 ft, with capacity of 121,400 acre-ft. Elevation of notch crest in spillway is 6,243.0 ft, capacity, 93,600 acre-ft. Permanent pool is 4,500 acre-ft at elevation 6,143.1 ft. Elevation of outlet invert is 6,095.0 ft. Reservoir is used for flood control, storage for irrigation, and to help control sedimentation. Figures given are total contents.

COOPERATION.--Capacity tables provided by U.S. Army, Corps of Engineers.

EXTREMES (AT 2400) FOR PERIOD OF RECORD.--Maximum contents, 61,800 acre-ft, Apr. 26, 1983, elevation, 6,222.66 ft; no contents prior to Aug. 19, 1977.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 24,200 acre-ft, June 22, 23, and 25, elevation, 6,183.50 ft; minimum contents, 4,260 acre-ft, Oct. 5, elevation, 6,142.41 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

6,140.0	3,260	6,170.0	15,600
6,145.0	5,010	6,175.0	18,500
6,150.0	6,690	6,180.0	21,700
6,155.0	8,670	6,185.0	25,300
6,160.0	10,800	6,190.0	29,300
6,165.0	13,100		

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4850	5430	6960	8940	10400	11400	13100	20300	20900	23500	18100	21800
2	4690	5290	7040	9040	10500	11400	13200	20500	21100	23500	18300	22000
3	4550	5290	7100	9090	10500	11500	13400	20700	21300	23400	18400	22300
4	4410	5350	7150	9150	10500	11500	13600	20900	21500	23300	18700	21900
5	4260	5390	7210	9180	10600	11600	14200	21100	21700	23200	18900	21500
6	4310	5460	7270	9220	10600	11600	14900	21300	21800	23000	19200	21500
7	4370	5520	7320	9290	10600	11600	15400	21400	21900	22700	19500	21700
8	4440	5600	7390	9340	10600	11700	15800	21600	22100	22400	19600	21700
9	4500	5670	7470	9370	10600	11700	16300	21700	22100	22100	19800	21700
10	4570	5740	7550	9420	10600	11800	16600	21800	22100	21700	20100	21700
11	4640	5850	7630	9460	10700	11800	17000	21800	22000	21400	20400	21700
12	4690	5900	7680	9510	10700	11900	17200	21600	21900	21100	20600	21700
13	4750	5980	7740	9520	10700	11900	17500	21400	21800	20900	20700	21600
14	4800	6070	7790	9570	10800	12000	17700	21100	21800	20700	21000	21700
15	4840	6150	7830	9630	10800	12000	17900	20800	21900	20700	21200	21700
16	4880	6240	7880	9680	10800	12100	18100	20500	22100	20500	21400	21700
17	4930	6310	7950	9730	10800	12100	18300	20500	22400	21400	21300	21700
18	4970	6390	8010	9770	10900	12100	18400	20400	22900	21900	21000	21800
19	5020	6460	8070	9830	11000	12200	18500	20400	23400	22000	20900	21800
20	5070	6540	8140	9890	11000	12200	18600	20400	23700	21900	20900	21800
21	5120	6540	8190	9950	11100	12300	18800	20300	24000	21800	20900	21800
22	5170	6490	8250	10000	11100	12300	18900	20400	24200	21600	21000	21800
23	5220	6470	8300	10000	11200	12400	19000	20500	24200	21300	21100	21700
24	5290	6610	8350	10100	11200	12400	19100	20500	24000	21000	21200	21700
25	5340	6650	8390	10100	11200	12500	19300	20900	24200	20700	21100	21700
26	5390	6690	8440	10100	11300	12500	19400	21300	24100	20400	21700	21700
27	5450	6730	8490	10200	11300	12600	19500	21700	23800	20000	22100	21600
28	5500	6780	8570	10200	11300	12700	19600	21900	23700	19600	22100	21300
29	5570	6860	8690	10300	---	12800	19800	21500	23600	19100	21900	21100
30	5640	6900	8800	10300	---	12900	20000	20800	23500	18700	22000	20800
31	5570	---	8870	10400	---	13000	---	20600	---	18300	21900	---
MAX	5640	6900	8870	10400	11300	13000	20000	21900	24200	23500	22100	22300
MIN	4260	5290	6960	8940	10400	11400	13100	20300	20900	18300	18100	20800

07124410 PURGATOIRE RIVER BELOW TRINIDAD LAKE, CO

LOCATION.--Lat 37°08'37", long 104°32'49", in NE¹/₄SW¹/₄ sec.27, T.33 S., R.64 W., Las Animas County, Hydrologic Unit 11020010, on left bank of flip bucket outlet, 500 ft downstream from base of dam, 0.8 mi upstream from Santa Fe Railroad bridge, and 3.0 mi southwest of courthouse in Trinidad.

DRAINAGE AREA.--672 mi².

PERIOD OF RECORD.--Streamflow records, December 1976 to current year. Water-quality data available, March 1977 to September 1984.

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Datum of gage is 6,073.64 ft above sea level, (levels by U.S. Army, Corps of Engineers). Auxillary gage is water-stage recorder in shelter about 1,000 ft downstream.

REMARKS.--No estimated daily discharges. Records good except those below 0.5 ft³/s, which are poor. Natural flow of stream affected by diversions upstream from station for irrigation of about 6,000 acres. Flow since Aug. 19, 1977, completely regulated by Trinidad Lake (station 07124400) immediately upstream. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	75	.38	.14	.28	.09	.07	3.2	246	274	237	198
2	79	74	.38	.14	.28	.08	.07	.51	269	274	4.1	.31
3	78	24	.38	.14	.28	.08	.09	.47	252	274	.16	.25
4	78	.41	.38	.14	.27	.09	.08	.44	223	255	3.7	266
5	76	.38	.38	.14	.22	.11	.08	.45	220	248	10	276
6	6.6	.42	.38	.14	6.9	.11	.08	5.7	211	281	7.9	107
7	6.4	.40	.38	.14	24	.10	.08	21	195	308	5.3	37
8	3.1	.39	.38	.13	32	.10	.08	30	188	312	9.6	94
9	.58	.40	.38	.13	22	.08	.08	29	215	312	9.8	128
10	.54	.44	.38	.12	.44	.08	.08	65	239	311	6.3	93
11	.48	.43	.38	.11	.38	.08	.08	87	244	310	1.7	74
12	.44	.38	.38	.11	.38	.08	.08	159	229	305	.14	74
13	2.5	.38	.38	.11	.38	.08	.08	206	229	286	.14	74
14	4.1	.35	.38	.11	.34	.08	.08	248	215	245	.14	74
15	3.9	.33	.38	.11	.29	.08	.08	268	205	177	.12	61
16	3.7	.33	.38	.11	.27	.08	.08	266	206	241	6.2	54
17	3.5	.33	.38	.11	.27	.08	.08	266	207	182	106	54
18	5.0	.33	.38	.11	.26	.07	.08	266	124	.06	208	54
19	4.1	.33	.38	.21	.22	.11	.10	266	144	126	160	54
20	2.7	.43	.38	.22	.22	.11	2.3	266	189	188	116	54
21	4.0	25	.47	.22	.20	.11	5.0	265	210	188	101	60
22	3.8	35	.45	.28	.18	.12	12	267	220	217	49	63
23	2.1	12	.18	.33	.15	.11	12	269	349	233	4.4	63
24	.44	.48	.18	.29	.12	.10	9.5	289	367	232	16	63
25	.43	.44	.18	.30	.11	.08	11	299	366	232	131	63
26	.40	.41	.18	.33	.11	.08	9.6	276	382	231	187	63
27	.42	.40	.15	.28	.11	.07	14	310	382	250	250	114
28	.35	.38	.14	.28	.10	.06	15	372	342	269	356	142
29	.33	.38	.14	.28	---	.07	11	649	294	273	212	142
30	.33	.38	.14	.28	---	.08	9.3	767	274	272	125	190
31	51	---	.14	.28	---	.08	---	459	---	271	179	---
TOTAL	506.24	254.33	9.95	5.82	90.76	2.73	112.23	6675.77	7436	7577.06	2502.70	2789.56
MEAN	16.3	8.48	.32	.19	3.24	.088	3.74	215	248	244	80.7	93.0
MAX	84	75	.47	.33	32	.12	15	767	382	312	356	276
MIN	.33	.33	.14	.11	.10	.06	.07	.44	124	.06	.12	.25
AC-FT	1000	504	20	12	180	5.4	223	13240	14750	15030	4960	5530

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1993, BY WATER YEAR (WY)

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	20.9	7.98	2.89	2.99	3.97	4.19	33.2	157	201	176	148	115					
MAX	96.0	25.9	11.9	14.7	13.1	17.8	91.7	266	614	306	285	283					
(WY)	1984	1984	1979	1977	1977	1977	1982	1983	1983	1983	1991	1984					
MIN	.35	.015	.067	.012	.056	.007	.073	25.5	51.5	40.5	36.1	5.15					
(WY)	1989	1982	1992	1985	1984	1982	1984	1980	1977	1977	1977	1987					

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1977 - 1993
ANNUAL TOTAL	29468.21	27963.15	
ANNUAL MEAN	80.5	76.6	76.2
HIGHEST ANNUAL MEAN			146
LOWEST ANNUAL MEAN			42.8
HIGHEST DAILY MEAN	513	767	917
LOWEST DAILY MEAN	.00	.06	.00
ANNUAL SEVEN-DAY MINIMUM	.01	.07	.00
INSTANTANEOUS PEAK FLOW		872	963
INSTANTANEOUS PEAK STAGE		7.76	7.89
ANNUAL RUNOFF (AC-FT)	58450	55460	55180
10 PERCENT EXCEEDS	250	267	239
50 PERCENT EXCEEDS	18	.58	12
90 PERCENT EXCEEDS	.11	.08	.04

a-Also occurred Jan 25-27.

b-Also occurred Jul 18.

c-No flow at times most years.

07126140 VAN BREMER ARROYO NEAR TYRONE, CO

LOCATION.--Lat 37°23'58", long 104°06'55", in SW¹/4SW¹/4, sec.27, T.30 S., R. 60 W., Las Animas County, Hydrologic Unit 11020010, on left bank, on Pinon Canyon Army Maneuver Site, 200 ft downstream from military road at gas line crossing near Brown Sheep Camp, 6 mi southeast of Tyrone, and 11 mi upstream from mouth.

DRAINAGE AREA.--132 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1985 to current year.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 5,310 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Oct. 1-8, and Mar. 30 to Apr. 13. Records good except for estimated daily discharges, which are poor. Natural flow affected by return flow from irrigation and storage in a small channel reservoir upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	1.6	.00	.00	2.0
2	.00	.00	.00	.14	.00	.00	.00	.00	2.7	.00	.00	1.3
3	.30	.00	.00	1.2	.00	.00	.00	.00	4.2	.00	.00	1.0
4	1.2	.00	.00	.54	.00	.00	.00	.00	5.1	.25	.00	.32
5	5.0	.00	.00	.05	.00	.00	.00	.00	5.3	.01	.00	.00
6	5.3	.00	.00	.00	.00	.00	.00	.00	2.8	.00	.00	.00
7	4.4	.00	.00	.00	.00	.00	.00	.00	2.8	.00	.00	.00
8	2.2	.00	.00	.00	.00	.00	.00	.00	3.8	.00	.08	.00
9	1.3	.00	.00	.00	.00	.00	.00	.00	6.0	.00	.83	.00
10	2.7	.00	.00	.00	.00	.00	.00	.00	6.4	.03	1.2	.00
11	5.2	.00	.00	.00	.00	.00	.00	.00	5.3	.00	1.5	.00
12	5.8	.00	.00	.00	.00	.00	.00	.00	2.0	.15	1.2	.00
13	4.7	.00	.00	.00	.00	.00	.00	.00	.95	.03	.51	.00
14	6.4	.00	.00	.00	.00	.00	.00	.00	.55	.00	1.3	.00
15	4.2	.00	.00	.00	.00	.00	.00	.00	.18	.00	.81	.00
16	3.5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.70	.00
17	2.3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.20	.00
18	1.3	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.75	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.52	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.40	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.80	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	2.3	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	1.5	.00
30	.00	.00	.00	.00	---	.00	.00	.31	.00	.00	.34	.00
31	.00	---	.00	.00	---	.00	---	.73	---	.00	.33	---
TOTAL	57.48	0.00	0.00	1.93	0.00	0.00	0.00	1.04	49.68	0.47	13.60	4.62
MEAN	1.85	.000	.000	.062	.000	.000	.000	.034	1.66	.015	.44	.15
MAX	6.4	.00	.00	1.2	.00	.00	.00	.73	6.4	.25	2.3	2.0
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	114	.00	.00	3.8	.00	.00	.00	2.1	99	.9	27	9.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1993, BY WATER YEAR (WY)

	MEAN	2.55	.058	.029	.031	.061	.006	.016	1.01	2.01	.70	2.61	2.50
MAX	17.3	.23	.11	.16	.48	.035	.10	5.11	7.44	2.74	8.30	10.3	
(WY)	1986	1986	1987	1987	1987	1987	1986	1987	1985	1990	1986	1988	
MIN	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.015	.004	.000
(WY)	1990	1990	1990	1989	1989	1989	1989	1990	1990	1990	1993	1985	1991

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1985 - 1993

ANNUAL TOTAL	265.89	128.82	
ANNUAL MEAN	.73	.35	.89
HIGHEST ANNUAL MEAN			2.53
LOWEST ANNUAL MEAN			.049
HIGHEST DAILY MEAN	124	6.4	171
LOWEST DAILY MEAN	.00	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00
INSTANTANEOUS PEAK FLOW		9.6	11
INSTANTANEOUS PEAK STAGE		4.39	10.02
ANNUAL RUNOFF (AC-FT)	527	256	644
10 PERCENT EXCEEDS	1.2	1.1	2.0
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

a-Also occurred Jun 10.

b-No flow many days most years.

c-From rating curve extended above 45 ft³/s, on basis of flow through culvert computation.

d-Maximum gage height, 10.17 ft, Jun 7, 1992.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[illegible]

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[illegible]

ARKANSAS RIVER BASIN

07126140 VAN BREMER ARROYO NEAR TYRONE, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

[illegible]

07126200 VAN BREMER ARROYO NEAR MODEL, CO

LOCATION.--Lat 37°20'45", long 103°57'27", in sec.13, T.31 S., R.59 W., Las Animas County, Hydrologic Unit 11020010, on right bank 3 mi upstream from mouth, 16 mi east of Model, and 33 mi northeast of Trinidad.

DRAINAGE AREA.--175 mi² of which 11.8 mi² is noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1966 to current year.

REVISIONS.--WDR CO-84-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry and crest-stage gage. Elevation of gage is 4,960 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges during water year 1992. Records fair. Estimated daily discharges: Water year 1993, Oct. 12, Mar. 6, Aug. 23-24, and Sept. 3. Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.12	.08	.10	.12	.08	.10	.08	.13	.07	.06	.19
2	.06	.12	.08	.10	.12	.10	.11	.06	.10	.06	.06	.09
3	.06	.11	.08	.12	.10	.12	.12	.06	.08	.06	.06	.06
4	.05	.12	.08	.12	.10	.15	.12	.06	.08	.06	.06	.06
5	.04	.10	.08	.11	.10	.16	.12	.06	.09	.06	.06	.06
6	.06	.12	.08	.12	.10	.12	.12	.06	.08	.07	.06	.06
7	.06	.12	.08	.20	.10	.12	.12	.06	92	.06	.06	.06
8	.06	.12	.08	.12	.10	.10	.12	.06	27	.07	.06	.06
9	.06	.12	.11	.12	.10	.10	.12	.06	5.5	.08	.06	.06
10	.06	.12	.12	.12	.10	.10	.12	.06	1.8	.08	.07	.06
11	.06	.15	.11	.12	.10	.10	.11	.07	.57	.08	.09	.06
12	.06	.12	.10	.12	.10	.10	.10	.08	.30	.58	.06	.06
13	.06	.10	.10	.12	.12	.10	.10	.08	.23	.22	.06	.06
14	.06	.10	.10	.11	.12	.10	.10	.08	.15	.07	.06	.06
15	.06	.10	.10	.10	.12	.10	.10	.08	.10	.07	.06	.06
16	.06	.15	.10	.11	.12	.10	.11	.08	.08	.06	.06	.06
17	.06	.20	.10	.10	.12	.08	.14	.08	.06	.06	.06	.26
18	.04	.17	.10	.10	.12	.09	.12	.08	.06	.06	.06	.38
19	.04	.22	.11	.12	.12	.16	.15	.08	.06	.06	.06	.20
20	.04	.14	.12	.12	.11	.10	.12	.06	.08	.08	.06	.42
21	.04	.12	.12	.12	.10	.10	.10	.06	.08	1.4	.06	2.3
22	.05	.10	.12	.12	.12	.10	.10	.06	.08	.15	.05	2.8
23	.06	.10	.13	.12	.12	.10	.10	.06	.08	.11	.04	2.3
24	.04	.11	.11	.12	.08	.10	.10	.06	.07	.07	.05	1.8
25	.06	.12	.10	.12	.08	.10	.10	.06	.28	.96	.06	.53
26	.06	.12	.10	.12	.08	.10	.10	.07	.19	.38	.08	.28
27	.06	.08	.10	.12	.08	.10	.10	.08	.10	.12	.10	.16
28	.08	.08	.10	.12	.10	.10	.10	.09	.10	.06	2.8	.10
29	.08	.08	.10	.11	.12	.10	.08	.10	.09	.06	3.2	.08
30	.08	.08	.10	.10	---	.10	.08	.10	.08	.06	.65	.07
31	.11	---	.10	.12	---	.10	---	.11	---	.06	.29	---
TOTAL	1.83	3.61	3.09	3.64	3.07	3.28	3.28	2.24	129.70	5.44	8.62	12.80
MEAN	.059	.12	.10	.12	.11	.11	.11	.072	4.32	.18	.28	.43
MAX	.11	.22	.13	.20	.12	.16	.15	.11	92	1.4	3.2	2.8
MIN	.04	.08	.08	.10	.08	.08	.08	.06	.06	.06	.04	.06
AC-FT	3.6	7.2	6.1	7.2	6.1	6.5	6.5	4.4	257	11	17	25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1992, BY WATER YEAR (WY)

	MEAN	1.23	.17	.16	.18	.21	.19	.20	3.30	2.34	5.02	9.61	1.98
MAX	16.0	.35	.26	.43	.59	.40	.73	30.1	20.6	36.4	104	9.89	
(WY)	1986	1973	1973	1973	1987	1973	1973	1981	1969	1977	1981	1972	
MIN	.059	.067	.031	.064	.11	.072	.075	.072	.030	.039	.11	.041	
(WY)	1992	1984	1984	1984	1992	1979	1979	1992	1968	1978	1991	1991	

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1966 - 1992
ANNUAL TOTAL	36.45	180.60	
ANNUAL MEAN	.10	.49	2.07
HIGHEST ANNUAL MEAN			12.3
LOWEST ANNUAL MEAN			.11
HIGHEST DAILY MEAN	1.2 Aug 4	92 Jun 7	802 May 30 1981
LOWEST DAILY MEAN	^a .03 Sep 6	^b .04 Oct 5	^c .00 Jun 7 1968
ANNUAL SEVEN-DAY MINIMUM	.03 Sep 16	^d .04 Oct 18	^d .00 Jun 7 1968
INSTANTANEOUS PEAK FLOW		^d 279 Jun 7	^d 6240 May 26 1967
INSTANTANEOUS PEAK STAGE		3.45 Jun 7	^{e,f} 9.40 May 26 1967
ANNUAL RUNOFF (AC-FT)	72	358	1500
10 PERCENT EXCEEDS	.17	.15	.47
50 PERCENT EXCEEDS	.09	.10	.16
90 PERCENT EXCEEDS	.04	.06	.07

a-Also occurred Sep 7-9, 12, and 16-24.

b-Also occurred Oct 18-21, 24, and Aug 23.

c-Also occurred Jun 8-13, 1968.

d-From rating curve extended above 65 ft³/s, on basis of slope-area measurement of peak flow.

e-From floodmarks.

f-Maximum gage height, 9.98 ft, Aug 9, 1979, from floodmark.

07126200 VAN BREMER ARROYO NEAR MODEL, CO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.16	.11	.12	.10	.20	.18	.18	.08	.04	.52	.18
2	.04	.12	.12	.14	.10	.25	.15	.20	.08	.04	.56	.17
3	1.2	.12	.12	.13	.10	.19	.63	.12	.08	.04	.29	.17
4	5.1	.11	.12	.11	.10	.13	.44	.10	.08	.04	.21	.17
5	5.4	.10	.14	.10	.11	.12	.24	.08	.08	.04	.19	.17
6	5.9	.10	.14	.10	.12	.11	.17	.08	.08	.04	5.0	.17
7	5.3	.10	.13	.10	.12	.10	.14	.08	.05	.04	.51	.17
8	4.4	.10	.12	.10	.11	.10	.14	.08	.04	.04	.22	.17
9	2.5	.10	.12	.10	.10	.10	.13	.08	.04	.04	.14	.17
10	.80	.10	.12	.10	.14	.10	.12	.08	.05	.04	.14	.12
11	.40	.13	.13	.11	.17	.12	.12	.06	.06	.04	.12	.13
12	1.5	.14	.14	.12	.15	.14	.12	.06	1.0	.06	.13	.14
13	4.5	.14	.14	.09	.14	.12	.12	.07	1.7	.06	.31	.12
14	3.5	.14	.17	.12	.13	.12	.12	.08	.54	.06	.27	.16
15	4.8	.13	.14	.13	.12	.12	.12	.07	.30	.06	.14	.17
16	3.3	.12	.16	.13	.12	.12	.12	.10	.18	.06	.14	.15
17	2.6	.12	.15	.13	.10	.12	.10	.17	.14	.06	.10	.14
18	1.9	.12	.14	.11	.10	.12	.09	.12	.14	.07	10	.14
19	.75	.12	.14	.10	.15	.11	.06	.10	.12	.15	3.8	.14
20	.55	.13	.13	.10	.16	.08	.06	.10	.11	.19	.47	.13
21	.37	.22	.13	.12	.11	.10	.06	.10	.10	.11	.26	.12
22	.26	.17	.14	.12	.10	.11	.08	.09	.08	.09	.17	.12
23	.17	.17	.14	.12	.10	.13	.08	.06	.06	.08	.16	.12
24	.14	.15	.14	.09	.10	.12	.08	.06	.06	.07	.14	.09
25	.13	.13	.14	.10	.10	.11	.09	.09	.06	.06	.16	.10
26	.10	.12	.14	.10	.10	.12	.10	.10	.06	.05	.20	.10
27	.10	.12	.14	.10	.10	.20	.08	.10	.06	.04	.99	.10
28	.09	.11	.16	.10	.10	.15	.08	.10	.06	3.9	2.5	.10
29	.09	.10	.20	.10	---	.29	.08	.10	.05	.79	.53	.10
30	.10	.10	.15	.10	---	.49	.08	.10	.04	.17	.27	.10
31	.11	---	.13	.10	---	.26	---	.09	---	.11	.20	---
TOTAL	56.14	3.79	4.29	3.39	3.25	4.65	4.18	3.00	5.58	6.68	28.84	4.13
MEAN	1.81	.13	.14	.11	.12	.15	.14	.097	.19	.22	.93	.14
MAX	5.9	.22	.20	.14	.17	.49	.63	.20	1.7	3.9	10	.18
MIN	.04	.10	.11	.09	.10	.08	.06	.06	.04	.04	.10	.09
AC-FT	111	7.5	8.5	6.7	6.4	9.2	8.3	6.0	11	13	57	8.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1993, BY WATER YEAR (WY)

MEAN	1.25	.17	.16	.18	.21	.19	.20	3.18	2.26	4.85	9.30	1.91
MAX	16.0	.35	.26	.43	.59	.40	.73	30.1	20.6	36.4	104	9.89
(WY)	1986	1973	1973	1973	1987	1973	1973	1981	1969	1977	1981	1972
MIN	.059	.067	.031	.064	.11	.072	.075	.072	.030	.039	.11	.041
(WY)	1992	1984	1984	1984	1992	1979	1979	1992	1968	1978	1991	1991

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1966 - 1993
ANNUAL TOTAL	236.29	127.92	
ANNUAL MEAN	.65	.35	2.00
HIGHEST ANNUAL MEAN			12.3
LOWEST ANNUAL MEAN			.11
HIGHEST DAILY MEAN	92	10	802
LOWEST DAILY MEAN	a .04	b .04	c .00
ANNUAL SEVEN-DAY MINIMUM	.05	.04	.00
INSTANTANEOUS PEAK FLOW		d 151	d 6240
INSTANTANEOUS PEAK STAGE		2.78	e, f 9.40
ANNUAL RUNOFF (AC-FT)	469	254	1450
10 PERCENT EXCEEDS	.38	.38	.47
50 PERCENT EXCEEDS	.10	.12	.15
90 PERCENT EXCEEDS	.06	.06	.07

a-Also occurred Oct 1 and 2.

b-Also occurred Oct 2, Jun 7, 8, Jun 30 to Jul 11, and Jul 27.

c-Also occurred Jun 8-13, 1968.

d-From rating curve extended above 65 ft³/s, on basis of slope-area measurement of peak flow.

e-From floodmarks.

f-Maximum gage height, 9.98 ft, Aug 9, 1979, from floodmark.

07126200 VAN BREMER ARROYO NEAR MODEL, CO---Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--January 1983 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1983 to current year.

WATER TEMPERATURE: January 1983 to current year.

INSTRUMENTATION.--Water-quality monitor.

REMARKS.--Daily data that are not published are either missing or of unacceptable quality. Records for the 1992 and 1993 water years are good. Daily maximum and minimum specific conductance and daily mean water temperature data are available in district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 8,860 microsiemens, May 13, 1987; minimum, 130 microsiemens, Aug. 22, 1984.

WATER TEMPERATURE: Maximum, 34.0°C, June 15, 28, 1986; minimum, 0.0°C, many days during the winter in most years.

EXTREMES FOR 1992 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,330 microsiemens, Aug. 28; minimum, 473 microsiemens, June 7.

WATER TEMPERATURE: Maximum, 30.9°C, July 24; minimum, 1.5°C, Nov. 3.

EXTREMES FOR 1993 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,710 microsiemens, June 13; minimum, 576 microsiemens, July 28.

WATER TEMPERATURE: Maximum, 30.0°C, July 31; minimum, 1.0°C, Nov. 24-25.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1950	1960	1900	1920	1850	1860	1910	1910	1950	1680	1470	1220
2	1950	1940	1960	1970	1830	1880	1910	1890	1920	1680	1500	1300
3	1960	1980	1950	1950	1800	1880	1920	1880	1910	1680	1530	1390
4	1940	1960	1920	1950	1780	1890	1920	1890	1870	1700	1550	1440
5	1940	1950	1940	1940	1770	1900	1920	1900	1880	1710	1560	1480
6	1950	1960	1960	1920	1760	1910	1920	1900	1870	1740	1590	1500
7	1950	1950	2000	1800	1800	1900	1920	1910	1080	1740	1620	1530
8	1960	1900	2010	1810	1820	1900	1920	1940	862	1730	1650	1530
9	1940	1850	1990	1780	1830	1880	1930	1940	899	1740	1670	1550
10	1940	1830	1960	1800	1840	1900	1930	1930	967	1750	1650	1550
11	1960	1820	1950	1820	1840	1890	1930	1990	1030	1760	1660	1570
12	1940	1830	1920	1860	1830	1900	1930	1990	1130	1630	1710	1590
13	1930	1830	1950	1870	1820	1900	1940	1970	1190	1630	1750	1590
14	1940	1820	1950	1880	1820	1900	1930	1970	1260	1660	1760	1600
15	1940	1820	1930	1900	1830	1900	1930	1950	1320	1660	1780	1600
16	1930	1760	1950	1940	1830	1900	1930	1940	1370	1660	1790	1610
17	1940	1750	1970	1930	1830	1910	1950	1930	1410	1640	1790	1620
18	1950	1820	1980	1930	1840	1900	1930	1930	1420	1640	1790	1720
19	1950	1770	1980	1970	1850	1900	1910	1930	1430	1630	1800	1750
20	1960	1720	1960	1970	1840	1890	1910	1930	1440	1630	1820	1730
21	1950	1790	1940	1970	1850	1900	1910	1920	1460	1210	1810	1790
22	1950	1780	1890	1980	1870	1890	1900	1900	1480	1070	1820	1730
23	1950	1790	1870	1970	1880	1890	1890	1900	1540	1110	1810	1640
24	1940	1840	1870	1970	1860	1890	1880	1930	1620	1240	1760	1610
25	1960	1830	1870	1960	1850	1890	1890	1930	1500	1280	1790	1560
26	1960	1860	1890	1930	1820	1910	1880	1940	1420	1100	1770	1550
27	1970	1880	1900	1900	1840	1900	1890	1930	1620	1130	1750	1560
28	1970	1900	1910	1870	1850	1900	1890	1940	1660	1260	1880	1590
29	1970	1900	1940	1870	1860	1900	1890	1960	1670	1360	1360	1620
30	1930	1910	1960	1860	---	1900	1890	1930	1680	1420	1130	1620
31	1940	---	1940	1850	---	1900	---	1930	---	1440	1170	---
MEAN	1950	1860	1940	1900	1830	1900	1910	1930	1460	1530	1660	1570

07126200 VAN BREMER ARROYO NEAR MODEL, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	22.2	12.4	7.5	2.8	5.3	3.4	---	4.3	8.2	4.1	13.6	5.1
2	21.8	13.0	4.0	2.5	6.0	3.1	6.2	3.9	9.4	5.1	15.5	6.5
3	22.1	12.8	4.5	1.5	5.6	3.8	6.2	3.7	7.3	4.5	12.0	7.2
4	16.7	11.4	6.5	3.0	5.8	4.1	8.3	4.2	6.3	4.1	13.0	8.3
5	17.6	8.4	10.1	4.1	6.6	4.4	7.6	4.3	7.7	3.7	14.2	7.1
6	18.4	8.7	12.6	5.1	8.0	4.6	8.3	3.8	8.3	4.4	15.2	6.4
7	20.0	10.0	11.5	6.0	8.2	3.8	6.8	4.1	8.3	4.3	14.8	6.7
8	19.7	10.8	12.5	4.4	8.4	4.5	6.2	4.0	8.9	4.6	15.3	7.3
9	20.0	---	13.3	5.9	8.4	4.2	6.5	4.0	9.9	4.1	8.3	4.0
10	20.3	11.3	12.0	7.8	7.5	4.1	7.0	4.1	9.8	4.5	12.6	2.6
11	20.0	11.4	8.9	6.4	5.3	4.5	5.7	4.0	9.5	4.9	13.5	4.2
12	20.2	11.1	11.7	4.2	6.7	4.3	5.1	3.0	10.3	4.8	13.1	4.5
13	19.0	12.6	11.9	4.1	6.8	3.7	5.8	2.7	7.8	4.5	15.5	5.6
14	17.7	11.0	11.4	5.7	6.2	3.9	6.0	3.4	10.2	4.3	16.1	6.3
15	18.9	10.1	7.7	6.2	6.4	4.2	5.1	3.2	9.9	4.4	16.0	6.3
16	19.4	10.4	6.3	3.7	6.5	4.1	5.5	2.5	7.9	4.6	17.3	7.4
17	19.2	10.6	9.9	3.5	6.0	4.2	4.6	3.6	8.2	3.4	12.4	7.4
18	16.2	10.0	9.8	4.7	5.4	4.2	5.8	3.3	8.5	3.6	14.0	7.5
19	16.0	8.2	6.9	3.3	6.9	2.8	5.7	3.5	9.6	3.6	14.9	7.9
20	16.1	8.4	8.0	1.9	5.7	4.0	6.4	3.8	9.6	4.0	15.7	6.3
21	15.7	10.8	10.0	3.5	6.9	3.8	6.8	3.9	10.3	5.4	16.2	6.8
22	17.4	9.3	6.3	3.6	6.1	4.0	6.6	4.0	11.0	4.5	11.7	7.2
23	17.6	9.6	6.8	2.5	6.3	3.7	6.4	3.8	9.1	5.6	16.1	5.5
24	16.1	9.0	6.0	2.0	6.6	4.1	8.1	3.7	9.8	4.8	13.6	6.9
25	15.3	7.9	9.1	3.5	7.0	4.3	7.6	4.0	6.9	4.7	17.9	7.4
26	15.2	7.6	9.9	4.0	6.4	4.5	7.3	4.5	9.3	3.3	15.5	7.4
27	14.6	8.6	8.5	4.9	6.8	4.2	7.9	4.0	11.1	5.8	12.6	8.0
28	10.9	5.4	8.1	5.0	6.8	4.1	8.2	4.1	14.0	5.0	14.0	7.7
29	8.1	4.3	6.4	4.4	7.2	4.4	8.2	4.1	14.1	4.7	16.6	8.6
30	5.1	1.9	5.4	3.6	6.9	4.0	8.7	4.2	---	---	18.6	8.0
31	4.7	2.6	---	---	5.7	4.4	9.3	4.0	---	---	12.1	8.4
MONTH	22.2	---	13.3	1.5	8.4	2.8	---	2.5	14.1	3.3	18.6	2.6
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	17.8	7.2	26.3	14.0	18.2	13.3	26.9	17.6	29.1	17.3	24.9	16.7
2	14.8	8.0	23.4	13.6	21.3	11.9	27.7	18.2	29.2	18.3	25.1	16.6
3	18.8	6.8	24.2	13.0	24.1	13.4	25.4	17.0	29.0	19.2	25.0	15.9
4	18.8	8.7	24.5	12.8	24.3	15.2	22.8	19.1	28.5	18.9	---	17.8
5	18.4	9.3	23.3	13.3	24.6	16.1	28.2	17.6	26.3	18.7	23.8	15.6
6	20.7	8.9	23.0	11.4	24.4	16.2	29.5	19.5	26.6	19.3	23.8	15.3
7	20.4	10.2	24.8	13.8	16.5	5.7	26.5	19.2	28.3	16.7	23.7	14.9
8	19.7	10.8	23.2	14.6	16.4	13.6	25.9	19.5	28.8	19.5	24.8	15.7
9	22.4	10.3	21.8	13.7	16.6	15.0	26.5	19.1	28.5	19.8	23.9	14.9
10	20.0	11.3	16.7	13.3	21.7	13.8	23.7	19.8	24.4	19.6	21.9	14.5
11	21.6	11.2	23.5	---	24.8	17.4	27.5	18.3	28.8	18.3	24.4	13.9
12	21.0	11.4	23.3	13.5	26.9	16.4	26.8	19.6	27.1	18.8	24.8	16.5
13	23.9	12.6	24.0	14.5	27.9	17.7	28.5	20.6	27.5	18.4	25.3	16.4
14	22.4	13.5	26.5	14.1	26.9	16.6	27.7	18.5	28.4	17.7	23.2	16.0
15	21.4	13.0	22.8	16.0	26.0	15.5	27.0	19.5	28.6	17.9	21.4	17.5
16	20.4	13.3	24.4	14.0	24.9	15.6	26.0	19.0	27.8	19.1	23.0	16.1
17	22.0	11.2	---	14.8	25.1	14.1	27.3	18.5	28.2	19.1	24.6	16.2
18	16.2	10.3	---	14.2	26.4	16.1	26.5	18.5	26.2	19.2	22.5	16.4
19	13.0	8.8	26.4	14.5	25.0	17.5	27.1	17.5	28.2	18.1	23.2	16.7
20	16.5	8.9	24.2	15.1	22.5	18.3	27.5	19.6	28.6	18.6	22.4	14.9
21	21.5	8.5	25.4	15.1	27.6	17.6	25.5	19.8	27.9	19.0	19.2	15.9
22	19.8	10.6	20.0	15.4	28.3	16.2	23.5	18.5	27.3	19.0	19.8	15.0
23	21.4	10.6	17.3	14.6	28.1	19.0	29.4	18.9	26.0	18.2	21.0	15.6
24	20.2	10.8	22.3	13.8	27.5	18.4	30.9	18.9	21.4	17.3	21.7	16.1
25	22.3	10.9	17.2	13.4	26.2	18.0	29.2	20.4	22.0	16.1	21.4	15.8
26	23.1	11.3	25.1	11.4	24.8	17.9	26.3	20.4	23.9	16.0	20.8	12.6
27	23.4	12.1	18.2	11.7	21.9	16.9	30.6	18.9	26.3	15.3	21.6	12.3
28	22.4	13.4	16.0	10.8	26.1	16.1	29.3	19.1	25.4	15.5	20.7	12.1
29	25.5	12.9	21.0	10.6	---	18.3	27.7	18.7	22.4	17.7	21.3	12.2
30	24.7	14.3	16.5	13.1	28.1	18.1	28.0	18.2	22.7	18.2	21.8	12.4
31	---	---	21.1	12.9	---	---	27.6	18.2	22.9	16.6	---	---
MONTH	25.5	6.8	---	---	---	5.7	30.9	17.0	29.2	15.3	---	12.1

07126200 VAN BREMER ARROYO NEAR MODEL, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1800	1580	1890	1790	1730	1720	1790	1810	1880	1920	1360	1200
2	1800	1610	1910	1790	1710	1690	1790	1860	1870	1910	1330	1260
3	1820	1610	1900	1780	1690	1750	1650	1880	1870	1910	1420	1340
4	1880	1630	1890	1780	1680	1760	1710	1860	1850	1890	1460	1340
5	1690	1650	1860	1760	1690	1760	1740	1850	1850	1870	1460	1370
6	1500	1660	1860	1800	1700	1760	1760	1850	1870	1850	975	1410
7	1420	1660	1870	1820	1710	1760	1760	1850	1880	1850	1430	1410
8	1370	1670	1870	1850	1720	1770	1770	1860	1860	1850	1490	1420
9	1350	1690	1850	1870	1720	1790	1770	1860	1840	1850	1540	1440
10	1350	1700	1840	1900	1690	1800	1760	1890	1840	1840	1570	1470
11	1370	1690	1850	1900	1690	1820	1780	1880	1860	1850	1600	1460
12	1390	1700	1840	1900	1710	1820	1790	1880	2010	1850	1600	1480
13	1390	1710	1820	1940	1730	1850	1810	1900	2460	1890	1500	1500
14	1420	1720	1840	1960	1740	1840	1820	1910	2620	1910	1380	1500
15	1410	1710	1840	1950	1730	1840	1830	1900	2460	1930	1550	1500
16	1310	1720	1790	1950	1790	1850	1830	1890	2340	1950	1590	1530
17	1280	1730	1840	1930	1810	1850	1850	1850	2230	1950	1600	1560
18	1300	1730	1810	1840	1820	1860	1850	1900	2180	1950	1440	1580
19	1310	1730	1820	1810	1770	1850	1840	1920	2170	1980	783	1600
20	1340	1730	1860	1800	1780	1840	1830	1890	2140	2080	950	1620
21	1390	1710	1840	1800	1710	1850	1840	1880	2120	2090	1080	1630
22	1430	1750	1860	1770	1700	1860	1850	1880	2080	2080	1200	1640
23	1470	1740	1880	1700	1710	1870	1870	1870	2030	2030	---	1640
24	1520	1750	1900	1720	1710	1880	1860	1850	1980	2000	---	1650
25	1550	1770	1890	1720	1710	1870	1870	1870	1970	1960	1370	1660
26	1560	1820	1910	1740	1720	1870	1890	1900	1960	1930	1390	1670
27	1550	1850	1920	1770	1730	1870	1880	1900	1950	1900	1190	1680
28	1540	1870	1900	1770	1740	1880	1870	1880	1950	1540	1230	1690
29	1550	1850	1880	1750	---	1850	1870	1880	1950	743	1050	1690
30	1570	1900	1860	1750	---	1730	1870	1890	1940	1070	1090	1730
31	1580	---	1800	1740	---	1800	---	1890	---	1300	1140	---
MEAN	1490	1720	1860	1820	1730	1820	1810	1880	2030	1830	---	1520

07126200 VAN BREMER ARROYO NEAR MODEL, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH		
1	21.6	11.9	12.8	8.8	6.2	3.8	5.7	2.9	8.7	3.7	7.4	3.9
2	21.4	11.6	9.7	7.1	5.6	3.8	6.7	3.5	8.4	4.2	10.6	3.2
3	21.0	11.8	8.4	6.0	5.1	3.9	5.8	3.1	7.9	4.4	10.5	4.5
4	17.5	13.4	9.4	5.2	4.8	3.3	4.9	2.5	7.0	4.0	9.4	4.7
5	16.7	14.0	7.1	4.6	4.4	2.4	4.5	3.6	7.4	3.8	11.3	3.9
6	15.6	13.7	9.2	4.7	4.8	2.9	4.6	3.2	8.6	2.8	9.7	4.7
7	14.2	10.7	9.5	4.7	4.6	2.8	4.8	3.6	7.4	3.9	13.3	4.6
8	12.3	8.6	10.4	5.2	4.8	2.5	4.4	3.2	7.4	4.0	14.2	5.7
9	13.6	9.3	10.2	6.1	4.9	3.3	4.0	2.5	9.1	4.6	14.5	6.8
10	15.3	9.4	9.9	6.7	5.7	3.6	4.0	2.5	7.2	3.2	12.6	7.1
11	16.6	9.5	8.7	5.8	5.9	3.6	4.2	2.3	7.6	2.8	8.5	5.4
12	---	---	8.1	4.4	5.0	3.8	4.5	2.6	7.3	3.3	8.4	2.0
13	15.3	11.3	9.0	4.2	4.4	3.0	4.3	2.7	8.8	3.1	9.7	3.7
14	14.9	11.6	9.8	4.8	4.5	2.6	4.6	2.4	6.3	3.6	11.6	4.5
15	14.1	11.6	10.5	5.2	4.2	2.2	5.7	3.2	4.8	2.3	11.9	6.7
16	12.2	10.2	10.3	5.8	4.6	3.6	5.9	3.1	4.4	2.7	12.0	5.4
17	12.6	8.6	10.4	6.1	4.0	2.6	3.9	3.3	4.1	2.3	11.9	5.8
18	13.7	9.3	9.6	6.5	4.5	2.8	5.2	2.8	4.6	2.6	11.1	5.8
19	14.6	9.9	9.3	6.3	4.4	3.2	5.6	3.3	10.0	3.6	15.9	5.1
20	16.0	9.5	6.3	3.1	3.9	2.3	6.9	3.6	10.9	4.0	16.2	6.8
21	16.7	10.7	5.7	2.6	4.3	2.7	8.3	2.4	8.9	2.6	15.7	8.3
22	17.9	12.3	5.6	3.3	4.3	2.8	8.5	2.4	9.3	3.6	17.4	7.9
23	17.8	11.4	6.6	2.8	4.5	2.3	5.0	2.4	9.0	3.9	18.2	7.2
24	17.2	11.3	3.2	1.0	4.3	2.6	5.3	2.5	10.5	4.1	18.7	7.2
25	18.3	11.9	4.7	1.0	4.6	3.1	5.7	3.4	8.9	4.4	19.1	7.6
26	16.9	11.2	5.1	3.3	4.4	2.3	7.7	3.6	9.7	4.0	18.0	9.4
27	16.9	9.7	5.2	3.6	4.5	2.6	7.3	3.4	10.4	4.6	14.0	8.5
28	14.8	10.9	5.3	3.7	4.5	2.6	7.1	3.6	9.4	4.4	18.2	7.2
29	11.9	9.0	5.4	4.0	5.1	3.1	7.2	2.3	---	---	12.1	9.0
30	14.2	8.7	5.1	3.4	4.9	3.2	7.7	3.7	---	---	13.4	8.6
31	13.2	9.1	---	---	4.3	3.1	8.4	3.7	---	---	15.9	7.5
MONTH	---	---	12.8	1.0	6.2	2.2	8.5	2.3	10.9	2.3	19.1	2.0
APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
1	18.3	7.2	13.9	8.2	26.3	15.1	29.4	18.3	27.3	19.2	26.3	15.6
2	15.9	9.5	20.9	7.5	23.1	15.7	28.8	18.6	29.2	19.1	23.0	16.3
3	11.0	6.4	23.9	10.5	25.2	15.8	27.2	18.3	21.7	18.6	24.8	13.7
4	16.1	6.0	20.7	12.9	19.9	15.3	25.7	17.7	28.2	17.6	26.1	15.6
5	18.6	7.9	20.7	11.9	21.9	12.8	27.2	16.6	26.5	19.6	23.0	16.3
6	17.1	10.1	22.2	12.0	23.6	15.9	26.1	17.5	25.0	17.7	22.1	16.4
7	13.8	7.9	18.8	12.6	22.8	12.4	27.3	17.5	27.1	18.9	21.9	15.2
8	16.1	6.5	18.9	11.4	23.0	12.8	28.4	17.8	29.3	19.1	24.1	15.3
9	17.6	7.3	17.1	10.1	22.3	14.3	25.5	18.3	29.8	19.1	23.8	14.9
10	19.1	9.2	20.1	9.6	25.1	14.2	27.9	17.7	29.6	20.5	23.9	15.4
11	19.8	8.8	14.5	9.6	26.7	15.6	24.3	18.7	29.6	19.6	25.1	15.9
12	19.5	9.5	18.9	11.8	25.9	16.5	26.5	18.6	27.5	19.3	24.6	15.8
13	18.7	9.9	25.3	11.9	25.7	18.3	26.4	17.9	23.3	18.4	19.7	11.8
14	14.9	8.8	23.7	13.5	25.1	19.7	27.9	19.6	24.2	18.0	19.9	9.9
15	17.4	7.6	23.9	13.6	27.3	17.4	28.7	18.9	29.2	17.4	22.2	11.6
16	15.6	8.0	23.4	15.0	26.2	16.6	28.9	19.6	28.3	18.3	23.3	13.5
17	20.8	9.2	17.9	15.1	20.0	16.4	24.1	20.6	27.7	18.6	22.3	14.2
18	18.2	10.6	25.9	13.4	23.6	15.6	29.1	18.9	27.1	17.8	22.9	15.2
19	14.3	9.3	25.0	14.4	28.1	16.8	27.4	19.4	20.5	17.7	22.2	14.0
20	18.6	6.4	26.5	14.4	26.4	17.2	28.8	19.5	25.0	17.7	21.8	13.1
21	19.5	7.9	25.2	15.6	25.1	16.2	27.6	18.8	27.9	19.0	21.9	13.6
22	20.3	10.4	25.2	14.5	27.8	15.8	27.8	17.9	25.6	18.0	21.5	15.1
23	20.0	11.2	26.2	13.9	26.3	16.7	28.2	18.2	---	---	21.0	15.2
24	15.3	11.2	24.8	14.9	25.4	15.9	27.9	18.4	---	---	22.8	15.0
25	20.8	8.6	27.1	15.3	28.0	15.7	27.4	19.2	27.1	18.1	22.0	13.4
26	21.8	10.4	23.9	16.2	29.3	19.1	27.3	19.5	26.3	18.0	20.1	12.7
27	20.6	11.4	26.3	15.4	28.5	18.4	27.8	18.2	20.6	18.6	21.3	11.5
28	22.4	12.2	25.4	15.9	26.7	18.5	27.5	10.6	22.5	18.1	20.2	12.0
29	21.4	13.0	23.8	15.7	26.1	18.8	24.9	11.3	24.0	18.2	20.9	12.3
30	21.3	12.5	27.0	15.3	27.1	17.8	29.7	17.8	20.9	15.6	19.5	12.4
31	---	---	27.0	16.2	---	---	30.0	19.0	22.6	14.5	---	---
MONTH	22.4	6.0	27.1	7.5	29.3	12.4	30.0	10.6	---	---	26.3	9.9

07126300 PURGATOIRE RIVER NEAR THATCHER, CO

LOCATION.--Lat 37°21'30", long 103°53'44", in sec.10, T.31 S., R.58 W., Las Animas County, Hydrologic Unit 11020010, on right bank 250 ft downstream from county road bridge at gas line crossing, 1.2 mi downstream from Van Bremer Arroyo, and 18 mi southeast of Thatcher.

DRAINAGE AREA.--1,791 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1966 to current year. Statistical summary computed for 1976 to current year, subsequent to completion of Trinidad Reservoir.

REVISED RECORDS.--WDR CO-84-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,790 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 22, 25-27, 29, Dec. 5, 9-14, 16, 19, Jan. 8-9, 11-13, 17-20, 24, 26-27, Feb. 11, and Mar. 31 to Apr. 2. Records good except for Dec. 15 to Jan. 14, which are fair, and for estimated daily discharges and flows greater than 1,660 ft³/s, which are poor. Diversions upstream from station for irrigation of about 30,000 acres. Peak flows regulated to some extent by Trinidad Dam, 52 mi upstream, since January 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of July 22, 1954, and May 19, 1955, reached stages of 26.7 and 25.2 ft, respectively, from floodmarks. Flood of June 18, 1965, reached a stage of 23.5 ft, from floodmarks, discharge, 47,700 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	46	35	58	29	35	455	214	199	37	17	196
2	29	41	37	50	29	45	376	215	90	41	124	206
3	29	36	37	52	29	46	371	224	65	28	126	72
4	29	37	36	44	29	48	255	262	76	33	49	54
5	30	40	33	37	28	42	791	210	47	27	57	262
6	29	37	32	34	28	36	1490	161	46	19	592	275
7	30	35	32	33	26	36	905	131	46	12	232	321
8	41	34	33	31	26	36	464	105	37	9.7	72	129
9	49	33	33	28	25	40	373	123	37	9.6	47	119
10	43	33	34	24	28	46	344	207	45	9.4	41	142
11	39	35	35	25	31	48	337	284	78	14	32	117
12	38	38	36	26	33	49	390	242	75	12	30	81
13	38	41	38	25	33	39	323	272	73	17	249	66
14	38	38	35	25	33	41	272	164	62	29	136	70
15	39	38	32	31	35	45	203	150	39	157	46	81
16	38	40	33	31	34	54	147	137	34	37	27	67
17	36	40	33	31	26	54	128	121	42	23	21	53
18	34	37	33	32	26	48	124	140	153	993	67	47
19	33	36	36	30	36	48	182	258	106	77	62	44
20	31	35	35	31	51	57	156	170	73	49	41	45
21	31	37	34	32	63	76	115	110	48	35	279	42
22	30	37	34	33	45	83	100	98	42	29	72	40
23	30	33	33	33	37	88	109	81	37	23	46	41
24	30	33	31	32	32	85	148	67	44	20	33	54
25	30	34	33	28	31	94	162	94	72	16	29	59
26	30	33	31	30	31	110	118	119	76	13	24	57
27	29	33	29	31	31	573	130	106	104	15	74	53
28	28	32	32	32	31	420	181	136	97	24	1120	49
29	28	33	58	32	---	195	223	177	73	29	465	45
30	28	32	91	32	---	234	259	430	46	13	224	40
31	28	---	79	29	---	525	---	464	---	18	173	---
TOTAL	1024	1087	1173	1022	916	3376	9631	5672	2062	1868.7	4607	2927
MEAN	33.0	36.2	37.8	33.0	32.7	109	321	183	68.7	60.3	149	97.6
MAX	49	46	91	58	63	573	1490	464	199	993	1120	321
MIN	28	32	29	24	25	35	100	67	34	9.4	17	40
AC-FT	2030	2160	2330	2030	1820	6700	19100	11250	4090	3710	9140	5810

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1976 - 1993, BY WATER YEAR (WY)

	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	32.3	28.6	27.4	26.5	29.5	34.8	93.3	131	111	98.9	158	64.8						
MAX	84.0	52.3	44.3	43.2	53.3	109	467	592	764	547	910	302						
(WY)	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MIN	.73	3.71	12.1	10.6	11.5	5.97	1.38	6.22	6.69	8.80	9.10	.64						
(WY)	1979	1979	1979	1978	1976	1977	1978	1991	1976	1989	1976	1978						

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1976 - 1993
ANNUAL TOTAL	17938.5	35365.7	
ANNUAL MEAN	49.0	96.9	a 70.0
HIGHEST ANNUAL MEAN			181
LOWEST ANNUAL MEAN			12.3
HIGHEST DAILY MEAN	1820	Aug 25	10000
LOWEST DAILY MEAN	5.3	May 23	b .00
ANNUAL SEVEN-DAY MINIMUM	6.3	May 17	.00
INSTANTANEOUS PEAK FLOW			c 42400
INSTANTANEOUS PEAK STAGE			22.00
ANNUAL RUNOFF (AC-FT)	35580	70150	50710
10 PERCENT EXCEEDS	92	227	118
50 PERCENT EXCEEDS	30	41	28
90 PERCENT EXCEEDS	14	28	4.8

a-Average discharge for 10 years (water years 1967-76), 37.9 ft³/s; 27460 acre-ft/yr, prior to completion of Trinidad Dam.

b-No flow at times in most years.

c-From rating curve extended above 2100 ft³/s, on basis of two slope-area measurements of peak flow.

07126300 PURGATOIRE RIVER NEAR THATCHER, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1982 to current year.

WATER TEMPERATURE: December 1982 to current year.

SUSPENDED SEDIMENT DISCHARGE: May 1983 to September 1992 (Discontinued).

INSTRUMENTATION.--Water-quality monitor since December 1983 with satellite telemetry. Pumping-sediment sampler since May 1983.

REMARKS.--Records for 1992 water year for daily specific conductance are fair and daily water temperature are good. Records for 1993 water year for daily water temperature are good except for Dec. 4 to Jan. 14, which are fair; records for daily specific conductance are good except for Oct. 1 to Dec. 1, which are fair, and Mar. 25 to Sept. 30, which are poor. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance and daily mean water temperature data are available in the district office.

EXTREMES FOR PERIOD OF RECORD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 5,850 microsiemens, July 16, 1989 and July 8, 1991; minimum, 340 microsiemens, Aug. 4, 1987.

WATER TEMPERATURE: Maximum, 32.1°C, June 25, 1990; minimum 0.0°C, on many days during the winter months.

SEDIMENT CONCENTRATION: Maximum daily, 49,600 mg/L, June 9, 1986; minimum daily, 3 mg/L, Apr. 29, 1989.

SEDIMENT LOAD: Maximum daily, 250,000 tons, June 6, 1983; minimum daily, 0.00 tons, June 26 to July 4, 1990.

EXTREMES FOR 1992 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 4,410 microsiemens, May 22; minimum, 536 microsiemens, July 25.

WATER TEMPERATURE: Maximum, 28.1°C, July 13; minimum, 0.0°C, on many days during the winter months.

SEDIMENT CONCENTRATION: Maximum daily, 39,600 mg/L, Aug. 13; minimum daily, 12 mg/L, Mar. 27-28.

SEDIMENT LOAD: Maximum daily, 132,000 tons, Aug. 25; minimum daily, 0.68 tons, Mar. 28.

EXTREMES FOR 1993 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 3,890 microsiemens, Nov. 6; minimum, 436 microsiemens, Mar. 28.

WATER TEMPERATURE: Maximum, 27.2°C, July 31, and Aug 11; minimum, 0.0°C, on many days during the winter months.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT				
08...	1415	22	82	4.9
NOV				
15...	1400	28	424	32
JAN				
16...	1340	14	38	1.4
FEB				
26...	1355	25	33	2.2
MAR				
27...	1515	22	10	0.59
27...	1630	22	4	0.24
APR				
29...	1700	14	175	6.6
MAY				
07...	1140	11	166	4.9
14...	1515	10	341	9.2
14...	1535	10	341	9.2
JUN				
18...	1405	32	180	16
18...	1410	32	221	19
JUL				
23...	1555	136	1970	723
AUG				
27...	1530	132	692	247
SEP				
22...	1735	12	46	1.5
22...	1745	12	44	1.4

07126300 PURGATOIRE RIVER NEAR THATCHER, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2660	3090	3270	---	3260	3020	2290	2680	2940	2240	1860	1600
2	2680	3100	3330	3350	3250	3030	2340	2680	2860	2220	1480	1750
3	2660	3160	3430	3400	3220	3020	2630	2880	2740	2250	620	1360
4	2670	3150	3330	3330	3200	2930	2520	2880	2790	2210	717	1310
5	2720	3100	3350	3290	3220	2870	2010	2780	2960	2240	1180	1510
6	2690	3240	3390	3320	3200	2840	1990	2960	2860	2270	1660	1570
7	2520	3260	3280	3210	3190	2920	2230	3140	1970	2260	2080	1880
8	2540	3090	3130	3260	3200	3070	2120	3290	1940	2250	1830	2180
9	2710	3180	3090	3230	3200	3110	2210	3280	2190	2260	2000	2420
10	2790	3320	3180	3210	3240	3100	2120	3100	2380	2280	2240	2830
11	2700	3380	3250	3320	3270	2970	1800	3080	2220	2300	2270	3020
12	2700	3300	3270	3320	3260	2940	1710	3050	2410	2310	1500	3110
13	2770	3220	3270	3320	3220	2970	1770	3010	2670	2280	1470	3160
14	2770	3250	3260	3330	3190	2980	1750	2560	2620	2320	1450	3160
15	2720	3170	3260	3390	3190	2950	1930	2510	2690	2490	1380	3150
16	2630	3240	3290	3460	3190	2940	2050	2550	2380	2330	1230	3190
17	2680	3490	3290	3540	3180	2960	2130	2690	2140	2200	1520	3280
18	2710	3410	3350	3440	3190	2960	2370	3050	1940	2030	1670	3380
19	2800	3070	3350	3570	3180	2920	2490	3220	2160	2010	1000	3360
20	2880	---	3300	3580	3170	2900	3080	3250	2030	1930	1100	3340
21	2920	---	3260	3370	3170	2800	2830	3420	2380	1720	---	3310
22	2940	---	3220	3260	3250	2800	2540	4220	2700	1490	---	3180
23	3000	---	3220	3340	3300	2830	2500	3600	2510	1360	---	3250
24	3030	---	3260	3320	3220	2810	2500	3250	2400	1950	---	3310
25	3060	---	3310	3270	3150	2650	2470	2910	2310	792	---	3360
26	3060	3250	3330	3240	3090	2620	2520	2720	2200	941	---	3390
27	3050	3280	3400	3190	3010	2680	2600	2820	2360	1270	---	3390
28	3070	3190	3450	3150	2980	2660	2630	2980	2370	1500	2200	3450
29	3080	3210	3450	3180	3000	2700	2620	3160	2340	2090	2100	3420
30	3100	3220	3390	3250	---	2160	2700	3090	2280	1790	1990	3340
31	3080	---	3360	3240	---	2290	---	2990	---	1820	1840	---
MEAN	2820	---	3300	---	3190	2850	2310	3030	2420	1980	---	2800

07126300 PURGATOIRE RIVER NEAR THATCHER, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	19.2	15.0	3.2	.2	1.1	.1	---	.2	3.7	1.5	9.7	6.2
2	19.6	15.5	1.4	.2	.6	.1	.7	.1	5.1	2.5	11.1	7.1
3	19.6	15.4	.8	---	.6	.1	.6	.1	4.6	2.9	9.8	8.0
4	17.8	12.5	---	.2	.6	.1	2.2	.2	3.9	2.5	10.9	8.4
5	14.7	10.8	3.1	.3	.7	.1	2.2	.2	4.2	.1	10.9	8.4
6	15.2	10.8	6.0	---	1.1	.0	3.9	.7	4.4	1.7	11.6	7.5
7	16.4	11.8	6.4	4.1	1.5	.1	3.8	2.2	4.1	1.5	11.4	8.1
8	16.8	12.6	6.9	3.7	2.1	.1	2.5	.9	4.9	2.0	12.1	8.3
9	17.2	13.2	8.2	4.8	2.2	.3	2.0	.2	5.7	2.7	9.5	5.4
10	17.4	13.2	8.4	6.6	2.0	.4	1.7	.1	5.8	3.0	8.5	3.7
11	17.5	13.6	7.9	6.5	1.1	.2	1.4	.1	6.1	3.5	9.7	5.4
12	17.5	13.6	7.7	5.0	1.3	.1	1.4	.4	6.9	3.7	9.3	5.8
13	17.2	14.1	7.3	4.6	1.1	.1	1.0	.1	5.3	3.7	11.3	6.4
14	16.0	13.3	7.4	5.1	.7	.1	.7	.1	6.8	3.5	12.1	7.4
15	16.1	12.4	6.3	5.1	.7	.1	.4	.1	6.7	3.8	12.2	7.9
16	16.6	12.7	5.1	.4	.6	.1	.6	.1	5.4	3.9	13.1	8.5
17	16.6	12.9	5.4	2.8	.6	.1	.3	.1	5.7	3.3	11.3	9.0
18	15.3	12.5	5.6	3.5	.5	.1	.6	.1	5.7	2.5	11.3	8.4
19	13.5	10.7	4.8	3.1	1.5	.2	.6	.1	5.8	2.0	12.2	8.4
20	13.9	10.4	---	2.2	1.2	.6	.6	.1	6.0	3.0	12.2	8.3
21	13.9	11.7	---	---	2.0	.1	.6	.1	6.7	4.1	12.3	8.4
22	14.5	10.9	---	---	2.4	1.6	.7	.1	7.4	4.0	10.0	8.3
23	14.7	11.2	---	---	2.1	.4	.6	.1	7.1	4.9	11.5	6.9
24	13.6	11.0	---	---	1.8	.2	1.0	.1	6.8	3.9	11.3	8.1
25	12.3	9.3	---	---	1.9	.1	1.3	.1	5.3	3.9	13.1	8.3
26	12.3	9.0	4.0	---	1.5	.3	1.6	.1	9.1	3.0	13.0	9.4
27	12.4	9.3	3.9	2.0	1.4	.1	2.3	.1	8.0	4.4	11.5	9.3
28	11.1	6.6	4.0	2.2	.9	.1	2.6	.2	9.1	4.7	12.2	9.0
29	6.7	5.1	3.5	2.6	1.3	.1	3.1	.3	9.8	5.6	13.3	9.5
30	5.1	1.4	2.6	.8	1.1	.1	3.5	.6	---	---	13.8	9.5
31	1.5	---	---	---	1.3	.3	4.0	.9	---	---	12.2	9.4
MONTH	19.6	---	---	---	2.4	.0	---	.1	9.8	.1	13.8	3.7
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.1	8.4	22.7	17.3	16.7	15.1	25.3	19.8	23.4	18.4	19.5	16.8
2	12.3	9.5	21.0	16.5	18.7	13.6	25.2	19.4	23.1	18.9	20.3	17.1
3	14.0	8.8	20.8	16.5	20.8	15.3	24.7	19.5	23.8	19.8	20.7	17.6
4	15.0	10.4	21.5	16.4	21.5	17.2	22.6	19.9	24.8	20.3	20.9	18.2
5	14.8	11.5	20.9	16.9	22.4	18.2	25.7	18.6	24.2	20.6	20.5	17.3
6	16.2	11.2	20.2	15.4	22.3	18.4	27.9	21.5	24.1	20.5	20.7	16.8
7	16.9	12.6	21.6	16.5	19.2	11.1	26.4	22.2	24.8	20.7	20.6	16.7
8	16.2	12.9	20.8	17.2	18.6	15.0	25.8	22.2	25.5	20.9	21.7	17.6
9	17.6	12.8	19.8	16.7	17.9	16.6	25.8	21.3	26.8	21.7	21.6	17.4
10	17.3	13.5	17.6	15.0	21.7	15.4	24.1	21.7	25.0	22.2	20.9	17.4
11	17.8	13.6	20.1	13.4	23.2	18.3	26.8	20.2	24.0	20.8	20.9	16.0
12	17.5	13.9	21.2	16.3	24.2	18.6	26.1	21.8	23.3	19.9	21.9	17.8
13	19.4	14.3	20.9	16.9	25.1	19.7	28.1	22.2	21.4	18.5	22.2	18.1
14	19.2	15.8	22.7	16.6	24.6	19.2	25.3	21.3	22.2	18.0	21.9	18.4
15	18.9	15.4	21.7	18.8	23.8	18.7	25.2	21.0	23.4	19.7	20.5	19.0
16	18.3	15.4	22.3	16.9	23.1	19.1	23.8	20.1	23.1	19.5	21.3	17.8
17	18.5	14.1	21.4	17.5	22.8	17.8	21.8	17.0	24.6	20.4	22.5	18.4
18	16.9	12.4	22.5	17.6	24.5	18.7	22.0	17.7	22.5	19.9	21.2	17.6
19	12.4	10.8	23.1	18.0	23.8	20.0	24.7	18.6	22.9	18.7	20.6	17.5
20	12.9	9.6	22.8	18.3	22.7	20.1	24.7	20.3	23.4	20.0	20.5	17.1
21	15.6	10.0	23.1	18.2	23.3	18.9	22.3	15.9	23.1	20.1	19.3	17.1
22	16.3	11.8	19.8	17.6	24.3	18.5	21.7	19.3	23.8	20.1	19.8	15.5
23	17.5	12.7	17.8	16.2	25.3	20.3	23.3	19.3	23.1	19.7	20.6	16.0
24	17.9	13.3	20.0	15.1	25.2	20.4	24.2	20.2	21.1	18.7	21.0	16.7
25	18.6	13.3	18.2	14.4	24.4	20.0	22.9	20.9	18.8	14.6	19.6	16.7
26	19.3	14.0	20.3	13.6	24.1	20.0	21.6	20.2	19.1	16.0	18.5	14.8
27	19.8	14.5	18.8	13.4	21.9	19.2	24.3	19.6	20.2	16.8	18.5	14.4
28	19.9	15.9	15.0	12.5	24.0	18.2	25.6	20.9	20.1	16.7	18.0	14.4
29	21.8	15.7	17.4	12.2	25.2	19.9	25.0	21.1	20.9	17.6	18.5	14.3
30	21.5	16.9	16.4	14.7	24.9	19.9	24.8	20.1	20.3	18.0	18.9	14.8
31	---	---	18.5	14.5	---	---	23.7	20.6	19.8	17.4	---	---
MONTH	21.8	8.4	23.1	12.2	25.3	11.1	28.1	15.9	26.8	14.6	22.5	14.3

07126300 PURGATOIRE RIVER NEAR THATCHER, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	19	214	11	18	139	6.8	29	---	7.8
2	23	192	12	17	---	6.2	26	---	7.0
3	23	---	11	20	126	6.8	27	---	7.3
4	20	179	9.7	25	105	7.1	28	---	7.6
5	17	162	7.4	30	---	11	30	---	8.1
6	20	---	9.3	30	143	12	32	---	8.6
7	22	163	9.7	33	92	8.2	36	---	9.7
8	21	84	4.8	31	---	6.3	34	---	9.2
9	20	---	4.5	29	71	5.6	33	---	8.9
10	20	---	5.0	26	---	5.0	32	---	8.6
11	25	122	8.2	27	---	5.2	30	---	8.1
12	23	---	8.3	41	---	59	32	---	8.6
13	21	134	7.6	31	---	39	32	---	8.6
14	17	109	5.0	25	---	29	33	---	8.9
15	18	---	5.1	27	423	31	40	---	11
16	18	109	5.3	31	---	30	43	---	12
17	18	92	4.5	39	---	37	41	---	11
18	17	---	4.2	41	---	39	36	---	9.7
19	17	101	4.6	51	---	49	33	---	4.5
20	18	84	4.1	48	---	35	31	---	4.2
21	19	---	4.1	39	---	21	33	---	4.5
22	19	88	4.5	39	---	21	33	---	4.5
23	19	109	5.6	42	---	23	38	---	5.1
24	16	---	4.9	31	---	13	35	---	4.7
25	18	105	5.1	33	---	13	33	---	4.5
26	19	109	5.6	33	---	13	33	---	4.5
27	19	---	6.9	33	---	13	32	---	4.3
28	19	227	12	34	---	14	30	---	4.0
29	19	193	9.9	33	---	13	29	---	3.9
30	19	---	8.6	33	---	13	30	---	4.0
31	19	---	8.0	---	---	---	30	---	4.0
TOTAL	602	---	216.5	970	---	585.2	1014	---	217.4
JANUARY			FEBRUARY			MARCH			
1	27	---	3.6	24	---	2.6	24	---	1.6
2	30	---	4.0	24	---	2.6	25	---	1.7
3	31	---	4.2	27	---	2.9	25	---	1.7
4	32	---	4.3	31	---	3.3	25	---	1.7
5	26	---	3.5	30	---	3.2	26	---	1.8
6	30	---	4.0	26	---	2.5	26	---	1.8
7	33	---	4.5	27	---	2.6	26	---	1.8
8	39	---	5.3	26	---	2.5	24	---	1.6
9	31	---	3.3	26	---	2.5	22	---	1.5
10	29	---	3.1	27	---	2.6	22	---	1.5
11	27	---	2.9	26	---	2.5	22	---	1.5
12	26	---	2.8	26	---	2.5	21	---	1.4
13	25	---	2.7	25	---	2.4	21	---	1.4
14	22	---	2.4	25	---	2.4	21	---	1.4
15	21	---	2.3	25	---	2.4	20	---	1.4
16	21	38	2.2	25	---	2.4	20	---	1.4
17	22	---	2.4	23	---	2.2	20	---	1.4
18	23	---	2.5	23	---	2.2	21	---	1.4
19	25	---	2.7	22	---	2.1	26	---	1.8
20	26	---	2.8	22	---	2.1	27	---	1.8
21	27	---	2.9	23	---	2.2	25	---	1.7
22	30	---	3.2	24	---	2.3	23	---	1.6
23	31	---	3.3	25	---	2.4	25	---	1.7
24	28	---	3.0	26	---	2.5	28	---	1.9
25	30	---	3.2	24	---	2.3	28	---	1.9
26	29	---	3.1	24	33	2.1	25	---	1.0
27	28	---	3.0	23	---	1.6	22	12	.71
28	26	---	2.8	23	---	1.6	21	12	.68
29	25	---	2.7	23	---	1.6	50	271	38
30	24	---	2.6	---	---	---	43	165	19
31	24	---	2.6	---	---	---	30	---	14
TOTAL	848	---	97.9	725	---	69.1	784	---	113.79

07126300 PURGATOIRE RIVER NEAR THATCHER, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	30	240	19	12	---	4.9	18	---	21
2	39	175	18	10	---	4.0	21	410	23
3	49	---	26	15	---	7.1	26	340	24
4	48	200	26	13	---	6.1	21	---	20
5	46	195	24	13	---	6.1	19	365	19
6	42	---	19	20	---	12	24	365	24
7	37	150	15	11	168	5.0	131	2450	1640
8	40	135	15	8.8	---	4.5	95	1580	426
9	52	---	21	8.3	---	4.3	46	700	87
10	58	170	27	9.0	---	5.1	37	---	45
11	50	185	25	8.6	---	5.2	31	400	33
12	46	---	28	7.9	---	4.4	26	---	25
13	39	190	20	14	---	12	44	---	150
14	37	140	14	10	350	9.4	37	---	40
15	31	---	10	8.8	385	9.1	45	---	30
16	30	120	9.7	8.4	355	8.0	37	---	20
17	34	124	12	7.2	---	7.0	38	---	19
18	61	274	47	5.4	365	5.3	31	180	15
19	38	140	14	7.0	420	7.9	23	---	11
20	39	1750	183	7.6	---	10	72	915	406
21	35	---	109	5.8	440	6.9	45	5000	608
22	30	500	40	5.7	395	6.1	31	---	210
23	28	350	26	5.3	435	6.2	28	6350	515
24	25	---	16	7.9	435	9.3	18	1750	85
25	23	190	12	11	435	13	16	---	57
26	21	180	10	10	---	12	18	500	24
27	20	---	9.4	10	455	12	21	450	26
28	18	---	8.5	13	530	19	30	---	67
29	15	175	7.1	14	---	17	49	1160	208
30	13	---	6.1	14	385	15	33	1200	107
31	---	---	---	15	390	16	---	---	---
TOTAL	1074	---	816.8	316.7	---	269.9	1111	---	4985
JULY			AUGUST			SEPTEMBER			
1	20	600	32	188	---	1720	141	---	285
2	18	---	24	256	---	2400	130	429	151
3	16	500	22	176	---	523	123	---	117
4	14	375	14	52	---	98	99	---	83
5	13	---	12	37	---	55	67	---	43
6	15	320	13	33	500	45	43	---	25
7	12	310	10	73	2440	481	36	---	20
8	9.7	---	8.1	33	---	174	33	---	17
9	14	310	12	23	---	106	32	---	15
10	9.8	310	8.2	21	---	88	24	156	10
11	7.4	---	6.0	119	9030	2900	20	---	7.4
12	7.9	250	5.3	47	13500	1710	16	---	5.4
13	19	246	17	329	39600	35200	16	---	5.0
14	81	1480	550	119	---	4850	14	---	4.2
15	76	2250	462	154	10600	4420	16	84	3.6
16	37	---	170	93	9000	22300	16	---	3.5
17	338	---	22300	68	5000	918	16	---	3.5
18	118	---	4140	297	39300	31500	16	---	3.3
19	37	---	599	109	---	8240	15	---	2.9
20	22	---	178	157	24700	10500	15	---	2.8
21	500	24100	35300	244	---	13800	13	---	2.0
22	222	16900	13900	139	---	3750	13	49	1.7
23	103	2900	808	88	---	1430	13	---	1.7
24	212	2330	1850	76	---	308	14	---	1.7
25	432	---	3240	1820	---	132000	14	---	1.7
26	334	15100	12300	271	---	3730	14	---	1.7
27	103	6500	1810	135	700	255	14	---	1.7
28	79	2080	463	124	---	211	17	---	2.8
29	76	---	246	110	---	166	22	---	3.6
30	39	700	74	109	---	139	27	---	4.4
31	115	---	757	147	728	290	---	---	---
TOTAL	3099.8	---	99330.6	5647	---	284307	1049	---	830.6
YEAR	17240.5		391839.79						

07126300 PURGATOIRE RIVER NEAR THATCHER, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 28...	1555	28	36	2.7
DEC 02...	1500	37	49	4.9
JAN 14...	1450	32	27	2.3
FEB 25...	1210	31	308	26
MAR 24...	1700	70	536	101
24...	1720	71	421	81
APR 14...	1630	284	426	327
MAY 27...	1300	100	360	97
JUN 25...	1350	66	446	79
AUG 27...	1240	30	178	14
SEP 29...	1345	44	36	4.3

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3420	3200	3530	2940	3300	3140	772	---	---	---	2750	---
2	3290	3170	3200	3140	3310	3070	723	---	---	---	2770	---
3	3090	3100	3330	3190	3340	3010	702	---	---	---	---	---
4	3170	3170	3360	2980	3340	2970	803	---	---	---	---	---
5	3220	3420	3300	3270	3350	3230	1010	---	---	---	---	---
6	3190	3850	3360	3340	3360	3340	753	---	---	---	---	---
7	3290	3660	3390	3390	3370	3300	685	---	---	---	---	---
8	3300	3280	3420	3420	3340	3290	788	---	---	---	---	---
9	3330	3260	3430	3440	3350	3210	912	---	---	---	---	---
10	3290	3310	3480	3480	3310	3140	942	---	---	---	---	---
11	2820	3290	3470	3530	3270	2860	912	---	---	---	---	---
12	2820	3300	3340	3480	3320	2450	836	---	---	---	---	---
13	2840	3280	3330	3580	3420	2440	858	---	---	---	---	---
14	2890	3280	3410	3620	3410	2420	960	---	---	---	---	---
15	2860	3240	3470	3500	3250	2720	1100	---	---	2180	---	---
16	2860	3210	3440	3440	3270	2740	1270	---	---	2110	---	---
17	2880	3280	3510	3450	3390	2630	1470	---	---	2090	---	---
18	2880	3320	3640	3320	3500	2410	1600	---	---	1700	---	---
19	2880	3350	3520	3220	3370	2420	1500	---	---	1450	---	---
20	2890	3320	3550	3260	3390	2430	1250	---	---	1650	---	---
21	3040	3260	3620	3270	3190	2230	1290	---	---	2180	---	---
22	3140	3240	3480	3200	3150	1890	1370	---	---	2070	---	---
23	3180	3230	3530	3210	2970	1590	1420	---	---	2030	---	---
24	3150	3180	3620	3330	2930	1530	1380	---	---	2120	---	---
25	3180	3240	3540	3260	3090	1510	1150	---	---	2230	---	---
26	3210	3370	3490	3350	3130	1240	1150	---	---	2450	---	---
27	3120	3540	3550	3370	3150	818	1340	---	---	2610	---	---
28	3060	3520	3470	3410	3190	554	1220	2040	---	2700	1310	---
29	3080	3370	3360	3280	---	736	1050	1590	---	3030	---	---
30	3140	3460	2860	3260	---	855	919	1040	---	3170	---	2070
31	3190	---	2620	3300	---	763	---	742	---	2620	---	---
MEAN	3090	3320	3410	3330	3280	2290	1070	---	---	---	---	---

07126300 PURGATOIRE RIVER NEAR THATCHER, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	18.7	14.9	11.1	9.1	.2	.0	.0	.0	3.6	.5	6.0	3.3
2	18.5	14.5	9.4	6.9	.2	.0	.0	.0	3.8	1.2	6.4	2.3
3	18.5	14.6	6.9	5.1	.1	.0	.0	.0	3.9	2.3	7.1	4.0
4	18.1	14.3	5.7	4.1	.0	.0	.0	.0	4.1	2.2	7.0	4.8
5	17.1	14.7	4.6	3.4	.0	.0	.0	.0	3.8	.9	7.9	3.9
6	15.8	14.3	5.5	3.0	.0	.0	.0	.0	4.0	.8	7.6	4.8
7	14.3	10.3	5.6	3.2	.0	.0	.0	.0	3.5	1.2	9.2	4.8
8	12.3	8.8	6.6	3.6	.0	.0	.0	.0	3.9	1.8	10.2	5.9
9	13.0	9.6	7.0	4.6	.0	.0	.0	.0	5.9	2.7	11.3	7.1
10	13.5	9.8	7.3	5.5	.0	.0	.0	.0	5.0	1.5	10.4	8.2
11	14.2	10.5	6.4	4.9	.0	.0	.0	.0	3.3	.7	8.3	5.4
12	15.0	11.3	5.5	3.9	.0	.0	.0	.0	3.3	.1	5.6	2.8
13	15.6	11.9	5.6	3.3	.0	.0	.0	.0	3.9	.9	5.8	1.7
14	15.1	11.9	6.0	3.5	.0	.0	.0	.0	2.9	1.6	7.3	3.2
15	14.4	12.0	6.4	3.9	.0	.0	.1	.0	2.4	.0	8.6	5.3
16	12.6	10.2	6.5	4.2	.0	.0	.1	.0	.3	.0	8.4	5.8
17	12.7	8.9	6.7	4.6	.0	.0	.0	.0	.3	.0	8.5	6.5
18	13.0	9.7	6.7	5.2	.0	.0	.1	.0	.3	.0	8.3	6.5
19	13.2	10.5	6.8	5.4	.0	.0	.1	.0	1.5	.0	10.6	6.2
20	14.0	10.6	5.4	2.9	.0	.0	.2	.0	5.4	1.2	11.6	7.9
21	14.6	11.5	3.3	1.8	.0	.0	.3	.0	5.2	2.7	12.1	9.2
22	15.2	12.7	2.3	.5	.0	.0	.5	.0	5.2	2.4	13.1	9.3
23	15.6	12.6	2.4	.7	.0	.0	.2	.0	4.9	2.2	13.3	9.2
24	15.1	12.7	.7	.0	.0	.0	.1	.0	5.6	1.9	13.9	9.5
25	15.8	12.8	.4	.0	.0	.0	.2	.0	5.4	3.2	14.4	10.1
26	14.6	12.2	.4	.0	.0	.0	.4	.0	5.9	2.7	14.1	10.9
27	14.4	11.3	.3	.0	.0	.0	.7	.0	6.9	3.7	12.0	7.1
28	13.5	11.5	.2	.0	.0	.0	.9	.0	6.6	4.1	10.5	6.9
29	11.5	10.0	.2	.0	.0	.0	1.4	.0	---	---	9.3	8.2
30	12.0	9.2	.2	.0	.0	.0	1.8	.0	---	---	9.2	7.7
31	11.4	9.4	---	---	.0	.0	2.5	.0	---	---	8.6	6.2
MONTH	18.7	8.8	11.1	.0	.2	.0	2.5	.0	6.9	.0	14.4	1.7
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.6	6.6	13.4	9.9	21.5	17.3	26.4	20.6	26.4	23.2	20.7	16.6
2	11.4	8.5	11.6	7.4	20.7	18.1	26.6	21.2	25.4	22.1	20.5	18.3
3	9.9	5.8	15.7	9.7	22.1	17.9	25.3	21.0	22.3	19.4	21.0	16.7
4	7.6	4.3	16.6	12.8	19.8	17.7	24.1	20.3	23.2	19.0	22.1	17.8
5	9.0	6.8	16.0	13.0	19.9	15.6	25.0	19.3	23.7	21.0	21.3	18.8
6	10.6	8.0	16.7	13.5	21.6	17.3	24.9	20.6	22.0	19.1	19.5	17.7
7	9.4	7.5	15.7	14.3	20.9	16.2	25.6	20.2	22.0	18.9	18.4	14.9
8	9.1	6.9	15.8	13.4	20.8	16.1	26.4	20.9	24.2	19.8	18.9	14.7
9	10.8	7.4	14.6	11.9	20.7	17.1	25.0	21.3	25.4	21.0	19.7	16.8
10	12.8	8.6	14.4	11.4	22.2	16.6	26.3	21.0	26.3	22.9	20.4	17.7
11	13.0	9.7	13.2	11.3	22.5	17.7	23.6	20.7	27.2	22.8	21.5	17.8
12	13.6	10.3	14.1	11.4	23.6	18.7	25.2	21.1	26.2	23.1	21.5	18.4
13	12.3	9.6	17.0	12.1	24.0	19.3	25.3	21.0	23.3	12.1	19.8	14.7
14	11.2	9.1	18.1	14.4	23.5	20.8	25.6	21.9	20.8	15.1	16.8	13.1
15	11.4	8.5	19.0	16.2	23.6	19.4	23.2	21.0	23.3	18.6	17.6	13.3
16	10.9	8.7	18.8	16.1	22.8	19.1	24.4	20.0	24.6	20.2	19.1	14.7
17	13.6	9.6	17.7	16.6	20.5	18.5	22.9	20.8	24.7	20.3	19.5	16.1
18	14.4	11.0	19.8	15.9	19.6	17.5	21.4	13.7	24.5	20.1	20.1	16.9
19	12.8	11.0	19.0	15.7	21.3	17.3	21.3	17.6	20.8	18.8	20.0	16.7
20	12.8	9.4	19.9	15.4	22.9	19.2	23.6	19.4	23.3	19.8	20.0	16.3
21	13.9	9.8	21.0	17.6	22.7	18.9	24.4	20.7	22.8	21.3	19.9	16.3
22	15.3	11.2	21.1	17.3	24.4	19.0	25.2	20.5	23.0	20.1	19.4	16.8
23	16.3	12.5	21.9	16.8	24.5	19.7	25.4	21.0	23.7	19.2	19.6	17.2
24	14.0	12.1	21.5	17.4	23.9	18.9	25.0	20.8	24.7	20.0	20.5	17.0
25	13.7	10.6	22.2	17.5	24.6	19.1	26.2	22.0	24.9	20.8	20.0	16.8
26	15.4	11.6	20.3	18.4	26.0	21.1	25.6	22.1	23.9	20.8	18.5	15.8
27	16.2	12.6	24.1	18.0	25.4	21.6	25.3	20.9	22.3	20.2	18.5	14.7
28	15.9	13.2	22.0	18.8	24.3	21.2	25.5	21.6	20.2	16.9	18.2	15.1
29	16.6	13.3	20.3	17.9	24.6	21.2	25.8	20.4	20.4	18.0	18.5	---
30	16.0	12.9	19.8	17.2	24.7	19.9	27.1	22.5	19.9	16.7	18.1	15.1
31	---	---	21.2	18.0	---	---	27.2	22.7	18.5	16.0	---	---
MONTH	16.6	4.3	24.1	7.4	26.0	15.6	27.2	13.7	27.2	12.1	22.1	---

07126325 TAYLOR ARROYO BELOW ROCK CROSSING, NEAR THATCHER, CO

LOCATION.--Lat 37°25'26", long 103°55'09", in SE¹/4SE¹/4 sec.17, T.30 S., R.58 W., Las Animas County, Hydrologic Unit 11020010, on left bank 5 mi upstream from mouth, 1.6 mi southeast of Rock Crossing, and 13.5 mi southeast of Thatcher.

DRAINAGE AREA.--48.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1983 to current year.

GAGE.--Water-stage recorder with satellite telemetry, and crest-stage gage. Elevation of gage is 4,982 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.04	.00
2	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	6.5	.00
3	.00	.00	.00	.00	.00	.00	.06	.00	.00	.00	3.7	.00
4	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.17	.00
5	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.08	.00
6	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.52	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.05	.00
8	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
9	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
10	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
11	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
12	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
13	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
14	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
17	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
18	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
19	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
21	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
22	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	1.9	.00
23	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.19	.00
24	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.09
25	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
26	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	3.0	.00
27	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.38	.00
28	.00	.00	.00	.00	.00	.00	.00	.00	.00	.21	.18	.00
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.01	.01	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
31	.00	---	.00	.00	---	.00	---	.00	---	.00	.00	---
TOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.22	16.72	0.09
MEAN	.000	.000	.000	.000	.000	.000	.002	.000	.000	.007	.54	.003
MAX	.00	.00	.00	.00	.00	.00	.06	.00	.00	.21	6.5	.09
MIN	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	.00	.00	.00	.00	.00	.00	.1	.00	.00	.4	33	.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1993, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
	.025	.14	1987	.000	1984
	.000	.000	1991	.000	1984
	.000	.000	1984	.000	1984
	.000	.000	1984	.000	1984
	.000	.000	1984	.000	1984
	.000	.000	1984	.000	1984
	.031	.33	1983	.000	1984
	.060	.50	1987	.000	1983
	.43	3.11	1992	.000	1984
	.93	7.60	1989	.000	1983
	.63	2.72	1987	.000	1988
	.029	.30	1986	.000	1983

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1983 - 1993
ANNUAL TOTAL	94.34	17.10	
ANNUAL MEAN	.26	.047	.19
HIGHEST ANNUAL MEAN			.67
LOWEST ANNUAL MEAN			.047
HIGHEST DAILY MEAN	79 Jun 7	6.5 Aug 2	144 Jul 31 1989
LOWEST DAILY MEAN	a.00 Jan 1	a.00 Oct 1	a.00 Mar 18 1983
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 1	.00 Oct 1	.00 Mar 18 1983
INSTANTANEOUS PEAK FLOW		51 Aug 2	b2820 Jul 31 1989
INSTANTANEOUS PEAK STAGE		4.68 Aug 2	10.96 Jul 31 1989
ANNUAL RUNOFF (AC-FT)	187	34	141
10 PERCENT EXCEEDS	.00	.00	.00
50 PERCENT EXCEEDS	.00	.00	.00
90 PERCENT EXCEEDS	.00	.00	.00

a-No flow most of the time.

b-From rating extended to peak flow on the basis of slope-conveyance.

07126325 TAYLOR ARROYO BELOW ROCK CROSSING NEAR THATCHER, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1983 to current year.

PERIOD OF DAILY RECORD.--March 1983 to current year.

INSTRUMENTATION.--Water-quality monitor since March 1983. Pumping sediment sampler since Aug. 5, 1983.

REMARKS.--Estimated daily sediment load and concentrations: June 8-11, Sept. 2. Records for 1992 water year for daily specific conductance and daily water temperature are fair. Records for 1993 water year for daily specific conductance and daily water temperature are fair. Maximum and minimum specific conductance and water temperature are published only for the period of flow during the day that was recorded.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 2,520 microsiemens, Aug. 20, 1984; minimum, 61 microsiemens, Aug. 31, 1992.

WATER TEMPERATURE: Maximum, 32.0°C, Aug. 11, 1987; minimum, 0.0°C, Apr. 2, 1988.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 15,300 mg/L, Aug. 22, 1984; no flow most of the time.

SEDIMENT LOAD: Maximum daily mean, 4,910 tons, Aug. 9, 1987; no flow most of the time.

EXTREMES FOR 1992 WATER YEAR .--

SPECIFIC CONDUCTANCE: Maximum, 716 microsiemens, June 7; minimum, 61 microsiemens, Aug. 31.

WATER TEMPERATURE: Maximum, 20.7°C, Sept. 2; minimum, 8.0°C, June 7.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 5,560 mg/L, June 7; minimum daily mean 478 mg/l, June 4; no flow most of the time.

SEDIMENT LOAD: Maximum daily mean, 3,440 tons/day, June 7; minimum daily mean 0.00 tons/day, June 11; no flow most of the time.

EXTREMES FOR 1993 WATER YEAR .--

SPECIFIC CONDUCTANCE: Maximum, 955 microsiemens, Aug. 1; minimum, 91 microsiemens, Apr. 3.

WATER TEMPERATURE: Maximum, 24.7 °C, Aug. 22; minimum, 6.1°C, Apr. 3.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 346 mg/L, Aug. 3; minimum daily mean 10 mg/L, Apr. 4; no flow most of the time.

SEDIMENT LOAD: Maximum daily mean, 3.5 tons/day, Aug. 3; minimum daily mean 0.0 tons/day, Apr. 4; no flow most of the time.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[illegible][illegible]

ARKANSAS RIVER BASIN

07126325 TAYLOR ARROYO BELOW ROCK CROSSING NEAR THATCHER, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

[illegible]

07126325 TAYLOR ARROYO BELOW ROCK CROSSING NEAR THATCHER, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	.00	---	---	.00	---	---	.00	---	---
2	.00	---	---	.00	---	---	.00	---	---
3	.00	---	---	.00	---	---	.00	---	---
4	.00	---	---	.00	---	---	.00	---	---
5	.00	---	---	.00	---	---	.00	---	---
6	.00	---	---	.00	---	---	.00	---	---
7	.00	---	---	.00	---	---	.00	---	---
8	.00	---	---	.00	---	---	.00	---	---
9	.00	---	---	.00	---	---	.00	---	---
10	.00	---	---	.00	---	---	.00	---	---
11	.00	---	---	.00	---	---	.00	---	---
12	.00	---	---	.00	---	---	.00	---	---
13	.00	---	---	.00	---	---	.00	---	---
14	.00	---	---	.00	---	---	.00	---	---
15	.00	---	---	.00	---	---	.00	---	---
16	.00	---	---	.00	---	---	.00	---	---
17	.00	---	---	.00	---	---	.00	---	---
18	.00	---	---	.00	---	---	.00	---	---
19	.00	---	---	.00	---	---	.00	---	---
20	.00	---	---	.00	---	---	.00	---	---
21	.00	---	---	.00	---	---	.00	---	---
22	.00	---	---	.00	---	---	.00	---	---
23	.00	---	---	.00	---	---	.00	---	---
24	.00	---	---	.00	---	---	.00	---	---
25	.00	---	---	.00	---	---	.00	---	---
26	.00	---	---	.00	---	---	.00	---	---
27	.00	---	---	.00	---	---	.00	---	---
28	.00	---	---	.00	---	---	.00	---	---
29	.00	---	---	.00	---	---	.00	---	---
30	.00	---	---	.00	---	---	.00	---	---
31	.00	---	---	.00	---	---	.00	---	---
TOTAL	0.00	---	---	0.00	---	---	0.00	---	---

JANUARY			FEBRUARY			MARCH			
1	.00	---	---	.00	---	---	.00	---	---
2	.00	---	---	.00	---	---	.00	---	---
3	.00	---	---	.00	---	---	.00	---	---
4	.00	---	---	.00	---	---	.00	---	---
5	.00	---	---	.00	---	---	.00	---	---
6	.00	---	---	.00	---	---	.00	---	---
7	.00	---	---	.00	---	---	.00	---	---
8	.00	---	---	.00	---	---	.00	---	---
9	.00	---	---	.00	---	---	.00	---	---
10	.00	---	---	.00	---	---	.00	---	---
11	.00	---	---	.00	---	---	.00	---	---
12	.00	---	---	.00	---	---	.00	---	---
13	.00	---	---	.00	---	---	.00	---	---
14	.00	---	---	.00	---	---	.00	---	---
15	.00	---	---	.00	---	---	.00	---	---
16	.00	---	---	.00	---	---	.00	---	---
17	.00	---	---	.00	---	---	.00	---	---
18	.00	---	---	.00	---	---	.00	---	---
19	.00	---	---	.00	---	---	.00	---	---
20	.00	---	---	.00	---	---	.00	---	---
21	.00	---	---	.00	---	---	.00	---	---
22	.00	---	---	.00	---	---	.00	---	---
23	.00	---	---	.00	---	---	.00	---	---
24	.00	---	---	.00	---	---	.00	---	---
25	.00	---	---	.00	---	---	.00	---	---
26	.00	---	---	.00	---	---	.00	---	---
27	.00	---	---	.00	---	---	.00	---	---
28	.00	---	---	.00	---	---	.00	---	---
29	.00	---	---	.00	---	---	.00	---	---
30	.00	---	---	.00	---	---	.00	---	---
31	.00	---	---	.00	---	---	.00	---	---
TOTAL	0.00	---	---	0.00	---	---	0.00	---	---

07126325 TAYLOR ARROYO BELOW ROCK CROSSING NEAR THATCHER, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	.00	---	---	.00	---	---	.00	---	---
2	.00	---	---	.00	---	---	.00	---	---
3	.00	---	---	.00	---	---	.00	---	---
4	.00	---	---	.00	---	---	10	478	73
5	.00	---	---	.00	---	---	2.8	1100	8.3
6	.00	---	---	.00	---	---	.14	620	.23
7	.00	---	---	.00	---	---	79	5560	3440
8	.00	---	---	.00	---	---	.89	---	1.2
9	.00	---	---	.00	---	---	.20	---	.14
10	.00	---	---	.00	---	---	.12	---	.03
11	.00	---	---	.00	---	---	.03	---	.00
12	.00	---	---	.00	---	---	.00	---	---
13	.00	---	---	.00	---	---	.00	---	---
14	.00	---	---	.00	---	---	.00	---	---
15	.00	---	---	.00	---	---	.00	---	---
16	.00	---	---	.00	---	---	.00	---	---
17	.00	---	---	.00	---	---	.00	---	---
18	.00	---	---	.00	---	---	.00	---	---
19	.00	---	---	.00	---	---	.00	---	---
20	.00	---	---	.00	---	---	.00	---	---
21	.00	---	---	.00	---	---	.00	---	---
22	.00	---	---	.00	---	---	.00	---	---
23	.00	---	---	.00	---	---	.00	---	---
24	.00	---	---	.00	---	---	.00	---	---
25	.00	---	---	.00	---	---	.00	---	---
26	.00	---	---	.00	---	---	.00	---	---
27	.00	---	---	.00	---	---	.00	---	---
28	.00	---	---	.00	---	---	.00	---	---
29	.00	---	---	.00	---	---	.00	---	---
30	.00	---	---	.00	---	---	.00	---	---
31	---	---	---	.00	---	---	---	---	---
TOTAL	0.00	---	---	0.00	---	---	93.18	---	---
JULY			AUGUST			SEPTEMBER			
1	.00	---	---	.00	---	---	.55	260	.39
2	.00	---	---	.00	---	---	.01	---	.00
3	.00	---	---	.00	---	---	.00	---	---
4	.00	---	---	.00	---	---	.00	---	---
5	.00	---	---	.00	---	---	.00	---	---
6	.00	---	---	.00	---	---	.00	---	---
7	.00	---	---	.00	---	---	.00	---	---
8	.00	---	---	.00	---	---	.00	---	---
9	.00	---	---	.00	---	---	.00	---	---
10	.00	---	---	.00	---	---	.00	---	---
11	.00	---	---	.00	---	---	.00	---	---
12	.00	---	---	.00	---	---	.00	---	---
13	.00	---	---	.00	---	---	.00	---	---
14	.00	---	---	.00	---	---	.00	---	---
15	.00	---	---	.00	---	---	.00	---	---
16	.00	---	---	.00	---	---	.00	---	---
17	.00	---	---	.00	---	---	.00	---	---
18	.00	---	---	.00	---	---	.00	---	---
19	.00	---	---	.00	---	---	.00	---	---
20	.00	---	---	.00	---	---	.00	---	---
21	.00	---	---	.00	---	---	.00	---	---
22	.00	---	---	.00	---	---	.00	---	---
23	.00	---	---	.00	---	---	.00	---	---
24	.00	---	---	.00	---	---	.00	---	---
25	.00	---	---	.00	---	---	.00	---	---
26	.00	---	---	.00	---	---	.00	---	---
27	.00	---	---	.00	---	---	.00	---	---
28	.00	---	---	.00	---	---	.00	---	---
29	.00	---	---	.00	---	---	.00	---	---
30	.00	---	---	.00	---	---	.00	---	---
31	.00	---	---	.60	123	1.0	---	---	---
TOTAL	0.00	---	---	0.60	---	---	0.56	---	---

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

[illegible][illegible]

ARKANSAS RIVER BASIN

07126325 TAYLOR ARROYO BELOW ROCK CROSSING NEAR THATCHER, CO--Continued

TEMPERATURE, WATER (DEC. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

[illegible]

07126325 TAYLOR ARROYO BELOW ROCK CROSSING NEAR THATCHER, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	.00	---	---	.00	---	---	.00	---	---
2	.00	---	---	.00	---	---	.00	---	---
3	.00	---	---	.00	---	---	.00	---	---
4	.00	---	---	.00	---	---	.00	---	---
5	.00	---	---	.00	---	---	.00	---	---
6	.00	---	---	.00	---	---	.00	---	---
7	.00	---	---	.00	---	---	.00	---	---
8	.00	---	---	.00	---	---	.00	---	---
9	.00	---	---	.00	---	---	.00	---	---
10	.00	---	---	.00	---	---	.00	---	---
11	.00	---	---	.00	---	---	.00	---	---
12	.00	---	---	.00	---	---	.00	---	---
13	.00	---	---	.00	---	---	.00	---	---
14	.00	---	---	.00	---	---	.00	---	---
15	.00	---	---	.00	---	---	.00	---	---
16	.00	---	---	.00	---	---	.00	---	---
17	.00	---	---	.00	---	---	.00	---	---
18	.00	---	---	.00	---	---	.00	---	---
19	.00	---	---	.00	---	---	.00	---	---
20	.00	---	---	.00	---	---	.00	---	---
21	.00	---	---	.00	---	---	.00	---	---
22	.00	---	---	.00	---	---	.00	---	---
23	.00	---	---	.00	---	---	.00	---	---
24	.00	---	---	.00	---	---	.00	---	---
25	.00	---	---	.00	---	---	.00	---	---
26	.00	---	---	.00	---	---	.00	---	---
27	.00	---	---	.00	---	---	.00	---	---
28	.00	---	---	.00	---	---	.00	---	---
29	.00	---	---	.00	---	---	.00	---	---
30	.00	---	---	.00	---	---	.00	---	---
31	.00	---	---	.00	---	---	.00	---	---
TOTAL	0.00	---	---	0.00	---	---	0.00	---	---

JANUARY			FEBRUARY			MARCH			
1	.00	---	---	.00	---	---	.00	---	---
2	.00	---	---	.00	---	---	.00	---	---
3	.00	---	---	.00	---	---	.00	---	---
4	.00	---	---	.00	---	---	.00	---	---
5	.00	---	---	.00	---	---	.00	---	---
6	.00	---	---	.00	---	---	.00	---	---
7	.00	---	---	.00	---	---	.00	---	---
8	.00	---	---	.00	---	---	.00	---	---
9	.00	---	---	.00	---	---	.00	---	---
10	.00	---	---	.00	---	---	.00	---	---
11	.00	---	---	.00	---	---	.00	---	---
12	.00	---	---	.00	---	---	.00	---	---
13	.00	---	---	.00	---	---	.00	---	---
14	.00	---	---	.00	---	---	.00	---	---
15	.00	---	---	.00	---	---	.00	---	---
16	.00	---	---	.00	---	---	.00	---	---
17	.00	---	---	.00	---	---	.00	---	---
18	.00	---	---	.00	---	---	.00	---	---
19	.00	---	---	.00	---	---	.00	---	---
20	.00	---	---	.00	---	---	.00	---	---
21	.00	---	---	.00	---	---	.00	---	---
22	.00	---	---	.00	---	---	.00	---	---
23	.00	---	---	.00	---	---	.00	---	---
24	.00	---	---	.00	---	---	.00	---	---
25	.00	---	---	.00	---	---	.00	---	---
26	.00	---	---	.00	---	---	.00	---	---
27	.00	---	---	.00	---	---	.00	---	---
28	.00	---	---	.00	---	---	.00	---	---
29	.00	---	---	.00	---	---	.00	---	---
30	.00	---	---	.00	---	---	.00	---	---
31	.00	---	---	.00	---	---	.00	---	---
TOTAL	0.00	---	---	0.00	---	---	0.00	---	---

07126325 TAYLOR ARROYO BELOW ROCK CROSSING NEAR THATCHER, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	.00	---	---	.00	---	---	.00	---	---
2	.00	---	---	.00	---	---	.00	---	---
3	.06	---	.01	.00	---	---	.00	---	---
4	.01	---	.00	.00	---	---	.00	---	---
5	.00	---	---	.00	---	---	.00	---	---
6	.00	---	---	.00	---	---	.00	---	---
7	.00	---	---	.00	---	---	.00	---	---
8	.00	---	---	.00	---	---	.00	---	---
9	.00	---	---	.00	---	---	.00	---	---
10	.00	---	---	.00	---	---	.00	---	---
11	.00	---	---	.00	---	---	.00	---	---
12	.00	---	---	.00	---	---	.00	---	---
13	.00	---	---	.00	---	---	.00	---	---
14	.00	---	---	.00	---	---	.00	---	---
15	.00	---	---	.00	---	---	.00	---	---
16	.00	---	---	.00	---	---	.00	---	---
17	.00	---	---	.00	---	---	.00	---	---
18	.00	---	---	.00	---	---	.00	---	---
19	.00	---	---	.00	---	---	.00	---	---
20	.00	---	---	.00	---	---	.00	---	---
21	.00	---	---	.00	---	---	.00	---	---
22	.00	---	---	.00	---	---	.00	---	---
23	.00	---	---	.00	---	---	.00	---	---
24	.00	---	---	.00	---	---	.00	---	---
25	.00	---	---	.00	---	---	.00	---	---
26	.00	---	---	.00	---	---	.00	---	---
27	.00	---	---	.00	---	---	.00	---	---
28	.00	---	---	.00	---	---	.00	---	---
29	.00	---	---	.00	---	---	.00	---	---
30	.00	---	---	.00	---	---	.00	---	---
31	---	---	---	.00	---	---	---	---	---
TOTAL	0.07	---	---	0.00	---	---	0.00	---	---
JULY			AUGUST			SEPTEMBER			
1	.00	---	---	.04	92	.01	.00	---	---
2	.00	---	---	6.5	195	3.4	.00	---	---
3	.00	---	---	3.7	346	3.5	.00	---	---
4	.00	---	---	.17	168	.08	.00	---	---
5	.00	---	---	.08	90	.02	.00	---	---
6	.00	---	---	.52	171	.53	.00	---	---
7	.00	---	---	.05	50	.01	.00	---	---
8	.00	---	---	.00	---	---	.00	---	---
9	.00	---	---	.00	---	---	.00	---	---
10	.00	---	---	.00	---	---	.00	---	---
11	.00	---	---	.00	---	---	.00	---	---
12	.00	---	---	.00	---	---	.00	---	---
13	.00	---	---	.00	---	---	.00	---	---
14	.00	---	---	.00	---	---	.00	---	---
15	.00	---	---	.00	---	---	.00	---	---
16	.00	---	---	.00	---	---	.00	---	---
17	.00	---	---	.00	---	---	.00	---	---
18	.00	---	---	.00	---	---	.00	---	---
19	.00	---	---	.00	---	---	.00	---	---
20	.00	---	---	.00	---	---	.00	---	---
21	.00	---	---	.00	---	---	.00	---	---
22	.00	---	---	1.9	255	3.4	.00	---	---
23	.00	---	---	.19	50	.03	.00	---	---
24	.00	---	---	.00	---	---	.09	---	.02
25	.00	---	---	.00	---	---	.00	---	---
26	.00	---	---	3.0	76	2.7	.00	---	---
27	.00	---	---	.38	50	.05	.00	---	---
28	.21	138	.61	.18	25	.01	.00	---	---
29	.01	---	.00	.01	---	.00	.00	---	---
30	.00	---	---	.00	---	---	.00	---	---
31	.00	---	---	.00	---	---	---	---	---
TOTAL	0.22	---	---	16.72	---	---	0.09	---	---

07126470 CHACAUCO CREEK AT MOUTH NEAR TIMPAS, CO

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1983 to September 1992 (Discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1983 to September 1992 (Discontinued).

WATER TEMPERATURE: June 1983 to September 1992 (Discontinued).

SUSPENDED SEDIMENT: June 1983 to September 1992 (Discontinued).

INSTRUMENTATION.--Water-quality monitor since June 1983. Automatic pumping sediment sampler June 1983 to September 1992.

REMARKS.--Estimated daily load and concentrations (1992 water year): June 25-26, July 8, 11-12, 20-21, and Aug. 17, 31. Records for 1992 water year for daily sediment are poor. Daily data that are not published are either missing, of unacceptable quality, or during periods of no flow. Maximum and minimum specific conductance and water temperature are published only for the period of flow during the day that was recorded.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,510 microsiemens, June 10, 1989; minimum, 105 microsiemens, July 20, 1990.

WATER TEMPERATURE: Maximum, 35.5°C, July 13, 1992; minimum, 4.0°C, Oct. 4, 1984.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 8,240 mg/l, July 9, 1992 but was probably higher during sampler malfunction on July 8; minimum daily, no flow most of time.

SEDIMENT LOADS: Maximum daily mean, 150,000 tons/day, July 8, 1992; minimum daily, no flow most of time.

EXTREMES FOR 1992 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum 1,370 microsiemens, July 25; minimum, 154 microsiemens, July 21.

WATER TEMPERATURE: Maximum, 35.5°C, July 13; minimum, 12.1°C, July 8.

SEDIMENT CONCENTRATIONS: Maximum daily mean, 8,240 mg/l, July 9 but was probably higher during sampler malfunction on July 8; minimum daily mean, 56 mg/l, no flow most of time.

SEDIMENT LOADS: Maximum daily mean, 150,000 tons/day, July 8; minimum daily mean, 0.0 tons/day, July 20, 21 no flow most of time.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
JUL				
09...	1535	40	2060	222
09...	1540	39	1860	196

07126470 CHACAUCO CREEK AT MOUTH NEAR TIMPAS, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	.00	---	---	.00	---	---	.00	---	---
2	.00	---	---	.00	---	---	.00	---	---
3	.00	---	---	.00	---	---	.00	---	---
4	.00	---	---	.00	---	---	.00	---	---
5	.00	---	---	.00	---	---	.00	---	---
6	.00	---	---	.00	---	---	.00	---	---
7	.00	---	---	.00	---	---	.00	---	---
8	.00	---	---	.00	---	---	.00	---	---
9	.00	---	---	.00	---	---	.00	---	---
10	.00	---	---	.00	---	---	.00	---	---
11	.00	---	---	.00	---	---	.00	---	---
12	.00	---	---	.00	---	---	.00	---	---
13	.00	---	---	.00	---	---	.00	---	---
14	.00	---	---	.00	---	---	.00	---	---
15	.00	---	---	.00	---	---	.00	---	---
16	.00	---	---	.00	---	---	.00	---	---
17	.00	---	---	.00	---	---	.00	---	---
18	.00	---	---	.00	---	---	.00	---	---
19	.00	---	---	.00	---	---	.00	---	---
20	.00	---	---	.00	---	---	.00	---	---
21	.00	---	---	.00	---	---	.00	---	---
22	.00	---	---	.00	---	---	.00	---	---
23	.00	---	---	.00	---	---	.00	---	---
24	.00	---	---	.00	---	---	.00	---	---
25	.00	---	---	.00	---	---	.00	---	---
26	.00	---	---	.00	---	---	.00	---	---
27	.00	---	---	.00	---	---	.00	---	---
28	.00	---	---	.00	---	---	.00	---	---
29	.00	---	---	.00	---	---	.00	---	---
30	.00	---	---	.00	---	---	.00	---	---
31	.00	---	---	.00	---	---	.00	---	---
TOTAL	0.00	---	---	0.00	---	---	0.00	---	---

JANUARY			FEBRUARY			MARCH			
1	.00	---	---	.00	---	---	.00	---	---
2	.00	---	---	.00	---	---	.00	---	---
3	.00	---	---	.00	---	---	.00	---	---
4	.00	---	---	.00	---	---	.00	---	---
5	.00	---	---	.00	---	---	.00	---	---
6	.00	---	---	.00	---	---	.00	---	---
7	.00	---	---	.00	---	---	.00	---	---
8	.00	---	---	.00	---	---	.00	---	---
9	.00	---	---	.00	---	---	.00	---	---
10	.00	---	---	.00	---	---	.00	---	---
11	.00	---	---	.00	---	---	.00	---	---
12	.00	---	---	.00	---	---	.00	---	---
13	.00	---	---	.00	---	---	.00	---	---
14	.00	---	---	.00	---	---	.00	---	---
15	.00	---	---	.00	---	---	.00	---	---
16	.00	---	---	.00	---	---	.00	---	---
17	.00	---	---	.00	---	---	.00	---	---
18	.00	---	---	.00	---	---	.00	---	---
19	.00	---	---	.00	---	---	.00	---	---
20	.00	---	---	.00	---	---	.00	---	---
21	.00	---	---	.00	---	---	.00	---	---
22	.00	---	---	.00	---	---	.00	---	---
23	.00	---	---	.00	---	---	.00	---	---
24	.00	---	---	.00	---	---	.00	---	---
25	.00	---	---	.00	---	---	.00	---	---
26	.00	---	---	.00	---	---	.00	---	---
27	.00	---	---	.00	---	---	.00	---	---
28	.00	---	---	.00	---	---	.00	---	---
29	.00	---	---	.00	---	---	.00	---	---
30	.00	---	---	.00	---	---	.00	---	---
31	.00	---	---	.00	---	---	.00	---	---
TOTAL	0.00	---	---	0.00	---	---	0.00	---	---

07126470 CHACAUCO CREEK AT MOUTH NEAR TIMPAS, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	.00	---	---	.00	---	---	.00	---	---
2	.00	---	---	.00	---	---	.00	---	---
3	.00	---	---	.00	---	---	.00	---	---
4	.00	---	---	.00	---	---	.00	---	---
5	.00	---	---	.00	---	---	.00	---	---
6	.00	---	---	.00	---	---	.00	---	---
7	.00	---	---	.00	---	---	.00	---	---
8	.00	---	---	.00	---	---	.00	---	---
9	.00	---	---	.00	---	---	.00	---	---
10	.00	---	---	.00	---	---	.00	---	---
11	.00	---	---	.00	---	---	.00	---	---
12	.00	---	---	.00	---	---	.00	---	---
13	.00	---	---	.00	---	---	.00	---	---
14	.00	---	---	.00	---	---	.00	---	---
15	.00	---	---	.00	---	---	.00	---	---
16	.00	---	---	.00	---	---	.00	---	---
17	.00	---	---	.00	---	---	.00	---	---
18	.00	---	---	.00	---	---	.00	---	---
19	.00	---	---	.00	---	---	.00	---	---
20	.00	---	---	.00	---	---	.00	---	---
21	.00	---	---	.00	---	---	.00	---	---
22	.00	---	---	.00	---	---	.00	---	---
23	.00	---	---	.00	---	---	.00	---	---
24	.00	---	---	.00	---	---	.00	---	---
25	.00	---	---	.00	---	---	46	---	1730
26	.00	---	---	.00	---	---	14	---	33
27	.00	---	---	.00	---	---	.00	---	---
28	.00	---	---	.00	---	---	.00	---	---
29	.00	---	---	.00	---	---	.00	---	---
30	.00	---	---	.00	---	---	.00	---	---
31	---	---	---	.00	---	---	---	---	---
TOTAL	0.00	---	---	0.00	---	---	60.00	---	---
JULY			AUGUST			SEPTEMBER			
1	.00	---	---	.00	---	---	.00	---	---
2	.00	---	---	.00	---	---	.00	---	---
3	.00	---	---	.00	---	---	.00	---	---
4	.00	---	---	.00	---	---	.00	---	---
5	.00	---	---	.00	---	---	.00	---	---
6	.00	---	---	.00	---	---	.00	---	---
7	.00	---	---	.00	---	---	.00	---	---
8	1330	---	150000	.00	---	---	.00	---	---
9	322	8240	20100	.00	---	---	.00	---	---
10	4.2	441	5.7	.00	---	---	.00	---	---
11	.27	---	.07	.00	---	---	.00	---	---
12	.00	---	---	.00	---	---	.00	---	---
13	.19	---	.05	.00	---	---	.00	---	---
14	.67	56	.34	.00	---	---	.00	---	---
15	.00	---	---	.00	---	---	.00	---	---
16	.00	---	---	.00	---	---	.00	---	---
17	.00	---	---	.11	---	.03	.00	---	---
18	.00	---	---	.00	---	---	.00	---	---
19	.00	---	---	.00	---	---	.00	---	---
20	.01	---	.00	.00	---	---	.00	---	---
21	.02	---	.00	.00	---	---	.00	---	---
22	.00	---	---	.00	---	---	.00	---	---
23	.00	---	---	.00	---	---	.00	---	---
24	.00	---	---	.00	---	---	.00	---	---
25	33	165	392	.00	---	---	.00	---	---
26	4.2	411	11	.00	---	---	.00	---	---
27	.00	---	---	.00	---	---	.00	---	---
28	.00	---	---	.00	---	---	.00	---	---
29	.00	---	---	.00	---	---	.00	---	---
30	.00	---	---	.00	---	---	.00	---	---
31	.00	---	---	.01	---	.00	---	---	---
TOTAL	1694.56	---	---	0.12	---	---	0.00	---	---

07126485 PURGATOIRE RIVER AT ROCK CROSSING NEAR TIMPAS, CO

LOCATION.--Lat 37°37'10", long 103°35'32" in NE1/4SE1/4 sec.10, T.28 S., R.55 W., Las Animas County, Hydrologic Unit 11020010, on left bank at Rock Crossing, 2.1 mi upstream from Minnie Canyon, 2.4 mi downstream from Beaty Canyon, and 17 mi southeast of Timpas.

DRAINAGE AREA.--2,635 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1983 to current year.

REVISED RECORD.--WDR CO-87-1: 1984-86 (M).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 4,350 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Water year 1992, Nov. 1-5, 23-24, Dec. 2, 18, 22-25, and Jan. 14-23. Records good except for estimated daily discharges, which are poor. Estimated daily discharges: Water year 1993, Nov. 26 to Feb. 17. Records good except for estimated daily discharges, which are poor. Diversions upstream from station for irrigation of about 30,000 acres. Peak flows are regulated to some extent by Trinidad Dam, 92 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	19	37	33	24	26	38	16	16	35	185	169
2	17	17	35	28	24	26	32	14	16	20	132	152
3	18	16	33	27	29	27	40	13	18	17	360	152
4	21	20	32	28	30	29	48	13	23	15	103	117
5	20	25	32	30	31	30	49	15	267	14	52	85
6	18	32	33	27	31	30	48	15	33	12	40	60
7	16	31	32	29	28	29	47	16	111	9.6	34	41
8	19	33	32	29	27	30	41	19	188	899	64	33
9	20	34	35	37	26	31	43	13	112	1780	32	30
10	20	31	34	34	27	29	53	12	58	43	23	27
11	19	29	34	28	27	27	58	12	38	22	19	24
12	22	28	34	31	27	25	53	12	36	22	105	19
13	23	37	32	31	27	25	49	12	27	17	123	17
14	22	33	30	28	27	25	42	11	36	40	233	14
15	19	28	30	25	26	25	40	13	31	85	101	14
16	17	31	31	28	25	24	38	12	40	78	140	14
17	17	35	34	30	25	24	43	12	33	55	64	15
18	17	38	33	29	25	24	37	10	32	267	125	15
19	17	47	35	29	24	26	62	25	30	58	216	14
20	17	51	35	31	24	29	49	10	24	23	72	15
21	17	50	33	35	23	30	45	6.8	58	224	218	13
22	17	42	32	34	24	30	41	7.1	43	313	256	13
23	18	38	30	32	24	29	36	8.1	28	99	77	12
24	19	36	30	32	25	29	33	7.5	23	61	64	12
25	18	35	32	27	26	32	30	6.5	21	301	834	11
26	17	32	34	28	26	33	28	6.8	78	706	674	12
27	19	33	34	28	26	31	25	9.6	20	230	188	12
28	19	34	31	26	27	30	23	12	18	107	149	12
29	20	37	28	28	26	26	21	12	23	93	118	12
30	20	37	28	27	---	47	19	13	39	72	94	16
31	19	---	31	25	---	47	---	14	---	45	92	---
TOTAL	580	989	1006	914	761	905	1211	378.4	1520	5762.6	4987	1152
MEAN	18.7	33.0	32.5	29.5	26.2	29.2	40.4	12.2	50.7	186	161	38.4
MAX	23	51	37	37	31	47	62	25	267	1780	834	169
MIN	16	16	28	25	23	24	19	6.5	16	9.6	19	11
AC-FT	1150	1960	2000	1810	1510	1800	2400	751	3010	11430	9890	2280

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1992, BY WATER YEAR (WY)

	MEAN	42.5	37.5	32.9	31.5	37.0	41.3	77.7	120	133	85.5	108	38.8
MAX	74.3	52.8	42.9	41.4	56.0	96.5	274	585	836	186	161	65.5	
(WY)	1986	1987	1987	1984	1988	1987	1987	1987	1983	1992	1986	1983	
MIN	13.0	20.5	15.6	17.4	22.7	19.7	16.8	5.81	9.65	11.2	39.1	12.5	
(WY)	1990	1990	1991	1991	1991	1991	1989	1991	1990	1989	1985	1990	

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1983 - 1992
ANNUAL TOTAL	12849.15	20166.0	
ANNUAL MEAN	35.2	55.1	58.5
HIGHEST ANNUAL MEAN			123
LOWEST ANNUAL MEAN			29.6
HIGHEST DAILY MEAN	565	1780	3500
LOWEST DAILY MEAN	.58	6.5	.00
ANNUAL SEVEN-DAY MINIMUM	1.0	7.5	.00
INSTANTANEOUS PEAK FLOW		b11400	b11400
INSTANTANEOUS PEAK STAGE		c17.90	c17.90
ANNUAL RUNOFF (AC-FT)	25490	40000	42400
10 PERCENT EXCEEDS	56	95	115
50 PERCENT EXCEEDS	21	29	35
90 PERCENT EXCEEDS	6.0	14	13

a-Also occurred Jul 1-9, 1990.

b-From rating curve extended above 5450 ft³/s, on basis of slope-area measurement of peak flow.

c-From floodmarks.

07126485 PURGATOIRE RIVER AT ROCK CROSSING NEAR TIMPAS, CO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	31	40	40	18	35	461	248	397	47	17	166
2	26	45	39	41	18	39	383	224	127	34	77	181
3	26	47	39	42	19	46	362	189	92	38	314	149
4	25	38	39	42	19	46	362	235	76	30	86	76
5	26	36	40	40	19	49	435	249	78	27	49	64
6	26	44	41	39	20	44	1580	191	55	27	230	314
7	30	39	41	38	20	40	1080	153	50	22	519	291
8	30	38	42	36	19	39	611	130	53	15	114	186
9	38	36	43	33	19	39	413	112	44	11	64	109
10	44	36	42	31	21	41	337	142	43	9.4	49	125
11	40	38	42	29	22	48	333	237	49	7.4	45	131
12	36	39	41	26	26	54	369	246	78	7.1	36	104
13	36	42	41	26	27	54	365	291	75	8.8	208	79
14	38	45	39	27	28	47	299	214	74	9.8	250	72
15	37	41	39	27	29	47	244	153	64	38	109	77
16	36	42	40	26	30	50	185	150	42	96	51	81
17	37	44	41	26	31	58	146	137	37	38	33	70
18	35	43	41	26	31	59	133	125	56	742	27	60
19	32	40	41	24	31	55	132	184	131	219	72	54
20	32	39	41	24	34	52	191	227	100	88	53	50
21	30	44	42	22	46	62	146	150	73	49	246	50
22	31	45	43	20	56	81	118	111	52	34	144	45
23	29	45	43	18	45	85	109	103	46	27	72	44
24	28	39	42	17	38	92	120	88	40	22	53	43
25	31	38	39	18	33	90	158	169	46	18	37	56
26	30	38	38	19	32	100	156	115	71	14	37	62
27	29	39	35	19	32	142	117	118	79	11	50	59
28	29	40	34	19	31	765	144	110	99	9.4	761	57
29	28	40	29	19	---	239	179	151	87	18	642	53
30	28	40	32	19	---	200	239	244	67	28	358	49
31	29	---	35	19	---	428	---	501	---	14	139	---
TOTAL	974	1211	1224	852	794	3226	9907	5697	2381	1758.9	4942	2957
MEAN	31.4	40.4	39.5	27.5	28.4	104	330	184	79.4	56.7	159	98.6
MAX	44	47	43	42	56	765	1580	501	397	742	761	314
MIN	22	31	29	17	18	35	109	88	37	7.1	17	43
AC-FT	1930	2400	2430	1690	1570	6400	19650	11300	4720	3490	9800	5870

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1993, BY WATER YEAR (WY)

MEAN	41.4	37.8	33.6	31.1	36.2	47.6	103	126	128	82.9	113	44.2
MAX	74.3	52.8	42.9	41.4	56.0	104	330	585	836	186	161	98.6
(WY)	1986	1987	1987	1984	1988	1993	1993	1987	1983	1992	1986	1993
MIN	13.0	20.5	15.6	17.4	22.7	19.7	16.8	5.81	9.65	11.2	39.1	12.5
(WY)	1990	1990	1991	1991	1991	1991	1989	1991	1990	1989	1985	1990

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1983 - 1993

ANNUAL TOTAL	21000.0	35923.9	
ANNUAL MEAN	57.4	98.4	62.5
HIGHEST ANNUAL MEAN			123
LOWEST ANNUAL MEAN			29.6
HIGHEST DAILY MEAN	1780	Jul 9	3500
LOWEST DAILY MEAN	6.5	May 25	a .00
ANNUAL SEVEN-DAY MINIMUM	7.5	May 21	b .00
INSTANTANEOUS PEAK FLOW			11400
INSTANTANEOUS PEAK STAGE			c 17.90
ANNUAL RUNOFF (AC-FT)	41650	71260	45290
10 PERCENT EXCEEDS	95	238	130
50 PERCENT EXCEEDS	31	44	36
90 PERCENT EXCEEDS	14	22	14

a-Also occurred Jul 1-9, 1990.

b-From rating curve extended above 5450 ft³/s, on basis of slope-area measurement of peak flow.

c-From floodmarks.

07126485 PURGATOIRE RIVER AT ROCK CROSSING NEAR TIMPAS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to September 1992 (Discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1983 to September 1992 (Discontinued).

WATER TEMPERATURE: July 1983 to September 1992 (Discontinued).

SUSPENDED SEDIMENT: August 1983 to September 1992 (Discontinued).

INSTRUMENTATION.--Water-quality monitor since July 1983. Automatic pumping sediment sampler since August 1983.

REMARKS.--Records for 1992 water year for daily specific conductance, daily water temperature are good. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance and daily mean water temperature data are available in district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 5,590 microsiemens, July 13, 1991; minimum, 202 microsiemens, Aug. 11, 1991.

WATER TEMPERATURE: Maximum, 36.8°C, June 27, 1990; minimum 0.0°C, on many days during the winter in most years.

SEDIMENT CONCENTRATIONS: Maximum daily, 54,900 mg/L, Aug. 16, 1986; minimum daily, 5 mg/L, Mar. 22, 1988, and Feb. 10, 1989.

SEDIMENT LOADS: Maximum daily, 160,000 tons, July 9, 1992; minimum daily, 0.0 tons (estimated), on several days during 1989 and 1990.

EXTREMES FOR 1992 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 3,740 microsiemens, June 3; minimum, 318 microsiemens, June 7.

WATER TEMPERATURE: Maximum, 29.8°C, July 7; minimum, 0.1°C, Jan. 14-15.

SEDIMENT CONCENTRATION: Maximum daily mean, 10,000 mg/L, July 22; minimum daily mean, 25 mg/L, Feb. 27.

SEDIMENT LOAD: Maximum daily mean, 160,000 tons/day, July 9; minimum daily mean, 1.5 tons/day, Feb. 28 to Mar. 3.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT				
16...	1755	17	209	9.6
NOV				
27...	1410	35	254	24
JAN				
23...	1300	44	72	8.6
FEB				
27...	1445	27	25	1.8
APR				
03...	1600	43	314	36
30...	1410	18	252	12
MAY				
15...	1230	14	348	13
15...	1240	14	347	13
JUN				
17...	1525	34	430	39
17...	1540	34	422	39
JUL				
07...	1515	9.6	338	8.8
10...	1350	40	299	32
10...	1355	40	244	26
22...	1715	338	9190	8390
AUG				
06...	1410	41	382	42
06...	1420	41	371	41
28...	1445	161	1710	743
SEP				
29...	1200	12	66	2.1
29...	1220	12	85	2.8

07126485 PURGATOIRE RIVER AT ROCK CROSSING NEAR TIMPAS, CO--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
OCT				
29...	1410	27	26	1.9
NOV				
19...	1635	39	18	1.9
JAN				
13...	1505	37	37	1.2
FEB				
24...	1305	41	62	6.9
MAR				
25...	1635	103	187	52
APR				
15...	1645	219	543	321
MAY				
26...	1545	141	773	294
JUN				
24...	1805	38	390	40
JUL				
29...	1555	21	62	3.5
AUG				
26...	1600	30	355	29
SEP				
28...	1720	58	82	13

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2110	---	3250	3300	3130	3210	2710	2720	2760	2260	1960	2050
2	2340	---	3370	3370	3110	3130	2650	2710	3140	2610	1980	1910
3	2440	---	3320	3400	2990	3090	2710	2700	3540	2640	1750	1690
4	2470	2970	3280	3390	2970	3000	---	2720	3130	2770	1250	1820
5	2430	2900	3260	3340	3040	2930	---	2750	1540	2840	---	1460
6	2380	2930	3290	3310	3050	2940	---	2800	633	---	881	1390
7	2370	2960	3330	3260	3110	2970	---	2830	809	---	939	---
8	2400	2970	3370	3260	3140	2980	---	2820	1540	2630	913	---
9	2460	2990	3320	3280	3140	2940	---	2830	1470	547	1410	---
10	2470	2940	3290	3210	3130	2920	---	2780	1120	1070	1740	---
11	2450	2960	3360	3220	3110	2890	2150	2810	1680	910	2320	---
12	2470	3100	3230	3110	3100	2870	2110	2810	2550	---	2140	---
13	2560	3060	3120	3080	3080	2870	2250	2800	2460	---	2500	---
14	2490	2940	3070	3180	3080	2970	2210	2890	2480	---	2010	---
15	2450	3070	3090	3200	3080	3080	1960	3030	2810	---	1740	---
16	2560	3110	3170	3250	3100	3130	1820	3080	2650	---	1770	---
17	2720	---	3210	3250	3120	3130	1770	3030	2900	---	1740	---
18	2750	3030	3260	3290	3130	3020	1670	3010	2980	---	1530	---
19	2700	2930	3270	3330	3120	2940	1770	3190	2900	---	2300	---
20	2660	3010	3240	3350	3080	2960	1900	3430	2930	---	1800	---
21	2690	3310	3200	3320	3070	2960	1990	3490	2640	---	1640	---
22	2740	3380	3190	3300	3060	2940	2260	3460	1940	---	1310	---
23	2740	3190	3190	3410	3070	2930	2270	3320	2090	2010	832	---
24	2670	3080	3230	3330	3070	2960	2380	3130	2100	1430	852	---
25	2630	3110	3230	3310	3060	2960	2730	2590	1980	1270	1060	---
26	2670	3120	3220	3320	3050	2930	2890	1900	792	840	1190	---
27	2690	3180	3200	3150	3060	2840	2870	1780	1410	---	1220	---
28	2790	3300	3200	3090	3150	2840	2700	2330	2870	835	1380	---
29	2870	3260	3240	3140	3230	2880	2660	3150	3290	1540	1790	---
30	2880	3280	3240	3140	---	2860	2650	3010	2820	1340	2140	3680
31	---	---	3290	3130	---	2690	---	2770	---	1500	2160	---
MEAN	---	---	3240	3260	3090	2960	---	2860	2270	---	---	---

07126485 PURGATOIRE RIVER AT ROCK CROSSING NEAR TIMPAS, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	21.0	14.9	---	---	1.5	.2	2.0	.2	5.7	2.3	11.6	6.6
2	21.0	15.8	---	---	.9	.2	2.0	.2	7.3	3.8	13.5	7.9
3	20.7	15.5	---	---	1.2	.2	1.8	.2	6.5	3.6	11.6	8.2
4	18.3	12.3	1.7	.4	1.7	.2	3.8	.7	4.7	2.7	13.4	9.1
5	15.8	10.0	4.5	.4	2.8	.2	3.6	.5	5.9	1.8	11.6	9.0
6	16.2	10.3	7.6	2.7	4.0	.6	5.4	1.1	6.1	2.2	13.2	7.0
7	17.8	11.5	7.7	4.2	4.1	.9	4.8	2.8	5.9	1.6	12.8	8.2
8	18.1	12.5	8.2	3.6	4.7	1.4	3.4	1.1	4.8	2.4	13.2	8.5
9	18.7	13.6	9.8	5.3	4.6	1.6	2.5	.2	6.4	1.9	9.5	5.0
10	18.7	13.4	8.8	7.0	4.2	1.7	2.6	.2	7.0	2.7	9.5	2.8
11	18.6	13.4	8.1	6.1	2.6	.8	2.3	.4	8.4	4.1	11.2	5.7
12	18.3	13.1	8.3	4.0	2.7	.6	1.8	.2	9.5	5.2	10.9	6.2
13	18.1	14.1	8.0	4.2	3.0	.2	1.7	.2	6.8	4.4	13.6	6.9
14	16.5	12.4	8.4	5.3	1.8	.2	.9	.1	8.5	3.4	14.5	8.0
15	17.1	11.8	6.6	5.7	1.8	.2	.4	.1	8.7	4.2	14.2	8.4
16	18.2	12.6	---	---	2.0	.2	.6	.2	6.8	4.5	15.4	9.1
17	18.3	13.0	---	---	1.0	.2	.7	.2	7.6	3.7	12.5	9.4
18	15.6	12.2	7.3	4.1	.7	.2	1.4	.2	7.4	2.9	11.6	8.2
19	14.6	10.0	6.3	4.0	2.8	.2	1.0	.2	7.2	1.5	14.0	8.0
20	14.3	10.3	5.1	1.9	2.7	---	1.0	.2	8.7	3.2	14.3	8.2
21	14.3	11.1	6.5	3.0	3.3	.2	1.3	.2	8.3	5.3	13.9	8.4
22	15.8	10.7	5.0	4.0	3.7	1.9	1.4	.2	9.3	4.3	12.0	7.9
23	16.3	11.5	3.8	1.2	3.3	.7	1.3	.2	8.5	6.0	12.7	6.9
24	14.7	11.1	3.0	.2	2.4	.2	2.5	.2	8.2	3.9	13.5	7.4
25	13.7	9.6	4.2	.7	2.6	.2	4.4	.3	5.9	3.9	15.5	8.9
26	13.4	9.1	6.1	2.0	2.4	.3	4.2	1.4	7.2	2.9	15.0	9.5
27	14.2	10.0	5.6	3.1	2.0	.2	4.2	.5	9.3	5.2	13.9	10.0
28	12.1	7.1	4.6	3.3	1.9	.2	4.8	.7	11.3	5.4	13.5	9.8
29	6.6	4.1	4.2	2.6	3.1	.2	5.1	1.0	12.0	6.0	15.0	9.1
30	4.4	.4	2.6	.6	2.3	.2	5.7	1.4	---	---	16.0	9.1
31	---	---	---	---	1.7	.4	6.4	1.9	---	---	13.4	9.7
MONTH	---	---	---	---	4.7	---	6.4	.1	12.0	1.5	16.0	2.8

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	15.0	8.2	24.6	17.0	18.4	14.9	28.0	21.3	25.9	20.8	23.1	18.9
2	13.5	9.2	22.0	16.3	20.3	13.5	27.3	20.5	26.5	21.5	23.1	19.0
3	15.8	8.6	23.6	16.2	22.9	15.3	27.2	20.3	24.5	22.0	22.8	18.7
4	---	---	24.0	16.6	22.4	17.4	24.7	21.1	---	21.3	22.2	19.2
5	---	---	23.6	17.0	20.1	15.2	27.7	19.6	25.9	21.5	22.1	18.3
6	---	---	23.2	15.9	19.3	15.1	---	---	25.0	22.0	23.2	18.0
7	---	---	23.3	16.8	20.0	10.3	29.8	---	26.8	21.4	22.2	18.3
8	---	---	23.9	18.0	17.9	16.2	27.9	13.7	26.7	22.6	23.3	18.0
9	---	---	23.3	18.0	17.6	16.1	18.0	10.6	28.0	22.7	22.2	18.6
10	19.4	---	18.4	14.9	22.4	14.4	21.2	17.5	27.0	23.7	21.9	17.6
11	19.6	14.2	22.5	13.3	24.9	17.7	23.3	19.3	26.7	22.3	22.4	17.2
12	19.4	14.3	23.7	16.3	26.0	18.5	23.1	22.1	---	23.0	23.6	19.0
13	21.6	14.7	25.1	17.3	27.8	19.6	23.5	22.8	25.4	21.5	23.9	19.3
14	21.0	16.3	26.2	17.2	27.0	20.2	24.3	22.6	24.8	20.5	23.9	19.6
15	20.4	15.7	24.2	---	26.4	19.4	25.9	23.9	25.3	20.4	21.6	19.6
16	18.3	15.8	25.6	16.4	24.8	19.4	25.8	24.4	25.1	21.3	23.6	18.2
17	20.5	13.8	---	17.8	24.5	17.3	26.4	23.8	24.6	21.6	24.7	19.5
18	18.0	12.0	26.4	18.2	26.4	19.4	24.6	21.5	24.4	20.9	21.8	18.1
19	12.1	10.5	25.5	17.7	26.6	21.1	25.1	19.4	24.9	20.3	22.0	18.1
20	15.2	9.4	25.3	18.1	24.6	21.2	24.9	20.8	25.7	21.0	22.1	17.6
21	17.7	9.9	25.7	17.8	26.0	19.7	24.5	20.3	25.5	21.9	20.6	18.2
22	17.3	12.2	20.2	16.8	27.1	19.0	22.5	18.9	25.1	21.8	21.2	16.3
23	19.7	12.7	19.6	15.1	28.9	21.5	24.9	20.3	25.0	20.7	22.4	16.8
24	19.4	13.2	23.6	15.3	28.8	21.9	26.2	21.2	23.1	19.4	22.7	17.5
25	20.3	13.5	18.6	14.5	27.7	21.3	26.2	22.8	20.1	16.5	20.3	17.5
26	20.2	13.3	25.2	13.5	---	16.3	23.7	20.8	19.1	16.0	19.6	15.0
27	21.9	14.8	19.3	13.7	---	19.2	---	20.9	21.4	16.8	20.0	14.9
28	21.9	16.3	15.8	11.6	26.3	19.1	25.4	21.5	22.3	17.5	18.8	14.8
29	24.0	16.0	19.5	11.7	28.1	20.4	25.4	21.5	22.1	18.3	20.5	14.7
30	23.0	17.0	18.4	15.1	---	21.0	24.7	20.1	22.6	19.0	19.7	15.2
31	---	---	22.0	15.3	---	---	26.1	21.2	22.7	19.0	---	---
MONTH	---	---	---	---	---	10.3	---	---	---	16.0	24.7	14.7

07126485 PURGATOIRE RIVER AT ROCK CROSSING NEAR TIMPAS, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	18	---	7.3	19	---	10	37	---	20
2	17	---	6.9	17	---	10	35	---	20
3	18	---	7.3	16	---	10	33	---	20
4	21	---	8.5	20	---	15	32	---	20
5	20	---	8.1	25	---	15	32	---	20
6	18	---	7.3	32	---	20	33	---	20
7	16	---	6.3	31	---	20	32	---	20
8	19	---	7.4	33	---	20	32	---	20
9	20	---	7.8	34	---	20	35	---	20
10	20	---	7.8	31	---	20	34	---	20
11	19	---	7.4	29	---	20	34	---	20
12	22	142	8.4	28	---	20	34	---	20
13	23	126	7.8	37	---	20	32	---	15
14	22	---	12	33	---	20	30	---	15
15	19	220	11	28	---	20	30	---	15
16	17	208	9.5	31	---	20	31	---	15
17	17	204	9.4	35	---	20	34	---	15
18	17	195	9.0	38	---	25	33	---	15
19	17	---	8.3	47	---	30	35	---	15
20	17	172	7.9	51	---	30	35	---	15
21	17	165	7.6	50	---	30	33	---	10
22	17	---	7.3	42	---	30	32	---	10
23	18	158	7.7	38	---	25	30	---	10
24	19	180	9.2	36	---	25	30	---	10
25	18	---	9.5	35	---	25	32	---	10
26	17	198	9.1	32	---	23	34	---	10
27	19	180	9.2	33	254	23	34	---	10
28	19	---	10	34	---	23	31	---	10
29	20	207	11	37	---	25	28	---	10
30	20	---	11	37	---	25	28	---	10
31	19	---	10	---	---	---	31	---	10
TOTAL	580	---	267.0	989	---	639	1006	---	470
JANUARY			FEBRUARY			MARCH			
1	33	---	10	24	---	5.0	26	---	1.5
2	28	---	10	24	---	5.0	26	---	1.5
3	27	---	10	29	---	5.0	27	---	1.5
4	28	---	10	30	---	5.0	29	---	2.0
5	30	---	10	31	---	5.0	30	---	2.0
6	27	---	10	31	---	5.0	30	---	2.0
7	29	---	10	28	---	4.0	29	---	2.0
8	29	---	10	27	---	4.0	30	---	2.0
9	37	---	10	26	---	4.0	31	---	2.0
10	34	---	10	27	---	4.0	29	---	2.0
11	28	---	10	27	---	4.0	27	---	2.0
12	31	---	10	27	---	4.0	25	---	2.0
13	31	---	10	27	---	4.0	25	---	2.0
14	28	---	9.0	27	---	4.0	25	---	2.0
15	25	---	8.0	26	---	4.0	25	---	2.0
16	28	---	8.0	25	---	3.0	24	---	2.0
17	30	---	7.0	25	---	3.0	24	---	2.0
18	29	---	6.5	25	---	3.0	24	---	2.0
19	29	---	6.5	24	---	3.0	26	---	2.0
20	31	---	6.5	24	---	3.0	29	---	2.0
21	35	---	6.5	23	---	3.0	30	---	2.0
22	34	---	6.5	24	---	3.0	30	---	2.0
23	32	72	6.2	24	---	3.0	29	---	2.0
24	32	---	6.0	25	---	3.0	29	---	2.0
25	27	---	6.0	26	---	2.0	32	---	2.0
26	28	---	6.0	26	---	2.0	33	---	2.0
27	28	---	6.0	26	25	1.8	31	---	2.0
28	26	---	6.0	27	---	1.5	30	---	2.0
29	28	---	6.0	26	---	1.5	26	---	2.0
30	27	---	5.0	---	---	---	47	---	38
31	25	---	5.0	---	---	---	47	---	32
TOTAL	914	---	246.7	761	---	101.8	905	---	126.5

07126485 PURGATOIRE RIVER AT ROCK CROSSING NEAR TIMPAS, CO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	38	---	21	16	208	9.0	16	---	7.1
2	32	---	22	14	---	7.0	16	---	7.1
3	40	317	34	13	176	6.2	18	---	12
4	48	---	41	13	160	5.6	23	---	20
5	49	---	42	15	---	7.8	267	4330	7680
6	48	---	41	15	192	7.8	33	---	18
7	47	---	40	16	152	6.6	111	---	687
8	41	---	35	19	---	11	188	---	1210
9	43	---	37	13	216	7.6	112	---	254
10	53	315	45	12	176	5.7	58	---	82
11	58	---	49	12	---	5.7	38	---	32
12	53	300	43	12	192	6.2	36	---	36
13	49	300	40	12	152	4.9	27	---	15
14	42	---	30	11	---	4.3	36	---	41
15	40	---	31	13	289	10	31	---	26
16	38	288	30	12	231	7.5	40	---	40
17	43	---	44	12	---	8.0	33	421	38
18	37	---	31	10	322	8.7	32	---	27
19	62	---	110	25	---	28	30	---	21
20	49	---	140	10	---	9.5	24	210	14
21	45	736	89	6.8	---	6.2	58	617	153
22	41	480	53	7.1	264	5.1	43	---	24
23	36	---	39	8.1	---	4.9	28	158	12
24	33	352	31	7.5	---	4.2	23	110	6.8
25	30	---	27	6.5	---	3.3	21	---	6.0
26	28	---	24	6.8	---	3.0	78	3240	696
27	25	---	21	9.6	231	6.0	20	1190	64
28	23	---	18	12	280	9.1	18	---	17
29	21	---	15	12	---	8.3	23	340	21
30	19	256	13	13	264	9.3	39	680	72
31	---	---	---	14	---	7.5	---	---	---
TOTAL	1211	---	1236	378.4	---	234.0	1520	---	11339.0

JULY			AUGUST			SEPTEMBER			
1	35	---	112	185	---	2800	169	---	228
2	20	255	14	132	---	178	152	---	308
3	17	255	12	360	---	3000	152	---	267
4	15	---	8.6	103	---	139	117	490	155
5	14	212	8.0	52	---	56	85	420	96
6	12	---	6.9	40	372	40	60	---	62
7	9.6	340	8.8	34	---	27	41	350	39
8	899	---	82000	64	552	95	33	245	22
9	1780	---	160000	32	255	22	30	---	14
10	43	500	58	23	---	13	27	105	7.7
11	22	---	15	19	298	15	24	105	6.8
12	22	---	12	105	638	181	19	---	4.5
13	17	---	6.9	123	715	409	17	88	4.0
14	40	---	108	233	500	315	14	---	3.5
15	85	---	459	101	558	167	14	---	3.5
16	78	---	210	140	727	344	14	---	3.5
17	55	---	297	64	---	43	15	---	3.5
18	267	---	10000	125	547	692	15	---	3.5
19	58	---	157	216	1250	954	14	---	3.0
20	23	---	31	72	---	68	15	---	3.0
21	224	---	3020	218	---	5000	13	---	3.0
22	313	10000	8450	256	---	9000	13	---	3.0
23	99	---	134	77	---	208	12	---	3.0
24	61	---	41	64	---	86	12	---	3.0
25	301	---	14000	834	---	75000	11	---	2.5
26	706	---	10000	674	---	60000	12	---	2.5
27	230	---	6000	188	---	3000	12	---	2.5
28	107	---	160	149	1680	676	12	---	2.5
29	93	---	126	118	---	319	12	77	2.5
30	72	---	49	94	---	127	16	---	3.0
31	45	---	24	92	---	62	---	---	---
TOTAL	5762.6	---	295528.2	4987	---	163036	1152	---	1265.0
YEAR	20166.0		474489.2						

07126500 PURGATOIRE RIVER AT NINEMILE DAM, NEAR HIGBEE, CO

LOCATION.--Lat 37°42'53", long 103°30'38", in NW¼ sec.7, T.27 S., R.54 W., Otero County, Hydrologic Unit 11020010, on left bank at Ninemile Dam, 4 mi southwest of Higbee, and 5.5 mi upstream from Smith Canyon. Prior to Apr. 21, 1978 gage located 850 ft, upstream.

DRAINAGE AREA.--2,752 mi².

PERIOD OF RECORD.--October 1924 to current year. Monthly discharge only for some periods, published in WSP 1311. Statistical summary computed for 1977 to current year.

REVISED RECORDS.--WSP 1311: 1934 (M), 1936 (M), 1941-42 (M), 1948-49 (M). WSP 1731: 1929 (M).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 4,240.59 ft above sea level, supplementary adjustment of 1960. See WSP 1711 or 1731 for history of changes prior to Dec. 6, 1956. Dec. 6, 1956 to Apr. 20, 1978, at site 850 ft, upstream.

REMARKS.--No estimated daily discharges. Records good except for flows over 1,000 ft³/s, which are fair. Diversions for irrigation of about 32,000 acres above station. Discharge computed by combining discharge of river below Ninemile Dam and Ninemile canal.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	29	40	77	28	31	425	234	453	46	24	164
2	23	32	37	64	30	34	358	206	158	35	100	182
3	25	42	39	52	26	38	337	190	117	37	278	173
4	24	35	33	41	25	41	397	259	72	27	113	71
5	23	31	34	47	35	45	370	305	85	19	52	52
6	24	37	35	46	36	42	1350	237	60	25	72	284
7	33	35	32	36	32	39	1010	192	55	19	638	263
8	30	34	29	52	30	36	600	158	54	15	152	246
9	33	33	35	32	29	35	399	132	46	8.5	69	117
10	36	33	35	34	31	35	332	152	45	6.6	47	117
11	37	33	38	44	41	37	352	234	48	10	40	124
12	34	33	38	42	42	43	357	326	78	12	36	107
13	33	34	35	38	47	46	399	328	71	6.7	151	75
14	33	38	33	42	39	44	313	288	65	5.6	286	63
15	38	35	37	41	36	39	259	196	66	9.5	136	64
16	36	35	46	35	33	43	193	180	45	88	56	76
17	36	37	31	32	42	48	161	168	41	35	35	63
18	36	42	39	33	35	54	132	154	45	471	28	50
19	30	42	33	33	40	56	140	182	131	253	50	45
20	30	42	29	37	39	52	190	288	94	145	67	42
21	29	42	38	40	50	56	153	195	72	48	208	43
22	29	42	33	38	65	67	114	135	52	32	206	38
23	28	42	30	38	61	75	99	121	45	23	78	36
24	27	37	32	32	47	72	102	102	40	19	60	35
25	29	32	33	33	34	69	137	175	38	15	41	44
26	28	28	28	45	33	78	161	109	72	13	38	52
27	28	32	33	47	32	98	125	129	67	11	42	50
28	28	30	32	38	31	676	148	116	97	8.7	434	47
29	27	35	33	28	---	273	203	155	89	13	713	45
30	27	31	39	29	---	177	210	213	71	22	388	42
31	28	---	75	28	---	327	---	524	---	31	149	---
TOTAL	920	1063	1114	1254	1049	2806	9526	6383	2472	1509.6	4787	2810
MEAN	29.7	35.4	35.9	40.5	37.5	90.5	318	206	82.4	48.7	154	93.7
MAX	38	42	75	77	65	676	1350	524	453	471	713	284
MIN	18	28	28	28	25	31	99	102	38	5.6	24	35
AC-FT	1820	2110	2210	2490	2080	5570	18890	12660	4900	2990	9500	5570

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1993, BY WATER YEAR (WY)

	MEAN	32.0	25.9	24.7	25.6	28.3	35.3	86.9	130	120	116	180	60.8
MAX	79.9	43.7	40.0	40.5	65.7	93.4	333	489	640	448	829	268	
(WY)	1986	1987	1987	1993	1988	1987	1983	1987	1983	1981	1981	1981	
MIN	.000	.000	4.45	5.82	11.7	6.06	1.19	5.87	4.35	29.9	32.6	.90	
(WY)	1978	1977	1979	1977	1977	1977	1978	1991	1977	1989	1980	1978	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1977 - 1993

ANNUAL TOTAL	21455.6	35693.6	
ANNUAL MEAN	58.6	97.8	
HIGHEST ANNUAL MEAN			^a 72.4
LOWEST ANNUAL MEAN			161
HIGHEST DAILY MEAN	1750	Jul 9	1350
LOWEST DAILY MEAN	4.3	May 26	5.6
ANNUAL SEVEN-DAY MINIMUM	4.9	May 22	8.4
INSTANTANEOUS PEAK FLOW			^d 2660
INSTANTANEOUS PEAK STAGE			^e 22700
ANNUAL RUNOFF (AC-FT)	42560	70800	52480
10 PERCENT EXCEEDS	123	249	140
50 PERCENT EXCEEDS	30	42	29
90 PERCENT EXCEEDS	11	28	5.6

a-Average discharge for 52 years (water years 1925-76), 94.5 ft³/s; 68470 acre-ft/yr, prior to completion of Trinidad Dam.

b-Maximum daily discharge for period of record, 27000 ft³/s, Aug 7, 1929.

c-No flow at times most years.

d-Maximum combined instantaneous discharge, gage height, not determined.

e-Maximum discharge and stage for period of record, 105000 ft³/s, estimated, Jun 18, 1965, gage height, 19.6 ft, from floodmarks.

07128500 PURGATOIRE RIVER NEAR LAS ANIMAS, CO

LOCATION.--Lat 38°02'02", long 103°12'00", in NE1/4SW1/4 sec.23, T.23 S., R.52 W., Bent County, Hydrologic Unit 11020010, on right bank at downstream side of bridge on State Highway 101, 2.3 mi southeast of courthouse in Las Animas, and 4.5 mi upstream from mouth.

DRAINAGE AREA.--3,318 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to September 1889, July to October 1909 (gage heights and discharge measurements only), January 1922 to September 1931, July 1948 to current year. Monthly discharge only for some periods, published in WSP 1311. Published as Purgatoire Creek at Las Animas in 1889 and as Purgatory River near Las Animas in 1909. Statistical summary computed for 1978 to current year, subsequent to completion of Trinidad Reservoir.

REVISED RECORDS.--WSP 1241: 1927 (M); WDR CO-84-1: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 3,871.84 ft above sea level. See WSP 1731 for history of changes prior to Oct. 1, 1955. Oct. 1, 1955 to July 11, 1966, at datum 3.00 ft, higher. Supplementary water-stage recorder at site 1.6 mi downstream at different datum July 12 to Nov. 17, 1966. Nov. 18, 1966 to May 4, 1982 at datum 3.1 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 27 to Dec. 9, Jan. 7-14, and Feb. 10-17. Records fair except for estimated daily discharges and winter period, which are poor. Flow regulated to some extent since January 1975 by Trinidad Lake near Trinidad, upstream. Diversions for irrigation of about 36,000 acres upstream from station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood since at least 1860 occurred Oct. 1, 1904, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	29	37	78	47	44	377	182	377	29	5.3	130
2	7.4	28	37	94	43	50	368	194	317	25	5.1	150
3	9.6	30	36	82	41	50	353	174	162	18	21	158
4	13	44	33	61	38	46	376	143	118	22	130	130
5	17	38	33	52	37	49	308	173	96	19	44	51
6	14	30	32	46	36	51	526	174	98	19	17	39
7	18	33	32	43	35	51	1200	143	76	18	115	245
8	29	43	32	41	35	48	816	119	56	17	278	265
9	28	45	38	40	33	43	490	98	50	14	64	183
10	25	38	47	40	31	40	395	83	33	9.1	26	108
11	24	46	47	41	29	40	347	96	24	7.4	14	104
12	25	51	48	44	28	42	335	172	24	6.4	13	113
13	25	47	47	44	26	54	364	184	26	5.6	9.3	89
14	26	47	45	43	27	57	348	213	35	6.4	75	67
15	28	36	44	40	26	58	303	165	27	20	147	52
16	28	34	45	42	25	50	259	126	14	20	69	44
17	32	33	46	37	25	47	207	130	10	11	22	56
18	33	33	45	38	34	51	163	147	16	22	13	48
19	35	35	41	40	48	55	146	110	87	283	13	35
20	33	36	40	41	50	55	140	139	76	129	9.9	27
21	33	38	45	47	44	52	165	169	52	68	22	22
22	28	37	47	46	45	58	121	119	46	24	116	17
23	26	37	44	45	61	90	99	91	22	18	103	15
24	24	34	41	45	58	83	94	129	12	11	36	29
25	27	27	41	41	49	79	102	83	7.7	8.2	23	37
26	26	28	42	38	41	68	127	138	11	7.6	16	32
27	27	30	40	41	37	85	143	92	16	6.7	15	41
28	25	32	41	54	37	254	117	101	22	7.3	19	41
29	26	33	43	47	---	478	125	93	27	7.4	487	35
30	27	34	46	48	---	207	154	103	37	7.6	407	29
31	27	---	45	49	---	173	---	181	---	5.5	285	---
TOTAL	759.0	1086	1280	1488	1066	2608	9068	4264	1974.7	872.2	2619.6	2392
MEAN	24.5	36.2	41.3	48.0	38.1	84.1	302	138	65.8	28.1	84.5	79.7
MAX	35	51	48	94	61	478	1200	213	377	283	487	265
MIN	7.4	27	32	37	25	40	94	83	7.7	5.5	5.1	15
AC-FT	1510	2150	2540	2950	2110	5170	17990	8460	3920	1730	5200	4740

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1993, BY WATER YEAR (WY)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
MEAN	29.3	30.9	26.4	29.9	31.0	39.9	91.4	130	115	72.4	130	47.3				
MAX	82.6	59.1	41.3	48.0	56.2	125	418	614	724	263	761	224				
(WY)	1986	1987	1993	1993	1988	1987	1983	1987	1983	1981	1981	1981				
MIN	1.58	1.90	2.38	4.72	5.65	5.26	3.53	5.41	8.76	10.7	3.76	3.14				
(WY)	1978	1979	1979	1979	1979	1978	1978	1991	1990	1980	1980	1978				

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1978 - 1993

	1992 CALENDAR YEAR	1993 WATER YEAR	WATER YEARS 1978 - 1993
ANNUAL TOTAL	16028.1	29477.5	
ANNUAL MEAN	43.8	80.8	a 64.7
HIGHEST ANNUAL MEAN			166
LOWEST ANNUAL MEAN			22.7
HIGHEST DAILY MEAN	963 Jul 9	1200 Apr 7	b 3610 Aug 18 1981
LOWEST DAILY MEAN	2.4 May 25	5.1 Aug 2	c 1.2 Oct 12 1977
ANNUAL SEVEN-DAY MINIMUM	3.5 May 20	6.4 Jul 27	d 1.3 Oct 10 1977
INSTANTANEOUS PEAK FLOW		1590 Apr 7	d 6680 Jul 5 1981
INSTANTANEOUS PEAK STAGE		7.93 Apr 7	10.09 Jul 5 1981
ANNUAL RUNOFF (AC-FT)	31790	58470	46860
10 PERCENT EXCEEDS	87	174	127
50 PERCENT EXCEEDS	30	43	25
90 PERCENT EXCEEDS	6.5	16	4.0

a-Average discharge for 37 years (water years 1923-31, 1949-76), 116 ft³/s; 84040 acre-ft/yr, prior to completion of Trinidad Reservoir.

b-Maximum daily discharge for period of record, 46300 ft³/s, May 20, 1955.

c-No flow at times in 1924-25, 1927, 1949, and 1974.

d-Maximum discharge and stage for period of record, 70000 ft³/s, May 20, 1955, gage height, 20.00 ft, from rating curve extended above 38000 ft³/s, at different datum.

07128500 PURGATOIRE RIVER NEAR LAS ANIMAS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1985 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1985 to current year.

WATER TEMPERATURE: December 1985 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Records for daily specific conductance and water temperature are fair. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance and daily mean water temperature data available in district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 6,320 microsiemens, July 31, 1989; minimum, 365 microsiemens, July 21, 1990.

WATER TEMPERATURE: maximum, 34.0°C, July 23, 29, 1987; minimum, 0.0°C, many days during winter months.

EXTREMES FOR 1992 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 5,230 microsiemens, May 14; minimum, 490 microsiemens, Aug. 12.

WATER TEMPERATURE: Maximum, 32.9°C, July 6; minimum, 0.0°C, many days during winter.

EXTREMES FOR 1993 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 5,840 microsiemens, Aug. 3; minimum, 426 microsiemens, Apr. 6.

WATER TEMPERATURE: Maximum, 33.3°C, July 31; minimum, 0.0°C, many days during winter.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4310	2740	3290	3390	3590	3680	3750	4620	---	2790	2080	2220
2	4270	---	3390	3400	3520	3670	3860	4390	---	2870	2380	2470
3	4340	---	3450	3430	3380	3720	3600	4420	2280	2610	2060	2410
4	4620	---	3440	3380	3250	3750	3660	4570	2180	3450	1330	2320
5	---	3430	3420	3430	3280	3700	3810	4810	1920	3830	1300	2110
6	---	3060	3400	3460	3310	3740	3570	4670	3090	3590	2100	2090
7	---	3070	3450	3470	3300	3800	3440	4440	3290	3840	2810	2610
8	---	3140	3460	3490	3300	3970	3470	4540	2970	3890	2830	2760
9	---	3140	3440	3560	3330	3950	3410	4790	2090	2240	2660	3010
10	---	2920	3430	3570	3390	3670	3300	4670	1690	963	2430	3420
11	---	2850	3420	3470	3410	3830	3430	4560	1730	1810	2460	3520
12	---	2930	3410	3370	3460	3670	3370	4550	1940	2870	2010	3090
13	---	2960	3430	3330	3480	3620	3400	4650	2310	3440	1320	2840
14	---	3010	3440	3410	3500	3580	3280	4780	1910	2870	1370	2950
15	---	3170	3490	3550	3500	3580	3250	3710	2010	3350	2440	3680
16	---	3170	3480	3690	3500	3760	3160	4360	2610	2870	2620	3910
17	---	3160	3490	3530	3510	3140	3350	4610	2810	2340	2270	3830
18	---	3200	3450	3410	3540	3150	3350	4110	3110	3090	2160	3810
19	---	3130	3350	3420	3540	3250	3390	4380	3500	2910	2340	4080
20	---	3070	3280	3390	3540	3310	3620	---	3830	3620	1970	3780
21	---	3070	3280	3420	3570	3310	3570	---	3810	2070	2100	3400
22	4160	3070	3320	3450	3590	3050	3200	---	3220	1840	2770	2730
23	4320	3060	3360	3550	3640	3070	3360	---	3490	1780	1920	3740
24	3750	3110	3380	3590	3660	3080	3390	---	2710	1360	2100	4730
25	4030	3180	3350	3560	3650	2990	3240	---	2460	2500	1520	4570
26	3410	3400	3310	3610	3630	3160	3690	---	2300	---	1540	4610
27	2980	3510	3290	3620	3610	3200	4030	---	2020	---	1280	4720
28	2790	3420	3320	3600	3590	3190	4050	---	1840	---	1340	3420
29	2600	3300	3370	3630	3630	2850	4200	---	2120	1080	1400	3130
30	2330	3270	3400	3600	---	2980	4450	---	2370	1410	1570	2840
31	2340	---	3390	3630	---	3370	---	---	---	1580	1890	---
MEAN	---	---	3390	3500	3490	3440	3550	---	---	---	2010	3290

07128500 PURGATOIRE RIVER NEAR LAS ANIMAS, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	23.5	13.4	5.7	.1	2.1	.0	2.7	.3	5.7	2.1	12.2	7.0
2	23.3	14.1	2.7	.0	1.3	.0	2.4	.0	7.7	4.0	14.1	8.5
3	23.1	14.1	2.7	.0	2.2	.0	1.7	.0	7.6	3.7	11.5	8.5
4	16.6	13.3	3.1	.0	2.0	.0	2.8	.0	5.2	2.7	13.0	9.8
5	17.8	10.8	4.5	.2	2.1	.0	2.9	.0	5.2	1.1	12.7	9.6
6	18.2	10.2	5.7	.8	3.1	.0	4.6	.4	6.3	2.4	14.3	7.7
7	20.5	11.3	6.4	3.2	4.1	.1	4.6	2.6	5.6	1.5	14.7	9.0
8	20.9	11.7	7.1	2.8	4.9	1.7	2.7	.4	4.5	1.7	16.0	8.4
9	21.2	13.6	9.0	4.7	4.3	1.5	2.5	.0	5.5	1.0	8.1	3.8
10	21.5	12.7	7.4	6.1	3.3	.5	2.3	.0	6.4	2.2	7.7	1.6
11	20.9	12.3	7.5	5.9	2.1	.4	2.3	.0	7.3	4.3	9.6	5.3
12	21.4	12.3	8.3	3.9	2.9	1.1	2.2	.4	7.2	4.2	10.5	6.5
13	19.2	13.3	7.8	4.0	2.4	.0	2.6	.0	5.7	3.7	13.3	7.0
14	17.1	12.0	7.9	4.7	1.9	.0	1.6	.0	8.0	4.0	14.7	8.2
15	17.1	10.9	7.3	5.9	1.9	.0	.7	.0	7.8	3.2	15.2	9.0
16	17.7	10.7	5.9	3.1	2.5	.0	.8	.0	7.2	4.3	16.8	9.0
17	18.4	11.2	6.6	3.3	1.0	.0	1.6	.0	7.0	4.8	12.8	8.6
18	15.6	10.9	5.9	2.8	1.1	.0	1.5	.0	6.9	2.4	11.0	7.5
19	14.4	8.4	6.9	4.3	2.1	.0	1.4	.0	6.4	1.3	11.7	6.3
20	14.9	8.4	5.5	2.3	3.5	1.9	1.8	.0	7.8	3.0	12.8	6.9
21	14.5	10.0	6.8	2.9	3.3	.1	2.0	.0	7.9	5.0	12.9	7.7
22	17.0	9.7	5.7	3.2	3.9	2.4	2.3	.0	8.9	3.8	11.6	7.3
23	17.3	10.3	3.6	1.2	3.9	1.6	2.5	.0	9.0	6.6	12.9	5.8
24	16.1	9.8	2.9	.0	2.6	.0	3.5	.0	8.6	4.6	12.9	7.8
25	14.0	8.3	3.7	.3	2.5	.0	3.3	.0	6.7	4.6	15.0	7.8
26	12.5	6.9	4.8	1.3	2.1	.0	4.0	1.0	7.4	2.9	14.9	7.5
27	13.0	7.7	4.1	2.0	2.4	.0	4.6	.7	9.4	5.4	14.1	8.9
28	9.0	6.4	3.5	2.8	1.3	.0	4.5	.6	11.3	5.3	13.6	9.0
29	6.6	2.9	3.4	1.7	3.1	.5	5.1	1.1	12.0	6.1	13.7	8.4
30	2.8	.0	1.9	.5	2.3	.0	5.5	1.4	---	---	16.2	7.5
31	.8	.0	---	---	2.0	1.1	6.3	2.1	---	---	13.3	8.5
MONTH	23.5	.0	9.0	.0	4.9	.0	6.3	.0	12.0	1.0	16.8	1.6
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	16.7	6.0	25.3	16.1	---	---	29.2	20.3	28.1	19.9	24.8	18.7
2	15.4	8.1	22.6	14.8	---	---	27.4	20.4	27.8	20.2	23.9	18.3
3	18.6	7.8	24.2	15.6	23.5	15.3	27.2	18.5	27.4	22.3	24.0	18.6
4	21.0	9.9	23.2	15.4	21.2	16.5	26.1	19.9	23.9	19.0	22.8	18.9
5	19.7	10.5	23.3	15.7	24.6	16.8	28.5	18.7	25.7	20.2	22.9	17.8
6	20.8	11.5	23.7	14.5	23.6	17.4	32.9	21.5	26.8	21.6	23.6	17.1
7	20.1	12.8	24.8	15.0	23.9	17.0	30.9	21.1	28.9	19.9	23.5	17.0
8	19.3	12.6	25.7	16.2	23.4	18.0	30.0	20.6	29.4	21.5	25.2	16.6
9	19.9	13.5	22.7	16.6	21.0	17.9	22.3	16.1	30.6	21.8	24.2	16.4
10	21.0	12.9	17.8	14.7	23.6	16.7	21.2	16.1	28.8	23.1	23.1	15.0
11	20.9	13.6	23.6	13.3	24.4	18.7	26.8	19.2	28.0	20.9	25.4	14.6
12	16.8	12.5	22.4	15.1	25.4	19.0	27.7	21.0	24.0	17.9	25.8	17.7
13	20.7	10.9	25.9	15.5	27.0	19.9	27.4	21.3	25.5	19.1	25.6	17.9
14	20.5	15.0	26.3	16.5	26.9	19.5	27.6	20.8	26.2	20.2	24.8	18.0
15	21.0	14.6	25.4	17.6	26.1	18.5	27.8	21.2	26.9	20.7	22.7	18.3
16	18.3	15.2	26.3	15.6	26.2	17.7	24.7	19.5	26.1	21.1	25.4	17.3
17	20.3	13.7	25.6	16.5	25.0	16.3	26.4	20.1	25.1	21.2	25.3	18.0
18	16.2	11.0	26.2	17.2	27.0	---	27.1	18.7	24.3	19.0	21.5	15.8
19	10.9	8.2	27.0	17.1	26.0	19.2	25.8	21.6	26.0	20.1	22.3	16.1
20	13.1	7.0	23.3	15.7	---	---	25.4	19.5	26.4	20.6	23.0	16.7
21	16.4	7.8	23.7	14.7	---	---	24.7	20.0	27.3	21.9	21.3	16.7
22	17.4	10.0	---	---	29.9	21.4	24.9	20.7	26.3	20.7	20.9	13.3
23	18.9	11.1	---	---	29.4	21.7	26.5	21.9	25.5	21.2	22.8	14.5
24	20.1	11.0	---	---	29.6	21.0	28.0	22.3	23.3	18.3	24.3	15.8
25	20.6	9.7	---	---	27.5	19.2	27.5	23.3	20.8	17.0	20.1	15.4
26	19.7	11.3	---	---	26.3	18.2	24.2	21.7	20.0	16.8	20.2	13.4
27	21.7	12.1	---	---	23.3	19.6	25.1	22.6	21.3	17.1	21.0	13.2
28	22.2	14.1	---	---	26.5	19.8	27.3	23.6	23.1	16.8	19.2	12.5
29	24.5	14.3	---	---	28.3	20.7	28.1	22.4	22.8	18.1	20.3	11.9
30	23.8	15.7	---	---	27.7	20.7	27.2	20.7	22.6	18.4	20.3	11.9
31	---	---	---	---	---	---	27.8	21.4	23.8	18.3	---	---
MONTH	24.5	6.0	---	---	---	---	32.9	16.1	30.6	16.8	25.8	11.9

07128500 PURGATOIRE RIVER NEAR LAS ANIMAS, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2900	2720	3760	3580	3180	3580	1140	1660	1560	2930	3290	1200
2	3270	2940	3690	3460	3220	3430	1240	1340	987	2630	3750	---
3	3500	3160	3620	3370	3320	3480	1250	1250	1170	2590	3660	---
4	3120	3120	3590	3350	3500	3490	1260	1210	1380	2320	2120	---
5	3100	3180	3590	3360	3600	3370	1120	1320	1540	2220	2360	---
6	3290	3310	3670	3330	3650	3350	1050	1640	1620	2080	3060	---
7	3360	3220	3770	3080	3670	3390	1240	1620	1690	2040	2770	---
8	3040	3240	3880	3020	3690	3470	898	1660	1880	2100	2050	1820
9	2830	3140	3940	3160	3690	3560	896	1670	2110	2230	---	876
10	2820	3170	3790	3270	3550	3630	998	1840	2490	2960	---	1250
11	2750	3080	3760	3620	3540	3660	1240	1810	3100	3360	---	1320
12	2800	3040	3620	3650	3420	3610	1320	1520	3100	3910	2950	1730
13	2820	3130	3470	3780	3440	3480	1360	1480	3380	4600	2520	1880
14	2730	3150	3560	3950	3370	3510	1270	1440	3110	4490	2630	2310
15	2820	3370	3630	3970	3370	3600	1170	---	2910	2920	2030	---
16	2840	3650	3560	3950	3450	3620	1230	---	---	1910	1890	2230
17	2910	3860	3670	3940	3650	3670	1370	---	---	2760	1850	1920
18	3130	3850	3750	3860	3730	3630	1540	---	---	3100	2240	1830
19	3070	3690	3780	3770	3600	3490	1710	1650	2220	2480	2510	2020
20	2950	3600	3780	3680	3420	3200	1860	1720	1800	1990	3010	2400
21	2690	3520	3860	3600	3500	2990	1850	1560	2040	1920	2760	2780
22	2700	3510	3800	3520	3520	3040	2000	1640	2120	2120	2260	2900
23	2800	3530	3770	3370	3500	2930	2130	1710	2490	2280	1620	3150
24	2920	3540	3760	3410	3560	2920	2170	1340	3240	2910	1570	2800
25	3080	3540	3770	3440	3490	2900	2020	---	3780	2840	2660	2580
26	2910	3630	3810	3370	3590	2770	1880	1750	4050	3490	3370	2780
27	2670	3590	3820	3270	3700	2740	1820	1810	4030	3490	3540	2730
28	2710	3650	3800	3120	3710	2360	1910	1690	3000	3100	3580	2680
29	2710	3720	3750	3160	---	1290	1770	1450	3050	2940	2590	2760
30	2780	3780	3670	3120	---	959	1550	1960	2590	2920	1370	2880
31	2740	---	3660	3130	---	856	---	2270	---	3340	1130	---
MEAN	2930	3390	3720	3470	3520	3100	1480	---	---	2810	---	---

07128500 PURGATOIRE RIVER NEAR LAS ANIMAS, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	20.3	11.9	11.8	8.4	1.5	.0	.4	.0	2.7	.0	6.6	2.2
2	19.9	12.6	10.3	7.8	1.4	.0	.6	.0	3.0	.0	7.4	1.4
3	19.9	13.0	8.0	5.1	1.3	.0	.3	.0	3.2	.5	8.6	4.3
4	19.6	12.1	6.0	3.8	.8	.0	.2	.0	3.8	.6	7.9	4.5
5	18.5	12.8	5.4	2.2	.6	.0	.3	.0	4.8	.5	9.3	2.7
6	15.1	12.6	7.4	3.9	.5	.0	.1	.0	5.9	.6	7.5	5.4
7	13.4	9.8	6.8	2.6	.3	.0	.6	.0	5.6	1.6	11.0	4.2
8	13.3	7.7	7.8	3.2	.1	.0	.0	.0	6.3	2.8	12.7	6.3
9	14.2	7.9	7.6	4.7	.7	.0	.0	.0	5.6	4.3	14.3	7.8
10	15.5	9.0	7.9	5.1	1.3	.0	.0	.0	5.3	.1	11.1	7.4
11	16.3	9.5	6.1	4.7	1.0	.0	.2	.0	2.7	.0	7.4	3.2
12	16.8	10.3	6.0	3.5	.4	.0	.0	.0	2.6	.0	7.0	1.3
13	17.6	11.0	5.7	2.2	.2	.0	.0	.0	3.1	.0	6.9	1.1
14	16.6	11.4	6.1	2.8	.5	.0	.0	.0	3.7	.6	9.3	2.2
15	14.9	10.4	7.8	3.4	.5	.0	.3	.0	3.4	.0	12.3	6.3
16	11.4	8.8	8.1	4.1	.8	.0	.3	.0	.9	.0	10.9	7.5
17	12.7	7.4	8.3	5.1	.3	.0	.0	.0	.8	.0	8.0	4.5
18	12.9	7.6	7.4	6.7	.6	.0	.0	.0	.8	.0	6.8	3.9
19	13.7	8.9	7.1	5.2	.6	.0	.2	.0	2.5	.0	12.1	4.2
20	14.8	9.5	5.2	3.1	.2	.0	.4	.0	6.6	1.2	13.5	7.5
21	15.6	10.3	4.2	2.3	.3	.0	.7	.0	7.4	2.6	14.7	9.9
22	17.3	12.5	3.2	.3	.6	.0	1.2	.0	7.9	2.9	15.6	9.1
23	17.3	12.1	2.4	1.3	.2	.0	1.2	.0	6.8	2.3	15.0	7.8
24	16.4	11.6	1.3	.0	.3	.0	.3	.0	6.5	2.2	16.4	10.0
25	17.4	12.3	1.2	.0	.9	.0	1.0	.0	5.2	2.7	17.6	10.3
26	16.2	11.5	.2	.0	.3	.0	1.8	.0	4.4	1.3	17.2	12.3
27	15.3	9.5	.7	.0	.6	.0	3.0	.0	6.6	1.5	15.0	11.2
28	13.8	8.7	.4	.0	.2	.0	1.3	.0	8.5	2.5	15.0	10.2
29	10.3	8.6	1.4	.0	.7	.0	2.9	.0	---	---	12.8	9.8
30	12.0	8.4	.3	.0	1.4	.0	2.1	.0	---	---	12.2	9.7
31	10.8	8.2	---	---	.2	.0	2.5	.0	---	---	12.4	8.5
MONTH	20.3	7.4	11.8	.0	1.5	.0	3.0	.0	8.5	.0	17.6	1.1
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.4	8.8	16.8	11.6	23.8	20.1	31.2	20.1	29.5	21.5	23.0	17.4
2	12.7	9.7	16.5	10.0	24.1	20.4	31.1	19.7	30.9	19.1	---	---
3	11.4	7.2	19.2	11.9	24.0	18.5	30.1	19.9	20.6	18.3	---	---
4	9.6	6.6	19.5	13.5	20.8	17.5	26.7	18.4	24.2	17.5	---	---
5	13.4	8.2	19.1	14.7	22.4	15.6	28.8	19.0	26.8	20.5	---	---
6	13.6	10.7	20.7	15.0	24.6	18.0	28.8	18.1	---	18.4	---	---
7	11.4	8.0	20.3	15.6	22.2	15.9	28.4	18.8	30.8	19.6	21.1	---
8	11.2	8.6	20.0	15.0	23.7	15.4	30.2	19.6	27.2	22.8	21.9	18.3
9	13.5	9.5	17.3	13.9	24.8	17.9	30.0	19.5	29.0	20.5	23.0	18.1
10	14.8	10.7	19.8	12.3	25.7	18.1	32.0	18.8	---	---	23.6	18.1
11	15.4	11.6	15.0	11.2	28.0	16.7	25.0	19.5	30.7	---	24.5	17.9
12	15.5	12.2	18.1	12.4	29.4	17.7	30.8	19.4	29.8	20.9	23.3	18.3
13	14.0	11.6	21.7	14.1	28.6	18.5	30.5	19.5	24.7	19.4	20.6	12.6
14	14.0	10.7	21.6	16.4	25.7	20.0	28.5	20.1	24.4	19.0	18.1	10.8
15	14.2	10.1	23.7	16.7	28.8	19.2	29.5	20.1	25.2	20.6	20.7	12.2
16	13.3	10.1	20.7	17.7	28.7	17.2	31.2	21.5	25.1	21.8	22.1	14.7
17	15.6	10.8	19.2	17.1	20.5	17.2	25.1	20.7	29.6	---	22.5	15.7
18	17.4	11.6	22.7	15.9	22.1	16.9	29.1	20.4	29.4	20.4	18.9	16.7
19	15.4	11.1	23.3	16.9	24.8	15.7	26.2	21.6	23.8	20.9	22.1	13.8
20	15.0	9.3	24.2	17.6	28.1	18.8	26.2	21.2	29.4	19.4	22.8	14.3
21	16.5	10.8	25.3	19.4	29.1	20.4	28.7	21.3	29.5	20.3	21.8	14.5
22	18.4	12.1	26.1	19.4	30.0	20.0	---	20.5	26.5	19.9	18.4	15.0
23	18.9	13.5	25.7	18.2	30.7	19.9	---	19.6	26.1	19.8	16.6	14.1
24	16.0	13.3	21.4	16.5	29.0	17.1	30.0	---	27.9	19.4	17.4	13.6
25	19.2	11.5	19.2	---	31.2	16.9	30.6	---	28.0	19.8	20.0	13.0
26	20.6	12.3	24.6	17.0	32.7	20.4	30.4	19.9	27.9	18.9	20.3	14.0
27	20.5	15.2	26.3	18.7	32.7	20.9	29.8	19.0	23.4	20.6	19.7	12.2
28	21.2	14.9	26.3	19.8	31.6	21.0	29.9	18.9	27.0	19.2	19.3	13.1
29	21.6	15.7	25.5	19.2	27.3	21.5	31.5	19.5	23.8	19.9	19.8	12.9
30	19.6	13.8	25.0	18.9	29.0	19.5	31.3	20.1	22.1	17.7	21.0	13.3
31	---	---	26.2	20.4	---	---	33.3	21.6	20.1	16.1	---	---
MONTH	21.6	6.6	26.3	---	32.7	15.4	---	---	---	---	---	---

07130000 JOHN MARTIN RESERVOIR AT CADDOA, CO

LOCATION.--Lat 38°04'05", long 102°56'13", in NE¹/4NW¹/4 sec.8, T.23 S., R.49 W., Bent County, Hydrologic Unit 11020009, at dam on Arkansas River at Caddoa, 3.2 mi southeast of Hasty, and 58 mi upstream from Colorado-Kansas State line.

DRAINAGE AREA.--18,915 mi², of which 785 mi² is probably noncontributing.

PERIOD OF RECORD.--January 1943 to current year. Month-end contents only prior to November 1943, published in WSP 1311.

GAGE.--Water-stage recorder with satellite telemetry for elevations above 3,784 ft (64 acre-feet), and nonrecording gage read once daily for those below. Datum of gage is 3,760.00 ft above sea level, (levels by U.S. Corps of Engineers); gage readings have been reduced to elevations above sea level.

REMARKS.--No estimated contents. Records good. Reservoir is formed by concrete and earthfill dam. Storage began while dam was under construction prior to 1943, and record of contents began Jan. 1, 1943. Capacity (based on 1986 resurvey used from Feb. 1, 1988) 608,200 acre-ft, at elevation 3,870.00 ft, top of spillway gates, of which 345,300 acre-ft between elevations 3778.22 ft, elevation of no contents, and 3851.58 ft, is reserved for flood control. Contents table shown is from the latest survey of 1986. No dead storage. Figures given represent total contents.

COOPERATION.--Capacity tables provided by U.S. Army, Corps of Engineers.

EXTREMES (AT 2400) FOR PERIOD OF RECORD.--Maximum contents, 429,600 acre-ft, Aug. 25, 1965, elevation, 3,856.16 ft; no contents at times many years.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 98,100 acre-ft, Jun. 23, elevation, 3,821.85 ft; minimum contents, 13,300 acre-ft, Oct. 30, elevation, 3,797.62 ft.

Capacity table (elevation, in feet, and contents, in acre-feet)

3,785.0	196	3,820.0	88,900
3,790.0	2,400	3,830.0	148,000
3,795.0	8,510	3,840.0	227,000
3,800.0	18,500	3,850.0	327,000
3,810.0	47,600	3,860.0	453,000

RESERVOIR STORAGE (ACRE-FEET), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14100	14000	24400	40500	51600	63900	77400	79300	81400	90200	62000	53300
2	14100	14300	25000	41000	51900	64700	78200	78500	83400	89100	61100	53100
3	14000	14500	25500	41600	52300	65300	79000	78100	85300	87800	60300	52900
4	14000	14600	26000	42000	52600	66100	79600	77500	87400	87000	60000	52900
5	13900	14800	26400	42500	52900	66700	80200	77000	89300	85800	59900	52600
6	13900	15000	26600	42800	53300	67300	81300	76700	91200	84500	59700	52300
7	13900	15200	26800	43200	53600	67700	83600	76200	92700	83200	59500	52300
8	13800	15400	27100	43700	54000	68200	85200	75800	93600	82000	59800	52000
9	13800	15600	27400	43900	54300	68600	86300	75100	94100	80700	59700	51900
10	13900	15800	28000	44200	54900	68900	86900	74600	94100	79300	59600	51800
11	14000	16200	28600	44500	55300	69400	87600	74000	94100	77800	59800	51800
12	14000	16400	29200	44800	55500	69800	88200	73600	94200	76700	59500	51800
13	14000	16600	29700	45000	55800	70100	88900	73200	94100	75300	59200	51800
14	13900	16800	30200	45300	56300	70500	89500	72900	93900	74300	58700	51500
15	13800	17100	30500	45600	56700	70800	89600	72500	93700	73600	58700	51400
16	13700	17800	30900	45900	57000	71100	89400	72000	93300	72800	58300	51100
17	13700	18300	31400	46300	57200	71300	89000	71600	93100	71600	57700	50800
18	13700	18800	32000	46600	57400	71800	88600	71400	93400	70500	57100	50700
19	13700	19300	32600	47000	57800	72200	88100	71300	93700	70000	56600	50600
20	13600	19800	33200	47400	58300	72600	87600	71600	94700	69400	56100	50500
21	13500	20300	33700	47700	58900	73100	87100	72100	96000	68400	56200	50400
22	13500	20800	34200	48100	59400	73400	86600	72300	97500	67100	56100	50200
23	13500	21200	34800	48500	60000	73600	85800	72500	98100	66100	56100	49900
24	13500	21700	35500	48800	60600	73900	85100	72500	97800	64900	55600	49500
25	13600	22100	36200	49100	61200	74100	84100	73100	96500	64100	55100	49300
26	13600	22500	36900	49500	61700	74400	83400	73500	95900	64000	54500	48800
27	13500	22700	37800	49800	62300	74700	82500	73800	95000	63400	54200	48400
28	13400	22900	38400	50100	62900	74900	81800	74800	94000	63300	53600	48000
29	13400	23400	39000	50500	---	76000	80800	75800	92700	63500	53500	47500
30	13300	23900	39500	50800	---	76500	80200	76700	91300	63300	53600	47000
31	13600	---	40000	51200	---	76900	---	79000	---	62800	53500	---
MEAN	13700	18300	31500	46100	56600	70900	84700	74500	92800	74000	57600	50900
MAX	14100	23900	40000	51200	62900	76900	89600	79300	98100	90200	62000	53300
MIN	13300	14000	24400	40500	51600	63900	77400	71300	81400	62800	53500	47000

CAL YR 1992 MEAN 34600 MAX 70800 MIN 13300
WTR YR 1993 MEAN 55900 MAX 98100 MIN 13300

07130500 ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR, CO

LOCATION.--Lat 38°03'59", long 102°55'55", in NW¹/4NE¹/4 sec.8, T.23 S., R.49 W., Bent County, Hydrologic Unit 11020009, on right bank 0.2 mi downstream from John Martin Dam, 2.6 mi upstream from Caddoa Creek, and 3.5 mi southeast of Hasty.

DRAINAGE AREA.--18,915 mi², of which 785 mi² is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1938 to current year. Published as "at Caddoa" prior to October 1947.

REVISED RECORDS.--WSP 1241: 1942(M). WSP 1341: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Datum of gage is 3,737.40 ft above sea level. Prior to Feb. 22, 1940, at site 3 mi upstream at datum 22.83 ft higher. Feb. 22, 1940 to Feb. 4, 1943, at site 700 ft upstream, at datum 3.64 ft higher, Feb. 5, 1943 to Apr. 8, 1975, at site 1.5 mi downstream at datum approximately 27.5 ft lower.

REMARKS.--Estimated daily discharges: Water Year 1992, no estimated daily discharges. Water Year 1993, Feb. 15-17. Records good except those for Nov. 1, 1991 to Mar. 31, 1992, and those for Nov. 1, 1992 to Mar. 31, 1993, which are poor. Storage diversions upstream from station for irrigation of about 438,000 acres and for flood control. Flow completely regulated by John Martin Dam (station 07130000) 0.2 mi upstream since Oct. 1948.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	1.9	2.0	1.6	1.8	1.8	11	614	504	581	310	389
2	74	1.5	2.0	1.6	1.8	2.0	18	614	504	515	307	389
3	58	1.4	2.0	1.6	2.2	2.1	18	615	504	469	330	391
4	46	1.4	2.0	1.6	2.0	2.2	18	612	504	469	351	388
5	45	1.5	2.2	1.6	1.7	2.2	18	610	488	470	485	389
6	45	1.4	2.2	1.6	1.8	2.0	160	608	476	498	553	308
7	45	1.4	2.2	1.6	1.8	2.0	431	571	454	863	421	386
8	45	1.4	2.2	2.0	1.8	2.0	536	547	439	1100	343	385
9	45	1.4	2.2	1.9	1.8	2.0	541	546	440	1100	342	335
10	45	1.4	2.1	2.0	1.8	2.0	566	544	456	1100	351	313
11	45	1.4	1.6	2.0	1.8	2.3	585	544	457	995	339	322
12	46	1.4	1.6	2.0	1.8	2.2	582	529	489	920	302	322
13	46	1.4	1.5	2.3	1.8	2.1	603	520	517	923	292	322
14	46	1.4	1.6	2.0	1.8	2.2	646	523	517	909	317	321
15	52	1.4	1.6	2.1	1.8	2.2	643	526	406	857	364	305
16	61	2.0	1.6	1.8	1.8	2.2	640	525	347	826	380	249
17	63	1.8	1.8	1.8	1.8	2.2	641	504	395	834	387	173
18	63	1.8	1.7	1.8	1.7	1.8	641	485	406	845	393	164
19	63	1.8	1.6	1.8	1.8	1.8	638	488	421	841	391	154
20	63	1.6	1.6	1.8	1.8	1.7	637	410	428	785	383	151
21	80	1.7	1.6	3.4	1.8	1.6	621	357	425	570	345	151
22	109	1.8	1.5	4.4	1.8	1.6	603	407	525	466	307	170
23	116	2.0	1.4	7.1	1.8	1.6	625	431	592	477	295	182
24	115	2.0	1.4	2.2	1.8	1.6	618	430	592	476	299	183
25	115	2.0	1.4	2.0	1.9	1.8	608	425	591	442	357	193
26	115	2.0	1.6	2.0	1.8	1.6	608	454	589	420	397	201
27	116	2.0	1.6	2.0	1.8	1.7	607	455	345	423	402	200
28	116	2.0	1.6	2.0	1.9	1.6	610	479	474	425	398	158
29	115	2.1	1.6	1.8	1.8	1.6	612	505	476	424	393	106
30	114	2.0	1.6	1.8	---	1.6	612	509	545	425	393	96
31	71	---	1.6	1.8	---	1.7	---	507	---	356	391	---
TOTAL	2252	50.3	54.2	67.0	52.8	59.0	14697	15894	14306	20804	11318	7876
MEAN	72.6	1.68	1.75	2.16	1.82	1.90	490	513	477	671	365	263
MAX	116	2.1	2.2	7.1	2.2	2.3	646	615	592	1100	553	391
MIN	45	1.4	1.4	1.6	1.7	1.6	11	357	345	356	292	96
AC-FT	4470	100	108	133	105	117	29150	31530	28380	41260	22450	15620

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1992, BY WATER YEAR (WY)

	192	24.8	12.8	6.97	14.8	29.9	415	428	536	620	574	309
MEAN	192	24.8	12.8	6.97	14.8	29.9	415	428	536	620	574	309
MAX	565	217	281	173	477	410	1174	2576	2665	1471	2127	1007
(WY)	1949	1966	1966	1966	1966	1986	1987	1987	1987	1980	1965	1984
MIN	11.4	.85	.64	.62	.75	1.06	2.43	34.2	52.0	86.1	22.6	6.69
(WY)	1975	1977	1977	1977	1977	1980	1973	1975	1954	1963	1960	1974

SUMMARY STATISTICS	FOR 1991 CALENDAR YEAR	FOR 1992 WATER YEAR	WATER YEARS 1949 - 1992
ANNUAL TOTAL	79231.3	87430.3	
ANNUAL MEAN	217	239	a 265
HIGHEST ANNUAL MEAN			745
LOWEST ANNUAL MEAN			82.5
HIGHEST DAILY MEAN	1120 Jun 30	b 1100 Jul 8	3830 d Aug 25 1965
LOWEST DAILY MEAN	c 1.4 Nov 3	c 1.4 Nov 3	.36 Dec 25 1979
ANNUAL SEVEN-DAY MINIMUM	1.4 Nov 6	1.4 Nov 6	.36 Dec 25 1979
INSTANTANEOUS PEAK FLOW		1120 Jul 7	e 40000 Apr 24 1942
INSTANTANEOUS PEAK STAGE		3.82 Jul 7	10.46 Apr 24 1942
ANNUAL RUNOFF (AC-FT)	157200	173400	191900
10 PERCENT EXCEEDS	561	604	850
50 PERCENT EXCEEDS	71	114	44
90 PERCENT EXCEEDS	1.8	1.6	2.0

a-Average discharge for 5 years (water years 1939-43), 628 ft³/s, unadjusted; 455000 acre-ft/yr, during construction of John Martin Dam.

b-Also occurred Jul 9, 10.

c-Also occurred Nov 4, 6-15, and Dec 23-25.

d-No flow at times in 1945-47. Minimum daily prior to construction of John Martin Dam, 5 ft³/s, Jul 16, 1939.

e-Site and datum then in use, from rating curve extended above 12000 ft³/s, on basis of flow-over-dam and critical-depth measurement of peak flow.

f-Site and datum then in use.

07130500 ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR, CO--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	2.9	1.8	2.5	2.0	3.9	14	619	336	986	560	375
2	96	2.0	2.1	2.5	2.1	3.6	21	619	338	1020	539	382
3	96	1.8	2.1	2.5	2.0	3.4	17	597	202	1020	513	385
4	96	1.8	1.9	2.5	2.0	3.4	16	581	173	999	517	382
5	96	1.8	2.1	2.5	1.8	3.4	16	587	227	1040	499	385
6	96	1.9	2.0	2.5	1.8	3.4	16	585	231	1060	479	385
7	81	1.8	9.3	2.5	1.8	3.4	16	548	249	1040	479	395
8	76	1.9	3.1	2.5	1.8	3.4	7.2	526	272	1020	481	402
9	83	2.0	2.8	2.5	1.8	3.4	2.3	525	311	1020	497	404
10	87	1.8	2.8	2.5	1.9	3.4	2.1	505	342	1020	539	393
11	85	2.1	2.8	2.5	1.6	3.4	2.1	483	342	1020	458	384
12	85	1.8	2.8	2.5	9.8	3.4	6.1	477	340	1020	507	386
13	125	1.6	2.8	2.5	3.5	3.4	16	488	342	983	475	385
14	157	1.5	2.6	2.5	3.4	3.4	16	506	427	915	472	380
15	158	1.5	2.4	14	3.4	3.4	265	510	504	898	474	387
16	120	1.6	2.5	2.6	3.4	3.4	416	506	518	880	473	365
17	98	1.6	2.5	2.5	3.3	3.4	416	498	574	858	472	342
18	98	1.6	2.5	2.5	3.4	3.4	416	495	600	856	473	342
19	114	1.6	2.5	2.5	3.5	3.4	415	496	498	856	456	336
20	157	1.7	2.5	2.3	3.6	3.4	415	493	427	855	444	342
21	174	2.1	2.5	2.0	3.6	3.1	432	511	482	854	444	342
22	131	1.8	2.5	2.0	3.4	3.2	443	534	578	853	440	342
23	114	1.8	2.5	2.0	3.4	3.2	515	536	630	851	441	374
24	121	1.9	2.5	2.0	3.4	3.3	558	514	1010	847	441	383
25	120	2.2	2.5	2.0	3.4	3.3	558	462	1280	846	436	372
26	152	1.9	2.5	2.0	3.4	3.1	565	425	1250	865	435	372
27	190	2.0	2.5	2.0	3.4	2.9	574	391	1190	885	433	375
28	201	2.0	2.5	2.0	3.4	2.9	573	347	1190	829	430	377
29	199	2.0	2.5	2.0	---	3.1	585	326	1120	585	430	378
30	202	2.0	2.5	2.0	---	3.1	613	328	1030	573	406	377
31	142	---	2.5	2.0	---	2.9	---	332	---	563	375	---
TOTAL	3846	56.0	83.4	83.4	85.3	102.8	7926.8	15350	17013	27917	14518	11229
MEAN	124	1.87	2.69	2.69	3.05	3.32	264	495	567	901	468	374
MAX	202	2.9	9.3	14	9.8	3.9	613	619	1280	1060	560	404
MIN	76	1.5	1.8	2.0	1.6	2.9	2.1	326	173	563	375	336
AC-FT	7630	111	165	165	169	204	15720	30450	33750	55370	28800	22270

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1993, BY WATER YEAR (WY)

	MEAN	191	24.3	12.6	6.87	14.6	29.3	411	430	537	626	572	310
	MAX	565	217	281	173	477	410	1174	2576	2665	1471	2127	1007
	(WY)	1949	1966	1966	1966	1966	1986	1987	1987	1987	1980	1965	1984
	MIN	11.4	.85	.64	.62	.75	1.06	2.43	34.2	52.0	86.1	22.6	6.69
	(WY)	1975	1977	1977	1977	1977	1980	1973	1975	1954	1963	1960	1974

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1949 - 1993

ANNUAL TOTAL	89059.2	98210.7	
ANNUAL MEAN	243	269	a 265
HIGHEST ANNUAL MEAN			745
LOWEST ANNUAL MEAN			82.5
HIGHEST DAILY MEAN	b 1100	1280	3830
LOWEST DAILY MEAN	c 1.5	c 1.5	d .36
ANNUAL SEVEN-DAY MINIMUM	1.6	1.6	.36
INSTANTANEOUS PEAK FLOW		1320	e 40000
INSTANTANEOUS PEAK STAGE		4.22	f 10.46
ANNUAL RUNOFF (AC-FT)	176600	194800	192000
10 PERCENT EXCEEDS	604	623	847
50 PERCENT EXCEEDS	151	120	45
90 PERCENT EXCEEDS	1.8	2.0	2.0

a-Average discharge for 5 years (water years 1939-43), 628 ft³/s, unadjusted; 455000 acre-ft/yr, during construction of John Martin Dam.

b-Also occurred Jul 9, 10.

c-Also occurred Nov 15.

d-No flow at times in 1945-47. Minimum daily prior to construction of John Martin Dam, 5 ft³/s, Jul 16, 1939.

e-Site and datum then in use, from rating curve extended above 12000 ft³/s, on basis of flow-over-dam and critical-depth measurement of peak flow.

f-Site and datum then in use.

07130500 ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--December 1985 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1985 to current year.

WATER TEMPERATURE: December 1985 to current year.

INSTRUMENTATION.--Water-quality monitor with satellite telemetry.

REMARKS.--Records for daily specific conductance and water temperature for the 1992 water year are good. Records for water temperature for the 1993 water year are good. Records for specific conductance for the 1993 water year are good, except for July 14 to Aug. 7, which are fair. Daily data that are not published are either missing or of unacceptable quality. Daily maximum and minimum specific conductance and mean water temperature data are available in district office.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 3,540 microsiemens, Feb. 26, 1986; minimum, 1,180 microsiemens, July 31 to Aug. 1, 1987.

WATER TEMPERATURE: Maximum, 27.9°C, June 10, 1989; minimum, 0.0°C, many days during winter months.

EXTREMES FOR 1992 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,780 microsiemens, Jan. 16; minimum, 1,340 microsiemens, Aug. 6.

WATER TEMPERATURE: Maximum, 24.7°C, July 25; minimum, 1.1°C, Jan. 14.

EXTREMES FOR 1993 WATER YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 2,780 microsiemens, Feb. 18; minimum, 1,410 microsiemens, Aug. 5-6, 30-31.

WATER TEMPERATURE: Maximum, 24.1°C, Aug. 2; minimum, 0.7°C, Nov. 25.

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1950	---	2420	2610	2680	2650	2600	2490	2210	1700	1440	1690
2	1920	---	2450	2630	2670	2650	2530	2430	2130	1700	1420	1670
3	1920	---	2460	2650	2620	2640	2500	2440	2120	1700	1400	1660
4	1960	---	2460	2630	2630	2630	2490	2450	2090	1700	1380	1640
5	2040	---	2430	2660	2630	2630	2490	2470	2100	1690	1350	1630
6	2010	2340	2380	2650	2630	2630	2490	2470	2070	1670	1360	1640
7	2010	2320	2370	2600	2640	2640	2480	2480	2060	1640	1380	1640
8	2000	2350	2390	2600	2630	2630	2470	2480	2060	1590	---	1650
9	1990	2390	2410	2670	2630	2600	2470	2490	2040	1570	---	1650
10	2000	2370	2440	2660	2630	2610	2480	2490	2050	1550	---	1650
11	2010	---	2460	2630	2630	2600	2480	2490	2070	1530	---	1640
12	2020	2340	2430	2600	2640	2610	2480	2500	2050	1540	---	1640
13	2030	2330	2440	2640	2640	2590	2490	2500	2050	1500	---	1650
14	2060	2320	2480	2680	2640	2580	2490	2510	2040	1480	---	1650
15	2090	2330	2520	2700	2650	2580	2490	2500	2020	1500	---	1650
16	2080	2330	2520	2740	2640	2580	2500	2500	2010	1480	---	1690
17	2080	2280	2500	2710	2640	2610	2500	2500	1960	1490	---	1690
18	2090	2310	2510	2690	2650	2680	2500	2500	1970	1490	1680	1660
19	2090	2320	2500	2710	2670	2680	2500	2480	1960	1490	1660	1680
20	2120	2350	2500	2710	2670	2670	2530	2480	1950	1490	1670	1680
21	2140	2350	2520	2710	2650	2670	2560	2450	1930	1490	1680	1670
22	2140	2340	2530	2690	2650	2680	2550	2410	1920	1470	1700	1690
23	2130	2350	2540	2690	2660	2680	2550	2410	1880	1510	1710	1700
24	2140	2360	2550	2690	2660	2670	2550	2420	1830	1480	1680	1690
25	2140	2370	2540	2670	2660	2670	2550	2410	1790	1460	1660	1700
26	2140	2360	2540	2670	2660	2670	2540	2410	1790	1410	1680	1700
27	2170	2360	2560	2670	2660	2660	2540	2380	1790	1390	1680	1700
28	2240	2370	2570	2670	2660	2650	2530	2350	1780	1420	1690	1710
29	2210	2380	2570	2670	2660	2640	2500	2310	1770	1410	1690	1720
30	2200	2390	2590	2680	---	2630	2510	2290	1750	1430	1680	1720
31	---	---	2590	2680	---	2620	---	2280	---	1440	1680	---
MEAN	---	---	2490	2670	2650	2640	2510	2440	1970	1530	---	1670

07130500 ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	17.7	15.9	---	---	4.4	2.1	3.5	2.3	6.3	3.3	12.3	6.8
2	17.7	16.0	---	---	4.3	2.3	3.2	1.3	7.5	4.7	13.6	7.4
3	18.3	16.0	---	---	3.8	2.2	3.4	1.4	6.6	5.2	10.9	7.8
4	16.3	14.3	---	---	4.0	2.6	4.4	3.3	5.8	4.7	11.7	9.6
5	15.7	13.4	---	---	4.7	2.2	3.9	2.0	6.2	3.1	11.0	9.2
6	15.7	13.1	5.5	3.4	4.1	2.6	5.4	2.7	6.7	4.1	14.5	8.0
7	15.6	12.8	5.9	3.9	5.7	3.6	5.2	3.0	6.6	3.9	13.5	8.9
8	15.1	12.7	6.6	3.8	4.6	3.7	3.5	1.6	5.2	3.9	14.8	9.5
9	15.4	13.1	9.3	4.8	5.1	2.7	3.6	1.7	7.0	3.6	10.1	6.0
10	15.4	13.2	7.2	6.4	4.9	3.3	3.5	1.6	6.3	3.6	11.3	5.2
11	16.0	13.1	7.2	5.7	4.5	3.4	4.6	2.1	7.1	4.9	10.7	6.9
12	16.2	13.7	8.0	4.9	4.7	3.1	3.6	2.2	7.2	5.3	10.6	7.7
13	16.1	14.1	8.3	4.3	3.9	2.8	3.5	1.4	6.9	4.9	13.3	7.6
14	15.9	14.0	7.5	5.3	4.1	2.6	3.2	1.1	7.6	5.4	14.7	8.7
15	15.6	13.6	7.1	6.2	3.9	2.4	3.1	1.3	8.4	5.2	13.3	9.0
16	15.5	13.8	6.3	4.2	4.1	2.4	3.3	1.2	7.2	5.4	15.7	9.4
17	15.1	13.5	7.2	4.1	4.7	2.7	3.6	1.5	6.9	5.3	11.6	9.0
18	14.1	13.1	6.3	4.1	4.1	2.7	3.7	1.4	7.2	4.3	10.6	8.4
19	13.9	12.6	6.9	4.9	4.3	2.7	3.9	1.7	8.6	3.1	14.8	7.9
20	13.6	12.3	6.3	3.8	5.0	3.2	4.1	1.6	8.9	4.1	14.3	8.4
21	13.4	12.0	6.8	4.0	4.5	2.7	4.5	1.3	8.6	5.2	11.6	8.5
22	13.2	12.1	5.8	4.0	5.1	4.0	4.1	2.1	9.8	5.0	13.8	8.6
23	13.3	11.9	4.2	3.1	4.6	3.4	3.9	1.4	8.1	6.5	14.4	7.9
24	12.6	11.7	4.7	2.3	4.2	2.5	4.0	2.0	9.9	5.1	13.8	9.4
25	12.3	11.2	5.0	3.4	4.2	2.5	4.4	2.5	6.7	5.0	15.6	9.4
26	11.9	11.0	5.4	3.3	4.0	2.5	4.8	3.5	8.4	4.3	14.4	9.5
27	11.9	10.8	5.7	4.0	4.3	2.7	5.1	2.3	9.7	5.5	13.2	10.2
28	11.5	8.4	4.5	4.0	3.7	2.9	6.3	3.5	12.0	5.7	13.1	10.3
29	8.3	6.8	4.6	3.0	4.3	3.0	5.0	2.7	12.3	6.1	13.7	9.1
30	6.8	4.5	3.7	2.5	3.8	2.3	5.7	3.5	---	---	16.0	9.5
31	---	---	---	---	3.7	3.0	6.5	3.7	---	---	13.3	10.8
MONTH	---	---	---	---	5.7	2.1	6.5	1.1	12.3	3.1	16.0	5.2
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	13.4	8.9	15.3	13.7	15.5	15.0	23.3	22.5	23.8	22.6	21.1	19.9
2	12.4	9.5	16.7	15.1	15.2	14.6	22.9	22.3	23.6	22.4	21.3	20.2
3	13.1	9.1	16.0	15.3	15.6	14.8	22.9	22.2	23.4	22.4	21.0	20.1
4	13.6	9.4	16.3	15.3	15.7	14.8	23.2	22.4	23.5	22.1	21.3	20.1
5	13.9	9.8	16.0	15.4	16.0	15.1	23.2	22.4	23.3	22.8	20.5	18.4
6	13.3	9.9	16.7	15.6	16.3	15.4	23.1	22.4	23.4	22.7	20.1	19.4
7	10.6	9.9	17.0	16.3	17.8	15.8	24.0	22.4	24.0	23.1	20.1	19.4
8	11.1	10.0	17.2	16.4	17.6	17.0	24.1	23.1	23.9	23.0	20.1	19.5
9	11.0	10.4	17.6	16.4	18.4	17.1	23.6	23.1	24.4	23.1	20.4	19.6
10	11.8	10.3	17.5	17.2	18.6	17.7	23.3	23.1	24.2	23.4	20.1	19.5
11	11.7	11.1	17.5	16.9	18.2	17.6	23.4	23.0	24.3	23.6	19.8	19.0
12	11.9	11.1	17.9	16.9	18.6	17.9	24.6	23.0	24.0	23.3	19.9	19.1
13	12.2	11.6	18.7	17.4	19.3	18.4	23.8	23.4	24.0	23.1	20.0	18.8
14	12.9	11.7	18.9	18.1	20.1	19.0	24.2	23.3	23.8	22.9	20.6	19.2
15	13.4	12.9	18.8	18.1	20.9	19.4	24.4	23.5	23.3	22.4	20.7	17.9
16	13.2	12.8	19.2	18.3	21.6	20.3	23.8	23.4	22.9	22.3	20.7	19.9
17	13.4	12.8	18.9	18.1	21.3	20.2	23.4	22.9	22.6	22.1	20.8	19.6
18	14.0	13.4	19.0	18.0	20.8	20.1	23.3	22.8	22.5	21.9	20.7	19.1
19	13.6	12.2	19.3	18.5	21.3	20.1	23.6	23.0	22.3	21.5	19.6	18.6
20	12.2	11.8	20.2	18.5	21.2	20.4	23.4	22.9	22.1	21.3	19.6	18.4
21	12.3	11.5	20.3	19.3	21.4	20.5	23.6	22.8	22.3	21.4	18.6	18.0
22	12.3	11.8	19.6	19.1	21.5	20.6	23.4	22.7	23.5	21.9	18.6	17.7
23	12.4	11.8	19.4	18.5	21.5	20.9	23.3	22.6	24.2	23.1	18.9	17.8
24	12.7	12.0	18.9	18.4	22.9	21.0	24.2	23.3	23.0	21.5	18.8	17.7
25	12.6	12.1	18.5	17.9	22.9	21.6	24.7	23.7	21.5	19.2	18.4	17.4
26	12.6	12.1	18.1	17.4	22.1	21.5	24.2	23.5	19.8	19.1	17.5	16.7
27	12.8	12.0	17.4	16.1	22.5	21.8	23.9	23.1	20.8	19.5	17.1	16.1
28	13.6	12.1	16.1	15.3	22.6	21.6	23.9	22.9	21.0	19.8	16.3	15.2
29	14.9	13.5	15.6	14.7	22.5	21.7	24.1	22.9	20.6	19.7	16.4	14.9
30	14.1	13.4	15.0	14.7	22.5	21.6	24.0	22.8	20.5	19.8	16.5	14.8
31	---	---	15.1	14.5	---	---	23.6	22.6	20.4	19.6	---	---
MONTH	14.9	8.9	20.3	13.7	22.9	14.6	24.7	22.2	24.4	19.1	21.3	14.8

07130500 ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR, CO--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1730	---	2490	2620	2670	2640	2640	2400	2270	1740	1490	1460
2	1730	---	2490	2590	2650	2660	2590	2400	2250	1710	1480	1470
3	1740	2140	2480	2570	2650	2710	2550	2410	2230	1700	1450	1440
4	1750	2170	2470	2580	2680	2720	2530	2410	2220	1700	1440	1440
5	1760	2180	2470	2590	2710	2710	2530	2420	2190	1700	1440	1440
6	1780	2190	2470	2610	2710	2710	2540	2400	2150	1700	1440	1450
7	1830	2200	2480	2610	2710	2710	2550	2400	2080	1700	1440	1440
8	1860	2210	2530	2600	2700	2730	2570	2400	2100	1700	1450	1450
9	1850	2230	2540	2590	2700	2730	---	2400	2070	1700	1460	1460
10	1860	2240	2530	2600	2670	2730	---	2400	2050	1700	1470	1480
11	1860	2210	2550	2630	2660	2710	---	2400	2060	1690	1490	1480
12	1880	2230	2510	2620	2700	2700	2590	2390	2040	1660	1480	1490
13	1880	2250	2500	2620	2720	2710	2550	2380	2040	1640	1470	1490
14	1910	2270	2510	2620	2720	2700	2510	2370	2020	1640	1460	1520
15	1940	2280	2550	2630	2690	2700	2460	2360	2000	1630	1460	1580
16	1940	2290	2550	2670	2710	2700	2430	2360	1960	1640	1460	1570
17	1940	2300	2530	2670	2750	2690	2420	2350	1930	1620	1460	1570
18	1960	2310	2550	2660	2760	2680	2420	2340	1930	1600	1450	1580
19	1960	2320	2550	2650	2730	2670	2400	2340	1920	1600	1450	1570
20	1980	2330	2550	2650	2690	2670	2390	2330	1920	1580	1460	1570
21	1980	2300	2560	2660	2710	2670	2390	2330	1910	1590	1450	1570
22	1970	2330	2570	2660	2700	2660	2400	2330	1900	1580	1450	1570
23	1980	2340	2580	2650	2710	2650	2400	2330	1900	1560	1440	1570
24	1990	2350	2590	2680	2710	2650	2420	2340	1880	1560	1430	1570
25	2000	2380	2590	2680	2710	2650	2420	2340	1860	1560	1440	1590
26	2040	2410	2600	2680	2710	2650	2410	2340	1850	1570	1440	1580
27	2080	2450	2620	2670	2710	2640	2410	2330	1860	1540	1440	1580
28	2050	2470	2600	2630	2710	2640	2400	2320	1830	1510	1450	1580
29	2040	2470	2580	2610	---	2650	2410	2310	1810	1520	1450	1590
30	2050	2500	2570	2610	---	2650	2400	2310	1770	1490	1430	1580
31	2050	---	2590	2630	---	2650	---	2290	---	1500	1430	---
MEAN	1920	---	2540	2630	2700	2680	---	2360	2000	1620	1450	1520

07130500 ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR, CO--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	16.4	14.9	---	---	3.2	2.0	4.4	2.9	---	---	6.4	4.4
2	16.4	14.9	---	---	3.2	1.9	4.7	3.0	---	---	8.9	3.1
3	16.3	14.8	8.2	---	3.3	2.0	4.7	3.9	---	---	8.7	4.6
4	16.2	14.7	6.8	4.1	3.9	2.5	4.4	3.8	---	---	7.4	4.3
5	16.2	14.8	8.0	4.6	3.5	2.8	4.6	3.9	7.4	---	9.1	3.6
6	16.0	15.3	8.6	5.6	3.3	2.8	4.9	4.1	8.3	3.4	8.1	5.3
7	15.3	11.9	7.8	5.3	3.6	2.6	4.8	4.1	7.3	3.2	10.8	4.9
8	12.6	11.3	8.1	5.3	3.3	1.1	4.8	3.8	6.5	4.0	11.6	6.0
9	12.6	11.3	8.3	6.1	3.5	1.1	4.0	3.4	5.9	5.3	12.3	5.9
10	12.8	11.3	8.0	6.3	3.7	2.3	4.6	3.7	5.9	2.5	9.1	7.1
11	13.0	11.2	7.4	5.9	3.6	1.0	4.8	3.8	4.4	1.7	7.1	4.9
12	13.2	11.7	7.4	4.7	4.0	2.1	4.6	3.7	5.0	1.7	9.3	4.2
13	13.6	12.0	6.9	4.7	3.4	2.6	4.0	3.6	6.5	1.6	9.6	3.6
14	13.6	12.5	7.2	4.6	3.2	2.5	4.1	3.5	5.4	3.4	10.7	3.9
15	12.9	12.0	8.3	5.2	3.6	2.6	4.3	3.3	4.8	2.0	11.0	6.0
16	12.0	11.4	8.5	5.7	4.0	2.8	3.6	2.8	3.8	1.7	8.6	6.2
17	11.9	10.8	7.6	5.6	4.5	3.3	4.1	2.3	3.8	1.9	7.0	4.8
18	11.9	10.7	7.2	6.7	4.9	3.9	3.6	3.1	4.1	1.9	6.9	4.1
19	11.5	10.5	7.2	5.8	4.7	3.4	4.9	3.3	6.2	2.5	12.5	5.2
20	11.4	10.3	6.1	4.8	4.6	3.1	5.0	3.2	7.1	2.9	11.6	7.1
21	11.8	10.6	5.4	3.9	4.9	3.0	4.9	3.8	7.4	3.8	11.8	7.4
22	12.5	11.6	5.2	3.4	4.0	3.0	5.6	3.7	8.0	3.6	14.7	8.0
23	12.8	11.5	5.0	3.8	4.0	2.9	6.2	3.2	6.8	3.9	15.6	8.0
24	13.3	12.1	3.8	.8	4.1	3.1	6.2	2.5	7.3	3.1	16.5	8.4
25	13.4	12.3	2.6	.7	3.8	3.0	5.8	3.8	5.9	4.7	17.4	9.7
26	14.0	12.9	2.9	1.6	4.3	3.5	6.4	2.2	4.9	3.2	16.9	10.1
27	13.2	12.4	2.9	1.8	4.2	3.2	6.8	3.7	7.2	3.3	13.0	10.4
28	12.7	12.1	3.1	1.8	3.8	3.3	6.1	2.9	8.6	3.3	14.8	9.0
29	12.1	11.5	2.8	1.8	4.1	2.9	6.4	4.1	---	---	14.5	10.3
30	11.6	10.8	2.4	1.3	4.1	3.3	6.9	4.9	---	---	12.6	10.5
31	10.8	10.3	---	---	4.7	3.5	8.2	4.9	---	---	13.7	8.5
MONTH	16.4	10.3	---	---	4.9	1.0	8.2	2.2	---	---	17.4	3.1
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	12.4	8.4	12.7	12.2	19.3	17.9	22.3	21.6	23.8	23.1	21.5	20.5
2	12.0	9.1	13.1	12.1	19.5	18.3	22.4	21.7	24.1	23.2	20.8	20.2
3	9.7	8.0	12.9	12.2	20.3	18.7	23.4	22.2	23.7	23.3	21.3	20.5
4	10.5	8.0	13.4	12.2	19.5	18.2	23.4	22.5	23.6	23.1	21.4	20.4
5	12.3	8.1	13.8	12.8	19.6	18.6	23.2	22.2	23.4	22.6	21.1	20.4
6	11.9	8.6	14.7	13.7	20.1	19.0	22.4	22.1	23.0	22.4	20.7	20.3
7	10.9	7.3	14.5	13.9	20.3	19.2	22.3	21.9	23.0	22.3	20.6	20.0
8	11.7	7.0	14.4	13.8	20.0	18.9	22.4	21.9	22.9	22.3	20.4	19.7
9	---	---	14.6	13.8	19.7	18.8	22.5	22.1	22.9	22.2	20.6	19.6
10	---	---	14.7	14.0	20.2	18.9	23.0	22.2	23.0	22.3	20.6	19.8
11	---	---	14.2	13.9	19.9	18.9	22.6	22.3	23.5	22.5	20.5	19.7
12	14.1	11.0	14.3	13.8	20.3	18.8	22.6	22.3	23.3	22.6	20.6	19.6
13	13.5	10.0	14.7	13.9	20.0	19.0	22.8	22.3	23.5	22.6	20.2	18.7
14	12.8	9.1	15.0	13.9	19.7	19.1	22.7	22.3	23.3	22.8	18.7	17.4
15	10.2	8.3	15.1	14.5	20.0	19.2	22.7	22.2	23.6	22.7	17.8	17.0
16	10.1	9.4	15.0	14.4	20.6	19.6	22.9	22.4	23.3	22.6	17.8	16.9
17	10.4	9.5	16.0	14.4	20.6	20.2	23.3	22.6	23.4	22.7	17.7	16.8
18	11.4	9.6	16.2	15.4	20.6	20.0	23.1	22.8	23.2	22.5	17.3	16.9
19	12.1	10.9	16.0	15.2	20.7	19.9	23.0	22.7	22.9	22.5	17.6	16.8
20	11.4	10.6	16.2	15.3	20.7	19.9	23.1	22.7	23.4	22.6	17.6	16.7
21	11.4	10.5	16.4	15.4	20.7	19.8	23.2	22.7	23.4	22.8	17.5	16.7
22	11.5	10.6	17.4	16.3	21.0	20.0	23.1	22.6	23.7	22.8	17.6	16.8
23	12.0	10.8	17.7	16.4	21.1	19.9	22.8	22.5	23.9	23.1	17.2	16.9
24	11.7	11.2	17.2	16.8	21.2	20.6	22.8	22.4	23.9	23.1	17.0	16.5
25	12.1	11.2	17.3	16.9	21.0	20.6	23.0	22.4	23.5	23.0	17.0	16.3
26	12.0	11.1	18.1	16.9	21.1	20.5	23.3	22.4	23.4	22.7	16.8	16.1
27	12.1	11.4	18.7	17.4	21.5	20.7	23.6	22.4	23.2	22.7	16.8	16.0
28	12.4	11.8	18.6	17.6	22.2	20.7	22.8	22.4	23.4	22.8	16.5	15.9
29	12.6	11.9	18.4	17.5	23.3	20.9	23.1	22.4	23.4	22.7	16.5	15.8
30	13.3	12.3	18.8	17.5	22.8	21.7	23.3	22.6	23.1	22.2	16.8	15.9
31	---	---	18.8	17.7	---	---	23.8	23.0	22.2	21.0	---	---
MONTH	---	---	18.8	12.1	23.3	17.9	23.8	21.6	24.1	21.0	21.5	15.8

07133000 ARKANSAS RIVER AT LAMAR, CO

LOCATION.--Lat 38°06'21", long 102°37'05", in NE1/4SE1/4 sec.30, T.22 S., R.46 W., Prowers County, Hydrologic Unit 11020009, on left bank at left upstream end of upstream bridge on U.S. Highways 50 and 287, and 1.3 mi north of courthouse in Lamar.

DRAINAGE AREA.--19,780 mi², of which 950 mi² is probably noncontributing.

PERIOD OF RECORD.--Streamflow records, May 1913 to September 1955, April 1959 to current year. Monthly discharge only for some periods, published in WSP 1311. Statistical summary computed for 1949 to current year. Water-quality data available, November 1963 to September 1965, September 1969 to August 1972.

REVISED RECORDS.--WSP 1341: 1921(M), 1945-46(M), drainage area; WDR CO-86-1: 1985.

GAGE.--Water-stage recorder. Datum of gage is 3,602.23 ft above sea level. See WSP 1731 for history of changes prior to Apr. 4, 1959. Apr. 4, 1959 to Mar. 26, 1968, at site 450 ft upstream at datum 2.42 ft, higher. Mar. 27, 1968 to Nov. 17, 1982 at datum 4.00 ft lower. Prior to Mar. 18, 1987, at site 75 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Oct. 7-16, 18, Nov. 25-30, Dec. 6-9, 14-15, 17-21, 24, 31, Jan. 1, Jan. 5-21, 24-25, Feb. 10-19, Feb. 21 to Mar. 2, Mar. 9-10, and Mar. 13 to Apr. 7. Records good except for Oct. 7-16, 18, Feb. 21 to Mar. 2, Feb. 9-10, and daily discharges above 600 ft³/s, which are fair; and for Nov. 25-30, Dec. 6-9, 14-15, 17-21, 24, Dec. 31 to Jan. 1, Jan. 5-21, 24-25, Feb. 10-19, Mar. 13 to Apr. 7, which are poor. Flow regulated by John Martin Reservoir (station 07130000) 21 mi upstream since Oct. 1948. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 487,000 acres, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	7.3	25	19	21	30	20	42	8.8	504	64	12
2	8.1	4.6	24	21	28	39	22	45	22	513	52	12
3	6.8	4.0	24	20	29	38	22	44	452	498	25	12
4	5.9	3.6	22	21	28	36	22	14	78	470	19	12
5	5.0	3.7	22	20	27	35	24	8.1	39	476	24	12
6	4.0	3.6	21	19	25	33	24	13	19	480	36	11
7	3.8	3.4	20	19	25	31	25	8.1	9.8	451	22	14
8	3.8	3.3	20	18	24	29	14	10	8.7	415	16	66
9	4.0	3.1	22	15	24	29	9.1	5.9	9.0	415	15	41
10	3.9	3.1	24	14	23	29	3.4	3.6	12	420	16	21
11	3.8	5.5	27	14	20	28	3.4	15	10	418	376	12
12	4.0	4.5	24	14	18	27	3.5	4.4	7.0	429	121	11
13	4.2	3.9	25	14	18	27	3.8	3.4	5.7	464	38	10
14	4.5	3.6	23	14	18	27	4.1	4.1	5.8	579	17	9.7
15	5.0	3.3	23	15	15	26	4.4	7.4	5.4	400	16	9.3
16	4.5	3.1	24	18	13	25	7.8	27	4.9	399	15	10
17	7.3	3.0	22	16	13	25	3.9	21	7.5	403	12	10
18	5.0	2.8	23	16	14	25	4.9	15	17	401	12	8.1
19	4.1	2.8	23	17	15	24	6.6	5.8	157	396	12	8.2
20	4.0	3.6	25	18	17	24	8.3	5.3	35	394	12	7.7
21	11	4.6	27	19	20	22	9.4	9.4	17	399	20	7.3
22	5.5	3.9	27	19	22	22	9.9	12	13	391	21	6.8
23	4.9	3.7	28	19	25	22	11	13	8.7	347	13	6.9
24	11	5.1	25	18	23	21	8.8	6.1	71	352	11	15
25	16	10	25	17	22	21	14	6.8	514	370	10	7.3
26	4.9	9.0	25	18	20	20	20	5.6	625	380	9.8	7.5
27	4.2	10	26	18	20	20	30	5.4	559	404	11	7.2
28	3.9	15	29	18	20	22	44	10	570	446	12	7.3
29	5.2	18	21	18	---	20	40	47	597	217	132	7.7
30	4.5	20	21	22	---	20	41	33	584	131	41	9.5
31	4.3	---	19	19	---	20	---	24	---	81	14	---
TOTAL	180.1	175.1	736	547	587	817	464.3	474.4	4472.3	12443	1214.8	391.5
MEAN	5.81	5.84	23.7	17.6	21.0	26.4	15.5	15.3	149	401	39.2	13.0
MAX	16	20	29	22	29	39	44	47	625	579	376	66
MIN	3.8	2.8	19	14	13	20	3.4	3.4	4.9	81	9.8	6.8
AC-FT	357	347	1460	1080	1160	1620	921	941	8870	24680	2410	777

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1993, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1949	38.4	233	1949	.84	1978
1950	15.7	52.2	1950	1.81	1978
1951	21.0	71.5	1951	.56	1978
1952	23.4	158	1952	.47	1978
1953	31.0	507	1953	.72	1965
1954	28.9	210	1954	1.11	1965
1955	167	1089	1955	10.9	1963
1956	172	2143	1956	6.41	1963
1957	243	2087	1957	3.80	1954
1958	237	950	1958	10.2	1964
1959	212	1547	1959	10.9	1974
1960	94.0	689	1960	1.37	1974

SUMMARY STATISTICS

	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1949 - 1993
ANNUAL TOTAL	14971.5	22502.5	
ANNUAL MEAN	40.9	61.7	a 105
HIGHEST ANNUAL MEAN			537
LOWEST ANNUAL MEAN			27.0
HIGHEST DAILY MEAN	810	625	b 25000
LOWEST DAILY MEAN	c 2.8	c 2.8	d .00
ANNUAL SEVEN-DAY MINIMUM	3.2	3.2	e .21
INSTANTANEOUS PEAK FLOW		1330	f 73800
INSTANTANEOUS PEAK STAGE		8.05	16.48
ANNUAL RUNOFF (AC-FT)	29700	44630	76050
10 PERCENT EXCEEDS	52	269	390
50 PERCENT EXCEEDS	18	18	21
90 PERCENT EXCEEDS	4.5	4.1	3.8

a-Average discharge for 30 years (water years 1914-43), 298 ft³/s; 215900 acre-ft/yr, prior to and during construction of John Martin Dam.

b-Maximum daily discharge for period of record, 87300 ft³/s, Jun 6, 1921.

c-Also occurred Nov 19.

d-Minimum daily discharge for period of record, no flow at times in 1913-15.

e-Maximum discharge and stage for period of record, 130000 ft³/s, Jun 5, 1921, gage height, 14.55 ft, datum then in use, from rating curve extended above 10000 ft³/s.

f-Datum then in use, from floodmarks.

07134180 ARKANSAS RIVER NEAR GRANADA, CO

LOCATION.--Lat 38°05'44", long 102°18'37", in SE¹/4NE¹/4 sec.36, T.22 S., R.44 W., Prowers County, Hydrologic Unit 11020009, on left bank at upstream side at end of bridge on U.S. Highway 385, 1.2 mi downstream from headgate of Buffalo Canal, and 2.3 mi north of Granada.

DRAINAGE AREA.--23,707 mi².

PERIOD OF RECORD.--January 1899 to December 1901, gage heights only at different site and datum, August to October 1903, December 1980 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 3,480 ft above sea level, from topographic map.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by John Martin Reservoir (station 07130000) 38 mi upstream since October 1948. Natural flow of stream affected by transmountain diversion, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 500,000 acres, and return flow from irrigated areas. Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	3.6	80	87	95	120	109	5.4	8.5	470	94	31
2	4.9	3.6	82	87	107	141	103	6.4	9.3	442	70	24
3	4.7	3.5	83	87	111	149	107	6.2	109	440	58	9.5
4	4.7	3.5	83	87	115	148	110	5.4	326	425	50	9.0
5	4.6	3.5	84	87	111	146	108	5.2	136	415	49	8.3
6	4.5	3.5	84	86	108	151	103	7.2	106	414	52	9.0
7	4.6	3.6	80	88	107	142	103	6.6	74	409	42	8.9
8	4.3	3.6	81	88	107	135	106	5.1	31	390	36	17
9	4.3	3.5	82	85	107	131	123	5.4	11	366	33	18
10	4.3	3.5	85	81	111	128	117	5.7	7.6	363	31	12
11	4.3	3.6	85	79	100	126	101	5.7	7.1	360	32	10
12	4.2	33	84	81	102	127	60	6.7	7.3	367	172	9.7
13	4.0	51	84	79	101	125	25	6.5	7.0	384	87	8.8
14	4.0	52	85	82	104	125	19	6.1	7.1	472	56	9.6
15	4.0	51	89	83	108	123	17	6.4	7.4	416	40	9.6
16	3.8	43	88	82	98	120	15	5.9	7.6	389	34	8.9
17	3.8	28	87	83	95	118	16	5.7	7.7	364	28	8.3
18	3.8	26	89	84	91	119	10	27	8.4	353	25	8.4
19	3.9	25	89	85	100	118	8.7	33	86	345	26	8.2
20	4.0	26	84	86	110	115	7.2	32	92	341	24	7.9
21	4.0	29	84	84	115	114	5.4	33	35	340	24	7.7
22	4.1	41	86	88	120	112	5.1	42	19	349	24	7.5
23	3.9	43	85	93	123	111	4.7	45	13	315	22	9.2
24	4.1	61	87	90	121	112	4.4	44	14	299	20	9.6
25	4.4	74	90	87	123	114	4.3	46	123	308	19	9.6
26	3.9	71	88	88	120	113	4.4	46	470	314	19	8.0
27	3.7	72	86	89	118	104	4.5	20	514	327	22	8.3
28	4.0	77	87	92	114	108	4.5	7.8	492	338	21	6.9
29	3.8	80	90	92	---	114	6.0	7.7	485	308	14	6.9
30	3.5	79	89	91	---	108	5.3	8.0	501	169	53	6.9
31	3.5	---	86	92	---	107	---	8.1	---	118	41	---
TOTAL	128.6	1001.0	2646	2673	3042	3824	1416.5	501.2	3722.0	11110	1318	316.7
MEAN	4.15	33.4	85.4	86.2	109	123	47.2	16.2	124	358	42.5	10.6
MAX	5.0	80	90	93	123	151	123	46	514	472	172	31
MIN	3.5	3.5	80	79	91	104	4.3	5.1	7.0	118	14	6.9
AC-FT	255	1990	5250	5300	6030	7580	2810	994	7380	22040	2610	628

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1993, BY WATER YEAR (WY)

	MEAN	76.8	82.9	106	98.7	96.9	102	200	256	361	327	233	111
MAX	184	149	157	134	143	249	1138	2072	2196	529	607	430	
(WY)	1984	1987	1988	1988	1988	1987	1987	1987	1987	1983	1983	1984	
MIN	4.15	9.68	35.4	51.6	55.9	33.3	5.68	4.51	9.39	130	4.39	4.13	
(WY)	1993	1982	1982	1982	1982	1981	1992	1992	1981	1990	1990	1990	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1981 - 1993

ANNUAL TOTAL	19716.8	31699.0	
ANNUAL MEAN	53.9	86.8	179
HIGHEST ANNUAL MEAN			597
LOWEST ANNUAL MEAN			59.3
HIGHEST DAILY MEAN	565	Jul 22	3330
LOWEST DAILY MEAN	^a 3.5	Oct 30	^b 2.7
ANNUAL SEVEN-DAY MINIMUM	3.5	Oct 30	3.0
INSTANTANEOUS PEAK FLOW		583	^c 3460
INSTANTANEOUS PEAK STAGE		7.61	11.78
ANNUAL RUNOFF (AC-FT)	39110	62870	129400
10 PERCENT EXCEEDS	88	170	453
50 PERCENT EXCEEDS	19	74	88
90 PERCENT EXCEEDS	4.0	4.4	6.1

a-Also occurred Oct 31, Nov 3-6, 9-10.

b-Also occurred Aug 18 and 19, 1990.

c-From rating curve extended above 2700 ft³/s.

07137000 FRONTIER DITCH NEAR COOLIDGE, KS

LOCATION.--Lat 38°02'18", long 102°02'19", in SW¹/4SE¹/4NE¹/4 sec.21, T.23 S., R.43 W., Hamilton County, Hydrologic Unit 11030001, on left bank 0.3 mi east of Colorado-Kansas State line, 0.5 midstream from Holly drain diversion, 1.5 mi west of Coolidge, and 2.3 mi downstream from diversion of the Arkansas River.

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 1731: 1951.

GAGE.--Water-stage recorders and Parshall flume. Datum of gage is 3,343.14 ft above sea level.

REMARKS.--Records good. This ditch diverts water from the Arkansas River in Colorado for use in Kansas. These records and records for the Arkansas River near Coolidge represent total flow of the Arkansas River at the Colorado-Kansas State line. Satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 84 ft³/s, Aug. 1, 1975; no flow many days each year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	.00	.45	.61	.00	.00	.00	.00	.00	31	36	7.6
2	17	.00	.42	.49	.00	.00	.00	.00	.00	25	26	10
3	11	.00	.46	.49	.00	.00	.00	.00	.00	31	.00	9.6
4	.40	.00	.49	.52	.00	.00	.00	.00	.00	32	.00	6.6
5	.08	.00	.43	.56	.00	.00	.00	.00	.00	40	.00	3.4
6	.00	.00	.59	.26	.00	.00	.00	.00	.00	36	.00	.24
7	.00	.00	.66	.14	.00	.00	.00	.00	.00	33	.00	.02
8	.00	.00	.56	.14	.00	.00	.00	.00	.00	24	9.7	.00
9	.00	.00	.56	.05	.00	.00	.00	.00	.00	29	37	.00
10	.00	.00	.56	.00	.00	.00	.00	.00	.00	24	37	.00
11	.00	.00	.56	.00	.00	.00	.00	.00	.00	.13	35	.00
12	.00	.00	.56	.00	.00	.00	.00	.00	.00	.00	35	.00
13	.00	.00	.52	.00	.00	.00	.00	.00	.00	.00	37	.00
14	.00	.00	.49	.00	.00	.00	.00	.00	.00	.00	37	8.3
15	.00	.00	.44	.00	.00	.00	.00	.00	.00	.00	38	32
16	.00	3.8	.42	.00	.00	.00	.00	.00	17	.00	36	22
17	.00	13	.42	.00	.00	.00	.00	.00	34	6.1	36	25
18	.00	14	.52	.00	.00	.00	.00	.00	48	16	37	23
19	.00	24	.56	.00	.00	.00	.00	.00	2.5	19	36	23
20	.00	24	.48	.00	.00	.00	.00	.00	.00	27	37	30
21	.00	15	.36	.00	.00	.00	.00	.00	12	27	27	30
22	.00	.95	.68	.26	.00	.00	.00	.00	35	21	21	28
23	.00	.53	.70	.23	.00	.00	.00	.00	35	16	28	34
24	.00	.48	.54	.00	.00	.00	.00	.00	37	20	32	36
25	.00	.39	.43	.00	.00	.00	.00	.00	34	23	31	16
26	.00	.42	.83	.00	.00	.00	.00	.00	8.3	25	34	12
27	.00	.42	.88	.00	.00	.00	.00	.00	.00	25	36	15
28	.00	.41	1.3	.00	.00	.00	.00	.00	28	25	34	15
29	.00	.42	.55	.00	---	.00	.00	.00	43	25	33	16
30	.00	.45	.50	.00	---	.00	.00	.00	43	31	27	15
31	.00	---	.64	.00	---	.00	---	.00	---	35	18	---
TOTAL	42.48	98.27	17.56	3.75	0.00	0.00	0.00	0.00	376.80	646.23	830.70	417.76
MEAN	1.37	3.28	.57	.12	.000	.000	.000	.000	12.6	20.8	26.8	13.9
MAX	17	24	1.3	.61	.00	.00	.00	.00	48	40	38	36
MIN	.00	.00	.36	.00	.00	.00	.00	.00	.00	.00	.00	.00
AC-FT	84	195	35	7.4	.00	.00	.00	.00	747	1280	1650	829
CAL YR TOTAL	3321.00	MEAN	9.07	MAX 63	MIN .00	AC-FT 6590						
WTR YR TOTAL	2433.55	MEAN	6.67	MAX 48	MIN .00	AC-FT 4830						

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS
(National stream-quality accounting network station)

LOCATION.--Lat 38°01'34", long 102°00'41", in NW¹/₄ NE¹/₄ NW¹/₄ sec.26, T.23 S., R.43 W., Hamilton County, Hydrologic Unit 11030001, on right bank at downstream side of bridge, 1.0 mi south of Coolidge, 1.9 mi downstream from Colorado-Kansas State line, and at mile 1,099.3.

DRAINAGE AREA.--25,410 mi², of which 1,708 mi² is probably noncontributing.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May to October 1903, March to May 1921, October 1950 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1341: 1903, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,330.84 ft above sea level. May 5 to Oct. 31, 1903, nonrecording gage, and Mar. 1 to May 31, 1921, water-stage recorder at present site at different datum. Oct. 1, 1950, to Mar. 31, 1966, water-stage recorder at site 0.3 mi upstream at datum 3.00 ft, higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Combined flow of river and Frontier Ditch (station 07137000) represents entire flow that enters Kansas. Flow regulated since 1943 by John Martin Reservoir (station 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 500,000 acres, and return flow from irrigated areas. Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	62	106	113	135	167	146	108	148	479	202	130
2	46	70	99	115	156	182	145	126	152	459	215	106
3	44	83	102	116	154	193	148	124	177	440	203	104
4	49	71	102	115	152	196	150	121	411	422	200	109
5	48	72	102	116	155	196	152	110	382	401	176	118
6	50	76	104	118	153	200	144	134	314	418	193	109
7	54	82	105	114	150	199	143	163	271	437	177	103
8	64	75	104	117	147	192	143	121	243	428	152	102
9	67	71	106	113	147	187	145	115	227	394	108	117
10	68	70	105	113	152	182	159	107	209	418	100	117
11	59	73	107	110	145	179	158	107	150	448	107	129
12	60	85	109	112	140	178	142	123	108	456	135	123
13	59	80	108	e112	140	174	138	127	100	482	196	118
14	55	85	109	e113	140	174	145	114	103	525	161	105
15	55	89	112	114	148	173	137	114	116	570	136	94
16	55	87	111	114	138	167	134	122	81	518	126	100
17	62	75	112	113	133	162	137	141	76	491	107	80
18	69	73	115	e113	131	162	175	140	71	478	88	73
19	66	62	116	112	136	161	174	121	216	471	88	75
20	59	62	112	115	146	158	189	124	210	490	84	75
21	55	75	119	116	155	157	180	122	146	478	97	77
22	44	88	113	117	158	153	132	126	96	483	99	71
23	43	90	112	127	162	153	113	123	77	469	100	69
24	42	87	112	123	163	151	107	122	65	432	92	86
25	49	79	113	121	165	149	106	124	64	422	84	99
26	48	90	113	121	162	148	112	124	287	422	71	116
27	50	96	114	126	160	146	110	117	452	414	77	121
28	57	99	112	133	160	142	115	124	420	419	76	114
29	66	101	113	133	---	149	106	123	427	427	77	102
30	82	98	115	131	---	155	104	143	457	319	98	102
31	71	---	113	131	---	146	---	151	---	250	131	---
MEAN	56.1	80.2	110	118	149	169	140	125	209	444	128	101
MAX	82	101	119	133	165	200	189	163	457	570	215	130
MIN	42	62	99	110	131	142	104	107	64	250	71	69
AC-FT	3450	4770	6730	7250	8300	10380	8310	7660	12410	27290	7850	6040

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1993, BY WATER YEAR (WY)

MEAN	117	101	107	107	121	111	197	281	467	278	296	171
MAX	331	256	270	274	602	331	1221	2106	8221	741	1979	1079
(WY)	1985	1988	1966	1966	1966	1960	1987	1987	1965	1965	1965	1965
MIN	1.97	1.53	3.94	3.14	5.52	5.63	9.43	6.61	4.20	3.59	1.94	.90
(WY)	1979	1979	1979	1979	1978	1978	1979	1963	1954	1974	1964	1960

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1951 - 1993
ANNUAL MEAN	107	153	196
HIGHEST ANNUAL MEAN			1012
LOWEST ANNUAL MEAN			19.8
HIGHEST DAILY MEAN	1050	Aug 17	101000
LOWEST DAILY MEAN	15	Apr 26	.00
ANNUAL SEVEN-DAY MINIMUM	18	May 20	.00
INSTANTANEOUS PEAK FLOW		621	158000
INSTANTANEOUS PEAK STAGE		4.31	14.80
ANNUAL RUNOFF (AC-FT)	78000	110400	142200
10 PERCENT EXCEEDS	149	316	418
50 PERCENT EXCEEDS	90	118	111
90 PERCENT EXCEEDS	36	70	8.3

e-Estimated.

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1964-68, 1970-73, 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1963 to September 1968, January 1976 to September 1981.

WATER TEMPERATURES: November 1963 to September 1968, January 1976 to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	BARO- METRIC PRES- SURE (MM OF HG)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 01...	1140	46	4590	8.3	19.0	10.4	680	270	420
MAR 24...	1100	149	4660	8.0	14.0	9.4	670	13	45
JUN 04...	1530	473	2200	8.1	19.5	--	--	--	--
SEP 29...	1105	415	2780	8.0	26.5	6.6	670	<1	980
SEP 08...	1050	100	4450	8.0	16.5	8.8	691	250	6200

DATE	TUR- BID- ITY (NTU)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY WAT DIS TOT IT (MG/L AS CACO3)	BICAR- BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR- BONATE WATER DIS IT FIELD (MG/L AS CO3)	SULFATE DIS- SOLVED (MG/L AS SO4)
OCT 01...	18	1700	340	200	590	6	13	308	376	0	2100
MAR 24...	46	1700	350	190	580	6	11	279	348	0	2400
JUN 04...	--	--	--	--	--	--	--	--	--	--	--
SEP 29...	120	940	210	100	260	4	7.4	192	237	0	1200
SEP 08...	420	1600	360	180	600	6	14	285	347	0	2300

DATE	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, TOTAL (MG/L AS NO3)
OCT 01...	160	0.90	16	3810	5.18	473	1.70	1.70	0.01	0.04	10
MAR 24...	160	0.80	15	4180	5.68	1680	2.00	2.00	--	0.06	--
JUN 04...	--	--	--	--	--	--	--	--	--	--	--
SEP 29...	70	0.90	13	2160	2.94	2420	1.10	1.10	--	0.18	--
SEP 08...	160	1.0	18	4010	5.45	1080	2.30	2.30	--	0.10	--

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)
OCT 01...	7.4	0.07	0.01	0.03	0.60	2.3	1.67	1.68	0.03	0.02
MAR 24...	8.8	0.07	--	0.05	0.90	2.9	1.98	1.98	--	0.02
JUN 04...	--	--	--	--	--	--	--	--	--	--
SEP 29...	4.8	0.07	--	0.14	0.50	1.6	1.08	1.08	--	0.02
SEP 08...	10	0.07	--	0.08	0.90	3.2	2.28	2.28	--	0.02

ARKANSAS RIVER BASIN

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	PHOS- PHATE, TOTAL (MG/L AS PO4)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO TOTAL (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 01...	0.59	0.09	0.03	0.07	0.03	0.03	0.01	167	21	86
MAR 24...	0.85	--	0.03	0.08	<0.01	--	0.01	214	86	86
JUN 04...	--	--	--	--	--	--	--	6960	8890	79
SEP 29...	0.36	--	0.25	0.07	0.07	--	0.08	1080	1210	5000
SEP 08...	0.82	--	0.06	0.19	0.03	--	0.02	848	229	96

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
OCT 01...	<10	<100	<1	<10	170	60	5	<1	21	<1.0	6200	5
MAR 24...	20	<100	<1	<10	190	30	4	2	24	<1.0	6000	6
JUN 29...	20	<100	<1	<10	100	10	6	2	11	<1.0	3800	5
SEP 08...	60	<100	<1	120	170	20	4	3	21	<1.0	6200	8

RIO GRANDE BASIN

08213500 RIO GRANDE AT THIRTYMILE BRIDGE, NEAR CREEDE, CO

LOCATION.--Lat 37°43'29", long 107°15'18", in NE 1/4 sec.13, T.40 N., R.4 W., Hinsdale County, Hydrologic Unit 13010001, on right bank 70 ft downstream from bridge, 500 ft upstream from Squaw Creek, 0.8 mi downstream from Rio Grande Reservoir, and 20 mi southwest of Creede.

DRAINAGE AREA.--163 mi².

PERIOD OF RECORD.--June 1909 to September 1923, May 1925 to current year. No winter records 1910, 1926. Monthly discharge only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 9,300 ft above sea level, from topographic map. See WSP 1712 or 1732 for history of changes prior to Oct. 1, 1934.

REMARKS.--Estimated daily discharges: Oct. 30 to Apr. 26, May 27 to June 1, and Aug. 29 to Sept. 1. Records good except for estimated daily discharges, which are fair. Flow regulated by Rio Grande Reservoir, capacity, 51,110 acre-ft, since 1912. Natural flow of stream affected by transmountain diversions from Colorado River basin to drainage area upstream from station through Weminuche Pass and Pine River-Weminuche Pass ditches. No known diversions 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	.30	.60	1.2	1.7	2.3	2.9	400	13	1130	759	151
2	58	.30	.60	1.2	1.8	2.3	2.9	372	14	921	244	243
3	58	.30	.70	1.2	1.8	2.3	2.9	355	15	988	90	224
4	58	.30	.70	1.2	1.8	2.3	2.9	355	377	1040	76	153
5	55	.30	.70	1.2	1.8	2.3	2.9	361	493	1010	76	104
6	46	.30	.70	1.3	1.8	2.4	2.9	332	532	864	76	97
7	46	.30	.70	1.3	1.9	2.4	2.9	240	566	962	76	118
8	46	.30	.70	1.3	1.9	2.4	2.9	190	706	1090	76	151
9	46	.30	.80	1.3	1.9	2.4	3.0	181	1010	930	76	157
10	46	.30	.80	1.3	1.9	2.4	3.0	149	1010	671	77	152
11	46	.30	.80	1.4	1.9	2.5	3.0	133	962	707	77	131
12	46	.30	.80	1.4	2.0	2.5	3.0	192	1300	994	76	103
13	46	.30	.80	1.4	2.0	2.5	3.0	302	1240	783	66	77
14	65	.30	.80	1.4	2.0	2.5	3.0	508	671	771	62	84
15	72	.30	.90	1.4	2.0	2.5	3.0	893	646	968	62	88
16	63	.40	.90	1.4	2.0	2.6	3.0	894	1150	1120	98	92
17	42	.40	.90	1.5	2.0	2.6	3.1	527	1090	1100	151	94
18	42	.40	.90	1.5	2.1	2.6	3.1	396	898	809	151	94
19	33	.40	.90	1.5	2.1	2.6	3.1	616	827	702	145	104
20	37	.40	1.0	1.5	2.1	2.6	3.1	826	965	670	144	109
21	41	.40	1.0	1.5	2.1	2.6	3.1	860	1200	669	145	107
22	41	.50	1.0	1.6	2.1	2.7	3.1	964	1400	362	145	96
23	41	.50	1.0	1.6	2.2	2.7	3.1	724	1150	129	126	83
24	41	.50	1.0	1.6	2.2	2.7	3.1	813	890	83	97	73
25	41	.50	1.0	1.6	2.2	2.7	3.1	852	977	82	88	69
26	41	.50	1.1	1.6	2.2	2.7	87	684	1040	423	75	64
27	41	.50	1.1	1.7	2.2	2.8	188	206	1070	686	70	59
28	42	.60	1.1	1.7	2.3	2.8	235	6.2	818	724	72	60
29	42	.60	1.1	1.7	---	2.8	327	7.2	951	619	36	61
30	26	.60	1.1	1.7	---	2.8	392	8.7	1170	577	10	62
31	.30	---	1.1	1.7	---	2.8	---	10	---	707	10	---
TOTAL	1406.30	11.70	27.30	44.9	56.0	79.1	1304.1	13357.1	25151	23291	3532	3260
MEAN	45.4	.39	.88	1.45	2.00	2.55	43.5	431	838	751	114	109
MAX	72	.60	1.1	1.7	2.3	2.8	392	964	1400	1130	759	243
MIN	.30	.30	.60	1.2	1.7	2.3	2.9	6.2	13	82	10	59
AC-FT	2790	23	54	89	111	157	2590	26490	49890	46200	7010	6470

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1993, BY WATER YEAR (WY)

	MEAN	97.8	30.2	9.38	9.29	9.16	11.8	102	489	909	534	249	105
MAX	648	280	116	89.0	81.0	88.6	368	907	1842	1246	612	467	
(WY)	1912	1917	1912	1912	1912	1916	1950	1958	1917	1986	1957	1909	
MIN	2.00	.39	.40	.40	.40	.40	5.63	75.0	139	54.2	40.4	25.8	
(WY)	1937	1993	1952	1952	1952	1952	1983	1938	1934	1934	1940	1956	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1909 - 1993
ANNUAL TOTAL	60597.30	71520.50	
ANNUAL MEAN	166	196	212
HIGHEST ANNUAL MEAN			362
LOWEST ANNUAL MEAN			77.7
HIGHEST DAILY MEAN	1080	1400	5720
LOWEST DAILY MEAN	a .30	a .30	b .10
ANNUAL SEVEN-DAY MINIMUM	.30	.30	.21
INSTANTANEOUS PEAK FLOW		1460	c 7500
INSTANTANEOUS PEAK STAGE		d 3.83	7.03
ANNUAL RUNOFF (AC-FT)	120200	141900	153600
10 PERCENT EXCEEDS	578	837	740
50 PERCENT EXCEEDS	42	10	51
90 PERCENT EXCEEDS	.70	.70	2.5

a-Also occurred Nov 1-15.

b-Also occurred Nov 3, 4, 1960.

c-Present site and datum, from rating curve extended above 1200 ft³/s.

d-Maximum gage height, 3.84 ft, Jun 22.

08214500 NORTH CLEAR CREEK BELOW CONTINENTAL RESERVOIR, CO

LOCATION.--Lat 37°53'18", long 107°12'10", in NE¹/4SW¹/4 sec.21, T.42 N., R.3 W., Hinsdale County, Hydrologic Unit 13010001, on left bank 100 ft downstream from bridge, 1,000 ft downstream from Continental Reservoir, and 15 mi west of Creede.

DRAINAGE AREA.--51.7 mi².

PERIOD OF RECORD.--May 1929 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to October 1960, published as Clear Creek below Continental Reservoir.

REVISED RECORDS.--WSP 1008: Drainage area.

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Elevation of gage is 10,200 ft above sea level, from topographic map. Prior to Oct. 2, 1951, at site 150 ft upstream, at different datum.

REMARKS.--Estimated daily discharges: Nov. 10 to Apr. 27. Records good except for estimated daily discharges, which are fair. Flow regulated by Continental Reservoir, capacity, 26,720 acre-ft. No diversion 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 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	4.6	.15	.20	.25	.30	.35	.25	1.5	1.2	213	23
2	11	.18	.15	.20	.25	.30	.35	.25	1.6	1.2	201	21
3	12	.15	.15	.20	.25	.30	.35	.25	1.6	1.2	205	18
4	12	.15	.15	.20	.25	.30	.35	.25	1.6	1.2	198	14
5	12	.15	.15	.20	.25	.30	.35	.25	1.7	1.2	194	14
6	12	.15	.15	.20	.25	.30	.35	.25	1.8	1.2	193	14
7	12	.15	.15	.20	.25	.30	.35	.25	2.0	1.1	194	16
8	8.4	.15	.15	.20	.25	.30	.35	.25	2.1	1.0	205	15
9	6.4	.15	.15	.20	.25	.30	.35	.25	2.0	1.0	209	14
10	6.4	.15	.15	.20	.25	.30	.35	.25	2.2	1.1	205	13
11	6.4	.15	.15	.20	.25	.30	.35	.30	2.0	1.2	202	13
12	9.0	.15	.15	.20	.25	.30	.35	.35	2.2	122	198	12
13	11	.15	.15	.20	.25	.30	.35	.35	2.2	232	193	15
14	11	.15	.20	.20	.25	.30	.35	.35	2.1	220	193	14
15	11	.15	.20	.20	.25	.30	.35	47	2.0	232	195	14
16	11	.15	.20	.20	.25	.30	.35	188	2.0	261	198	14
17	11	.15	.20	.25	.25	.30	.35	237	110	266	196	14
18	11	.15	.20	.25	.25	.30	.35	199	177	228	152	13
19	11	.15	.20	.25	.25	.30	.35	177	150	215	22	13
20	11	.15	.20	.25	.30	.30	.35	195	87	278	20	13
21	11	.15	.20	.25	.30	.30	.35	225	63	264	22	12
22	12	.15	.20	.25	.30	.30	.35	49	45	250	19	11
23	9.6	.15	.20	.25	.30	.30	.35	2.1	32	260	17	11
24	6.4	.15	.20	.25	.30	.30	.35	112	43	268	16	11
25	6.4	.15	.20	.25	.30	.35	.35	161	1.2	249	15	11
26	9.0	.15	.20	.25	.30	.35	.35	50	1.2	232	18	11
27	11	.15	.20	.25	.30	.35	.35	1.2	1.2	231	25	11
28	11	.15	.20	.25	.30	.35	.25	1.2	1.2	227	39	5.4
29	11	.15	.20	.25	---	.35	.27	1.2	1.2	218	40	.30
30	11	.15	.20	.25	---	.35	.25	1.3	1.2	213	39	.25
31	11	---	.20	.25	---	.35	---	1.4	---	215	29	---
TOTAL	317.0	8.98	5.55	6.95	7.45	9.65	10.22	1652.25	744.8	4693.6	3865	380.95
MEAN	10.2	.30	.18	.22	.27	.31	.34	53.3	24.8	151	125	12.7
MAX	12	4.6	.20	.25	.30	.35	.35	237	177	278	213	23
MIN	6.4	.15	.15	.20	.25	.30	.25	.25	1.2	1.0	15	.25
AC-FT	629	18	11	14	15	19	20	3280	1480	9310	7670	756

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1993, BY WATER YEAR (WY)

	MEAN	13.0	7.80	3.67	3.79	3.96	4.53	21.8	87.2	82.5	69.3	48.1	18.7
MAX	72.4	100	20.0	20.0	20.0	20.0	20.0	80.9	209	166	234	216	88.1
(WY)	1979	1985	1942	1939	1939	1939	1985	1987	1987	1987	1958	1948	1986
MIN	.20	.10	.11	.12	.13	.14	.19	14.8	13.0	11.6	2.78	4.59	1946
(WY)	1989	1989	1989	1989	1989	1989	1984	1980	1977	1963	1978	1978	1946

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1929 - 1993

	ANNUAL TOTAL	6675.35	11702.40	
ANNUAL MEAN	18.2	32.1	30.4	
HIGHEST ANNUAL MEAN			54.5	1948
LOWEST ANNUAL MEAN			8.55	1977
HIGHEST DAILY MEAN	203	Aug 13	278	Jul 20
LOWEST DAILY MEAN	a	.15 Nov 3	a	.15 Nov 3
ANNUAL SEVEN-DAY MINIMUM	.15	Nov 3	.15	Nov 3
INSTANTANEOUS PEAK FLOW			324	May 18
INSTANTANEOUS PEAK STAGE			2.65	May 18
ANNUAL RUNOFF (AC-FT)	13240		23210	
10 PERCENT EXCEEDS	54		194	
50 PERCENT EXCEEDS	.50		.35	
90 PERCENT EXCEEDS	.15		.15	.70

a-Also occurred Nov 4 to Dec 13.

b-Also occurred Jan 23, 1935, and Sep 25-27, 1990.

08217500 RIO GRANDE AT WAGON WHEEL GAP, CO

LOCATION.--Lat 37°46'01", long 106°49'51", in NW¼/4NE¼/4 sec.35, T.41 N., R.1 E., Mineral County, Hydrologic Unit 13010001, on right bank 250 ft upstream from private bridge, 0.4 mi upstream from Goose Creek, and 0.4 mi west of town of Wagon Wheel Gap.

DRAINAGE AREA.--780 mi².

PERIOD OF RECORD.--May 1951 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,431 ft above sea level, from topographic map.

REMARKS.--Estimated daily discharges: Nov. 23 to Mar. 20. Records good except for estimated daily discharges, which are poor. Flow regulated by Santa Maria, Rio Grande, and Continental Reservoirs, combined capacity, 121,400 acre-ft. Diversions upstream from station for irrigation. Transmountain diversions to drainage area upstream from station from Colorado River basin (see elsewhere in this report). Several measurements of specific conductance and water temperature were obtained and are published elsewhere in this report.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	254	124	90	99	100	96	102	851	1800	1950	957	701
2	233	113	93	99	99	94	105	794	1750	1750	860	810
3	230	109	95	97	97	91	98	737	1610	1630	355	719
4	229	109	97	99	95	89	104	757	1500	1710	279	641
5	225	109	97	102	95	89	108	820	1770	1620	283	525
6	219	113	93	102	97	92	104	783	1820	1500	267	465
7	216	120	89	97	99	96	98	732	1800	1410	259	457
8	209	117	86	93	101	99	101	672	1670	1640	270	472
9	211	107	87	93	104	103	102	661	1720	1750	278	462
10	203	107	91	94	104	107	113	704	1850	1490	293	447
11	194	105	93	96	103	107	126	744	1800	1340	293	417
12	192	100	92	97	101	105	144	876	2140	1550	267	381
13	193	102	89	97	97	105	131	1190	2720	1840	263	356
14	183	106	86	94	96	110	135	1550	2400	1540	303	366
15	229	110	84	94	96	115	129	1920	1960	1680	315	355
16	237	113	86	93	97	120	139	2260	2520	1820	268	360
17	230	116	88	94	100	122	154	2230	2560	1800	286	360
18	205	117	89	95	103	123	176	1940	2120	1560	327	337
19	203	119	89	94	104	120	194	2050	2010	1230	359	325
20	192	120	88	97	104	110	173	2370	2130	1240	413	323
21	186	107	87	98	103	102	195	2720	2370	1240	382	321
22	202	90	88	96	102	96	249	2720	2590	1130	400	312
23	202	89	90	95	99	96	309	2280	2440	802	365	297
24	196	87	90	97	98	96	312	2180	1990	648	331	277
25	186	85	89	99	99	100	257	2740	1940	633	302	258
26	199	86	88	101	99	111	277	2750	2030	608	283	250
27	196	87	88	103	99	109	474	2420	1970	849	319	242
28	196	88	89	103	98	103	612	1920	1870	957	693	232
29	196	89	92	99	---	99	704	1640	1690	905	1320	230
30	182	89	94	98	---	97	831	1660	1990	809	1130	225
31	173	---	96	98	---	98	---	1740	---	856	864	---
TOTAL	6401	3133	2793	3013	2789	3200	6756	49411	60530	41487	13584	11923
MEAN	206	104	90.1	97.2	99.6	103	225	1594	2018	1338	438	397
MAX	254	124	97	103	104	123	831	2750	2720	1950	1320	810
MIN	173	85	84	93	95	89	98	661	1500	608	259	225
AC-FT	12700	6210	5540	5980	5530	6350	13400	98010	120100	82290	26940	23650

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1993, BY WATER YEAR (WY)

	MEAN	261	150	107	99.3	104	127	364	1392	1907	1011	524	326
MAX	542	482	228	178	175	251	677	2384	3259	2248	1405	841	
(WY)	1986	1986	1987	1986	1986	1972	1987	1987	1979	1957	1957	1970	
MIN	109	76.6	51.8	55.6	65.9	87.6	169	502	549	201	159	107	
(WY)	1957	1957	1957	1957	1978	1977	1968	1977	1977	1977	1956	1956	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1951 - 1993

ANNUAL TOTAL	165649	205020	
ANNUAL MEAN	453	562	537
HIGHEST ANNUAL MEAN			906
LOWEST ANNUAL MEAN			219
HIGHEST DAILY MEAN	1900	2750	4970
LOWEST DAILY MEAN	84	84	46
ANNUAL SEVEN-DAY MINIMUM	87	87	49
INSTANTANEOUS PEAK FLOW		3050	5190
INSTANTANEOUS PEAK STAGE		4.33	6.10
ANNUAL RUNOFF (AC-FT)	328600	406700	389200
10 PERCENT EXCEEDS	1370	1820	1630
50 PERCENT EXCEEDS	217	196	212
90 PERCENT EXCEEDS	94	93	90

08219500 SOUTH FORK RIO GRANDE AT SOUTH FORK, CO

LOCATION (REVISED).--Lat 37°39'25", long 106°38'55", in SW¹/4NE¹/4 sec.3, T.39 N., R.3 E., Rio Grande County, Hydrologic Unit 13010001, on left bank near U.S. Highway 160, 0.1 mi downstream from Church Creek, 0.9 mi southwest of village of South Fork, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--216 mi².

PERIOD OF RECORD.--August 1910 to September 1922, May 1936 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 898: 1911(M). WSP 1312: 1912, 1944(M). WSP 1632: 1956-58(P).

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,221.79 ft above sea level. Aug. 9, 1910 to Mar. 28, 1915, nonrecording gage, and Mar. 29, 1915 to Sept. 30, 1922, water-stage recorder, at bridges 1 mi downstream at different datums.

REMARKS.--Estimated daily discharges: Nov. 3-5, and Nov. 12 to Mar. 30. Records good except for estimated daily discharges, which are fair. Transmountain diversions from Colorado River basin to drainage area upstream from station through Treasure Pass ditch. Natural flow of stream affected by a few small diversions for irrigation, slight regulation by Beaver Creek Reservoir, capacity, 4,760 acre-ft, and several smaller storage reservoirs.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, exceeded all other observed floods at this location since at least 1873. Flood of June 29, 1927, reached a stage about 1 ft lower than that of Oct. 5, 1911, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	52	44	42	49	52	93	490	1840	598	91	354
2	85	44	44	44	44	49	100	390	1810	534	92	310
3	83	43	50	41	44	46	99	351	1680	494	84	265
4	80	39	47	37	44	46	98	384	1430	453	79	238
5	79	46	45	40	41	47	113	430	1340	385	83	219
6	84	46	41	42	42	50	116	377	1270	350	77	216
7	84	50	39	44	45	49	107	350	1130	320	73	232
8	77	49	42	46	48	49	101	322	907	302	77	234
9	70	46	44	43	52	49	106	298	783	278	80	201
10	69	43	47	48	48	52	129	306	728	258	95	186
11	68	44	45	43	50	50	151	367	780	248	89	172
12	66	39	48	41	46	48	162	476	957	248	78	161
13	65	39	40	41	46	46	160	620	1180	254	78	171
14	63	42	39	45	47	48	157	780	1320	221	130	186
15	62	43	41	44	49	54	148	875	1410	203	107	169
16	69	44	40	44	47	54	145	962	1440	190	86	151
17	94	47	39	47	52	54	145	998	1390	177	81	139
18	93	46	45	45	47	58	177	970	1220	164	78	127
19	71	44	40	49	52	58	194	1040	1100	153	78	123
20	54	46	38	48	52	60	197	1060	1070	140	86	109
21	52	40	41	45	48	66	222	1190	1080	131	89	98
22	55	41	41	44	46	64	279	1250	1060	123	119	93
23	56	43	41	43	46	66	345	1180	1010	115	126	88
24	53	39	41	42	49	66	350	1180	937	108	103	88
25	55	39	41	43	46	74	285	1180	834	104	92	84
26	60	39	40	45	47	80	314	1440	784	98	87	81
27	55	39	40	43	49	86	388	2110	763	94	136	79
28	53	41	44	42	50	88	468	2000	724	88	814	77
29	61	43	47	46	---	86	554	1640	725	88	885	72
30	64	43	50	44	---	86	562	1580	693	101	600	66
31	69	---	42	46	---	89	---	1720	---	99	426	---
TOTAL	2135	1299	1326	1357	1326	1870	6465	28316	33395	7119	5199	4789
MEAN	68.9	43.3	42.8	43.8	47.4	60.3	215	913	1113	230	168	160
MAX	94	52	50	49	52	89	562	2110	1840	598	885	354
MIN	52	39	38	37	41	46	93	298	693	88	73	66
AC-FT	4230	2580	2630	2690	2630	3710	12820	56160	66240	14120	10310	9500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1993, BY WATER YEAR (WY)

	MEAN	92.4	58.5	44.0	37.5	40.6	62.9	218	694	840	259	112	86.0
MAX	569	152	106	88.6	78.3	131	479	1282	1746	794	264	357	
(WY)	1912	1987	1912	1986	1986	1989	1962	1984	1979	1957	1970		
MIN	32.1	23.9	18.0	13.6	18.2	21.5	85.2	211	113	58.5	43.1	23.6	
(WY)	1956	1961	1977	1977	1955	1955	1955	1977	1977	1940	1978	1956	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1910 - 1993

ANNUAL TOTAL	61709	94596	
ANNUAL MEAN	169	259	213
HIGHEST ANNUAL MEAN			359
LOWEST ANNUAL MEAN			68.9
HIGHEST DAILY MEAN	979	May 21	2980
LOWEST DAILY MEAN	38	Dec 20	10
ANNUAL SEVEN-DAY MINIMUM	40	Nov 21	11
INSTANTANEOUS PEAK FLOW			8000
INSTANTANEOUS PEAK STAGE		6.19	May 28
ANNUAL RUNOFF (AC-FT)	122400	187600	154400
10 PERCENT EXCEEDS	530	919	619
50 PERCENT EXCEEDS	74	80	71
90 PERCENT EXCEEDS	44	42	33

a-Present site and datum, from rating curve extended above 1500 ft³/s.

b-From floodmarks.

08220000 RIO GRANDE NEAR DEL NORTE, CO

LOCATION.--Lat 37°41'22", long 106°27'38", in NW1/4 sec.29, T.40 N., R.5 E., Rio Grande County, Hydrologic Unit 13010001, on right bank 20 ft downstream from county highway bridge, 5.0 mi upstream from Pinos Creek, and 6.0 mi west of Del Norte.

DRAINAGE AREA.--1,320 mi², approximately.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1889 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 763: Drainage area. WSP 1312: 1889, 1901, 1913-14.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,980.25 ft above sea level. Prior to May 16, 1908, nonrecording gage at site 4 mi downstream at different datum. May 16, 1908 to Nov. 8, 1910, nonrecording gages on bridge at present site and datum.

REMARKS.--Estimated daily discharges: Nov. 27 to Mar. 19. Records good except for estimated daily discharges, which are fair. Small diversions upstream from station for irrigation. Flow regulated by Beaver Creek Reservoir since 1910, Santa Maria Reservoir since 1912, Rio Grande Reservoir since 1912, and Continental Reservoir since 1925, combined capacity, 126,100 acre-ft, and by several smaller reservoirs. Transmountain diversions to drainage area upstream from station from Colorado River basin (see elsewhere in this report).

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1873, that of Oct. 5, 1911, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	364	266	180	150	170	180	284	1410	4070	2730	1000	1230
2	335	219	190	180	160	180	315	1260	3920	2460	989	1210
3	330	206	210	180	150	160	309	1140	3660	2160	546	1090
4	322	178	190	150	140	150	303	1170	3110	2250	406	965
5	314	172	170	120	130	160	322	1310	3330	2080	375	857
6	319	196	150	150	130	190	323	1240	3320	1930	365	770
7	308	212	130	160	140	180	292	1160	3180	1730	336	776
8	305	241	140	180	150	180	267	1060	2790	1900	348	805
9	287	256	180	180	180	190	277	999	2530	2130	359	738
10	284	255	170	190	170	200	319	1040	2680	1800	390	700
11	273	253	170	180	160	190	362	1160	2630	1580	402	650
12	271	207	170	140	150	160	384	1380	3040	1700	358	597
13	268	195	150	140	150	160	384	1810	4150	2240	348	587
14	262	228	140	160	140	180	384	2380	4210	1740	452	649
15	270	225	140	160	140	230	366	2900	3600	1840	477	603
16	306	219	140	160	140	240	362	3440	4280	2000	386	581
17	350	226	130	170	160	230	367	3670	4430	1980	371	564
18	343	222	170	160	150	250	413	3390	3700	1770	404	530
19	324	205	140	180	170	270	468	3510	3360	1410	431	512
20	285	208	140	160	180	287	454	3760	3410	1370	542	493
21	267	202	120	150	160	294	488	4320	3740	1380	503	468
22	287	160	140	150	140	300	593	4540	3950	1320	563	441
23	300	182	150	140	140	315	745	4040	3880	952	542	422
24	303	164	150	140	160	343	788	3760	3230	803	475	399
25	298	143	140	150	160	381	658	4420	2960	762	420	373
26	316	146	140	150	140	417	658	4840	3010	721	391	364
27	312	150	120	150	160	428	875	5140	2920	857	454	351
28	302	150	150	150	160	376	1080	4570	2830	997	1510	338
29	316	160	180	160	---	354	1280	3800	2470	980	2450	329
30	312	160	200	170	---	317	1440	3710	2850	902	2110	314
31	321	---	160	150	---	287	---	3880	---	917	1510	---
TOTAL	9454	6006	4850	4910	4280	7779	15560	86209	101240	49391	20213	18706
MEAN	305	200	156	158	153	251	519	2781	3375	1593	652	624
MAX	364	266	210	190	180	428	1440	5140	4430	2730	2450	1230
MIN	262	143	120	120	130	150	267	999	2470	721	336	314
AC-FT	18750	11910	9620	9740	8490	15430	30860	171000	200800	97970	40090	37100

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1890 - 1993, BY WATER YEAR (WY)

	MEAN	484	286	207	190	197	271	776	2512	3165	1434	795	509
MAX	2451	804	420	340	300	646	1999	4449	6240	3451	1745	2001	
(WY)	1912	1917	1926	1912	1928	1910	1895	1922	1921	1957	1957	1927	
MIN	134	114	105	89.8	111	153	317	747	475	239	190	135	
(WY)	1957	1957	1957	1977	1977	1965	1951	1977	1934	1934	1956	1956	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1890 - 1993
ANNUAL TOTAL	245601	328598	
ANNUAL MEAN	671	900	907
HIGHEST ANNUAL MEAN			1482
LOWEST ANNUAL MEAN			311
HIGHEST DAILY MEAN	3030	May 28	14000
LOWEST DAILY MEAN	110	Jan 19	74
ANNUAL SEVEN-DAY MINIMUM	120	Jan 14	76
INSTANTANEOUS PEAK FLOW			b ₁ 8000
INSTANTANEOUS PEAK STAGE			6.80
INSTANTANEOUS LOW FLOW			69
ANNUAL RUNOFF (AC-FT)	487100	651800	657400
10 PERCENT EXCEEDS	2000	3020	2460
50 PERCENT EXCEEDS	323	329	365
90 PERCENT EXCEEDS	140	150	165

a-Also occurred Jan 5.

b-From rating curve extended above 12900 ft³/s.

RIO GRANDE BASIN

08220000 RIO GRANDE NEAR DEL NORTE, CO--Continued
(Rio Grande National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
APR 13...	0900	--	94	8.0	0.0	563	10.3	96	38	12
MAY 18...	0830	3420	58	7.7	10.5	570	9.5	114	23	7.1
JUN 15...	0830	3600	42	8.0	10.5	572	8.8	105	17	5.4
JUL 20...	0800	1300	57	8.1	14.0	572	8.3	108	22	6.9
AUG 17...	0930	350	86	8.2	14.5	573	6.0	79	34	11
SEP 14...	0930	650	77	8.5	7.5	571	7.7	86	30	9.4

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- ^A BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- ^B BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- ^C LINTY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
APR 13...	1.9	4.4	19	0.3	1.7	27	0	22	7.4	1.3
MAY 18...	1.2	2.6	19	0.2	1.3	42	0	34	3.5	0.50
JUN 15...	0.85	1.9	18	0.2	1.1	--	--	--	2.9	0.40
JUL 20...	1.1	2.4	18	0.2	1.2	--	--	--	3.7	0.30
AUG 17...	1.6	3.6	18	0.3	1.7	42	0	34	6.0	0.60
SEP 14...	1.6	3.3	18	0.3	1.3	39	0	32	5.6	0.40

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
APR 13...	0.10	24	87	67	0.12	0.01	0.07	0.02	0.20	<0.20
MAY 18...	<0.10	19	57	56	0.08	<0.01	<0.05	0.02	0.40	0.20
JUN 15...	<0.10	16	41	40	0.06	<0.01	<0.05	0.04	<0.20	0.20
JUL 20...	<0.10	17	50	48	0.07	<0.01	<0.05	0.02	0.20	<0.20
AUG 17...	0.10	23	72	68	0.10	<0.01	<0.05	0.02	0.30	<0.20
SEP 14...	0.10	21	67	62	0.09	<0.01	<0.05	0.03	<0.20	<0.20

DATE	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, DIS- SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)
APR 13...	0.06	0.04	0.04	100	14	2.8	0.6	8	--
MAY 18...	0.08	0.04	0.04	210	9	4.8	3.5	--	--
JUN 15...	0.05	0.03	0.02	70	7	3.5	--	--	--
JUL 20...	0.03	0.02	0.02	78	10	2.4	0.4	14	49
AUG 17...	0.06	0.03	0.03	67	12	2.1	0.4	10	9.5
SEP 14...	0.04	0.02	0.04	87	10	2.2	0.3	7	12

A-Field dissolved bicarbonate, determined by incremental titration method.

B-Field dissolved carbonate, determined by incremental titration method.

C-Field total dissolved alkalinity, determined by incremental titration method.

08223000 RIO GRANDE AT ALAMOSA, CO

LOCATION.--Lat 37°28'53", long 105°52'46", in SE¹/₄NE¹/₄ sec.4, T.37 N., R.10 E., Alamosa County, Hydrologic Unit 13010002, on right bank 0.2 mi northwest of city limits of Alamosa and 9 mi upstream from Alamosa Creek.

DRAINAGE AREA.--1,710 mi², approximately.

PERIOD OF RECORD.--May 1912 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 928: Drainage area. WSP 1312: 1936(M). WSP 1732: 1951.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 7,532.66 ft above sea level. Prior to Apr. 7, 1915, nonrecording gages, and Apr. 7, 1915 to Nov. 5, 1935, water-stage recorder, at railroad and highway bridges in Alamosa 1.0 to 2.5 mi downstream at different datums. Nov. 6, 1935 to June 30, 1942, water-stage recorder at present site at datum 1.00 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 24 to Mar. 18, Mar. 25, May 5, 10-13, June 8-9, July 8-27, Aug. 29-30, and Sept. 13-14. Records good except for estimated daily discharges, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1911 with a stage of 0.2 ft lower than that of July 1, 1927, from floodmarks, probably exceeded that of July 1, 1927; and is probably the greatest since at least 1884, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	40	155	175	170	205	333	125	359	57	27	481
2	45	36	160	155	165	210	272	84	485	51	30	206
3	49	30	135	145	180	225	235	73	375	43	34	112
4	47	28	160	175	175	230	165	49	168	30	32	83
5	46	27	190	175	170	225	161	45	73	34	39	68
6	42	28	180	160	165	230	185	52	89	40	34	94
7	46	44	155	140	165	245	147	48	113	27	30	191
8	51	74	130	160	165	270	88	41	130	24	30	174
9	51	125	135	165	165	270	75	42	133	22	33	114
10	53	155	150	180	175	270	68	35	88	38	39	95
11	49	146	165	185	190	275	73	36	164	30	41	111
12	52	160	160	190	180	275	75	46	190	18	45	150
13	49	142	165	180	180	270	83	48	234	22	38	120
14	43	122	160	155	175	275	117	66	659	42	36	106
15	40	138	140	150	175	285	76	73	569	22	45	107
16	39	142	160	165	170	310	62	32	177	38	72	93
17	41	139	165	170	175	345	60	85	349	38	51	80
18	44	138	160	170	180	345	56	151	494	30	42	81
19	51	138	160	180	180	318	58	130	230	17	46	73
20	63	128	180	175	170	347	53	201	126	17	49	62
21	65	120	155	185	180	357	44	225	152	23	110	55
22	69	122	150	180	195	370	47	387	258	22	156	55
23	64	110	140	170	185	378	67	514	352	18	186	63
24	53	135	150	165	180	381	95	191	304	16	205	92
25	56	150	150	160	180	400	93	53	122	22	127	95
26	56	135	155	155	190	413	81	285	107	19	88	78
27	54	120	145	160	195	457	58	629	158	19	79	68
28	54	125	140	160	190	502	71	871	114	20	118	64
29	51	140	125	165	---	462	104	934	83	24	514	56
30	43	140	155	165	---	444	143	535	48	29	1180	52
31	45	---	170	165	---	380	---	319	---	24	1080	---
TOTAL	1553	3277	4800	5180	4965	9969	3245	6405	6903	876	4636	3279
MEAN	50.1	109	155	167	177	322	108	207	230	28.3	150	109
MAX	69	160	190	190	195	502	333	934	659	57	1180	481
MIN	39	27	125	140	165	205	44	32	48	16	27	52
AC-FT	3080	6500	9520	10270	9850	19770	6440	12700	13690	1740	9200	6500

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1993, BY WATER YEAR (WY)

	MEAN	154	218	208	186	211	244	227	438	768	233	113	121
MAX	1207	908	483	335	360	522	1198	3027	5598	1514	973	1457	
(WY)	1917	1917	1987	1922	1986	1987	1987	1987	1921	1917	1916	1927	
MIN	7.26	14.7	23.5	24.8	24.1	13.0	11.9	27.4	36.7	18.6	6.58	9.57	
(WY)	1957	1935	1957	1957	1957	1957	1933	1931	1977	1977	1913	1959	

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1912 - 1993

ANNUAL TOTAL	50932	55088	
ANNUAL MEAN	139	151	
HIGHEST ANNUAL MEAN			257
LOWEST ANNUAL MEAN			873
HIGHEST DAILY MEAN	760	Apr 14	1180
LOWEST DAILY MEAN	16	May 14	16
ANNUAL SEVEN-DAY MINIMUM	21	May 13	19
INSTANTANEOUS PEAK FLOW			1310
INSTANTANEOUS PEAK STAGE			5.14
ANNUAL RUNOFF (AC-FT)	101000	109300	186100
10 PERCENT EXCEEDS	312	306	460
50 PERCENT EXCEEDS	110	133	150
90 PERCENT EXCEEDS	39	35	21

a-Site and datum then in use.

b-Maximum gage height, 10.62 ft, Jun 20, 1949.

CLOSED BASIN IN SAN LUIS VALLEY, CO

08227000 SAGUACHE CREEK NEAR SAGUACHE, CO

LOCATION.--Lat 38°09'48", long 106°17'24", in SE 1/4 SE 1/4 sec. 10, T. 45 N., R. 6 E., Saguache County, Hydrologic Unit 13010004, on left bank 0.2 mi downstream from Middle Creek and 10 mi northwest of Saguache.

DRAINAGE AREA.--595 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1910 to September 1912, June 1914 to current year. Monthly discharge only for some periods, published in WSP 1312

REVISED RECORDS.--WSP 1242: 1948-49. WSP 1312: 1912, 1934(M), 1942(M). WSP 1923: 1951.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is about 8,030 ft above sea level, from topographic map. Prior to Apr. 9, 1934, at sites 0.8 mi downstream at different datums. Apr. 10, 1934 to Nov. 20, 1966, at present site at datum 1.00 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 4-18, Nov. 23 to Feb. 10. Feb. 13, and Feb. 17 to Mar. 11. Records good except for estimated daily discharges, which are fair. Natural flow of stream affected by transmountain diversions from Colorado River basin to drainage area above station through Tarbell ditch (see elsewhere in this report), and diversions above station for irrigation.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	38	25	27	29	30	42	89	322	101	52	102
2	29	36	25	28	30	31	48	83	331	97	46	92
3	30	34	28	30	31	28	44	76	326	94	44	80
4	32	28	28	22	30	29	44	76	309	93	43	69
5	35	31	30	21	24	30	48	89	264	92	47	63
6	35	33	22	27	22	31	48	87	233	80	49	62
7	36	33	19	28	23	28	40	82	222	74	46	68
8	36	33	19	35	25	30	36	83	209	74	56	80
9	35	34	20	35	32	30	40	77	197	73	63	71
10	37	34	25	30	31	31	46	72	188	75	64	63
11	38	34	27	33	30	31	48	74	163	68	60	65
12	37	31	27	32	29	25	46	82	160	73	55	57
13	38	32	30	28	29	25	50	98	170	89	55	58
14	37	33	25	32	29	19	46	112	182	87	79	63
15	38	34	22	32	29	30	42	119	184	80	70	57
16	38	35	25	29	28	34	43	154	188	74	54	53
17	40	38	20	29	27	39	45	208	200	74	47	51
18	40	39	21	32	28	39	48	258	200	68	44	49
19	40	38	24	35	29	45	46	238	170	61	44	49
20	40	39	25	35	33	43	39	222	153	62	62	49
21	40	35	22	32	30	44	40	250	166	68	60	45
22	40	26	20	31	28	45	48	289	175	60	68	43
23	40	26	23	31	27	45	56	276	155	56	61	42
24	37	25	23	29	26	47	61	262	138	51	48	40
25	37	25	23	29	26	52	58	270	128	51	43	39
26	40	24	18	27	25	60	51	301	125	50	42	39
27	39	23	19	27	27	60	54	325	118	46	51	39
28	37	24	19	25	29	48	59	372	117	50	88	38
29	37	24	30	26	---	46	68	377	113	50	113	38
30	39	26	30	30	---	46	84	330	107	55	125	38
31	40	---	29	29	---	41	---	319	---	58	108	---
TOTAL	1148	945	743	916	786	1162	1468	5750	5713	2184	1887	1702
MEAN	37.0	31.5	24.0	29.5	28.1	37.5	48.9	185	190	70.5	60.9	56.7
MAX	40	39	30	35	33	60	84	377	331	101	125	102
MIN	29	23	18	21	22	19	36	72	107	46	42	38
AC-FT	2280	1870	1470	1820	1560	2300	2910	11410	11330	4330	3740	3380

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 1993, BY WATER YEAR (WY)

	MEAN	44.4	35.8	25.7	23.1	26.6	38.5	69.8	159	177	94.6	73.7	51.2
MAX	108	60.1	40.0	40.3	41.4	70.0	257	437	474	299	198	194	
(WY)	1912	1930	1928	1986	1986	1924	1924	1924	1957	1957	1929	1929	
MIN	20.6	16.4	13.9	12.2	13.4	21.5	34.2	34.8	19.4	20.5	23.3	15.0	
(WY)	1979	1978	1978	1978	1966	1964	1978	1981	1963	1940	1940	1956	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1910 - 1993

ANNUAL TOTAL	18418	24404	
ANNUAL MEAN	50.3	66.9	68.2
HIGHEST ANNUAL MEAN			122
LOWEST ANNUAL MEAN			28.0
HIGHEST DAILY MEAN	148	377	678
LOWEST DAILY MEAN	a 18	18	7.0
ANNUAL SEVEN-DAY MINIMUM	20	21	8.3
INSTANTANEOUS PEAK FLOW		397	b 790
INSTANTANEOUS PEAK STAGE		3.41	c 3.85
ANNUAL RUNOFF (AC-FT)	36530	48410	49400
10 PERCENT EXCEEDS	91	157	150
50 PERCENT EXCEEDS	40	42	41
90 PERCENT EXCEEDS	23	25	21

a-Also occurred Dec 26.

b-Present datum, from rating curve extended above 83 ft³/s.

c-Maximum gage height, 3.94 ft, May 20, 1970.

08227000 SAGUACHE CREEK NEAR SAGUACHE, CO--Continued
(Rio Grande National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
APR 13...	1130	49	148	8.3	6.0	563	9.6	104	60	19
MAY 18...	1330	280	158	8.0	19.5	569	6.9	101	56	17
JUN 15...	1215	195	114	8.1	17.0	570	7.1	99	54	17
JUL 20...	1115	203	116	8.4	17.0	570	7.6	106	47	15
AUG 17...	1330	46	118	8.5	21.0	570	7.0	106	47	15
SEP 14...	1245	65	110	8.7	11.0	570	8.6	105	47	15

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- ^A BONATE WATER DIS IT FIELD (MG/L AS HCO3)	CAR- ^B BONATE WATER DIS IT FIELD (MG/L AS CO3)	ALKA- ^C LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
APR 13...	3.1	7.0	19	0.4	2.4	--	--	--	5.8	2.0
MAY 18...	3.2	9.2	25	0.5	3.5	--	--	--	6.9	2.2
JUN 15...	2.7	5.2	17	0.3	1.7	--	--	--	2.7	0.60
JUL 20...	2.3	4.9	18	0.3	1.6	78	0	64	3.1	0.70
AUG 17...	2.3	4.9	18	0.3	1.9	70	0	58	3.2	0.90
SEP 14...	2.3	4.7	17	0.3	1.7	61	1	52	3.3	0.70

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
APR 13...	0.20	30	108	112	0.15	<0.01	<0.05	0.01	0.30	<0.20
MAY 18...	0.20	28	126	112	0.17	<0.01	<0.05	0.04	0.70	0.50
JUN 15...	0.20	27	90	94	0.12	--	--	--	--	--
JUL 20...	0.10	28	93	94	0.13	<0.01	<0.05	0.03	0.30	<0.20
AUG 17...	0.20	28	69	91	0.09	<0.01	<0.05	0.02	0.20	<0.20
SEP 14...	0.20	29	92	88	0.13	<0.01	<0.05	0.02	<0.20	<0.20

DATE	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
APR 13...	0.09	0.06	0.05	64	18	3.1	1.5	38	5.0
MAY 18...	0.12	0.06	0.06	320	53	13	2.1	--	--
JUN 15...	--	--	--	130	16	5.7	1.1	--	--
JUL 20...	0.10	0.07	0.07	100	11	2.8	0.5	27	15
AUG 17...	0.11	0.08	0.07	140	8	2.5	0.6	24	2.9
SEP 14...	0.08	0.07	0.05	160	8	2.2	1.5	27	4.7

A-Field dissolved bicarbonate, determined by incremental titration method.

B-Field dissolved carbonate, determined by incremental titration method.

C-Field total dissolved alkalinity, determined by incremental titration method.

08240000 RIO GRANDE ABOVE MOUTH OF TRINCHERA CREEK, NEAR LASAUSES, CO

LOCATION.--Lat 37°18'58", long 105°44'32", in sec.35, T.36 N., R.11 E., Conejos County, Hydrologic Unit 13010002, on right bank 0.2 mi upstream from Trinchera Creek, 3.2 mi north of Lasasaues, and 13 mi southeast of Alamosa.

DRAINAGE AREA.--5,740 mi², approximately, includes 2,940 mi² in closed basin in northern part of San Luis Valley, CO.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1936 to current year.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,500 ft above sea level, estimated from nearby level lines.

REMARKS.--Estimated daily discharges: Nov. 27 to Mar. 12. Records good except for estimated daily discharges, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, ground-water withdrawals and diversions for irrigation, and return flow from irrigated areas.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	109	185	210	230	295	508	368	830	269	78	699
2	65	103	205	200	225	300	472	357	844	249	73	349
3	64	107	210	195	235	300	448	329	867	215	76	218
4	64	111	145	195	245	300	411	297	719	184	78	167
5	63	107	190	220	245	320	372	270	570	177	77	143
6	72	113	230	215	250	330	328	275	492	159	79	137
7	70	112	225	210	245	350	309	280	469	142	72	183
8	71	124	205	205	255	370	284	262	401	142	73	223
9	73	148	175	215	250	395	255	262	369	130	74	187
10	66	182	200	215	250	410	229	258	357	125	82	152
11	64	201	225	225	260	410	218	252	397	121	85	140
12	63	196	215	240	260	415	213	233	408	121	83	159
13	67	199	220	240	255	407	215	223	417	125	81	161
14	75	199	230	230	265	398	225	238	506	131	79	152
15	66	183	225	215	265	435	215	263	702	128	76	142
16	64	191	205	205	265	459	196	294	563	120	78	143
17	63	189	215	210	265	486	189	330	427	114	87	131
18	63	188	225	220	275	493	177	422	598	115	76	125
19	66	202	215	230	280	520	174	427	520	110	70	123
20	74	204	225	240	265	502	175	397	394	105	73	117
21	81	195	230	240	260	510	167	488	379	105	74	111
22	86	189	210	240	265	513	161	522	453	105	114	111
23	90	186	200	255	265	524	158	746	526	104	137	118
24	89	167	200	245	250	527	185	790	559	101	156	120
25	86	169	200	240	260	533	201	551	466	98	147	125
26	92	171	190	235	270	547	208	494	386	94	126	123
27	95	160	200	225	275	576	201	766	378	94	120	109
28	98	155	195	225	285	617	206	1060	390	87	135	114
29	102	160	180	220	---	624	245	1310	337	84	171	103
30	104	185	170	230	---	594	309	1320	320	88	435	98
31	109	---	200	230	---	551	---	959	---	83	793	---
TOTAL	2372	4905	6345	6920	7215	14011	7654	15043	15044	4025	3958	4983
MEAN	76.5	163	205	223	258	452	255	485	501	130	128	166
MAX	109	204	230	255	285	624	508	1320	867	269	793	699
MIN	63	103	145	195	225	295	158	223	320	83	70	98
AC-FT	4700	9730	12590	13730	14310	27790	15180	29840	29840	7980	7850	9880

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1993, BY WATER YEAR (WY)

MEAN	135	233	220	195	228	306	299	466	667	240	106	96.1
MAX	1113	1017	687	351	421	697	1497	3407	2746	1461	561	566
(WY)	1942	1942	1942	1987	1986	1987	1987	1987	1948	1986	1957	1970
MIN	7.45	30.1	36.4	36.5	62.3	38.2	28.0	7.39	4.41	1.42	1.68	.85
(WY)	1957	1964	1957	1957	1957	1957	1957	1963	1964	1940	1940	1956

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1936 - 1993
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ANNUAL TOTAL	81003		92475				
ANNUAL MEAN	221		253			267	
HIGHEST ANNUAL MEAN						950	1987
LOWEST ANNUAL MEAN						49.0	1964
HIGHEST DAILY MEAN	910	Apr 14	1320	May 30		5380	Jun 22 1949
LOWEST DAILY MEAN	39	Sep 17	^a 63	Oct 5		.40	Jul 4 1940
ANNUAL SEVEN-DAY MINIMUM	49	Sep 13	66	Oct 12		.69	Sep 11 1956
INSTANTANEOUS PEAK FLOW			1410	May 30		^b 5470	Jun 21 1949
INSTANTANEOUS PEAK STAGE			5.79	May 30		9.50	Jun 21 1949
ANNUAL RUNOFF (AC-FT)	160700		183400			193600	
10 PERCENT EXCEEDS	419		504			501	
50 PERCENT EXCEEDS	190		210			165	
90 PERCENT EXCEEDS	72		80			24	

a-Also occurred Oct 12, 17 and 18.

b-From rating curve extended above 3600 ft³/s.

08240000 RIO GRANDE ABOVE MOUTH OF TRINCHERA CREEK NEAR LASAUSES, CO--Continued
(Rio Grande National Water-Quality Assessment Program Station)

WATER-QUALITY RECORDS

PERIOD OF RECORDS.--May to September 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CLIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
MAY										
19...	1230	410	512	8.3	22.0	580	7.1	108	130	39
JUN										
16...	1115	549	390	8.3	17.5	580	6.6	91	120	37
JUL										
21...	1200	106	597	8.6	21.0	580	7.2	107	160	49
AUG										
18...	1115	78	434	8.6	19.5	583	7.0	100	140	41
SEP										
15...	1100	142	455	8.5	13.5	583	8.6	109	150	44

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR-A BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR-B BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA-C LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
MAY									
19...	9.1	48	42	2	7.4	178	2	150	85
JUN									
16...	7.9	35	37	1	5.3	146	0	120	79
JUL									
21...	10	60	43	2	9.2	195	2	164	110
AUG									
18...	8.7	35	34	1	6.0	149	0	123	79
SEP									
15...	8.7	37	35	1	5.3	151	1	126	86

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
MAY										
19...	0.50	24	295	314	0.40	<0.01	0.06	0.04	0.60	0.30
JUN										
16...	0.40	22	251	260	0.34	<0.01	0.05	0.03	0.40	0.40
JUL										
21...	0.70	25	385	398	0.52	<0.01	<0.05	0.03	0.60	0.40
AUG										
18...	0.50	23	265	275	0.36	--	--	--	--	--
SEP										
15...	0.40	26	312	296	0.42	<0.01	0.22	0.03	0.30	0.30

DATE	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
MAY									
19...	0.14	0.09	0.08	44	110	9.0	2.3	--	--
JUN									
16...	0.09	0.07	0.05	31	41	7.2	0.7	--	--
JUL									
21...	0.12	0.07	0.07	10	43	5.5	1.5	44	13
AUG									
18...	--	--	--	10	20	4.0	0.7	43	9.1
SEP									
15...	0.08	0.06	0.06	21	15	3.9	0.7	76	29

A-Field dissolved bicarbonate, determined by incremental titration method.

B-Field dissolved carbonate, determined by incremental titration method.

C-Field total dissolved alkalinity, determined by incremental titration method.

08244500 PLATORO RESERVOIR AT PLATORO, CO

LOCATION.--Lat 37°21'07", long 106°32'38", Conejos County, Hydrologic Unit 13010005, on right bank in valvehouse, 400 ft downstream from Platoro Dam on Conejos River and 0.7 mi west of Platoro.

DRAINAGE AREA.--40 mi², approximately.

PERIOD OF RECORD.--November 1951 to current year.

REVISED RECORDS.--WDR CO-85-1: 1984.

GAGE.--Nonrecording gage. Datum of gage is 9,911.5 ft above sea level, (levels by U.S. Bureau of Reclamation); gage readings have been reduced to elevations above NGVD. Prior to June 9, 1955, nonrecording gage at present site and datum. June 9, 1955 to Sept. 30, 1959, water-stage recorder in gate chamber at dam for elevations above 9,921.0 ft, at same datum.

REMARKS.--Reservoir is formed by an earth and rockfill dam and dikes. Dam completed Dec. 9, 1951; storage began Nov. 7, 1951. Capacity of reservoir (based on revised capacity table put in use Jan. 1, 1975), 59,570 acre-ft, between elevations 9,911.5 ft, sill of trashrack at outlet, and 10,034.0 ft, crest of spillway. No dead storage. Reservoir is used for irrigation and flood control. Figures given are usable contents.

COOPERATION.--Records provided by State of Colorado, Division of Water Resources.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 61,420 acre-ft, June 9, 11, 1958, elevation, 10,035.5 ft; no contents for long periods in 1952-56.

EXTREMES FOR CURRENT YEAR.--Maximum contents, about 53,610 acre-ft, June 24, elevation, 10,027.61 ft; minimum contents, about 24,130 acre-ft, Nov. 2, elevation, 9,989.00 ft.

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Date	Elevation	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.	9,998.5	29,900	-
Oct. 31.	9,989.9	24,170	-5,730
Nov. 30.	9,990.2	24,390	+220
Dec. 31.	9,990.9	24,800	+410
CAL YR 1992.			+5,800
Jan. 31.	9,991.3	25,100	+300
Feb. 28.	9,991.8	25,390	+290
Mar. 31.	9,993.0	26,190	+800
Apr. 30.	9,989.7	24,070	-2,120
May 31.	10,005.9	35,280	+11,210
June 30.	10,027.9	53,890	+18,610
July 31.	10,021.7	48,250	-5,640
Aug. 31.	10,019.4	46,250	-2,000
Sept. 30.	10,015.6	43,000	-3,250
WTR YR 1993.			+13,100

08245000 CONEJOS RIVER BELOW PLATORO RESERVOIR, CO

LOCATION.--Lat 37°21'18", long 106°32'37", Conejos County, Hydrologic Unit 13010005, on left bank 1,100 ft downstream from valvehouse for Platoro Reservoir and 0.7 mi northwest of Platoro.

DRAINAGE AREA.--40 mi², approximately.

PERIOD OF RECORD.--May 1952 to current year.

GAGE.--Water-stage recorder with satellite telemetry, and concrete control. Datum of gage is 9,866.60 ft above sea level, (levels by U.S. Bureau of Reclamation).

REMARKS.--Estimated daily discharges: Nov. 5 to Apr. 19. Records good except for estimated daily discharges, which are fair. No diversion upstream from station. Flow completely regulated by Platoro Reservoir (station 08244500).

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, is the greatest since at least 1854, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	37	5.3	5.4	5.5	5.6	5.8	297	44	792	225	575
2	72	15	5.3	5.4	5.5	5.6	5.8	294	29	744	237	625
3	78	6.9	5.3	5.4	5.5	5.6	5.8	295	137	656	227	484
4	78	6.9	5.3	5.4	5.5	5.6	5.8	192	311	524	191	345
5	78	6.2	5.3	5.4	5.5	5.6	5.8	70	401	385	170	190
6	78	5.3	5.3	5.4	5.5	5.7	5.8	69	402	323	144	96
7	78	5.3	5.3	5.4	5.5	5.7	5.8	92	307	336	132	95
8	60	5.3	5.3	5.4	5.5	5.7	5.8	104	212	364	132	87
9	48	5.3	5.3	5.4	5.5	5.7	5.8	103	212	329	146	81
10	48	5.3	5.3	5.4	5.5	5.7	5.8	79	212	323	175	67
11	48	5.3	5.3	5.4	5.5	5.7	5.8	66	212	315	188	52
12	48	5.3	5.3	5.4	5.6	5.7	5.8	67	212	285	148	52
13	61	5.3	5.3	5.4	5.6	5.7	5.8	67	213	273	110	67
14	89	5.3	5.3	5.4	5.6	5.7	5.8	135	214	306	105	81
15	85	5.3	5.3	5.4	5.6	5.7	5.8	186	212	317	105	72
16	86	5.3	5.3	5.4	5.6	5.7	5.8	185	106	340	119	67
17	97	5.3	5.3	5.4	5.6	5.7	5.8	186	40	356	136	44
18	97	5.3	5.3	5.4	5.6	5.7	5.8	188	103	355	136	20
19	116	5.3	5.3	5.4	5.6	5.7	30	188	205	327	112	20
20	136	5.3	5.3	5.4	5.6	5.7	69	189	205	287	86	31
21	141	5.3	5.3	5.5	5.6	5.7	70	191	246	270	80	42
22	147	5.3	5.3	5.5	5.6	5.7	100	192	292	243	80	29
23	141	5.3	5.3	5.5	5.6	5.7	158	193	292	234	85	27
24	127	5.3	5.3	5.5	5.6	5.7	156	102	445	220	97	30
25	127	5.3	5.3	5.5	5.6	5.7	153	40	751	219	103	30
26	146	5.3	5.3	5.5	5.6	5.7	155	41	764	222	99	30
27	153	5.3	5.3	5.5	5.6	5.7	159	42	749	246	90	30
28	148	5.3	5.3	5.5	5.6	5.8	174	41	730	238	84	30
29	153	5.3	5.3	5.5	---	5.8	260	41	712	227	84	34
30	125	5.3	5.3	5.5	---	5.8	299	42	772	226	231	43
31	81	---	5.3	5.5	---	5.8	---	44	---	226	453	---
TOTAL	3038	204.5	164.3	168.5	155.7	176.6	1887.4	4021	9742	10508	4510	3476
MEAN	98.0	6.82	5.30	5.44	5.56	5.70	62.9	130	325	339	145	116
MAX	153	37	5.3	5.5	5.6	5.8	299	297	772	792	453	625
MIN	48	5.3	5.3	5.4	5.5	5.6	5.8	40	29	219	80	20
AC-FT	6030	406	326	334	309	350	3740	7980	19320	20840	8950	6890

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1993, BY WATER YEAR (WY)

	37.3	70.4	11.2	11.7	12.6	10.9	49.7	241	341	212	85.7	41.9
MEAN	37.3	70.4	11.2	11.7	12.6	10.9	49.7	241	341	212	85.7	41.9
MAX	158	405	50.0	50.0	102	27.5	204	492	609	610	429	164
(WY)	1958	1966	1986	1986	1983	1986	1980	1974	1982	1952	1952	1982
MIN	1.92	2.00	2.00	3.20	3.00	3.00	3.00	16.9	87.0	24.9	9.19	3.34
(WY)	1957	1957	1957	1991	1957	1957	1957	1958	1977	1972	1972	1956

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1952 - 1993

ANNUAL TOTAL	26772.7	38052.0	92.7
ANNUAL MEAN	73.1	104	137
HIGHEST ANNUAL MEAN			1986
LOWEST ANNUAL MEAN			1977
HIGHEST DAILY MEAN	410	792	1150
LOWEST DAILY MEAN	3.8	5.3	0.00
ANNUAL SEVEN-DAY MINIMUM	3.9	5.3	0.16
INSTANTANEOUS PEAK FLOW		864	1160
INSTANTANEOUS PEAK STAGE		3.36	4.02
ANNUAL RUNOFF (AC-FT)	53100	75480	67130
10 PERCENT EXCEEDS	205	294	326
50 PERCENT EXCEEDS	11	40	17
90 PERCENT EXCEEDS	4.3	5.3	5.8

a-Also occurred Jan 2.

b-Also occurred Nov 7 to Dec 31.

c-Also occurred Oct 17-20, 1955.

d-Maximum gage height, 4.29 ft, Jun 15, 1958.

08246500 CONEJOS RIVER NEAR MOGOTE, CO

LOCATION.--Lat 37°03'14", long 106°11'13", in SE¹/4SE¹/4 sec.34, T.33 N., R.7 E., Conejos County, Hydrologic Unit 13010005, on left bank 75 ft downstream from bridge on State Highway 174, 0.4 mi downstream from Fox Creek, 5.3 mi west of Mogote, and 10 mi west of Antonito.

DRAINAGE AREA.--282 mi².

PERIOD OF RECORD.--April 1903 to October 1905, October 1911 to current year. Monthly discharge only for some periods, published in WSP 1312. Records for March 1900 at site 5.5 mi upstream and May 1905 to September 1911 (some missing periods most years) at site 3.2 mi upstream not equivalent to present site due to inflow.

REVISED RECORDS.--WSP 898: 1911(M). WSP 1312: 1903-5, 1913. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder with satellite telemetry. Datum of gage is 8,273.69 ft above sea level, Colorado State Highway datum. Apr. 17, 1903 to Oct. 31, 1905, nonrecording gage 400 ft downstream, at different datum. Oct. 5, 1911 to early 1915, nonrecording gage, and from early 1915 to Oct. 1, 1988, water-stage recorder at site 100 ft upstream, at datum 2.15 ft, lower. Since Oct. 1, 1988, at present site and datum.

REMARKS.--Estimated daily discharges: Nov. 10, 23, 25, Nov. 27 to Mar. 13, Mar. 17-19, 22, May 14, June 7, and July 6-7. Records good except for estimated daily discharges, which are fair. Diversions for irrigation of about 500 acres of hay meadows upstream from station. Some regulation by Platoro Reservoir (station 08244500).

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1854, that of Oct. 5, 1911, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	134	50	48	56	52	95	795	1830	1600	368	816
2	120	102	52	54	54	50	101	675	1840	1440	370	897
3	125	80	56	43	54	48	103	639	1760	1370	369	831
4	128	58	52	41	48	48	101	693	1630	1230	309	551
5	127	58	52	43	42	50	118	599	1650	968	290	500
6	128	56	38	47	44	54	127	491	1630	765	273	284
7	127	57	38	54	46	56	116	469	1530	730	243	255
8	124	60	43	58	49	56	107	486	1140	770	240	267
9	109	59	45	50	52	56	108	450	997	718	241	222
10	99	59	48	54	50	58	127	451	924	663	305	211
11	98	59	47	52	44	56	158	516	967	638	286	184
12	97	49	47	46	44	54	182	655	1160	628	270	166
13	96	51	38	47	44	56	179	784	1420	582	220	167
14	111	57	37	50	42	60	175	900	1620	585	271	208
15	134	58	39	52	42	67	160	1090	1750	591	241	201
16	127	55	39	50	46	65	154	1350	1890	588	209	183
17	133	59	39	54	48	70	163	1340	1650	595	215	171
18	139	53	52	52	46	78	193	1260	1410	574	214	144
19	140	51	40	54	58	89	183	1300	1390	555	216	127
20	163	56	39	50	54	100	213	1290	1400	481	222	119
21	175	52	37	52	50	114	265	1450	1360	448	199	119
22	181	41	40	50	52	112	318	1640	1460	418	220	122
23	188	52	42	50	52	115	455	1570	1460	378	191	111
24	173	41	41	46	52	124	511	1550	1430	367	179	101
25	169	42	41	43	54	135	423	1440	1650	350	180	102
26	169	45	39	50	52	148	417	1730	1680	343	175	102
27	190	47	37	50	52	143	495	2070	1670	344	204	98
28	185	48	44	52	52	124	583	1960	1640	360	817	95
29	193	52	58	52	---	117	700	1720	1640	340	778	93
30	193	43	56	52	---	102	827	1720	1720	377	507	94
31	173	---	48	52	---	96	---	1740	---	375	746	---
TOTAL	4434	1734	1374	1548	1379	2553	7857	34823	45298	20171	9568	7541
MEAN	143	57.8	44.3	49.9	49.2	82.4	262	1123	1510	651	309	251
MAX	193	134	58	58	58	148	827	2070	1890	1600	817	897
MIN	96	41	37	41	42	48	95	450	924	340	175	93
AC-FT	8790	3440	2730	3070	2740	5060	15580	69070	89850	40010	18980	14960

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1993, BY WATER YEAR (WY)

	MEAN	116	96.7	51.6	47.9	51.6	78.8	321	1110	1305	476	205	129
MAX	515	467	116	116	159	153	800	2053	3163	1502	626	484	
(WY)	1905	1966	1987	1986	1983	1989	1936	1937	1920	1957	1952	1927	
MIN	34.7	29.9	26.9	22.7	30.0	41.0	138	358	118	69.2	44.2	26.8	
(WY)	1957	1931	1977	1918	1904	1904	1970	1977	1934	1904	1972	1956	

SUMMARY STATISTICS

FOR 1992 CALENDAR YEAR

FOR 1993 WATER YEAR

WATER YEARS 1903 - 1993

ANNUAL TOTAL	90430	138280	
ANNUAL MEAN	247	379	331
HIGHEST ANNUAL MEAN			592
LOWEST ANNUAL MEAN			109
HIGHEST DAILY MEAN	1170	2070	4490
LOWEST DAILY MEAN	^a 37	^a 37	10
ANNUAL SEVEN-DAY MINIMUM	40	40	17
INSTANTANEOUS PEAK FLOW		2230	^b 9000
INSTANTANEOUS PEAK STAGE		5.51	^c 8.50
ANNUAL RUNOFF (AC-FT)	179400	274300	239600
10 PERCENT EXCEEDS	670	1390	1050
50 PERCENT EXCEEDS	131	128	95
90 PERCENT EXCEEDS	45	46	42

a-Also occurred Dec 21, 27.

b-Present site and datum, from rating curve extended above 3100 ft³/s.

c-From floodmarks.

08247500 SAN ANTONIO RIVER AT ORTIZ, CO

LOCATION.--Lat 36°59'35", long 106°02'17", in NE¹/4SE¹/4 sec.24, T.32 N., R.8 E., Rio Arriba County, New Mexico, Hydrologic Unit 13010005, on left bank 800 ft south of Colorado-New Mexico State line, 0.4 mi southeast of Ortiz, and 0.4 mi upstream from Los Pinos River.

DRAINAGE AREA.--110 mi², approximately.

PERIOD OF RECORD.--April 1919 to October 1920, October 1924 to current year (no winter records prior to 1941). Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1732: 1951. WSP 1923: 1927 (monthly runoff).

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 7,970 ft above sea level, from topographic map. Prior to Apr. 7, 1926, nonrecording gage at various locations near present site, at different datums. Apr. 7, 1926 to June 24, 1954, water-stage recorder at site 200 ft downstream, at present datum.

REMARKS.--Estimated daily discharges: Nov. 4-7, Nov. 13 to Mar. 31, and June 16. Records good except for estimated daily discharges, which are fair. A few small diversions upstream from station for irrigation.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, is the greatest since at least 1854, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.82	5.8	2.1	4.2	5.6	4.0	23	362	142	3.8	.00	5.4
2	1.1	4.6	2.5	4.8	5.2	3.9	21	212	123	3.2	.00	4.2
3	.97	3.2	3.6	3.5	5.2	3.8	21	208	109	2.8	.00	2.6
4	.86	2.2	3.0	3.2	4.4	3.7	18	318	90	2.4	.00	1.7
5	.91	1.8	3.0	3.4	3.6	4.8	22	391	76	1.9	.00	1.3
6	.91	1.8	2.0	4.1	4.0	5.6	28	280	68	2.1	.00	1.1
7	1.0	2.5	2.0	5.2	4.2	6.2	26	251	68	1.2	.00	.95
8	1.0	3.2	2.8	5.6	4.6	6.8	25	241	63	.53	.00	.89
9	.93	3.6	3.0	4.6	4.8	6.8	24	175	51	.52	.00	.57
10	.98	3.6	3.6	5.2	4.6	7.6	35	154	49	.37	.00	.44
11	1.4	3.9	3.4	4.8	4.0	7.4	65	231	41	.21	.00	.38
12	1.4	2.8	3.4	4.1	4.0	7.2	90	337	37	.20	.00	.30
13	1.4	2.5	2.5	4.3	3.8	7.0	81	453	33	.19	.00	.15
14	1.6	2.8	2.5	4.8	3.0	7.8	67	521	30	.16	.00	.32
15	1.6	3.0	2.7	5.0	3.0	9.2	55	517	28	1.5	.00	1.7
16	1.6	3.6	2.7	4.8	3.4	9.0	51	597	27	1.1	.36	2.2
17	1.6	4.3	2.7	5.2	3.6	8.8	63	618	25	.82	.93	1.6
18	1.8	3.5	4.0	5.0	3.2	11	96	548	25	.55	1.3	1.2
19	1.0	3.3	3.0	5.2	4.4	11	86	515	22	.40	1.4	.96
20	1.0	3.3	2.8	4.8	4.2	11	76	437	19	.30	.73	.80
21	1.2	2.8	2.6	5.0	4.0	12	93	460	20	.07	.47	.82
22	1.6	1.8	3.0	4.8	4.2	11	175	498	20	.00	1.6	.66
23	1.8	2.2	3.2	4.8	4.0	13	281	358	15	.00	1.2	.81
24	2.2	1.5	3.1	4.5	4.2	15	302	336	13	.00	.57	.72
25	2.0	1.5	3.1	4.2	4.4	17	181	306	11	.00	.48	.92
26	2.0	1.7	2.9	5.0	4.0	20	225	331	9.8	.00	.32	.86
27	2.0	1.8	2.7	5.0	4.0	21	330	319	7.5	.00	.30	.68
28	2.0	1.8	3.8	5.2	4.0	19	370	270	6.2	.00	8.5	1.0
29	2.2	2.0	5.6	5.2	---	18	417	225	5.8	.00	14	1.1
30	4.0	1.6	5.2	5.2	---	18	428	182	4.7	.00	8.2	1.3
31	4.3	---	4.2	5.2	---	19	---	156	---	.00	6.5	---
TOTAL	49.18	84.0	96.7	145.9	115.6	325.6	3775	10807	1239.0	24.32	46.86	37.63
MEAN	1.59	2.80	3.12	4.71	4.13	10.5	126	349	41.3	.78	1.51	1.25
MAX	4.3	5.8	5.6	5.6	5.6	21	428	618	142	3.8	14	5.4
MIN	.82	1.5	2.0	3.2	3.0	3.7	18	154	4.7	.00	.00	.15
AC-FT	98	167	192	289	229	646	7490	21440	2460	48	93	75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1993, BY WATER YEAR (WY)

	MEAN	2.90	3.83	2.66	2.29	3.57	14.9	106	148	16.7	1.98	3.01	1.25
MAX	12.0	13.8	8.12	6.00	13.0	63.5	302	508	108	12.0	17.7	4.42	
(WY)	1987	1987	1967	1965	1962	1960	1962	1941	1957	1957	1957	1986	
MIN	.000	1.04	.48	.000	.25	2.50	22.2	4.05	.027	.000	.000	.000	
(WY)	1952	1956	1977	1977	1990	1948	1972	1977	1977	1940	1951	1951	

SUMMARY STATISTICS	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1940 - 1993
ANNUAL TOTAL	5498.77	16746.79	
ANNUAL MEAN	15.0	45.9	25.9
HIGHEST ANNUAL MEAN			61.8 1952
LOWEST ANNUAL MEAN			3.35 1977
HIGHEST DAILY MEAN	198 Apr 29	618 May 17	1050 May 13 1941
LOWEST DAILY MEAN	a .00 Jul 6	b .00 Jul 22	c .00 Jun 24 1940
ANNUAL SEVEN-DAY MINIMUM	.00 Jul 6	.00 Jul 22	d .00 Jun 24 1940
INSTANTANEOUS PEAK FLOW		788 May 16	d 1750 Apr 15 1937
INSTANTANEOUS PEAK STAGE		4.68 May 16	5.38 Apr 15 1937
ANNUAL RUNOFF (AC-FT)	10910	33220	18760
10 PERCENT EXCEEDS	49	177	64
50 PERCENT EXCEEDS	3.3	4.0	3.0
90 PERCENT EXCEEDS	.03	.34	.00

a-Also occurred Jul 7-28, and Sep 11-22.

b-Also occurred Jul 23 to Aug 15.

c-Also occurred Jun 25 to Aug 7, and Aug 19-23, 1940.

d-From rating curve extended above 1100 ft³/s.

08248000 LOS PINOS RIVER NEAR ORTIZ, CO

LOCATION.--Lat 36°58'56", long 106°04'23", on line between secs.26, and 27, T.32 N., R.8 E., Rio Arriba County, New Mexico, Hydrologic Unit 13010005, on left bank 0.9 mi south of Colorado-New Mexico State line, 2.1 mi southwest of Ortiz, and 2.9 mi upstream from mouth.

DRAINAGE AREA.--167 mi².

PERIOD OF RECORD.--January 1915 to December 1920, October 1924 to current year. Monthly discharge only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder with satellite telemetry. Elevation of gage is 8,040 ft above sea level, from topographic map. Prior to Apr. 15, 1955, at site 350 ft upstream at datum 2.52 ft, higher.

REMARKS.--Estimated daily discharges: Nov. 4, 9, and Nov. 12 to Mar. 24. Records good except for estimated daily discharges, which are fair. Diversions upstream from station for irrigation.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, is the greatest since at least 1854, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	17	14	15	18	20	45	543	1190	268	27	71
2	15	16	16	17	17	19	50	395	1190	235	29	58
3	14	15	22	13	17	19	53	413	1050	215	27	49
4	14	13	20	12	15	19	51	547	837	203	24	42
5	14	21	20	13	13	19	64	583	737	182	25	38
6	14	26	14	15	14	25	74	464	723	160	29	35
7	14	25	14	17	15	28	66	430	723	141	27	33
8	13	25	17	19	17	30	59	415	566	129	26	34
9	15	18	18	15	19	30	59	356	503	119	27	31
10	15	22	20	17	18	35	74	360	467	111	29	28
11	15	18	19	16	16	34	102	491	478	103	25	27
12	15	16	19	14	16	33	119	666	532	99	21	26
13	15	20	16	15	16	32	111	853	601	96	22	26
14	13	26	16	17	14	37	104	1020	650	86	29	42
15	13	26	17	18	14	42	97	1130	693	77	30	35
16	14	22	17	17	16	40	96	1330	722	72	25	30
17	13	20	17	19	16	39	106	1560	686	66	22	27
18	13	18	20	18	15	52	131	1410	591	61	22	25
19	13	16	17	19	21	50	120	1380	526	56	21	25
20	12	17	16	17	20	49	121	1330	505	51	28	24
21	13	15	14	18	19	50	135	1450	494	48	32	23
22	15	13	16	17	20	48	180	1520	480	43	44	21
23	15	14	17	17	19	54	227	1390	456	40	37	22
24	15	11	16	15	20	56	284	1340	425	38	27	20
25	15	11	16	13	21	63	243	1370	380	35	21	18
26	15	11	14	16	20	72	272	1570	350	32	20	18
27	15	12	13	16	20	74	371	1520	331	30	27	19
28	15	12	16	16	20	58	469	1350	315	28	220	18
29	17	14	21	16	---	54	547	1230	312	27	181	19
30	18	11	20	16	---	88	604	1200	307	28	99	19
31	20	---	15	16	---	48	---	1170	---	26	85	---
TOTAL	452	521	527	499	486	1317	5034	30786	17820	2905	1308	903
MEAN	14.6	17.4	17.0	16.1	17.4	42.5	168	993	594	93.7	42.2	30.1
MAX	20	26	22	19	21	88	604	1570	1190	268	220	71
MIN	12	11	13	12	13	19	45	356	307	26	20	18
AC-FT	897	1030	1050	990	964	2610	9980	61060	35350	5760	2590	1790

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1993, BY WATER YEAR (WY)

MEAN	27.7	21.7	15.9	14.4	16.9	33.4	230	616	333	73.9	35.5	24.9
MAX	109	70.1	34.4	26.0	30.0	84.7	610	1341	1022	258	112	101
(WY)	1987	1987	1987	1987	1962	1971	1936	1952	1957	1957	1929	1927
MIN	10.1	11.1	5.00	5.00	7.50	13.9	65.9	96.8	25.2	13.2	11.9	7.53
(WY)	1957	1957	1918	1918	1964	1977	1968	1977	1977	1934	1977	1956

SUMMARY STATISTICS FOR 1992 CALENDAR YEAR FOR 1993 WATER YEAR WATER YEARS 1915 - 1993

ANNUAL TOTAL	33731	62558	
ANNUAL MEAN	92.2	171	121
HIGHEST ANNUAL MEAN			230
LOWEST ANNUAL MEAN			28.7
HIGHEST DAILY MEAN	674	May 1	2410
LOWEST DAILY MEAN	^a 11	Nov 24	^b 4.0
ANNUAL SEVEN-DAY MINIMUM	12	Nov 24	4.4
INSTANTANEOUS PEAK FLOW		1780	^c 3160
INSTANTANEOUS PEAK STAGE		6.19	^d 5.77
ANNUAL RUNOFF (AC-FT)	66910	124100	87470
10 PERCENT EXCEEDS	331	555	386
50 PERCENT EXCEEDS	25	26	25
90 PERCENT EXCEEDS	15	14	12

a-Also occurred Nov 25, 26, and 30.

b-Minimum observed, 4.0 ft³/s, Dec 17, 1945 (discharge measurement); minimum daily discharge for period of record, also occurred Dec 12-14, 17, 22, 30-31, 1989, and Jan 4-6, 1990, but may have been less during periods of no gage-height record.

c-Site and datum then in use, from rating curve extended above 1600 ft³/s.

d-Maximum gage height, 6.19 ft, May 22, 1993, present site and datum.

08249000 CONEJOS RIVER NEAR LASAUSES, CO

LOCATION.--Lat 37°18'01", long 105°44'47", in SW¹/4SW¹/4 sec.2, and SE¹/4NE¹/4 sec.10 (two channels), T.35 N., R.11 E., Conejos County, Hydrologic Unit 13010005, on left bank of main channel 125 ft downstream from bridge on State Highway 158 and on left bank of secondary channel 230 ft upstream from bridge on State Highway 158, 1.0 mi upstream from mouth, 2.1 mi north of Lasasues, and 13 mi southeast of Alamosa.

DRAINAGE AREA.--887 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1921 to current year. Monthly discharge only for some periods, published in WSP 1312. Prior to Oct. 1, 1966, published as "near La Sausas."

REVISED RECORDS.--WSP 1312: 1934(M).

GAGE.--Two water-stage recorders with satellite telemetry. Datum of gage on main (north) channel is 7,495.02 ft above sea level, and on secondary (south) channel is 7,496.89 ft above sea level (levels by U.S. Bureau of Reclamation). Main channel: See WSP 1732 for history of changes prior to Oct. 1, 1937. South channel: Prior to Oct. 23, 1934, at bridge 230 ft downstream at datum 0.56 ft, lower; Oct. 23, 1934 to May 3, 1936, at site 250 ft downstream, and May 4, 1936 to Oct. 13, 1965, at site 280 ft downstream, at datum 1.00 ft, lower.

REMARKS.--Estimated daily discharges: Nov. 11-15, 21, 23-25, Nov. 27 to Mar. 12, June 15, and Aug. 16-23. Records good except for estimated daily discharges, which are fair. Diversions for irrigation of about 75,000 acres upstream from station.

COOPERATION.--Records collected and computed by Colorado Division of Water Resources and reviewed by Geological Survey.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, is the greatest since at least 1854, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	24	28	62	62	94	186	1280	1610	748	35	557
2	3.2	23	30	72	64	91	183	1060	1550	649	37	617
3	1.9	24	33	66	65	89	200	691	1420	482	43	647
4	1.9	23	36	56	67	89	202	585	1200	346	45	539
5	1.8	23	42	52	66	89	189	626	934	293	34	368
6	8.6	23	44	54	62	91	210	554	893	200	22	316
7	7.9	29	46	58	65	92	225	399	978	129	18	206
8	8.0	31	46	64	67	99	215	369	907	105	13	227
9	8.0	31	58	56	68	104	201	343	627	82	12	231
10	8.6	31	58	53	69	110	199	292	484	57	25	211
11	9.0	35	56	53	71	121	230	271	413	51	35	199
12	9.2	31	66	50	72	114	299	337	375	49	37	160
13	8.3	28	66	49	73	108	359	453	406	33	41	141
14	8.9	28	54	52	73	107	352	664	542	14	21	149
15	9.4	29	54	54	75	118	350	856	750	38	40	175
16	9.5	31	54	57	73	132	319	1050	1020	41	45	170
17	10	32	54	58	74	146	311	1350	1220	48	32	128
18	11	32	58	58	73	159	338	1520	1180	84	24	105
19	13	33	58	62	78	172	394	1520	943	83	21	84
20	12	31	52	62	83	177	349	1480	812	86	17	64
21	14	31	52	60	80	208	363	1400	737	56	17	51
22	12	28	52	60	77	213	405	1540	773	59	19	47
23	15	28	54	56	77	212	542	1680	839	64	37	43
24	14	28	54	54	78	209	739	1620	807	42	49	32
25	14	28	54	52	81	213	754	1460	731	34	26	24
26	13	28	54	54	80	215	588	1340	732	34	11	24
27	13	29	52	56	86	270	658	1490	770	41	9.5	20
28	13	29	64	56	87	283	736	1810	752	34	45	16
29	15	30	78	61	---	238	939	2110	685	27	495	15
30	19	27	88	62	---	219	1180	1960	683	22	479	13
31	20	---	70	61	---	205	---	1740	---	29	416	---
TOTAL	314.7	858	1665	1780	2046	4787	12215	33850	25773	4060	2200.5	5579
MEAN	10.2	28.6	53.7	57.4	73.1	154	407	1092	859	131	71.0	186
MAX	20	35	88	72	87	283	1180	2110	1610	748	495	647
MIN	1.8	23	28	49	62	89	183	271	375	14	9.5	13
AC-FT	624	1700	3300	3530	4060	9500	24230	67140	51120	8050	4360	11070

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 1993, BY WATER YEAR (WY)

	MEAN	49.9	86.5	59.4	61.1	77.6	99.9	254	733	571	143	51.6	40.0
MAX	307	424	140	146	185	261	1177	2642	1850	1132	413	425	
(WY)	1942	1976	1986	1986	1983	1989	1924	1924	1935	1957	1952	1927	
MIN	.11	8.92	16.7	24.0	29.6	24.9	1.49	1.39	.13	.027	.000	.000	
(WY)	1978	1978	1978	1964	1964	1957	1990	1972	1977	1972	1934	1976	

SUMMARY STATISTICS

	FOR 1992 CALENDAR YEAR	FOR 1993 WATER YEAR	WATER YEARS 1921 - 1993
ANNUAL TOTAL	35684.40	95128.2	
ANNUAL MEAN	97.5	261	185
HIGHEST ANNUAL MEAN			451
LOWEST ANNUAL MEAN			17.2
HIGHEST DAILY MEAN	825	2110	3820
LOWEST DAILY MEAN	.65	1.8	a .00
ANNUAL SEVEN-DAY MINIMUM	1.4	4.0	b .00
INSTANTANEOUS PEAK FLOW		2200	c 3890
ANNUAL RUNOFF (AC-FT)	70780	188700	134300
10 PERCENT EXCEEDS	237	787	533
50 PERCENT EXCEEDS	49	66	56
90 PERCENT EXCEEDS	4.2	16	1.5

a-Also occurred Jun 28 to Jul 1, Jul 3, and Jul 21 to Sep 8, 1934.

b-Maximum combined peak discharge, gage height not determined.

c-Gage height not determined.

08249000 CONEJOS RIVER NEAR LASAUSES, CO--Continued
(Rio Grande National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

		DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)
APR 14...	1500	300	154	7.6	8.0	572	8.8	99	42	13
MAY 19...	0915	1490	117	7.8	12.5	582	4.1	51	40	12
JUN 16...	0845	900	82	8.0	15.0	580	5.5	72	30	9.3
JUL 21...	0930	75	101	8.2	18.0	581	8.0	112	39	12
AUG 18...	0830	27	119	8.2	17.5	582	6.8	94	45	14
SEP 15...	0830	200	87	8.7	9.0	584	8.0	91	--	--
DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- ^A BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- ^B BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- ^C LINITY WAT DIS TOT IT FIELD MG/L AS CaCO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
APR 14...	2.4	3.8	16	0.3	1.9	70	0	57	4.1	1.0
MAY 19...	2.5	7.4	26	0.5	4.0	78	0	64	5.7	1.9
JUN 16...	1.7	3.9	21	0.3	1.9	--	--	--	2.8	0.80
JUL 21...	2.2	4.0	17	0.3	1.9	54	0	44	4.1	0.60
AUG 18...	2.4	5.2	19	0.3	2.6	63	0	52	6.3	0.80
SEP 15...	--	--	--	--	--	56	0	46	--	--
DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
APR 14...	0.10	24	73	85	0.10	<0.01	<0.05	0.01	0.20	<0.20
MAY 19...	0.10	24	100	97	0.14	<0.01	<0.05	0.03	1.0	0.40
JUN 16...	0.10	18	72	63	0.10	<0.01	<0.05	0.03	0.30	0.30
JUL 21...	0.10	24	78	76	0.11	<0.01	<0.05	0.03	0.20	<0.20
AUG 18...	0.20	29	95	92	0.13	<0.01	<0.05	0.01	<0.20	<0.20
SEP 15...	--	--	--	--	--	<0.01	<0.05	0.02	<0.20	<0.20
DATE	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	
APR 14...	0.05	0.04	0.04	120	27	--	1.4	116	94	
MAY 19...	0.18	0.11	0.09	360	34	9.7	1.8	--	--	
JUN 16...	0.10	0.07	0.05	120	14	5.2	0.9	--	--	
JUL 21...	0.04	0.02	0.02	42	33	2.2	0.4	18	3.6	
AUG 18...	0.05	0.02	0.02	80	20	1.8	0.6	22	1.6	
SEP 15...	0.03	0.05	0.02	--	--	1.5	0.4	19	10	

A-Field dissolved bicarbonate, determined by incremental titration method.

B-Field dissolved carbonate, determined by incremental titration method.

C-Field total dissolved alkalinity, determined by incremental titration method.

LOCATION.--Lat 37°04'43", long 105°45'23", in NE1/4NW1/4 sec.27, T.33 N., R.11 E., Conejos County, Hydrologic Unit 13010002, on right bank at highway bridge, 5.7 mi north of Colorado-New Mexico State line, 8 mi downstream from Culebra Creek, 11 mi east of Lobatos, and 14 mi east of Antonito.

WATER-DISCHARGE RECORDS

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1828, that of June 8, 1905.

d-Maximum discharge and stage for period of record, 13200 ft³/s, Jun 8, 1905, gage height, 9.1 ft, from rating curve extended above 8000 ft³/s.

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1969 to September 1993 (Discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to September 1981.

WATER TEMPERATURE: October 1975 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,040 microsiemens, Sept. 17, 18, 1977; minimum, 89 microsiemens, May 9, 1979.

WATER TEMPERATURE: Maximum, 30.0°C, July 17, 1977; minimum, 0.0°C, on many days during winter months.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT									
11...	0915	73	276	8.3	10.5	2.9	8.7	K5	K6
DEC									
30...	1100	300	259	7.9	0.0	1.9	10.2	K7	K8
FEB									
26...	1430	270	241	8.0	0.0	2.6	11.2	K4	51
JUN									
23...	1130	485	486	8.5	21.5	6.1	10.4	25	15
AUG									
26...	1030	728	188	7.9	17.5	70	6.0	5000	10000

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- ^A BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- ^B BONATE WATER DIS IT FIELD MG/L AS CO3
OCT									
11...	85	26	4.8	21	34	1	3.9	--	--
DEC									
30...	54	15	3.9	32	55	2	3.3	114	0
FEB									
26...	77	24	4.1	18	33	0.9	3.1	92	0
JUN									
23...	130	38	8.5	42	40	2	6.1	139	0
AUG									
26...	52	16	2.9	12	32	0.7	3.7	69	0

DATE	ALKA- ^C LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT								
11...	--	25	6.2	0.4	25	183	179	36.3
DEC								
30...	94	29	5.9	0.3	33	158	180	128
FEB								
26...	75	31	7.1	0.2	28	162	162	118
JUN								
23...	115	100	17	0.5	23	330	304	432
AUG								
26...	56	19	4.0	0.2	17	115	109	226

A-Field dissolved bicarbonate, determined by incremental titration method.

B-Field dissolved carbonate, determined by incremental titration method.

C-Field total dissolved alkalinity, determined by incremental titration method.

K-Based on non-ideal colony counts.

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 11...	<0.01	<0.05	<0.01	<0.01	<0.20	0.05	0.04	0.04
DEC 30...	0.01	0.27	0.02	0.01	<0.20	0.04	0.04	0.03
FEB 26...	<0.01	0.21	0.05	0.04	0.30	0.06	0.05	0.04
JUN 23...	<0.01	<0.05	0.02	0.02	0.70	0.09	0.04	0.05
AUG 26...	<0.01	<0.05	<0.01	<0.01	1.6	0.62	0.05	0.04

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
OCT 11...	<10	24	<3	41	7	5	<10	<1	<1	<1	210	<6
FEB 26...	<10	22	<3	25	10	7	<10	<1	<1	<1	170	<6
JUN 23...	20	28	<3	65	8	16	<10	1	<1	<1	370	<6
AUG 26...	30	19	<3	50	<4	13	<10	1	<1	<1	130	<6

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	RADIUM 226, DIS- SOLVED RADON, METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
DEC 30...	1100	1.4	<0.6	2.6	<0.6	3.4	<0.6	0.04	0.95
JUN 23...	1130	2.8	<0.6	6.8	0.6	8.8	0.7	0.03	1.3

CROSS-SECTION DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK)	TEMPER- ATURE WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)
FEB 26...	1431	22.0	0.0	238	8.0	11.2	10
26...	1432	44.0	0.0	240	8.0	11.2	4
26...	1433	66.0	0.0	241	8.0	11.2	10
26...	1434	88.0	0.0	249	8.0	11.2	3
JUN 23...	1131	24.0	22.0	488	8.6	10.8	9
23...	1132	39.0	21.5	486	8.6	10.2	9
23...	1133	54.0	21.5	486	8.5	10.1	8
23...	1134	64.0	21.5	486	8.5	10.1	13
23...	1135	74.0	21.0	487	8.5	10.1	13
23...	1136	84.0	21.0	486	8.5	10.1	13
23...	1137	94.0	21.0	485	8.5	10.2	13
23...	1138	104	21.5	485	8.5	10.4	14
23...	1139	114	21.5	485	8.5	10.6	17
23...	1140	134	22.0	482	8.6	11.8	13

RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued
(National stream-quality accounting network station)

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1992

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. & FINER THAN .062 MM
OCT 11...	0915	73	11	2.3	--
DEC 30...	1100	300	5	4.4	--
FEB 26...	1430	270	7	5.2	--
JUN 23...	1130	485	12	16	--
AUG 26...	1030	728	265	521	94

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 27...	1400	123	461	8.5	12.0	3.8	10.3	K8	K8
DEC 02...	1200	435	332	8.0	0.0	5.8	12.4	K2	53
FEB 23...	1100	340	287	8.3	0.0	2.3	10.7	K5	84
JUN 14...	1201	970	343	8.4	22.0	6.4	4.7	500	K40
AUG 16...	1230	134	472	9.0	20.5	2.3	8.3	>6000	K8

DATE	HARD- NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- ^A BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- ^B BONATE WATER DIS IT FIELD MG/L AS CO3
OCT 27...	140	42	8.2	43	39	2	6.5	167	--
DEC 02...	110	33	6.6	26	33	1	4.5	130	0
FEB 23...	79	24	4.5	25	39	1	4.5	106	0
JUN 14...	100	31	6.6	26	34	1	4.7	107	5
AUG 16...	140	42	8.8	39	36	1	7.6	144	--

DATE	ALKA- ^C LITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT 27...	137	68	12	0.7	24	294	287	97.6
DEC 02...	106	43	8.4	0.4	34	225	223	264
FEB 23...	87	34	8.3	0.3	29	176	183	162
JUN 14...	96	67	7.2	0.4	21	233	222	610
AUG 16...	118	89	11	0.5	24	293	293	106

A-Field dissolved bicarbonate, determined by incremental titration method.

B-Field dissolved carbonate, determined by incremental titration method.

C-Field total dissolved alkalinity, determined by incremental titration method.

K-Based on non-ideal colony counts.

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued
(National stream-quality accounting network station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 27...	<0.01	<0.05	0.02	0.02	0.6	0.09	0.04	0.03
DEC 02...	0.01	0.75	0.01	0.02	0.3	0.08	0.05	0.04
FEB 23...	0.02	0.21	--	0.01	0.2	0.07	0.05	0.05
JUN 14...	<0.01	<0.05	--	0.03	0.5	0.09	0.06	0.05
AUG 16...	<0.01	<0.05	--	0.02	0.4	0.12	0.04	0.04

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)
OCT 27...	<10	33	<3	41	10	12	<10	<1	<1	<1	370	<6
FEB 23...	20	23	<3	58	4	22	<10	<1	<1	<1	190	<6
JUN 14...	30	34	<3	54	5	19	<10	<1	<1	<1	270	<6
AUG 16...	<10	36	<3	9	10	12	<10	<1	<1	<1	370	<6

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS BETA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	RADIUM 226, DIS- SOLVED, METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)
DEC 02...	1200	2.0	<0.6	5.0	<0.6	6.4	<0.6	0.03	1.6
JUN 14...	1201	1.1	<0.6	4.4	0.9	5.7	0.9	0.05	<0.01

CROSS-SECTION DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK)	TEMPER- ATURE WATER (DEG C)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH WATER WHOLE FIELD (STAND- ARD UNITS)	OXYGEN, DIS- SOLVED (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)
OCT							
27...	1401	14.0	12.0	460	8.5	10.3	10
27...	1402	23.0	12.0	461	8.5	10.2	19
27...	1403	31.0	12.0	461	8.4	10.3	15
27...	1404	38.0	12.0	461	8.4	10.3	15
27...	1405	45.0	12.0	461	8.4	10.3	12
27...	1406	51.0	12.0	460	8.4	10.3	13
27...	1407	59.0	12.0	461	8.5	10.3	12
27...	1408	69.0	12.0	461	8.5	10.3	12
27...	1409	79.0	12.0	461	8.5	10.4	7
27...	1410	89.0	12.0	461	8.5	10.4	12
AUG							
16...	1231	25.0	21.0	467	9.0	8.5	13
16...	1232	39.0	20.5	471	9.0	8.3	17
16...	1233	50.0	20.5	472	9.0	8.2	23
16...	1234	59.0	20.5	473	9.0	8.2	17
16...	1235	66.0	20.5	473	9.0	8.2	17
16...	1236	72.0	20.5	473	9.0	8.3	15
16...	1237	79.0	20.5	474	9.0	8.3	18
16...	1238	85.0	20.5	473	9.0	8.3	16
16...	1239	93.0	20.5	473	9.0	8.4	24
16...	1240	104	21.0	471	9.0	8.7	13

RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued
(National stream-quality accounting network station)

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
OCT 27...	1400	123	13	4.2
DEC 02...	1200	435	16	19
FEB 23...	1100	340	14	13
JUN 14...	1201	970	55	144
AUG 16...	1230	134	17	6.2

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued
(Rio Grande National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS- CHARGE, INST- CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	TUR- BID- ITY (NTU)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, (PER- CENT SATUR- ATION)	HARD- NESS TOTAL (MG/L AS CACO3)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L)
APR 12...	1300	450	378	8.7	12.0	--	575	9.6	119	110	0
MAY 17...	1230	1640	187	8.4	14.5	--	579	7.0	91	54	0
JUN 14...	1200	1100	343	8.4	22.0	8.5	585	4.7	71	90	0
JUL 19...	1200	240	376	8.6	24.5	--	585	--	--	110	0
AUG 16...	1230	134	475	9.0	22.0	--	584	8.6	130	--	--
SEP 13...	1230	350	273	8.7	15.5	--	575	8.5	114	92	4

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- ^A BONATE WATER DIS IT FIELD MG/L AS HCO3	CAR- ^B BONATE WATER DIS IT FIELD MG/L AS CO3	ALKA- ^C LINITY WAT DIS TOT IT FIELD MG/L AS CACO3	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
APR 12...	32	6.7	30	37	1	4.5	126	4	110	51	9.9
MAY 17...	16	3.4	12	31	0.7	3.1	76	0	62	22	3.5
JUN 14...	27	5.5	22	34	1	3.8	107	5	96	67	7.2
JUL 19...	32	6.7	34	39	1	6.3	132	2	112	56	8.2
AUG 16...	--	--	--	--	--	--	144	0	--	--	--
SEP 13...	28	5.3	20	31	0.9	3.7	97	5	88	42	6.0

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
APR 12...	0.40	27	235	228	0.32	<0.01	0.07	<0.01	0.30	0.20
MAY 17...	0.20	20	132	118	0.18	<0.01	<0.05	0.02	0.80	0.40
JUN 14...	0.40	18	234	209	0.32	<0.01	<0.05	0.04	0.40	0.40
JUL 19...	0.50	25	247	236	0.34	<0.01	<0.05	0.03	0.50	0.30
AUG 16...	--	--	--	--	--	<0.01	<0.05	0.02	0.40	0.40
SEP 13...	0.30	24	183	182	0.25	<0.01	<0.05	0.03	<0.20	0.20

DATE	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	BARIUM, DIS- SOLVED (UG/L AS BA)	COBALT, DIS- SOLVED (UG/L AS CO)	BORON, DIS- SOLVED (UG/L AS B)	IRON, DIS- SOLVED (UG/L AS FE)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
APR 12...	0.06	0.04	0.04	--	--	--	50	25	--	42
MAY 17...	0.15	0.04	0.04	--	--	--	--	180	--	22
JUN 14...	0.09	0.06	0.04	20	29	<3	--	38	5	17
JUL 19...	0.10	0.05	0.05	--	--	--	--	25	--	12
AUG 16...	0.12	0.05	0.04	--	--	--	--	--	--	--
SEP 13...	0.06	0.05	0.03	--	--	--	--	28	--	7

A-Field dissolved bicarbonate, determined by incremental titration method.

B-Field dissolved carbonate, determined by incremental titration method.

C-Field total dissolved alkalinity, determined by incremental titration method.

RIO GRANDE BASIN

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued
(Rio Grande National Water-Quality Assessment Program station)

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDEDED TOTAL (MG/L AS C)	SEDI- MENT, SUS- PENDEDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY)
APR 12...	--	--	--	--	260	--	3.5	1.6	42	51
MAY 17...	--	--	--	--	--	--	8.0	2.7	--	--
JUN 14...	<10	<1	<1	<1.0	230	<6	6.3	0.8	55	163
JUL 19...	--	--	--	--	--	--	5.5	1.2	29	19
AUG 16...	--	--	--	--	--	--	--	--	43	16
SEP 13...	--	--	--	--	--	--	3.0	0.4	18	17

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	ALPHA, COUNT, 2 SIGMA WAT DIS AS NAT U (UG/L)	ALPHA RADIO. WATER DISS TH-230 (PCI/L)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	ALPHA SED SUSP DRY WGH AS TH-230 (PCI/L)	ALPHA, 2 SIGMA SED SUS AS TH-230 (PCI/L)	GROSS BETA, DIS- SOLVED AS CS-137 (PCI/L)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L)
JUN 14...	1200	1.4	1.4	0.9	0.88	0.6	0.6	0.54	6.0	1.6

DATE	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90)	BETA, 2 SIGMA WATER, DISS, AS SR90 /Y90 (PCI/L)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS- SOLVED (UG/L AS U)	BETA, 2 SIGMA SED, SUSP, TOT DRY SR90Y90 (PCI/L)	RA-226 2 SIGMA WATER, DISS, (PCI/L)	URANIUM NATURAL 2 SIGMA WATER, DISS, (UG/L)
JUN 14...	4.4	0.93	0.9	0.9	0.03	<0.01	0.64	0.010	<1.0

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN IN COLORADO

There are 24 tunnels or ditches, all of which are equipped with water-stage recorders and Parshall flumes or sharp-crested weirs. Records provided by Colorado Division of Water Resources. The locations and diversions of 8 selected diversions are given in the following list.

TO PLATTE RIVER BASIN

09010000 Grand River Ditch diverts water from tributaries of Colorado River to La Poudre Pass Creek (tributary to Cache la Poudre River) in NW¹/₄ sec.21, T.6 N., R.75 W., in Platte River basin. Two collection ditches beginning at headgates located in sec.28, T.5 N., R.76 W., and sec.29, T.6 N., R.75 W., intercept all tributaries upstream on each side of the Colorado River and converge at La Poudre Pass.

REVISIONS (WATER YEARS).--WSP 1313: 1912-27.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09010000	0	0	0	0	0	0	0	583	10,300	9,910	3,260	718

Water year 1993, 24,770

09013000 Alva B. Adams Tunnel diverts water from Grand Lake and Shadow Mountain Lake in NW¹/₄ sec.9, T.3 N., R.75 W., in Colorado River basin, to Lake Estes (Big Thompson River) in sec.30, T.5 N., R.72 W., in Platte River basin. For daily discharge, see elsewhere in this report.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09013000	6,870	22,340	29,050	26,110	21,600	345	5,290	21,580	6,100	16,560	28,830	21,680

Water year 1993, 206,400

09021500 Berthoud Pass Ditch diverts water from tributaries of Fraser River between headgate in sec.33, T.2 S., R.75 W., and Berthoud Pass, in Colorado River basin, to Hoop Creek (tributary to West Fork Clear Creek) in sec.10, T.3 S., R.75 W., in Platte River basin.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09021500	0	0	0	0	0	0	0	0	378	613	206	60

Water year 1993, 1,260

09050590 Harold D. Roberts Tunnel diverts water from Dillon Reservoir (Blue River) in sec.18, T.5 S., R.77 W., in Blue River basin, to North Fork South Platte River (tributary to South Platte, River) in SW¹/₄SW¹/₄ sec.4, T.7 S., R.74 W., in Platte River basin. Figures include a small amount of ground-water inflow between Dillon Reservoir and east portal of tunnel.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09050590	2,750	9,080	6,350	6,110	5,650	6,380	3,890	3,850	21,450	27,160	17,720	13,780

Water year 1993, 124,200

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN IN COLORADO--Continued

TO ARKANSAS RIVER BASIN

09042000 Hoosier Pass Tunnel diverts water from tributaries of Blue River in Colorado River basin to Montgomery Reservoir (Middle Fork South Platte River) in sec.14, T.8 S., R.78 W., in Platte River basin; this water is again diverted to South Catamount Creek (tributary to Catamount Creek) in SE¹/₄ sec.14, T.13 S., R.69 W., in the Arkansas River basin. Collection conduits extending from the right bank of Crystal Creek (tributary to Spruce Creek) in sec.14, T.7 S., R.78 W., right bank of Spruce Creek in sec.23, T.7 S., R.78 W., right bank of McCullough Gulch in sec.26, T.7 S., R.78 W., right bank of Monte Cristo Creek in SW¹/₄NE¹/₄ sec.2, T.8 S., R.78 W., left bank of Bemrose Creek in SW¹/₄SW¹/₄ sec.6, T.8 S., R.77 W., and intercepting intermediate tributaries, transport diversions to north portal of the tunnel.

REVISIONS (WATER YEARS).--WDR CO-86-1, WDR CO-86-2: 1984, 1985.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09042000	0	0	0	0	0	0	0	1,390	4,780	2,550	1,930	387

Water year 1993, 11,040

09063700 Homestake Tunnel diverts water from Homestake Lake (Middle Fork Homestake Creek), in sec.17, T.8 S., R.81 W., in Eagle River basin, to Lake Fork in sec.9, T.9 S., R.81 W., in Arkansas River basin. Water is imported to Homestake Lake from tributaries of Homestake Creek by collection conduits that extend from right bank of French Creek in sec.28, T.7 S., R.81 W., and left bank of East Fork Homestake Creek in sec.9, T.8 S., R.81 W., and intercept intermediate tributaries.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09063700	97	0	0	0	0	9,120	7,590	0	2,130	8,110	1,030	28

Water year 1993, 28,110

09077160 Charles H. Bousted Tunnel diverts water from the main stem and tributaries of Fryingpan River (tributary to Roaring Fork River), in Colorado River basin, to Lake Fork in sec.10, T.9 S., R.81 W., in Arkansas River basin. Water is transported to west portal of tunnel (at lat 39°14'44", long 106°31'47"), by a series of collection conduits extending between headgates on right bank of Sawyer Creek at lat 39°15'58", long 106°38'19" and right bank of Fryingpan River at lat 39°14'40", long 106°31'49", and intercepting intermediate tributaries.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09077160	163	137	141	141	150	201	226	15,670	43,870	25,120	2,390	523

Water year 1993, 88,740

09077500 Busk-Ivanhoe Tunnel diverts water from Ivanhoe Lake (Ivanhoe Creek), tributary to Fryingpan River in sec.13, T.9 S., R.82 W., in Roaring Fork River basin, to Busk Creek (tributary to Lake Fork) in sec. 20, T.9 S., R.81 W., in Arkansas River basin.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
09077500	44	0	0	0	0	0	0	415	2,740	1,430	243	112

Water year 1993, 4,980

TRANSMOUNTAIN DIVERSIONS NO LONGER PUBLISHED

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		TO ARKANSAS RIVER BASIN		TO RIO GRANDE BASIN	
09012000	Eureka Ditch	09061500	Columbine Ditch	09118200	Tarbell Ditch
09022500	Moffat Water Tunnel	09062000	Ewing Ditch	09121000	Tabor Ditch
09046000	Boreas Pass Ditch	09062500	Wurtz Ditch	09341000	Treasure Pass Ditch
09047300	Vidler Tunnel	09073000	Twin Lakes Tunnel	09247000	Don LaFont Ditches
		09115000	Larkspur Ditch		1&2
				09348000	Williams Creek
					Squaw Pass Ditch
				09351000	Pine River-
					Weminuche Pass
					Ditch
				09351500	Weminuche Pass
					Ditch

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

		Water year 1993 maximum				Period of record maximum		
Station name and number	Location and drainage area	Period of record	Date	Gage height ft	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
PLATTE RIVER BASIN								
Threemile Creek at Upper Site, near Hartsel, CO (385138105391700)	Lat 38°51'38", long 105°39'17", in NW ¹ /4SE ¹ /4 sec.3, T.14 S., R.74 W., Park County	1991-93	--	*	--	5-27-92	10.01	14
Threemile Creek at Middle Site, near Hartsel, CO (385403105383300)	Lat 38°54'03", long 105°38'33", in SE ¹ /4SW ¹ /4 sec.23, T.13 S., R.74 W., Park County.	1991-93	--	*	--	7-26-92	15.03	22
Threemile Creek at Lower Site near Hartsel, CO (385800105362200)	Lat 38°58'00", long 105°36'22", in SE ¹ /4NW ¹ /4 sec.31, T.12 S., R.73 W., Park County.	1991-93	4-19-93	14.58	c	5-27-92	14.58	c
Deer Creek near Littleton, CO (06708500)	Lat 39°32'56", long 105°07'59", in NE ¹ /4NE ¹ /4 sec.8, T.6 S., R.69 W., Jefferson County, 70 ft upstream from county bridge over Deer Creek, 7.5 mi southwest of Littleton. Drainage area is 26.2 mi ² .	1942-46, 1978-93	--	*	--	^a 1980	6.22	320
Lee Gulch at Littleton, CO (06709740)	Lat 39°35'47", long 105°00'57", in SW ¹ /4SW ¹ /4 sec.21, T.5 S., R.68 W., Arapahoe County, on right bank 30 ft upstream from culvert under Prince St. and 0.6 mi upstream from mouth in Littleton. Drainage area not determined.	1980-93	6-17-93	9.93	37	^a 1983	16.00	444
Dutch Creek at Platte Canyon Drive, near Littleton, CO (06709910)	Lat 39°36'01", long 105°02'28", in NW ¹ /4SE ¹ /4 sec.19, T.5 S., R.69 W., Arapahoe County, on left bank 150 ft down-stream from bridge on Platte Canyon Road. Drainage area not determined.	1985-93	6-17-93	8.23	87	6-01-91	11.51	1,090
Littles Creek at Littleton, CO (06709995)	Lat 39°36'44", long 105°01'09", in SE ¹ /4SE ¹ /4 sec.17, T.5 S., R.68 W., Arapahoe County, 50 ft upstream from Rapp St., and 150 ft south of W. Alamo St. in Littleton. REVISED RECORDS.--WD CO-89-1: 1988. Drainage area not determined.	1985-93	6-17-93	11.12	101	7-29-90	13.01	503
Cub Creek at Evergreen, CO (06710400)	Lat 39°37'50", long 105°19'16", in NW ¹ /4SE ¹ /4 sec.10, T.5 S., R.71 W., Jefferson County, 0.1 mi upstream from confluence with Bear Creek. Drainage area is 22.2 mi ² .	1978-93	7-20-93	46.67	68	^a 1980	^b 7.41	244

MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS--Continued

			Water year 1993 maximum			Period of record maximum		
Station name and number	Location and drainage area	Period of record	Date	Gage height ft	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
PLATTE RIVER BASIN--Continued								
Mt. Vernon Creek near Morrison, CO (06710600)	Lat 39°40'49", long 105°11'50", in NW ¹ / ₄ NW ¹ / ₄ sec.26, T.4 S., R.70 W., Jefferson County, 1.9 mi north of Morrison. REVISED RECORDS.--WDR CO-91- 1: 1990. Drainage area is 7.58 mi ² .	1978-93	--	*	--	7-22-91	9.09	121
Paramalee Gulch at mouth at Indian Hills, CO (06710990)	Lat 39°36'57", long 105°13'54", in NW ¹ / ₄ SE ¹ / ₄ sec.16, T.5 S., R.70 W., Jefferson County, 20 ft upstream from box type culvert beneath U.S. Highway 285. Drainage area is 5.80 mi ² .	1978-93	e	e	e	^a 1984	9.62	100
Turkey Creek near Morrison, CO (06711000)	Lat 39°37'22", long 105°11'13", in NE ¹ / ₄ NE ¹ / ₄ sec.14, T.5 S., R.70 W., Jefferson County, 2.2 mi southwest of Morri- son. Drainage area is 48.0 mi ² .	1942-53, 1969, 1978-93	5-17-93	39.36	42	5-07-69	c	2,730
Weaver Creek near Lakewood, CO (06711305)	Lat 39°38'13", long 105°07'47", in NE ¹ / ₄ NE ¹ / ₄ sec.8, T.5 S., R.69 W., Jefferson County, 500 ft upstream from Simms St., and 700 ft south of West Quincy Ave. Drainage area not determined.	1982-93	6-18-93	10.38	^f 30	6-02-91	12.50	305
Little Dry Creek near Arapahoe Road, CO (06711515)	Lat 39°35'38", long 104°54'23", in NE ¹ / ₄ NE ¹ / ₄ sec.29, T.5 S., R.67 W., Arapahoe County, on right bank, 800 ft downstream from Quebec St. (formerly pub- lished as Inflow to Holly Res- ervoir, 1985-86). Drainage area not determined.	1985-93	8-13-93	8.07	113	^a 1985	10.52	800
Willow Creek at Dry Creek Road, near Englewood, CO (06711535)	Lat 39°34'49", long 104°54'42", in NW ¹ / ₄ NE ¹ / ₄ sec.32, T.5 S., R.67 W., Arapahoe County, on left bank, upstream wingwall of bridge on Dry Creek Road over Willow Creek. Drainage area not determined.	1985-93	6-17-93	9.06	726	^a 1985	14.28	3,470
Little Dry Creek above Englewood, CO (06711555)	Lat 39°38'57", long 104°58'42", in SE ¹ / ₄ NE ¹ / ₄ sec.3, T.5 S., R.68 W., Arapahoe County, on right bank 250 ft downstream from bridge on Clarkson St., and 800 ft south of Hampton Ave., in Cherry Hills Village. Drainage area not determined. Prior to April 2, 1992, gage was located at a site 300 ft upstream from the present location.	1982-93	8-24-92 6-17-92	7.16 5.88	563 218	^a 1983	15.64	1,060
Harvard Gulch at Colorado Blvd. at Denver, CO (06711570)	Lat 39°40'08", long 104°56'32", in SE ¹ / ₄ SE ¹ / ₄ sec.25, T.4 S., R.67 W., Denver County, on left bank, 100 ft upstream from S. Jackson St., and 400 ft north of E. Yale Ave. Drainage area not determined.	1979-93	9-18-93	12.57	332	8-04-88	14.02	597
Harvard Gulch below University Blvd. at Denver, CO (06711572)	Lat 39°40'10", long 104°57'33", in SE ¹ / ₄ SE ¹ / ₄ sec.26, T.4 S., R.68 W., Denver County, 200 ft, downstream from Uni- versity Blvd., and 600 ft north of East Yale Ave., in Denver. REVISED RECORDS.--WDR CO-92-1: 1989-91. Drainage area not determined.	1979-93	9-18-93	13.60	519	^a 1983	13.75	780

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES
MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS--Continued

			Water year 1993 maximum			Period of record maximum		
Station name and number	Location and drainage area	Period of record	Date	Gage height ft	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
PLATTE RIVER BASIN--Continued								
Harvard Gulch at Harvard Park at Denver, CO (06711575)	Lat 39°40'21", long 104°58'35", in NW ¹ / ₄ SW ¹ / ₄ sec.26, T.4 S., R.68 W., Denver County, on left bank, 200 ft north of E. Harvard Ave. and 300 ft west of S. Ogden St., directly north of Porter Hospital. Drainage area not determined.	1979-93	9-18-93	14.37	424	^a 1981	15.61	785
Sanderson Gulch tributary at Lakewood, CO (06711600)	Lat 39°41'19", long 105°04'54", in NE ¹ / ₄ NW ¹ / ₄ sec.23, T.4 S., R.68 W., Jefferson County, 300 ft upstream from S. Wad- sworth Blvd., 300 ft south of W. Florida Ave. in Lakewood. Drainage area is 0.38 mi ² .	1969-93	6-02-93	12.73	54	6-06-77	4.91	422
Sanderson Gulch at Mouth at Navajo St. at Denver, CO (06711609)	Lat 39°41'33", long 105°00'12", in SW ¹ / ₄ NE ¹ / ₄ sec.21, T.4 S. R.68 W., Denver County, 200 ft south of Louisiana Ave., at Navajo St. Drainage area not determined.	1985-93	6-02-93	11.08	342	6-01-91	11.87	501
Weir Gulch upstream from 1st Avenue, at Denver, CO (06711618)	Lat 39°43'03", long 105°02'30", in NW ¹ / ₄ SE ¹ / ₄ sec.7, T.4 S., R.68 W., Denver County, 250 ft upstream from 1st Ave., in Denver. Drainage area not determined.	1985-93	6-17-93	10.36	158	8-01-91	11.91	523
Lakewood Gulch at Denver, CO (06711700)	Lat 39°44'06", long 105°01'54", in SW ¹ / ₄ NW ¹ / ₄ sec.5, T.4 S., R.68 W., Denver County, 2,000 ft downstream from con- fluence with Dry Gulch, near intersection of Knox Ct., and West 12th Ave., in Denver. Drainage area not determined.	1980-93	6-17-93	12.50	314	^a 1984	17.24	930
Dry Gulch at Denver, CO (06711770)	Lat 39°44'03", long 105°02'20", in SW ¹ / ₄ NE ¹ / ₄ sec.6, T.4 S., R.68 W., Denver County, 800 ft upstream from confluence with Lakewood Gulch, north of West 10th Ave., at Perry St., in Denver. Drainage area not determined.	1980-93	4-12-93	11.98	155	^a 1981	16.00	445
Sloans Lake, south Tributary at Denver, CO (06711820)	Lat 39°44'44", long 105°03'28", in NW ¹ / ₄ SE ¹ / ₄ sec.36, T.3 S., R.69 W., Jefferson County, 50 ft south of 18th Ave., at Depew St. REVISED RECORDS.-- WDR CO-90-1: 1985-89. Drain- age area not determined.	1985-93	7-20-93	3.15	115	6-01-91	4.00	451
Westerly Creek at Aurora, CO (06714260)	Lat 39°44'43", long 104°52'48", in NW ¹ / ₄ SW ¹ / ₄ sec.34, T.3 S., R.67 W., Adams County, 50 ft upstream from footbridge. 800 ft upstream from Montview Blvd., and 100 ft east of Bos- ton St., in Aurora. REVISED RECORDS.--WDR CO-90-1: 1983-85, 1987-88. Drainage area not determined.	1982-93	9-18-93	13.21	809	^a 1983	14.45	1,530
Lena Gulch at Upper Site, at Golden, CO (06719535)	Lat 39°43'21", long 105°11'46", in NE ¹ / ₄ NW ¹ / ₄ sec.11, T.4 S., R.70 W., Jefferson County, 60 ft north of US 40, and 2,200 ft southwest of US 6, in Golden. Drainage area not determined.	1985-93	6-17-93	10.24	150	^a 1987	10.92	373

MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS--Continued

			Water year 1993 maximum			Period of record maximum		
Station name and number	Location and drainage area	Period of record	Date	Gage height ft	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
PLATTE RIVER BASIN--Continued								
Lena Gulch at Lakewood, (06719560)	Lat 39°44'27", long 105°08'49", in SE ¹ /4SE ¹ /4 sec.31, T.3 S., R.69 W., Jefferson County on right bank 200 ft north of West 15th Drive at Arbutus Prior to July 6, 1988, at site approx. 500 ft downstream (formerly published as Lena Gulch at Alkire at Golden, CO, 1986-87). Drainage area is approximately 9.0 mi ² .	1974-79, 1986-93	6-17-93	11.12	115	7-20-75	14.41	641
Hidden Lake Outflow at 65th Ave near Arvada, CO (06719775)	Lat 39°48'53", long 105°02'03", in SE ¹ /4SE ¹ /4 sec.6, T.3 S., R.68 W., Adams County, 30 ft downstream from 65th Ave. at Lowell Blvd. May 1985 to Aug. 1987 at site 200 ft down- stream. Drainage area not determined.	1985-93	9-18-93	2.33	13	7-22-91	2.50	22
Little Dry Creek at Westminster, CO (06719840)	Lat 39°49'34", long 105°02'25", in NW ¹ /4NE ¹ /4 sec.6, T.3 S., R.68 W., Adams County, 400 ft downstream from 72nd Ave. in Westminster. REVISED RECORDS.--WDR CO-89-1: 1986. Drainage area not determined.	1982-93	6-17-93	11.92	560	6-01-91	13.09	1,280
Middle Fork St. Vrain Creek near Allens Park, CO (06723000)	Lat 40°10'07", long 105°26'27", in SW ¹ /4NW ¹ /4 sec.3, T.2 N., R.72 W., Boulder County, 1.4 mi northeast from Raymond. REVISED RECORDS.--WDR CO-89-1: 1983-87. Drainage area is 28.0 mi ² .	1925-30, 1978-93	6-18-93	7.25	424	6-12-90	97.31	892
Fourmile Creek near Crisman, CO (06727400)	Lat 40°02'44", long 105°22'02", in SE ¹ /4SW ¹ /4 sec.17, T.1 N., R.71 W., Boulder county, on right bank 0.65 mile below junction of Gold Run Road. Drainage area not determined.	1985-93	6-18-93	10.30	24	6-03-91	11.45	^b 145
Sunshine Creek at Boulder, CO (06728010)	Lat 40°01'15", long 105°17'47", in NW ¹ /4SW ¹ /4 sec.25, T.1 N., R.71 W., Boulder County on right bank 0.2 mile past Hospital at Open Space Park, 125 ft upstream from footbridge. REVISED RECORDS.-- WDR CO-90-1: 1989. Drainage area not determined.	1986-93	5-29-93	1.61	6.5	6-09-89	2.12	22
Fall River at Estes Park, CO (06732500)	Lat 40°22'40", long 105°31'56", in NW ¹ /4NW ¹ /4 sec.25, T.5 N., R.73 W., Larimer County, 100 ft upstream from State bridge 34 and 0.7 mi upstream from mouth. Destroyed by flood, 7-82. Drainage area is 39.5 mi ² .	1947-53, 1978-93	6-18-93	97.84	305	7-15-82	b11.10	6,550
Cedar Creek at Cedar Cove, CO (06736650)	Lat 40°25'08", long 105°15'53", NW ¹ /4NW ¹ /4 sec.8, T.5 N., R.70 W., Larimer County, 0.2 mi north of Cedar Cove and 4.1 mi south-east of Drake. Drainage area is 18.9 mi ² .	1978-93	6-16-93	84.95	6.6	^a 1980	b13.80	1,590
ARKANSAS RIVER BASIN								
Chalk Creek near Nathrop, CO (07091000)	Lat 38°44'01", long 106°09'34", in SE ¹ /4NW ¹ /4 sec.19, T.15 S., R.78 W., Chaffee County 4 mi west of Nathrop. REVISED RECORDS.--WDR CO-92-1: Drain- age area. Drainage area is 82.7 mi ² .	1910, 1949-56 1978-93	6-18-93	3.05	890	^a 1986	3.55	1,400

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES
MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS--Continued

			Water year 1993 maximum			Period of record maximum		
Station name and number	Location and drainage area	Period of record	Date	Gage height ft	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
ARKANSAS RIVER BASIN--Continued								
Badger Creek above Cals Fork Gulch near Howard, CO (07093705)	Lat 38°45'25", long 105°50'52", in NW ¹ /4SW ¹ /4 sec.12, T.15 S., R.76 W., Park County, 1.0 mi upstream from Cals Fork Gulch, and 21 mi north of Howard. Drainage area is 18.0 mi ² .	1986-93	no peaks during year			^a 1987	6.34	183
Wagon Tongue Creek near Howard, CO (07093710)	Lat 38°44'20", long 105°50'21", in SW ¹ /4SE ¹ /4 sec.13, T.15 S., R.76 W., Park County, 0.1 mi upstream from county road bridge, 0.8 mi upstream from mouth, and 20 mi north of Howard. Drainage area is 7.85 mi ² .	1986-93	no peaks during year			no peaks during year		
Long Gulch near Howard, CO (07093720)	Lat 38°42'32", long 105°50'27", in SE ¹ /4SE ¹ /4 sec.25, T.15 S., R.76 W., Park County, 0.3 mi upstream from mouth, and 18 mi north of Howard. Drainage area is 36.5 square mi ² .	1986-93	no peaks during year			no peaks during year		
Gribbles Creek near Howard, CO (07093745)	Lat 38°39'45", long 105°45'38", in SE ¹ /4SE ¹ /4 sec.16, T.51 N., R.75 W., Fremont County, 1.4 mi upstream from County Road 2, 3.5 mi upstream from mouth, and 14.3 mi north of Howard. Drainage area is 5.76 mi ² .	1986-93	no peaks during year			no peaks during year		
B-Ditch Tributary blw Hwy 115 at Fort Carson, CO (07105770)	Lat 38°45'53", long 104°48'39", in NW ¹ /4NW ¹ /4 sec.8, T.15 S., R.66 W., El Paso County, 200 ft south of Academy Ave, 0.2 mi downstream from Hwy 115, and 3.7 mi upstream from the mouth. Drainage area is 0.49 mi ² .	1993	8-10-93	3.58	28.7	8-10-93	3.58	28.7
Clover Ditch Tribu- tary at Hwy 115 at Fort Carson, CO (07105810)	Lat 38°45'07", long 104°48'41", in NW ¹ /4NW ¹ /4 sec.17, T.15 S., R.66 W., El Paso County, 3.4 mi south of intersection of High- way 115 and Lake Avenue near Colorado Springs. Drainage area is 1.46 mi ² .	1993	no peaks during year			no peaks during year		
St. Charles River at Burnt Mill, CO (07107500)	Lat 38°03'-06", long 104°47'35", in NE ¹ /4NE ¹ /4 sec.17, T.23 S., R.66 W., Pueblo County, 5.9 mi downstream from North St. Charles River. Drainage areas 166 mi ² .	1923-33, 1978-93 Discontinued	5-18-93	2.66	403	7-22-25	22.13	21,800
Big Arroyo near Thatcher, CO (07120620)	Lat 37°33'17", long 104°01'15", in NW ¹ /4NW ¹ /4 sec.4, T.29 S., R.59 W., Las Animas County, 2.4 mi from U.S. Route 350, 4.8 mi east of Thatcher, and 3.2 mi upstream from mouth. Drainage area is 15.5 mi ² .	1983-90 ^d 1991-93	no peaks during year			7-28-85	4.86	1,500
Lockwood Canyon Creek near Thatcher, CO (07126390)	Lat 37°29'37", long 103°29'37", in SE ¹ /4NW ¹ /4 sec.30, T.29 S., R.57 W., Las Animas County, on right bank 0.6 mi downstream from Sharp Ranch, 5.3 mi upstream from mouth, and 16 mi southeast of Thatcher. Drain- age area is 41.4 mi ² .	1983-93 ^d	no peaks during year			6-08-92	7.04	332
Red Rock Canyon Creek at mouth, near Thatcher, CO (07126415)	Lat 37°30'54", long 103°43'25", in NW ¹ /4SE ¹ /4 sec.18, T.29 S., R.56 W., Las Animas County, 200 ft downstream from Welsh Canyon, 0.3 mi upstream from mouth, and 21 mi east of Thatcher. Drainage area is 48.8 mi ² .	1983-90 ^d 1991-93	a	7.40	351	5-22-87	10.09	1,530

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES
 MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS--Continued

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		Water year 1993 maximum			Period of record maximum			
Station name and number	Location and drainage area	Period of record	Date	Gage height ft	Dis- charge (ft ³ /s)	Date	Gage height (ft)	Dis- charge (ft ³ /s)
ARKANSAS RIVER BASIN--Continued								
Chacuaco Creek near mouth, near Timpas, CO (07126470)	Lat 37°32'38", long 103°37'54", in SE ¹ / ₄ SE ¹ / ₄ sec. 1, T.28 S, R.56W, Las Animas County, at Red Rocks Ranch, 1.5 mi upstream from mouth, 3.3 mi upstream from Bent Canyon Creek, and 21 mi southeast of Timpas. Drainage area is 424 mi ² .	1983-92 ^d 1993-	a	3.82	0.4	7-8-92	16.22	11,800
Bent Canyon Creek at mouth near Timpas, CO (07126480)	Lat 37°35'19", long 103°38'51", in SE ¹ / ₄ SE ¹ / ₄ sec.23, T.28 S., R.65 W., Las Animas County 0.5 mi upstream from mouth, 0.6 mi southwest of Rourk Ranch house, 0.9 mi upstream from Iron Canyon, and 17 mi southeast of Timpas. Drainage area is 56.2 mi ² .	1983-90 ^d 1991-93	no peaks during year			8-21-84	12.56	2,640

- * Peak stage did not reach the bottom of the gage.
- a Month or day of occurrence is unknown or not exact.
- b At different datum.
- c Not determined.
- d Previously operated as a continuous-record gaging station.
- e Station out of operation for 1992-93, highway construction.
- f Maximum observed.

384533104495101 B-DITCH RAIN GAGE BELOW HWY 115, AT FORT CARSON, CO

LOCATION.--Lat 38°45'33, long 104°49'51", in NW¹/4SW¹/4 sec.7, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003, approximately 1.0 mile west of intersection of Hwy. 115 and Academy Blvd., near Colorado Springs, Colorado.

DRAINAGE AREA.--0.49 mi² at B-Ditch Tributary below Hwy 115, at Fort Carson (07105770).

PRECIPITATION RECORDS

PERIOD OF RECORD.--June to September 1993.

GAGE.--Tipping-bucket rain gage and electronic-data logger. Elevation of gage is 6,410 ft above sea level, from topographic map.

REMARKS.--Records good. Station is operated in conjunction with partial-record station 07105770, B-Ditch Tributary blw Hwy 115 at Fort Carson (published in 'Crest-stage partial-record stations' section of this report).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall during period June to September, 1.11 inches, Aug. 10, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall during period June to September, 1.11 inches, Aug. 10.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	.00	.40	.17
2	---	---	---	---	---	---	---	---	---	.00	.18	.17
3	---	---	---	---	---	---	---	---	---	.00	.12	.00
4	---	---	---	---	---	---	---	---	---	.00	.20	.00
5	---	---	---	---	---	---	---	---	---	.03	.19	.58
6	---	---	---	---	---	---	---	---	---	.00	.09	.58
7	---	---	---	---	---	---	---	---	---	.00	.09	.08
8	---	---	---	---	---	---	---	---	---	.00	.02	.00
9	---	---	---	---	---	---	---	---	---	.00	.13	.00
10	---	---	---	---	---	---	---	---	---	.00	1.11	.18
11	---	---	---	---	---	---	---	---	---	.10	.02	.00
12	---	---	---	---	---	---	---	---	---	.22	.00	.00
13	---	---	---	---	---	---	---	---	---	.00	.00	.20
14	---	---	---	---	---	---	---	---	---	.06	.00	.08
15	---	---	---	---	---	---	---	---	---	.07	.00	.00
16	---	---	---	---	---	---	---	---	---	.00	.00	.00
17	---	---	---	---	---	---	---	---	.18	.00	.00	.00
18	---	---	---	---	---	---	---	---	.30	.32	.28	.00
19	---	---	---	---	---	---	---	---	.00	.03	.00	.00
20	---	---	---	---	---	---	---	---	.20	.00	.00	.00
21	---	---	---	---	---	---	---	---	.00	.00	.00	.00
22	---	---	---	---	---	---	---	---	.00	.00	.00	.00
23	---	---	---	---	---	---	---	---	.00	.00	.00	.15
24	---	---	---	---	---	---	---	---	.00	.00	.00	.01
25	---	---	---	---	---	---	---	---	.00	.00	.00	.00
26	---	---	---	---	---	---	---	---	.00	.00	.00	.00
27	---	---	---	---	---	---	---	---	.00	.00	.32	.00
28	---	---	---	---	---	---	---	---	.00	.28	.10	.00
29	---	---	---	---	---	---	---	---	.00	.00	.00	.00
30	---	---	---	---	---	---	---	---	.00	.00	.24	.00
31	---	---	---	---	---	---	---	---	---	.00	.02	---
TOTAL	---	---	---	---	---	---	---	---	---	1.11	3.51	2.20

384519104483601 CLOVER DITCH TRIBUTARY RAIN GAGE AT HWY 115, AT FORT CARSON, CO

LOCATION.--Lat 38°45'19, long 104°48'36", in NW¹/4SW¹/4 sec.8, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003, 3.2 miles south of intersection of Hwy. 115 and Lake Avenue, near Colorado Springs, Colorado.

DRAINAGE AREA.--1.46 mi² at Clover Ditch Tributary at Hwy 115, at Fort Carson (07105810).

PRECIPITATION RECORDS

PERIOD OF RECORD.--June to September 1993.

GAGE.--Tipping-bucket rain gage and electronic-data logger. Elevation of gage is 5,950 ft above sea level, from topographic map.

REMARKS.--Records good. Station is operated in conjunction with partial-record station 07105810, Clover Ditch Tributary at Hwy 115 at Fort Carson (published in 'Crest-stage partial-record stations' section of this report).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily rainfall during period June to September, 0.75 inch, Aug. 10, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum daily rainfall during period June to September, 0.75 inch, Aug. 10.

RAINFALL ACCUMULATED (INCHES), WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	.00	.49	.10
2	---	---	---	---	---	---	---	---	---	.00	.12	.14
3	---	---	---	---	---	---	---	---	---	.00	.10	.00
4	---	---	---	---	---	---	---	---	---	.00	.09	.00
5	---	---	---	---	---	---	---	---	---	.02	.14	.95
6	---	---	---	---	---	---	---	---	---	.11	.06	.52
7	---	---	---	---	---	---	---	---	---	.00	.07	.05
8	---	---	---	---	---	---	---	---	---	.00	.00	.00
9	---	---	---	---	---	---	---	---	---	.00	.11	.00
10	---	---	---	---	---	---	---	---	---	.00	.75	.19
11	---	---	---	---	---	---	---	---	---	.20	.02	.00
12	---	---	---	---	---	---	---	---	---	.22	.01	.00
13	---	---	---	---	---	---	---	---	---	.01	.00	.11
14	---	---	---	---	---	---	---	---	---	.01	.00	.03
15	---	---	---	---	---	---	---	---	---	.09	.00	.00
16	---	---	---	---	---	---	---	---	---	.00	.02	.00
17	---	---	---	---	---	---	---	---	.11	.00	.00	.00
18	---	---	---	---	---	---	---	---	.16	.47	.35	.00
19	---	---	---	---	---	---	---	---	.00	.01	.00	.00
20	---	---	---	---	---	---	---	---	.13	.01	.00	.00
21	---	---	---	---	---	---	---	---	.00	.00	.01	.00
22	---	---	---	---	---	---	---	---	.00	.00	.00	.00
23	---	---	---	---	---	---	---	---	.01	.00	.00	.06
24	---	---	---	---	---	---	---	---	.01	.00	.02	.00
25	---	---	---	---	---	---	---	---	.06	.00	.00	.00
26	---	---	---	---	---	---	---	---	.00	.00	.02	.00
27	---	---	---	---	---	---	---	---	.00	.00	.26	.00
28	---	---	---	---	---	---	---	---	.00	.25	.07	.00
29	---	---	---	---	---	---	---	---	.00	.00	.00	.00
30	---	---	---	---	---	---	---	---	.00	.00	.23	.00
31	---	---	---	---	---	---	---	---	---	.00	.05	---
TOTAL	---	---	---	---	---	---	---	---	---	1.40	2.99	2.15

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
06614800 MICHIGAN RIVER NEAR CAMERON PASS, CO (LAT 40 29 46N LONG 105 51 52W)									
OCT 1992					APR 1993				
29...	1215	0.60	55	4.0	30...	1120	0.41	59	1.0
DEC					JUN				
07...	1300	0.40	54	0.5	09...	0930	11.6	46	1.0
JAN 1993					JUL				
25...	1230	0.29	56	1.0	07...	1235	11.1	36	5.5
MAR					AUG				
16...	1300	0.43	55	1.0	24...	1345	2.05	44	13.5
06699005 TARRYALL CREEK BELOW ROCK CREEK NEAR JEFFERSON, CO (LAT 39 27 13N LONG 105 41 43W)									
OCT 1992					JUN 1993				
22...	1600	9.60	149	7.0	22...	1030	184	196	11.5
NOV					JUL				
16...	1530	22.8	172	0.5	07...	1100	77.1	192	13.5
DEC					22...	1100	73.8	--	12.5
16...	1300	--	212	0.0	AUG				
MAR 1993					17...	1045	37.1	117	12.5
22...	1030	--	165	0.0	SEP				
APR					20...	0940	24.2	128	5.0
27...	1200	24.5	176	9.5					
MAY									
25...	1500	98.1	188	13.5					
06709000 PLUM CREEK NEAR SEDALIA, CO (LAT 39 26 18N LONG 104 58 57W)									
OCT 1992					MAY 1993				
22...	1150	8.21	379	12.5	24...	1318	22.4	--	18.0
NOV					JUN				
09...	1235	16.1	360	9.5	29...	1410	5.46	325	28.0
DEC					JUL				
08...	1245	16.7	408	--	09...	1250	1.32	388	25.5
FEB 1993					23...	1000	1.29	--	19.0
02...	1530	16.2	381	5.0	AUG				
MAR					12...	1345	0.38	400	19.0
24...	1110	14.5	369	14.5	SEP				
APR					14...	1640	5.40	406	19.5
01...	1018	21.1	--	15.0					
20...	1324	37.8	--	14.5					
06709530 PLUM CREEK AT TITAN ROAD NEAR LOUVIERS, CO (LAT 39 30 27N LONG 105 01 23W)									
OCT 1992					MAR 1993				
22...	0950	6.98	405	10.0	01...	1435	15.2	403	8.0
NOV					23...	1340	12.1	394	17.0
09...	0915	15.9	382	3.5	APR				
DEC					20...	1100	39.0	--	11.0
08...	1130	10.1	437	0.5	MAY				
FEB 1993					24...	1048	24.7	--	17.5
02...	1340	16.6	368	1.0	JUN				
					11...	1245	9.75	345	23.0
					29...	1130	3.51	345	24.0
06710245 SOUTH PLATTE RIVER AT UNION AVE AT ENGLEWOOD, CO (LAT 39 37 52N LONG 105 00 50W)									
OCT 1992					MAY 1993				
23...	1000	26.0	771	10.0	17...	1405	98.8	438	14.0
NOV					18...	1110	240	414	16.5
25...	1310	33.6	647	4.5	JUN				
DEC					17...	1250	144	425	17.5
22...	1315	27.6	906	3.5	JUL				
FEB 1993					22...	1250	58.1	850	21.0
01...	1320	77.3	828	8.0	AUG				
MAR					19...	0930	41.7	553	17.5
04...	1345	63.8	685	9.5	SEP				
APR					24...	1340	36.6	625	20.0
16...	1005	95.2	456	9.0	27...	1215	34.8	742	17.5

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
06710385 BEAR CREEK ABOVE EVERGREEN (LAT 39 37 58N LONG 105 19 59W)									
OCT 1992					MAY 1993				
21...	0845	16.7	61	3.0	04...	0900	32.9	73	5.5
NOV					17...	0840	54.9	62	7.0
24...	1300	10.7	66	0.0	JUN				
DEC					02...	1330	48.6	53	14.5
29...	0830	10.6	69	0.0	14...	1025	35.2	53	11.5
FEB 1993					JUL				
02...	0835	11.0	72	0.0	13...	1245	41.6	48	14.5
MAR					AUG				
02...	0850	11.0	76	0.0	16...	1115	21.7	55	13.5
25...	1115	9.38	78	5.5	SEP				
APR					14...	0940	24.0	58	3.0
12...	1035	18.3	92	4.5					
06710605 BEAR CREEK ABOVE BEAR CREEK LAKE NEAR MORRISON, CO (LAT 39 39 08N LONG 105 10 23W)									
OCT 1992					MAY 1993				
21...	1045	6.17	251	8.5	12...	1300	16.9	204	13.5
NOV					JUN				
25...	0900	9.96	243	0.0	07...	1145	19.4	145	13.5
DEC					JUL				
29...	1340	10.9	265	1.0	13...	0945	17.5	127	16.0
FEB 1993					AUG				
02...	1030	12.7	258	0.5	16...	1320	5.21	166	19.5
MAR					SEP				
05...	1135	11.0	281	3.5	14...	1130	14.8	167	8.5
APR									
12...	1240	7.43	299	7.5					
06712000 CHERRY CREEK NEAR FRANKTOWN, CO (LAT 39 21 21N LONG 104 45 46W)									
OCT 1992					MAY 1993				
23...	1615	2.50	215	12.0	19...	1055	5.41	244	14.0
NOV					JUN				
24...	1010	3.47	--	0.0	17...	0950	2.41	221	14.0
DEC					JUL				
10...	1315	5.27	209	1.5	15...	1230	2.71	178	23.0
FEB 1993					AUG				
04...	1445	8.06	260	1.5	19...	1115	6.54	158	17.0
MAR					SEP				
01...	0945	16.7	204	1.0	17...	1335	2.39	200	17.5
19...	1030	13.3	215	4.5					
APR									
19...	1305	10.6	233	10.0					
393109104464500 CHERRY CREEK NEAR PARKER, CO (LAT 39 31 09N LONG 104 46 45W)									
OCT 1992					JUN 1993				
22...	1345	1.74	589	15.5	03...	1420	10.6	465	22.0
NOV					11...	1025	4.28	531	18.0
24...	1215	2.91	563	6.5	17...	1130	2.17	572	13.0
DEC					JUL				
10...	1045	7.35	477	3.5	01...	0930	2.61	551	15.0
FEB 1993					09...	1030	1.83	570	16.0
04...	1300	13.1	370	3.5	15...	1405	1.55	550	23.0
26...	0940	15.6	370	1.5	23...	1025	1.67	590	14.5
26...	1120	19.8	350	3.5	28...	1300	1.05	621	21.0
MAR					AUG				
31...	1550	18.4	359	10.0	06...	1130	1.41	584	17.5
APR					09...	1210	1.36	577	19.0
16...	1520	12.3	432	14.0	19...	1405	1.22	556	19.0
MAY					27...	1425	1.29	565	15.0
07...	1150	7.13	519	18.0	SEP				
12...	1620	6.19	533	19.0	10...	1230	1.37	593	17.0
19...	1245	7.53	504	21.0	17...	1530	1.33	614	15.5
27...	0855	6.57	491	14.0	24...	1430	1.52	609	16.0
06713000 CHERRY CREEK BELOW CHERRY CREEK LAKE, CO (LAT 39 39 12N LONG 104 51 41W)									
FEB 1993					MAY 1993				
11...	1415	6.37	1010	6.0	14...	1050	17.2	909	14.0
18...	1145	12.9	1010	6.0	JUN				
APR					16...	0905	2.97	923	17.0
13...	1440	22.6	925	10.0	JUL				
					01...	1200	4.58	914	22.0

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
06713300 CHERRY CREEK AT GLENDALE, CO (LAT 39 42 22N LONG 104 56 13W)									
OCT 1992					APR 1993				
23...	1250	4.72	1510	14.5	12...	1415	27.9	1000	11.0
NOV					MAY				
13...	1240	6.15	1440	9.5	11...	1320	6.66	1230	19.0
DEC					25...	1350	13.4	950	15.0
11...	1205	6.01	1680	7.5	JUN				
JAN 1993					15...	1235	12.3	1070	22.0
14...	1320	3.46	1620	4.5	JUL				
14...	1320	3.46	1620	4.5	14...	1115	15.5	948	22.0
FEB					AUG				
16...	1400	--	1270	0.5	16...	1530	7.01	1210	25.5
19...	1405	29.6	1090	7.5	SEP				
19...	1555	33.5	1070	7.0	08...	0840	13.6	725	13.0
MAR									
16...	1505	8.20	1230	12.0					
06713500 CHERRY CREEK AT DENVER, CO (LAT 39 44 58N LONG 105 00 08W)									
OCT 1992					JUL 1993				
09...	1115	15.5	1010	13.0	15...	1045	25.6	--	21.5
NOV					15...	1130	26	936	21.5
24...	1420	13.5	1230	7.5	28...	1030	17	1180	19.0
DEC					AUG				
14...	1240	11.2	1280	7.0	05...	1630	348	190	21.0
FEB 1993					05...	1930	168	403	20.5
09...	1340	11.0	1240	11.5	06...	1045	21	958	20.0
MAR					10...	1130	15.6	1120	23.5
12...	1100	33	2310	8.5	10...	1150	16	1120	23.5
31...	1110	16.2	990	13.0	10...	2210	161	658	21.0
APR					16...	1105	14.2	1070	21.0
12...	1125	34	997	11.5	24...	1450	15	1110	27.0
12...	1130	34	997	11.5	26...	1455	15.1	--	26.5
12...	1145	33.8	1010	11.5	30...	0730	21	943	15.5
28...	1000	10.1	1100	12.5	SEP				
28...	1020	10	1100	12.5	02...	1130	15	941	17.0
MAY					13...	1250	153	--	9.0
14...	1140	27	1050	19.0	13...	1255	172	362	9.0
14...	1145	27	1050	19.0	21...	0905	18.9	912	13.0
17...	1400	74	560	15.5					
19...	1525	20	1070	21.0					
20...	1035	42.7	990	16.0					
25...	1535	20.1	934	16.0					
JUN									
02...	0855	21.9	--	16.5					
02...	0920	22	1100	16.5					
02...	0925	22	1100	16.5					
17...	1315	17	1060	17.5					
30...	1145	19.5	--	23.0					
30...	1200	20	1150	23.0					
06714215 SOUTH PLATTE R AT 64TH AVE. COMMERCE CITY, CO (LAT 39 48 44N LONG 104 57 28W)									
OCT 1992					MAY 1993				
20...	1220	95.7	1040	14.0	07...	1150	12.7	1280	18.0
NOV					JUN				
18...	0800	9.80	1460	--	21...	1145	75.4	553	21.5
DEC					JUL				
16...	1000	15.0	1460	--	12...	1030	161	658	20.5
JAN 1993					AUG				
22...	0830	63.3	1130	--	17...	1030	110	715	21.0
FEB					SEP				
25...	0840	17.8	1130	--	27...	1200	10.3	1740	20.0
MAR									
25...	1005	43.4	988	--					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
394839104570300 SAND CREEK AT MOUTH NR COMMERCE CITY, CO (LAT 39 48 39N LONG 104 57 03W)									
JAN 1992					DEC 1992				
30...	1440	24.3	1630	8.5	17...	1200	12.4	2170	--
MAR					JAN 1993				
05...	0935	109	729	8.0	22...	1200	22.9	1780	--
18...	1410	24.0	1770	12.5	FEB				
APR					25...	1230	17.5	1750	--
17...	1400	79.7	1210	13.0	MAR				
MAY					25...	1330	13.7	1840	--
21...	0930	83.3	670	18.0	MAY				
JUN					07...	1340	71.8	950	19.0
01...	1340	60.0	1030	17.0	JUN				
JUL					21...	1435	48.0	869	24.0
14...	1300	46.0	1050	23.0	JUL				
OCT					12...	1250	56.3	862	21.5
20...	1000	16.6	1760	12.0	AUG				
NOV					17...	1150	39.8	995	22.5
18...	1150	15.3	1650	--	SEP				
					27...	1325	17.9	1650	17.5
06720820 BIG DRY CREEK AT WESTMINSTER, CO (LAT 39 54 20N LONG 105 02 04W)									
OCT 1992					JUN 1993				
19...	1450	2.23	1150	--	15...	1445	32.7	323	20.0
NOV					JUL				
19...	1110	1.38	1210	--	19...	1350	15.0	428	24.0
DEC					30...	0905	17.9	342	19.0
18...	1055	--	1170	0.5	AUG				
FEB 1993					16...	1400	19.1	329	23.5
22...	1300	6.83	1240	--	SEP				
MAR					20...	1120	4.14	796	15.0
22...	0935	1.00	1970	--					
MAY									
06...	1055	1.86	1600	15.0					
06720990 BIG DRY CREEK AT MOUTH NEAR FORT LUPTON, CO (LAT 40 04 09N LONG 104 49 52W)									
OCT 1992					APR 1993				
23...	1340	28.3	1440	13.5	29...	1410	37.0	1200	17.0
NOV					MAY				
05...	1350	38.2	1230	6.0	21...	1425	11.2	988	18.0
DEC					JUL				
02...	1310	21.2	1510	3.0	01...	1415	45.2	612	23.0
JAN 1993					AUG				
12...	1120	15.5	1540	0.0	04...	1015	64.0	826	17.5
MAR					SEP				
04...	1215	21.5	1510	7.5	27...	1410	55.9	1160	17.5
29...	1640	12.7	1100	5.5					
06721500 NORTH ST. VRAIN CREEK NEAR ALLENS PARK, CO (LAT 40 13 08N LONG 105 31 40W)									
OCT 1992					APR 1993				
14...	0930	11.2	22	3.5	29...	0900	20.1	28	1.5
NOV					MAY				
18...	1010	8.90	23	1.0	26...	1200	152	18	6.0
DEC					JUN				
17...	1355	6.77	22	0.0	23...	0845	343	14	4.5
JAN 1993					JUL				
20...	0920	8.10	26	0.0	27...	0815	120	14	8.0
FEB					AUG				
23...	1335	5.57	26	0.0	20...	0835	61.5	15	9.0
MAR					SEP				
24...	0940	6.14	27	1.0	20...	1220	46.6	17	7.0
06725450 ST. VRAIN CREEK BELOW LONGMONT, CO (LAT 40 09 29N LONG 105 00 53W)									
OCT 1992					APR 1993				
23...	1050	48.7	1340	12.0	26...	1305	43.9	1320	14.0
NOV					MAY				
04...	1105	49.5	1420	6.5	28...	1130	110	924	10.5
DEC					JUL				
01...	1115	40.6	1340	5.5	26...	1045	154	1290	22.0
FEB 1993					AUG				
01...	1230	50.6	1420	5.0	30...	1055	164	1380	16.5
MAR					SEP				
29...	1550	35.7	1010	5.0	30...	0855	77.8	1300	16.5

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
06726900 BUMMERS GULCH NEAR EL VADO, CO (LAT 40 00 42N LONG 105 20 53W)									
OCT 1992					MAY 1993				
08...	1230	0.24	520	6.0	04...	0950	0.75	429	7.0
21...	1245	0.17	586	11.0	JUN				
NOV					09...	0930	0.50	--	9.0
17...	1115	2.39	523	5.5	JUL				
DEC					13...	0900	0.15	492	12.5
15...	0930	0.35	493	1.5	AUG				
JAN 1993					13...	0920	0.07	558	12.5
19...	0940	0.36	502	--	SEP				
FEB					17...	1215	0.15	547	10.5
26...	0910	0.38	465	0.5					
MAR									
23...	0820	0.36	477	2.0					
06727500 FOURMILE CREEK AT ORODELL, CO (LAT 40 01 06N LONG 105 19 33W)									
OCT 1992					MAY 1993				
08...	1330	0.58	313	8.0	04...	1115	13.7	158	8.5
21...	1400	0.55	320	11.5	JUN				
NOV					09...	1045	12.4	93	9.0
17...	0825	0.92	305	1.5	JUL				
DEC					13...	1130	3.63	116	15.5
15...	1140	0.95	324	0.0	AUG				
JAN 1993					13...	1230	0.63	199	17.0
19...	1220	0.64	353	--	24...	1240	0.11	229	17.5
FEB					SEP				
26...	1025	1.17	361	0.0	17...	1325	1.35	207	12.0
MAR									
16...	--	--	--	--					
23...	0915	1.40	358	2.5					
06730200 BOULDER CREEK AT NORTH 75TH STREET NEAR BOULDER, CO (LAT 40 03 06N LONG 105 10 42W)									
OCT 1992					MAY 1993				
08...	1735	70.7	255	11.5	04...	1255	51.6	494	18.5
NOV					JUN				
13...	0930	40.6	775	14.5	09...	1300	93.3	329	18.0
DEC					JUL				
14...	0840	38.3	620	11.0	30...	0745	--	302	20.5
JAN 1993					AUG				
26...	1255	35.6	608	9.5	02...	1000	258	260	21.5
FEB					16...	1130	129	312	22.5
16...	1200	--	492	5.0	SEP				
26...	1310	33.6	560	8.5	21...	1100	57.1	446	17.0
MAR									
23...	1145	37.6	685	14.0					
06730500 BOULDER CREEK AT MOUTH, NEAR LONGMONT, CO (LAT 40 09 08N LONG 105 00 52W)									
OCT 1992					APR 1993				
23...	1250	47.9	922	12.5	26...	1545	61.2	689	14.0
NOV					MAY				
04...	1310	68.0	821	7.0	28...	1310	44.0	475	19.0
DEC					JUL				
01...	1335	60.5	702	4.5	26...	1135	24.1	980	20.5
FEB 1993					AUG				
01...	1450	35.3	622	5.5	30...	1410	24.1	1050	17.0
MAR					SEP				
29...	1450	52.7	970	5.0	30...	1115	69.9	823	13.5
06746095 JOE WRIGHT CREEK ABOVE JOE WRIGHT RESERVOIR, CO (LAT 40 32 24N LONG 105 52 56W)									
OCT 1992					JUN 1993				
29...	1430	2.59	64	1.5	09...	1310	42.0	47	3.5
DEC					14...	1245	68.3	30	4.5
08...	0833	0.80	--	0.0	JUL				
JAN 1993					07...	1630	56.4	41	8.5
25...	1630	0.41	56	0.0	AUG				
MAR					24...	1445	10.0	49	15.5
16...	1600	0.2	81	0.0					
APR									
29...	1605	1.01	79	0.0					

MISCELLANEOUS STATION ANALYSES

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06746110 JOE WRIGHT CREEK BELOW JOE WRIGHT RESERVOIR, CO (LAT 40 33 43N LONG 105 52 09W)									
OCT 1992					MAY 1993				
30...	0930	0.69	39	1.0	05...	1630	0.64	63	0.5
DEC 08...	0930	0.18	43	0.0	JUN 09...	1340	47.9	47	3.0
JAN 1993					JUL 08...	1035	62.1	39	5.5
26...	0900	0.26	45	0.5	AUG 25...	1030	41.2	41	8.5
MAR 17...	0850	0.37	48	0.0					
07080980 ST. KEVIN GULCH ABOVE TEMPLE GULCH NEAR LEADVILLE, CO (LAT 39 17 29N LONG 106 22 07W)									
APR 1993					AUG 1993				
28...	1500	0.88	--	8.5	25...	1300	0.37	288	9.5
JUN 02...	1640	15	127	7.0	SEP 15...	1520	0.40	280	7.0
JUL 14...	0830	1.3	160	7.5					
29...	1030	0.67	215	8.0					
07093740 BADGER CREEK, UPPER STATION, NEAR HOWARD, CO (LAT 38 39 25N LONG 105 48 45W)									
OCT 1992					JUN 1993				
07...	1550	0.71	418	11.0	09...	1215	1.0	403	9.5
MAR 1993					30...	1340	0.42	399	25.5
31...	1240	4.5	445	4.0	JUL 20...	1145	0.19	399	23.0
APR 13...	1245	2.1	425	5.5	AUG 04...	1330	0.21	363	24.5
26...	1600	2.5	406	16.5	SEP 08...	1325	0.74	387	20.0
MAY 06...	1105	2.7	445	7.5					
07093775 BADGER CREEK, LOWER STATION, NEAR HOWARD, CO (LAT 38 28 02N LONG 105 41 34W)									
OCT 1991					OCT 1992				
02...	1545	5.3	1040	20.0	14...	1220	6.4	1060	12.0
NOV 05...	1105	4.8	1080	7.0	DEC 03...	1215	5.1	1090	4.5
DEC 17...	1500	5.8	1040	4.0	JAN 1993				
JAN 1992					13...	0930	3.0	1160	0.0
29...	0855	2.7	1130	0.0	FEB 26...	1240	3.8	1090	7.0
MAR 11...	1600	7.0	1040	11.0	APR 01...	0950	11	968	5.0
MAY 05...	1515	8.9	932	20.0	14...	0900	12	938	4.0
JUN 09...	1430	8.6	939	14.5	MAY 04...	1535	15	797	14.5
JUL 21...	1400	5.7	950	22.5	JUN 09...	1610	9.2	851	17.5
SEP 02...	0930	7.5	1030	10.5	JUL 20...	1515	5.1	963	20.0
					AUG 27...	0815	5.1	1050	12.5
07096250 FOURMILE CREEK BELOW CRIPPLE CREEK NEAR VICTOR, CO (LAT 38 39 52N LONG 105 13 37W)									
NOV 1992					MAY 1993				
09...	1130	7.0	365	6.0	24...	1240	33	276	14.5
DEC 09...	1120	7.1	365	1.0	JUN 01...	1215	54	230	17.0
JAN 1993					JUL 07...	1135	8.9	390	19.0
13...	1130	7.6	247	0.0	28...	1120	5.8	351	20.0
FEB 26...	1000	8.3	367	0.0	AUG 25...	1545	2.2	384	25.0
MAR 30...	1230	8.4	349	10.0					

MISCELLANEOUS STATION ANALYSES

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07096500 FOURMILE CREEK NEAR CANON CITY, CO (LAT 38 26 11N LONG 105 11 27W)									
OCT 1991					AUG 1992				
15...	1305	24	1040	14.5	19...	1250	46	915	20.5
DEC 12...	1230	13	1340	6.0	OCT 09...	1130	24	964	12.0
JAN 1992					DEC 18...	1140	12	1480	5.0
28...	1315	23	--	10.0	JAN 1993				
FEB 21...	1210	16	1040	10.5	21...	1415	18	1150	9.0
MAR 25...	0920	--	1180	--	MAR 04...	1130	11	1330	8.5
30...	1210	24	1020	13.5	24...	1215	3.5	1850	16.0
MAY 01...	0915	33	1020	12.0	MAY 11...	0850	18	1170	10.5
22...	1115	--	733	--	JUL 01...	1025	14	1310	17.0
26...	1200	60	647	15.0	28...	0905	13	1170	16.0
JUN 26...	1210	75	--	19.0	AUG 26...	0830	14	1040	18.0
JUL 28...	1205	36	831	21.5					
07099060 BEAVER CREEK ABOVE HIGHWAY 115 NEAR PENROSE, CO (LAT 38 29 21N LONG 104 59 49W)									
NOV 1992					MAY 1993				
19...	1300	2.0	--	6.0	11...	1200	2.8	113	10.5
MAR 1993					27...	1040	91	94	13.5
15...	1335	11	159	5.5	SEP 14...	1050	0.04	122	11.0
07099230 TURKEY CREEK ABOVE TELLER RESERVOIR NEAR STONE CITY, CO (LAT 38 27 37N LONG 104 49 19W)									
DEC 1992					JUN 1993				
23...	0900	0.13	930	2.0	04...	1120	0.14	913	12.5
JAN 1993					JUL 20...	0945	0.71	818	15.5
28...	1025	0.21	894	3.5					
MAR 23...	0950	0.23	939	5.0					
07099235 TURKEY CREEK NEAR STONE CITY, CO (LAT 38 26 27N LONG 104 49 31W)									
JAN 1992					OCT 1992				
14...	1130	0.01	--	0.0	28...	1145	0.02	1910	10.5
FEB 27...	1055	0.01	1290	6.0	DEC 23...	1055	0.10	2860	1.5
APR 21...	1320	0.02	1300	13.0	JAN 1993				
MAY 18...	1235	0.02	1450	13.5	28...	1305	0.26	2580	3.0
JUL 1992					MAR 05...	1158	0.22	2430	7.0
01...	1255	1.5	2570	22.5	MAY 24...	0945	0.05	1880	14.5
AUG 06...	1130	0.09	2430	--	JUL 19...	1220	0.02	1670	22.5
SEP 03...	1130	0.04	2320	17.0	SEP 16...	1015	0.02	1520	12.5
07103703 CAMP CREEK AT GARDEN OF THE GODS, CO (LAT 38 52 37N LONG 104 52 20W)									
MAY 1992					AUG 1992				
20...	1230	0.26	228	19.5	11...	1435	0.02	325	23.0
27...	1315	0.23	252	8.0	24...	1525	0.20	197	14.0
JUN 02...	1530	0.63	257	20.0	SEP 04...	1310	0.14	350	19.5
11...	1150	2.0	215	13.0	16...	1200	0.24	345	17.5
18...	1210	0.80	242	17.5	28...	1225	0.01	335	14.0
24...	1335	0.63	249	20.0	APR 1993				
JUL 01...	1330	0.77	262	19.0	21...	1210	0.31	257	12.0
09...	1215	0.33	290	20.0	MAY 11...	1035	0.12	260	12.0
20...	1310	0.12	315	16.5	JUN 02...	1130	0.05	260	20.0

MISCELLANEOUS STATION ANALYSES

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07103800 WEST MONUMENT CREEK AT AIR FORCE ACADEMY, CO (LAT 38 58 14N LONG 104 54 08W)									
OCT 1991					JUN 1992				
01...	1115	0.27	99	9.5	02...	1205	1.2	78	8.0
NOV					JUL				
12...	1115	0.14	98	3.5	06...	1305	0.08	92	15.5
12...	1225	0.13	92	3.5	APR 1993				
DEC					13...	1105	0.09	80	4.0
17...	1015	0.07	89	0.0	MAY				
JAN 1992					05...	1100	0.17	81	6.5
21...	1045	0.09	89	0.0	25...	0840	0.96	80	7.0
APR					JUN				
02...	1110	0.50	76	3.0	15...	0905	0.16	88	10.0
30...	1505	2.5	68	10.0					
07103980 COTTONWOOD CREEK AT WOODMEN ROAD NEAR COLO SPRINGS, CO (LAT 38 56 22N LONG 104 44 26W)									
OCT 1992					JUN 1993				
14...	1015	0.37	635	8.5	02...	1040	0.44	570	21.0
28...	1100	0.40	615	9.0	17...	1335	0.26	505	19.0
NOV					24...	1555	0.25	595	23.0
16...	1120	0.53	645	8.5	JUL				
DEC					06...	1555	0.22	550	20.5
16...	1035	0.34	627	2.0	20...	1335	1.1	530	19.5
JAN 1993					22...	1320	0.44	545	26.5
22...	1125	0.43	580	4.0	26...	1220	0.36	540	25.5
MAR					29...	1440	0.24	560	26.5
05...	1225	2.2	453	5.0	AUG				
24...	1010	0.80	544	12.0	11...	1125	0.68	530	24.0
APR					26...	1140	0.38	555	22.5
21...	1115	0.62	572	13.0	SEP				
MAY					14...	1055	0.74	630	15.0
14...	1305	0.24	518	18.5					
07103990 COTTONWOOD CREEK AT MOUTH, AT PIKEVIEW, CO (LAT 38 55 41N LONG 104 38 35W)									
OCT 1991					OCT 1992				
02...	1025	3.5	594	14.0	01...	1025	4.3	640	13.0
NOV					NOV				
14...	1120	3.6	626	8.5	06...	1210	5.0	--	10.0
DEC					DEC				
17...	1330	2.1	635	1.0	23...	1330	5.4	582	0.0
JAN 1992					JAN 1993				
22...	1010	2.0	695	1.0	22...	1400	5.0	647	6.0
FEB					26...	1130	6.0	581	0.0
25...	1515	4.7	601	7.0	MAR				
MAR					10...	1025	3.0	611	3.5
10...	1135	13	496	1.0	APR				
APR					15...	0955	3.5	618	6.5
02...	1415	3.7	600	12.0	26...	1510	2.7	--	19.5
20...	1700	3.0	606	17.0	MAY				
MAY					05...	0755	2.8	598	9.0
01...	1215	2.8	581	23.0	25...	1030	5.0	516	13.0
JUN					JUN				
02...	1320	4.7	572	24.0	15...	1130	3.4	546	25.0
JUL					29...	1430	2.7	--	28.5
07...	1520	2.5	568	22.5	JUL				
23...	1220	3.6	581	24.5	22...	1050	5.6	539	22.0
SEP					AUG				
09...	1340	3.8	615	23.5	12...	0940	4.0	527	18.0
					SEP				
					08...	1130	6.5	481	19.0
07105000 BEAR CREEK NEAR COLORADO SPRINGS, CO (LAT 38 49 21N LONG 104 53 17W)									
OCT 1992					MAY 1993				
14...	1150	0.08	147	9.0	11...	1205	0.21	113	9.0
28...	1215	0.13	118	8.5	JUN				
NOV					02...	1215	0.27	115	11.5
16...	1230	0.07	127	6.0	10...	1210	0.24	109	10.0
DEC					JUL				
16...	1220	0.19	108	2.0	08...	1040	0.11	130	12.0
JAN 1993					20...	1450	0.15	129	13.5
25...	1200	0.37	94	0.5	AUG				
MAR					11...	1345	1.3	100	14.5
05...	1225	0.36	97	3.0	26...	1445	0.21	125	14.0
24...	1200	0.32	100	6.0	SEP				
APR					15...	1100	1.0	92	8.0
21...	1345	0.24	115	8.0					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
07105490 CHEYENNE CREEK AT EVANS AVE AT COLORADO SPRINGS, CO (LAT 38 47 26N LONG 104 51 49W)									
OCT 1992					MAY 1993				
14...	1330	0.48	147	10.5	11...	1335	3.2	89	9.5
28...	1300	0.63	142	10.0	JUN				
NOV					02...	1310	2.4	105	13.5
16...	1320	1.4	150	6.0	JUL				
DEC					08...	1240	1.0	148	16.5
16...	1300	0.44	159	2.5	20...	1545	0.54	146	17.0
JAN 1993					AUG				
21...	1245	1.8	142	2.0	11...	1510	3.4	110	17.5
MAR					26...	1615	0.54	--	15.5
05...	1540	0.56	156	5.0	SEP				
24...	1320	0.62	147	9.0	15...	1155	0.35	165	13.0
APR									
21...	1500	1.6	171	10.5					
07105900 JIMMY CAMP CREEK AT FOUNTAIN, CO (LAT 38 41 04N LONG 104 41 17W)									
OCT 1992					MAY 1993				
13...	1130	2.8	2480	3.0	04...	0905	2.4	2300	10.0
NOV					JUN				
17...	1145	2.1	2610	9.5	09...	1140	2.0	2210	17.5
DEC					JUL				
15...	1630	1.9	2590	5.0	21...	0750	1.8	2690	14.5
JAN 1993					AUG				
21...	1010	1.6	2520	4.0	09...	1615	0.83	2560	25.0
FEB					SEP				
24...	0920	1.9	2770	4.0	14...	1025	1.4	2810	11.0
APR									
07...	1525	1.5	2540	12.0					
07105945 ROCK CREEK ABOVE FORT CARSON RESERVATION, CO (LAT 38 42 26N LONG 104 50 47W)									
OCT 1992					MAY 1993				
13...	1240	0.30	163	12.0	04...	1110	3.5	102	8.0
NOV					JUN				
17...	1035	0.38	153	4.0	09...	1335	1.7	120	13.0
DEC					JUL				
15...	1440	0.48	149	1.0	21...	0905	0.30	150	13.5
JAN 1993					AUG				
21...	1345	0.36	142	1.0	06...	1105	0.13	156	15.5
FEB					SEP				
24...	1205	0.77	150	1.0	14...	1225	0.25	166	10.5
APR									
06...	1525	2.8	126	3.0					
07108900 ST. CHARLES RIVER AT VINELAND, CO (LAT 38 14 44N LONG 104 29 09W)									
OCT 1992					JUN 1993				
06...	1200	6.0	--	14.5	01...	1040	361	319	16.5
NOV					07...	0815	182	472	16.5
13...	1230	14	1990	7.0	14...	1015	98	715	16.5
JAN 1993					JUL				
06...	1255	12	2030	2.0	08...	1045	18	1880	20.0
FEB					15...	1100	95	938	17.0
19...	1230	14	2030	8.0	AUG				
APR					04...	1150	17	2120	21.5
07...	1345	183	417	8.0	SEP				
MAY					09...	1000	21	1550	16.0
05...	1300	182	391	13.0	16...	1200	12	2260	18.0
18...	1440	811	--	13.5					
07116500 HUERFANO RIVER NEAR BOONE, CO (LAT 38 13 33N LONG 104 15 40W)									
NOV 1992					MAY 1993				
13...	1430	4.6	4090	11.5	05...	1100	145	1460	15.0
DEC					JUN				
11...	1300	20	2670	3.5	01...	1250	517	767	22.5
JAN 1993					14...	0900	18	2630	15.5
06...	1045	13	3140	0.0	30...	1225	0.40	5100	30.5
27...	1135	73	1680	1.5	JUL				
FEB					13...	1110	64	--	22.0
19...	1045	16	3520	0.0	AUG				
MAR					04...	1010	2.2	3990	19.0
10...	1305	16	3160	8.0	SEP				
APR					01...	1200	1.9	3890	27.5
07...	1200	24	3010	13.0					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
07119500 APISHAPA RIVER NEAR FOWLER, CO (LAT 38 05 28N LONG 103 58 52W)									
OCT 1992					MAY 1993				
09...	1520	6.6	2000	15.0	05...	1115	34	1420	15.0
DEC					JUN				
08...	1350	4.0	2970	6.5	22...	1140	22	1050	21.0
JAN 1993					JUL				
12...	1305	3.4	2990	5.0	19...	1155	35	990	23.0
26...	1340	3.1	2960	9.0	AUG				
MAR					09...	1350	9.7	1470	25.0
03...	1000	2.5	2990	8.0	SEP				
APR					10...	1305	21	1340	19.5
08...	1325	37	1070	11.0					
07121500 TIMPAS CREEK AT MOUTH NEAR SWINK, CO (LAT 38 00 10N LONG 103 39 18W)									
OCT 1992					MAY 1993				
14...	1130	102	1680	12.5	06...	1220	75	1780	16.5
NOV					JUN				
13...	1205	125	1520	5.5	11...	1245	43	1860	20.0
DEC					JUL				
02...	1500	20	3130	8.0	09...	1045	55	1440	20.0
JAN 1993					AUG				
12...	1620	15	3210	5.0	12...	1115	41	1940	21.0
MAR					SEP				
05...	1040	21	3610	7.5	09...	1035	112	1540	16.5
APR									
02...	1145	50	1710	12.5					
07122400 CROOKED ARROYO NEAR SWINK, CO (LAT 37 58 56N LONG 103 35 52W)									
OCT 1992					MAY 1993				
14...	1355	11	2000	15.0	06...	1435	11	2020	19.0
NOV					JUN				
13...	1350	15	1590	7.5	11...	1015	9.4	2190	15.0
DEC					JUL				
02...	1245	4.6	3020	9.5	09...	0910	15	1380	18.5
JAN 1993					AUG				
12...	1430	2.5	3130	7.0	12...	1305	16	1660	22.0
MAR					SEP				
05...	1225	2.0	3250	11.0	09...	1245	16	1590	18.5
APR									
02...	1315	3.8	2570	14.0					
07124200 PURGATOIRE RIVER AT MADRID, CO (LAT 37 07 46N LONG 104 38 20W)									
DEC 1992					JUN 1993				
01...	1600	31	460	0.0	04...	1340	309	184	13.0
FEB 1993					JUL				
02...	1330	17	482	5.0	13...	1210	191	248	19.5
25...	1125	21	505	4.0	AUG				
APR					11...	1040	80	300	19.5
09...	1155	98	394	8.5	SEP				
MAY					08...	1225	109	256	17.5
06...	1200	97	290	13.0					
20...	1315	235	220	15.5					
07124410 PURGATOIRE RIVER BELOW TRINIDAD LAKE, CO (LAT 37 08 37N LONG 104 32 49W)									
FEB 1993					JUL 1993				
02...	1530	0.24	512	4.0	13...	1340	287	263	18.0
25...	1330	0.11	518	3.5	AUG				
APR					11...	1220	0.20	287	19.0
09...	1310	0.07	490	11.0	SEP				
MAY					08...	1445	120	280	18.0
06...	1410	9.0	300	12.5					
JUN									
24...	1315	314	270	16.0					

MISCELLANEOUS STATION ANALYSES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)	DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE WATER (DEG C)
07126485 PURGATOIRE RIVER AT ROCK CROSSING NR TIMPAS, CO (LAT 37 37 03N LONG 103 35 47W)									
OCT 1992					APR 1993				
29...	1445	27	3160	11.5	15...	1600	208	1030	13.5
NOV					MAY				
20...	1200	39	3370	5.0	26...	1530	141	750	21.5
JAN 1993					JUN				
13...	1630	37	3530	0.0	24...	1810	37	1950	25.0
FEB					JUL				
24...	1430	41	3350	7.0	29...	1600	21	3620	28.0
MAR					SEP				
25...	1530	81	1870	16.0	28...	1530	57	2570	19.0
07133000 ARKANSAS RIVER AT LAMAR, CO (LAT 38 06 24N LONG 102 37 04W)									
OCT 1992					MAY 1993				
20...	1610	4.1	3910	21.0	05...	1100	8.6	4020	17.0
NOV					JUN				
16...	1620	3.0	4060	14.0	09...	1025	8.3	4110	17.5
DEC					JUL				
16...	1205	23	4290	4.0	07...	1115	453	1890	21.0
JAN 1993					AUG				
27...	1230	18	4330	7.5	11...	1115	28	2700	24.0
MAR					SEP				
02...	1655	41	4530	12.0	15...	1230	10	4290	19.0
APR									
07...	1140	23	4210	9.5					
07134180 ARKANSAS RIVER NEAR GRANADA, CO (LAT 38 05 44N LONG 102 18 37W)									
OCT 1992					MAY 1993				
20...	1355	4.8	5000	19.5	05...	0830	4.8	5190	12.0
NOV					JUN				
16...	1435	41	4460	12.0	09...	0755	14	4530	14.5
DEC					JUL				
16...	0915	88	4180	3.0	07...	0815	396	2140	21.0
JAN 1993					AUG				
27...	0855	91	4260	3.0	11...	0820	32	4310	19.0
MAR					SEP				
03...	0850	155	4110	5.0	15...	0940	9.0	4750	15.0
APR									
07...	0840	100	4260	8.0					
08217500 RIO GRANDE AT WAGON WHEEL GAP, CO (LAT 37 46 01N LONG 106 49 51W)									
OCT 1992					JUN 1993				
22...	1500	202	91	7.0	10...	1630	1830	67	11.0
NOV					JUL				
12...	1525	101	110	1.5	08...	1450	1570	49	13.0
JAN 1993					AUG				
12...	1430	97	109	0.0	26...	1435	285	82	14.0
MAR					SEP				
03...	1440	91	112	0.5	09...	1350	462	74	14.5
APR									
27...	1240	479	78	9.0					

393912104512100 CHERRY CREEK BELOW CHERRY CREEK LAKE, CO

STORM RUNOFF WATER-QUALITY RECORDS

LOCATION.--Lat 39°39'12", long 10°51'21", in SW¹/4SE¹/4 sec.35, T.4 S., R.67 W., Arapahoe County, Hydrologic Unit 10190003, at storm drain in median of I-225 NE of highway bridge crossing Cherry Creek Lake outflow.

PERIOD OF RECORD.--July 1992 to August 1992.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREP-TOCOCCHI, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
JUL 20...	2100	1690	177	8.1	10.5	380	31	>1600	9200	28	9.5	1.0
AUG 05...	1620	1700	228	7.9	14.5	180	34	1800	>6000	48	16	2.0
30...	0720	900	172	7.7	--	220	40	6000	>6000	34	11	1.5

DATE	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
JUL 20...	20	57	2	3.6	46	16	14	2910	158	101	0.21	721
AUG 05...	20	43	1	7.2	59	16	21	628	170	127	0.23	780
30...	13	44	1	2.2	14	16	14	114	119	78	0.16	289

DATE	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRATE DIS- SOLVED (MG/L AS NO3)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS NO2)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS TOTAL (MG/L AS P)	PHOS- PHORUS DIS- SOLVED (MG/L AS P)
JUL 20...	1.5	6.7	0.08	0.26	1.6	1.9	2.4	1.2	3.1	4.7	0.43	0.31
AUG 05...	1.6	7.2	0.07	0.23	1.7	1.4	1.8	2.7	4.1	5.8	0.88	0.73
30...	1.5	6.8	0.06	0.20	1.6	3.4	4.4	0.90	4.3	5.9	0.27	0.22

DATE	TIME	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	CYANIDE TOTAL (MG/L AS CN)
JUL 20...	2100	4	<10	3	27	75
AUG 05...	1620	2	<10	1	8	32
30...	0720	1	<10	<1	4	34

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	THAL- LIUM, TOTAL RECOV- ERABLE (UG/L AS TL)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
JUL 20...	260	<0.1	22	<2	<1	<5	690
AUG 05...	53	0.2	10	<2	<1	<5	290
30...	24	<0.1	7	<1	<1	<10	400

393912104512100 CHERRY CREEK BELOW CHERRY CREEK LAKE, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	1,1,1-TRI-CHLORO-ETHANE	1,1,2-TRI-CHLORO-ETHANE	1,1-DI-CHLORO-ETHANE	1,1-DI-CHLORO-ETHYL-ENE	1,1-DI-CHLORO-PRO-PENE, WH	123-TRI-CHLORO-PROPANE	1,2,5,6-DIBENZ-ANTHRA-CENE	1,2-DIBROMO-ETHANE	1,2-DI-CHLORO-ETHANE	1,2-DI-CHLORO-PROPANE	1,2-DI-PHENYL-HYDRA-ZINE	
		TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	
JUL 20...	2100	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	--	<0.2	<0.2	<0.2	--	
AUG 05...	1620	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<10.0	<0.2	<0.2	<0.2	<5.0	
30...	0720	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<10.0	<0.2	<0.2	<0.2	<5.0	
DATE		1,2-TRANSDI-CHLORO-ETHENE	2,2-DI-CHLORO-PRO-PANE WAT, WH	2,4,6-TRI-CHLORO-PHENOL	2,4-DI-METHYL-PHENOL	2,4-DI-CHLORO-PHENOL	2,4-DI-NITRO-PHENOL	2,4-DI-NITRO-TOLUENE	2,6-DI-NITRO-TOLUENE	2-CHLORO-ETHYL-VINYL-ETHER	2-CHLORO-NAPH-THALENE	2-CHLORO-PHENOL	2-NITRO-PHENOL
		TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)
JUL 20...	<0.2	<0.2	--	--	--	--	--	--	--	<1.0	--	--	--
AUG 05...	<0.2	<0.2	<20.0	<5.0	<5.0	<5.0	<20.0	<5.0	<5.0	<1.0	<5.0	<5.0	<5.0
30...	<0.2	<0.2	<20.0	<5.0	<5.0	<5.0	<20.0	<5.0	<5.0	<1.0	<5.0	<5.0	<5.0
DATE		3,3'-DI-CHLORO-BENZI-DINE	4,6-DINITRO-ORTHOCRESOL	4-BROMO-PHENYL-PHENYL	4-CHLORO-PHENYL-PHENYL	4-NITRO-PHENOL	ACE-NAPHTH-ENE	ACE-NAPHTH-YLENE	ACRO-LEIN	ACRYLO-NITRILE	ALDRIN, BHC	ALPHA BHC	ANTHRA-CENE
		TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)
JUL 20...	--	--	--	--	--	--	--	--	<20	<20	--	--	--
AUG 05...	<20.0	<30.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20	<20	<0.040	<0.03	<5.0
30...	<20.0	<30.0	<5.0	<5.0	<30.0	<5.0	<5.0	<5.0	<20	<20	<0.040	<0.03	<5.0
DATE		AROCLOR 1016 PCB	AROCLOR 1221 PCB	AROCLOR 1232 PCB	AROCLOR 1242 PCB	AROCLOR 1248 PCB	AROCLOR 1254 PCB	AROCLOR 1260 PCB	1,2,3-TRI-CHLORO-BENZENE WAT, WH REC	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC	ISO-PROPYL-BENZENE WATER WHOLE REC
		TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	TOTAL (UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
JUL 20...	--	--	--	--	--	--	--	--	<0.20	<0.20	<0.20	<0.20	<0.20
AUG 05...	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.20	<5.0	<5.0	<5.0	<0.20
30...	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.20	<0.20	<0.20	<0.20	<0.20
DATE		BENZENE N-BUTYL-WATER UNFLTRD REC	BENZENE N-PROPY-WATER UNFLTRD REC	BENZENE O-CHLORO-WATER UNFLTRD REC	BENZENE SEC-BUTYL-WATER UNFLTRD REC	BENZENE TERT-BUTYL-WATER UNFLTRD REC	BENZENE BENZENE TOTAL	BENZI-DINE TOTAL	BENZO-A-PYRENE TOTAL	BENZO B-FLUOR-AN-THENE TOTAL	BENZO K-FLUOR-AN-THENE TOTAL	BENZO A-ANTHRAC-ENE1,2-BENZANTHRACENE TOTAL	BENZOGH I PERYL-ENE1,12-BENZOP-ERYLENE TOTAL
		(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
JUL 20...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	--	--	--	--	--	--
AUG 05...	<0.20	<0.20	<5.0	<0.20	<0.20	<0.20	<0.2	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0
30...	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<40.0	<10.0	<10.0	<10.0	<10.0	<10.0
DATE		BETA-BENZENE HEXA-CHLOR-IDE	BIS (2-CHLORO-ETHOXY) METHANE	BIS (2-CHLORO-ISO-PROPYL) ETHER	BIS (2-ETHYL-HEXYL) PHTHAL-ATE	BIS 2-CHLORO-ETHYL-ETHER	BROMO-BENZENE WATER, WHOLE, TOTAL	BROMO-FORM TOTAL	CARBON-TETRA-CHLO-RIDE TOTAL	CARBON, ORGANIC TOTAL (MG/L AS C)	CHLOR-DANE CIS WATER WHOLE TOTAL	CHLOR-DANE, CHLOR-DANE, TOTAL	CHLOR-DANE TRANS WATER WHOLE TOTAL
		(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)	(UG/L)
JUL 20...	--	--	--	--	--	--	<0.2	<0.2	<0.2	80	--	--	--
AUG 05...	<0.03	<5.0	<5.0	9.0	<5.0	<5.0	<0.2	<0.2	<0.2	55	<0.10	<0.1	<0.10
30...	<0.30	<5.0	<5.0	25.0	<5.0	<5.0	<0.2	<0.2	<0.2	61	<0.10	<0.1	<0.10

393912104512100 CHERRY CREEK BELOW CHERRY CREEK LAKE, CO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	CHLORO- BENZENE TOTAL (UG/L)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L)	CHLORO- ETHANE TOTAL (UG/L)	CHLORO- FORM TOTAL (UG/L)	CHRY- SENE TOTAL (UG/L)	CIS-1,2 -DI- CHLORO- ETHENE TOTAL (UG/L)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L)	DELTA BENZENE HEXA- CHLOR- IDE TOTAL (UG/L)	DIBROMO CHLORO- PROPANE TOT.REC (UG/L)	DI- BROMO- METHANE WATER WHOLE RECOVER (UG/L)	DI- CHLORO- BROMO- METHANE TOTAL (UG/L)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L)
JUL 20...	<0.20	<0.2	<0.2	<0.2	--	<0.2	<0.2	--	<1.0	<0.2	<0.2	<0.2
AUG 05...	<0.20	<0.2	<0.2	<0.2	<10.0	<0.2	<0.2	<0.09	<1.0	<0.2	<0.2	<0.2
30...	<0.20	<0.2	<0.2	<0.2	<10.0	<0.2	<0.2	<0.90	<1.0	<0.2	<0.2	<0.2
DATE	DI- ELDRIN TOTAL (UG/L)	DIETHYL PHTHAL- ATE TOTAL (UG/L)	DI- METHYL PHTHAL- ATE TOTAL (UG/L)	DI-N- BUTYL PHTHAL- ATE TOTAL (UG/L)	DI-N- OCTYL PHTHAL- ATE TOTAL (UG/L)	ENDO- SULFAN BETA TOTAL (UG/L)	ENDO- SULFAN- I WATER WHOLE REC (UG/L)	ENDO- SULFAN SULFATE TOTAL (UG/L)	ENDRIN ALDE- HYDE TOTAL (UG/L)	ENDRIN WATER UNFLTRD REC (UG/L)	ETHANE, 1112- TETRA- CHLORO- WAT UNF REC (UG/L)	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (UG/L)
JUL 20...	--	--	--	--	--	--	--	--	--	--	<0.2	<0.2
AUG 05...	<0.020	<5.0	<5.0	<5.0	<10.0	<0.04	<0.10	<0.60	<0.20	<0.060	<0.2	<0.2
30...	<0.20	<5.0	<5.0	<5.0	<10.0	<0.40	<1.0	<6.0	<2.0	<0.600	<0.2	<0.2
DATE	ETHYL- BENZENE TOTAL (UG/L)	FLUOR- ANTHENE TOTAL (UG/L)	FLUOR- ENE TOTAL (UG/L)	FREON- 113 WATER UNFLTRD REC (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR- TOTAL (UG/L)	HEXA- CHLORO- BENZENE TOTAL (UG/L)	HEXA- CHLORO- BUT- ADIENE TOTAL (UG/L)	HEXA- CHLORO- CYCLO- PENT- ADIENE TOTAL (UG/L)	HEXA- CHLORO- ETHANE TOTAL (UG/L)	INDENO (1,2,3- CD) PYRENE TOTAL (UG/L)	ISO- PHORONE TOTAL (UG/L)
JUL 20...	<0.2	--	--	<0.5	--	--	--	<0.2	--	--	--	--
AUG 05...	<0.2	<5.0	<5.0	<0.5	<0.80	<0.030	<5.0	<5.0	<5.0	<5.0	<10.0	<5.0
30...	<0.2	<5.0	<5.0	<0.5	<8.0	<0.030	<5.0	<0.2	<5.0	<5.0	<10.0	<5.0
DATE	LINDANE TOTAL (UG/L)	MESIT- YLENE WATER UNFLTRD REC (UG/L)	METHYL ETHER TERT- BUTYL WAT UNF REC (UG/L)	METHYL- BROMIDE TOTAL (UG/L)	METHYL- CHLO- RIDE TOTAL (UG/L)	METHYL- ENE CHLO- RIDE TOTAL (UG/L)	N-BUTYL BENZYL PHTHAL- ATE TOTAL (UG/L)	N- NITRO- SODI-N- PROPYL- AMINE TOTAL (UG/L)	N-NITRO -SODI- METHY- LAMINE TOTAL (UG/L)	N-NITRO -SODI- PHENY- LAMINE TOTAL (UG/L)	NAPHTH- ALENE TOTAL (UG/L)	NITRO- BENZENE TOTAL (UG/L)
JUL 20...	--	<0.20	<1.0	<0.2	<0.2	<0.2	--	--	--	--	<0.2	--
AUG 05...	<0.030	<0.20	<1.0	<0.2	<0.2	<0.2	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
30...	<0.030	0.20	<1.0	<0.2	<0.2	<0.2	<5.0	<5.0	<5.0	<5.0	<0.2	<5.0
DATE	O- CHLORO- TOLUENE WATER WHOLE TOTAL (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)	P,P' DDD, TOTAL (UG/L)	P,P' DDE, TOTAL (UG/L)	P,P' DDT, TOTAL (UG/L)	P-ISO- PROPYL- TOLUENE WATER WHOLE REC (UG/L)	PARA- CHLORO- META CRESOL TOTAL (UG/L)	PENTA- CHLORO- PHENOL TOTAL (UG/L)	PHENAN- THRENE TOTAL (UG/L)	PHENOL (C6H- 5OH) TOTAL (UG/L)	PHENOLS TOTAL (UG/L)	1,3-DI- CHLORO- PROPANE WAT. WH TOTAL (UG/L)
JUL 20...	<0.2	9	--	--	--	<0.20	--	--	--	--	7	<0.2
AUG 05...	<0.2	2	<0.10	<0.04	<0.10	<0.20	<30.0	<30.0	<5.0	<5.0	9	<0.2
30...	<0.2	11	<0.10	0.04	<0.10	<0.20	<30.0	<30.0	<5.0	<5.0	21	<0.2
DATE	PSEUDO- CUMENE WATER UNFLTRD REC (UG/L)	PYRENE TOTAL (UG/L)	STYRENE TOTAL (UG/L)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L)	TOLUENE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L)	VINYL CHLO- RIDE TOTAL (UG/L)	XYLENE WATER UNFLTRD REC (UG/L)
JUL 20...	<0.20	--	<0.2	<0.2	<0.20	<0.2	--	<0.2	<0.2	<0.2	<0.2	<0.20
AUG 05...	<0.20	<5.0	<0.2	<0.2	<0.20	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.20
30...	0.70	<5.0	<0.2	<0.2	<0.20	<0.2	<20	<0.2	<0.2	<0.2	<0.2	0.30

MISCELLANEOUS WATER-QUALITY IN THE RIO GRANDE BASIN

374752105300801 MEDANO CREEK NEAR MOSCA, CO
(Rio Grande National Water-Quality Assessment Program station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April to September 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

		DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	HARD-NESS TOTAL (MG/L AS CaCO3)	CALCIUM DIS-SOLVED (MG/L AS Ca)
APR 14...	1000	6.0	83	8.2	0.0	550	10.5	100	38	10
MAY 20...	1100	66	56	8.0	6.0	560	9.1	100	23	6.2
JUN 17...	0930	57	43	8.1	6.5	559	9.1	101	19	5.1
JUL 22...	1000	11	59	7.9	9.0	560	8.5	100	25	7.0
AUG 19...	1000	6.4	75	8.3	11.5	563	8.4	105	32	8.9
SEP 16...	1000	4.6	83	8.1	7.0	560	8.8	99	37	10
DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR- ^A BONATE WATER DIS IT FIELD (MG/L AS HCO3	CAR- ^B BONATE WATER DIS IT FIELD (MG/L AS CO3	ALKA- ^C LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
APR 14...	3.1	3.1	15	0.2	0.70	27	0	22	4.0	0.60
MAY 20...	1.9	2.1	16	0.2	0.70	37	0	30	2.8	0.50
JUN 17...	1.4	1.5	15	0.2	0.50	--	--	--	2.1	0.30
JUL 22...	1.9	1.8	13	0.2	0.50	27	0	22	2.2	0.20
AUG 19...	2.4	2.3	13	0.2	0.70	43	0	35	2.7	0.20
SEP 16...	2.8	2.5	13	0.2	0.80	50	0	41	3.0	0.40
DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)
APR 14...	0.20	13	71	48	0.10	0.01	<0.05	0.01	0.20	<0.20
MAY 20...	0.10	13	56	46	0.08	<0.01	<0.05	0.03	0.60	<0.20
JUN 17...	0.10	9.3	36	32	0.05	<0.01	0.05	0.04	<0.20	<0.20
JUL 22...	0.20	9.6	42	37	0.06	<0.01	<0.05	<0.05	<0.20	<0.20
AUG 19...	0.20	10	45	49	0.06	<0.01	<0.05	0.03	<0.20	<0.20
SEP 16...	0.20	12	56	56	0.08	<0.01	<0.05	0.02	<0.20	<0.20
DATE	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	
APR 14...	0.01	0.02	<0.01	120	9	2.8	0.5	13	0.21	
MAY 20...	0.06	0.02	0.01	210	9	5.2	1.2	--	--	
JUN 17...	0.02	0.01	<0.01	91	5	3.7	0.8	157	24	
JUL 22...	<0.01	<0.01	<0.01	75	7	1.9	0.6	15	0.44	
AUG 19...	0.01	<0.01	<0.01	130	10	2.0	0.6	18	0.31	
SEP 16...	<0.01	<0.01	<0.01	160	12	2.2	0.2	5	0.06	

A-Field dissolved bicarbonate, determined by incremental titration method.

B-Field dissolved carbonate, determined by incremental titration method.

C-Field total dissolved alkalinity, determined by incremental titration method.

EL PASO COUNTY

384056104415601 - SC01606505CCB - FOUNTAIN NO. 3

LOCATION.--Lat 38°40'56", long 104°41'56" in NW¹/₄SW¹/₄ sec.5, T.16 S., R.65 W., El Paso County, Hydrologic Unit 11020003

AQUIFER.--Fountain Creek Alluvial Aquifer.

WELL CHARACTERISTICS.--Municipal well, diameter 16 in, depth 53 ft, screened 38 to 53 ft.

DATUM.--Elevation of land-surface datum is 5,540 ft above sea level, from topographic map.

PERIOD OF RECORD.--March 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 22...	0740	1100	7.3	12.5	<0.01	1.9	0.09	0.02
MAY 28...	1000	929	7.3	11.0	<0.01	1.6	0.03	0.02
SEP 01...	0830	1000	7.2	12.0	<0.01	1.5	0.04	0.02

384108104420701 - SC01606506DAA - FOUNTAIN NO. 2

LOCATION.--Lat 38°41'08", long 104°42'07", NE¹/₄NE¹/₄SE¹/₄ sec.6, T.16 S., R.65 W., in El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Fountain Creek Alluvial Aquifer.

WELL CHARACTERISTICS.--Municipal well, diameter 16 in, depth 57 ft, screened 42 to 57 ft.

DATUM.--Elevation of land-surface datum is 5,550 ft above sea level, from topographic map.

PERIOD OF RECORD.--March 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 22...	0810	1160	7.2	12.0	<0.01	2.6	0.02	0.02
MAY 28...	1035	1260	7.3	13.0	<0.01	3.0	0.03	0.02
SEP 01...	0900	1180	7.2	12.5	<0.01	2.9	0.02	0.02

384313104431801 - SC01506625AAD - WIDEFIELD NO. 14

LOCATION.--Lat 38°43'13", long 104°43'18", in SE¹/₄NE¹/₄NE¹/₄ sec.25, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Municipal well, diameter 18 in, depth 48 ft, screened 37 to 48 ft.

DATUM.--Elevation of land-surface datum is 5,620 ft above sea level, from topographic map.

PERIOD OF RECORD.--January 1982 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 22...	0840	1460	7.3	13.0	<0.01	9.7	0.01	0.03
MAY 28...	1125	1240	7.4	13.5	<0.01	9.3	0.02	0.04
SEP 01...	1110	1430	7.3	14.0	<0.01	12	0.02	0.04

EL PASO COUNTY

384318104475301 - SC01506629AAB1 - GOLF COURSE NO. 19

LOCATION.--Lat 38°43'18", long 104°47'53", in NW¹/₄NE¹/₄ sec.29, T.15 S, R.66 W., El Paso County, Hydrologic Unit 11020003, on Fort Carson Military Reservation.

AQUIFER.--Piney Creek Alluvium.

WELL CHARACTERISTICS.--Observation well, diameter 2 in, depth 13.9 ft, screened 9.5 to 13.5 ft.

DATUM.--Elevation of land-surface datum is 5,880 ft above sea level, from topographic map.

PERIOD OF RECORD.--April to October 1981; September 1986 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
JAN 06...	1210	3.14	2470	7.5	9.0	0.02	4.5	0.02	0.2

384328104481101 - SC01506620CDD1 - GOLF COURSE NO. 14

LOCATION.--Lat 38°43'28", long 104°48'11", in SE¹/₄SE¹/₄SW¹/₄ sec.20, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on Fort Carson Military Reservation.

AQUIFER.--Piney Creek Alluvium.

WELL CHARACTERISTICS.--Observation well, diameter 2 in, depth 12.2 ft, screened 8 to 12 ft.

DATUM.--Elevation of land-surface datum is 5,920 ft above sea level, from topographic map.

PERIOD OF RECORD.--April 1981 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
JAN 06...	1300	5.21	5330	7.3	9.0	0.02	4.2	0.01	0.3

384331104473401 - SC01506621CCB - GOLF COURSE NO. 22

LOCATION.--Lat 38°43'31", long 104°47'34", in NW¹/₄SW¹/₄SW¹/₄ sec.21, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on Fort Carson Military Reservation.

AQUIFER.--Piney Creek Alluvium.

WELL CHARACTERISTICS.--Observation well, diameter 2 in, depth 18.2 ft, screened 14 to 18 ft.

DATUM.--Elevation of land-surface datum is 5,850 ft above sea level, from topographic map.

PERIOD OF RECORD.--September 1981 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
JAN 06...	1235	5.00	2460	7.6	11.0	0.02	4.7	0.01	<0.2

EL PASO COUNTY

384407104434801 - SC01506624BAD1 WIDEFIELD NO. 4

LOCATION.--Lat 38°44'07", long 104°43'48", in SE¹/₄NE¹/₄NE¹/₄ sec.24, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Municipal well, diameter 16 in, depth 71 ft, screened 41 to 71 ft.

DATUM.--Elevation of land-surface datum is 5,680.7 ft above sea level.

PERIOD OF RECORD.--February 1981 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 22...	1220	597	7.1	13.5	<0.01	6.3	0.02	0.02
MAY 28...	1225	630	7.2	13.5	<0.01	6.0	0.02	0.02
SEP 01...	1040	601	7.2	14.0	<0.01	6.3	0.03	0.03

384433104440702 - SC01506613CBD2 - U-14

LOCATION.--Lat 38°44'33", long 104°44'07", in SW¹/₄NW¹/₄SE¹/₄ sec.13, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Monitor well, diameter 2 in, depth 47 ft, screened 43 to 46 ft.

DATUM.--Elevation of land-surface datum is 5,701 ft above sea level.

PERIOD OF RECORD.--October 1992 to September 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 22...	1435	37.60	604	6.9	13.0	<0.01	5.8	0.01	0.02
MAY 10...	1115	35.60	626	6.9	12.5	<0.01	6.0	<0.01	0.02
AUG 19...	1600	38.00	614	7.0	16.0	<0.01	6.0	0.02	0.02

384458104442601 - SC01506614AAD - SECURITY NO. 2

LOCATION.--Lat 38°44'58", long 104°44'26", in SE¹/₄NE¹/₄NE¹/₄ sec.14, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Municipal well, diameter 24 in, depth 78 ft, screened 43 to 78 ft.

DATUM.--Elevation of land-surface datum is 5,717 ft above sea level.

PERIOD OF RECORD.--February 1981 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 22...	0950	473	7.2	13.5	<0.01	7.5	0.02	0.01
MAY 28...	1345	495	7.2	13.0	<0.01	8.4	0.03	0.02
SEP 01...	1425	437	7.3	13.5	<0.01	8.2	0.02	0.02

EL PASO COUNTY

384535104450801 - SC01506611BCD2 VENETUCCI NO. 3

LOCATION.--Lat 38°45'35", long 104°45'08", in SE¹/₄SW¹/₄NW¹/₄ sec.11, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Irrigation well, diameter 24 in, depth 80 ft, screening unknown.

DATUM.--Elevation of land-surface datum is 5,750.0 ft above sea level.

PERIOD OF RECORD.--February 1981 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
MAY 28...	1300	420	7.1	13.0	<0.01	8.1	0.02	0.06
SEP 01...	1630	396	7.2	13.0	<0.01	8.2	<0.01	0.06

384604104451502 - SC01506602CCC2 U-9

LOCATION.--Lat 38°46'04", long 104°45'15", in SW¹/₄SW¹/₄SW¹/₄ sec.2, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Monitor well, diameter 2 in, depth 55 ft, screened 51 to 53 ft.

DATUM.--Elevation of land-surface datum is 5,774 ft above sea level.

PERIOD OF RECORD.--October 1992 to September 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 21...	1640	37.60	434	7.1	14.0	<0.01	7.0	0.01	0.05
MAY 10...	1225	37.20	442	7.1	13.5	<0.01	7.3	<0.01	0.06
AUG 19...	1215	38.30	441	7.3	15.0	<0.01	6.8	0.01	0.04

384610104453501 - SC01506603DDB SECURITY NO. 14

LOCATION.--Lat 38°46'10", long 104°45'35", in NW¹/₄SE¹/₄SE¹/₄ sec.14, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Municipal well, diameter 24 in, depth 80 ft, screened 39 to 80 ft.

DATUM.--Elevation of land-surface datum is 5,779.2 ft above sea level.

PERIOD OF RECORD.--February 1981 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 22...	0925	644	7.4	13.0	<0.01	6.7	0.01	0.04
MAY 28...	1415	645	7.6	13.5	<0.01	7.0	0.02	0.05
SEP 01...	1450	619	7.5	13.0	<0.01	7.3	0.02	0.04

EL PASO COUNTY

384617104455901 - SC01506603CAD STRATMOOR HILLS NO. 4

LOCATION.--Lat 38°46'17", long 104°45'59", in SE¹/₄NE¹/₄SW¹/₄ sec.3, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield Aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Municipal well, diameter 16 in, depth 49 ft, screened 29 to 49 ft.

DATUM.--Elevation of land-surface datum is 5,775.4 ft above sea level.

PERIOD OF RECORD.--February 1981 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 22...	1020	972	7.1	13.5	<0.01	6.0	0.01	0.02
MAY 28...	1445	967	7.4	13.0	<0.01	7.1	0.02	0.02
28...	1446	967	7.4	13.0	<0.01	7.1	0.02	0.02
SEP 01...	1545	860	7.2	14.0	<0.01	7.5	0.02	0.02

384628104450801 - SC01506602BDC - TH-23

LOCATION.--Lat 38°46'28", long 104°45'08", in NW¹/₄SE¹/₄SW¹/₄ sec.2, T.15 S., R.66 W., El Paso County, Hydrologic Unit 1102003

AQUIFER.--Widefield aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Monitor well, diameter 2 in, depth 89 ft, screened 73 to 88 ft.

DATUM.--Elevation of land-surface datum is 5,849 ft above sea level.

PERIOD OF RECORD.--October 1992 to September 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 21...	1420	75.40	657	7.0	15.0	<0.01	9.0	0.02	0.05
MAY 10...	0920	76.40	535	7.0	12.5	<0.01	7.6	<0.01	0.10
AUG 24...	1245	76.60	598	7.1	16.5	--	--	--	--

384639104461401 - SC01506603BAC1 - MARS GAS

LOCATION.--Lat 38°46'39", long 104°46'14", in SW¹/₄NE¹/₄NW¹/₄ sec.3, T.15 S., R.66 W., El Paso County, Hydrologic Unit 1102003

AQUIFER.--Fountain Creek Alluvial Aquifer.

WELL CHARACTERISTICS.--Commercial well, diameter 6 in, depth 85 ft, screened 50 to 85 ft.

DATUM.--Elevation of land-surface datum is 5,820 ft above sea level, from topographic map.

PERIOD OF RECORD.--March 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 22...	1045	1040	7.1	13.0	<0.01	7.6	0.02	0.02
MAY 28...	1515	972	7.2	13.0	<0.01	6.8	0.02	0.02
SEP 01...	1230	1040	7.1	13.5	<0.01	8.8	0.02	0.02

EL PASO COUNTY

384653104451901 - SC01406602BBB - TH-18

LOCATION.--Lat 38°46'53", long 104°45'19", in NW¹/₄NW¹/₄ sec.2. T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Widefield aquifer of Fountain Creek Alluvium.

WELL CHARACTERISTICS.--Monitor well, diameter 2 in, depth 122 ft, screened 96 to 122 ft.

DATUM.--Elevation of land-surface datum is 5,890 ft above sea level.

PERIOD OF RECORD.--October 1992 to September 1993.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
MAY 10...	1345	93.60	518	6.9	13.5	<0.01	8.6	<0.01	0.07
AUG 24...	1605	94.00	521	--	17.0	--	--	--	--

384718104463701 - SC01406633DAA - BARNES WELL

LOCATION.--Lat 38°47'18", long 104°46'37", in NE¹/₄NE¹/₄SE¹/₄ sec.33. T.14 S., R.66 W., El Paso County, Hydrologic Unit 11020003.

AQUIFER.--Fountain Creek Alluvial Aquifer.

WELL CHARACTERISTICS.--Domestic well, diameter 6 in, depth 72 ft, screening unknown.

DATUM.--Elevation of land-surface datum is 5,830 ft above sea level, from topographic map.

PERIOD OF RECORD.--March 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
OCT 22...	1110	1350	7.1	13.5	<0.01	12	0.02	<0.01
MAY 28...	1535	1280	7.3	13.5	<0.01	11	0.02	0.02
SEP 01...	1310	1260	7.2	14.0	0.10	12	0.02	0.01

385323104224001 - SC01306230ACC1

LOCATION.--Lat 38°53'23", long 104°22'40", in SW¹/₄SW¹/₄NE¹/₄ sec.30. T.13 S., R.62 W., El Paso County, Hydrologic Unit 11020004.

AQUIFER.--Black Squirrel Alluvial Aquifer.

WELL CHARACTERISTICS.--Public-supply well, diameter 16 in, depth 176 ft, screened 116 to 176 ft.

DATUM.--Elevation of land-surface datum is 6,160 ft above sea level, from topographic map

PERIOD OF RECORD.--February 1985 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1992 TO SEPTEMBER 1993

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE WATER (DEG C)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P)
NOV 13...	0925	403	7.2	10.5	0.01	7.4	<0.01	0.04
FEB 19...	0925	402	7.2	11.0	0.01	7.3	0.02	0.04
MAY 21...	0935	399	7.2	12.0	<0.01	7.9	0.04	0.05
AUG 27...	1040	400	7.2	12.0	<0.01	8.3	0.02	0.04

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

Sea level: In this report “sea level” refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.

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