Water Resources Data for Colorado

Water Year 1976

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

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CO-76-1

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

CALENDAR FOR WATER YEAR 1976

1975

OCTOBER

S	M	T	W	T	F	S
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1976

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JULY

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AUGUST

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29	30	31				

SEPTEMBER

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Volume 1. Missouri River Basin
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U.S. GEOLOGICAL SURVEY WATER-DATA REPORT CO-76-1

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

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

V. E. McKelvey, Director

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Lakewood, Colorado 80225

1977

PREFACE

This report was prepared by the U.S. Geological Survey in cooperation with the State of Colorado and other agencies by personnel of the Colorado District of the Water Resources Division under the supervision of J. E. Biesecker, District Chief, and Alfred Clebsch, Jr., Regional Hydrologist, Central Region.

This report is one of a series issued State by State under the direction of J. S. Cragwall, Jr., Chief Hydrologist, and G. W. Whetstone, Assistant Chief Hydrologist for Scientific Publications and Data Management.

Data for Colorado are in two volumes as follows:

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

Volume 2. Colorado River Basin in Colorado.

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7. Author(s)			8. Performing Organization Rept. No.
9. Performing Organization Name and Address U.S. Geological Survey, Water Resources Division Box 25046, Mail Stop 415 Denver Federal Center Lakewood, Colorado 80225			10. Project/Task/Work Unit No. 11. Contract/Grant No.
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15. Supplementary Notes

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

16. Abstracts

Water resources data for Colorado for the 1976 water year consists 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 404 gaging stations, stage and contents of 24 lakes and reservoirs, 5 partial-record flow stations, 79 crest-stage partial-record stations, and 193 miscellaneous sites; water quality for 103 gaging stations and 60 miscellaneous sites; and water levels for 60 observation wells. A few pertinent stations in bordering States are also 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 J. E. Biesecker, district chief. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Colorado.

17. Key Words and Document Analysis. 17a. Descriptors

*Colorado, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water levels, Water analyses.

17b. Identifiers/Open-Ended Terms

17c. COSATI Field Group

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WATER RESOURCES DATA FOR COLORADO, 1976

VOLUME 1: MISSOURI RIVER, ARKANSAS RIVER, AND RIO GRANDE BASINS
VOLUME 2: COLORADO RIVER BASIN

INTRODUCTION

Water resources data for Colorado for the 1976 water year consists 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 404 gaging stations, stage and contents of 24 lakes and reservoirs, 5 partial-record flow stations, 79 crest-stage partial-record stations, and 193 miscellaneous sites; water quality for 103 gaging stations and 60 miscellaneous sites; and water levels for 60 observation wells. Locations of lake- and stream-gaging stations and water-quality stations are shown in figure 1, locations of crest-stage partial-record stations are shown in figure 2, and locations of observation wells are shown in figure 3. A few pertinent stations in bordering States are also 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 J. E. Biesecker, district chief. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Colorado.

Records of discharge and stage of streams, and contents and stage of lakes and reservoirs are published in a series of U.S. Geological Survey Water-Supply Papers entitled, "Surface-water Supply of the United States." Through September 30, 1960, these Water-Supply Papers were published in an annual series, and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual Water-Supply Paper series entitled, "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1955 in an annual Water-Supply Paper series entitled, "Water Levels and Artesian Pressures in Wells in the United States," and from 1955 to the present time, in a 5-year Water-Supply Paper series entitled, "Ground-Water Levels in the United States."

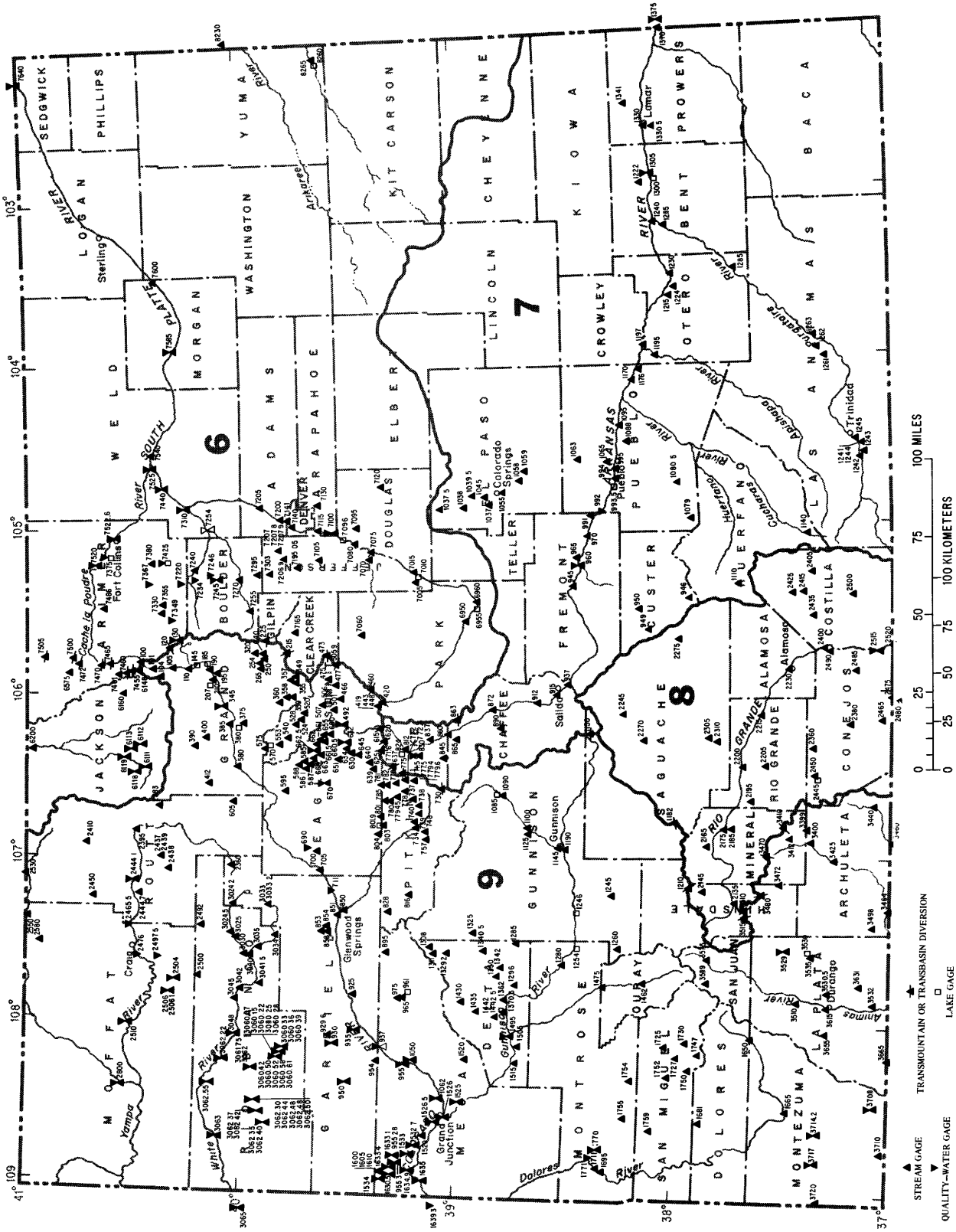

Figure 1.--Map showing locations of lake- and stream-gaging stations and water-quality stations in Colorado.

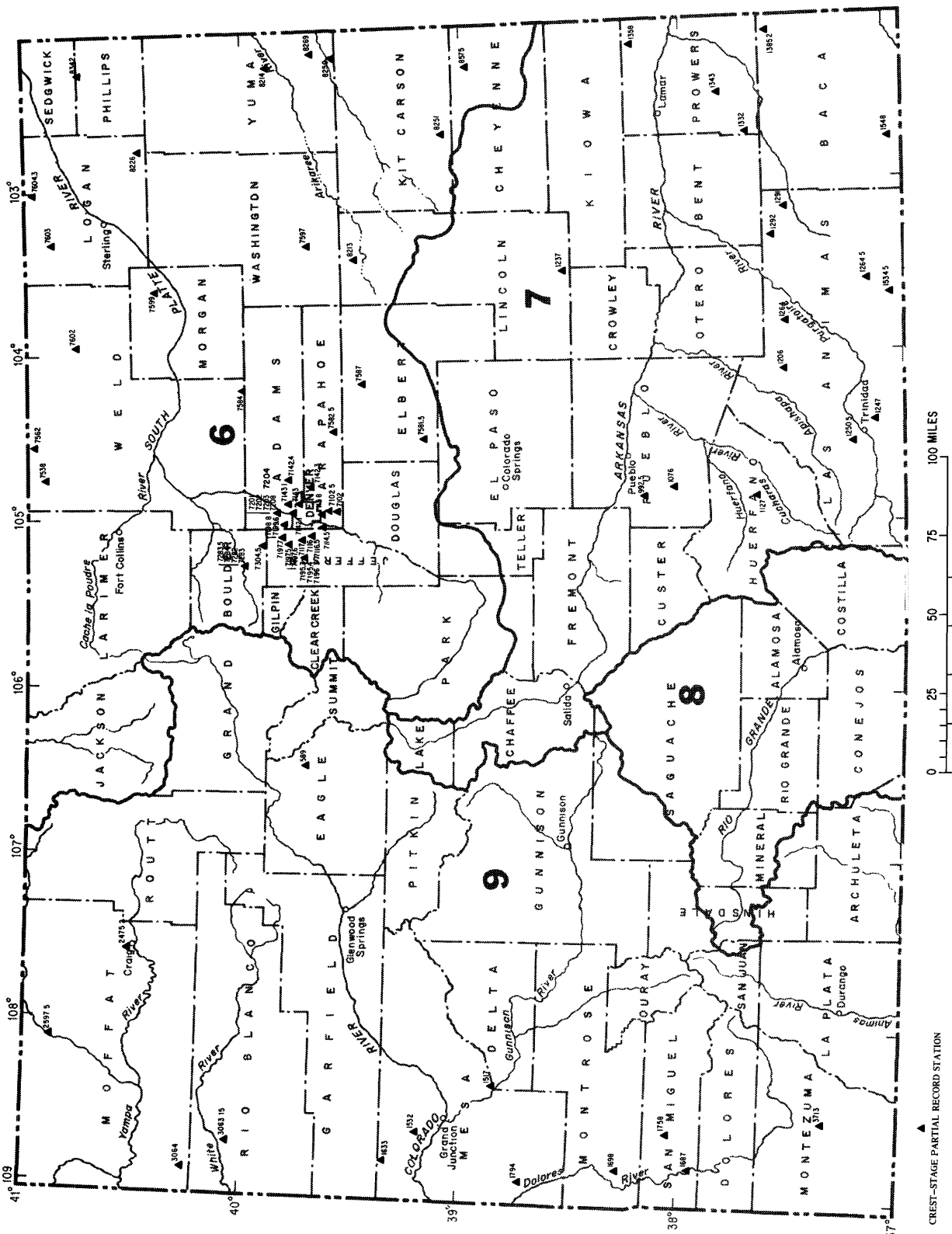

Figure 2.--Map showing locations of crest-stage partial-record stations in Colorado.

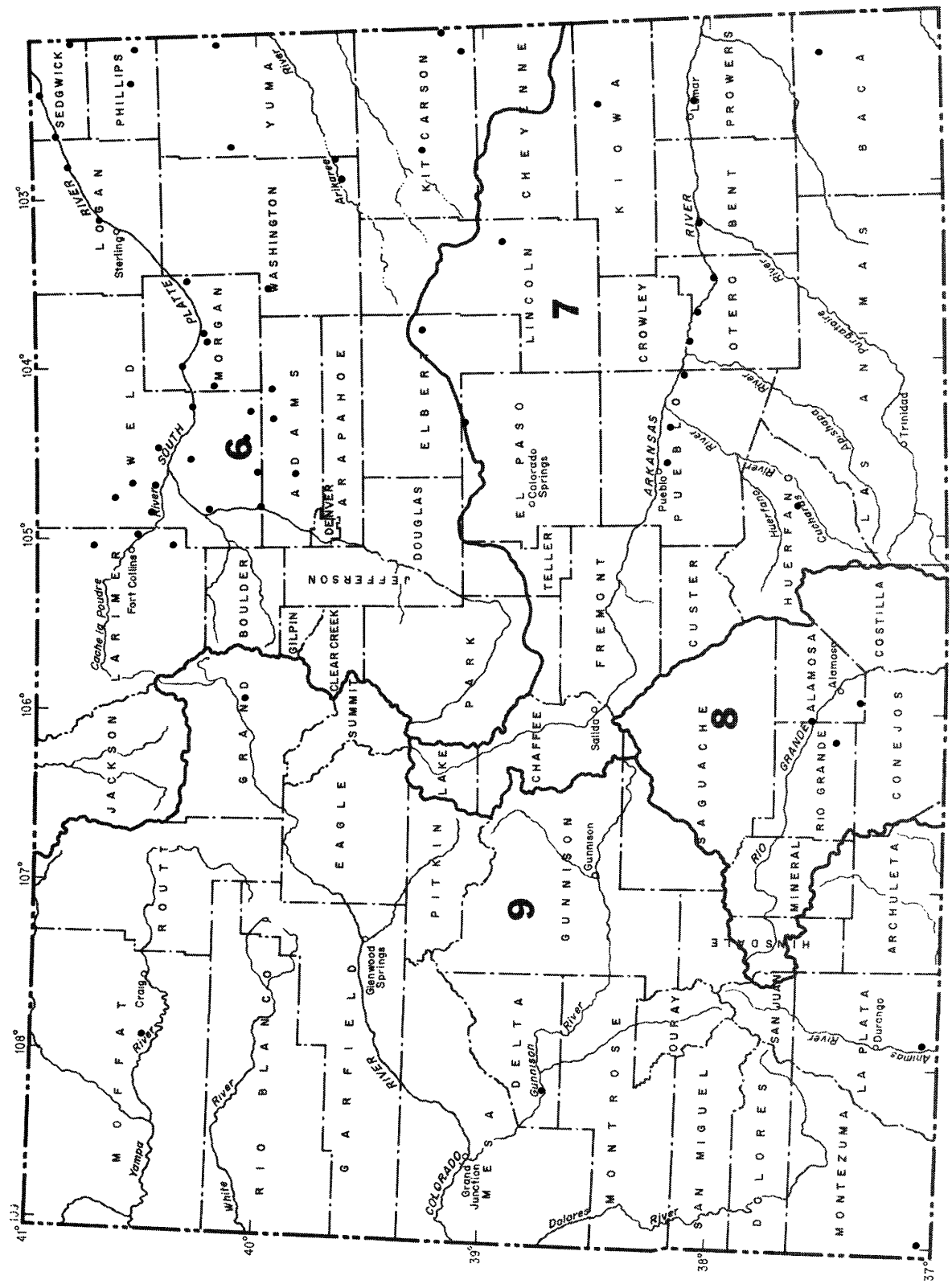

Figure 3.--Map showing locations of observation wells in Colorado.

Beginning with the 1961 water year, streamflow records and related data have been released by the Geological Survey in annual reports on a State-boundary basis. Beginning with the 1964 water year, water-quality records for surface and ground water have been similarly released in separate annual reports. These reports provided for rapid release of preliminary data shortly after the end of the water year. The final data were then released in the Water-Supply Paper series mentioned above. Beginning with the 1975 water year, water data will be released on a State-boundary basis in final form and will not be republished in the Water-Supply Paper series. The 1975 and subsequent water year reports will be in a series which will 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 report is identified as "U.S. Geological Survey Water-Data Report CO-76-1." These reports are for sale to the public for a nominal fee from the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22151. For more information on available publications, see the section entitled, "PUBLICATIONS" on subsequent pages.

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:

Colorado Division of Water Resources, C. J. Kuiper, State engineer.
Colorado Water Conservation Board, F. L. Sparks, Director.
Division of Highways, State of Colorado, C. E. Shumate, Executive Director.
Arkansas River Compact Administration, Frank G. Cooley, Chairman and Federal Representative.
Colorado River Water Conservation District, Roland C. Fischer, Secretary-Engineer.
Southwestern Water Conservation District, Robert H. Tyner, Manager.
Southeastern Colorado Water Conservancy District, C. L. Thomson, General Manager.
City and County of Denver, Board of Water Commissioners, John A. Yelenick, President.

Eagle County Commissioners, Daniel F. Kaprinikar, Chairman.
Pitkin County Board of County Commissioners, Dwight K. Shellman, Jr., Chairman.
City of Aspen, Russell Campbell, City Manager.
City of Aurora, C. A. Wemlinger, Director of Utilities.
Colorado City Water and Sanitation District, O. E. Cady, District Administrator.
City of Colorado Springs, Department of Public Utilities, James D. Phillips, Director.
City of Fort Collins, Roger E. Krempel, Director of Utilities.

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

HYDROLOGIC CONDITIONS

Over most of the State streamflow was slightly below normal the entire year. The monthly mean discharges of the Yampa River at Steamboat Springs and the Animas River at Durango varied between 75 and 119 percent and 83 and 106 percent of their respective monthly median discharges.

On the evening of July 31 as much as 12 inches of rain fell on the Big Thompson River Basin, causing a disastrous flood between Estes Park and Loveland. As of March 1977, the death count was 139 with five people still reported missing; damage estimates have reached 36.5 million dollars. Minor flooding in the southeast quarter of the state was associated with the same storm system.

Ground water levels continued to decline in the northern High Plains and remained constant in the alluvial river channel aquifers.

DEFINITION OF TERMS

Terms related to streamflow, water quality, and other hydrologic data as used in this report are defined below. See also the table for converting English units to metric units (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 equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

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

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.

Bacteria are microscopic unicellular organisms, typically spherical, rod-like, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, 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 which produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C ± 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 warmblooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C ± 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 organisms which produce red or pink colonies within 48 hours, at 35°C ± 1.0°C on M-enterrococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the shifting portion of fragmented material of which the streambed is composed.

Biochemical oxygen demand (BOD) is the amount of oxygen required by bacteria while stabilizing decomposable organic matter under aerobic conditions.

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

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

Dry weight refers to the weight of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the weight remains unchanged. This weight represents the total organic matter, ash and sediments, in the sample. Dry weight values are expressed in the same units as ash weight.

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

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

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,445 cubic meters. It represents a runoff of approximately 0.0372 inch from 1 square mile, or 0.3468 millimeter from 1 square kilometer.

Chemical oxygen demand (COD) indicates the quantity of oxidizable compounds in water and varies with water composition(s), temperature, period of contact, and other factors.

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

Coliform organisms are a group of bacteria used as an indicator of the sanitary quality of the water. The number of coliform colonies per 100 milliliters is determined by the immediate incubation membrane filter method.

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 the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Cubic foot per second (cfs, ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second, and is equivalent to approximately 7.48 gallons per second, 448.8 gallons per minute, or 0.2832 cubic meters per second.

Discharge is the volume of water (or more broadly, total fluids), that passes a given point within a given period of time.

Mean discharge is the arithmetic average of individual daily mean discharge during a specific period.

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

Dissolved refers to the amount of a substance present in true chemical solution. In practice, however, the term includes all forms of the substance that will pass through a 0.45-micrometer membrane filter, and thus may include some very small (colloidal) suspended particles. Analyses are performed on filtered samples.

Dissolved oxygen (DO).--The dissolved-oxygen content of water in equilibrium with air is a function of atmospheric pressure, and temperature and dissolved-solids content of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved solids, with small temperature changes having the more significant effect. Photosynthesis and respiration may cause diurnal variations in dissolved-oxygen content in water from some streams.

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.

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 gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

Hardness of water is the physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Herbicides are substances or a mixture of substances intended to control or destroy vegetation.

Insecticides are substances or a mixture of substances intended to prevent, destroy, or repel insects.

Micrograms per liter (µg/L, UG/L) is a unit for expressing the trace concentration of chemical constituents in 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 weight of solute per unit volume of water. Milligrams or micrograms per liter may be converted to milliequivalents (one thousandth of a gram-equivalent weight of a constituent) per liter by multiplying by the factors in table 1. Concentration of suspended sediment also is expressed in mg/L, and is based on the weight of sediment per liter of water-sediment mixture. Sediment concentrations may be converted to parts per million by using the factors in table 2.

Table 1.--Factors for conversion of chemical constituents in milligrams or micrograms per liter to milliequivalents per liter

Ion	Multiply by	Ion	Multiply by
Aluminum (Al^{+3})*	0.11119	Iodide (I^{-1})	0.00788
Ammonia as NH_4^{1}	.05544	Iron (FE^{+3})*	.05372
Barium (Ba^{+2})	.01456	Lead (Pb^{+2})*	.00965
Bicarbonate (HCO_3^{1})	.01639	Lithium (Li^{+1})*	.14411
Bromide (Br^{-1})	.01251	Magnesium (Mg^{+2})	.08226
Calcium (Ca^{+2})	.04990	Manganese (Mn^{+2})*	.03640
Carbonate (CO_3^{2})	.03333	Nickel (Ni^{+2})*	.03406
Chloride (Cl^{-1})	.02821	Nitrate (NO_3^{1})	.01613
Chromium (Cr^{+6})*	.11539	Nitrite (NO_2^{1})	.02174
Cobalt (Co^{+2})*	.03394	Phosphate (PO_4^{3})	.03159
Copper (Cu^{+2})*	.03148	Potassium (K^{+1})	.02557
Cyanide (CN^{-1})	.03844	Sodium (Na^{+1})	.04350
Fluoride (F^{-1})	.05264	Strontium (SR^{+2})*	.02283
Hydrogen (H^{+1})	.99209	Sulfate (SO_4^{2})	.02082
Hydroxide (OH^{-1})	.05880	Zinc (Zn^{+2})*	.03060

*Constituents reported in micrograms per liter; multiply by factor and divide results by 1,000.

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

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

Table 2.--Factors for conversion of sediment concentration in milligrams per liter to parts per million*
(All values calculated to three significant figures)

Range of concentration in 1000 mg/L	Divide by	Range of concentration in 1000 mg/L	Divide by	Range of concentration in 1000 mg/L	Divide by	Range of concentration in 1000 mg/L	Divide by
0 - 8	1.00	201-217	1.13	411-424	1.26	619-634	1.39
8.05- 24	1.01	218-232	1.14	427-440	1.27	636-650	1.40
24.2 - 40	1.02	234-248	1.15	443-457	1.28	652-666	1.41
40.5 - 56	1.03	250-264	1.16	460-473	1.29	668-682	1.42
56.5 - 72	1.04	266-280	1.17	476-489	1.30	684-698	1.43
72.5 - 88	1.05	282-297	1.18	492-506	1.31	700-715	1.44
88.5 -104	1.06	299-313	1.19	508-522	1.32	717-730	1.45
105 -120	1.07	315-329	1.20	524-538	1.33	732-747	1.46
121 -136	1.08	331-345	1.21	540-554	1.34	749-762	1.47
137 -152	1.09	347-361	1.22	556-570	1.35	765-780	1.48
153 -169	1.10	363-378	1.23	572-585	1.36	782-796	1.49
170 -185	1.11	380-393	1.24	587-602	1.37	798-810	1.50
186 -200	1.12	395-409	1.25	604-617	1.38		

*Based on water density of 1.000 g/mL and a specific gravity of sediment of 2.65.

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

Classification	Size (mm)	Method of analysis
Clay	0.00024 - 0.004	Sedimentation
Silt	.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 material 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.

Periphyton is the assemblage of microorganisms attached to and growing upon solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton is a useful indicator of water quality.

Pesticide network is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams whose waters are used for irrigation or in streams in areas where potential contamination could result from the application of the commonly used insecticides and herbicides.

Pesticides are chemical compounds used to control the growth of undesirable plants and animals. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Since the first application of DDT as an insecticide, there have been almost 60,000 pesticide formulations registered, each containing at least one of the approximately 800 different basic pesticide compounds. The United States annually produces about 1 billion pounds of these compounds. Although efforts are being made to replace many of the chlorinated hydrocarbon pesticides with more specific, fast-acting, and easily degradable compounds, chlorinated hydrocarbon pesticides are still commonly used in many areas of the country.

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 100 mL of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algal mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per 100 mL of sample.

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).

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

Radiochemical network is a network of regularly sampled water-quality stations where samples are collected monthly or twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

Radioisotopes are isotopic forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus. For example: Ordinary chlorine is a mixture of isotopes having atomic weights 35 and 37, with the natural mixture having atomic weight about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron (Rose and Rose, 1966). There are 275 isotopes of the 81 stable elements in addition to over 800 radioactive isotopes.

Radioisotopes that are determined in this program are natural uranium in µg/L (micrograms per liter), radium as radium-226 in PC/L (pCi/L, picocuries per liter), gross beta radiation as equivalent strontium/yttrium-90 or cesium-137 in PC/L, and gross alpha radiation as micrograms of uranium equivalent per liter (µg/L). Gross alpha and beta radioactivity associated with the fine-grained (silt and clay-sized) sediments in the samples are also determined.

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.

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 discharge is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight, or by volume, that is discharged in a given time. It is computed by multiplying discharge times mg/L times 0.0027.

Total sediment discharge or total sediment load is the sum of the suspended-sediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry weight or volume, that is discharged during a given time.

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 or 0.09 m above the bed) expressed as milligrams of dry sediments 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.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. This ratio should be known especially for water used for irrigating farmland.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks and is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the dissolved-solids content in the water. Commonly, the amount of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos per centimeter at 25°C). This relation is not constant from stream to stream or from well to well, and it may even vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height 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." Streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the location of the thermograph.

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 water year.

Tons per acre-foot indicates the dry weight of dissolved solids in tons (0.9072 tonnes) in 1 acre-foot (1,233 m^3) of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of a substance in solution or suspension in tons (0.9072 tonnes) that passes a stream section during a 24-hour period.

Total (as used in tables of chemical analyses) refers to the amount of a substance that is present both in solution and in suspension. Analyses are performed on representative samples of water-suspended sediment mixtures.

Water year in Geological Survey 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, 1975, is called the "1975 water year."

Weighted average is used in this report to indicate the 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.

WRD is used as an abbreviation for "Water-Resources Data" in the summary REVISIONS paragraph to refer to previously published State annual basic-data reports.

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

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

SPECIAL NETWORKS AND PROGRAMS

Some of the stations for which data are published in this report are included in special networks and programs. These stations are identified by their title, set in parentheses, under the station name.

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

Irrigation network stations are water-quality stations located at or near certain streamflow gaging stations west of the main stem of the Mississippi River. Data collected at these stations are used to evaluate the chemical quality of surface waters used for irrigation and the changes resulting from the drainage of irrigated lands. Prior to water year 1966, the data for these stations were published in the annual Water-Supply Paper series, "Quality of Surface Water for Irrigation, Western States."

National stream-quality accounting network is an accounting network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated in the network design. Areal configuration of the network is based on river-basin accounting units designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are: (1) To depict areal variability of water-quality conditions nationwide on a year-by-year basis, and (2) to detect and assess long-term changes in stream quality.

DOWNSTREAM ORDER AND STATION NUMBER

Stations are listed in a downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all mainstream stations are listed before the first mainstream station. Stations on tributaries to tributaries are listed in a similar manner. In the list of gaging stations in the front of this report the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of identification, each gaging station and each partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and continuous-record gaging station; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station.

Gaps are left in the numbers to allow for new stations that may be established; hence the numbers are not consecutive. The complete 8-digit number for each station, such as 07083000, which appears just to the left of the station name, includes the 2-digit part number "07" plus the 6-digit downstream order number "083000." In this report the records are listed in downstream order by parts. The part number refers to an area whose boundaries coincide with certain natural drainage lines. Records in this report are for Part 6 (Missouri River basin), Part 7 (Lower Mississippi River basin), and Part 8 (Western Gulf of Mexico basins). Records for Part 9 (Colorado River Basin) are in Volume 2. All records for a drainage basin encompassing more than one State can be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

EXPLANATION OF SURFACE WATER RECORDS

Collection and Computation of Data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from direct readings on a nonrecording gage or from a water-stage recorder that gives either a continuous graph of the fluctuations or a tape punched at 5-, 15-, 30- or 60-minute intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks, in Water-Supply Paper 888, and in U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6. Surface areas of lakes or reservoirs are determined from instrument surveys using standard methods. The configuration of the reservoir bottom is determined by sounding at many points.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharge are computed from the daily figures. 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 computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by 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 is used as a factor in computing discharge.

At some stream-gaging stations the stage-discharge relation is affected by ice in the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

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 on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, adjoining good record, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Records are published for the water year, which begins on October 1 and ends on September 30. A calendar for the current water year is shown on the inside of the front cover to facilitate finding the day of the week for any date.

The description of the gaging stations gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, general remarks, and notations of revisions or previously published records. The location of the gaging station and the drainage area are obtained from the most accurate maps available.

River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies.

Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1933 stands for the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge were revised, that fact is brought out by notations 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 revised figure was first published is given.

The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey, unless otherwise qualified.

Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, the reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir, is given under "REMARKS."

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE;" it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance.

The maximum discharge (or contents) and the maximum gage height, the minimum discharge if there is little or no regulation (or minimum contents), and the minimum gage height, if it is significant, are given under "EXTREMES." The minimum daily discharge is given if there is extensive regulation (also the minimum discharge and gage height if they are abnormally low). The first paragraph are extremes for period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, the maximum discharge (or contents) is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder (graphic or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge (or contents), it is given separately. Similarly, the minimum is the instantaneous minimum unless otherwise qualified. For some stations peak discharges are listed with "EXTREMES FOR THE CURRENT YEAR"; if they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage heights are published in tabular format. The base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. The minimums for these stations are published in a separate paragraph following the table of peaks.

Footnotes to the table of daily discharges are introduced by the word "NOTE." Footnotes are used to indicate periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

The daily table for stream-gaging stations gives the mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second (ft^3/s) during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month is also expressed in acre-feet (line headed "AC-FT"). In the yearly summary below the monthly summary, the figures following "MAX" are the maximum daily discharges for the calendar and water years; likewise, those following "MIN" are the minimum daily discharges.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published for all reservoirs for which records are published on a daily basis, but is not published for reservoirs for which only monthly data are given.

Data collected at partial-record stations and at miscellaneous sites are given in tables at the end of the gaging station records in this report. The first is a table of discharge measurements at low-flow partial-record stations, the second is a table of annual maximum stage and discharge at crest-stage stations, the third is a table of storm precipitation and related runoff at storm-runoff partial-record stations, and the fourth is a table of discharge measurements at miscellaneous sites.

ACCURACY OF DATA

The accuracy of streamflow data 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 observations of stage, measurements of discharge, and interpretation of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges is within 5 percent; "good" means within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second (ft^3/s) for discharges of less than 1 ft^3/s; to tenths between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures above 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures 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, evaporation, or other factors. However, because all the effects cannot be measured or evaluated, satisfactory adjustments generally cannot be made. For some stations, available figures of diversions or change in contents of reservoirs are included as supplemental data. Even at those stations where adjustments can be made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

PUBLICATIONS

In each water-supply paper entitled, "Surface Water Supply of the United States" there is a list of numbers of preceding water-supply papers containing streamflow information for the area covered by that report. In addition, there is a list of numbers of water-supply papers containing detailed information on major floods in the area. Records for stations in Colorado for the period October 1960 to September 1965 are in Water-Supply Papers 1918, 1919, 1921, 1923, 1924, and 1925; and for the period October 1965 to September 1970 are in Water-Supply Papers 2118, 2119, 2121, 2123, 2124, and 2125.

Two series of summary reports entitled, "Compilation of Records of Surface Waters of the United States" have been published; the first series covers the entire period of record through September 1950 and the second series covers the period October 1950 to September 1960. These reports contain summaries of monthly and annual discharge and monthend storage for all previously published records, as well as some records not contained in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gaps where practical. The yearly summary table for each gaging station lists the numbers of the water-supply papers in which daily records were published for that station. Records for stations in Colorado are compiled in Water-Supply Papers 1310, 1311, 1312, and 1313 through September 1950; and in Water-Supply Papers 1730, 1731, 1732, and 1733 for October 1950 to September 1960.

Special reports on major floods or droughts or of other hydrologic studies for the area have been issued in publications other than water-supply papers. Information relative to these reports may be obtained from the district office.

OTHER DATA AVAILABLE

Information of a more detailed nature than that published for most of the gaging stations, such as discharge measurements, gage-height records, and rating tables, is on file in the district office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

Records of discharge not published by the Geological Survey were collected at 87 sites in Colorado during the 1976 water year by the following agencies: City of Colorado Springs (36 sites); Colorado Division of Water Resources (23 sites); Forest Service, U.S. Department of Agriculture (9 sites); City and County of Denver, Board of Water Commissioners (11 sites); and National Weather Service, Department of Commerce (5 sites); Bureau of Reclamation, Department of Interior (3 sites). Information on specific sites can be obtained from the district office of the U.S. Geological Survey at the address given on the back of the title page of this report.

EXPLANATION OF WATER QUALITY RECORDS

COLLECTION AND EXAMINATION OF DATA

Water samples for analyses usually are collected at or near gaging stations. The discharge records at these stations are used in conjunction with the computations of the chemical constituents and sediment loads.

Descriptive statements are given for water-quality stations located at or near streamflow stations. Information given include the location, drainage area, periods of record for the various water-quality data, extremes of the pertinent data, and general remarks in a format similar to that used for streamflow gaging stations.

Water-quality information is presented for chemical, biological, and microbiological quality, water temperature, and fluvial sediment. Chemical quality includes concentrations of individual dissolved constituents and certain properties or characteristics such as hardness, sodium-absorption-ratio, specific conductance, and pH.

The biological information includes qualitative and quantitative analyses of plankton, bottom organisms, and particulate inorganic and amorphous matter present. Microbiological information includes quantitative identification of certain bacteriological indicator organisms.

Prior to 1968 water year, data for chemical constituents and concentrations of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit (°F). In October 1967, the Geological Survey began reporting data for chemical constituents and concentrations of suspended sediment in milligrams per liter (mg/L) and water temperatures in degrees Celsius (°C). In waters with a density of 1.000 g/mL (grams per milliliter), parts per million and milligrams per liter can be considered equal. In waters with a density greater than 1.000 g/mL, values in parts per million should be multiplied by the density to convert to milligrams per liter. Temperature reported in degrees Celsius may be converted to degrees Fahrenheit by using table 3.

TEMPERATURE

Water temperatures were measured at most of the water-quality stations. In addition, water temperatures are taken at the time of discharge measurements for surface-water stations. For daily stations, the water temperatures are taken at about the same time each day when the sample is collected. At stations where continuously recording thermographs are present, the records consist of maximum and minimum temperatures for each day; stations equipped with noncontinuous digital monitors provide records of daily mean values based on hourly punches.

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.

Table 3.--Degrees Celsius (°C) to degrees Fahrenheit (°F)*
(Temperature reported to nearest 0.5°C)

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0.0	32	10.0	50	20.0	68	30.0	86	40.0	104
.5	33	10.5	51	20.5	69	30.5	87	40.5	105
1.0	34	11.0	52	21.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	22.0	72	32.0	90	42.0	108
2.5	36	12.5	54	22.5	72	32.5	90	42.5	108
3.0	37	13.0	55	23.0	73	33.0	91	43.0	109
3.5	38	13.5	56	23.5	74	33.5	92	43.5	110
4.0	39	14.0	57	24.0	75	34.0	93	44.0	111
4.5	40	14.5	58	24.5	76	34.5	94	44.5	112
5.0	41	15.0	59	25.0	77	35.0	95	45.0	113
5.5	42	15.5	60	25.5	78	35.5	96	45.5	114
6.0	43	16.0	61	26.0	79	36.0	97	46.0	115
6.5	44	16.5	62	26.5	80	36.5	98	46.5	116
7.0	45	17.0	63	27.0	81	37.0	99	47.0	117
7.5	45	17.5	63	27.5	81	37.5	99	47.5	117
8.0	46	18.0	64	28.0	82	38.0	100	48.0	118
8.5	47	18.5	65	28.5	83	38.5	101	48.5	119
9.0	48	19.0	66	29.0	84	39.0	102	49.0	120
9.5	49	19.5	67	29.5	85	39.5	103	49.5	121

*°C=5/9(°F-32°) or °F=9/5(°C)+32°.

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor elements in micrograms per liter instead of milligrams per liter. (See "Definition of Terms," and table 5 for converting English units to SI units.)

SOLUTES

Most methods for collecting and analyzing water samples to determine the kinds and concentrations of solutes are described by Brown, Skoughstad, and Fishman (1970). The method for determining elemental constituents by emission spectographic techniques is described by Barnett and Mallory (1971). Analysis of pesticides and organic substances in water are described by Goerlitz and Lamar (1967), Lamar, Goerlitz, and Law (1965), and Goerlitz and Brown (1972). The collection and analysis of aquatic, biological, and microbiological samples are described by Slack and others (1973).

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.

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 exist between the 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 noncontinuous-digital monitors, the records consist of daily 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 Geological Survey district office at the address given on the back of the title page of this report.

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 loads 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. A blank in the daily mean concentration column of the suspended-sediment discharge table indicates the value in the sediment discharge column was estimated. A zero value in the sediment discharge column when there are nonzero values in the mean discharge and mean concentration columns indicates the load is less than 0.005 tons per day.

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 in predicting long-term sediment-discharge characteristics of the streams.

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

WATER-SUPPLY PAPERS

The annual series of Water-Supply Papers that give information on quality of surface waters in Colorado Are shown in the following table:

Table 4.--Water-Supply Paper numbers and parts, water years 1941-71

Year	Part 6	Part 7	Part 8	Part 9	Irrigation (1951-65)[a]
1941	942	942	942	942	----
1942	950	950	950	950	----
1943	970	970	970	970	----
1944	1022	1022	1022	1022	----
1945	1030	1030	1030	1030	----
1946	1050	1050	1050	1050	----
1947	1102	1102	1102	1102	----
1948	1132	1133	1133	1133	----
1949	1162	1163	1163	1163	----
1950	1187	1188	1188	1189	----
1951	1198	1199	1199	1200	1264
1952	1251	1252	1252	1253	1362
1953	1291	1292	1292	1293	1380
1954	1351	1352	1352	1353	1430
1955	1401	1402	1402	1403	1465
1956	1451	1452	1452	1453	1485
1957	1521	1522	1522	1523	1524
1958	1572	1573	1573	1574	1575
1959	1643	1644	1644	1645	1697
1960	1743	1744	1744	1745	1746
1961	1883	1884	1884	1885	1886
1962	1943	1944	1944	1945	1946
1963	1949	1950	1950	1951	1952
1964	1956	1957	1957	1958	1960
1965	1963	1964	1964	1965	1967
1966	1993	1994	1994	1995	----
1967	2013	2014	2014	2015	----
1968	2095	2096	2097	2098	----
1969	2145	2146	2147	2148	----
1970	[b]2155	[b]2156	[b]2157	[b]2158	----
1971	[b]2165	[b]2166	[b]2167	[b]2168	----

[a] Annual series, "Quality of Surface Waters for Irrigation, Western States."

[b] In preparation.

Information about reports and other data on quality of water in Colorado may be obtained from the district office at the address given on the back of the title page of this report.

EXPLANATION OF GROUND-WATER-LEVEL RECORDS

COLLECTION OF DATA

Only ground-water-level data from a basic national network of observation wells are published in this report. These water-level measurements are intended to provide a record of water-level changes in important aquifers.

The locations of wells are referenced by two systems. One system is based on latitude and longitude, and the second is based on the U.S. Bureau of Land Management system of land subdivision. The latitude and longitude grid system facilitates machine processing of data and plotting of data points.

The latitude and longitude grid system is used to provide the geographic location of each well. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude; N designates north; the next seven digits denote degrees, minutes, and seconds of longitude; and the last digit is a sequential number for wells within a 1-second grid, as shown below in figure 4.

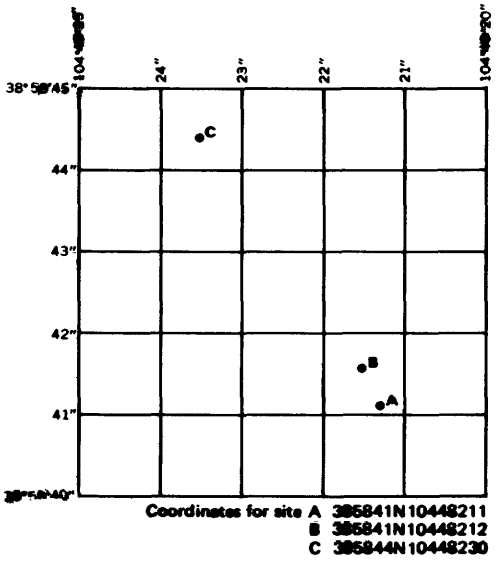

Figure 4.--System for numbering wells and miscellaneous sites (latitude and longitude).

The local well number locates a well within a 10-acre (4.0-ha) 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 (10 km) by townships and is subdivided in the east-west direction every 6 mi (10 km) by ranges. The first number of the well location designates the township and the second number designates the range.

The 36-mi^2 (93-km^2) area described by the township and range designation is subdivided into 1-mi^2 (2.59-km^2) areas called sections. The sections are numbered sequentially. The third number of the well location designates the section. The section, which contains 640 acres (259 ha), is subdivided into quarter sections. The 160-acre (64.8-ha) 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 (16.2-ha) area is designated in the same manner by the second letter following the section. The quarter-quarter section is subdivided into quarter-quarter-quarter sections. The 10-acre (4.0-ha) 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 (4.0-ha) 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.

The local number is provided for continuity with older reports.

Measurements are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well insure that measurements at each well are of consistent accuracy and reliability.

Water-level measurements in this report are given in feet with reference to either mean sea level (msl) or land-surface datum (lsd). Mean sea level is the datum plane on which the national network of precise levels is based; land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum above mean sea level is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth of a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

PUBLICATIONS

Publication of ground-water-level data for the United States in Water-Supply Papers was begun by the U.S. Geological Survey in 1935. From 1935 through 1939, a single Water-Supply Paper covering the entire nation was issued each year (Water-Supply Papers 777, 817, 840, 845, and 886). From 1940 through 1974, separate Water-Supply Papers were issued for six sections of the United States. Water-level data for Colorado are included in the Water-Supply Papers listed below, each report containing one or more calendar years (January through December) of data. Data in this report are for the 12-month water year ending September 30.

Calendar year	WSP no.	Calendar year	WSP no.	Calendar year	WSP no.	Calendar year	WSP no.
1940	910	1945	1027	1950	1169	1955	1408
1941	940	1946	1075	1951	1195	1956-60	1760
1942	948	1947	1100	1952	1225	1961-65	1845
1943	990	1948	1130	1953	1269	1966-70	1980
1944	1020	1949	1160	1954	1325		

Information about reports and other data on ground water in Colorado may be obtained from the district office at the address given on the back of the title page of this report.

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NOTE: When ordering any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

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HYDROLOGIC-DATA STATION RECORDS

MISSOURI RIVER BASIN

PLATTE RIVER BASIN

06614800 MICHIGAN RIVER NEAR CAMERON PASS, CO

LOCATION.--Lat 40°29'46", long 105°51'52", in SE¼ sec.12, T.6 N., R.76 W., (unsurveyed), Jackson County, Hydrologic Unit 10180001, on right bank 500 ft (152 m) upstream from Michigan ditch, 2.2 mi (3.5 km) southeast of Cameron Pass, 8 mi (13 km) east of Gould, and 27 mi (43 km) southeast of Walden.

DRAINAGE AREA.--1.53 mi² (3.96 m²).

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

GAGE.--Water-stage recorder. Altitude of gage is 10,390 ft (3,167 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. No diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44 ft³/s (1.25 m³/s) June 18, 1974, gage height, 3.53 ft (1.076 m); minimum daily, 0.16 ft³/s (0.005 m³/s) many days in March and April 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 24 ft³/s (0.68 m³/s) June 5, gage height, 3.15 ft (0.96 m), no peak above base of 35 ft³/s (1.0 m³/s); minimum daily, 0.22 ft³/s (0.006 m³/s) Jan. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.33	.33	.26	.25	.29	.30	.34	11	14	4.1	1.4
2	.30	.33	.33	.25	.25	.29	.30	.38	14	12	5.7	1.3
3	.30	.33	.33	.25	.25	.29	.30	.48	15	13	5.2	1.2
4	.33	.35	.37	.29	.25	.29	.30	.58	17	12	4.2	1.1
5	.36	.33	.37	.29	.25	.29	.30	.61	19	12	3.4	1.1
6	.33	.33	.37	.29	.25	.29	.30	.63	17	11	3.0	1.1
7	.33	.33	.37	.29	.26	.29	.30	.59	17	10	2.7	1.3
8	.29	.33	.37	.29	.28	.29	.31	.57	18	10	2.9	1.3
9	.32	.33	.36	.29	.29	.29	.33	.57	19	10	4.1	1.2
10	.36	.33	.33	.29	.29	.29	.33	.63	18	9.4	3.2	1.2
11	.38	.33	.33	.29	.29	.29	.34	.98	17	9.4	3.0	1.2
12	.36	.32	.33	.29	.29	.29	.36	1.0	15	9.7	2.7	1.2
13	.33	.30	.33	.29	.29	.29	.37	.85	13	9.1	2.9	1.1
14	.33	.29	.33	.29	.29	.29	.35	1.4	10	7.8	2.8	1.3
15	.33	.29	.33	.29	.29	.29	.30	1.8	9.5	7.0	2.4	1.5
16	.33	.29	.32	.29	.29	.29	.30	1.4	10	6.6	2.2	1.5
17	.32	.29	.32	.29	.29	.29	.30	1.9	8.9	6.2	2.1	1.3
18	.33	.29	.33	.29	.29	.29	.30	2.6	7.0	6.8	1.9	1.2
19	.32	.29	.32	.29	.29	.29	.30	3.0	7.1	8.3	1.7	1.3
20	.30	.29	.29	.29	.29	.29	.30	3.3	8.5	6.8	1.7	1.2
21	.30	.28	.29	.28	.29	.29	.30	4.5	12	6.1	1.6	1.2
22	.30	.28	.29	.26	.29	.29	.30	4.3	15	5.4	1.6	1.4
23	.31	.26	.29	.25	.29	.31	.30	3.1	14	5.0	1.6	1.4
24	.31	.27	.29	.25	.29	.29	.30	2.8	11	4.8	1.6	1.5
25	.32	.29	.29	.25	.29	.30	.30	2.8	11	4.6	1.5	1.5
26	.37	.29	.29	.22	.29	.30	.30	3.3	11	4.7	1.6	1.4
27	.37	.29	.27	.24	.29	.30	.30	4.8	13	4.9	1.9	1.3
28	.34	.30	.28	.25	.29	.30	.30	5.8	14	4.1	1.6	1.2
29	.33	.31	.29	.25	.29	.30	.31	6.4	13	3.5	1.4	1.2
30	.33	.31	.29	.25	---	.30	.34	6.6	13	3.3	1.3	1.1
31	.33	---	.28	.25	---	.30	---	7.8	---	3.3	1.3	---
TOTAL	10.16	9.18	9.91	8.44	8.13	9.08	9.34	75.81	398.0	240.8	78.9	38.2
MEAN	.33	.31	.32	.27	.28	.29	.31	2.45	13.3	7.77	2.55	1.27
MAX	.38	.35	.37	.29	.29	.31	.37	7.8	19	14	5.7	1.5
MIN	.29	.26	.27	.22	.25	.29	.30	.34	7.0	3.3	1.3	1.1
AC-FT	20	18	20	17	16	18	19	150	789	478	156	76

CAL YR 1975 TOTAL 998.07 MEAN 2.73 MAX 27 MIN .25 AC-FT 1980
WTR YR 1976 TOTAL 895.95 MEAN 2.45 MAX 19 MIN .22 AC-FT 1780

06616000 NORTH FORK MICHIGAN RIVER NEAR GOULD, CO

LOCATION.--Lat 40°32'58", long 106°01'14", in SE¼NW¼ sec.27, T.7 N., R.77 W., Jackson County, Hydrologic Unit 10180001, on left bank 25 ft (8 m) upstream from county road bridge, 0.7 mi (1.1 km) downstream from dam on recreation lake, 1.6 mi (2.6 km) north of Gould, 2.8 mi (4.5 km) upstream from mouth, and 19 mi (31 km) southeast of Walden.

DRAINAGE AREA.--21.2 mi² (54.9 km²).

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,793 ft (2,680.1 m) above mean sea level. Prior to Oct. 6, 1964, at site 0.6 mi (1.0 km) upstream at datum 55.00 ft (16.764 m) higher. Oct. 6, 1964, to Aug. 10, 1965, at site 0.2 mi (0.3 km) upstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. One small diversion above station to Canadian River drainage. Slight natural regulation by recreation lake, capacity 1,250 acre-ft (1.54 hm³), since Dec. 11, 1963.

AVERAGE DISCHARGE.--26 years, 17.4 ft³/s (0.493 m³/s) 12,610 acre-ft/yr (15.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 290 ft³/s (8.21 m³/s) May 25, 1961, gage height, 3.15 ft (0.960 m), site and datum then in use, from rating curve extended above 160 ft³/s (4.5 m³/s); maximum gage height, 4.91 ft (1.497 m) May 9, 1974; no flow Dec. 11, 1963, to Apr. 30, 1964, caused by filling recreation lake upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 109 ft³/s (3.09 m³/s) May 22, gage height, 4.09 ft (1.247 m), only peak above base of 100 ft³/s (2.8 m³/s) minimum daily, 1.3 ft³/s (0.037 m³/s) Jan. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	3.6	3.1	2.1	1.4	2.2	3.2	15	57	16	8.0	3.2
2	4.0	3.4	3.2	2.0	1.4	2.2	3.5	18	55	16	13	3.1
3	3.8	3.3	3.2	2.0	1.4	2.2	4.0	26	55	15	17	2.8
4	3.5	3.3	3.2	2.0	1.4	2.2	4.5	31	58	14	12	2.7
5	3.4	3.4	3.2	1.8	1.4	2.2	4.8	31	60	13	8.5	2.6
6	3.4	3.4	3.2	1.8	1.4	2.3	5.0	28	59	12	6.7	2.6
7	3.4	3.2	3.2	1.8	1.4	2.4	4.5	27	53	11	5.7	2.6
8	3.8	3.3	3.2	1.8	1.4	2.5	5.0	31	45	11	5.5	2.8
9	3.6	3.4	3.2	1.8	1.4	2.6	6.0	34	44	10	7.0	2.7
10	4.1	3.5	3.2	1.8	1.5	2.7	7.0	40	40	9.9	6.2	2.6
11	4.1	3.6	3.1	1.8	1.5	2.8	8.0	50	37	9.3	6.1	2.7
12	3.8	3.6	3.0	1.7	1.5	2.8	10	57	35	8.1	5.6	2.7
13	3.6	3.4	2.9	1.6	1.5	2.8	11	37	32	8.9	5.2	2.7
14	3.6	3.3	2.9	1.5	1.5	2.8	11	48	31	8.4	5.4	2.7
15	3.7	3.3	2.9	1.5	1.5	2.8	10	63	31	7.9	4.9	4.3
16	3.7	3.3	2.9	1.5	1.6	2.8	9.0	49	33	7.3	4.5	6.2
17	3.5	3.3	2.9	1.5	1.6	2.8	9.0	55	31	7.1	4.3	4.5
18	3.7	3.2	2.9	1.5	1.6	2.9	8.0	67	33	7.1	4.3	3.5
19	3.5	3.1	2.8	1.5	1.6	3.0	7.0	70	34	11	4.0	3.2
20	3.3	3.0	2.7	1.5	1.6	3.0	7.5	70	27	9.7	3.7	3.2
21	3.2	3.0	2.7	1.4	1.6	3.0	8.0	81	24	9.8	3.5	3.0
22	3.3	3.0	2.7	1.4	1.7	3.0	9.0	106	22	8.3	3.4	3.8
23	3.1	3.0	2.7	1.4	1.8	3.0	10	90	24	7.1	3.3	5.4
24	3.2	3.0	2.7	1.4	1.9	3.0	10	81	24	6.4	3.4	5.2
25	3.3	3.0	2.6	1.4	2.0	3.0	9.5	68	22	6.2	3.2	5.5
26	3.5	3.0	2.5	1.3	2.1	3.0	9.0	67	20	6.7	3.2	4.6
27	3.5	3.0	2.5	1.3	2.2	3.0	9.5	68	19	7.5	4.9	3.8
28	3.5	3.0	2.5	1.4	2.2	3.0	11	72	18	6.8	4.3	3.3
29	3.7	3.0	2.4	1.4	2.2	3.0	16	68	16	6.0	3.5	3.0
30	3.6	3.0	2.3	1.4	---	3.0	18	63	16	6.1	3.2	2.8
31	3.6	---	2.2	1.4	---	3.0	---	58	---	6.0	3.1	---
TOTAL	111.0	96.9	88.7	49.7	47.3	85.0	240.0	1669	1855	289.6	176.6	103.8
MEAN	3.58	3.23	2.86	1.60	1.63	2.74	8.27	53.8	35.2	9.34	5.70	3.46
MAX	4.1	3.6	3.2	2.1	2.2	3.0	18	106	60	16	17	6.2
MIN	3.1	3.0	2.2	1.3	1.4	2.2	3.2	15	16	6.0	3.1	2.6
AC-FT	220	192	176	99	94	169	492	3310	2090	574	350	206

CAL YR 1975 TOTAL 5200.0 MEAN 14.2 MAX 116 MIN 1.2 AC-FT 10310
WTR YR 1976 TOTAL 4020.6 MEAN 11.0 MAX 106 MIN 1.3 AC-FT 7970

NOTE.--NO GAGE-HEIGHT RECORD NOV. 11 TO APR. 27.

06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO

LOCATION.--Lat 40°56'10", long 106°20'21", in SW¼SE¼ sec.11, T.11 N., R.80 W., Jackson County, Hydrologic Unit 10180001, on right bank 350 ft (110 m) downstream from bridge on State Highway 125, 0.8 mi (1.3 km) upstream from Camp Creek, 4.2 mi (6.8 km) northwest of Northgate, and 4.4 mi (7.1 km) south of Colorado-Wyoming State line.

DRAINAGE AREA.--1,431 mi² (3,706 km²).

WATER-DISCHARGE RECORDS

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.

REVISED RECORDS.--WSP 1310: 1916-21, 1929(M), 1930-32. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 7,810.39 ft (2,380.607 m) above mean 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 0.8 mi (1.3 km) downstream at datum 3.36 ft (1.024 m) lower.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 130,000 acres (526 km²) of hay meadows above station. Transbasin diversions above station to Cache la Poudre River basin (see elsewhere in this report).

AVERAGE DISCHARGE.--61 years, 433 ft³/s (12.26 m³/s), 313,700 acre-ft/yr (387 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,720 ft³/s (190 m³/s) June 11, 1923, gage height, 6.24 ft (1.902 m), site and datum then in use; maximum gage height recorded, 8.84 ft (2.694 m) Apr. 9, 1962, (ice jam); minimum daily discharge, 19 ft³/s (0.54 m³/s) July 17-19, 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,740 ft³/s (49.3 m³/s) May 23, gage height, 4.60 ft (1.402 m); maximum gage height, 5.64 ft (1.719 m) Apr. 7 (backwater from ice); minimum daily discharge, 68 ft³/s (1.93 m³/s) Jan. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	100	84	78	70	100	200	444	558	520	337	124
2	88	100	84	76	70	100	220	380	515	566	493	119
3	90	100	84	74	70	100	250	400	561	613	539	110
4	90	100	84	74	70	100	290	428	613	589	543	102
5	90	95	88	74	72	100	300	462	504	571	464	95
6	85	90	88	74	74	105	260	474	631	545	377	90
7	82	86	88	72	74	110	300	552	707	512	309	91
8	82	82	90	70	74	110	350	620	731	477	265	116
9	86	78	90	70	78	110	450	566	826	453	295	110
10	89	78	90	70	80	115	600	462	870	441	316	103
11	93	78	90	70	80	120	849	434	935	436	291	102
12	90	78	90	70	80	120	858	531	875	381	293	97
13	91	78	90	70	80	120	894	612	820	347	284	99
14	101	78	90	70	80	120	903	444	748	342	260	104
15	110	80	90	70	80	120	831	412	983	312	244	113
16	116	80	90	70	80	130	741	504	919	277	218	133
17	116	80	90	70	80	140	644	474	755	284	195	142
18	113	80	90	70	80	150	531	400	844	299	189	148
19	111	80	86	70	80	160	450	422	956	524	193	137
20	108	80	84	70	80	150	422	504	756	659	189	148
21	104	80	84	70	80	150	400	750	551	591	171	146
22	102	80	84	70	82	160	417	1190	444	513	157	124
23	94	80	84	70	82	170	444	1680	739	446	153	117
24	90	80	84	70	86	180	456	1640	1100	393	157	126
25	80	80	84	70	90	190	417	1400	835	332	145	152
26	80	80	84	68	90	200	434	1220	600	336	142	157
27	85	80	84	68	92	210	417	984	501	405	148	142
28	90	80	82	70	95	210	355	763	480	412	182	123
29	94	80	80	70	96	210	355	640	489	351	153	116
30	96	80	80	70	---	200	412	604	535	310	139	109
31	98	---	80	70	---	190	---	620	---	333	129	---
TOTAL	2933	2501	2670	2198	2325	4450	14450	21016	21481	13570	7944	3595
MEAN	94.6	83.4	86.1	70.9	80.2	144	482	678	716	438	256	120
MAX	116	100	90	78	96	210	903	1680	1100	659	543	157
MIN	80	78	80	68	70	100	200	380	444	277	129	90
AC-FT	5820	4960	5300	4360	4610	8830	28660	41690	42610	26920	15760	7130

CAL YR 1975 TOTAL 152102 MEAN 417 MAX 2340 MIN 64 AC-FT 301700
WTR YR 1976 TOTAL 99135 MEAN 271 MAX 1680 MIN 68 AC-FT 196600

06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1965 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1965 to September 1966, June 1971 to November 1972.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum 22.0°C Aug. 15, 25, 1971, July 29, Aug. 9, 13, 1972; minimum, freezing point many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	FECAL COLIFORM (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
OCT									
19...	0845	110	280	8.0	3.5	9.9	830	100	0
NOV									
16...	0930	E80	297	8.0	1.5	9.5	86	120	0
DEC									
16...	0830	E90	299	7.9	.5	9.0	812	120	0
JAN									
18...	0800	E70	592	8.0	.5	12.8	85	260	0
FEB									
15...	0830	E80	279	7.7	.0	9.2	88	110	0
MAR									
18...	0815	E150	261	7.9	.0	9.8	87	99	0
APR									
20...	0830	422	283	8.1	2.0	10.3	83	110	3
MAY									
23...	0900	1680	--	--	8.0	8.5	8520	96	0
JUN									
21...	0845	551	--	--	15.0	6.9	832	170	0
JUL									
19...	0930	524	--	--	16.5	6.7	8840	140	0
AUG									
16...	0930	218	--	--	14.0	8.4	38	100	0
SEP									
14...	0730	104	--	--	12.0	8.3	42	99	0

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
OCT									
19...	28	8.1	16	.7	2.1	140	0	115	25
NOV									
16...	33	8.1	17	.7	2.1	150	0	123	26
DEC									
16...	34	8.8	15	.6	2.1	150	0	123	28
JAN									
18...	72	19	31	.8	4.4	320	0	263	57
FEB									
15...	31	8.0	15	.6	3.7	140	0	115	26
MAR									
18...	28	7.1	15	.7	2.1	130	0	107	23
APR									
20...	29	8.4	18	.8	3.3	130	0	107	38
MAY									
23...	25	8.0	24	1.1	3.5	120	0	98	52
JUN									
21...	44	14	27	.9	2.3	210	0	172	40
JUL									
19...	38	12	24	.9	2.1	180	0	148	37
AUG									
16...	28	7.4	13	.6	2.8	130	0	107	21
SEP									
14...	27	7.6	14	.6	1.6	130	0	107	21

06620000 NORTH PLATTE RIVER NEAR NORTHGATE, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRATE (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)
OCT 19...	3.6	.5	10	161	.22	47.8	.02	.01
NOV 16...	7.8	.5	12	180	.24	93.4	.02	.02
DEC 16...	2.4	.5	14	178	.24	160	.00	.01
JAN 18...	3.5	1.1	33	376	.51	305	.09	.03
FEB 15...	4.2	.4	11	166	.23	134	.00	.02
MAR 18...	1.7	.4	11	151	.21	81.6	.02	.03
APR 20...	4.0	.4	14	177	.24	202	.07	.03
MAY 23...	5.4	.5	11	187	.25	848	.16	.18
JUN 21...	3.7	.6	12	245	.33	364	.09	.03
JUL 19...	3.7	.6	8.6	213	.29	301	.09	.05
AUG 16...	1.9	.6	6.9	146	.20	85.9	.00	.02
SEP 14...	1.8	.6	5.3	145	.20	40.7	.25	.01

DATE	TOTAL PCB (UG/L)	PCB IN BOTTOM MA-TERIAL (UG/KG)	POLY-CHLO-RINATED NAPH-THA-LENES (UG/L)	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL CHLOR-DANE (UG/L)	TOTAL DDD (UG/L)	DDD IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL DDT (UG/L)	DDT IN BOTTOM MA-TERIAL (UG/KG)
SEP 14...	.0	0	.00	.00	.0	.0	.00	.0	.00	.2	.0	.0

DATE	TOTAL DI-AZINON (UG/L)	TOTAL DI-ELDRIN (UG/L)	DI-ELDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MA-TERIAL (UG/KG)	TOTAL ETHION (UG/L)	TOTAL HEPTA-CHLOR (UG/L)	HEPTA-CHLOR IN BOTTOM MA-TERIAL (UG/KG)	TOTAL HEPTA-CHLOR EPOXIDE (UG/L)	HEPTA-CHLOR EPOXIDE IN BOT-TOM MA-TERIAL (UG/KG)	TOTAL LINDANE (UG/L)
SEP 14...	.00	.00	.0	.00	.0	.00	.00	.0	.00	.0	.00

DATE	LINDANE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL MALA-THION (UG/L)	TOTAL METHYL PARA-THION (UG/L)	TOTAL METHYL TRI-THION (UG/L)	TOTAL PARA-THION (UG/L)	TOTAL TOX-APHENE (UG/L)	TOX-APHENE IN BOTTOM MA-TERIAL (UG/KG)	TOTAL TRI-THION (UG/L)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)	TOTAL SILVER (UG/L)
SEP 14...	.0	.00	.00	.00	.00	0	0	.00	.00	.00	.00

06657500 LARAMIE RIVER NEAR GLENDEVEY, CO

LOCATION.--Lat 40°48'02", long 105°52'40", in NW¼NW¼ sec.36, T.10 N., R.76 W., Larimer County, Hydrologic Unit 10180010, on left bank 200 ft (61 m) downstream from bridge on county road, 350 ft (110 m) downstream from Nunn Creek, 1,300 ft (400 m) upstream from Stub Creek, and 3.0 mi (4.8 km) east of Glendevey.

DRAINAGE AREA.--101 mi² (262 km²).

PERIOD OF RECORD.--June 1904 to October 1905, August 1910 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "at Glendevey" 1905, 1910-18.

REVISED RECORDS.--WSP 469: 1911-12. WSP 506: Drainage area. WSP 1310: 1905, 1914. WSP 1918: 1918 (monthly runoff).

GAGE.--Water-stage recorder. Altitude of gage is 8,230 ft (2,509 m), from topographic map. See WSP 1730 for history of changes prior to Sept. 20, 1935.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 700 acres (2.83 km²) of hay meadows above station. Transbasin diversions above station to Cache la Poudre River and tributaries (see elsewhere in this report).

AVERAGE DISCHARGE.--67 years, 73.7 ft³/s (2.087 m³/s), 53,400 acre-ft/yr (65.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,240 ft³/s (63.4 m³/s) June 9, 1923, gage height, 4.55 ft (1.387 m), from floodmarks, site and datum then in use, from rating curve extended above 1,400 ft³/s (40 m³/s); minimum daily recorded, 5.0 ft³/s (0.14 m³/s) Feb. 14, 15, 1911, but may have been less during winter periods of no gage-height record.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 342 ft³/s (9.69 m³/s) June 9, gage height, 2.09 ft (0.637 m); minimum daily, 14 ft³/s (0.40 m³/s) Jan. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	26	20	14	15	15	18	36	222	116	118	39
2	28	25	21	14	15	15	18	42	225	110	141	37
3	27	25	20	15	15	15	20	50	233	85	177	35
4	26	25	19	15	15	15	21	61	244	79	134	33
5	25	25	19	15	15	15	22	64	254	68	113	32
6	24	25	19	15	15	15	23	69	271	64	96	31
7	24	24	18	15	15	15	20	75	247	59	86	33
8	27	24	18	15	15	16	21	83	255	52	81	35
9	26	24	18	15	15	16	25	83	292	48	118	33
10	30	24	18	15	15	16	30	94	242	47	90	31
11	29	25	18	15	15	16	34	113	227	44	86	29
12	26	25	18	15	15	16	40	132	207	40	83	30
13	25	25	17	15	15	16	41	72	162	38	74	34
14	26	25	17	15	15	16	37	98	137	35	73	31
15	25	23	17	15	15	16	33	124	145	34	65	40
16	28	25	17	15	15	16	33	94	130	32	60	53
17	26	24	17	15	15	16	27	111	118	30	58	36
18	27	24	16	15	15	16	24	152	137	115	62	32
19	26	23	16	15	15	16	23	162	137	162	61	30
20	24	22	16	15	15	16	25	179	105	154	57	33
21	24	20	16	15	15	16	29	201	111	150	54	33
22	23	19	15	15	15	16	34	232	133	127	53	31
23	23	18	15	15	15	16	38	205	177	114	51	34
24	22	18	15	15	15	16	35	189	122	108	51	33
25	21	18	15	15	15	16	36	193	90	122	47	36
26	23	19	15	15	15	16	33	189	81	122	45	39
27	24	19	15	15	15	16	30	206	84	130	58	42
28	25	19	15	15	15	16	33	222	93	107	47	38
29	26	19	15	15	15	16	38	225	98	97	43	33
30	26	19	15	15	---	17	40	243	97	93	41	30
31	26	---	15	15	---	18	---	222	---	101	40	---
TOTAL	791	676	525	463	435	492	881	4221	5076	2683	2363	1036
MEAN	25.5	22.5	16.9	14.9	15.0	15.9	29.4	136	169	86.5	76.2	34.5
MAX	30	26	21	15	15	18	41	243	292	162	177	53
MIN	21	18	15	14	15	15	18	36	81	30	40	29
AC-FT	1570	1340	1040	918	863	976	1750	8370	10070	5320	4690	2050

CAL YR 1975 TOTAL 26630 MEAN 73.0 MAX 609 MIN 13 AC-FT 52820
WTR YR 1976 TOTAL 19642 MEAN 53.7 MAX 292 MIN 14 AC-FT 38960

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

LOCATION.--Lat 38°58'03", long 105°34'51", in NE¼ sec.32, T.12 S., R.73 W., Park County, Hydrologic Unit 10190001, on left bank 200 ft (60 m) downstream from highway bridge, 2.5 mi (4.0 km) upstream from water line of Elevenmile Canyon Reservoir at elevation 8,561 ft (2,609 m), and 13 mi (21 km) southeast of Hartsel.

DRAINAGE AREA.--880 mi² (2,279 km²).

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

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

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 8,612.83 ft (2,625.191 m) above mean sea level (datum of Denver Board of Water Commissioners). 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 (0.140 m) lower.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by Antero Reservoir capacity 22,300 acre-ft (27.5 hm³). Many small diversions above station for irrigation of about 24,000 acres (97.1 km²).

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

AVERAGE DISCHARGE.--37 years (water years 1940-76), 79.3 ft³/s (2.246 m³/s), 57,450 acre-ft/yr (70.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, occurred Apr. 28, 1970, gage height, 7.60 ft (2.316 m), from floodmarks; maximum daily, 3,970 ft³/s (112 m³/s) Apr. 27, 1970; minimum daily, 0.55 ft³/s (0.016 m³/s) Oct. 2-5, 9, 10, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 520 ft³/s (14.7 m³/s) Aug. 4, gage height, 2.87 ft (0.875 m); minimum daily, 14 ft³/s (0.40 m³/s) Jan. 2, May 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	64	33	18	18	34	60	37	22	86	151	90
2	28	60	34	14	19	34	65	31	20	106	289	84
3	27	57	31	16	20	31	65	26	22	127	450	73
4	26	55	31	17	22	28	65	19	36	106	503	60
5	26	54	32	18	24	25	70	14	52	89	389	50
6	26	52	32	18	25	21	70	19	61	92	249	48
7	24	50	32	16	24	23	75	41	68	92	177	48
8	19	50	34	18	28	25	80	80	62	90	149	48
9	18	55	36	18	29	26	83	95	98	84	141	46
10	18	52	36	19	29	27	81	110	153	87	128	43
11	19	54	34	17	27	29	80	115	285	95	122	40
12	18	54	32	18	30	28	81	120	211	117	112	34
13	17	50	30	18	31	27	89	115	130	148	99	33
14	18	40	28	18	32	29	83	66	90	155	102	37
15	18	30	24	21	33	29	73	26	62	139	89	44
16	18	26	22	23	33	30	66	19	49	139	74	58
17	21	26	20	22	33	31	66	18	52	123	64	57
18	21	25	17	24	32	33	64	17	76	127	66	48
19	18	27	16	23	31	34	68	18	76	134	68	48
20	18	28	16	20	30	33	65	24	65	185	72	51
21	18	29	17	20	23	34	51	30	57	217	86	54
22	18	30	17	20	25	37	49	58	68	205	80	54
23	23	32	18	22	27	39	48	65	107	177	68	52
24	19	34	18	22	29	40	44	46	148	160	69	50
25	32	34	18	22	30	45	38	33	120	132	110	45
26	48	30	18	19	30	45	31	28	96	141	118	83
27	61	32	19	21	30	45	24	24	84	213	95	139
28	61	34	18	21	31	50	23	20	84	162	86	139
29	62	33	17	18	32	51	26	18	81	141	81	95
30	61	32	18	18	---	53	31	17	83	115	79	69
31	62	---	20	18	---	55	---	23	---	148	83	---
TOTAL	895	1229	768	597	807	1071	1814	1372	2618	4132	4449	1820
MEAN	28.9	41.0	24.8	19.3	27.8	34.5	60.5	44.3	87.3	133	144	60.7
MAX	62	64	36	24	33	55	89	120	285	217	503	139
MIN	17	25	16	14	18	21	23	14	20	84	64	33
AC-FT	1780	2440	1520	1180	1600	2120	3600	2720	5190	8200	8820	3610

CAL YR 1975 TOTAL 28731.0 MEAN 78.7 MAX 555 MIN 3.0 AC-FT 56990
WTR YR 1976 TOTAL 21572.0 MEAN 58.9 MAX 503 MIN 14 AC-FT 42790

NOTE.--NO GAGE-HEIGHT RECORD NOV. 10 TO MAR. 31.

06696000 SOUTH PLATTE RIVER NEAR LAKE GEORGE, CO

LOCATION.--Lat 38°54'19", long 105°28'22", in SW¼ sec.20, T.13 S., R.72 W., Park County, Hydrologic Unit 10190001, on left bank 700 ft (210 m) downstream from Elevenmile Canyon Reservoir and 8.2 mi (13.2 km) southwest of town of Lake George.

DRAINAGE AREA.--963 mi² (2,494 km²).

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 and Parshall flume. Altitude of gage is 8,458 ft (2,578.0 m), from topographic map. Prior to Oct. 26, 1940, at site 1 mi (1.6 km) downstream at datum 8,423.95 ft (2,567.620 m) above mean sea level, adjustment of 1912.

REMARKS.--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 (27.5 hm³), 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.

AVERAGE DISCHARGE.--47 years, 72.7 ft³/s (2.059 m³/s), 52,670 acre-ft/yr (64.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 3,000 ft³/s (85 m³/s) Apr. 28, 1970, gage height, 8.34 ft (2.542 m), from floodmarks, by computation of outflow from Elevenmile Canyon Reservoir; no flow at times in January 1930, February 1931, November 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 353 ft³/s (10.0 m³/s) Aug. 5, gage height, 308 ft (0.939 m); minimum daily, 17 ft³/s (0.48 m³/s) Jan. 18, Feb. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	52	36	24	17	24	42	44	41	85	190	72
2	49	52	35	23	17	25	43	41	67	111	210	72
3	48	52	36	22	17	26	45	39	66	115	265	73
4	47	51	36	22	17	28	49	37	65	120	312	73
5	45	51	36	22	41	29	54	33	66	120	346	73
6	44	52	36	21	62	28	64	30	69	119	344	58
7	44	51	36	21	64	28	64	30	72	119	323	47
8	43	47	36	21	64	28	64	34	76	120	297	47
9	35	52	36	20	64	28	67	45	80	120	268	47
10	33	50	37	19	66	28	68	52	88	119	247	47
11	33	50	36	19	66	28	68	62	89	119	232	47
12	33	42	37	19	67	28	71	70	86	124	213	47
13	33	39	37	18	66	29	80	73	91	130	200	55
14	30	39	36	18	68	28	80	72	96	143	185	61
15	28	38	36	18	68	28	78	65	78	145	227	60
16	26	38	33	18	70	28	77	57	73	148	230	60
17	26	37	32	18	70	28	84	51	69	151	265	60
18	27	36	30	17	70	28	86	45	70	152	300	60
19	28	39	30	18	71	33	83	40	69	156	288	60
20	28	39	28	19	71	30	80	37	68	163	273	88
21	30	38	28	18	72	28	76	40	65	179	260	118
22	30	38	26	19	72	27	71	45	65	191	250	118
23	30	36	25	20	42	28	69	48	68	195	185	92
24	36	36	25	19	23	28	64	46	73	197	144	76
25	36	38	24	20	22	30	58	45	77	192	144	76
26	36	40	23	20	22	31	58	42	72	188	120	76
27	40	37	23	20	23	33	50	40	67	195	97	107
28	43	38	22	19	24	34	45	37	65	198	90	161
29	47	38	22	19	24	38	44	35	64	194	90	185
30	51	40	22	19	---	40	44	33	64	188	90	160
31	51	---	22	18	---	39	---	31	---	182	70	---
TOTAL	1161	1286	957	608	1440	916	1926	1399	2159	4678	6777	2376
MEAN	37.5	42.9	30.9	19.6	49.7	29.5	64.2	45.1	72.0	151	219	79.2
MAX	51	52	37	24	72	40	86	73	96	198	346	185
MIN	26	36	22	17	17	24	42	30	41	85	70	47
AC-FT	2300	2550	1900	1210	2860	1820	3820	2770	4280	9280	13440	4710

CAL YR 1975 TOTAL 31603.7 MEAN 86.6 MAX 512 MIN 5.5 AC-FT 62690
WTR YR 1976 TOTAL 25683.0 MEAN 70.2 MAX 346 MIN 17 AC-FT 50940

06700500 GOOSE CREEK ABOVE CHEESMAN LAKE, CO
(Known also as Lost Park Creek)

LOCATION.--Lat 39°12'32", long 105°18'11", in sec.2, T.10 S., R.71 W., Jefferson County, Hydrologic Unit 10190002, on right bank 1.0 mi (1.6 km) upstream from water line of Cheesman Lake at elevation 6,842 ft (2,085.4 m) and 1.7 mi (2.7 km) west of Cheesman Dam.

DRAINAGE AREA.--86.6 mi² (224 km²).

PERIOD OF RECORD.--August to December 1899 (published as "at Lake Cheesman"), October 1924 to current year (no winter records in some years). Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1730: Drainage area. WSP 1918: 1953.

GAGE.--Water-stage recorder and compound rectangular weir. Altitude of gage is 6,910 ft (2,106 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Small diversions above station for irrigation of about 100 acres (404,700 m²).

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

AVERAGE DISCHARGE.--39 years (water years 1925-30, 1936, 1940-41, 1944-47, 1951-76), 28.8 ft³/s (0.816 m³/s), 20,870 acre-ft/yr (25.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 487 ft³/s (13.8 m³/s) June 9, 1957, gage height, 4.11 ft (1.253 m) from rating curve extended above 170 ft³/s (4.8 m³/s); maximum gage height, 4.57 ft (1.393 m) May 30, 1942; minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 110 ft³/s (3.1 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 22	1100	110	3.12	1.85	0.564	Aug. 3	1200	*174	4.93	2.32	0.707

Minimum daily discharge, 3.5 ft³/s (0.099 m³/s) Jan. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	11	9.0	4.5	5.0	6.0	4.5	28	76	26	92	27
2	11	11	10	3.5	5.5	4.5	5.5	36	74	41	115	24
3	10	11	9.0	4.0	5.5	4.0	6.5	44	72	36	155	22
4	10	11	8.5	4.0	5.5	4.0	7.5	47	70	28	95	20
5	10	11	8.0	4.5	5.0	4.0	8.5	48	69	24	76	20
6	9.8	11	8.0	4.5	5.0	4.5	9.0	52	67	22	69	19
7	9.5	10	8.0	4.0	5.5	5.5	10	46	68	21	63	19
8	9.2	10	8.0	4.5	6.0	5.5	12	52	67	22	60	20
9	9.5	9.5	8.0	5.0	7.0	5.5	14	47	65	22	58	19
10	9.5	8.0	8.0	5.0	6.5	6.0	15	56	59	21	57	19
11	9.5	7.0	8.0	5.0	6.5	6.0	20	61	53	19	54	19
12	9.5	6.0	7.5	5.0	6.5	5.5	33	58	48	19	51	19
13	9.5	6.5	6.5	5.0	6.5	5.5	40	54	47	21	46	19
14	9.2	7.5	5.5	5.0	7.0	6.0	33	60	45	25	49	23
15	9.0	8.5	5.0	6.0	6.5	6.0	26	80	43	21	45	25
16	9.2	8.5	6.5	6.0	6.0	5.5	21	69	43	20	40	24
17	9.2	8.5	6.0	5.5	6.0	6.0	17	58	42	19	38	23
18	9.2	8.0	5.5	5.5	6.5	6.5	16	74	55	18	40	22
19	9.5	7.5	6.0	5.5	6.5	7.0	20	69	49	19	40	22
20	9.5	6.5	6.0	5.0	6.0	6.0	18	65	40	26	41	30
21	9.2	7.5	6.0	5.0	4.5	6.0	20	82	35	30	43	28
22	9.0	7.5	6.0	5.0	5.0	6.0	21	100	32	27	36	24
23	10	9.0	6.0	5.5	5.5	6.5	26	98	32	23	33	26
24	10	9.0	6.0	5.5	6.0	6.5	27	93	32	20	34	22
25	9.9	9.0	6.0	5.0	5.5	7.0	28	91	30	36	36	24
26	13	8.0	6.0	4.5	5.5	6.0	30	88	28	72	30	40
27	13	9.0	6.0	5.0	6.0	5.5	30	89	27	80	28	44
28	13	9.5	5.5	5.5	6.0	5.5	32	87	25	49	28	38
29	12	9.5	5.0	6.0	6.0	5.5	47	82	25	30	26	37
30	11	8.0	5.5	5.5	---	5.0	40	80	25	26	29	37
31	12	---	5.5	5.0	---	4.5	---	78	---	55	27	---
TOTAL	314.9	264.0	210.5	154.5	170.5	173.5	637.5	2072	1443	918	1634	755
MEAN	10.2	8.80	6.79	4.98	5.88	5.60	21.3	66.8	48.1	29.6	52.7	25.2
MAX	13	11	10	6.0	7.0	7.0	47	100	76	80	155	44
MIN	9.0	6.0	5.0	3.5	4.5	4.0	4.5	28	25	18	26	19
AC-F	625	524	418	306	338	344	1260	4110	2860	1820	3240	1500

CAL YR 1975 TOTAL 10483.9 MEAN 28.7 MAX 229 MIN 5.0 AC-FT 20790
WTR YR 1976 TOTAL 8747.4 MEAN 23.9 MAX 155 MIN 3.5 AC-FT 17350

NOTE--NO GAGE-HEIGHT RECORD NOV. 13 TO APR. 10.

06701500 SOUTH PLATTE RIVER BELOW CHEESMAN LAKE, CO

LOCATION.--Lat 39°12'33", long 105°16'02", in SE¼NW¼ sec.6, T.10 S., R.70 W., Jefferson County, Hydrologic Unit 10190002, on left bank 1,400 ft (430 m) downstream from toe of Cheesman Dam and 3.8 mi (6.1 km) southwest of Deckers.

DRAINAGE AREA.--1,752 mi² (4,538 km²).

PERIOD OF RECORD.--October 1924 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1949. WSP 1730: Drainage area.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 6,609.29 ft (2,014.512 m) above mean sea level. Prior to May 14, 1956, at site 370 ft (110 m) upstream at datum 0.50 ft (0.152 m) higher.

REMARKS.--Records good. Natural flow of stream affected by minor transmountain diversion from Colorado River basin through Boreas Pass ditch (see elsewhere in this report), Elevenmile Canyon Reservoir and Cheesman Lake (see elsewhere in this report), diversions for irrigation of about 40,000 acres (160 km²), and return flow from irrigated areas.

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

AVERAGE DISCHARGE.--52 years, 160 ft³/s (4.531 m³/s), 115,900 acre-ft/yr (143 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,640 ft³/s (131 m³/s) Apr. 29, 1970, gage height, 13.4 ft (4.08 m), from floodmarks, by computation of outflow from Cheesman Lake; minimum daily determined, 1.6 ft³/s (0.045 m³/s) Apr. 8-14, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 667 ft³/s (18.9 m³/s) Aug. 26, gage height, 3.12 ft (0.951 m); minimum daily, 15 ft³/s (0.42 m³/s) Nov. 18-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	238	57	65	68	91	92	84	140	104	357	207	475
2	198	57	65	68	89	92	101	183	108	235	257	472
3	164	57	65	68	89	92	117	269	209	223	204	405
4	149	57	65	68	89	74	117	311	313	223	57	272
5	110	57	65	68	91	54	117	311	311	223	164	269
6	81	57	65	68	117	47	117	308	311	252	435	269
7	79	57	65	69	132	47	117	343	311	274	414	186
8	79	57	65	69	132	47	138	319	321	240	402	119
9	144	57	65	69	134	47	147	292	509	192	300	119
10	221	57	66	69	136	34	147	292	568	176	231	108
11	203	40	66	69	136	27	172	319	532	176	160	103
12	203	30	66	69	136	27	303	385	475	151	132	99
13	189	30	66	69	136	27	332	414	453	106	149	97
14	183	30	66	68	136	27	408	349	472	81	183	96
15	183	30	66	68	136	19	459	203	519	73	185	96
16	183	30	65	68	136	16	426	214	509	73	207	96
17	183	20	66	68	134	16	306	496	506	71	290	117
18	181	15	66	68	136	17	219	496	490	68	292	130
19	181	15	66	68	136	17	219	496	456	91	332	130
20	148	15	66	68	136	17	219	472	459	86	402	130
21	57	15	66	71	136	17	219	456	500	69	429	130
22	57	15	66	77	136	17	219	438	525	106	426	146
23	57	15	66	91	117	17	254	375	519	214	394	179
24	57	15	66	92	92	17	282	54	453	292	487	196
25	57	27	68	91	92	17	285	56	391	308	519	196
26	57	51	68	91	92	36	285	57	391	343	462	196
27	57	60	68	91	92	84	245	115	391	207	649	170
28	57	60	68	91	92	84	194	201	429	164	554	115
29	57	60	68	91	92	84	147	228	447	166	450	181
30	57	60	68	91	---	84	121	219	444	183	432	201
31	57	---	68	91	---	84	---	168	---	166	462	---
TOTAL	3927	1203	2050	2335	3399	1377	6516	8979	12426	5589	10267	5498
MEAN	127	40.1	66.1	75.3	117	44.4	217	290	414	180	331	183
MAX	238	60	68	92	136	92	459	496	568	357	649	475
MIN	57	15	65	68	89	16	84	54	104	68	57	9/
AC-FT	7790	2390	4070	4630	6740	2730	12920	17810	24650	11090	20360	10//

CAL YR 1975 TOTAL 56322 MEAN 154 MAX 990 MIN 15 AC-FT 111700
WTR YR 1976 TOTAL 63566 MEAN 174 MAX 649 MIN 15 AC-FT 126100

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

LOCATION.--Lat 39°27'26", long 105°39'29", in NW¼ sec.10, T.7 S., R.74 W., Park County, Hydrologic Unit 10190002, on left bank at Grant, 1,550 ft (470 m) downstream from Geneva Creek and 1.3 mi (2.1 km) downstream from east portal of Harold D. Roberts tunnel.

DRAINAGE AREA.--127 mi² (329 km²).

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 and concrete control. Datum of gage is 8,560.81 ft (2,609.335 m) above mean sea level. 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 (15 m) downstream at datum 3.49 ft (1.064 m) lower.

REMARKS.--Records excellent. Small diversions above station for irrigation of about 200 acres (809,400 m²). Transmountain diversions from Colorado River basin to North Fork South Platte River above 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.

AVERAGE DISCHARGE.--39 years, 71.2 ft³/s (2.016 m³/s), 51,580 acre-ft/yr (63.6 hm³/yr), adjusted for inflow from Harold D. Roberts tunnel since 1964.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 990 ft³/s (28.0 m³/s) June 7, 8, 1912, gage height, 3.30 ft (1.006 m), site and datum then in use, from rating curve extended above 530 ft³/s (15 m³/s); maximum gage height, 4.72 ft (1.439 m), site and datum then in use, Feb. 11, 1952 (backwater from ice); minimum daily discharge, 6.5 ft³/s (0.18 m³/s) Nov. 27, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 655 ft³/s (18.5 m³/s) Aug. 2, gage height, 1.92 ft (0.585 m); minimum daily, 24 ft³/s (0.68 m³/s) Oct. 14, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	63	73	68	68	68	30	36	162	220	515	58
2	33	52	73	65	68	68	31	41	166	326	57	52
3	33	49	73	65	68	65	34	44	166	366	38	49
4	33	49	73	65	68	65	33	44	174	372	118	45
5	31	49	73	65	68	68	31	49	174	366	20	45
6	31	49	73	65	68	68	30	54	174	420	413	47
7	31	63	73	65	68	70	28	52	197	470	47	250
8	30	76	73	68	68	90	28	56	255	455	47	378
9	28	70	73	68	68	97	33	61	255	441	47	270
10	28	68	73	68	68	65	34	58	245	455	49	235
11	27	68	73	68	68	70	37	61	245	462	50	235
12	27	63	73	68	68	61	41	61	215	500	48	230
13	27	70	73	68	68	61	37	54	192	554	49	270
14	24	73	73	68	68	49	34	63	174	570	49	292
15	27	76	70	68	68	28	31	85	158	546	50	265
16	26	76	70	68	65	30	31	88	154	538	53	250
17	26	76	70	65	65	30	31	100	154	538	56	235
18	26	76	68	65	65	30	30	112	158	530	57	230
19	24	73	68	65	65	28	31	124	142	570	57	170
20	64	73	68	65	65	26	31	121	138	562	57	100
21	170	76	68	65	65	27	33	121	158	546	55	104
22	174	73	68	65	65	30	33	166	174	546	53	91
23	118	73	68	65	65	30	34	138	188	546	53	58
24	70	73	68	65	65	31	33	142	162	554	29	79
25	73	73	68	65	65	33	34	154	150	538	7	124
26	85	73	68	65	65	31	34	138	142	530	6	93
27	88	73	68	65	65	30	33	162	142	530	6	63
28	85	73	68	65	65	30	37	170	146	500	61	56
29	76	73	68	65	65	27	39	174	150	492	61	103
30	76	73	68	68	---	26	37	158	146	485	61	179
31	79	---	68	68	---	28	---	154	---	478	5	---
TOTAL	1701	2045	2184	2051	1930	1460	993	3041	5256	15006	1179	4656
MEAN	54.9	68.2	70.5	66.2	66.6	47.1	33.1	98.1	175	484	38	155
MAX	174	76	73	68	68	97	41	174	255	570	57	378
MIN	24	49	68	65	65	26	28	36	138	220	5	45
AC-FT	3370	4060	4330	4070	3830	2900	1970	6030	10430	29760	2339	9240

CAL YR 1975 TOTAL 49416 MEAN 135 MAX 485 MIN 24 AC-FT 98020
WTR YR 1976 TOTAL 52113 MEAN 142 MAX 578 MIN 24 AC-FT 103400

06707000 NORTH FORK SOUTH PLATTE RIVER AT SOUTH PLATTE, CO

LOCATION.--Lat 39°24'32", long 105°10'31", in SW¼ sec.25, T.7 S., R.70 W., Jefferson County, Hydrologic Unit 10190002, on left bank 0.2 mi (0.3 km) west of South Platte and 0.3 mi (0.5 km) upstream from mouth.

DRAINAGE AREA.--479 mi² (1,241 km²).

PERIOD OF RECORD.--June 1909 to September 1910, April 1913 to current year. Monthly discharge only for some periods, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1930(M), 1933(M), 1942(M). WSP 1730: 1954(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,090.55 ft (1,856.400 m) above mean sea level, adjustment of 1912. Prior to May 13, 1925, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. Small diversions above station for irrigation of about 2,000 acres (8.09 km²). Transmountain diversions from Colorado River basin to North Fork South Platte River above 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.

AVERAGE DISCHARGE.--64 years, 154 ft³/s (4.361 m³/s), 111,600 acre-ft/yr (138 hm³/yr), adjusted for inflow from Harold D. Roberts tunnel since 1964.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,050 ft³/s (58.1 m³/s) June 13, 1949, gage height, 6.30 ft (1.920 m); minimum observed, 4.0 ft³/s (0.11 m³/s) Dec. 8, 1932 (discharge measurement).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,010 ft³/s (28.6 m³/s) Aug. 3, gage height, 3.97 ft (1.210 m); minimum daily, 57 ft³/s (1.61 m³/s) Oct. 15-17, 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	117	105	90	95	100	68	90	256	251	708	130
2	72	97	110	75	95	100	68	88	262	445	822	124
3	69	95	110	90	95	90	68	90	256	528	854	107
4	69	92	110	90	95	90	71	93	273	512	328	105
5	66	92	110	95	90	80	69	95	278	512	251	102
6	66	95	110	95	90	85	68	110	273	520	505	100
7	64	90	105	95	105	95	65	121	256	580	610	138
8	64	107	105	95	110	100	62	121	315	580	610	408
9	64	117	105	100	110	115	65	121	334	580	625	355
10	62	102	105	105	105	120	69	130	303	558	618	256
11	62	115	105	100	95	100	73	124	303	558	640	290
12	62	95	102	95	95	95	82	127	273	565	632	251
13	62	95	102	95	95	90	84	118	246	640	640	297
14	59	100	97	90	95	90	77	115	224	685	648	362
15	57	105	78	95	95	80	73	139	206	655	640	355
16	57	100	100	100	95	65	69	168	202	648	632	328
17	57	102	90	100	90	68	73	168	210	640	625	297
18	58	99	7S	100	90	68	68	206	235	640	632	273
19	57	99	85	95	90	71	80	224	235	678	632	273
20	57	90	85	85	90	62	78	206	210	685	640	188
21	115	105	90	90	85	63	82	256	206	700	648	160
22	154	100	90	90	90	63	82	290	215	662	595	175
23	154	110	95	90	90	68	78	262	246	655	588	133
24	95	110	100	95	95	68	80	240	224	655	545	118
25	90	110	95	90	95	71	78	273	220	655	188	164
26	111	95	95	80	95	73	78	251	220	678	142	202
27	120	105	105	80	95	68	80	256	215	768	139	153
28	117	110	95	90	95	68	80	273	215	678	136	130
29	114	115	90	90	95	65	84	290	229	662	127	121
30	111	95	95	90	---	61	93	262	229	640	130	185
31	117	---	95	95	---	59	---	251	---	648	127	---
TOTAL	2552	3059	3039	2865	2755	2491	2245	5558	7369	18861	15657	6280
MEAN	82.3	102	98.0	92.4	95.0	80.4	74.8	179	246	608	505	209
MAX	154	117	110	105	110	120	93	290	334	768	854	408
MIN	57	90	75	75	85	59	62	88	202	251	127	100
AC-FT	5060	6070	6030	5680	5460	4940	4450	11020	14620	37410	31060	12460

CAL YR 1975 TOTAL 79555 MEAN 218 MAX 695 MIN 57 AC-FT 157800
WTR YR 1976 TOTAL 72731 MEAN 199 MAX 854 MIN 57 AC-FT 144300

06707500 SOUTH PLATTE RIVER AT SOUTH PLATTE, CO

LOCATION.--Lat 39°24'33", long 105°10'10", in SE¼ sec.25, T.7 S., R.70 W., Jefferson County, Hydrologic Unit 10190002, on left bank at South Platte, 200 ft (61 m) downstream from bridge on State Highway 75 and 400 ft (120 m) downstream from North Fork.

DRAINAGE AREA.--2,579 mi² (6,680 km²).

PERIOD OF RECORD.--July 1887 to September 1891, May to October 1892, October 1895 to September 1897, October 1898 to June 1900, October 1900 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as "at" or "near Deansbury," "at Deansbury and Platte Canyon," "at" or "near Platte Canyon," prior to 1901, and as "below North Fork, at South Platte" 1914.

REVISED RECORDS.--WSP 306: 1910. WSP 1310: 1887-91, 1893, 1896, 1900, 1904, 1915(M), 1922(M), 1936(M). WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 6,078.43 ft (1,852.705 m) above mean sea level, adjustment of 1912. See WSP 1710 or 1730 for history of changes prior to Mar. 14, 1910.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions through Boreas Pass ditch and Harold D. Roberts tunnel (see elsewhere in this report), Elevenmile Canyon Reservoir and Cheesman Lake (see elsewhere in this report), diversions above station for irrigation of about 45,000 acres (182 km²) and return flow from irrigated areas.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,320 ft³/s (179 m³/s) June 8, 1921, gage height, 8.95 ft (2.728 m), from rating curve extended above 3,500 ft³/s (99 m³/s); minimum daily determined, 10 ft³/s (0.28 m³/s) Dec. 5, 1899.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,250 ft³/s (35.4 m³/s) Aug. 3, gage height, 4.22 ft (1.286 m); maximum gage height, 4.33 ft (1.320 m) Feb. 7 (backwater from ice); minimum daily discharge, 84 ft³/s (2.38 m³/s) Mar. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	344	210	190	170	215	218	164	280	476	699	897	618
2	298	182	205	140	220	215	168	313	424	744	1010	609
3	259	170	210	160	215	195	208	378	434	766	1090	576
4	228	170	210	180	210	198	215	462	596	758	481	410
5	220	170	215	195	195	162	215	466	614	753	397	382
6	152	168	220	205	220	154	218	484	604	776	925	378
7	144	164	215	195	265	175	208	512	592	875	1050	389
8	142	192	208	195	295	164	205	520	640	870	1030	516
9	148	218	208	200	305	208	230	476	766	800	985	473
10	295	182	205	210	275	170	238	476	845	744	885	386
11	280	205	205	200	262	154	245	484	815	730	850	400
12	277	148	205	190	259	142	358	532	735	735	785	354
13	271	154	202	190	256	130	452	572	690	748	795	400
14	256	164	200	180	259	138	476	580	668	758	825	442
15	256	170	165	190	256	120	556	417	708	704	825	438
16	259	173	195	200	256	93	540	428	699	699	815	420
17	262	178	170	200	250	95	496	600	704	686	895	400
18	262	166	140	200	242	96	350	722	726	690	920	414
19	259	159	160	190	248	98	372	722	690	726	935	417
20	259	122	155	175	253	87	364	694	668	748	995	334
21	256	148	160	185	238	84	364	726	676	740	1030	307
22	292	142	160	195	250	87	364	748	735	726	995	331
23	301	161	170	200	250	93	382	708	766	790	963	310
24	198	159	180	220	212	93	431	459	730	910	941	328
25	180	161	175	210	202	96	424	400	645	915	775	386
26	210	130	175	175	202	104	424	372	645	1010	580	448
27	220	185	195	175	200	129	414	382	640	990	795	403
28	215	185	175	210	205	164	350	496	668	885	730	304
29	202	195	170	215	212	164	316	544	722	810	627	319
30	200	160	180	215	---	150	280	524	717	805	572	442
31	208	---	180	215	---	148	---	484	---	810	600	---
TOTAL	7353	5091	5803	5980	6927	4324	10027	15961	20038	24400	25963	12334
MEAN	237	170	187	193	239	139	334	515	668	787	838	411
MAX	344	218	220	220	305	218	556	748	845	1010	1090	618
MIN	142	122	140	140	195	84	164	280	424	686	396	304
AC-FT	14580	10100	11510	11860	13740	8580	19890	31660	39750	48400	51500	24460

CAL YR 1975 TOTAL 146079 MEAN 400 MAX 1540 MIN 120 AC-FT 289700
WTR YR 1976 TOTAL 144201 MEAN 394 MAX 1090 MIN 84 AC-FT 286000

06708000 SOUTH PLATTE RIVER AT WATERTON, CO

LOCATION.--Lat 39°29'18", long 105°05'32", in NE¼ sec.34, T.6 S., R.69 W., Jefferson County, Hydrologic Unit 10190002, on left bank 168 ft (51 m) downstream from bridge on State Highway 221, 0.4 mi (0.6 km) south of Waterton, 4.7 mi (7.6 km) west of Louviers, and 6 mi (10 km) upstream from Plum Creek.

DRAINAGE AREA.--2,621 mi² (6,788 km²).

PERIOD OF RECORD.--May 1926 to current year. Monthly discharge only prior to 1934, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 5,484.43 ft (1,671.654 m) above mean sea level, adjustment of 1912.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions (see elsewhere in this report), Elevenmile Canyon Reservoir and Cheesman Lake (see elsewhere in this report), diversions for irrigation of about 55,000 acres (223 km²) 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.

AVERAGE DISCHARGE.--50 years, 176 ft³/s (4.984 m³/s), 127,500 acre-ft/yr (157 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,700 ft³/s (161 m³/s) Apr. 23, 1942, gage height, 5.69 ft (1.731 m); minimum daily, 0.1 ft³/s (0.003 m³/s) Mar. 6, 7, 1933, Feb. 28 to Mar. 2, Mar. 20, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 752 ft³/s (21.3 m³/s) Aug. 7, gage height, 2.15 ft (0.655 m); minimum, 9.5 ft³/s (0.27 m³/s) Dec. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	43	20	35	22	20	20	28	73	289	344	236
2	55	39	20	14	21	20	20	26	59	326	493	226
3	59	41	21	25	21	14	19	25	62	335	652	198
4	54	40	21	22	17	11	17	29	72	303	133	195
5	99	42	21	145	19	15	19	30	80	292	31	181
6	137	38	16	135	20	15	20	37	63	289	474	163
7	71	36	16	135	25	15	21	50	58	380	705	155
8	54	39	16	125	27	17	23	78	119	388	675	128
9	53	77	16	120	25	17	21	88	303	319	502	87
10	192	41	11	160	26	17	25	91	440	267	321	78
11	137	49	12	140	23	18	32	99	370	255	278	74
12	67	21	11	57	22	21	61	143	219	256	185	69
13	67	20	10	20	23	18	65	175	191	273	270	80
14	64	17	9.5	19	23	16	68	195	233	288	391	149
15	64	23	16	25	23	65	81	327	338	246	385	146
16	64	26	15	24	25	33	72	391	299	245	372	136
17	53	18	15	19	23	20	59	404	306	256	365	88
18	47	18	15	21	25	25	55	411	347	259	353	95
19	49	18	15	22	29	26	62	387	344	280	362	186
20	49	18	15	26	20	22	65	371	317	235	432	152
21	57	19	18	26	22	21	52	384	309	314	526	101
22	54	17	20	24	26	63	39	363	316	325	503	113
23	59	19	20	18	20	56	44	277	335	405	481	139
24	52	19	20	14	22	26	32	212	324	537	447	174
25	47	19	20	27	20	31	24	105	221	554	301	167
26	46	19	23	24	22	78	28	109	233	524	126	274
27	49	19	25	25	22	59	25	55	219	509	351	238
28	45	19	25	25	21	72	40	59	252	312	331	63
29	38	19	30	24	20	24	32	51	301	282	275	59
30	30	19	35	21	---	24	42	77	292	378	202	68
31	34	---	30	21	---	24	---	82	---	354	212	---
TOTAL	2027	852	577.5	1538	654	903	1183	5159	7095	10275	11478	4218
MEAN	65.4	28.4	18.6	49.6	22.6	29.1	39.4	166	237	331	370	141
MAX	192	77	35	160	29	78	81	411	440	554	705	274
MIN	30	17	9.5	14	17	11	17	25	58	235	31	59
AC-FT	4020	1690	1150	3050	1300	1790	2350	10230	14070	20380	22770	8370

CAL YR 1975 TOTAL 53668.5 MEAN 147 MAX 1140 MIN 9.5 AC-FT 106500
WTR YR 1976 TOTAL 45959.5 MEAN 126 MAX 705 MIN 9.5 AC-FT 91160

06709500 PLUM CREEK NEAR LOUVIERS, CO

LOCATION.--Lat 39°29'04", long 105°00'07", in SE¼ sec.33, T.6 S., R.68 W., Douglas County, Hydrologic Unit 10190002, on downstream side of bridge on county road from U.S. Highway 85 to Louviers, 0.8 mi (1.3 km) northeast of Louviers, 1.2 mi (1.9 km) downstream from Indian Creek, and 7.5 mi (12.1 km) upstream from mouth.

DRAINAGE AREA.--302 mi² (782 km²).

PERIOD OF RECORD.--October 1947 to current year.

REVISED RECORDS.--WSP 1730: 1958, drainage area at site 2.5 mi (4.0 km) downstream. WSP 1918: 1957(M).

GAGE.--Water-stage recorder. Altitude of gage is 5,585 ft (1,702 m), from topographic map. Prior to Feb. 12, 1957, at site 2.5 mi (4.0 km) downstream and Nov. 7, 1965, to Aug. 6, 1966, at site 2.2 mi (3.5 km) downstream at different datums. Feb. 12, 1957, to Nov. 6, 1965, at present site at about present datum.

REMARKS.--Records poor. Diversions above station for irrigation.

AVERAGE DISCHARGE.--29 years, 27.8 ft³/s (0.787 m³/s), 20,140 acre-ft/yr (24.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 154,000 ft³/s (4,360 m³/s) June 16, 1965, gage height, 22.4 ft (6.83 m), from floodmarks, by slope-area measurement of peak flow; no flow at times in 1951-52, 1956-60, 1963-64.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 74 ft³/s (2.10 m³/s) Apr. 26, gage height, 2.88 ft (0.87[illegible] m), no peak above base of 220 ft³/s (6.2 m³/s); maximum gage height, 3.59 ft (1.094 m) Mar. 29; minimum daily discharge, 0.20 ft³/s (0.006 m³/s) July 29-31, Sept. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	7.6	16	7.0	8.8	14	16	62	5.7	.48	.49	.25
2	.40	8.2	23	4.0	5.7	16	14	55	3.6	.48	.7[illegible]	.25
3	.40	8.2	22	2.0	3.4	18	16	46	3.1	.48	4.6	.25
4	.40	6.8	19	2.4	1.8	10	12	44	2.7	.48	2.0	.25
5	.40	6.8	20	4.0	.62	5.0	11	42	3.1	.34	.62	.25
6	.40	8.2	15	6.0	2.3	7.0	11	41	3.4	.48	.49	.27
7	.40	20	14	5.0	3.6	9.0	12	37	4.0	.40	.3[illegible]	.40
8	.40	20	16	5.6	4.9	13	15	33	3.2	.38	.3[illegible]	.30
9	.40	13	14	7.0	5.7	16	17	29	3.2	.37	.3[illegible]	.25
10	.40	12	13	7.6	6.1	18	18	21	2.1	.38	.3[illegible]	.22
11	.40	12	11	7.0	5.3	16	20	20	1.2	.37	.48	.20
12	.40	13	10	7.2	6.5	15	23	25	.86	.37	.48	.20
13	.60	14	8.2	8.4	8.2	14	26	31	.68	.37	.48	.34
14	1.0	15	6.0	13	11	18	20	32	.46	.37	.48	.34
15	1.8	15	4.5	14	12	20	29	33	2.3	.37	.48	.34
16	2.0	14	3.0	14	11	17	29	35	2.1	.39	.48	.48
17	1.6	12	3.5	13	12	17	32	37	2.1	.45	.3[illegible]	.76
18	1.5	11	3.7	10	11	20	26	31	1.8	.50	.48	1.8
19	1.5	9.4	4.2	7.8	11	20	21	30	1.5	.70	.3[illegible]	3.8
20	1.5	11	7.0	8.0	11	18	18	37	1.3	1.0	.48	1.2
21	1.5	11	10	9.0	17	15	19	39	1.2	1.6	.62	.48
22	1.5	11	10	10	18	11	20	35	1.0	5.8	.34	.34
23	3.6	17	8.9	11	17	8.8	24	39	.90	.48	.48	.34
24	7.6	16	7.0	12	14	12	30	37	.76	.48	.50	.34
25	8.8	7.2	7.5	10	13	6.8	55	25	.62	.34	.55	.34
26	6.8	6.8	8.2	7.0	16	17	62	21	.62	.48	.40	.34
27	5.7	14	8.9	8.8	18	14	50	17	.62	.34	.30	1.0
28	4.9	26	8.0	9.4	19	15	52	14	.62	.34	.25	8.8
29	5.7	16	6.8	11	20	25	52	11	.62	.20	.25	4.9
30	5.7	14	7.6	9.4	---	21	37	16	.48	.20	.25	3.5
31	6.1	---	8.0	8.2	---	20	---	10	---	.20	.25	---
TOTAL	74.20	376.2	324.0	258.8	293.92	466.6	787	985	55.84	19.62	19.01	32.53
MEAN	2.39	12.5	10.5	8.35	10.1	15.1	26.2	31.8	1.86	.63	.61	1.08
MAX	8.8	26	23	14	20	25	62	62	5.7	5.8	4.6	8.8
MIN	.40	6.8	3.0	2.0	.62	5.0	11	10	.46	.20	.25	.20
AC-FT	147	746	643	513	583	926	1560	1950	111	39	38	65

CAL YR 1975 TOTAL 9942.80 MEAN 27.2 MAX 350 MIN .20 AC-FT 19720
WTR YR 1976 TOTAL 3692.72 MEAN 10.1 MAX 62 MIN .20 AC-FT 7320

NOTE.--NO GAGE-HEIGHT RECORD DEC. 14 TO JAN. 27.

06710000 SOUTH PLATTE RIVER AT LITTLETON, CO

LOCATION.--Lat 39°37'08", long 105°01'07", in NE¼ sec.17, T.5 S., R.68 W., Arapahoe County, Hydrologic Unit 10190002, on left bank 200 ft (61 m) downstream from Crestline Avenue Bridge at Littleton, 3.1 mi (5.0 km) upstream from Bear Creek, and 6.3 mi (10 km) downstream from Chatfield Reservoir.

DRAINAGE AREA.--3,069 mi² (7,949 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1941 to current year.

REVISED RECORDS.--WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,304.36 ft (1,616.769 m) above mean sea level (levels by Corps of Engineers). Prior to Nov. 23, 1948, nonrecording gage on bridge 200 ft (61 m) upstream at datum 1.00 ft (0.305 m) higher. Nov. 23, 1948, to Sept. 30, 1951, water-stage recorder at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records fair except those for period of no gage-height record, 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 Reservoir since May 29, 1975 (station 06709600).

AVERAGE DISCHARGE.--33 years (water years 1942-74), 234 ft³/s (6.627 m³/s), 169,500 acre-ft/yr (209 hm³/yr), prior to completion of Chatfield Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 110,000 ft³/s (3,100 m³/s) June 16, 1965, gage height, 15.45 ft (4.709 m), from floodmarks, estimated from contracted-opening and flow-over-road measurement of peak flow at point 1.6 mi (2.6 km) downstream and slope-area measurement of peak flow on Plum Creek at point 12.7 mi (20.4 km) upstream; minimum daily, 7.2 ft³/s (0.20 m³/s) Oct. 2, 1956.
Stage and discharge of the flood of June 16, 1965, are the greatest since at least 1894.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 736 ft³/s (20.8 m³/s) Aug. 3, gage height, 4.68 ft (1.426 m); minimum daily, 20 ft³/s (0.57 m³/s) Oct. 21, 22, Nov. 8, 11-13, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	30	22	42	39	51	98	119	52	298	478	164
2	64	28	26	45	39	49	63	114	52	275	412	164
3	56	27	24	45	39	51	52	112	52	275	498	150
4	54	26	22	45	39	51	52	114	52	263	551	144
5	52	26	22	89	38	51	52	98	50	250	161	141
6	54	27	22	135	38	48	51	84	50	242	141	155
7	52	25	22	109	38	49	51	91	45	306	502	125
8	49	20	22	49	38	49	56	84	40	365	604	117
9	46	34	22	42	38	48	56	80	50	355	490	91
10	38	22	22	43	38	48	54	102	190	330	311	74
11	39	20	24	42	38	48	48	127	450	270	230	72
12	38	20	26	40	39	48	48	127	310	174	204	68
13	39	20	24	39	38	48	54	119	240	171	155	72
14	40	22	22	39	38	48	91	159	130	197	245	104
15	39	22	37	39	38	49	95	316	190	263	350	164
16	36	22	127	39	39	48	95	325	220	275	360	150
17	26	22	130	39	40	48	125	355	240	230	360	180
18	22	22	138	39	34	46	102	388	410	216	355	59
19	22	22	130	39	34	51	102	360	350	212	340	115
20	22	22	130	39	38	46	167	311	320	204	345	161
21	20	20	127	39	38	48	199	306	300	216	355	112
22	20	22	125	39	38	51	424	311	320	306	430	91
23	32	22	122	39	36	48	367	316	380	355	454	102
24	36	22	119	39	36	49	174	239	430	306	436	132
25	34	24	125	39	36	46	171	68	410	438	327	152
26	36	31	122	39	38	63	171	113	171	580	130	201
27	38	38	119	39	39	109	177	132	207	472	178	298
28	39	30	119	39	51	114	174	76	330	358	267	173
29	43	22	106	40	51	127	161	56	355	263	246	43
30	42	25	49	39	---	114	141	51	350	279	190	43
31	36	---	45	39	---	112	---	51	---	430	152	---
TOTAL	1236	735	2192	1468	1123	1856	3671	5304	6746	9174	10257	3737
MEAN	39.9	24.5	70.7	47.4	38.7	59.9	122	171	225	296	331	125
MAX	72	38	138	135	51	127	424	388	450	580	604	298
MIN	20	20	22	39	34	46	48	51	40	171	130	43
AC-FT	2450	1460	4350	2910	2230	3680	7280	10520	13380	18200	20340	7410

CAL YR 1975 TOTAL 60506 MEAN 166 MAX 1350 MIN 20 AC-FT 120000
WTR YR 1976 TOTAL 47499 MEAN 130 MAX 604 MIN 20 AC-FT 94210

06710000 SOUTH PLATTE RIVER AT LITTLETON, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: April 1970 to current year.

INSTRUMENTATION.--Temperature recorder since April 1970.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 25.5°C July 17, 20, 1974, Aug. 24, 31, 1975; minimum, freezing point on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 27.0°C July 12; minimum, 1.0°C on several days during December.

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.0	11.0	13.5	9.0	7.0	2.5	2.5	2.0	6.5	2.5	11.0	5.5
2	17.5	11.5	13.0	8.5	8.0	4.0	2.5	2.0	6.5	4.0	8.5	3.5
3	18.0	12.0	13.5	8.5	8.0	4.0	2.5	1.5	7.5	4.0	6.0	3.0
4	17.5	12.0	13.5	9.0	8.0	4.0	2.0	1.5	6.0	2.5	5.0	3.5
5	18.0	12.0	13.5	8.0	7.0	4.0	2.5	1.5	3.0	2.5	6.0	2.5
6	18.5	12.5	13.0	8.5	7.5	4.5	3.0	2.5	4.0	2.5	7.5	2.5
7	17.5	13.0	13.0	8.0	7.5	4.5	4.0	2.0	7.0	2.5	8.5	3.0
8	15.5	11.5	10.5	6.5	7.5	4.5	4.0	2.0	7.0	4.0	9.0	3.5
9	15.5	10.0	7.0	4.0	8.0	4.5	5.5	2.5	10.5	5.5	8.5	4.0
10	17.0	11.0	8.5	4.0	8.0	4.0	5.0	3.5	9.5	6.0	---	---
11	17.0	11.5	7.5	4.5	7.5	4.0	5.5	2.5	9.5	5.0	---	---
12	17.0	11.5	7.5	3.0	7.0	4.5	5.5	2.5	9.5	5.0	---	---
13	15.5	11.5	9.0	4.0	5.5	3.5	4.5	2.0	10.0	5.5	7.5	---
14	14.0	10.0	9.5	5.0	4.5	1.5	5.0	2.0	10.5	6.5	8.0	4.0
15	14.5	9.5	10.5	6.5	4.0	1.0	5.0	3.5	9.5	6.5	8.0	4.0
16	14.0	10.0	10.5	6.0	3.5	1.0	6.5	3.0	10.5	6.0	9.5	3.5
17	14.5	9.5	10.5	7.0	3.0	1.0	6.5	3.0	9.0	6.0	9.0	5.0
18	15.5	10.0	7.0	5.5	3.5	1.0	5.5	3.5	9.0	5.0	11.5	5.5
19	15.5	10.5	5.5	2.5	4.0	1.5	4.5	2.0	9.5	4.5	9.5	5.0
20	14.5	10.0	5.0	2.5	4.0	1.5	4.5	1.5	9.0	3.5	7.5	2.0
21	14.5	9.5	5.0	2.5	3.5	2.0	5.0	2.0	6.5	3.5	7.5	4.0
22	15.0	10.0	5.5	2.0	4.0	2.0	5.5	2.0	9.0	3.5	10.5	3.5
23	12.0	7.0	6.0	2.5	4.0	2.0	5.5	2.0	8.0	4.5	10.0	5.5
24	11.0	7.0	6.5	3.5	4.0	2.0	6.0	3.5	9.5	4.0	11.5	5.5
25	10.5	6.0	5.0	2.0	4.5	2.5	4.0	2.0	9.0	5.0	11.5	5.5
26	14.0	8.0	3.5	2.0	4.5	2.5	3.5	1.5	9.5	5.5	11.0	4.5
27	14.0	9.0	4.5	2.0	5.0	2.0	5.5	1.5	8.5	5.5	12.0	5.0
28	14.5	10.5	5.0	2.0	3.5	2.0	6.5	3.5	9.0	5.0	9.0	5.0
29	13.5	8.5	4.5	2.0	4.0	1.5	7.0	3.0	9.5	6.0	9.5	5.0
30	12.5	8.5	2.5	2.0	5.5	2.5	6.5	3.5	---	---	10.5	5.0
31	10.5	9.5	---	---	4.0	2.0	5.5	2.5	---	---	11.5	5.0
MONTH	18.5	6.0	13.5	2.0	8.0	1.0	7.0	1.5	10.5	2.5	12.0	2.0

06710000 SOUTH PLATTE RIVER AT LITTLETON, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.5	7.0	18.0	9.5	21.0	13.0	21.5	15.5	22.0	19.5	23.5	18.0
2	13.5	7.5	17.5	10.5	20.0	13.5	19.5	15.5	19.5	19.0	24.0	17.5
3	13.5	8.0	18.5	10.5	21.5	13.5	21.0	15.5	21.5	18.5	23.5	18.0
4	11.5	8.0	18.0	12.0	20.0	14.0	25.0	19.0	21.5	18.5	24.5	18.0
5	14.0	8.5	18.0	11.5	---	---	25.5	19.0	24.0	17.5	24.5	18.0
6	14.5	9.5	14.0	11.5	---	---	25.5	20.0	24.5	17.5	23.0	17.0
7	12.5	9.5	17.0	10.5	---	---	23.5	20.0	23.0	19.5	21.5	18.0
8	15.5	9.5	16.5	10.5	---	---	25.0	20.5	22.5	20.0	18.5	17.0
9	14.5	10.0	17.0	11.5	---	---	25.0	20.5	21.0	19.5	22.0	17.0
10	15.5	9.0	18.5	11.0	---	---	25.5	20.5	22.5	18.5	22.0	16.0
11	17.0	10.5	17.5	12.0	---	---	26.5	21.0	22.0	18.0	22.5	16.5
12	15.0	10.0	16.5	11.5	---	---	27.0	20.0	23.5	17.5	21.5	17.0
13	15.5	10.5	18.0	11.0	---	---	23.5	20.0	21.5	17.0	20.5	16.5
14	13.5	10.0	20.5	11.5	---	---	25.5	19.0	22.5	16.5	20.0	16.0
15	14.0	10.0	14.5	12.5	---	---	22.0	19.5	23.0	18.5	19.0	16.5
16	13.5	11.0	15.5	12.5	---	---	25.0	19.5	23.5	19.0	21.5	16.0
17	11.0	8.0	18.0	12.5	---	---	25.0	19.5	24.0	19.0	21.5	16.5
18	15.0	8.0	18.0	13.5	---	---	23.5	19.5	23.5	19.5	21.5	16.0
19	15.0	10.0	18.0	14.0	---	---	24.0	20.0	22.5	19.5	18.5	16.5
20	16.5	9.0	18.0	13.5	---	---	22.0	20.0	23.5	19.5	20.5	16.5
21	14.5	10.0	15.5	14.0	---	---	25.0	19.5	23.5	19.5	21.0	15.0
22	14.5	10.5	14.0	13.0	---	---	24.5	19.5	23.0	19.5	18.5	15.0
23	13.5	11.5	14.5	12.5	---	---	24.0	20.0	21.0	20.0	19.0	15.0
24	16.5	10.5	16.5	12.5	---	---	24.0	20.0	23.0	20.0	17.5	15.0
25	16.5	11.0	15.5	12.5	20.5	13.0	23.5	20.0	24.0	19.5	17.0	16.0
26	14.0	10.5	16.5	12.0	18.5	13.0	23.0	20.5	24.5	18.5	16.5	15.5
27	10.5	10.0	20.0	12.0	21.0	13.5	22.5	20.0	23.0	17.5	15.5	14.5
28	15.5	11.0	19.5	12.0	20.0	15.0	23.5	19.5	23.5	19.0	18.0	14.0
29	12.0	11.0	18.0	12.5	18.5	15.0	24.0	19.5	24.0	19.5	17.5	12.5
30	14.0	9.0	17.0	12.5	20.0	15.5	24.0	19.0	22.5	19.0	18.5	13.0
31	---	---	20.5	12.0	---	---	23.0	19.5	21.5	18.5	---	---
MONTH	17.0	7.0	20.5	9.5	---	---	27.0	15.5	24.5	16.5	24.5	12.5

06710500 BEAR CREEK AT MORRISON, CO

LOCATION.--Lat 39°39'11", long 105°11'43", in SE¼SW¼ sec.35, T.4 S., R.70 W., Jefferson County, Hydrologic Unit 10190002, on left bank at Morrison, 180 ft (55 m) upstream from bridge on State Highway 8 and 0.2 mi (0.3 km) upstream from Mount Vernon Creek.

DRAINAGE AREA.--164 mi² (425 km²).

PERIOD OF RECORD.--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.

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

GAGE.--Water-stage recorder. Datum of gage is 5,780.43 ft (1,761.875 m) above mean 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 (24 m) downstream at same datum.

REMARKS.--Records good except those for winter period, which are fair. Small diversions for irrigation of about 1,000 acres (4.05 km²) above station.

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

AVERAGE DISCHARGE.--61 years (water years 1891, 1897, 1899, 1901, 1920-76), 53.4 ft³/s (1.512 m³/s), 38,690 acre-ft/yr (47.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,600 ft³/s (244 m³/s), estimated, July 24, 1896; minimum daily, 0.8 ft³/s (0.023 m³/s) Nov. 26, 1939, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 139 ft³/s (3.94 m³/s) Aug. 3, gage height, 5.56 ft (1.695 m), no peak above base of 250 ft³/s (7.1 m³/s); minimum daily, 10 ft³/s (0.28 m³/s) Feb. 5, 6, 16, 18-21, Mar. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	23	17	14	13	14	20	29	71	35	50	38
2	22	22	18	12	12	14	22	35	68	39	64	35
3	21	22	19	13	12	12	22	35	65	39	107	32
4	21	22	18	14	11	11	21	38	64	34	74	31
5	20	22	18	15	10	10	20	40	72	32	66	28
6	18	22	18	15	10	12	20	45	66	31	62	28
7	19	22	18	14	13	12	18	48	60	30	58	36
8	22	22	18	15	14	13	18	49	58	30	55	52
9	14	27	18	14	15	15	19	51	61	28	57	39
10	17	20	18	15	14	16	20	53	56	27	53	35
11	16	27	17	14	14	17	20	56	51	25	50	32
12	16	22	16	14	13	14	23	59	48	24	48	30
13	18	22	16	14	12	15	24	53	44	24	46	30
14	18	27	15	13	12	15	22	54	42	28	46	35
15	15	27	14	14	11	14	22	65	37	27	44	36
16	16	25	16	15	10	11	22	63	38	27	40	40
17	18	26	17	16	11	14	24	54	38	24	37	35
18	18	23	15	17	10	17	21	59	62	23	41	36
19	16	22	16	15	10	18	28	64	59	39	48	32
20	16	16	16	14	10	13	28	61	46	70	45	42
21	16	15	17	15	10	11	30	70	42	72	64	34
22	16	18	16	16	12	14	30	73	41	56	49	32
23	18	19	15	15	15	14	30	78	44	42	43	30
24	16	20	14	14	14	15	29	74	45	41	50	28
25	13	19	14	13	12	17	27	80	40	44	47	38
26	22	13	15	13	11	18	28	76	37	48	42	68
27	27	16	15	14	11	15	27	71	35	57	40	63
28	25	16	15	14	11	18	27	76	33	48	37	50
29	22	17	15	16	12	15	27	80	33	45	35	46
30	20	16	16	14	---	16	33	72	35	39	38	44
31	22	---	16	15	---	16	---	71	---	37	36	---
TOTAL	581	630	506	446	345	446	722	1832	1491	1165	1569	1135
MEAN	18.7	21.0	16.3	14.4	11.9	14.4	24.1	59.1	49.7	37.6	50.6	37.8
MAX	27	27	19	17	15	18	33	80	72	72	107	68
MIN	13	13	14	12	10	10	18	29	33	23	35	28
AC-FT	1150	1250	1000	885	684	885	1430	3630	2960	2310	3110	2250

CAL YR 1975 TOTAL 16103 MEAN 44.1 MAX 238 MIN 10 AC-FT 31940
WTR YR 1976 TOTAL 10868 MEAN 29.7 MAX 107 MIN 10 AC-FT 21560

06711500 BEAR CREEK AT MOUTH, AT SHERIDAN, CO

LOCATION.--Lat 39°39'08", long 105°01'57", in NW¼NW¼ 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 (2.1 km) upstream from mouth, and 2.1 mi (3.4 km) west of city hall in Englewood.

DRAINAGE AREA.--260 mi² (673 km²).

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. Altitude of gage is 5,295 ft (1,614 m), 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 (0.30 m) higher.

REMARKS.--Records good except those for winter period, which are fair. Storage and diversions above station for irrigation of about 12,000 acres (48.6 km²).

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

AVERAGE DISCHARGE.--49 years, 38.4 ft³/s (1.087 m³/s), 27,820 acre-ft/yr (34.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,150 ft³/s (231 m³/s) May 7, 1969, gage height, 10.5 ft (3.20 m), present datum, from flood marks, from rating curve extended above 3,400 ft³/s (96 m³/s); no flow July 13, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 178 ft³/s (5.04 m³/s) July 25, gage height, 2.72 ft (0.829 m); minimum daily, 2.7 ft³/s (0.076 m³/s) July 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	9.9	28	22	26	23	11	33	44	5.9	24	11
2	10	9.7	29	19	23	24	10	30	51	11	42	10
3	12	9.5	29	20	22	21	10	32	54	10	83	8.3
4	11	9.6	28	21	23	18	10	32	51	7.1	51	8.0
5	12	9.5	26	24	17	21	10	35	49	5.9	38	6.1
6	12	9.4	31	23	24	26	10	41	37	2.9	30	6.6
7	11	9.1	30	21	25	26	8.3	47	30	4.4	24	9.1
8	10	14	29	21	26	22	7.1	45	26	4.4	23	14
9	14	30	29	22	25	12	6.3	48	28	4.6	23	12
10	10	18	29	21	27	11	5.9	52	23	4.1	21	9.6
11	11	15	28	22	25	10	5.9	43	13	3.8	18	8.7
12	13	13	28	21	26	11	8.7	38	12	6.7	20	7.6
13	15	13	26	22	24	16	10	37	11	13	20	12
14	17	13	27	22	25	19	8.5	33	18	10	20	13
15	17	13	24	22	25	18	9.8	37	15	13	19	15
16	17	12	23	22	23	13	15	42	12	13	18	15
17	13	12	23	24	21	13	36	35	18	8.7	20	15
18	10	12	22	26	20	14	23	30	53	2.7	18	13
19	9.4	13	21	27	20	11	14	31	45	9.6	17	19
20	8.9	15	23	24	22	8.6	20	29	35	40	18	21
21	8.8	12	23	24	24	9.2	13	45	25	48	23	20
22	8.1	13	23	24	25	9.4	12	44	18	34	19	22
23	16	14	23	26	27	8.1	13	51	20	21	17	19
24	11	13	23	24	22	6.9	12	46	18	17	15	18
25	9.5	14	24	22	24	8.0	10	54	15	28	16	31
26	8.8	11	22	23	22	15	8.9	54	11	35	13	46
27	9.1	12	24	26	22	11	12	48	10	26	13	75
28	9.1	12	22	23	22	12	17	50	9.1	22	7.1	47
29	8.5	14	23	22	23	24	23	51	4.3	16	7.6	33
30	8.5	20	21	26	---	15	45	49	3.5	11	8.7	28
31	9.2	---	23	25	---	13	---	49	---	9.7	10	---
TOTAL	349.9	394.7	784	711	680	469.2	405.4	1291	758.9	448.5	696.4	573.0
MEAN	11.3	13.2	25.3	22.9	23.4	15.1	13.5	41.6	25.3	14.5	22.5	19.1
MAX	17	30	31	27	27	26	45	54	54	48	83	75
MIN	8.1	9.1	21	19	17	6.9	5.9	29	3.5	2.7	7.1	6.1
AC-FT	694	783	1560	1410	1350	931	804	2560	1510	890	1380	1140

CAL YR 1975 TOTAL 16184.8 MEAN 44.3 MAX 346 MIN 5.8 AC-FT 32100
WTR YR 1976 TOTAL 7562.0 MEAN 20.7 MAX 83 MIN 2.7 AC-FT 15000

06712000 CHERRY CREEK NEAR FRANKTOWN, CO

LOCATION.--Lat 39°21'21", long 104°45'46", in NE¼ sec.15, T.8 S., R.66 W., Douglas County, Hydrologic Unit 10190003, on right bank 1.5 mi (2.4 km) upstream from Russellville Gulch and 2.5 mi (4.0 km) south of Franktown.

DRAINAGE AREA.--169 mi² (438 km²).

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

REVISED RECORDS.--WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 6,170 ft (1,881 m), from topographic map. See WSP 1730 for history of changes prior to Oct. 1, 1953.

REMARKS.--Records fair except those for winter period, which are poor. Many small diversions above station for irrigation of about 800 acres (3.24 km²).

AVERAGE DISCHARGE.--36 years (water years 1941-76), 8.85 ft³/s (0.251 m³/s), 6,410 acre-ft/yr (7.90 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,170 ft³/s (260 m³/s) Aug. 5, 1945, gage height, 4.91 ft (1.497 m), site and datum then in use, by float measurement; minimum daily, 0.20 ft³/s (0.006 m³/s) July 13, 1946, Sept. 30, Oct. 1, 1950.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,580 ft³/s (73.1 m³/s) Aug. 1, gage height, 8.16 ft (2.487 m), only peak above base of 200 ft³/s (5.7 m³/s); minimum daily, 0.82 ft³/s (0.023 m³/s) July 8, 9, 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	3.9	5.9	5.0	7.3	18	13	10	1.8	1.0	238	.94
2	1.8	3.9	5.8	5.0	8.1	16	13	7.8	1.7	3.2	34	.90
3	1.8	4.0	5.9	5.0	8.9	11	11	7.0	1.6	1.6	5.0	.86
4	1.8	3.9	6.7	4.9	8.0	8.5	9.6	6.4	1.6	1.1	3.2	.90
5	1.8	3.9	6.8	4.6	7.3	9.0	8.9	6.6	1.6	1.2	2.3	.94
6	1.9	4.0	7.3	4.7	8.0	9.5	8.3	5.8	1.8	1.0	2.0	.90
7	1.8	4.0	7.8	4.7	7.6	10	7.1	5.5	2.6	.90	2.0	.94
8	1.8	4.2	7.6	4.7	8.1	11	6.2	5.5	2.0	.82	1.9	1.3
9	1.9	5.2	7.5	4.7	13	13	5.9	5.1	1.6	.82	1.9	1.3
10	2.0	5.3	7.8	5.2	19	14	5.6	4.9	1.3	.86	1.8	1.2
11	2.0	5.4	7.6	4.9	14	14	5.3	4.7	1.1	.86	1.8	1.2
12	2.0	4.6	8.7	5.1	14	13	5.1	4.2	1.3	.98	1.8	1.4
13	2.0	4.6	8.3	5.0	14	7.6	4.8	3.7	1.2	1.0	1.8	1.5
14	2.0	5.2	7.0	5.0	14	11	4.8	3.7	1.3	1.0	1.8	1.5
15	2.0	5.9	6.0	4.7	14	11	4.7	3.7	1.3	1.1	1.7	1.4
16	2.1	6.4	5.0	3.7	14	8.1	4.9	4.1	1.4	.98	1.6	1.4
17	2.2	6.7	5.0	3.8	13	9.4	6.0	4.3	1.4	.82	1.6	1.4
18	2.3	6.6	5.0	4.2	9.9	9.6	10	4.2	2.2	.82	1.5	1.3
19	2.2	4.4	5.2	4.1	8.7	9.4	18	4.1	1.9	.86	1.5	1.4
20	2.3	4.2	4.9	4.2	8.5	6.8	24	4.4	1.6	1.0	1.3	1.5
21	2.4	4.8	5.3	4.4	8.5	6.6	20	3.9	1.4	18	1.3	1.5
22	2.4	4.5	5.1	4.9	8.5	6.8	16	3.8	1.5	3.7	1.3	1.5
23	2.6	4.2	5.1	5.5	8.5	7.8	13	3.8	1.5	2.3	1.3	1.5
24	2.8	4.9	5.4	5.4	8.5	7.5	13	3.7	1.4	1.6	1.2	1.6
25	3.4	5.2	5.4	5.0	13	7.2	12	3.2	1.2	1.6	1.1	1.6
26	3.7	5.0	5.7	5.2	15	7.8	10	3.5	1.1	1.6	.9[illegible]	2.0
27	3.7	5.0	5.5	5.6	16	8.0	8.7	2.5	1.1	3.8	.9[illegible]	3.1
28	3.5	5.4	4.2	6.0	16	8.3	8.0	2.1	1.1	1.7	.9[illegible]	2.2
29	3.4	6.0	4.5	6.4	19	7.8	7.3	2.0	.98	1.6	.9[illegible]	1.6
30	3.6	5.6	4.7	7.6	---	9.9	11	1.9	1.1	2.3	.9[illegible]	1.5
31	3.8	---	5.1	7.2	---	11	---	1.9	---	3.6	.9[illegible]	---
TOTAL	74.8	146.9	187.8	156.4	332.4	308.6	295.2	138.0	44.68	63.72	320.30	42.28
MEAN	2.41	4.90	6.06	5.05	11.5	9.95	9.84	4.45	1.49	2.06	10.3	1.41
MAX	3.8	6.7	8.7	7.6	19	18	24	10	2.6	18	23[illegible]	3.1
MIN	1.8	3.9	4.2	3.7	7.3	6.6	4.7	1.9	.98	.82	.9[illegible]	.86
AC-FT	148	291	373	310	659	612	586	274	89	126	63[illegible]	84

CAL YR 1975 TOTAL 2625.96 MEAN 7.19 MAX 46 MIN .86 AC-FT 5210
WTR YR 1976 TOTAL 2111.08 MEAN 5.77 MAX 238 MIN .82 AC-FT 4190

PLATTE RIVER BASIN

06713000 CHERRY CREEK BELOW CHERRY CREEK LAKE, CO

LOCATION.--Lat 39°39'12", long 104°51'41", in SW¼SW¼ sec.35, T.4 S., R.67 W., Arapahoe County, Hydrologic Unit 10190003, on right bank 2,000 ft (610 m) downstream from Cherry Creek Dam, 2.2 mi (3.5 km) southeast of Sullivan, 9 mi (14 km) southeast of Civic Center in Denver, and 11 mi (18 km) upstream from mouth.

DRAINAGE AREA.--385 mi² (997 km²).

PERIOD OF RECORD.--June 1950 to current year.

REVISED RECORDS.--WSP 1730: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 5,490.51 ft (1,673.507 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Records good. Flow regulated by Cherry Creek Lake (see elsewhere in this report). Diversions above station for irrigation of about 1,800 acres (7.28 km²).

AVERAGE DISCHARGE.--26 years, 4.40 ft³/s (0.125 m³/s), 3,190 acre-ft/yr (3.93 hm³/yr), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,440 ft³/s (40.8 m³/s) July 31, 1956, gage height, 6.07 ft (1.850 m); no flow most of time since May 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum flood known, 34,000 ft³/s (963 m³/s) Aug. 3, 1933, by slope-area measurement near present site (Castlewood Dam failure).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13 ft³/s (0.37 m³/s) Sept. 14, gage height, 3.14 ft (0.957 m); no flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										0		0
2										0		0
3										0		0
4										0		0
5										0		0
6										0		0
7										0		0
8										0		0
9										0		0
10										0		0
11										0		0
12										0		0
13										0		0
14										0		1.9
15										0		.48
16										0		0
17										0		0
18										0		0
19										0		0
20										0		0
21										.81		0
22										.50		0
23										0		0
24										0		0
25										0		0
26										0		0
27										0		0
28										0		0
29										0		0
30					---					0		0
31		---			---		---		---	0		---
TOTAL	0	0	0	0	0	0	0	0	0	1.31	0	2.38
MEAN	0	0	0	0	0	0	0	0	0	.042	0	.079
MAX	0	0	0	0	0	0	0	0	0	.81	0	1.9
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	0	0	2.6	0	4.7

CAL YR 1975	TOTAL	964.00	MEAN	2.64	MAX	60	MIN 0	AC-FT 1910
WTR YR 1976	TOTAL	3.69	MEAN	.01	MAX	1.9	MIN 0	AC-FT 7

06714000 SOUTH PLATTE RIVER AT DENVER, CO

LOCATION.--Lat 39°45'35", long 105°00'10", in NW¼SE¼ sec.28, T.3 S., R.68 W., Denver County, Hydrologic Unit 10190003, on right bank 90 ft (27 m) upstream from Nineteenth Street Bridge in Denver and 0.4 mi (0.6 km) downstream from Cherry Creek.

DRAINAGE AREA.--3,804 mi² (9,852 km²).

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.

REVISED RECORDS.--WSP 1310: 1934(M). WSP 1730: 1957(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,157.64 ft (1,572.049 m) above mean sea level. 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 (0.8 km) of present site at various datums. Aug. 29, 1931, to June 28, 1965, water-stage recorder at site 70 ft (21 m) downstream at datum 3.66 ft (1.116 m) higher. June 29, 1965, to Mar. 18, 1966, water-stage recorder at site 70 ft (21 m) downstream at present datum.

REMARKS.--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 (320 km²) 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.

AVERAGE DISCHARGE.--81 years, 342 ft³/s (9.685 m³/s), 247,800 acre-ft/yr (306 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,300 ft³/s (1,140 m³/s) June 17, 1965, gage height, 18.66 ft (5.688 m), from flood marks, present datum, from rating curve extended above 2,700 ft³/s (76 m³/s), on basis of contracted-opening measurement of peak flow; minimum daily, 8.8 ft³/s (0.25 m³/s) Mar. 25, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,140 ft³/s (60.6 m³/s) Sept. 27, gage height, 4.79 ft (1.460 m); minimum daily, 66 ft³/s (1.87 m³/s) Apr. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129	74	102	84	86	89	126	198	142	320	797	265
2	122	72	99	74	82	89	94	182	132	293	853	247
3	109	69	89	79	82	106	79	180	139	303	817	232
4	104	69	82	82	79	94	74	172	132	290	928	211
5	99	69	79	136	74	114	79	172	136	285	335	200
6	96	72	79	221	79	149	72	177	136	282	156	229
7	94	76	79	198	84	119	72	213	132	303	619	253
8	92	137	79	99	84	104	76	180	102	380	817	237
9	94	416	76	94	84	89	69	174	102	375	720	185
10	84	159	79	94	84	84	72	180	322	342	450	116
11	82	96	76	89	79	82	66	203	501	310	338	119
12	79	74	82	92	79	92	69	195	390	208	316	112
13	86	76	82	86	79	84	76	193	323	208	247	294
14	92	76	79	89	79	86	94	190	185	226	276	298
15	89	74	74	89	76	89	106	374	263	290	415	263
16	86	72	144	89	79	84	136	405	274	316	415	239
17	86	74	180	89	79	82	412	405	316	279	438	193
18	82	72	187	92	74	84	222	450	664	268	426	122
19	74	74	187	112	72	82	139	438	426	323	400	201
20	76	76	187	102	82	74	259	405	385	323	395	296
21	74	72	187	96	131	76	177	468	366	362	456	211
22	69	84	190	86	109	76	334	529	385	405	515	208
23	179	86	187	84	92	76	358	462	462	482	565	164
24	116	84	190	84	84	72	266	432	487	390	588	182
25	82	76	187	84	76	92	200	231	416	535	526	353
26	82	82	187	82	72	167	200	200	180	972	258	630
27	79	94	185	84	72	116	245	263	182	602	193	943
28	82	96	182	86	82	164	234	190	296	527	350	407
29	79	96	185	84	86	290	222	154	346	306	338	162
30	76	86	102	82	---	154	456	160	350	296	303	139
31	74	---	92	84	---	134	---	172	---	480	307	---
TOTAL	2847	2833	3995	3026	2400	3293	5084	8347	8672	11281	14559	7711
MEAN	91.8	94.4	129	97.6	82.8	106	169	269	289	364	471	257
MAX	179	416	190	221	131	290	456	529	664	972	928	943
MIN	69	69	74	74	72	72	66	154	102	208	156	112
AC-FT	5650	5620	7920	6000	4760	6530	10080	16560	17200	22380	28880	15290

CAL YR 1975 TOTAL 99133 MEAN 272 MAX 2280 MIN 69 AC-FT 196600
WTR YR 1976 TOTAL 74048 MEAN 202 MAX 972 MIN 66 AC-FT 146900

PLATTE RIVER BASIN

06714100 THIRTYSIXTH STREET STORM SEWER AT DENVER, CO

LOCATION.--Lat 39°46'23", long 104°58'46", in SE¼SE¼ sec.22, T.3 S., R.68 W., Denver County, Hydrologic Unit 10190003, on right bank at north side of Arkins Court and Thirtysixth Street intersection, 900 ft (274 m) upstream from Washington Street Bridge in Denver.

DRAINAGE AREA.--3.51 mi² (9.09 km²).

PERIOD OF RECORD.--December 1975 to September 1976.

GAGE.--Water-stage recorder with sharp-crested weir.

REMARKS.--Records poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period December to September, 237 ft³/s (6.71 m³/s) July 25, gage height, 6.01 ft (1.832 m), from theoretical rating in super critical regime; minimum daily, 0.10 ft³/s (0.003 m³/s) Feb. 14-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1			.83	.15	.13	.20	.20	.31	1.5	.74	13	.88
2			.48	.11	.17	.56	.25	.21	.75	.58	11	.82
3			.21	.11	.17	2.2	.27	.24	.63	.44	.56	.88
4			.20	.34	.13	.27	.25	.31	.61	.44	1.4	.74
5			.17	2.7	.15	4.1	.29	.84	.54	.51	.61	.68
6			.16	.18	.33	5.7	.38	.73	2.3	.68	.54	.68
7			.16	.16	.36	1.8	.25	1.1	1.8	.85	.79	4.8
8			.16	.16	.15	.91	.20	.22	.66	.74	.51	.91
9			.20	.53	.15	.24	.33	.21	.71	.79	.63	.46
10			.17	.24	.12	.22	.22	.36	.74	.58	.71	.54
11			.16	.22	.13	.22	.20	.36	.90	.58	.79	.56
12			.16	.22	.13	.33	.40	.54	.54	1.1	.82	.54
13			.21	.21	.15	.15	.36	.54	.49	.82	1.2	3.0
14			.21	.24	.10	.13	.38	.63	.58	.79	.61	3.6
15			.38	.31	.10	.97	.33	1.1	.71	.74	.61	2.6
16			.20	.27	.10	.16	.98	.46	.88	.88	.88	.99
17			.25	.24	.10	.18	14	.61	4.0	.74	2.0	1.5
18			1.7	.22	.11	.25	.21	.71	11	.71	.88	1.4
19			.78	1.9	.11	.30	.27	.93	.51	5.4	.88	3.0
20			.21	.49	.16	.63	2.7	.68	.43	3.6	1.0	.61
21			.15	.21	5.3	.11	.31	5.1	.76	4.2	.71	.51
22			.18	.21	2.5	.16	.36	7.4	1.1	.51	.66	3.2
23			.17	.18	.51	.18	2.7	.62	2.0	1.7	.88	.38
24			.17	.36	.38	.22	.36	1.5	1.3	.58	3.4	.46
25			.15	.43	.16	5.4	.22	.70	.85	12	1.0	7.0
26			.17	.30	.13	3.4	.27	.33	.51	1.7	.85	4.0
27			.13	.20	.17	.24	6.1	.40	.51	.46	1.2	2.0
28			.13	.22	.17	6.2	.40	.61	.71	.66	1.0	.90
29			.16	.18	.15	5.0	2.1	.56	.74	.68	.66	.80
30			.20	.15	---	.47	13	.42	.74	.68	.93	.80
31			.29	.12	---	.20	---	.40	---	.56	2.5	---
TOTAL	---		8.90	11.56	12.52	41.10	48.29	29.13	39.50	45.44	53.21	49.24
MEAN	---		.29	.37	.43	1.33	1.61	.94	1.32	1.47	1.72	1.64
MAX	---		1.7	2.7	5.3	6.2	14	7.4	11	12	13	7.0
MIN	---		.13	.11	.10	.11	.20	.21	.43	.44	.51	.38
AC-FT	---		18	23	25	82	96	58	78	90	106	98

06716500 CLEAR CREEK NEAR LAWSON, CO

LOCATION.--Lat 39°45'57", long 105°37'32", in NW¼NW¼ sec.25, T.3 S., R.74 W., Clear Creek County, Hydrologic Unit 10190004, on left bank at east edge of Lawson, 30 ft (9 m) downstream from private bridge and 2.0 mi (3.2 km) downstream from West Fork Clear Creek.

DRAINAGE AREA.--147 mi² (381 km²).

PERIOD OF RECORD.--March 1946 to current year. Records prior to 1959 include inflow from August P. Gumlick Tunnel (formerly Jones Pass tunnel).

REVISED RECORDS.--WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 8,080 ft (2,463 m), from topographic map. Mar. 29, 19[illegible] to Sept. 30, 1967, at site 1.5 mi (2.4 km) upstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Natural flow affected by minor transmountain diversion from Colorado River basin through Berthoud Pass ditch (see elsewhere in this report). No diversion above station.

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

AVERAGE DISCHARGE.--30 years, 137 ft³/s (3,880 m³/s), 99,260 acre-ft/yr (122 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,130 ft³/s (174 m³/s) June 4, 1956, gage height, 7.41 ft (2.259 m), site and datum then in use, from rating curve extended above 1,600 ft³/s (45 m³/s), on basis of computation of peak flow over dam, caused by failure of Georgetown Dam on White Reservoir 5.0 mi (8.0 km) upstream; minimum daily, 13 ft³/s (0.37 m³/s) Feb. 20, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 646 ft³/s (18.3 m³/s) June 10, gage height, 4.97 ft (1.515 m), only peak above base of 600 ft³/s (17 m³/s); minimum daily, 25 ft³/s (0.71 m³/s) Jan. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	51	37	30	34	33	33	49	306	387	222	102
2	70	49	40	25	34	33	35	50	344	383	269	94
3	68	49	41	29	33	30	35	55	367	366	285	90
4	66	50	40	30	35	30	36	58	413	366	236	88
5	64	51	40	31	33	30	36	63	460	360	215	85
6	65	52	39	31	33	30	38	67	447	348	199	83
7	66	49	40	28	34	33	34	67	444	333	181	81
8	64	51	40	28	33	34	33	67	526	318	172	85
9	58	50	40	34	34	33	35	74	554	317	179	82
10	62	43	40	34	34	33	36	69	565	307	160	79
11	61	47	40	34	32	33	39	85	526	307	157	79
12	59	32	40	33	33	32	42	89	451	315	149	77
13	58	47	39	32	32	33	43	78	384	314	145	76
14	55	44	38	34	33	33	38	87	351	298	139	82
15	56	44	35	34	34	32	37	121	309	282	135	87
16	58	42	35	34	32	32	37	123	312	266	128	91
17	56	42	35	34	30	33	36	138	315	259	131	85
18	60	42	35	33	33	32	36	164	301	251	137	83
19	60	44	37	34	36	33	35	182	277	282	128	81
20	57	35	37	32	34	28	35	198	281	294	125	79
21	56	38	37	33	33	32	36	218	336	288	126	74
22	57	39	37	35	32	34	36	198	395	278	115	77
23	60	40	37	36	34	34	38	185	435	256	115	80
24	53	40	35	37	34	33	36	175	357	239	124	75
25	52	38	36	35	34	33	42	195	321	224	111	90
26	60	37	36	30	33	33	47	189	317	251	108	105
27	54	38	36	35	33	33	46	212	341	247	117	104
28	53	38	35	35	33	33	48	264	368	213	107	100
29	48	37	34	35	33	32	51	284	374	190	103	94
30	50	35	35	35	---	32	56	282	366	185	99	91
31	53	---	33	35	---	33	---	274	---	185	98	---
TOTAL	1830	1294	1159	1015	965	1002	1165	4360	11543	8909	4715	2579
MEAN	59.0	43.1	37.4	32.7	33.3	32.3	38.8	141	385	287	152	86.0
MAX	71	52	41	37	36	34	56	284	565	387	285	105
MIN	48	32	33	25	30	28	33	49	277	185	98	74
AC-FT	3630	2570	2300	2010	1910	1990	2310	8650	22900	17670	9350	5120

CAL YR 1975 TOTAL 53782 MEAN 147 MAX 820 MIN 26 AC-FT 106700
WTR YR 1976 TOTAL 40536 MEAN 111 MAX 565 MIN 25 AC-FT 80400

PLATTE RIVER BASIN

06719505 CLEAR CREEK AT GOLDEN, CO

LOCATION.--Lat 39°45'11", long 105°14'05", in NE¼NW¼ sec.33, T.3 S., R.70 W., Jefferson County, Hydrologic Unit 10190004, on left bank 100 ft (30 m) downstream from U.S. Highway 6 bridge at west edge of Golden, 0.7 mi (1.1 km) downstream from headgate of Church ditch, and 13.3 mi (21.4 km) downstream from North Clear Creek.

DRAINAGE AREA.--400 mi² (1,036 km²).

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,695 ft (1,736 m), from topographic map.

REMARKS.--Records good except those for winter period and those for periods of no gage-height record, which are 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 above station. Diversion by Welch ditch 1.4 mi (2.3 km) upstream and by Church Ditch 0.7 mi (1.1 km) upstream for irrigation of about 5,200 acres (21.0 km²) below station.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,190 ft³/s (33.7 m³/s) July 9, gage height, 4.31 ft (1.314 m); minimum daily, 19 ft³/s (0.54 m³/s) Mar. 20, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 823 ft³/s (23.3 m³/s) June 10, gage height, 3.86 ft (1.177 m); no peak above base of 1,100 ft³/s (31 m³/s); minimum daily, 19 ft³/s (0.54 m³/s) Mar. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	69	48	30	45	44	30	73	341	424	258	141
2	101	65	55	20	44	44	27	76	416	424	330	127
3	100	65	57	35	44	33	22	77	434	407	385	117
4	98	63	61	45	42	37	22	75	493	402	274	111
5	94	65	63	47	34	26	39	86	537	390	250	106
6	93	68	59	47	38	30	53	87	540	375	254	102
7	96	66	60	40	40	35	51	80	498	350	232	104
8	86	65	58	35	45	38	47	78	625	326	221	104
9	78	60	58	40	56	45	51	87	691	322	225	106
10	78	50	53	40	52	44	53	78	741	297	207	102
11	80	58	51	40	49	40	58	93	695	308	173	101
12	76	31	52	40	47	36	65	130	568	307	175	99
13	75	52	48	40	52	28	73	118	464	304	169	105
14	73	66	48	35	49	27	65	129	418	286	201	125
15	69	57	34	40	47	27	59	166	377	274	193	123
16	76	54	32	40	45	20	55	172	378	262	183	133
17	78	52	41	45	42	28	59	155	378	246	173	117
18	74	50	28	48	36	28	55	172	351	243	191	121
19	76	49	35	46	42	28	58	207	315	290	193	120
20	71	38	45	44	40	19	55	221	308	317	173	122
21	69	43	50	43	31	22	56	265	370	322	185	111
22	69	45	50	51	30	27	55	254	460	299	169	112
23	71	47	50	48	35	30	58	218	554	278	162	116
24	68	47	45	50	40	32	54	198	434	258	173	110
25	62	47	45	45	40	29	57	228	365	250	165	131
26	74	45	48	42	42	28	58	218	340	299	152	174
27	76	47	50	45	41	28	59	232	348	282	160	153
28	76	47	48	45	42	30	59	298	402	254	149	127
29	71	47	46	50	43	29	62	334	424	225	137	104
30	68	44	48	48	---	26	73	333	390	211	137	96
31	69	---	45	48	---	28	---	303	---	214	139	---
TOTAL	2448	1602	1511	1312	1233	966	1588	5241	13655	9446	6207	3520
MEAN	79.0	53.4	48.7	42.3	42.5	31.2	52.9	169	455	305	201	117
MAX	103	69	63	51	56	45	73	334	741	424	385	174
MIN	62	31	28	20	30	19	22	73	308	211	139	96
AC-FT	4860	3180	3000	2600	2450	1920	3150	10400	27080	18740	12310	6980

CAL YR 1975 TOTAL 70740 MEAN 194 MAX 1070 MIN 28 AC-FT 140300
WTR YR 1976 TOTAL 48729 MEAN 133 MAX 741 MIN 19 AC-FT 96650

06720000 CLEAR CREEK AT MOUTH, NEAR DERBY, CO

LOCATION.--Lat 39°49'42", long 104°57'30", in SW¼SW¼ sec.36, T.2 S., R.68 W., Adams County, Hydrologic Unit 10190004, on right bank 210 ft (64 m) downstream from York Street bridge, 0.6 mi (1.0 km) upstream from mouth, and 2.5 mi (4.0 km) west of Derby.

DRAINAGE AREA.--575 mi² (1,489 km²).

PERIOD OF RECORD.--April to November 1914, March 1927 to current year. Prior to October 1933 monthly discharge only published in WSP 1310.

REVISED RECORDS.--WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 5,110 ft (1,558 m), from topographic map. See WSP 1710 or 1730 for history of changes prior to July 16, 1958. July 16, 1958, to Sept. 20, 1965, water-stage recorder at site 50 ft (15 m) upstream at datum 1.56 ft (0.475 m) higher.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions (see elsewhere in this report), storage reservoirs, diversions for irrigation of about 75,000 acres (304 km²) above station, and return flow from irrigated areas.

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

AVERAGE DISCHARGE.--49 years, 92.6 ft³/s (2.622 m³/s), 67,090 acre-ft/yr (82.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,070 ft³/s (144 m³/s) July 24, 1965, gage height, 8.97 ft (2.734 m), present datum; minimum daily, 0.4 ft³/s (0.011 m³/s) Mar. 11, 1943.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 357 ft³/s (10.1 m³/s) Sept. 27, gage height, 4.00 ft (1.219 m); minimum daily, 2.1 ft³/s (0.059 m³/s) Apr. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	87	13	10	19	17	3.2	29	12	52	53	14
2	11	57	13	9.5	19	17	2.7	11	22	64	184	11
3	11	21	14	9.0	22	15	2.2	11	37	55	211	8.1
4	9.9	13	12	10	20	14	2.1	11	53	24	14	12
5	9.3	12	12	12	11	13	2.4	9.9	92	22	10	9.1
6	10	12	12	11	13	16	3.1	12	89	8.5	7.8	9.9
7	10	12	12	10	16	20	3.2	18	28	8.0	9.3	11
8	9.2	14	13	10	17	23	2.9	12	56	8.0	6.9	17
9	7.5	120	13	14	17	21	2.7	8.5	106	5.8	8.3	13
10	6.5	56	15	15	19	20	2.4	7.2	235	19	14	14
11	7.3	40	14	16	15	18	2.7	8.6	250	76	9.5	13
12	8.5	33	13	15	16	18	2.9	17	113	79	10	12
13	8.9	31	15	15	16	18	3.3	18	61	60	6.7	20
14	9.1	36	16	13	17	18	4.0	11	19	61	7.3	118
15	7.7	36	17	18	14	24	3.8	26	16	38	9.4	88
16	7.9	24	16	22	16	24	5.8	44	11	27	9.8	59
17	8.5	21	11	20	16	22	37	33	17	15	10	44
18	7.9	21	13	18	16	21	37	19	179	32	11	46
19	8.6	20	15	20	18	20	15	33	47	79	13	111
20	8.1	20	15	22	16	20	19	40	10	132	9.6	62
21	8.5	21	13	22	15	16	6.4	102	11	98	7.5	37
22	6.5	23	12	21	18	14	5.4	179	40	42	5.9	34
23	28	24	12	17	19	16	5.4	82	221	20	6.0	26
24	35	20	12	16	20	17	10	50	137	10	6.3	23
25	12	20	13	13	19	16	4.5	84	53	11	8.4	129
26	4.9	19	13	14	17	27	4.3	54	20	33	7.1	204
27	7.8	17	11	17	15	19	16	36	11	11	7.9	281
28	13	17	10	18	16	22	18	24	30	16	10	174
29	15	17	11	19	17	46	16	26	42	50	8.5	64
30	15	14	13	20	---	24	106	18	46	9.3	10	33
31	23	---	12	21	---	16	---	16	---	11	14	---
TOTAL	345.6	878	406	487.5	489	612	349.4	1050.2	2064	1176.6	706.2	1697.1
MEAN	11.1	29.3	13.1	15.7	16.9	19.7	11.6	33.9	68.8	38.0	22.8	56.6
MAX	35	120	17	22	22	46	106	179	250	132	211	281
MIN	4.9	12	10	9.0	11	13	2.1	7.2	10	5.8	5.9	8.1
AC-FT	685	1740	805	967	970	1210	693	2080	4090	2330	1400	3370

CAL YR 1975	TOTAL	31236.08	MEAN 85.6	MAX 753	MIN .43	AC-FT	61960
WTR YR 1976	TOTAL	10261.60	MEAN 28.0	MAX 281	MIN 2.1	AC-FT	20350

06720500 SOUTH PLATTE RIVER AT HENDERSON, CO

LOCATION.--Lat 39°55'19", long 104°52'00", in SE¼NE¼ sec.34, T.1 S., R.67 W., Adams County, Hydrologic Unit 10190003, on right bank 500 ft (150 m) upstream from bridge on State Highway 22 and 0.2 mi (0.3 km) northwest of Henderson.

DRAINAGE AREA.--4,713 mi² (12,207 km²).

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.

GAGE.--Water-stage recorder. Datum of gage is 5,003.12 ft (1,524.951 m) above mean 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 (370 m) upstream at datum 2.00 ft (0.610 m) higher. May 11 to Oct. 2, 1969, nonrecording gage at site 500 ft (150 m) downstream at present datum.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, ground-water withdrawal, diversions for irrigation of about 253,000 acres (1,020 km²), and return flow from irrigated areas.

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

AVERAGE DISCHARGE.--50 years, 366 ft³/s (10.37 m³/s), 265,200 acre-ft/yr (327 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 33,000 ft³/s (935 m³/s) May 6, 1973, gage height, 11.67 ft (3.557 m), from rating curve extended above 7,200 ft³/s (200 m³/s), partly on basis of flow-over-road measurement at peak flow; maximum gage height, 12.93 ft (3.941 m) June 17, 1965, site and datum then in use; minimum daily discharge, 4.4 ft³/s (0.12 m³/s) Apr. 1, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,160 ft³/s (146 m³/s) Aug. 1, gage height, 6.28 ft (1.914 m); minimum daily, 85 ft³/s (2.41 m³/s) Apr. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	278	266	259	164	245	248	179	263	266	499	1330	420
2	270	245	214	164	259	248	156	192	266	450	1370	375
3	241	227	186	164	263	252	85	198	266	450	855	306
4	234	214	182	167	259	266	97	189	263	390	472	278
5	227	198	173	195	259	263	116	137	294	385	306	245
6	245	201	162	263	263	328	117	137	298	405	227	274
7	238	211	167	270	263	278	122	195	218	405	568	310
8	231	218	176	319	256	278	124	245	102	516	840	482
9	234	744	167	248	259	266	127	227	301	522	522	350
10	224	410	170	218	263	263	112	208	628	488	337	298
11	214	245	170	241	252	252	110	238	911	522	360	278
12	204	218	179	266	256	248	110	259	590	440	455	234
13	221	211	167	241	248	248	120	310	466	415	370	231
14	234	221	162	245	238	241	106	286	282	390	385	728
15	231	214	173	238	231	263	124	400	370	430	522	528
16	231	195	186	248	241	263	298	540	332	504	576	306
17	241	201	179	227	224	256	657	510	404	435	546	274
18	224	198	170	218	156	256	564	528	1160	405	564	294
19	208	204	182	234	156	252	306	546	684	499	499	425
20	218	201	176	231	167	241	385	488	455	728	496	527
21	221	198	167	231	216	231	278	670	460	795	510	332
22	214	192	176	221	290	231	390	1300	522	616	564	342
23	362	204	179	218	286	180	400	318	894	564	635	365
24	467	224	176	211	266	150	332	261	788	488	640	314
25	294	231	156	201	256	145	204	488	596	425	705	719
26	266	182	156	214	248	221	234	306	314	1350	370	528
27	286	179	164	245	245	173	328	298	259	590	263	1810
28	294	176	159	274	238	159	298	282	365	546	480	628
29	278	195	170	263	234	286	201	314	482	425	425	375
30	286	248	186	270	---	224	733	282	499	365	425	337
31	274	---	189	259	---	182	---	302	---	472	440	---
TOTAL	7890	7071	5478	7168	7037	7392	7413	10917	13735	15914	17066	12913
MEAN	255	236	177	231	243	238	247	352	458	513	551	430
MAX	467	744	259	319	290	328	733	1300	1160	1350	1370	1810
MIN	204	176	156	164	156	145	85	137	102	365	227	231
AC-FT	15650	14030	10870	14220	13960	14660	14700	21650	27240	31570	33850	25610

CAL YR 1975 TOTAL 150838 MEAN 413 MAX 4270 MIN 80 AC-FT 299200
WTR YR 1976 TOTAL 119994 MEAN 328 MAX 1810 MIN 85 AC-FT 238000

06720500 SOUTH PLATTE RIVER AT HENDERSON, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1975 to September 1976 (discontinued).
pH: October 1975 to September 1976 (discontinued).
WATER TEMPERATURES: October 1975 to September 1976 (discontinued).
DISSOLVED OXYGEN: October 1975 to September 1976 (discontinued).

INSTRUMENTATION.--Water-quality monitor for the period.

REMARKS.--Daily maximum and minimum specific conductance and pH data available in district office.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 1,950 micromhos Nov. 13, 14; minimum daily, 686 micromhos Aug. 2.
pH: Maximum, 8.0 units Feb. 20; minimum, 7.1 units on several days during July and August.
WATER TEMPERATURES: Maximum, 28.0°C July 11, 12; minimum, 5.0°C on many days during winter months.
DISSOLVED OXYGEN: Maximum, 9.7 mg/L July 20; minimum, 1.6 mg/L Nov. 3, 10.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1030	1060	1210	1290	1180	1170	1200	1050	1150	977	723	1060
2	1080	1060	1260	1250	1150	1230	1220	1080	1190	1010	686	1080
3	1090	1120	1300	1310	1220	1200	1220	1170	1140	983	792	1040
4	1100	1210	1330	1280	1210	1220	1190	1290	1140	992	918	996
5	1130	1230	1330	1260	1210	1320	1180	1310	1060	995	1070	968
6	1100	1250	1290	1370	1190	1580	1200	1280	997	1020	1180	955
7	1140	1270	1270	1270	1240	1550	1210	1270	1050	1050	---	965
8	1140	1240	1260	1180	1190	1390	1220	1190	1130	973	---	880
9	1140	820	1270	1250	1170	1180	1240	1160	1050	967	---	995
10	1170	932	1290	1270	1230	1210	1230	1170	915	970	975	1050
11	---	1120	1290	1200	1230	1220	1200	1160	796	903	993	1110
12	---	1580	1300	1170	1240	1220	1190	1180	856	935	982	1090
13	---	1950	1270	1210	1270	1240	1210	1110	866	1010	1050	1080
14	---	1950	1250	1210	1250	1180	1210	1160	1020	1030	1090	810
15	---	1930	1220	1260	1200	1120	1250	1070	1060	1010	950	857
16	---	1930	1240	1250	1170	1200	1120	917	1040	968	909	993
17	---	1920	1240	1250	1190	1200	946	935	1030	1010	935	1030
18	---	1560	1250	1210	1250	1240	772	965	780	992	905	1070
19	---	1220	1330	1190	1260	1220	1010	929	875	945	933	941
20	1190	1250	1280	1310	1200	1220	1000	945	934	850	954	883
21	1230	1330	1200	1280	1230	1170	1070	880	968	819	913	1070
22	1240	1310	1200	1280	1270	1120	984	753	944	872	853	1100
23	---	1310	1250	1300	1170	1230	933	999	835	895	847	1040
24	---	1260	1260	1270	1240	1260	952	1090	829	899	866	1110
25	1130	1280	1250	1220	1260	1230	1030	968	905	897	849	913
26	1150	1320	1230	1200	1260	1110	991	1110	1050	696	995	---
27	1140	1320	1300	1240	1260	1190	965	1180	1120	835	1150	---
28	1180	1270	1260	1240	1300	1160	975	1230	1060	857	1030	---
29	1170	1290	1240	1240	1230	959	1130	1140	975	934	957	1070
30	1190	1250	1280	1290	---	1100	772	1110	968	1010	993	1120
31	1190	---	1290	1220	---	1190	---	1090	---	940	1050	---
MONTH	---	1350	1270	1250	1220	1220	1090	1090	991	943	948	1010

06720500 SOUTH PLATTE RIVER AT HENDERSON, CO--Continued

PH (UNITS), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	---	7.5	7.5	7.5	7.6	7.6	7.6	7.5	7.3	7.1	7.3
2	7.5	---	7.4	7.6	7.4	7.6	7.5	7.6	7.5	7.3	7.1	7.3
3	7.5	---	7.4	7.7	7.4	7.7	7.5	7.6	7.5	7.3	7.2	7.3
4	7.6	7.6	7.5	7.7	7.5	7.7	7.5	7.6	7.4	7.2	7.3	7.3
5	7.6	7.6	7.5	7.6	7.6	7.7	7.6	7.6	7.3	7.3	7.3	7.3
6	7.6	7.6	7.4	7.5	7.6	7.6	7.6	7.6	7.4	7.3	7.3	7.3
7	7.6	7.6	7.5	7.5	7.5	7.5	7.6	7.6	7.4	7.3	7.3	7.4
8	7.7	7.6	7.5	7.6	7.4	7.5	7.6	7.6	7.4	7.3	7.2	7.3
9	7.6	7.4	7.5	7.5	7.4	7.5	7.6	7.6	7.4	7.3	7.2	7.3
10	7.6	7.3	7.6	7.5	7.4	7.5	7.5	7.6	7.4	7.3	7.3	7.3
11	---	7.5	7.6	7.5	7.3	7.5	7.6	7.6	7.4	7.2	7.3	7.3
12	---	7.4	7.6	7.5	7.4	7.6	7.7	7.6	7.4	7.2	7.3	7.3
13	---	7.4	7.6	7.5	7.4	7.6	7.6	7.6	7.4	7.3	7.3	7.4
14	---	7.5	7.7	7.4	7.4	7.5	7.5	7.6	7.5	7.3	7.4	7.3
15	---	7.5	7.7	7.4	7.3	7.5	7.5	7.5	7.4	7.3	7.3	7.3
16	---	7.6	7.6	7.4	7.5	7.5	7.5	7.4	7.4	7.2	7.3	7.3
17	---	7.7	7.6	7.5	7.7	7.4	7.6	7.5	7.3	7.2	7.2	7.3
18	---	7.7	7.6	7.5	7.8	7.4	7.5	7.6	7.2	7.2	7.2	7.3
19	---	7.5	7.6	7.6	7.8	7.4	7.5	7.5	7.2	7.2	7.2	7.3
20	7.7	7.3	7.5	7.5	8.0	7.5	7.6	7.5	7.3	7.1	7.2	7.3
21	7.7	7.3	7.5	7.4	7.8	7.5	7.6	7.4	7.3	7.1	7.3	7.3
22	7.7	7.3	7.5	7.4	7.7	7.3	7.6	7.3	7.3	7.1	7.3	7.3
23	---	7.5	7.5	7.4	7.6	7.5	7.6	7.4	7.3	7.2	7.3	7.3
24	---	7.6	7.5	7.5	7.6	7.6	7.5	7.4	7.3	7.2	7.3	7.3
25	---	7.6	7.5	7.6	7.6	7.7	7.5	7.4	7.3	7.2	7.3	7.3
26	---	7.6	7.6	7.6	7.6	7.7	7.5	7.4	7.3	7.1	7.3	7.2
27	---	7.5	7.6	7.5	7.6	7.6	7.5	7.5	7.3	7.2	7.3	7.3
28	---	7.6	7.6	7.5	7.6	7.6	7.5	7.5	7.3	7.3	7.3	7.3
29	---	7.6	7.6	7.4	7.6	7.7	7.6	7.5	7.3	7.2	7.2	7.3
30	---	7.6	7.5	7.5	---	7.7	7.6	7.5	7.3	7.2	7.3	7.3
31	---	---	7.6	7.5	---	7.6	---	7.5	---	7.2	7.3	---
MONTH	---	7.5	7.5	7.5	7.6	7.6	7.6	7.5	7.4	7.2	7.3	7.3

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.0	13.0	15.0	10.5	11.5	7.5	8.0	5.0	12.5	8.0	16.5	9.0
2	20.5	13.0	15.5	11.0	12.0	9.0	6.0	5.0	13.5	9.0	11.0	7.0
3	21.0	13.5	16.0	11.0	14.0	9.0	6.5	5.0	13.5	9.0	10.0	6.5
4	20.5	14.0	17.0	12.0	14.0	9.5	7.5	5.0	9.0	5.5	8.0	6.5
5	21.0	15.0	17.5	12.0	11.5	9.5	10.0	5.5	7.5	5.0	12.5	5.0
6	21.5	15.5	15.0	12.0	13.0	9.5	8.0	6.5	11.0	6.0	13.0	5.0
7	19.5	15.0	16.5	11.5	11.5	9.5	9.0	6.0	13.0	7.5	14.5	6.0
8	16.0	11.0	13.0	11.0	12.5	9.5	9.5	5.0	12.5	8.5	16.0	7.5
9	18.5	12.0	12.0	7.5	13.5	10.0	11.5	7.5	15.5	10.0	17.0	9.0
10	17.5	13.0	13.0	8.0	12.5	9.5	10.0	7.5	14.5	9.5	17.0	9.5
11	---	---	10.5	7.5	12.0	9.0	10.0	6.5	16.0	9.0	14.0	9.0
12	---	---	10.5	6.5	11.5	9.5	10.0	7.5	14.5	9.0	12.5	6.5
13	---	---	13.5	8.0	9.0	7.0	9.0	6.5	15.5	9.5	14.0	7.5
14	---	---	13.5	8.5	8.5	5.0	11.0	6.0	14.5	10.0	15.5	8.5
15	---	---	15.0	10.5	9.5	5.0	11.0	8.0	14.0	9.5	14.5	9.0
16	---	---	15.0	9.5	8.5	6.0	13.0	8.0	14.0	9.0	15.5	9.0
17	---	---	13.0	10.5	7.5	5.0	13.0	8.0	10.0	7.5	17.5	9.5
18	---	---	11.0	9.0	9.5	5.0	10.5	8.0	11.0	6.0	17.0	11.5
19	---	---	8.5	5.0	11.0	6.0	10.5	6.5	12.5	6.0	14.5	8.0
20	17.5	14.5	10.0	5.0	11.0	6.0	11.5	6.0	9.0	5.0	13.0	7.0
21	18.5	12.5	9.5	6.0	9.5	7.0	12.5	7.0	11.0	5.0	13.5	7.0
22	18.5	13.0	11.0	5.5	11.0	6.5	12.5	7.0	13.5	6.0	18.5	8.5
23	20.0	10.0	12.0	6.5	10.0	7.5	12.5	7.0	13.5	7.5	16.0	10.0
24	19.0	10.0	11.0	6.5	10.5	7.0	9.5	5.0	14.5	8.5	18.0	8.5
25	20.0	10.0	10.5	6.0	10.5	8.0	9.0	5.5	14.0	9.0	16.5	7.5
26	17.0	11.0	8.5	5.0	10.5	6.5	9.5	5.0	16.0	9.5	14.0	7.5
27	16.5	12.0	9.0	6.5	9.5	6.0	12.5	6.5	14.0	9.5	17.5	8.5
28	16.0	13.0	8.5	5.5	7.0	5.5	13.0	9.5	15.5	9.0	14.0	8.0
29	16.5	11.0	7.5	5.0	10.0	5.5	14.5	9.0	13.5	9.0	11.0	6.5
30	15.5	11.0	8.5	6.0	12.0	7.5	12.0	7.5	---	---	13.0	6.5
31	13.0	12.0	---	---	9.5	5.0	12.0	7.5	---	---	18.0	8.0
MONTH	---	---	17.5	5.0	14.0	5.0	14.5	5.0	16.0	5.0	18.5	5.0

06720500 SOUTH PLATTE RIVER AT HENDERSON, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	19.5	9.0	21.0	11.0	24.5	15.5	25.5	18.5	23.0	20.0	24.5	18.0
2	19.5	10.0	21.5	12.5	25.5	16.0	22.5	18.0	20.0	19.0	25.0	18.0
3	19.0	8.5	23.0	12.5	23.0	16.0	25.5	17.5	23.5	19.0	24.5	18.0
4	18.5	9.5	21.0	14.0	24.5	15.5	27.0	19.0	25.5	19.0	25.0	18.0
5	19.5	10.0	19.5	13.0	23.5	16.0	26.5	18.5	26.5	18.5	25.5	18.5
6	16.5	11.0	14.5	12.5	23.0	15.5	27.0	18.5	27.5	18.5	24.0	18.0
7	16.0	10.0	20.5	12.0	25.5	15.5	26.0	19.5	25.0	19.0	22.5	18.5
8	17.5	11.0	19.5	13.0	25.0	16.0	27.5	19.5	22.5	20.0	19.5	17.0
9	19.5	10.5	18.0	13.0	23.5	17.0	27.0	20.5	23.5	19.0	22.5	16.5
10	20.5	10.5	22.5	13.0	23.0	16.5	27.5	20.0	25.0	18.0	23.5	17.0
11	21.5	12.5	20.5	14.5	22.5	17.5	28.0	20.0	24.0	18.0	25.5	18.5
12	19.5	11.0	18.5	13.5	22.0	15.5	28.0	20.0	25.0	18.0	23.5	18.5
13	19.5	12.0	19.5	12.5	22.5	16.5	24.5	20.5	23.5	18.5	23.5	18.0
14	18.0	11.0	24.0	13.5	20.5	13.5	27.5	19.5	25.5	18.0	20.5	18.0
15	18.0	11.0	17.5	13.0	23.5	14.5	23.5	19.5	25.5	19.5	19.5	16.5
16	18.0	12.5	17.5	12.0	23.0	16.0	27.0	19.5	26.0	19.5	23.0	16.5
17	12.5	8.5	21.5	12.0	18.5	16.0	27.5	20.0	25.5	20.0	23.5	18.5
18	15.5	8.0	22.5	15.0	16.5	15.0	26.5	20.5	26.0	20.0	23.0	17.5
19	18.5	12.0	22.0	16.0	22.5	14.0	25.0	20.5	26.5	20.5	19.5	17.5
20	18.5	13.0	22.0	15.0	26.0	16.5	24.5	20.5	25.5	20.5	21.0	17.0
21	17.0	12.0	19.0	15.5	26.5	18.0	25.0	20.0	25.5	20.0	23.0	17.0
22	17.5	12.5	15.5	14.0	26.5	19.0	26.5	20.0	25.5	19.5	20.0	17.5
23	17.0	13.0	15.5	13.5	20.5	17.5	25.5	19.5	21.5	19.5	22.0	16.0
24	19.5	11.5	21.0	13.5	22.5	16.5	26.0	19.5	24.0	19.0	19.5	17.0
25	19.5	12.0	19.0	14.0	24.0	16.5	24.5	19.5	24.5	19.5	18.0	17.0
26	16.0	11.0	22.0	14.5	24.0	16.5	24.5	19.5	24.5	19.0	17.5	16.5
27	11.0	10.0	24.5	15.0	26.5	16.5	24.5	20.0	24.5	18.0	16.0	13.0
28	15.0	10.0	23.5	16.0	26.0	18.0	25.5	19.5	25.0	18.5	19.0	14.0
29	13.5	12.0	22.5	16.0	25.5	18.5	26.5	19.5	25.0	18.5	---	---
30	15.0	10.0	21.0	15.5	24.5	17.5	26.5	20.0	23.5	18.5	22.0	16.0
31	---	---	24.0	14.5	---	---	26.0	21.0	21.0	18.0	---	---
MONTH	21.5	8.0	24.5	11.0	26.5	13.5	28.0	17.5	27.5	18.0	25.5	13.0

06720500 SOUTH PLATTE RIVER AT HENDERSON, CO--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.8	4.2	7.9	4.1	6.4	4.7	7.2	4.5	5.7	4.2	6.5	2.1
2	7.9	4.0	8.0	4.0	6.3	5.2	8.3	5.2	6.0	4.0	7.0	4.7
3	7.8	4.2	6.3	1.6	6.1	4.6	8.2	5.5	6.1	4.6	7.1	6.1
4	7.6	4.2	6.2	3.2	6.0	4.4	7.2	5.0	6.8	5.0	6.8	6.1
5	7.6	4.3	6.2	2.9	6.5	4.7	6.4	4.2	7.4	6.2	7.1	5.7
6	7.4	4.5	6.6	3.0	6.1	4.9	7.2	4.4	8.3	5.0	7.6	3.0
7	7.7	4.0	6.7	3.0	6.1	4.3	6.8	4.8	6.3	3.3	6.6	3.7
8	8.3	4.3	5.7	2.9	6.4	2.3	8.3	4.8	6.1	3.1	6.5	3.4
9	8.2	4.5	5.9	2.3	6.4	4.2	6.1	4.6	6.0	2.8	6.2	4.6
10	8.9	5.4	4.8	1.6	6.6	4.7	7.6	5.1	5.7	3.3	6.3	4.4
11	---	---	6.9	4.8	6.9	5.0	7.8	5.8	5.8	4.6	6.1	4.4
12	---	---	6.8	5.4	6.7	4.4	7.8	3.3	5.5	4.3	7.1	4.4
13	---	---	6.2	3.9	7.3	4.6	8.0	4.4	6.1	4.3	6.7	3.3
14	---	---	6.4	4.4	8.3	4.3	7.0	5.9	6.2	4.8	6.4	4.2
15	---	---	8.0	4.1	7.5	4.0	6.5	3.2	6.2	4.0	6.8	3.6
16	---	---	5.4	3.3	7.6	4.0	6.2	2.0	7.6	2.0	6.5	4.1
17	---	---	6.2	3.8	7.8	4.5	6.0	3.8	7.2	4.9	6.2	3.3
18	---	---	6.8	4.8	7.2	4.4	6.2	4.1	7.5	5.5	5.8	2.7
19	---	---	9.5	5.5	7.0	4.9	6.9	4.6	6.8	5.0	5.6	2.5
20	7.5	3.2	7.7	5.7	7.0	5.4	6.6	4.7	9.7	5.1	6.1	4.3
21	7.0	2.9	6.5	2.3	7.0	5.4	6.5	4.6	7.3	2.5	5.6	3.6
22	6.9	2.8	7.2	2.9	7.4	4.8	6.6	5.1	6.5	3.8	5.4	2.1
23	6.6	3.1	6.9	5.4	7.4	5.2	6.2	4.2	6.6	3.1	5.9	2.9
24	6.6	2.8	7.0	4.5	7.0	5.2	6.5	4.2	6.3	5.0	5.8	2.9
25	6.8	2.9	8.1	4.9	7.1	5.2	6.6	5.2	6.4	5.0	5.7	3.1
26	6.5	3.8	7.3	5.6	7.4	4.0	7.0	5.2	6.2	4.6	6.6	2.2
27	6.7	4.0	7.1	5.4	7.6	5.0	6.8	4.9	6.4	4.1	5.8	2.3
28	8.0	4.1	7.5	4.2	8.0	5.7	6.5	4.8	6.0	3.8	6.3	3.5
29	8.0	4.0	8.0	5.2	7.4	4.7	6.1	4.4	6.4	3.9	7.6	2.5
30	7.9	4.2	7.0	4.2	6.8	4.8	5.9	4.5	---	---	7.0	4.9
31	8.0	4.0	---	---	8.2	4.4	5.5	2.9	---	---	6.8	4.3
MONTH	---	---	9.5	1.6	8.3	2.3	8.3	2.0	9.7	2.0	7.6	2.1

06720500 SOUTH PLATTE RIVER AT HENDERSON, CO--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	6.4	3.8	6.2	4.4	4.8	3.3	4.7	3.7	4.6	2.6	3.8	2.8
2	7.0	4.2	5.4	3.9	4.6	3.4	4.7	3.7	5.1	3.7	4.1	2.5
3	6.4	4.3	5.6	4.1	5.3	3.5	5.2	3.5	5.0	2.4	3.9	2.2
4	6.8	4.6	5.8	4.8	5.4	3.4	4.8	3.3	4.8	4.1	3.5	2.0
5	7.5	4.4	5.7	5.0	5.6	2.6	4.4	3.2	4.6	3.6	3.9	2.3
6	8.0	4.7	6.6	5.3	5.8	4.2	4.8	2.8	4.2	2.9	4.4	2.7
7	7.9	5.2	6.4	4.5	5.2	2.2	5.1	3.7	4.5	3.7	4.0	2.8
8	8.0	4.4	6.6	4.8	3.9	2.5	4.8	2.5	4.7	4.1	4.2	2.9
9	7.6	4.2	6.6	4.6	4.6	3.3	4.6	2.6	4.4	3.9	4.1	2.8
10	8.0	3.9	7.0	3.8	4.6	2.0	4.7	3.1	4.0	3.6	3.3	2.0
11	8.2	4.2	6.8	4.5	3.3	3.2	5.2	3.6	4.1	3.5	3.1	2.0
12	8.3	4.0	7.4	4.6	4.3	4.3	4.7	3.2	4.0	3.0	3.1	2.0
13	8.4	4.2	7.7	4.8	---	---	3.9	2.9	3.8	2.8	3.1	2.2
14	8.0	3.6	7.7	4.0	7.0	4.0	4.0	2.6	3.7	2.4	4.1	2.7
15	6.9	2.5	6.9	4.2	4.8	3.8	4.4	2.7	3.9	2.8	4.0	3.1
16	3.7	2.0	7.0	5.6	4.9	3.6	4.5	2.6	3.9	2.0	3.4	2.4
17	6.4	2.8	6.5	5.0	5.8	4.6	4.2	2.7	---	---	3.3	2.7
18	6.6	4.5	6.0	4.6	6.5	5.6	4.2	3.0	---	---	3.4	2.7
19	4.4	2.0	6.4	4.7	7.0	4.7	4.1	2.8	---	---	4.1	3.1
20	7.2	3.5	6.3	4.8	6.7	4.6	3.4	2.5	---	---	4.1	3.0
21	4.6	2.7	6.2	5.0	5.2	4.3	2.7	2.0	---	---	3.5	2.6
22	6.7	2.4	6.4	4.8	5.1	4.7	---	---	4.4	3.0	3.6	2.9
23	6.8	5.8	5.8	5.2	5.3	4.2	4.9	2.0	4.4	3.3	3.8	2.8
24	7.3	5.1	5.8	4.6	5.6	4.6	4.6	3.6	4.3	3.1	3.6	2.7
25	5.9	4.8	5.8	5.0	5.4	4.2	4.7	4.1	4.1	3.1	4.3	3.0
26	6.1	5.5	5.2	3.2	4.6	4.0	5.0	3.5	3.7	2.7	4.2	3.2
27	6.7	6.0	5.1	2.0	4.6	3.4	4.8	4.3	3.8	2.8	5.8	3.6
28	6.3	3.2	5.2	3.4	4.7	3.7	4.9	4.0	4.3	3.1	5.2	2.0
29	6.7	3.1	5.4	4.0	4.8	4.0	4.6	3.1	4.2	3.4	4.5	2.0
30	8.0	5.8	5.7	4.8	4.9	3.8	4.3	3.0	4.5	3.3	3.5	2.0
31	---	---	6.1	3.8	---	---	4.4	3.4	4.2	3.3	---	---
MONTH	8.4	2.0	7.7	2.0	7.0	2.0	5.2	2.0	5.1	2.0	5.8	2.0

06722000 NORTH ST. VRAIN CREEK AT LONGMONT DAM, NEAR LYONS, CO

LOCATION.--Lat 40°13'30", long 105°21'00", in NE¼SW¼ sec.16, T.3 N., R.71 W., Boulder County, Hydrologic Unit 10190005, on right bank 0.7 mi (1.1 km) upstream from Longmont Dam and 4.2 mi (6.8 km) west of Lyons.

DRAINAGE AREA.--106 mi² (275 km²).

PERIOD OF RECORD.--October 1971 to current year.

REMARKS.--Records of discharge are estimated values.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT									
09...	1545	E15	22	8.1	12.0	8.0	12	2	3.5
NOV									
06...	1515	E20	22	7.7	9.0	8.8	10	3	2.7
DEC									
08...	1220	E10	50	7.5	4.0	10.4	10	1	2.8
JAN									
14...	1115	E8.0	50	7.9	1.0	11.0	13	5	3.5
FEB									
11...	1100	E8.0	26	8.0	1.0	11.3	13	1	3.6
MAR									
30...	1335	E12	73	7.9	5.0	9.6	26	11	5.8
APR									
13...	1125	E7.0	26	7.5	7.0	9.3	12	2	3.6
MAY									
05...	0910	E10	50	7.3	6.0	10.0	14	3	3.9
JUN									
17...	1410	E75	23	7.6	9.5	8.6	9	1	2.6
JUL									
10...	1145	144	21	7.5	11.5	8.6	7	2	2.3
AUG									
11...	1215	E75	21	7.1	14.0	8.1	9	2	2.6
SEP									
13...	1715	E35	23	7.1	14.0	7.7	9	0	2.8

06722000 NORTH ST. VRAIN CREEK AT LONGMONT DAM, NEAR LYONS, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT									
09...	.7	1.3	.2	.4	12	0	10	2.9	.5
NOV									
06...	.8	1.5	.2	.2	9	0	7	2.1	.3
DEC									
08...	.8	1.8	.2	.5	11	0	9	2.2	.5
JAN									
14...	1.0	2.2	.3	.4	9	0	7	10	.5
FEB									
11...	.9	2.0	.2	.3	14	0	11	3.6	.9
MAR									
30...	2.9	4.0	.3	.5	19	0	16	16	1.1
APR									
13...	.8	2.3	.3	.5	13	0	11	2.9	.7
MAY									
05...	1.1	3.0	.3	.3	14	0	11	2.8	.9
JUN									
17...	.7	1.8	.3	.5	10	0	8	4.8	.8
JUL									
10...	.4	1.3	.2	.3	7	0	6	4.4	.6
AUG									
11...	.5	1.0	.1	.3	8	0	7	8.0	.2
SEP									
13...	.6	1.5	.2	.5	11	0	9	5.9	.6

DATE	DIS-SOLVED FLUO-RIDE (F) .MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT									
09...	.1	4.2	20	.03	.81	.03	.00	90	10
NOV									
06...	.1	4.3	17	.02	.92	.02	.00	60	0
DEC									
08...	.1	4.0	18	.02	.49	.01	.00	110	10
JAN									
14...	.2	4.0	27	.04	.58	.22	.01	70	5
FEB									
11...	.2	3.8	23	.03	.50	.09	.01	70	160
MAR									
30...	.1	4.1	45	.06	.97	.15	.00	70	10
APR									
13...	.2	4.0	22	.03	.59	.01	.05	120	10
MAY									
05...	.2	3.7	23	.03	.75	.03	.00	70	0
JUN									
17...	.2	4.9	22	.03	4.46	.13	.02	110	10
JUL									
10...	.2	5.0	18	.02	7.00	.06	.00	70	10
AUG									
11...	.1	4.7	22	.03	4.46	.15	.01	60	10
SEP									
13...	.1	5.4	24	.03	2.27	.14	.00	170	40

06723400 SOUTH ST. VRAIN CREEK ABOVE LYONS, CO

LOCATION.--Lat 40°13'02", long 105°16'26", in NE¼NW¼ sec.19, T.3 N., R.70 W., Boulder County, Hydrologic Unit 10190005, at bridge on county road 250 ft (76 m) south of State Highway 7 and 0.2 mi (0.3 km) southwest of Lyons.

DRAINAGE AREA.--81.4 mi² (210.8 km²).

PERIOD OF RECORD.--October 1971 to current year.

REMARKS.--Records of discharge are estimated values.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT									
08...	1200	E8.0	70	7.7	9.0	--	26	0	8.0
NOV									
06...	1600	E5.0	65	7.6	9.0	9.4	26	0	7.2
DEC									
08...	1135	E8.0	65	7.6	3.0	11.1	24	0	7.1
JAN									
14...	1115	E6.0	75	7.8	.0	12.0	35	2	9.7
FEB									
11...	1100	E8.0	75	7.5	1.5	11.8	34	2	9.8
MAR									
29...	1030	E6.0	75	7.6	4.5	10.6	29	1	7.4
APR									
13...	1200	E8.0	65	7.5	12.5	8.5	25	0	6.9
MAY									
05...	1040	E12	60	7.6	11.0	9.0	21	0	6.6
JUN									
16...	1120	E35	33	7.7	11.5	8.8	13	0	3.8
JUL									
16...	0945	E20	31	7.3	14.5	8.4	15	2	4.4
AUG									
11...	1125	E15	40	7.3	15.5	8.4	18	1	5.5
SEP									
13...	1620	E18	51	7.3	17.0	7.2	21	0	6.0

06723400 SOUTH ST. VRAIN CREEK ABOVE LYONS, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT									
08...	1.5	2.8	.2	.8	34	0	28	5.1	.0
NOV									
06...	1.9	3.0	.3	.6	31	0	25	3.9	1.7
DEC									
08...	1.4	3.3	.3	.4	29	0	24	4.2	1.4
JAN									
14...	2.6	6.0	.4	.7	40	0	33	--	1.6
FEB									
11...	2.2	4.0	.3	.5	38	0	31	5.3	.0
MAR									
29...	2.5	4.1	.3	.7	34	0	28	5.9	1.5
APR									
13...	1.9	3.8	.3	1.0	31	0	25	5.1	1.3
MAY									
05...	1.2	3.4	.3	.5	27	0	22	6.3	1.4
JUN									
16...	.8	1.4	.2	.3	17	0	14	5.2	.6
JUL									
16...	.9	1.9	.2	.3	16	0	13	3.7	.5
AUG									
11...	1.1	1.5	.2	.4	21	0	17	3.9	.1
SEP									
13...	1.4	2.4	.2	.6	26	0	21	5.6	.6

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT									
08...	.1	6.7	42	.06	.91	.00	.00	60	10
NOV									
06...	.2	7.0	41	.06	.55	.02	.01	20	0
DEC									
08...	.3	7.8	41	.06	.89	.09	.01	20	0
JAN									
14...	.2	8.8	--	--	1.07	.24	.01	10	5
FEB									
11...	.2	7.6	49	.07	1.06	.12	.01	60	0
MAR									
29...	.3	8.7	49	.07	.79	.15	.12	30	10
APR									
13...	.2	8.8	45	.06	.97	.11	.00	40	0
MAY									
05...	.2	8.3	42	.06	1.36	.11	.00	30	0
JUN									
16...	.1	5.3	26	.04	2.46	.00	.00	40	0
JUL									
16...	.1	4.0	24	.03	1.30	.03	.03	80	10
AUG									
11...	.1	4.4	28	.04	1.13	.07	.01	40	0
SEP									
13...	.1	5.5	36	.05	1.74	.11	.00	170	10

06724000 ST. VRAIN CREEK AT LYONS, CO

LOCATION.--Lat 40°13'05", long 105°15'34", in NW¼NW¼ sec.20, T.3 N., R.70 W., Boulder County, Hydrologic Unit 10190005, on left bank 75 ft (23 m) southwest of U.S. Highway 36 (State Highways 7 and 66) at southeast edge of Lyons, 400 ft (120 m) upstream from St. Vrain Supply Canal, and 0.4 mi (0.6 km) downstream from confluence of North and South St. Vrain Creeks.

DRAINAGE AREA.--212 mi² (549 km²).

PERIOD OF RECORD.--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.

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

GAGE.--Water-stage recorder. Altitude of gage is 5,292 ft (1,613 m), 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 (0.305 m) higher.

REMARKS.--Records good. Diversions above station for irrigation of about 20,000 acres (80.9 km²). Flow partly regulated by small reservoirs above station.

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

AVERAGE DISCHARGE.--85 years (water years 1888-91, 1896-76), 128 ft³/s (3.625 m³/s), 92,740 acre-ft/yr (114 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,500 ft³/s (297 m³/s) June 22, 1941, gage height, 9.06 ft (2.761 m), present datum, from floodmark, from rating curve extended above 2,100 ft³/s (59 m³/s) on basis of slope-area measurement at gage height 8.90 ft (2.713 m); no flow Jan. 19, 20, 1922, Jan. 12, 13, 1950.

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 (2.783 m), from information by local resident, discharge, about 9,800 ft³/s (278 m³/s). For discussions of these floods, see WSP 997.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 835 ft³/s (23.6 m³/s) Aug. 1, gage height, 4.65 ft (1.417 m); minimum daily, 4.6 ft³/s (0.13 m³/s) Feb. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	20	17	12	9.2	13	11	28	198	285	236	67
2	34	19	16	12	8.6	12	12	29	229	300	290	59
3	29	17	15	9.1	7.5	13	11	31	275	305	252	52
4	26	17	14	9.6	7.5	13	9.1	27	310	310	188	39
5	28	17	13	9.1	4.6	13	7.5	34	348	295	171	35
6	26	15	13	9.1	7.5	13	18	52	418	275	184	39
7	22	17	14	11	9.6	14	19	50	412	247	184	42
8	29	19	13	9.6	11	12	18	47	406	220	175	43
9	28	24	13	11	11	12	16	47	454	211	175	43
10	28	15	14	10	10	13	11	57	454	206	163	37
11	25	13	12	11	9.1	13	8.0	67	430	193	167	31
12	18	14	13	10	9.6	12	7.5	75	376	206	175	34
13	22	14	13	8.0	9.6	10	19	69	305	216	151	35
14	27	21	10	8.6	9.6	12	18	81	275	206	124	42
15	26	23	10	9.1	9.1	11	9.6	107	256	193	124	43
16	27	21	11	10	8.0	10	11	110	229	167	124	45
17	21	21	11	9.6	7.5	11	14	107	198	143	121	50
18	15	17	11	9.6	8.2	12	14	114	202	139	124	55
19	13	22	13	9.2	12	11	15	147	211	151	128	59
20	13	16	14	9.1	13	7.9	27	229	216	215	121	57
21	13	19	12	10	12	12	27	234	247	188	121	47
22	12	16	14	9.7	15	11	28	216	285	167	118	47
23	24	18	11	9.1	13	11	32	184	354	155	121	47
24	26	16	8.6	8.6	12	12	28	171	359	151	121	42
25	26	15	10	8.6	11	12	31	171	295	155	118	43
26	29	12	12	8.7	11	10	28	139	247	171	107	52
27	31	17	13	9.2	12	12	40	139	224	151	97	59
28	27	17	13	9.1	13	9.6	29	159	238	143	72	55
29	28	15	12	9.0	13	13	28	175	256	135	64	50
30	28	15	13	8.2	---	12	32	147	265	124	64	47
31	26	---	12	8.0	---	13	---	151	---	124	67	---
TOTAL	777	522	390.6	294.9	294.2	365.5	578.7	3394	8972	6147	4447	1396
MEAN	25.1	17.4	12.6	9.51	10.1	11.8	19.3	109	299	198	143	46.5
MAX	50	24	17	12	15	14	40	234	454	310	290	67
MIN	12	12	8.6	8.0	4.6	7.9	7.5	27	198	124	64	31
AC-FT	1540	1040	775	585	584	725	1150	6730	17800	12190	8820	2770

CAL YR 1975 TOTAL 45358.6 MEAN 124 MAX 852 MIN 4.5 AC-FT 89970
WTR YR 1976 TOTAL 27578.9 MEAN 75.4 MAX 454 MIN 4.6 AC-FT 54700

06724600 LEFT HAND CREEK AT ALTONA, CO

LOCATION.--Lat 40°07'57", long 105°17'24", in SW¼SE¼ sec.13, T.2 N., R.71 W., Boulder County, Hydrologic Unit 10190005, on left bank beside State Highway 160, 0.5 mi (0.8 km) west of intersection of State Highway 160 and U.S. Highway 36 in Altona.

DRAINAGE AREA.--59.0 mi² (152.8 km²).

PERIOD OF RECORD.--October 1971 to current year.

REMARKS.--Records of discharge are estimated values.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT									
08...	1115	E4.0	100	7.5	6.0	10.1	42	19	12
NOV									
08...	0930	E5.0	140	8.3	4.5	10.3	51	28	15
DEC									
08...	1100	E5.0	180	7.6	1.0	11.6	72	50	20
JAN									
14...	1030	E3.0	220	7.0	.0	11.3	93	67	26
FEB									
11...	1010	E2.0	230	7.4	.0	11.8	91	60	26
MAR									
29...	0930	E2.0	160	7.2	2.0	10.6	87	60	23
APR									
13...	1000	E3.0	175	7.0	8.5	9.4	68	44	19
MAY									
05...	1110	E4.0	140	7.7	11.0	8.7	54	31	14
JUN									
16...	1025	E12	50	7.7	9.5	9.3	18	7	5.3
JUL									
16...	0850	E5.0	37	7.0	12.5	8.6	17	9	4.9
AUG									
11...	1050	E5.0	65	7.2	14.0	8.2	26	15	7.5
SEP									
13...	1315	E21	31	7.0	14.0	8.1	20	9	5.9

06724600 LEFT HAND CREEK AT ALTONA, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATID	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT									
08...	3.0	4.1	.3	1.4	29	0	24	28	1.1
NOV									
08...	3.4	6.0	.4	.9	29	0	24	43	1.0
DEC									
08...	5.3	7.5	.4	.9	27	0	22	59	1.3
JAN									
14...	6.8	12	.5	2.0	32	0	26	84	1.3
FEB									
11...	6.3	9.5	.4	1.1	38	0	31	77	2.3
MAR									
29...	7.2	9.0	.4	1.2	33	0	27	69	2.0
APR									
13...	4.9	7.3	.4	1.2	29	0	24	53	1.0
MAY									
05...	4.7	5.3	.3	.9	28	0	23	34	.9
JUN									
16...	1.2	1.7	.2	.5	14	0	11	11	.7
JUL									
16...	1.2	1.3	.1	.5	10	0	8	8.1	.5
AUG									
11...	1.7	2.3	.2	.5	13	0	11	18	.3
SEP									
13...	1.3	2.5	.2	.5	13	0	11	14	.6

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT									
08...	.5	7.6	72	.10	.78	.03	.00	60	10
NOV									
08...	.8	8.6	93	.13	1.26	.04	.00	20	30
DEC									
08...	1.4	9.5	119	.16	1.61	.11	.01	20	30
JAN									
14...	1.9	10	162	.22	1.31	.22	.40	30	40
FEB									
11...	2.1	9.4	153	.21	.83	.20	.00	0	--
MAR									
29...	2.4	9.9	148	.20	.80	.20	2.2	40	30
APR									
13...	2.2	9.9	118	.16	.96	.07	1.5	190	30
MAY									
05...	1.6	9.4	85	.12	.92	.07	.00	40	30
JUN									
16...	.4	6.1	37	.05	1.20	.07	.98	60	10
JUL									
16...	.4	4.0	26	.04	.35	.03	.01	70	10
AUG									
11...	.8	5.0	43	.06	.58	.09	.03	40	20
SEP									
13...	.8	3.6	36	.05	2.05	.10	.00	150	20

06725500 MIDDLE BOULDER CREEK AT NEDERLAND, CO

LOCATION.--Lat 39°57'42", long 105°30'14", in NE¼SE¼ sec.13, T.1 S., R.73 W., Boulder County, Hydrologic Unit 10190005, on left bank at Nederland just downstream from North Beaver Creek, 1,000 ft (300 m) upstream from Barker Reservoir.

DRAINAGE AREA.--36.2 mi² (93.8 km²).

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 (2,495.09 m) above mean sea level (Public Service Co. bench mark). Prior to Mar. 18, 1909, at datum 4.0 ft (1.22 m) lower. Mar. 18, 1909, to Apr. 23, 1952, at datum 2.5 ft (0.76 m) lower than present datum.

REMARKS.--Records good. No diversion above station. Flow regulated at times by Jasper Lake, capacity, 326 acre-ft (402,000 m³). 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.

AVERAGE DISCHARGE.--69 years, 54.2 ft³/s (1.535 m³/s), 39,270 acre-ft/yr (48.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 811 ft³/s (23.0 m³/s) June 2, 1914, gage height, 5.37 ft (1.637 m), datum then in use, by computation of peak flow over compound weir; minimum daily, 0.8 ft³/s (0.023 m³/s) Jan. 14, 1908.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 280 ft³/s (7.9 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 9	0030	*357	10.1	1.69	0.820	June 22	2300	282	7.99	2.35	0.716

Minimum daily discharge, 3.5 ft³/s (0.099 m³/s) Mar. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	7.7	6.5	5.5	4.5	4.9	6.7	19	180	194	120	35
2	11	7.7	7.3	5.1	4.5	4.3	7.3	25	201	187	141	32
3	10	7.3	8.3	5.5	4.5	4.3	7.3	29	213	178	132	29
4	10	7.3	8.5	5.9	4.5	4.5	7.7	34	225	174	99	29
5	9.3	7.9	8.1	6.1	4.3	4.3	7.9	42	227	158	78	27
6	9.3	7.9	7.9	6.3	4.5	4.1	7.7	41	225	147	68	20
7	9.1	6.9	7.7	6.5	4.7	3.9	7.1	35	232	141	62	18
8	10	7.9	7.7	6.3	4.9	4.1	6.9	35	274	134	58	21
9	9.9	6.3	7.7	6.3	5.3	4.3	7.7	37	289	139	71	20
10	12	6.5	7.7	6.3	5.1	4.3	9.1	42	252	130	57	17
11	10	6.3	7.5	6.3	4.7	4.3	11	52	249	132	58	15
12	9.3	5.3	7.1	6.3	4.9	4.1	13	57	199	136	48	15
13	9.1	7.5	7.3	6.1	4.9	3.5	16	52	156	149	44	17
14	7.7	8.3	6.5	6.7	4.7	4.3	15	74	136	126	42	20
15	9.1	7.9	5.3	6.7	4.3	3.9	13	85	120	114	41	22
16	8.9	7.5	7.3	6.7	4.1	4.3	12	66	114	101	39	24
17	8.7	7.5	7.1	6.7	3.7	4.5	11	68	124	97	37	22
18	9.3	7.1	6.9	6.9	4.3	5.1	11	99	118	110	36	24
19	8.5	6.3	6.7	6.3	4.9	4.5	11	118	112	128	36	23
20	7.9	6.9	6.5	6.3	4.7	4.1	12	141	122	126	36	24
21	7.5	6.9	6.3	5.9	4.7	5.3	12	147	171	110	39	20
22	7.7	6.5	6.3	5.5	5.1	4.9	14	139	213	97	37	20
23	8.3	8.1	6.1	5.5	4.5	5.5	15	122	225	90	36	24
24	6.5	6.5	6.1	5.5	4.7	5.7	14	118	167	92	39	23
25	7.5	6.5	6.1	5.5	4.5	6.5	15	128	134	92	37	28
26	10	6.9	6.1	5.3	4.5	6.3	15	126	134	99	33	36
27	9.3	7.1	6.3	4.7	4.5	6.7	14	147	149	83	41	34
28	8.9	7.3	6.1	4.9	4.5	4.9	14	178	174	77	43	31
29	8.1	7.1	6.1	4.9	4.7	4.9	20	183	183	69	42	30
30	7.7	6.7	6.3	4.7	---	5.3	22	165	185	66	38	29
31	8.3	---	6.3	4.5	---	5.9	---	158	---	66	36	---
TOTAL	279.9	213.6	213.7	181.7	133.7	147.5	355.4	2762	5503	3742	1720	729
MEAN	9.03	7.12	6.89	5.86	4.61	4.76	11.8	89.1	183	121	55.5	24.3
MAX	12	8.3	8.5	6.9	5.3	6.7	22	183	289	194	141	36
MIN	6.5	5.3	5.3	4.5	3.7	3.5	6.7	19	112	66	33	15
AC-FT	555	424	424	360	265	293	705	5480	10920	7420	3410	1450

CAL YR 1975 TOTAL 20944.1 MEAN 57.4 MAX 434 MIN 4.7 AC-FT 41540
WTR YR 1976 TOTAL 15981.5 MEAN 43.7 MAX 289 MIN 3.5 AC-FT 31700

06727000 BOULDER CREEK NEAR ORODELL, CO

LOCATION.--Lat 40°00'23", long 105°19'49", in NE¼SW¼ sec.34, T.1 N., R.71 W., Boulder County, Hydrologic Unit 10190005, on left bank along State Highway 119, 0.7 mi (1.1 km) southwest of old Orodell, 1.1 mi (1.8 km) upstream from Fourmile Creek, and 2.9 mi (4.7 km) southwest of courthouse in Boulder.

DRAINAGE AREA.--102 mi² (264 km²).

PERIOD OF RECORD.--August to October 1887, April to October 1888, October 1906 to November 1914, March 1916 to current year. Monthly discharge only for some periods, published in WSP 1310. Figures of daily discharge for Feb. 3-10, 17-25, 1912, published in WSP 326, have been found to be unreliable and should not be used. Published as North Boulder Creek, Colorado 1887-88 and as "at Orodell" March 1907 to December 1916.

REVISED RECORDS.--WSP 1310: 1941(M). WSP 1560: 1914(M). WSP 1730: Drainage area. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Altitude of gage is 5,826 ft (1,775.8 m), from topographic map. Prior to Sept. 1, 1907, nonrecording gage and Sept. 1, 1907, to May 11, 1917, water-stage recorder, at sites 1.1 mi (1.8 km) downstream, just upstream from Fourmile Creek, at different datums.

REMARKS.--Records good. Flow regulated by Barker Reservoir, capacity, 11,500 acre-ft (14.2 hm³). Low flow during non-irrigation season regulated by Orodell powerplant 1,500 ft (460 m) upstream from station.

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

AVERAGE DISCHARGE.--68 years (water years 1907-14, 1917-76), 89.4 ft³/s (2.532 m³/s), 64,770 acre-ft/yr (79.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,500 ft³/s (70.8 m³/s) June 6, 1921, gage height, 4.31 ft (1.314 m), from rating curve extended above 1,200 ft³/s (34.0 m³/s); minimum daily, 1 ft³/s (0.03 m³/s) Jan. 29, Feb. 1-3, 16-24, 1933.

EXIREMES OUTSIDE PERIOD OF RECORD.--Outstanding floods are known to have occurred in June 1864, May 1876, June 1894 and June 1914, stages and discharges unknown.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 249 ft³/s (7.05 m³/s) Aug. 3 gage height, 2.96 ft (0.902 m); minimum daily, 1.9 ft³/s (0.054 m³/s) Oct. 21, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	22	56	34	9.1	9.8	13	32	148	152	97	37
2	16	11	47	31	3.2	12	15	42	140	166	199	37
3	16	49	56	29	8.8	8.6	17	38	143	152	226	31
4	12	52	54	32	8.6	14	14	55	153	192	187	20
5	9.7	45	26	32	10	12	13	50	159	193	140	18
6	9.9	39	34	60	9.0	8.4	14	59	157	160	110	16
7	9.1	36	23	56	9.4	6.6	15	56	157	136	92	15
8	9.0	34	50	46	8.5	9.2	16	53	157	137	77	15
9	8.8	33	62	37	4.5	11	15	43	172	129	77	18
10	4.6	42	59	25	12	8.3	14	34	179	120	72	25
11	2.2	48	44	34	10	8.7	14	52	181	118	72	23
12	5.4	44	33	44	10	4.5	20	51	155	116	72	25
13	2.4	46	32	56	11	9.2	19	44	110	123	60	14
14	2.3	53	32	42	8.7	3.7	17	51	86	131	52	13
15	2.8	50	53	52	9.7	6.1	38	87	62	119	50	17
16	4.1	35	44	35	8.7	6.3	7.0	86	56	99	60	21
17	2.6	54	51	15	6.6	8.6	31	73	67	75	50	32
18	2.1	46	38	33	5.4	9.7	32	80	91	86	39	38
19	2.0	50	39	17	7.5	11	26	95	119	113	39	35
20	2.0	46	33	4.0	14	3.8	34	110	122	141	55	41
21	1.9	37	37	4.2	3.2	7.4	60	134	130	144	54	40
22	1.9	39	50	4.5	8.1	7.6	19	141	165	128	44	40
23	24	32	51	4.5	7.8	8.3	23	137	191	112	37	33
24	30	38	26	13	7.7	8.0	12	130	187	98	39	23
25	33	57	26	10	7.8	8.6	11	137	172	87	48	27
26	16	48	36	9.5	8.1	8.5	24	140	146	118	41	40
27	36	47	29	9.7	10	12	24	133	122	120	41	56
28	45	49	37	14	5.0	5.1	5.9	143	123	111	46	47
29	45	55	50	3.4	10	13	29	159	136	93	42	37
30	47	55	47	10	---	10	35	160	141	70	28	29
31	21	---	46	9.6	---	8.8	---	145	---	59	30	---
TOTAL	437.8	1292	1301	806.4	242.4	268.8	626.9	2750	4127	3798	2274	863
MEAN	14.1	43.1	42.0	26.0	8.36	8.67	20.9	88.7	138	123	73.4	28.8
MAX	47	57	62	60	14	14	60	160	191	193	226	56
MIN	1.9	11	23	3.4	3.2	3.7	5.9	32	56	59	28	13
AC-FT	868	2560	2580	1600	481	533	1240	5450	8190	7530	4510	1710

CAL YR 1975 TOTAL 28811.1 MEAN 78.9 MAX 442 MIN 1.9 AC-FT 57150
WTR YR 1976 TOTAL 18787.3 MEAN 51.3 MAX 226 MIN 1.9 AC-FT 37260

06729500 SOUTH BOULDER CREEK NEAR ELDORADO SPRINGS, CO

LOCATION.--Lat 39°55'52", long 105°17'43", in SE¼ sec.26, T.1 S., R.71 W., Boulder County, Hydrologic Unit 10190005, on left bank 0.2 mi (0.3 km) downstream from South Draw, 1.0 mi (1.6 km) west of Eldorado Springs, 1.8 mi (2.9 km) downstream from South Boulder diversion canal, 5.0 mi (8.0 km) south of Boulder, and 6.7 mi (10.8 km) downstream from Gross Reservoir.

DRAINAGE AREA.--109 mi² (282 km²).

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, 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.

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

GAGE.--Water-stage recorder. Altitude of gage is 6,080 ft (1,853 m), from topographic map. See WSP 1710 or 1730 for history of changes prior to May 10, 1940.

REMARKS.--Records good except those for winter period, which are fair. Many small diversions above station for irrigation. Water is imported above Gross Reservoir from Colorado River basin through Moffat water tunnel (see elsewhere in this report). Flow regulated since May 1, 1955, by Gross Reservoir, capacity, 43,060 acre-ft (53.1 hm³), 6.7 mi (10.8 km) above station. City of Denver diverts water 1.8 mi (2.9 km) above station.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,390 ft³/s (209 m³/s) Sept. 2, 1938, gage height, 9.24 ft (2.816 m), from floodmarks, site and datum then in use, from rating curve extended above 600 ft³/s (17 m³/s) on basis of slope-area measurement of peak flow; no flow Oct. 15, 1932.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 282 ft³/s (7.99 m³/s) June 9, gage height, 3.06 ft (0.933 m); minimum daily, 4.1 ft³/s (0.12 m³/s) Oct. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	31	7.6	9.0	7.0	9.0	19	43	212	116	45	37
2	16	32	7.6	9.0	10	9.0	22	46	246	116	65	42
3	16	32	6.4	9.0	12	8.0	22	44	254	114	114	35
4	16	32	6.0	9.0	15	8.0	22	48	254	109	142	32
5	17	31	6.0	9.0	20	8.0	23	53	270	109	128	29
6	11	20	6.0	9.0	22	8.0	23	74	274	102	85	26
7	6.8	12	5.6	9.0	22	8.0	22	83	262	78	64	23
8	5.6	12	5.6	9.0	22	8.5	22	64	270	67	64	20
9	6.0	13	5.2	9.0	20	8.5	22	56	270	87	58	19
10	5.6	11	4.8	9.0	15	12	21	54	266	104	52	20
11	12	12	4.8	9.2	15	16	20	56	254	104	50	21
12	16	12	5.2	9.2	15	16	20	81	226	109	46	21
13	16	12	6.4	9.1	15	15	23	87	178	106	43	22
14	16	12	6.4	9.0	15	16	27	72	128	94	44	22
15	16	12	11	9.0	15	16	41	67	106	83	44	32
16	16	12	7.5	8.5	15	16	53	81	106	79	39	44
17	16	12	8.5	7.8	15	16	54	96	106	67	39	48
18	16	11	9.5	7.8	15	16	54	94	111	64	44	48
19	16	9.5	9.5	7.8	15	16	39	116	123	65	45	42
20	13	9.5	9.5	7.5	10	15	28	133	121	79	49	32
21	4.8	9.5	9.5	7.5	4.5	15	28	158	126	94	54	29
22	4.1	9.0	9.5	7.5	4.5	15	27	181	172	78	44	30
23	5.2	9.0	9.5	7.0	4.5	15	32	164	203	60	32	31
24	5.6	9.0	9.5	7.0	4.5	15	35	152	175	60	38	32
25	6.0	8.5	9.0	7.0	4.8	15	35	155	121	56	38	33
26	7.2	8.0	9.0	7.0	6.2	15	34	170	94	72	34	37
27	7.2	8.0	9.0	7.0	9.0	15	35	190	85	74	42	52
28	7.2	8.0	9.0	7.0	9.0	16	29	226	83	58	49	62
29	7.2	8.5	9.0	7.0	9.0	16	26	232	100	53	40	62
30	7.2	8.0	9.0	7.0	---	19	33	212	116	52	35	40
31	13	---	9.0	7.0	---	17	---	193	---	48	36	---
TOTAL	339.7	425.5	240.1	252.9	366.0	418.0	891	3481	5312	2557	1702	1023
MEAN	11.0	14.2	7.75	8.16	12.6	13.5	29.7	112	177	82.5	54.9	34.1
MAX	17	32	11	9.2	22	19	54	232	274	116	142	62
MIN	4.1	8.0	4.8	7.0	4.5	8.0	19	43	83	48	32	19
AC-FT	674	844	476	502	726	829	1770	6900	10540	5070	3380	2030

CAL YR 1975 TOTAL 21669.8 MEAN 59.4 MAX 334 MIN 4.1 AC-FT 42980
WTR YR 1976 TOTAL 17008.2 MEAN 46.5 MAX 274 MIN 4.1 AC-FT 33740

NOTE.--NO GAGE-HEIGHT RECORD DEC. 17 TO FEB. 25.

06730300 COAL CREEK NEAR PLAINVIEW, CO

LOCATION.--Lat 39°52'40", long 105°16'36", in SE¼NE¼ sec.13, T.2 S., R.71 W., Jefferson County, Hydrologic Unit 10190005, on left bank 100 ft (30 m) upstream from culvert on State Highway 72, 1.2 mi (1.9 km) south of Plainview, 4.9 mi (7.9 km) downstream from Beaver Creek, and 9 mi (14 km) north of Golden.

DRAINAGE AREA.--15.1 mi² (39.1 km²).

PERIOD OF RECORD.--August 1959 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,540 ft (1,993 m), from topographic map. Prior to June 17, 1964, water-stage recorder at site 60 ft (18 m) downstream at datum 4.49 ft (1.369 m) lower.

REMARKS.--Records good except those for winter period, which are fair. No diversion above station.

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

AVERAGE DISCHARGE.--17 years, 438 ft³/s (0.124 m³/s), 3,170 acre-ft/yr (3.91 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,060 ft³/s (58.3 m³/s) May 7, 1969, gage height, 5.30 ft (1.615 m), from rating curve extended above 730 ft³/s (21 m³/s); no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28 ft³/s (0.79 m³/s) May 25, gage height, 1.12 ft (0.341 m); minimum daily, 0.04 ft³/s (0.001 m³/s) Sept. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.32	.36	.35	.36	.67	1.2	10	9.0	.45	.64	.06
2	.10	.32	.73	.30	.32	.61	1.5	10	7.3	.74	2.2	.05
3	.10	.32	.79	.30	.32	.67	1.5	10	6.5	.67	2.6	.05
4	.10	.32	.73	.35	.32	.60	1.4	10	5.1	.45	2.0	.05
5	.08	.32	.73	.35	.32	.50	1.4	10	4.8	.36	2.6	.04
6	.08	.32	.73	.35	.32	.60	1.8	13	4.1	.25	1.6	.04
7	.08	.32	.79	.35	.40	.80	1.5	13	3.7	.25	1.2	.08
8	.08	.36	.73	.35	.45	1.1	1.3	13	3.0	.19	.93	.06
9	.08	.50	.73	.35	.50	1.0	1.2	13	2.9	.14	.79	.05
10	.08	.40	.73	.35	.50	.93	1.3	12	2.4	.12	.59	.05
11	.10	.32	.73	.35	.40	.93	1.4	12	2.1	.10	.40	.05
12	.10	.32	.67	.35	.40	.61	1.6	12	1.9	.08	.36	.05
13	.12	.32	.67	.36	.45	.73	1.8	10	1.8	.10	.32	.08
14	.12	.28	.61	.36	.45	.59	1.8	9.0	1.6	.06	.28	.45
15	.12	.25	.61	.32	.40	.61	1.6	9.0	1.5	.08	.28	.86
16	.12	.25	.60	.40	.40	.61	1.9	10	1.4	.06	.25	1.1
17	.12	.28	.55	.45	.36	.67	1.6	9.5	1.5	.05	.19	.61
18	.12	.28	.50	.45	.36	.73	2.9	8.6	3.6	.06	.37	.40
19	.12	.25	.50	.45	.45	.67	4.1	8.2	2.9	.67	1.2	.67
20	.12	.32	.50	.40	.36	.61	6.5	7.3	1.8	1.8	.59	1.2
21	.12	.36	.50	.40	.40	.55	7.7	8.6	1.4	.93	.36	.93
22	.12	.36	.45	.36	.67	.61	6.9	12	1.2	.67	.25	.73
23	.22	.36	.45	.36	.55	.73	6.1	12	1.2	.40	.25	.61
24	.36	.36	.40	.40	.55	.73	5.4	16	1.1	.45	.22	.55
25	.36	.40	.40	.40	.61	.79	5.1	25	.93	.36	.14	1.4
26	.36	.40	.40	.36	.55	.86	5.4	20	.79	.82	.12	10
27	.36	.40	.40	.36	.61	.67	5.1	18	.67	.73	.10	18
28	.36	.45	.40	.36	.61	.79	4.8	16	.55	.45	.08	11
29	.36	.50	.40	.36	.67	.86	4.6	14	.50	.28	.08	7.7
30	.36	.40	.40	.36	---	.86	6.9	12	.50	.25	.06	5.8
31	.32	---	.40	.40	---	1.0	---	11	---	.22	.06	---
TOTAL	5.34	10.36	17.59	11.41	13.06	22.69	97.3	374.2	77.74	12.24	21.03	62.72
MEAN	.17	.35	.57	.37	.45	.73	3.24	12.1	2.59	.39	.68	2.09
MAX	.36	.50	.79	.45	.67	1.1	7.7	25	9.0	1.8	2.6	18
MIN	.08	.25	.36	.30	.32	.50	1.2	7.3	.50	.05	.06	.04
AC-FT	11	21	35	23	26	45	193	742	154	24	42	124

CAL YR 1975 TOTAL 1168.12 MEAN 3.20 MAX 64 MIN .03 AC-FT 2320
WTR YR 1976 TOTAL 725.68 MEAN 1.98 MAX 25 MIN .04 AC-FT 1440

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

LOCATION.--Lat 40°15'29", long 104°52'45", in SE¼NW¼ sec.3, T.3 N., R.67 W., Weld County, Hydrologic Unit 10190005, on right bank 140 ft (43 m) downstream from bridge on county road, 1.3 mi (2.1 km) upstream from mouth, and 4.2 mi (6.8 km) northwest of Platteville.

DRAINAGE AREA.--976 mi² (2,528 km²).

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. Altitude of gage is 4,740 ft (1,445 m), from topographic map. See WSP 1730 for history of changes prior to Apr. 25, 1960.

REMARKS.--Records good. Diversions above station for irrigation of about 177,000 acres (716 km²). Flow partly regulated by many small reservoirs above station.

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

AVERAGE DISCHARGE.--51 years (water years 1905-6, 1928-76), 203 ft³/s (5.749 m³/s), 147,100 acre-ft/yr (181 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft³/s (320 m³/s) Sept. 3, 1938, gage height, 8.93 ft (2.722 m), site and datum then in use, from rating curve extended above 4,700 ft³/s (133 m³/s); minimum daily, 12 ft³/s (0.34 m³/s) Apr. 23, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 795 ft³/s (22.5 m³/s) Aug. 3, gage height, 3.17 ft (0.966 m); minimum daily, 44 ft³/s (1.25 m³/s) Apr. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	205	175	185	122	119	93	64	134	121	119	165	184
2	202	165	213	81	123	98	67	116	101	134	231	182
3	201	154	203	99	121	96	66	104	95	145	710	169
4	191	172	206	110	111	98	66	99	107	147	47[illegible]	173
5	180	191	197	144	52	89	64	100	130	155	33[illegible]	169
6	156	184	175	165	92	97	67	103	132	144	281	161
7	146	180	172	175	128	107	70	106	118	123	269	151
8	146	166	166	176	153	114	69	95	109	120	27[illegible]	197
9	142	175	186	193	139	118	69	97	113	121	273	210
10	154	193	200	213	135	118	63	87	130	112	223	213
11	143	177	194	195	124	114	58	71	145	103	169	189
12	129	156	180	170	126	100	55	75	166	114	14[illegible]	200
13	126	163	172	190	125	98	57	82	165	146	19[illegible]	184
14	132	173	161	185	124	95	63	71	160	153	161	180
15	137	170	136	186	123	95	63	56	164	153	17[illegible]	199
16	130	165	178	217	119	104	60	80	145	151	167	208
17	134	157	164	203	120	95	69	86	141	150	15[illegible]	198
18	155	158	169	146	115	91	68	67	165	146	15[illegible]	186
19	141	152	186	146	112	93	67	61	217	149	15[illegible]	319
20	136	156	194	134	116	77	62	71	211	165	16[illegible]	339
21	141	160	161	128	97	67	65	96	151	330	164	265
22	140	156	155	127	123	66	55	273	133	229	164	227
23	137	183	158	125	134	69	46	220	150	178	160	193
24	197	179	164	129	136	69	47	159	220	156	160	189
25	215	180	141	120	130	63	48	134	179	148	15[illegible]	200
26	218	174	131	108	119	65	44	131	146	169	160	223
27	202	187	145	112	105	67	80	128	142	179	15[illegible]	243
28	208	183	130	131	96	67	118	118	129	166	161	259
29	220	182	125	130	95	72	103	122	111	153	164	218
30	224	162	155	129	---	72	134	132	113	145	167	181
31	212	---	156	114	---	63	---	136	---	142	164	---
TOTAL	5200	5128	5258	4603	3412	2730	2027	3410	4309	4745	664[illegible]	6209
MEAN	168	171	170	148	118	88.1	67.6	110	144	153	214	207
MAX	224	193	213	217	153	118	134	273	220	330	710	339
MIN	126	152	125	81	52	63	44	56	95	103	14[illegible]	151
AC-FT	10310	10170	10430	9130	6770	5410	4020	6760	8550	9410	13181	12320

CAL YR 1975 TOTAL 82180 MEAN 225 MAX 1270 MIN 72 AC-FT 163000
WTR YR 1976 TOTAL 53676 MEAN 147 MAX 710 MIN 44 AC-FT 106500

06731000 ST VRAIN CREEK AT MOUTH, NEAR PLATTEVILLE, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--February 1955 to August 1956, September 1965 to September 1968, October 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT									
08...	1320	152	1400	8.2	12.5	9.4	550	300	110
NOV									
08...	1045	178	1300	8.0	7.5	8.8	490	260	93
DEC									
09...	1330	233	--	8.0	6.0	9.2	450	230	88
JAN									
14...	1300	109	1300	7.7	.0	8.4	500	270	95
FEB									
11...	1300	121	1300	7.9	6.0	9.2	520	280	96
MAR									
29...	1130	76	1800	8.1	6.0	10.2	710	390	120
APR									
13...	1245	55	1800	8.4	16.5	12.8	710	410	120
MAY									
04...	1315	95	1450	7.6	19.0	7.3	580	330	110
JUN									
16...	1210	144	1150	8.1	17.5	7.2	460	280	88
JUL									
15...	0830	152	1320	7.9	18.5	6.4	510	280	100
AUG									
10...	1230	215	1900	7.7	21.0	7.4	780	560	130
SEP									
21...	1330	267	1350	7.9	18.0	7.2	530	300	100

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT									
08...	68	120	2.2	5.1	315	0	258	480	34
NOV									
08...	62	100	2.0	4.8	272	0	223	450	23
DEC									
09...	56	99	2.0	5.0	271	0	222	410	26
JAN									
14...	64	110	2.1	4.6	282	0	231	470	27
FEB									
11...	67	120	2.3	5.1	282	5	240	480	29
MAR									
29...	100	160	2.6	6.0	387	0	317	670	35
APR									
13...	100	170	2.8	6.9	361	2	299	690	35
MAY									
04...	74	130	2.4	6.3	306	0	251	530	34
JUN									
16...	59	99	2.0	3.9	227	0	186	420	21
JUL									
15...	62	110	2.1	7.1	275	0	226	450	26
AUG									
10...	110	170	2.7	5.5	270	0	221	840	27
SEP									
21...	68	110	2.1	5.6	280	0	230	450	27

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT									
08...	.9	6.9	995	1.35	408	3.1	.27	100	80
NOV									
08...	.8	6.1	884	1.20	425	2.2	.19	70	90
DEC									
09...	1.0	9.7	841	1.14	529	2.4	.51	40	110
JAN									
14...	1.0	8.9	932	1.27	274	2.5	.34	150	160
FEB									
11...	1.1	7.9	962	1.31	314	2.1	.69	70	250
MAR									
29...	1.2	7.3	1300	1.77	267	2.7	.29	40	350
APR									
13...	1.2	5.3	1320	1.80	196	2.3	.22	110	420
MAY									
04...	1.0	6.9	1050	1.43	269	1.8	.27	20	420
JUN									
16...	.7	7.3	822	1.12	320	2.3	.15	20	70
JUL									
15...	1.1	9.6	924	1.26	379	3.3	2.2	970	130
AUG									
10...	1.0	6.4	1440	1.96	836	2.2	3.1	10	50
SEP									
21...	1.1	10	922	1.25	665	2.7	.17	10	50

06733000 BIG THOMPSON RIVER AT ESTES PARK, CO

LOCATION.--Lat 40°22'42", long 105°30'48", in NW¼NW¼ sec.30, T.5 N., R.72 W., Larimer County, Hydrologic Unit 10190006, on right bank in Estes Park, 600 ft (180 m) downstream from bridge on State Highways 7 and 66, 900 ft (270 m) downstream from Black Canyon Creek, and 0.3 mi (0.5 km) northwest of Estes powerplant. Station is upstream from Lake Estes.

DRAINAGE AREA.--137 mi² (486 km²).

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

GAGE.--Water-stage recorder and Parshall flume with overflow weirs. Datum of gage is 7,492.5 ft (2,283.71 m) above mean sea level (levels by Bureau of Reclamation). Prior to May 18, 1949, at site 740 ft (230 m) downstream at different datum. May 18, 1949, to Mar. 22, 1951, at site 60 ft (18 m) upstream at datum 1.2 ft (0.37 m) higher.

REMARKS.--Records good except those for winter period, which are fair. Diversion from Colorado River Basin to Big Thompson River basin above station through Alva B. Adams tunnel began Aug. 10, 1947, and ended Aug. 2, 1950. Small power developments and small diversions for irrigation and municipal use above station. Diversions above station from Wind River to Lake Estes (bypassing this station) were 523 acre-ft (645,000 m³) during current year.

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

AVERAGE DISCHARGE.--30 years, 125 ft³/s (3.540 m³/s), 90,560 acre-ft/yr (112 hm³/yr), adjusted for inflow from Alva B. Adams tunnel Aug. 10, 1947, to Aug. 2, 1950.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,660 ft³/s (47.0 m³/s) June 18, 1949, gage height, 3.16 ft (0.963 m), site and datum then in use; maximum gage height, 6.89 ft (2.100 m) June 17, 1965; minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17 m³/s) and maximum(*):

Date	Time	Oischarge (ft³/s)	Oischarge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Oischarge (ft³/s)	Oischarge (m³/s)	Gage height (ft)	Gage height (m)
June 9	0300	*623	17.6	4.42	1.347	June 23	0300	612	17.3	4.37	1.332

Minimum daily discharge, 6.5 ft³/s (0.18 m³/s) Jan. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	27	13	7.5	12	10	15	33	348	334	225	72
2	33	24	14	7.5	12	11	16	36	402	339	242	66
3	33	24	14	8.0	12	10	16	44	423	325	265	62
4	30	24	15	8.0	11	10	17	55	453	328	204	59
5	28	24	16	8.0	9.5	9.5	18	66	498	312	175	56
6	27	24	17	8.0	10	9.5	23	70	525	293	155	56
7	26	22	17	7.5	10	10	20	64	487	278	138	55
8	29	26	16	7.5	11	10	20	58	502	257	130	65
9	26	23	17	8.0	12	11	20	56	540	270	153	64
10	26	18	17	8.0	12	13	22	59	483	265	142	56
11	26	21	18	8.0	12	12	22	80	469	242	140	52
12	26	15	18	8.0	12	11	27	112	404	260	124	54
13	25	20	19	8.0	13	10	32	87	295	282	119	60
14	26	22	16	8.5	12	11	28	101	259	254	128	64
15	26	21	11	9.0	11	10	28	163	219	227	114	77
16	27	19	14	9.0	12	9.0	27	134	213	206	108	91
17	26	19	14	9.5	11	11	25	115	228	192	102	76
18	26	16	13	9.5	10	12	22	159	242	195	100	73
19	26	15	13	8.0	10	12	22	224	225	255	97	73
20	25	14	12	7.5	10	11	22	290	246	260	93	77
21	24	16	12	7.0	9.5	10	22	352	318	260	95	70
22	23	15	11	7.0	9.5	11	22	368	410	219	92	68
23	27	16	11	7.5	10	13	25	302	516	194	91	69
24	25	16	9.3	8.0	10	13	23	283	357	184	101	66
25	26	16	8.9	7.5	9.5	12	22	249	277	187	91	73
26	31	15	9.3	6.5	9.0	12	27	212	267	181	86	80
27	33	15	9.3	9.0	9.5	12	28	221	272	182	88	88
28	30	16	8.9	11	9.5	12	28	275	312	170	83	80
29	27	13	8.4	13	10	11	29	318	328	156	76	71
30	26	12	9.0	13	---	11	33	311	300	159	72	64
31	28	---	9.0	12	---	13	---	299	---	175	72	---
TOTAL	853	568	409.1	264.5	311.0	343.0	701	5196	10818	7441	3901	2037
MEAN	27.5	18.9	13.2	8.53	10.7	11.1	23.4	168	361	240	126	67.9
MAX	36	27	19	13	13	13	33	368	540	339	265	91
MIN	23	12	8.0	6.5	9.0	9.0	15	33	213	156	72	52
AC-FT	1690	1130	811	525	617	680	1390	10310	21460	14760	7740	4040

CAL YR 1975 TOTAL 46396.1 MEAN 127 MAX 793 MIN 8.0 AC-FT 92030
WTR YR 1976 TOTAL 32842.6 MEAN 89.7 MAX 540 MIN 6.5 AC-FT 65140

NOTE.--NO GAGE-HEIGHT RECORD DEC. 31 TO FEB. 3.

06734900 OLYMPUS TUNNEL AT LAKE ESTES, CO

LOCATION.--Lat 40°22'30", long 105°29'13", in SE¼NW¼ 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 (3.0 km) 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.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)
OCT												
09...	1300	549	60	7.9	9.0	7.9	47	<1	19	0	5.6	1.3
NOV												
06...	1030	550	<50	7.8	6.0	9.0	83	81	20	0	5.7	1.3
DEC												
08...	1330	549	60	7.3	--	9.3	86	<1	22	0	6.4	1.4
JAN												
15...	1000	551	60	7.9	.5	9.4	83	<1	29	6	8.1	2.1
FEB												
12...	0920	550	65	7.8	1.0	9.4	84	<1	39	10	9.6	3.7
MAR												
30...	0915	553	65	7.7	1.5	9.4	<1	<1	25	0	8.1	1.2
APR												
28...	1110	498	60	7.9	5.0	9.0	81	<1	24	0	6.5	1.9
MAY												
24...	1140	575	50	7.8	8.0	8.6	82	15	17	0	5.6	.7
JUN												
17...	1000	501	<50	7.5	9.5	8.2	58	85	9	1	3.5	.1
JUL												
15...	1500	555	<50	7.9	16.5	7.4	180	18	14	6	4.0	1.0
AUG												
11...	1345	550	37	7.4	16.0	7.0	280	21	13	2	4.0	.7
SEP												
14...	0815	575	46	7.3	14.0	7.2	27	<1	20	0	6.0	1.2

PLATTE RIVER BASIN

06734900 OLYMPUS TUNNEL AT LAKE ESTES, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)
OCT												
09...	2.1	.2	.6	25	0	21	3.7	1.4	.2	4.3	31	32
NOV												
06...	2.0	.2	.6	29	0	24	1.8	1.1	.1	4.3	35	31
DEC												
08...	1.9	.2	.9	26	0	21	5.5	1.1	.2	5.0	47	36
JAN												
15...	3.1	.3	1.8	28	0	23	12	2.3	.1	5.1	48	49
FEB												
12...	3.7	.3	1.1	36	0	30	14	.3	.2	5.2	66	57
MAR												
30...	2.5	.2	.9	32	0	26	3.7	.8	.1	5.5	41	39
APR												
28...	2.6	.2	1.0	30	0	25	3.7	.6	.1	4.9	47	37
MAY												
24...	1.8	.2	.7	20	0	16	3.5	.7	.2	4.9	36	28
JUN												
17...	1.5	.2	.4	10	0	8	3.3	.5	--	4.6	26	19
JUL												
15...	1.3	.2	.4	10	0	8	5.7	.7	.1	3.2	19	22
AUG												
11...	1.3	.2	.4	13	0	11	2.0	.5	.1	3.6	--	19
SEP												
14...	2.1	.2	.7	26	0	21	5.9	.7	.2	3.8	38	34

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED NITRITE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO, PHOS-PHORUS (P) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL PHYTO-PLANK-TON (CELLS PER ML)	POTEN-TIAL ALGAL GROWTH BOTTLE TEST (MG/L)
OCT											
09...	.04	46.0	.04	.00	.06	.03	.00	50	10	3100	--
NOV											
06...	.05	52.0	.02	.01	.01	.01	.00	80	0	1400	--
DEC											
08...	.06	69.7	.10	.01	.03	.00	.01	120	10	390	--
JAN											
15...	.07	71.4	.15	.00	.00	.01	.00	60	0	730	--
FEB											
12...	.09	98.0	.22	.01	.02	.02	.01	60	0	640	--
MAR											
30...	.06	61.2	.10	.00	.22	.03	.01	90	10	890	--
APR											
28...	.06	63.2	.07	.00	.01	.02	.01	260	0	11000	--
MAY											
24...	.05	55.9	.03	.01	.02	.05	.00	110	20	1100	--
JUN											
17...	.04	35.2	.04	.00	.02	.05	.00	110	20	790	--
JUL											
15...	.03	28.5	.03	.00	.00	.02	.00	80	0	440	.7
AUG											
11...	.02	28.2	.03	.01	.04	.03	.00	80	0	2600	.4
SEP											
14...	.05	59.0	.10	.02	.01	.04	.00	210	20	6200	.3

06734900 OLYMPUS TUNNEL AT LAKE ESTES, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

OCT. 9, 1975
1300 HOURS

IDENTIFICATION OF PHYTOPLANKTON

3,100 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER_CENT	COUNT
	CHLOROPHYTA	GREEN ALGAE			0
	.CHLOROPHYCEAE				0
	..CHLOROCOCCALES				0
	...CHARACIACEAE				0
	....SCHROEDERIA		39	1	1
	..VOLVOCALES				0
	...CHLAMYDOMONADACEAE				0
	....CHLAMYDOMONAS		39	1	1
	..ZYGNEMATALES				0
	...DESMIDIACEAE	PLACODERM DESMIDS			0
D	....SPONDYLOSIUM		550	18	14
	CHRYSOPHYTA				0
	.BACILLARIOPHYCEAE	DIATOMS			0
	..CENTRALES	CENTRIC			0
	...COSCINODISCACEAE				0
	....CYCLOTELLA		430	14	11
D	....MELOSIRA		1,200	39	31
	..PENNALES	PENNATE			0
	...CYMBELLACEAE				0
	....CYMBELLA		39	1	1
	...FRAGILARIACEAE				0
	....ASTERIONELLA		270	9	7
	...GOMPHONEMATACEAE				0
	....GOMPHONEMA		79	3	2
	...NAVICULACEAE	NAVICULOID			0
	....NAVICULA		39	1	1
	...NITZSCHIACEAE				0
	....HANTZSCHIA		39	1	1
	....NITZSCHIA		39	1	1
	...TABELLARIACEAE				0
	....TABELLARIA		39	1	1
	CYANOPHYTA	BLUE-GREEN ALGAE			0
	.MYXOPHYCEAE				0
	..OSCILLATORIALES	FILAMENTOUS			0
	...NOSTOCACEAE				0
	....ANABAENA		310	10	8

NOV. 6, 1975
1030 HOURS

IDENTIFICATION OF PHYTOPLANKTON

1,400 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER_CENT	COUNT
	CHLOROPHYTA	GREEN ALGAE			0
	.CHLOROPHYCEAE				0
	..CHLOROCOCCALES				0
	...OCCYSTACEAE				0
L	....ANKISTRODESMUS				0
	...SCENEDESMACEAE				0
L	....SCENEDESMUS				0
	..TETRASPORALES				0
	...PALMELLACEAE				0
	....GLOEOCYSTIS		46	3	4
	..ZYGNEMATALES				0
	...DESMIDIACEAE	PLACODERM DESMIDS			0
L	....SPONDYLOSIUM				0
	CHRYSOPHYTA				0
	.BACILLARIOPHYCEAE	DIATOMS			0
	..CENTRALES	CENTRIC			0
	...COSCINODISCACEAE				0
	....CYCLOTELLA		11	1	1
D	....MELOSIRA		250	18	22
	..PENNALES	PENNATE			0
	...ACHNANTHACEAE				0
	....ACHNANTHES		23	2	2
	...CYMBELLACEAE				0
	....CYMBELLA		11	1	1
	...FRAGILARIACEAE				0
	....ASTERIONELLA		46	3	4
L	....FRAGILARIA				0
	...NAVICULACEAE	NAVICULOID			0
	....NAVICULA		23	2	2
	...NITZSCHIACEAE				0
	....NITZSCHIA		70	5	6
	.CHRYSOPHYCEAE	YELLOW-BROWN ALGAE			0
	..CHRYSOMONADALES				0
	...OCHROMONADACEAE				0
	....DINORRYON		35	3	3
	CYANOPHYTA	BLUE-GREEN ALGAE			0
	.MYXOPHYCEAE				0
	..OSCILLATORIALES	FILAMENTOUS			0
	...OSCILLATORIACEAE				0
D	....OSCILLATORIA		870	63	75

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

JAN. 15, 1976
1000 HOURS

IDENTIFICATION OF PHYTOPLANKTON

730 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER_CENT	
	CHRYSOPHYTA				
	.BACILLARIOPHYCEAE	DIATOMS			
	..CENTRALES	CENTRIC			
	...COSCINODISCACEAE				
	....CYCLOTELLA		43	6	216030101002000
D	....MELOSIRA		270	37	216030101003000
	..PENNALES	PENNATE			
	...CYMBELLACEAE				
L	....CYMBELLA			0	216030209002000
	...DIATOMACEAE				
L	....DIATOMA			0	216030203001000
	...FRAGILARIACEAE				
L	....ASTERIONELLA			0	216030204001000
O	....FRAGILARIA		220	29	216030204002000
L	....HANNAEA			0	216030204004000
D	....SYNEDRA		130	18	216030204003000
	...NAVICULACEAE	NAVICULOID			
	....NAVICULA		22	3	216030207010000
L	....PINNULARIA			0	216030207012000
	...NITZSCHIACEAE				
	....NITZSCHIA		32	4	216030210004000
	.CHRYSOPHYCEAE	YELLOW-BROWN ALGAE			
	..CHRYSOMONADALES				
	...OCHROMONADACEAE				
	....DINOBRYON		11	1	216020106002000
	PYRRHOPHYTA				
	.DINOPHYCEAE	DINOFLAGELLATES			
	..PERIDINIALES				
	...GLENODINIACEAE				
	....GLENODINIUM		11	1	215020202001000

FEB. 12, 1976
0920 HOURS

IDENTIFICATION OF PHYTOPLANKTON

640 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER_CENT	
	CHLOROPHYTA	GREEN ALGAE			
	.CHLOROPHYCEAE				
	..VOLVOCALES				
	...CHLAMYDOMONADACEAE				
L	....CHLAMYDOMONAS			0	211010102002000
	CHRYSOPHYTA				
	.BACILLARIOPHYCEAE	DIATOMS			
	..CENTRALES	CENTRIC			
	...COSCINODISCACEAE				
D	....CYCLOTELLA		270	42	216030101002000
D	....MELOSIRA		100	16	216030101003000
	..PENNALES	PENNATE			
	...ACHNANTHACEAE				
	....ACHNANTHES		30	5	216030206001000
	...DIATOMACEAE				
L	....DIATOMA			0	216030203001000
	...FRAGILARIACEAE				
L	....ASTERIONELLA			0	216030204001000
	....FRAGILARIA		75	12	216030204002000
	....HANNAEA				
L	.....HANNAEA ARCUS			0	216030204004001
	....SYNEDRA		60	9	216030204003000
	...NAVICULACEAE	NAVICULOID			
	....NAVICULA		45	7	216030207010000
	...NITZSCHIACEAE				
	....NITZSCHIA		30	5	216030210004000
	...TABELLARIACEAE				
L	....TABELLARIA			0	216030201002000
	.CHRYSOPHYCEAE	YELLOW-BROWN ALGAE			
	..CHRYSOMONADALES				
	...OCHROMONADACEAE				
L	....DINOBRYON			0	216020106002000
	CYANOPHYTA	BLUE-GREEN ALGAE			
	.MYXOPHYCEAE				
	..CHROOCOCCALES	COCCOID			
	...CHROOCOCCACEAE				
	....ANACYSTIS		30	5	218010101021000

06734900 OLYMPUS TUNNEL AT LAKE ESTES, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

APR. 28, 1976
1110 HOURS

IDENTIFICATION OF PHYTOPLANKTON

11,000 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
	....ANKISTRODESMUS		160	2
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		6,600	62
D	....MELOSIRA		1,800	17
	..PENNALES	PENNATE		
	...CYMBELLACEAE			
	....CYMBELLA		160	2
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		160	2
	...NITZSCHIACEAE			
	....NITZSCHIA		160	2
	...TABELLARIACEAE			
L	....TABELLARIA			0
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..CHROOCOCCALES	COCCOID		
	...CHROOCOCCACEAE			
	....ANACYSTIS		1,500	14
	EUGLENOPHYTA	EUGLENOIDS		
	.EUGLENOPHYCEAE			
	..EUGLENALES			
	...EUGLENACEAE			
	....TRACHELOMONAS		160	2

MAY 24, 1976
1140 HOURS

IDENTIFICATION OF PHYTOPLANKTON

1,100 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		71	6
D	....MELOSIRA		540	48
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		43	4
	...CYMBELLACEAE			
	....CYMBELLA		57	5
	...EUNOTIACEAE			
	....EUNOTIA		14	1
	...FRAGILARIACEAE			
	....ASTERIONELLA		14	1
D	....FRAGILARIA		190	16
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		85	8
	...NITZSCHIACEAE			
	....NITZSCHIA		110	10

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

JULY 15, 1976
1500 HOURS

IDENTIFICATION OF PHYTOPLANKTON

440 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...MICRACTINIACEAE			
	....MICRACTINIUM		9	2
	...OCCYSTACEAE			
L	....OICTYOSPHAERIUM			0
	..TETRASPORALES			
	...COCCOMYXACEAE			
L	....ELAKATOTHRIX			0
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		9	2
	....MELOSIRA		46	10
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		18	4
	...CYMBELLACEAE			
	....CYMBELLA		27	6
	...FRAGILARIACEAE			
L	....ASTERIONELLA			0
	....FRAGILARIA		9	2
	....HANNAEA		9	2
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		9	2
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		18	4
	...NITZSCHIACEAE			
D	....NITZSCHIA		82	19
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...NOSTOCACEAE			
D	....ANABAENA		200	46

AUG. 11, 1976
1345 HOURS

IDENTIFICATION OF PHYTOPLANKTON

2,600 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
L	....ANKISTRODESMUS			0
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		23	1
	....MELOSIRA		23	1
	..PENNALES	PENNATE		
	...FRAGILARIACEAE			
L	....ASTERIONELLA			0
	....SYNEDRA		93	4
	...NAVICULACEAE	NAVICULOID		
L	....NAVICULA			0
	...NITZSCHIACEAE			
L	....HANTZSCHIA			0
	....NITZSCHIA		120	4
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...NOSTOCACEAE			
D	....ANABAENA		2,300	88
	EUGLENOPHYTA	EUGLENOIDS		
	.EUGLENOPHYCEAE			
	..EUGLENALES			
	...EUGLENACEAE			
L	....TRACHELOMONAS			0

06735500 BIG THOMPSON RIVER NEAR ESTES PARK, CO

LOCATION.--Lat 40°22'35", long 105°29'06", in NE¼NE¼ sec.29, T.5 N., R.72 W., Larimer County, Hydrologic Unit 10190006, on right bank 100 ft (30 m) upstream from Dry Creek, 600 ft (180 m) downstream from Olympus Dam, and 2.0 mi (3.2 km) east of Estes Park.

DRAINAGE AREA.--155 mi² (401 km²), revised. Area at site used Jan. 29, 1934, to Mar. 21, 1951, 162 mi² (420 km²), revised.

PERIOD OF RECORD.--July 1930 to current year. Prior to October 1933 monthly discharges only, published in WSP 1310. Published as Thompson River near Estes Park 1934-47.

REVISED RECORDS.--WSP 1310: 1931. WSP 1730: Drainage area.

GAGE.--Water-stage recorder and Parshall flume. Datum of gage is 7,422.5 ft (2,262.38 m) above mean sea level (levels by Bureau of Reclamation). Prior to Jan. 29, 1934, nonrecording gage on highway bridge 1.5 mi (2.4 km) downstream at different datum. Jan. 29, 1934, to Mar. 21, 1951, water-stage recorder at site 0.4 mi (0.6 km) downstream at datum 10.5 ft (3.20 m) lower.

REMARKS.--Records excellent. Low flow regulated by Lake Estes since Nov. 30, 1948. Diversion from Colorado River basin to Big Thompson River basin above station through Alva B. Adams tunnel began Aug. 10, 1947 (see station 09013000 for diversion during current year); since Apr. 15, 1953, this imported water has been diverted from Lake Estes through Olympus tunnel bypassing this station. Since May 17, 1955, part of the natural flow of Big Thompson River (43,610 acre-ft or 53.8 hm³ during current year) has also been diverted through Olympus tunnel and returned to the river below the station at mouth of canyon, near Drake. Small power developments and small diversions for irrigation and municipal use above station.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 2,800 ft³/s (79.3 m³/s) June 20, 1933, gage height, 4.0 ft (1.22 m), site and datum then in use, from rating curve extended above 460 ft³/s (13 m³/s); no flow Aug. 1 to Sept. 30, 1976 (all flow into Lake Estes diverted through Olympus tunnel after flood of July 31, 1976).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 181 ft³/s (5.13 m³/s) July 31, gage height, 2.02 ft (0.616 m); maximum gage height, 5.51 ft (1.679 m) July 31 (backwater from Dry Gulch); no flow Aug. 1 to Sept. 30 (all flow into Lake Estes diverted through Olympus tunnel after flood of July 31).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	29	15	10	12	9.8	13	34	101	100		
2	37	28	15	11	12	9.8	14	36	101	100		
3	36	27	15	11	12	9.8	14	47	101	101		
4	33	27	15	11	12	10	14	59	100	100		
5	32	26	17	11	12	10	14	66	99	100		
6	28	25	18	11	11	11	14	50	99	100		
7	28	22	18	11	12	11	14	51	99	100		
8	31	26	17	11	12	11	14	51	100	99		
9	28	25	18	11	12	10	16	50	100	99		
10	29	25	18	11	12	12	21	50	100	100		
11	28	24	18	11	12	14	21	50	100	100		
12	26	15	18	12	12	14	21	50	100	100		
13	26	20	21	13	11	14	30	50	100	100		
14	27	22	17	13	11	14	33	51	100	99		
15	27	22	16	12	11	14	31	50	101	100		
16	27	21	16	12	11	14	30	54	101	98		
17	27	20	13	12	11	14	28	78	101	98		
18	26	18	13	12	11	14	26	78	101	99		
19	25	16	12	12	11	13	25	78	101	98		
20	25	17	12	12	12	13	23	78	101	98		
21	23	17	11	12	12	13	22	77	101	98		
22	22	16	11	11	12	13	23	77	101	99		
23	26	17	9.8	9.3	12	13	25	77	101	100		
24	26	17	9.3	9.3	11	13	24	77	102	100		
25	28	17	8.9	9.3	12	13	23	77	106	100		
26	31	16	8.9	9.3	11	14	26	77	105	100		
27	31	16	8.9	8.4	9.8	13	29	77	105	100		
28	29	17	8.9	8.0	9.8	13	29	77	102	100		
29	26	16	8.4	11	10	13	30	76	104	100		
30	27	15	9.8	13	---	13	35	76	104	101		
31	29	---	11	13	---	13	---	77	---	90		---
TOTAL	882	619	427.9	343.6	331.6	386.4	682	1956	3037	3077	0	0
MEAN	28.5	20.6	13.8	11.1	11.4	12.5	22.7	63.1	101	99.3	0	0
MAX	38	29	21	13	12	14	35	78	106	101	0	0
MIN	22	15	8.4	8.0	9.8	9.8	13	34	99	90	0	0
AC-FT	1750	1230	849	682	658	766	1350	3880	6020	6100	0	0

CAL YR 1975 TOTAL 18788.9 MEAN 51.5 MAX 369 MIN 8.4 AC-FT 37270
WTR YR 1976 TOTAL 11742.5 MEAN 32.1 MAX 106 MIN 0 AC-FT 23290

06736700 BIG THOMPSON RIVER ABOVE DILLE TUNNEL, NEAR ORAKE, CO

LOCATION.--Lat 40°25'06", long 105°14'36", in NE¼NW¼ sec.9, T.5 N., R.70 W., Larimer County, Hydrologic Unit 10190006, 100 ft (30 m) upstream from diversion dam at entrance to Dille Tunnel and 5.2 mi (8.4 km) east of Orake.

DRAINAGE AREA.--304 mi² (787 km²).

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

REMARKS.--Field data collected prior to 1974 water year available in district office. Records of discharge are estimated values.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)
OCT								
09...	1200	E35	65	7.7	7.0	9.4	26	B8
NOV								
06...	0930	E40	<50	6.5	5.0	9.4	B16	B2
DEC								
08...	1545	E35	50	7.9	1.5	11.4	B3	B1
JAN								
15...	0845	E25	60	7.3	.0	11.2	18	B6
FEB								
12...	0825	E25	70	7.2	.0	11.0	21	B7
MAR								
30...	0800	E20	65	7.2	.0	11.6	40	B17
APR								
28...	1015	E25	60	7.1	4.5	10.0	42	B10
MAY								
24...	1055	E75	<50	7.9	8.0	9.1	155	42
JUN								
17...	0855	150	<50	7.7	10.5	8.6	400	32
JUL								
15...	1410	115	<50	7.9	16.0	8.0	B840	B440

06737500 HORSETOOTH RESERVOIR NEAR FORT COLLINS, CO

LOCATION.--Lat 40°36'00", long 105°10'06", in NW¼SW¼ 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 (7.7 km) west of city hall in Fort Collins. Water-quality sampling site in middle of reservoir at Soldier Canyon Dam.

WATER-CONTENTS RECORDS

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

GAGE.--Nonrecording gage read at irregular intervals of from 1 to 10 days. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Gage readings have been reduced to elevations above mean sea level.

REMARKS.--Reservoir is formed by earth and rockfill dike and dams closing openings in a subsequent valley between hogbacks; storage began Jan. 10, 1951; dams completed July 21, 1949. Usable capacity, 143,507 acre-ft (177 hm³) above elevations 5,320 ft (1,621.5 m), invert of channel from Spring Canyon Dam, 5,310 ft (1,618.5 m), invert of channel from Dixon Canyon Dam, 5,270 ft (1,606.3 m), trashrack sill of outlet at Soldier Canyon Dam, and below maximum water-surface elevation, 5,430 ft (1,655.1 m), 6 ft (1.8 m) below crest of Satanka Dike. Dead storage, 8,270 acre-ft (10.2 hm³). Figures given herein represent usable contents. Water is diverted from Colorado River Basin through Alva B. Adams tunnel for supplemental irrigation supply to Cache la Poudre River.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 141,600 acre-ft (175 hm³) July 2, 1970, elevation, 5,429.02 ft (1,654.765 m); minimum observed, 3,040 acre-ft (3.75 hm³) Sept. 23, 1954, elevation, 5,302.20 ft (1,616.111 m); no storage prior to Apr. 18, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 131,300 acre-ft (162 hm³) May 24, elevation, 5,423.40 ft (1,653.052 m); minimum observed, 28,330 acre-ft (34.9 hm³) Sept. 27, elevation, 5,346.60 ft (1,629.644 m).

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	5,383.90	69,700	
Oct. 31	5,376.70	60,460	-9,240
Nov. 30	5,384.25	70,170	+9,710
Dec. 31	5,391.20	79,680	+9,510
CAL YR 1975			+14,410
Jan. 31	5,399.00	91,030	+11,350
Feb. 29	5,411.50	110,700	+19,670
Mar. 31	5,417.50	120,900	+10,200
Apr. 30	5,420.70	126,500	+5,600
May 31	5,422.70	130,000	+3,500
June 30	5,414.90	116,400	-13,600
July 31	5,391.00	79,390	-37,010
Aug. 31	5,360.10	41,440	-37,950
Sept. 30	5,347.40	29,050	-12,390
WTR YR 1976			-40,650

06737500 HORSETOOTH RESERVOIR NEAR FORT COLLINS, CO--Continued

WATER-QUALITY RECORDS

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

REMARKS.--Samples collected from surface, middle, and bottom depths in middle of reservoir at Soldier Canyon Dam. Reservoir storage represents useable contents.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	DEPTH (FT)	RESERVOIR STORAGE (AC-FT)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)
OCT									
18...	1330	2.0	78100	79	7.2	15.0	7.8	81	<1
18...	1335	70	78100	76	7.1	12.0	7.1	<1	<1
18...	1340	100	78100	73	7.1	7.0	5.4	81	<1
MAR									
22...	1245	2.0	127800	110	6.6	2.5	10.3	<1	<1
22...	1250	60	127800	83	6.5	2.0	10.6	<1	<1
22...	1255	120	127800	80	6.8	2.0	10.6	<1	<1
APR									
10...	1330	2.0	131200	75	6.4	5.5	10.7	<1	<1
10...	1335	50	131200	73	6.6	4.5	10.7	<1	<1
10...	1340	125	131200	70	6.8	4.0	10.7	<1	<1
MAY									
06...	1315	2.0	135800	65	6.8	7.0	10.2	<1	<1
06...	1320	40	135800	68	6.8	7.0	10.1	<1	<1
06...	1325	110	135800	60	6.8	5.0	10.2	<1	<1
JUN									
29...	1345	2.0	126100	80	7.6	21.0	7.4	<1	<1
29...	1350	30	126100	75	7.7	12.0	7.6	<1	<1
29...	1355	100	126100	80	7.6	7.0	8.1	<1	<1
JUL									
13...	1300	2.0	112900	72	6.6	20.5	7.2	81	<1
13...	1305	40	112900	69	6.9	13.0	7.8	81	<1
13...	1310	100	112900	69	6.9	8.0	8.1	<1	<1
AUG									
12...	1315	2.0	76520	72	6.8	21.0	7.2	<1	<1
12...	1320	30	76520	70	6.7	18.0	6.4	815	85
12...	1325	80	76520	71	7.0	9.5	7.2	--	83
SEP									
15...	1400	2.0	--	90	7.0	21.0	6.4	82	<1

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL PHYTOPLANKTON (CELLS PER ML)	POTENTIAL ALGAL GROWTH BOTTLE TEST (MG/L)
OCT									
18...	55	.07	.08	.00	.08	.05	.15	0	--
18...	53	.07	.06	.01	.07	.03	.03	--	--
18...	50	.07	.12	.00	.12	.03	.03	--	--
MAR									
22...	46	.06	.15	.00	.15	.00	.58	1100	--
22...	47	.06	.15	.00	.15	.00	.06	890	--
22...	45	.06	.15	.00	.15	.00	.19	950	--
APR									
10...	45	.06	.14	.00	.14	.04	.11	9600	--
10...	42	.06	.14	.00	.14	.04	.07	1200	--
10...	45	.06	.15	.00	.15	.03	.04	1700	--
MAY									
06...	44	.06	.14	.00	.14	3.6	.37	230	--
06...	44	.06	.15	.00	.15	.00	.27	140	--
06...	47	.06	.15	.00	.15	.03	.04	560	--
JUN									
29...	38	.05	.09	.00	.09	.02	.01	0	--
29...	40	.05	.11	.00	.11	.00	.01	30	--
29...	40	.05	.13	.00	.13	.00	.02	0	--
JUL									
13...	55	.07	.12	.00	.12	.02	.05	0	.6
13...	55	.07	.14	.00	.14	.02	.01	0	.4
13...	55	.07	.16	.00	.16	.02	.02	3	.5
AUG									
12...	57	.08	.13	.00	.13	.00	.09	0	.3
12...	63	.09	.13	.00	.13	.01	.02	0	.2
12...	58	.08	.16	.00	.16	.00	.02	0	.3
SEP									
15...	63	.09	.19	.03	.22	.00	.11	82	.4

06737500 HORSETOOTH RESERVOIR NEAR FORT COLLINS, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

OCT. 18, 1975
1330 HOURS

IDENTIFICATION OF PHYTOPLANKTON

0 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER_CENT	COUNT
	CHRYSOPHYTA				0
	.BACILLARIOPHYCEAE	DIATOMS			0
	..CENTRALES	CENTRIC			0
	...COSCINODISCACEAE				0
L	....MELOSIRA				0

MAR. 22, 1976
1245 HOURS

IDENTIFICATION OF PHYTOPLANKTON

1,100 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		1,100	100
L	....MELOSIRA			0
	..PENNALES	PENNATE		
	...FRAGILARIACEAE			
L	....ASTERIONELLA			0

MAR. 22, 1976
1250 HOURS

IDENTIFICATION OF PHYTOPLANKTON

890 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		890	100
L	....MELOSIRA			0
	..PENNALES	PENNATE		
	...FRAGILARIACEAE			
L	....ASTERIONELLA			0
	...NITZSCHIACEAE			
L	....NITZSCHIA			0

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

MAR. 22, 1976
1255 HOURS

IDENTIFICATION OF PHYTOPLANKTON

950 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		950	100
L	....MELOSIRA			0
	..PENNALES	PENNATE		
	...NITZSCHIACEAE			
L	....NITZSCHIA			0
	.CHRYSOPHYCEAE	YELLOW-BROWN ALGAE		
	..CHRYSOMONADALES			
	...OCHROMONADACEAE			
L	....DINOBRYON			0

APR. 10, 1976
1330 HOURS

IDENTIFICATION OF PHYTOPLANKTON

9,600 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OOCYSTACEAE			
	....ANKISTRODESMUS		180	2
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		9,200	96
	....MELOSIRA		180	2

06737500 HORSETOOTH RESERVOIR NEAR FORT COLLINS, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

APR. 10, 1976
1335 HOURS

IDENTIFICATION OF PHYTOPLANKTON

1,200 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		1,200	100
	..PENNALES	PENNATE		
	...FRAGILARIACEAE			
L	....ASTERIONELLA			0
	.CHRYSOPHYCEAE	YELLOW-BROWN ALGAE		
	..CHRYSOMONADALES			
	...OCHROMONADACEAE			
L	....DINOBRYON			0

APR. 10, 1976
1340 HOURS

IDENTIFICATION OF PHYTOPLANKTON

1,700 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		1,700	100
L	....MELOSIRA			0

06737500 HORSETOOTH RESERVOIR NEAR FORT COLLINS, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

MAY 6, 1976
1315 HOURS

IDENTIFICATION OF PHYTOPLANKTON

230 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		230	100

MAY 6, 1976
1320 HOURS

IDENTIFICATION OF PHYTOPLANKTON

140 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		140	100

MAY 6, 1976
1325 HOURS

IDENTIFICATION OF PHYTOPLANKTON

560 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		260	46
D	....MELOSIRA		220	38
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
D	....ACHNANTHES		87	15

06737500 HORSETOOTH RESERVOIR NEAR FORT COLLINS, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

JUNE 29, 1976
1350 HOURS

IDENTIFICATION OF PHYTOPLANKTON

30 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...CUSCINODISCACEAE			
D	....CYCLOTELLA		5	15
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..CHROOCOCCALES	COCCOID		
	...CHROOCOCCACEAE			
D	....ANACYSTIS		25	85

JULY 13, 1976
1310 HOURS

IDENTIFICATION OF PHYTOPLANKTON

3 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
D	....ANKISTRODESMUS		3	100

06738000 BIG THOMPSON RIVER AT MOUTH OF CANYON, NEAR DRAKE, CO

LOCATION.--Lat 40°25'18", long 105°13'34", in SW¼SW¼ sec.3, T.5 N., R.70 W., Larimer County, Hydrologic Unit 10190006, on right bank at mouth of canyon, 400 ft (120 m) upstream from Handy Ditch diversion dam and 6.0 mi (9.7 km) east of Drake.

DRAINAGE AREA.--305 mi² (790 km²), revised.

PERIOD OF RECORD.--August 1887 to September 1892, May 1895 to September 1903, October 1926 to September 1933 (no winter records prior to October 1932, except water years 1927-28), April 1938 to September 1949, March 1951 to current year. Monthly discharge only for some periods, published in WSP 1310. Published as Big Thompson Creek at Arkins 1887-92, Big Thompson Creek near Arkins 1901-3, and as Thompson River at mouth of canyon, near Drake 1927-30, 1938-47.

REVISED RECORDS.--WSP 1310: 1891, 1927. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,297.47 ft (1,614.669 m) above mean sea level (Bureau of Reclamation bench mark). See WSP 1710 or 1730 for history of changes prior to Oct. 1, 1949.

REMARKS.--Records good except those for winter period, which are fair, and those for period Aug. 1 to Sept. 30, which are poor. Diversions above station for irrigation. Diversions from Colorado River basin to Big Thompson River basin above station through Alva B. Adams tunnel began Aug. 10, 1947 (see station 09013000 for diversion during current year); since Apr. 15, 1953, this imported water has been diverted from Lake Estes through Olympus tunnel bypassing this station. Part of the natural flow of Big Thompson River has also been diverted through Olympus tunnel since May 17, 1955 (43,610 acre-ft or 53.8 hm³ during current year), and Dille tunnel since Apr. 20, 1959 (6,760 acre-ft or 8.34 hm³ during current year), and returned to the river just below this station.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,200 ft³/s (884 m³/s) July 31, 1976, gage height, 19.86 ft (6.053 m), from floodmarks, from slope-area measurement of peak flow; no flow Sept. 8-11, 21-27, 1976 (all flow above station diverted through Olympus and Dille tunnels after flood of July 31, 1976).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 31,200 ft³/s (884 m³/s) July 31, gage height, 19.86 ft (6.053 m), from floodmarks, from slope-area measurement of peak flow; no flow Sept. 8-11, 21-27 (all flow above station diverted through Olympus and Dille tunnels after flood of July 31).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	44	24	9.5	18	17	21	50	69	158	1650	30
2	54	43	30	8.5	18	18	19	44	72	158	1150	45
3	52	44	37	9.0	18	14	20	52	93	156	920	40
4	50	39	37	10	18	13	19	45	89	136	640	40
5	48	39	34	13	17	14	20	68	123	139	360	39
6	43	39	35	14	20	17	22	78	156	139	220	35
7	38	38	37	11	22	18	20	70	166	127	180	10
8	39	33	35	11	21	19	20	69	166	119	130	0
9	42	35	36	12	23	20	19	69	170	108	190	0
10	39	33	36	13	23	20	22	69	168	97	160	0
11	40	29	34	14	19	20	27	70	166	95	150	0
12	38	22	32	13	19	19	29	42	163	95	120	5.0
13	38	25	35	13	18	17	40	18	112	112	110	15
14	36	42	30	14	16	19	49	59	93	114	100	30
15	38	42	20	14	17	22	46	38	91	97	90	40
16	39	38	13	15	15	18	44	18	91	121	81	40
17	38	35	14	16	14	22	39	71	102	132	70	40
18	36	35	20	17	14	22	38	91	102	134	50	35
19	36	30	20	16	13	22	36	83	95	141	55	30
20	34	20	25	15	20	18	36	83	95	144	70	5.0
21	33	11	25	17	14	13	34	112	85	151	70	0
22	32	17	23	16	18	19	34	148	125	141	65	0
23	35	30	17	15	19	22	29	102	168	136	65	0
24	38	38	15	14	16	19	27	85	160	119	65	0
25	36	39	14	13	18	20	32	60	151	123	35	0
26	42	31	14	12	16	19	35	54	148	132	11	0
27	50	19	13	12	19	19	44	54	151	141	10	0
28	48	33	12	13	16	19	43	50	151	136	10	5.0
29	52	41	11	13	17	19	42	49	153	95	5.0	5.0
30	34	35	11	15	---	18	48	54	158	82	5.0	25
31	33	---	10	17	---	17	---	50	---	1300	10	---
TOTAL	1266	999	749	415.0	516	573	954	2005	3832	5078	6847.0	514.0
MEAN	40.8	33.3	24.2	13.4	17.8	18.5	31.8	64.7	128	164	221	17.1
MAX	55	44	37	17	23	22	49	148	170	1300	1650	45
MIN	32	11	10	8.5	13	13	19	18	69	82	5.0	0
AC-FT	2510	1980	1490	823	1020	1140	1890	3980	7600	10070	13580	1020

CAL YR 1975 TOTAL 29639.0 MEAN 81.2 MAX 456 MIN 10 AC-FT 58790
WTR YR 1976 TOTAL 23748.0 MEAN 64.9 MAX 1650 MIN .00 AC-FT 47100

NOTE.--NO GAGE-HEIGHT RECORD DEC. 1 TO FEB. 12, AUG. 1 TO SEPT. 30.

06742500 CARTER LAKE NEAR BERTHOUD, CO

LOCATION.--Lat 40°19'28", long 105°12'41", in SE¼ sec.10, T.4 N., R.70 W., Larimer County, Hydrologic Unit 10190006, in hoist house 293 ft (89 m) from right abutment of Carter Lake Dam on Dry Creek, 7.0 mi (11.3 km) west of Berthoud, and 8.9 mi (14.3 km) upstream from mouth. Water-quality sampling site near center of reservoir.

WATER-CONTENTS RECORDS

PERIOD OF RECORD.--March 1954 to current year.

GAGE.--Nonrecording gage read at irregular intervals of from 1 to 13 days. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

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 (140 hm^3) between elevations 5,618.00 ft (1,712.336 m), trashrack sill at outlet, and 5,763.00 ft (1,756.562 m), maximum water surface, 6 ft (1.8 m) below crest of dam. Dead storage, 3,310 acre-ft (4.08 hm^3). Figures given herein 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, St. Vrain Creek, and Boulder Creek basins. Water above elevation 5,620 ft (1,713.0 m) 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 furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 109,100 acre-ft (135 hm^3) Apr. 27-29, 1971, elevation, 5,759.12 ft (1,755.380 m); minimum observed since appreciable storage was attained, 960 acre-ft (1.18 hm^3) Oct. 25, 1954, elevation, 5,621.40 ft (1,713.403 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, 107,700 acre-ft (133 hm^3) May 5, 6, elevation, 5,757.90 ft (1,755.008 m); minimum observed, 24,450 acre-ft (30.1 hm^3) Sept. 30, elevation, 5,668.90 ft (1,727.881 m).

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	5,698.50	47,590	
Oct. 31	5,706.10	54,330	+6,740
Nov. 30	5,716.60	64,160	+9,830
Dec. 31	5,726.45	73,870	+9,710
CAL YR 1975			-2,490
Jan. 31	5,743.50	91,690	+17,820
Feb. 29	5,743.40	91,580	-110
Mar. 31	5,752.67	101,800	+10,220
Apr. 30	5,756.55	106,100	+4,300
May 31	5,754.00	103,300	-2,800
June 30	5,736.00	83,700	-19,600
July 31	5,707.90	55,970	-27,730
Aug. 31	5,686.65	37,690	-18,280
Sept. 30	5,668.90	24,450	-13,240
WTR YR 1976			-23,140

06742500 CARTER LAKE NEAR BERTHOUD, CO--Continued

WATER-QUALITY RECORDS

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

REMARKS.--Samples collected at surface, middle, and bottom depths near center of reservoir. Reservoir storage represents usable contents.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	DEPTH (FT)	RESERVOIR STORAGE (AC-FT)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)
OCT									
18...	0935	2.0	48490	94	7.0	12.0	7.7	<1	<1
18...	0940	50	48490	82	7.1	11.0	6.8	<1	<1
18...	0945	70	48490	81	7.1	8.0	5.8	83	<1
MAR									
23...	1100	21	100900	90	6.6	2.0	11.4	<1	<1
23...	1101	60	100900	80	6.9	2.0	11.5	<1	<1
23...	1102	110	100900	80	7.1	2.0	11.5	<1	<1
APR									
10...	0900	2.0	109000	145	6.8	4.0	11.4	<1	<1
10...	0905	25	109000	92	7.1	4.0	11.4	<1	<1
10...	0910	125	109000	82	7.3	3.5	11.5	<1	<1
MAY									
06...	0915	2.0	110700	70	6.8	8.0	10.4	<1	<1
06...	0920	30	110700	74	6.9	6.0	10.5	<1	<1
06...	0925	120	110700	74	7.2	4.5	10.4	<1	<1
JUN									
29...	0945	2.0	88640	99	7.7	18.0	8.6	33	--
29...	0950	30	88640	88	8.2	14.5	9.1	<1	--
29...	0955	100	88640	84	7.9	5.5	9.3	<1	--
JUL									
13...	0930	2.0	75400	83	7.4	21.5	7.6	818	<1
13...	0935	40	75400	80	7.4	14.0	8.8	<1	<1
13...	0940	100	75450	80	7.4	6.0	8.7	<1	<1
AUG									
12...	0930	2.0	58000	81	7.0	19.0	7.2	83	<1
12...	0935	20	58000	87	7.2	18.0	7.2	83	81
12...	0940	10	58000	77	7.2	10.5	6.8	818	817
SEP									
15...	0945	2.0	33700	95	7.8	17.5	7.0	<1	<1
15...	0950	30	33700	85	7.4	16.5	6.0	83	<1
15...	0955	50	33700	75	7.1	14.0	5.0	81	81

DATE	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	DISSOLVED NITRATE (N) (MG/L)	DISSOLVED NITRITE (N) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL PHYTOPLANKTON (CELLS PER ML)	POTENTIAL ALGAL GROWTH BOTTLE TEST (MG/L)
OCT									
18...	57	.08	.01	.00	.01	.04	.08	500	--
18...	55	.07	.03	.00	.03	--	.02	--	--
18...	53	.07	.08	.00	.08	.06	.01	--	--
MAR									
23...	56	.08	.04	.00	.04	.00	.15	12000	--
23...	45	.06	.02	.00	.02	.00	.01	7200	--
23...	43	.06	.02	.00	.02	.00	.01	9000	--
APR									
10...	41	.06	.01	.00	.01	.03	.22	7000	--
10...	40	.05	.07	.00	.07	.03	.04	9300	--
10...	42	.06	.01	.00	.01	.02	.02	7100	--
MAY									
06...	48	.07	.03	.00	.03	.02	.29	710	--
06...	48	.07	.01	.00	.01	.01	.10	820	--
06...	47	.06	.01	.00	.01	.00	.10	2200	--
JUN									
29...	46	.06	.00	.00	.00	.00	.04	590	--
29...	51	.07	.00	.00	.00	.00	.00	690	--
29...	63	.09	.00	.01	.01	.02	.00	730	--
JUL									
13...	47	.06	.00	.00	.00	.02	.10	1800	.4
13...	42	.06	.00	.00	.00	.03	.07	1500	.3
13...	--	--	.04	.00	.04	.03	.00	130	.2
AUG									
12...	60	.08	.01	.00	.01	.00	.08	110	.3
12...	59	.08	.01	.00	.01	.00	.01	250	.3
12...	54	.07	.07	.00	.07	.00	.02	1200	.3
SEP									
15...	--	--	--	--	--	--	--	--	.3
15...	--	--	--	--	--	--	--	3300	.3
15...	--	--	--	--	--	--	--	1100	.3

06742500 CARTER LAKE NEAR BERTHOUD, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

OCT. 18, 1975
0935 HOURS

IDENTIFICATION OF PHYTOPLANKTON

500 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	COUNT
	CHRYSOPHYTA				0
	.BACILLARIOPHYCEAE	DIATOMS			0
	..CENTRALES	CENTRIC			0
	...COSCINODISCACEAE				0
D	....CYCLOTELLA		300	61	17
D	....MELOSIRA		190	39	11
	..PENNALES	PENNATE			0
	...NITZSCHIACEAE				0
L	....NITZSCHIA				0

MAR. 23, 1976
2100 HOURS

IDENTIFICATION OF PHYTOPLANKTON

12,000 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....MELOSIRA		10,000	91
	..PENNALES	PENNATE		
	...FRAGILARIACEAE			
	....ASTERIONELLA		120	1
	....SYNEDRA		120	1
	...TABELLARIACEAE			
	....TABELLARIA		820	7

APR. 10, 1976
0905 HOURS

IDENTIFICATION OF PHYTOPLANKTON

9,300 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		81	1
D	....MELOSIRA		9,200	99
	..PENNALES	PENNATE		
	...TABELLARIACEAE			
L	....TABELLARIA			0

06742500 CARTER LAKE NEAR BERTHOUD, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

APR. 10, 1976
0910 HOURS

IDENTIFICATION OF PHYTOPLANKTON

7,100 CELLS/ML

	_ORGANISM__NAME	_COMMON__NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....MELOSIRA		6,100	86
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		65	1
	...FRAGILARIACEAE			
L	....FRAGILARIA			0
	...TABELLARIACEAE			
	....TABELLARIA		910	13

MAY 6, 1976
0915 HOURS

IDENTIFICATION OF PHYTOPLANKTON

710 CELLS/ML

	_ORGANISM__NAME	_COMMON__NAME	CELLS/ML	PER_CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....MELOSIRA		390	56
	..PENNALES	PENNATE		
	...TABELLARIACEAE			
D	....TABELLARIA		290	41
	.CHRYSOPHYCEAE	YELLOW-BROWN ALGAE		
	..CHRYSOMONADALES			
	...OCHROMONADACEAE			
	....OCHROMONAS		26	4

MAY 6, 1976
0920 HOURS

IDENTIFICATION OF PHYTOPLANKTON

820 CELLS/ML

	_ORGANISM__NAME	_COMMON__NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..TETRASPORALES			
	...PALMELLACEAE			
	....GLOEOCYSTIS		100	12
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		51	6
D	....MELOSIRA		460	56
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		17	2
	...TABELLARIACEAE			
D	....TABELLARIA		190	23

06742500 CARTER LAKE NEAR BERTHOUD, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

MAY 6, 1976
0925 HOURS

IDENTIFICATION OF PHYTOPLANKTON

2,200 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		150	7
D	....MELOSIRA		1,200	53
	..PENNALES	PENNATE		
	...FRAGILARIACEAE			
	....SYNEDRA		25	1
	...NITZSCHIACEAE			
	....NITZSCHIA		12	1
	...TABELLARIACEAE			
D	....TABELLARIA		770	35
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..CHROOCOCCALES	COCCOID		
	...CHROOCOCCACEAE			
	....ANACYSTIS		74	3

JUNE 29, 1976
0945 HOURS

IDENTIFICATION OF PHYTOPLANKTON

590 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		560	95
	....MELOSIRA		27	5

JUNE 29, 1976
0950 HOURS

IDENTIFICATION OF PHYTOPLANKTON

690 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		280	40
D	....MELOSIRA		390	57
	..PENNALES	PENNATE		
	...NITZSCHIACEAE			
	....NITZSCHIA		23	3

06742500 CARTER LAKE NEAR BERTHOUD, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

JUNE 29, 1976
0955 HOURS

IDENTIFICATION OF PHYTOPLANKTON

730 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OOCYSTACEAE			
	....TETRAEDRON		13	2
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		170	23
D	....MELOSIRA		450	61
	..PENNALES	PENNATE		
	...FRAGILARIACEAE			
	....FRAGILARIA		100	14

JULY 13, 1976
0930 HOURS

IDENTIFICATION OF PHYTOPLANKTON

1,800 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		1,600	90
	....MELOSIRA		170	10

JULY 13, 1976
0940 HOURS

IDENTIFICATION OF PHYTOPLANKTON

130 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		100	82
	....MELOSIRA		15	12
	..PENNALES	PENNATE		
	...TABELLARIACEAE			
	....TABELLARIA		7	6

JULY 13, 1976
0935 HOURS

IDENTIFICATION OF PHYTOPLANKTON

1,500 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		580	38
D	....MELOSIRA		940	62

06742500 CARTER LAKE NEAR BERTHOUD, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

AGENCY : USGS
STATE CODE : 08

AUG. 12, 1976
0930 HOURS

IDENTIFICATION OF PHYTOPLANKTON

110 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		79	75
	..PENNALES	PENNATE		
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		18	17
	PYRRHOPHYTA			
	.DINOPHYCEAE	DINOFLAGELLATES		
	..PERIDINIALES			
	...CERATIACEAE			
	....CERATIUM		9	8

AUG. 12, 1976
0935 HOURS

IDENTIFICATION OF PHYTOPLANKTON

250 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		220	91
L	....MELOSIRA			0
	EUGLENOPHYTA	EUGLENOIDS		
	.EUGLENOPHYCEAE			
	..EUGLENALES			
	...EUGLENACEAE			
	....TRACHELOMONAS		22	9

AUG. 12, 1976
0940 HOURS

IDENTIFICATION OF PHYTOPLANKTON

1,200 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		470	38
D	....MELOSIRA		750	60
	..PENNALES	PENNATE		
	...NITZSCHIACEAE			
	....NITZSCHIA		13	1
	...TABELLARIACEAE			
	....TABELLARIA		13	1

06744000 BIG THOMPSON RIVER AT MOUTH, NEAR LA SALLE, CO

LOCATION.--Lat 40°21'00", long 104°47'04", in SW¼SE¼ sec.33, T.5 N., R.66 W., Weld County, Hydrologic Unit 10190006, on left bank just southeast of gage on Evans Town ditch, 0.7 mi (1.1 km) upstream from highway bridge, 1.6 mi (2.6 km) upstream from mouth, and 4.2 mi (6.8 km) west of La Salle.

DRAINAGE AREA.--828 mi² (2,145 km²).

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--April 1914 to October 1915, March 1927 to current year. Prior to October 1933 monthly discharge only, published in WSP 1310. Published as Thompson River at mouth, near La Salle, 1934-47.

REVISED RECORDS.--WSP 976: 1941(M). WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,680 ft (1,426 m), from topographic map. Apr. 1, 1914, to Oct. 31, 1915, nonrecording gage and Mar. 1, 1927, to Sept. 30, 1951, water-stage recorder, at bridge 0.7 mi (1.1 km) downstream at different datums. Datum lowered 0.50 ft (0.152 m) May 21, 1962.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, diversions for irrigation of about 95,000 acres (384 km²) above station, and return flow from irrigated areas.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,100 ft³/s (173 m³/s) Aug. 4, 1951, gage height, 7.80 ft (2.377 m), site and datum then in use, from rating curve extended above 4,500 ft³/s (127 m³/s); maximum gage height, 8.72 ft (2.658 m) May 9, 1957, present datum; no flow at times in 1934-35, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,440 ft³/s (69.1 m³/s) Aug. 1, gage height, 7.82 ft (2.384 m); minimum daily, 7.6 ft³/s (0.22 m³/s) May 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	95	80	45	66	66	54	61	50	50	853	142
2	66	93	91	40	66	66	53	53	50	68	1130	128
3	69	93	89	45	69	68	50	47	50	78	876	128
4	78	93	87	50	62	68	50	39	46	71	327	128
5	74	93	86	55	53	64	50	32	46	58	139	117
6	76	95	82	60	64	68	56	26	43	58	117	119
7	74	97	78	59	69	69	56	28	59	54	117	130
8	71	91	76	59	71	71	53	26	71	74	109	174
9	71	99	76	59	71	71	53	29	43	74	111	181
10	73	101	80	62	73	69	52	27	50	71	103	168
11	78	95	78	61	68	68	50	21	69	64	109	164
12	84	91	78	64	66	62	48	27	47	68	111	168
13	91	91	76	61	66	62	52	26	30	73	213	151
14	93	93	73	61	64	62	50	21	23	78	241	159
15	89	93	68	66	64	59	52	14	23	68	253	233
16	87	93	78	74	64	59	53	13	21	69	256	244
17	87	93	69	73	62	58	54	43	22	76	261	191
18	87	93	68	71	61	59	58	31	38	82	256	210
19	91	95	74	69	62	58	53	12	48	91	256	227
20	93	80	76	66	62	54	39	7.6	37	103	270	297
21	93	75	76	68	56	54	36	38	31	149	270	253
22	93	75	71	68	73	54	29	297	30	115	261	147
23	93	80	76	66	73	54	29	119	42	103	230	142
24	101	87	71	66	66	56	29	80	64	84	159	135
25	103	82	73	66	71	54	30	80	46	84	124	137
26	99	78	71	59	69	54	30	73	33	97	105	137
27	101	82	73	64	71	54	48	62	31	89	113	144
28	101	82	69	66	71	54	64	48	33	89	122	139
29	99	82	68	66	69	56	56	42	31	93	117	130
30	101	69	69	68	---	54	62	52	42	82	105	119
31	99	---	60	68	---	58	---	58	---	82	119	---
TOTAL	2679	2659	2340	1925	1922	1883	1449	1532.6	1249	2495	7829	4942
MEAN	86.4	88.6	75.5	62.1	66.3	60.7	48.3	49.4	41.6	80.5	253	165
MAX	103	101	91	74	73	71	64	297	71	149	1130	297
MIN	64	69	60	40	53	54	29	7.6	21	50	103	117
AC-FT	5310	5270	4640	3820	3810	3730	2870	3040	2480	4950	15530	9800

CAL YR 1975 TOTAL 39668.0 MEAN 109 MAX 807 MIN 15 AC-FT 78680
WTR YR 1976 TOTAL 32904.6 MEAN 89.9 MAX 1130 MIN 7.6 AC-FT 65270

06744000 BIG THOMPSON RIVER AT MOUTH, NEAR LA SALLE, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1954 to July 1956, October 1967 to September 1968, October 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT									
08...	1405	74	2000	8.3	14.0	9.4	970	680	190
NOV									
08...	1215	96	2000	8.1	8.0	9.4	970	670	190
DEC									
09...	0910	75	--	8.0	3.0	10.4	1100	730	210
JAN									
14...	1345	63	2000	7.9	.0	9.8	970	630	190
FEB									
11...	1330	69	2000	8.1	6.0	10.2	970	650	190
MAR									
29...	1210	57	2100	8.1	6.0	9.8	970	650	190
APR									
13...	1325	51	2150	8.3	16.0	9.2	1000	690	190
MAY									
04...	1410	40	2200	8.5	19.0	11.0	1100	760	190
JUN									
16...	1305	33	2200	8.1	18.0	7.3	980	710	180
JUL									
15...	1020	63	1850	8.0	18.0	6.8	830	600	150
AUG									
10...	1330	98	1900	7.6	21.0	6.8	810	580	160
SEP									
21...	1240	248	1100	7.9	16.0	8.0	430	300	85

06744000 BIG THOMPSON RIVER AT MOUTH, NEAR LA SALLE, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT									
08...	120	150	2.1	4.8	354	0	290	920	19
NOV									
08...	120	150	2.1	6.2	364	0	299	920	21
DEC									
09...	130	160	2.1	6.5	396	0	325	1000	21
JAN									
14...	120	150	2.1	7.1	412	0	338	920	25
FEB									
11...	120	150	2.1	6.9	387	0	317	930	21
MAR									
29...	120	160	2.2	6.3	389	0	319	940	22
APR									
13...	130	180	2.5	7.1	387	0	317	1000	23
MAY									
04...	140	180	2.4	6.8	352	4	295	1100	25
JUN									
16...	130	220	3.1	7.7	334	0	274	1100	34
JUL									
15...	110	150	2.3	6.3	282	0	231	850	25
AUG									
10...	100	140	2.1	5.1	286	0	235	780	22
SEP									
21...	54	74	1.5	3.7	170	0	139	400	11

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO, PHOS-PHORUS (P) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT									
08...	.8	7.0	1600	2.18	320	2.2	.16	60	80
NOV									
08...	1.0	7.3	1610	2.19	417	2.7	.23	20	90
DEC									
09...	1.1	11	1750	2.38	354	3.0	.27	40	90
JAN									
14...	1.2	10	1640	2.23	279	2.8	.29	30	130
FEB									
11...	1.1	8.8	1630	2.22	304	2.6	.36	60	150
MAR									
29...	1.1	8.4	1650	2.24	254	2.7	.50	40	160
APR									
13...	1.1	8.4	1740	2.37	240	2.7	.35	40	160
MAY									
04...	1.0	8.0	1840	2.50	199	2.0	.27	40	290
JUN									
16...	.8	7.8	1860	2.53	166	3.1	.16	30	290
JUL									
15...	.9	7.9	1450	1.97	247	3.1	.23	60	100
AUG									
10...	.8	11	1370	1.86	363	2.1	.10	20	270
SEP									
21...	.6	8.3	729	.99	488	1.9	.11	10	30

06746100 JOE WRIGHT CREEK NEAR CAMERON PASS, CO

LOCATION.--Lat 40°32'49", long 105°52'31", in SW¼NW¼ sec.25, T.7 N., R.76 W., Larimer County, Hydrologic Unit 10190007, on left bank 1,850 ft (560 m) downstream from Montgomery Creek, 1.0 mi (1.6 km) upstream from Joe Wright Reservoir dam, 1.9 mi (3.1 km) northeast of Cameron Pass, and 8 mi (13 km) east of Gould.

DRAINAGE AREA.--5.05 mi² (13.08 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 9,910 ft (3,021 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Transbasin diversions from North Platte River basin to Cache la Poudre River basin enter above this station (see elsewhere in this report).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 154 ft³/s (4.36 m³/s) July 1, 2, 1975, gage height, 4.28 ft (1.305 m); minimum daily, 0.22 ft³/s (0.006 m³/s) Mar. 17-19, 31, Apr. 3, 4, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 114 ft³/s (3.23 m³/s) June 11, gage height, 4.11 ft (1.253 m), only peak above base of 110 ft³/s (3.1 m³/s); minimum daily, 0.43 ft³/s (0.012 m³/s) Jan. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	.84	.74	.45	.45	.52	.56	1.3	33	39	13	2.3
2	1.2	.80	.74	.43	.45	.52	.56	1.7	42	36	18	2.1
3	1.1	.79	.74	.43	.45	.52	.56	2.1	50	34	14	2.0
4	1.0	.82	.74	.44	.45	.52	.56	2.6	60	31	11	1.8
5	1.0	.86	.74	.45	.45	.52	.56	2.8	71	29	9.7	1.7
6	1.0	.81	.70	.45	.45	.52	.56	2.8	72	27	8.8	1.7
7	1.0	.76	.68	.45	.48	.52	.56	2.9	72	26	8.2	2.1
8	1.3	.88	.66	.45	.48	.52	.56	3.2	73	24	9.0	1.9
9	1.6	1.0	.64	.45	.48	.52	.56	3.3	80	22	11	1.7
10	1.5	1.0	.62	.45	.48	.52	.56	3.4	82	20	9.0	1.6
11	1.2	1.0	.60	.45	.48	.54	.56	5.8	86	19	8.3	1.4
12	1.1	1.0	.60	.45	.48	.54	.56	4.3	72	19	7.7	1.4
13	1.1	1.0	.58	.45	.48	.54	.56	4.8	58	17	8.6	1.4
14	1.5	.95	.54	.45	.48	.54	.56	6.0	51	14	7.9	2.1
15	1.4	.89	.50	.45	.50	.54	.56	7.0	49	13	7.0	3.0
16	1.1	.80	.50	.45	.50	.54	.56	6.6	44	12	6.4	2.3
17	1.3	.78	.50	.45	.50	.54	.56	7.4	41	11	6.2	1.7
18	1.1	.76	.50	.45	.50	.54	.56	9.0	36	13	5.8	1.5
19	1.0	.74	.50	.45	.50	.54	.56	12	38	15	5.4	2.3
20	.84	.70	.50	.45	.50	.54	.56	14	42	13	5.2	2.1
21	.83	.70	.50	.45	.50	.54	.56	17	54	11	5.1	1.7
22	.68	.70	.50	.45	.50	.54	.58	12	70	9.7	4.7	2.7
23	.66	.70	.50	.45	.50	.54	.58	15	73	9.1	4.6	2.3
24	.66	.70	.50	.45	.50	.54	.58	15	60	13	4.5	2.8
25	.70	.70	.50	.45	.50	.54	.58	14	55	13	4.1	2.4
26	.78	.70	.48	.45	.52	.54	.60	14	55	15	5.2	2.3
27	.82	.70	.45	.45	.52	.54	.64	19	60	15	4.6	2.3
28	.86	.72	.45	.45	.52	.54	.70	22	64	11	3.0	2.1
29	.88	.74	.45	.45	.52	.54	.90	23	54	10	2.6	1.8
30	.87	.74	.45	.45	---	.54	1.3	23	40	10	2.5	1.7
31	.86	---	.45	.45	---	.54	---	27	---	10	2.4	---
TOTAL	32.04	24.28	17.55	13.90	14.12	16.54	18.22	304.0	1737	560.8	223.5	60.2
MEAN	1.03	.81	.57	.45	.49	.53	.61	9.81	57.9	18.1	7.21	2.01
MAX	1.6	1.0	.74	.45	.52	.54	1.3	27	86	39	18	3.0
MIN	.66	.70	.45	.43	.45	.52	.56	1.3	33	9.1	2.4	1.4
AC-FT	64	48	35	28	28	33	36	603	3450	1110	443	119

CAL YR 1975 TOTAL 3642.98 MEAN 9.98 MAX 125 MIN .22 AC-FT 7230
WTR YR 1976 TOTAL 3022.15 MEAN 8.26 MAX 86 MIN .43 AC-FT 5990

NOTE.--NO GAGE-HEIGHT RECORD NOV. 20 TO APR. 27.

06748600 SOUTH FORK CACHE LA POUDRE RIVER NEAR RUSTIC, CO

LOCATION.--Lat 40°38'49", long 105°29'35", in SW¼ sec.20, T.8 N., R.72 W., Larimer County, Hydrologic Unit 10190007, on left bank 5.7 mi (9.2 km) upstream from mouth, 6 mi (10 km) southeast of Rustic, and 22 mi (35 km) west of Fort Collins.

DRAINAGE AREA.--92.4 mi² (239.3 km²), revised.

PERIOD OF RECORD.--August 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 7,596.86 ft (2,315.523 m) above mean sea level (Bureau of Reclamation bench mark).

REMARKS.--Records good except those for winter period, which are poor. No diversion above station. Slight regulation by small reservoirs and lakes.

AVERAGE DISCHARGE.--20 years, 64.2 ft³/s (1.818 m³/s), 46,510 acre-ft/yr (57.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,260 ft³/s (35.7 m³/s) June 17, 1965, gage height, 5.05 ft (1.539 m), from rating curve extended above 780 ft³/s (22 m³/s); minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 248 ft³/s (7.02 m³/s) June 8, gage height, 3.17 ft (0.966 m), no peak above base of 250 ft³/s (7.08 m³/s); minimum daily, 7.6 ft³/s (0.22 m³/s) Feb. 4, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	13	8.2	8.5	8.0	8.0	12	36	124	137	104	84
2	19	13	8.5	8.5	8.0	8.0	13	30	130	140	100	90
3	17	12	8.5	8.5	7.8	8.0	13	39	143	144	91	86
4	18	9.9	8.5	8.5	7.6	8.0	14	45	158	145	81	84
5	17	10	8.5	8.5	7.6	8.0	15	36	176	139	75	81
6	17	10	8.5	8.5	7.6	8.0	16	36	195	133	71	81
7	17	11	8.5	8.5	7.8	8.0	14	48	201	130	67	79
8	18	11	8.5	8.5	8.0	8.2	15	70	214	127	66	80
9	17	11	8.5	8.5	8.0	8.6	16	70	230	130	72	73
10	18	11	8.5	8.5	8.0	9.0	19	76	221	125	66	76
11	16	10	8.5	8.5	8.0	9.0	23	86	217	119	64	91
12	15	10	8.5	8.5	8.0	9.0	26	94	195	122	60	86
13	14	11	8.5	8.5	8.0	9.0	26	60	173	119	62	46
14	14	12	8.5	8.5	8.0	9.0	24	70	168	106	66	31
15	14	12	8.5	8.5	8.0	9.0	22	80	166	97	57	32
16	14	12	8.5	8.5	8.0	9.0	22	68	160	94	52	42
17	14	11	8.5	8.5	8.0	9.0	19	74	161	89	52	31
18	14	10	8.5	8.5	8.0	9.0	17	84	151	85	80	28
19	14	9.6	8.5	8.5	8.0	9.0	15	90	142	99	81	28
20	13	9.0	8.5	8.5	8.0	9.0	17	100	138	97	86	32
21	13	9.0	8.5	8.3	8.0	9.2	19	120	147	99	108	28
22	12	9.0	8.5	8.0	8.0	9.4	22	141	165	91	106	26
23	11	9.0	8.5	8.0	8.0	9.6	24	108	186	83	103	26
24	11	9.0	8.5	8.0	8.0	9.8	23	96	150	81	101	25
25	12	9.0	8.5	8.0	8.0	10	23	97	128	86	94	28
26	14	9.0	8.5	8.0	8.0	10	22	94	122	99	93	30
27	13	9.0	8.5	8.0	8.0	10	20	94	122	101	95	34
28	15	9.0	8.5	8.0	8.0	10	22	107	134	85	91	31
29	14	8.6	8.5	8.0	8.0	10	27	115	135	79	77	27
30	13	8.2	8.5	8.0	---	11	41	119	129	79	64	25
31	14	---	8.5	8.0	---	11	---	116	---	81	71	---
TOTAL	462	307.3	263.2	258.3	230.4	281.8	601	2499	4881	3341	2456	1541
MEAN	14.9	10.2	8.49	8.33	7.94	9.09	20.0	80.6	163	108	79.2	51.4
MAX	20	13	8.5	8.5	8.0	11	41	141	230	145	108	91
MIN	11	8.2	8.2	8.0	7.6	8.0	12	30	122	79	52	25
AC-FT	916	610	522	512	457	559	1190	4960	9680	6630	4870	3060

CAL YR 1975 TOTAL 23734.0 MEAN 65.0 MAX 374 MIN 8.2 AC-FT 47080
WTR YR 1976 TOTAL 17122.0 MEAN 46.8 MAX 230 MIN 7.6 AC-FT 33960

NOTE.--NO GAGE-HEIGHT RECORD NOV. 14 TO APR. 28.

TRANSBASIN DIVERSIONS FROM NORTH PLATTE RIVER BASIN TO CACHE LA POUDRE RIVER BASIN IN COLORADO

The following seven diversions, which are equipped with water-stage recorders, divert water from tributaries of the North Platte River to the Cache la Poudre River or its tributaries. Records furnished by Colorado Division of Water Resources.

06745500 Cameron Pass ditch diverts water from tributaries of Michigan River in sec.10, T.6 N., R.76 W., to Joe Wright Creek (tributary to Cache la Poudre River) in sec.2, T.6 N., R.76 W.

0674600 Michigan ditch diverts water from Michigan River, headgate in sec.12, T.6 N., R.76 W., and many small tributaries and Agnes Creek (tributary to Michigan River), headgate in sec.15, T.6 N., R.76 W., to Joe Wright Creek (tributary to Cache la Poudre River) in sec.2, T.6 N., R.76 W.

06746500 Skyline ditch diverts water from West Branch Laramie River (tributary to Laramie River), headgate in sec.14, T.8 N., R.76 W., to Chambers Lake (tributary to Cache la Poudre River) in sec.31, T.8 N., R.75 W.

06747000 Laramie-Poudre tunnel diverts water from Laramie River in sec.7, T.8 N., R.75 W., and Rawah Creek (tributary to Laramie River) in sec.14, T.9 N., R.76 W., to Cache la Poudre River in sec.9, T.8 N., R.75 W.

06747200 Bob Creek ditch diverts water from Nunn Creek (tributary to Laramie River) in sec.9, T.9 N., R.75 W., to Roaring Creek (tributary to Cache la Poudre River) in sec.11, T.9 N., R.75 W.

06750000 Columbine ditch diverts water from Nunn Creek (tributary to Laramie River) in sec.3, T.9 N., R.75 W., to North Fork Cache la Poudre River (tributary to Cache la Poudre River) in sec.25, T.10 N., R.75 W.

06750500 Wilson supply ditch diverts water from Sand Creek in sec.22, T.11 N., R.75 W., and at times includes water diverted from tributaries of Deadman Creek in sec.9, T.10 N., R.75 W. Diversion is from the Laramie River basin to Sheep Creek (tributary to North Fork Cache la Poudre River) in sec.23, T.11 N., R.75 W., in the Cache la Poudre River basin. Records represent total flow diverted from the Laramie River basin by Wilson supply ditch.

REVISED RECORDS.--WSP 1310: 1945, 1947.

INFLOW FROM TRANSBASIN DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

Month	06745500 Cameron Pass ditch	06746000 Michigan ditch	06746500 Skyline ditch	06747000 Laramie-Poudre tunnel	06747200 Bob Creek ditch	06750000 Columbine ditch	06750500 Wilson supply ditch	Total
October	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0
January	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	0
March	0	0	0	0	0	0	0	0
April	0	0	0	0	0	0	0	0
May	0	225	0	3,800	0	0	649	4,670
June	141	1,320	0	9,790	0	0	1,150	12,400
July	79	76	0	5,180	0	0	96	5,430
August	0	149	0	0	0	0	0	149
September	0	0	0	0	0	0	0	0
Water year 1976	220	1,770	0	18,770	0	0	1,900	22,660

06752000 CACHE LA POUDRE 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 (0.8 km) downstream from headgate of Poudre Valley Canal, 1.2 mi (1.9 km) upstream from Lewstone Creek and 9.3 mi (15.0 km) northwest of courthouse in Fort Collins.

DRAINAGE AREA.--1,056 mi² (2,735 km²), revised.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--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.

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. Altitude of gage is 5,220 ft (1,591 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Natural flow of stream affected by transbasin and transmountain diversions (see elsewhere in this report), diversions above station for irrigation of about 50,000 acres (202 km²), most of which is below station (85,850 acre-ft or 106 hm³ during current year), and diversions for municipal use (11,960 acre-ft or 14.7 hm³ during current year).

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, occurred May 20, 1904; maximum discharge determined, 21,000 ft³/s (595 m³/s) June 9, 1891 (from reports of State Engineer of Colorado), caused by failure of Chambers Lake Dam; minimum daily discharge, 1.6 ft³/s (0.045 m³/s) Nov. 20, 28, 1948, caused by diversion of Poudre Valley Canal 0.5 mi (0.8 km) upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,340 ft³/s (208 m³/s) Aug. 1, gage height, 7.86 ft (2.396 m); minimum daily, 10 ft³/s (0.28 m³/s) Mar. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	30	30	25	26	19	28	66	1060	952	1410	318
2	61	30	35	25	27	26	32	55	1180	928	1330	364
3	45	26	34	24	28	16	27	57	1280	864	768	45
4	44	24	33	23	29	14	24	64	1390	816	655	32
5	38	22	33	22	27	15	24	71	1490	784	524	30
6	34	23	32	23	27	33	35	86	1550	752	472	28
7	40	25	32	24	26	33	42	103	1400	720	446	35
8	39	38	33	25	26	28	35	88	1400	672	446	32
9	39	42	33	25	25	24	33	90	1530	640	492	33
10	44	36	32	25	26	25	29	94	1430	598	498	42
11	40	20	32	25	25	19	24	117	1400	564	460	35
12	43	22	31	25	26	16	28	216	1370	550	336	32
13	40	19	31	25	27	10	38	262	1120	557	270	36
14	39	34	29	25	28	24	36	290	1010	505	194	29
15	39	42	26	25	25	27	33	422	920	440	150	17
16	38	38	26	26	22	22	34	472	888	352	117	34
17	43	37	22	27	21	28	40	466	792	270	80	22
18	44	33	20	27	21	28	40	584	598	179	58	20
19	37	22	21	27	22	30	35	720	612	181	40	22
20	61	22	22	26	23	25	20	792	664	230	44	25
21	88	23	22	26	24	20	15	928	808	290	53	29
22	84	24	22	25	26	22	23	1010	1070	266	84	24
23	88	25	22	25	25	33	35	840	1350	174	78	22
24	92	27	21	25	24	32	58	808	1150	139	78	21
25	84	27	22	25	20	33	60	776	960	122	73	79
26	86	28	22	25	20	32	68	696	832	133	60	92
27	75	28	24	25	19	26	88	680	816	208	60	86
28	45	29	24	25	22	26	55	712	904	226	90	71
29	39	30	27	25	24	28	51	744	928	203	86	70
30	33	30	26	25	---	25	68	816	888	208	66	54
31	30	---	25	25	---	25	---	856	---	257	50	---
TOTAL	1632	856	844	775	711	764	1158	13981	32790	13780	9568	1779
MEAN	52.6	28.5	27.2	25.0	24.5	24.6	38.6	451	1093	445	309	59.3
MAX	92	42	35	27	29	33	88	1010	1550	952	1410	364
MIN	30	19	20	22	19	10	15	55	598	122	40	17
AC-FT	3240	1700	1670	1540	1410	1520	2300	27730	65040	27330	18980	3530

CAL YR 1975 TOTAL 110484.3 MEAN 303 MAX 2290 MIN 8.0 AC-FT 219100
WTR YR 1976 TOTAL 78638.0 MEAN 215 MAX 1550 MIN 10 AC-FT 156000

NOTE.--NO GAGE-HEIGHT RECORD NOV. 20 TO FEB. 26.

06752000 CACHE LA POUDRE RIVER AT MOUTH OF CANYON, NEAR FORT COLLINS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1962 to October 1965, October 1971 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT									
19...	1315	37	140	8.3	11.0	9.8	61	0	17
NOV									
23...	1430	25	210	7.5	.0	11.9	80	0	22
DEC									
06...	1115	32	155	6.5	.5	12.2	59	1	18
JAN									
24...	1000	25	205	6.7	.0	12.1	82	0	22
FEB									
29...	1200	25	125	6.3	1.5	11.6	42	0	11
MAR									
26...	1215	35	180	7.2	8.0	10.0	66	0	18
APR									
24...	1030	66	268	8.2	8.5	10.0	110	0	29
MAY									
15...	1115	498	95	6.9	10.5	8.8	35	0	9.1
JUN									
30...	1130	904	60	6.7	13.0	--	21	0	6.0
JUL									
25...	1130	112	50	7.2	19.0	7.2	16	1	4.7
AUG									
17...	1115	117	70	6.9	16.0	8.3	24	1	7.4
SEP									
22...	1100	29	50	7.0	13.0	7.8	23	0	6.8

06752000 CACHE LA POUDRE RIVER AT MOUTH OF CANYON, NEAR FORT COLLINS, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT									
19...	4.4	5.8	.3	1.2	74	0	61	5.9	1.4
NOV									
23...	6.0	6.9	.3	1.3	97	0	80	6.6	2.8
DEC									
06...	3.4	5.4	.3	1.0	71	0	58	5.9	2.0
JAN									
24...	6.6	7.3	.4	1.4	101	0	83	7.7	3.2
FEB									
29...	3.6	4.7	.3	1.2	55	0	45	5.4	1.8
MAR									
26...	5.1	7.0	.4	1.3	88	0	72	6.9	2.4
APR									
24...	9.1	9.7	.4	1.5	147	0	121	8.0	4.8
MAY									
15...	2.9	3.7	.3	1.2	46	0	38	4.3	1.2
JUN									
30...	1.4	2.3	.2	.7	26	0	21	3.3	.7
JUL									
25...	1.1	1.5	.2	.6	19	0	16	5.0	.5
AUG									
17...	1.4	2.0	.2	.8	28	0	23	6.8	.7
SEP									
22...	1.4	2.4	.2	.9	31	0	25	5.5	1.3

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO, PHOS-PHORUS (P) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT									
19...	.3	8.9	82	.11	8.19	.02	.00	20	10
NOV									
23...	.4	10	104	.14	7.02	.09	.00	30	0
DEC									
06...	.3	9.7	81	.11	7.00	.12	.00	30	0
JAN									
24...	.4	10	109	.15	7.36	.16	.00	10	0
FEB									
29...	.3	9.3	65	.09	4.39	.06	.00	10	10
MAR									
26...	.4	9.7	94	.13	8.88	.01	.00	10	10
APR									
24...	.6	9.6	145	.20	25.8	.02	.00	0	0
MAY									
15...	.2	8.3	54	.07	72.6	.08	.00	80	20
JUN									
30...	.2	6.8	34	.05	83.0	.02	.00	80	0
JUL									
25...	.2	6.9	30	.04	9.07	.03	.00	90	10
AUG									
17...	.2	7.1	40	.05	12.6	.03	.00	120	20
SEP									
22...	.2	7.2	41	.06	3.21	.04	.01	190	20

06752260 CACHE LA POUDRE RIVER AT FORT COLLINS, CO

LOCATION.--Lat 40°35'17", long 105°04'08", in NE¼SW¼ sec.12, T.7 N., R.69 W., Larimer County, on left bank 150 ft (46 m) downstream from Lincoln Ave. Bridge, and 2,200 ft (670 m) east of intersection of College Ave. (U.S. Highway 287) and Mountain Ave. in Fort Collins.

DRAINAGE AREA.--1,127 mi² (2,919 km²).

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--April 1975 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,940 ft (1,506 m), from topographic map.

REMARKS.--Records good. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, diversion for municipal supply, diversions above station for irrigation, and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,700 ft³/s (161 m³/s) Aug. 1, 1976, gage height, 8.84 ft (2.694 m), from floodmarks, from rating curve extended above 1,200 ft³/s (34 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 1.8 ft³/s (0.051 m³/s) May 12, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,700 ft³/s (161 m³/s) Aug. 1, gage height, 8.84 ft (2.694 m), from floodmarks, from rating curve extended above 1,200 ft³/s (34 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 1.8 ft³/s (0.051 m) May 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	5.0	3.5	3.2	3.1	2.7	2.7	5.3	27	430	1110	86
2	13	6.1	5.0	3.1	3.5	3.2	2.5	4.0	51	362	753	95
3	11	4.6	8.2	2.9	4.6	3.1	2.4	3.7	43	254	283	126
4	6.5	5.0	4.8	3.1	4.5	2.8	2.5	3.7	107	248	194	16
5	4.8	5.2	5.0	3.5	4.2	3.0	2.4	3.5	52	225	44	7.8
6	4.6	4.8	5.0	3.5	3.8	3.1	5.4	4.2	90	271	51	6.1
7	5.1	4.6	5.0	3.5	5.2	3.0	3.1	3.0	51	296	66	28
8	6.4	5.8	4.4	3.3	3.9	2.8	2.5	2.0	53	264	63	47
9	6.4	5.4	4.0	3.3	3.7	2.7	4.4	2.0	78	234	62	40
10	5.1	4.8	4.1	3.4	3.4	2.7	5.0	2.0	58	220	51	24
11	4.6	4.5	4.2	3.3	3.7	2.8	4.9	1.9	60	176	57	26
12	4.2	4.4	4.2	3.4	3.6	2.7	4.7	1.8	46	184	30	42
13	4.2	4.4	4.0	3.3	3.5	2.4	4.5	1.9	69	227	50	48
14	4.2	4.8	3.7	3.2	3.5	2.5	4.5	2.2	77	217	86	41
15	4.1	5.2	3.6	4.6	3.0	2.6	4.8	2.2	91	177	62	15
16	4.5	4.6	3.6	4.5	3.2	2.7	5.0	2.3	95	138	135	48
17	4.6	4.4	3.7	4.2	3.2	2.8	4.9	2.3	123	69	188	56
18	4.6	4.2	3.5	4.0	3.2	2.8	5.2	16	244	60	202	9.2
19	4.5	4.4	3.7	3.6	3.3	2.6	5.5	12	369	64	192	24
20	4.6	4.1	3.9	3.8	3.8	2.3	5.6	13	454	139	132	38
21	8.6	3.6	3.8	3.9	4.1	2.3	6.2	50	412	202	57	18
22	6.8	3.8	3.8	3.7	3.5	2.5	6.1	74	417	173	41	6.2
23	16	4.4	3.8	3.5	3.0	2.7	6.4	4.3	381	104	77	27
24	15	4.4	3.5	3.3	2.9	2.8	9.4	12	233	85	171	56
25	8.1	3.7	3.8	3.0	2.8	4.7	18	37	100	63	202	4.2
26	5.9	4.3	3.8	2.9	3.0	4.2	33	43	197	61	147	5.3
27	5.8	3.6	3.8	3.2	2.9	2.7	24	46	171	100	123	9.4
28	5.9	3.4	3.4	3.1	2.9	4.2	6.8	41	223	47	81	12
29	5.6	3.5	3.6	3.2	2.8	3.2	11	34	287	21	50	11
30	5.7	3.1	3.3	3.4	---	2.8	8.3	26	342	28	74	14
31	5.7	---	3.0	3.4	---	2.8	---	5.9	---	47	112	---
TOTAL	224.1	134.1	126.7	107.3	101.8	90.2	211.7	462.2	5001	5186	4946	986.2
MEAN	7.23	4.47	4.09	3.46	3.51	2.91	7.06	14.9	167	167	160	32.9
MAX	28	6.1	8.2	4.6	5.2	4.7	33	74	454	430	1110	126
MIN	4.1	3.1	3.0	2.9	2.8	2.3	2.4	1.8	27	21	30	4.2
AC-FT	445	266	251	213	202	179	420	917	9920	10290	9810	1960

WTR YR 1976 TOTAL 17577.3 MEAN 48.0 MAX 1110 MIN 1.8 AC-FT 34860

06752260 CACHE LA POUDRE RIVER AT FORT COLLINS, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1975 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT									
19...	1115	4.6	580	7.8	11.0	10.6	260	54	70
NOV									
23...	1315	4.0	680	7.4	3.0	13.0	270	63	75
DEC									
06...	0945	4.3	550	7.4	3.0	12.2	250	56	71
JAN									
24...	1100	3.1	680	7.6	2.0	11.9	280	70	79
FEB									
29...	1030	2.8	660	7.4	4.0	11.2	290	75	78
MAR									
26...	1400	4.0	590	8.1	11.0	12.4	270	69	72
APR									
24...	0830	8.5	570	7.8	9.0	10.3	250	67	66
MAY									
15...	0945	2.0	540	7.4	11.0	7.8	260	51	71
JUN									
30...	1020	366	96	6.4	11.5	9.4	34	1	10
JUL									
25...	1240	51	185	7.6	17.0	10.6	72	9	21
AUG									
17...	1000	6.9	120	7.0	13.5	8.8	51	9	16
SEP									
22...	1200	6.2	300	8.2	16.0	10.4	140	25	41

DATE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT									
19...	20	23	.6	3.2	248	0	203	75	8.6
NOV									
23...	20	29	.8	2.9	252	0	207	95	21
DEC									
06...	18	21	.6	2.5	238	0	195	82	8.1
JAN									
24...	21	23	.6	3.0	260	0	213	110	12
FEB									
29...	24	25	.6	3.3	267	0	219	110	13
MAR									
26...	21	23	.6	3.1	240	0	197	100	11
APR									
24...	20	20	.6	3.1	220	0	180	93	8.7
MAY									
15...	21	28	.8	3.7	260	0	213	94	13
JUN									
30...	2.3	2.6	.2	.8	41	0	34	7.1	1.1
JUL									
25...	4.8	4.7	.2	1.2	77	0	63	21	2.0
AUG									
17...	2.6	3.2	.2	.9	51	0	42	11	1.4
SEP									
22...	9.7	12	.4	2.2	143	0	117	47	5.6

06752260 CACHE LA POUDRE RIVER AT FORT COLLINS, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT									
19...	.4	8.3	333	.45	4.18	.55	.00	30	30
NOV									
23...	.5	8.8	380	.52	4.13	.78	.00	40	30
DEC									
06...	.5	8.0	331	.45	3.88	.59	.01	20	40
JAN									
24...	.5	8.1	389	.53	3.26	.91	.00	20	50
FEB									
29...	.5	6.9	396	.54	3.02	.73	.00	30	70
MAR									
26...	.5	7.6	359	.49	3.91	.52	.00	30	60
APR									
24...	.5	7.9	329	.45	7.59	.28	.00	40	40
MAY									
15...	.5	7.9	370	.50	2.00	.60	.00	30	90
JUN									
30...	.3	6.4	51	.07	50.4	.07	.00	60	20
JUL									
25...	.3	6.3	100	.14	13.9	.13	.01	70	10
AUG									
17...	.3	5.8	67	.09	1.26	.17	.01	100	10
SEP									
22...	.3	6.5	197	.27	3.30	.37	.00	70	30

DATE	TIME	DIS-SOLVED OXYGEN (MG/L)
MAY		
15...	0500	6.1
15...	0600	6.3
15...	0700	6.5
15...	0800	6.7
15...	0900	7.3
15...	0945	7.8
JUN		
30...	1020	9.4
JUL		
25...	1240	10.6
25...	1300	10.8
25...	1400	10.6
25...	1500	9.6
25...	1600	9.4
25...	1700	7.4
25...	1800	8.5
25...	1900	8.7
25...	2000	8.1
25...	2100	7.4
25...	2200	7.1
25...	2300	7.1
25...	2400	7.2
26...	0100	7.3
26...	0200	7.4
26...	0300	7.3
26...	0400	7.3
26...	0500	7.4
26...	0600	7.6
26...	0700	7.8
26...	0800	8.1
26...	0900	9.1
26...	1000	10.6
26...	1100	10.7
26...	1200	10.4
26...	1300	10.3
AUG		
17...	1000	8.8
SEP		
22...	1200	10.4

DATE	TIME	DIS-SOLVED OXYGEN (MG/L)
MAR		
26...	2000	8.5
26...	2100	8.1
26...	2200	8.1
26...	2300	8.1
26...	2400	8.2
27...	0100	8.3
27...	0200	8.4
27...	0300	8.4
27...	0400	8.5
27...	0500	8.6
27...	0600	8.7
27...	0700	8.9
27...	0800	9.8
27...	0900	10.7
27...	1000	11.4
27...	1100	12.1
27...	1200	12.9
27...	1300	13.5
APR		
24...	0830	10.3
MAY		
14...	1000	10.4
14...	1100	12.2
14...	1200	13.2
14...	1300	14.2
14...	1400	14.3
14...	1500	14.5
14...	1600	13.9
14...	1700	13.3
14...	1800	12.3
14...	1900	10.5
14...	2000	9.7
14...	2100	8.2
14...	2200	6.7
14...	2300	5.6
14...	2400	5.3
15...	0100	4.9
15...	0200	5.2
15...	0300	5.5
15...	0400	5.9

DATE	TIME	DIS-SOLVED OXYGEN (MG/L)
OCT		
19...	1115	10.6
NOV		
23...	1315	13.0
DEC		
06...	0945	12.2
JAN		
24...	1100	11.9
24...	1700	12.3
24...	1800	11.7
24...	1900	11.1
24...	2000	11.1
24...	2100	11.0
24...	2200	10.8
24...	2300	10.8
24...	2400	10.7
25...	0100	10.7
25...	0200	10.6
25...	0300	10.6
25...	0400	10.6
25...	0500	10.4
25...	0600	10.3
25...	0700	10.3
25...	0800	10.1
25...	0900	10.6
25...	1000	11.9
25...	1100	12.6
25...	1200	13.0
25...	1300	13.0
25...	1400	13.0
25...	1500	13.0
25...	1600	12.9
FEB		
29...	1030	11.2
MAR		
26...	1400	12.4
26...	1500	12.1
26...	1600	11.8
26...	1700	11.0
26...	1800	10.1
26...	1900	9.2

06752500 CACHE LA POUDRE RIVER NEAR GREELEY, CO

LOCATION.--Lat 40°25'04", long 104°38'22", in NW¼ sec.11, T.5 N., R.65 W., Weld County, Hydrologic Unit 10190007, on right bank 25 ft (8 m) downstream from highway bridge, 2.9 mi (4.7 km) east of courthouse in Greeley, and 3.0 mi (4.8 km) upstream from mouth.

DRAINAGE AREA.--1,877 mi² (4,861 km²).

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--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.

REVISED RECORDS.--WSP 1440: 1935, 1938(M), 1942-43. WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 4,610 ft (1,405 m), from topographic map. See WSP 1710 or 1730 for history of changes prior to Dec. 14, 1933.

REMARKS.--Records good. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, diversion for municipal supply, diversions above station for irrigation of about 250,000 acres (1,010 km²), and return flow from irrigated areas.

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

AVERAGE DISCHARGE.--57 years (water years 1915-19, 1925-76), 105 ft³/s (2.974 m³/s), 76,070 acre-ft/yr (93.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 4,220 ft³/s (120 m³/s) June 24, 26, 1917; minimum daily, 0.8 ft³/s (0.023 m³/s) Oct. 3, 1946.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,600 ft³/s (45.3 m³/s) Aug. 2, gage height, 5.62 ft (1.713 m); minimum daily, 9.5 ft³/s (0.27 m³/s) May 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	177	115	106	55	108	85	88	96	77	26	299	40
2	177	123	115	80	108	85	92	82	67	45	1070	42
3	169	135	111	82	104	85	87	60	70	47	717	42
4	146	133	111	82	98	90	90	41	63	34	279	41
5	125	131	106	86	88	80	98	41	58	27	99	36
6	113	131	101	87	101	90	104	34	44	27	48	36
7	99	129	98	87	103	96	104	27	51	31	34	44
8	96	131	98	87	108	98	103	29	47	30	28	51
9	94	129	103	87	108	94	103	24	50	27	20	50
10	99	129	101	90	110	104	94	21	60	27	22	46
11	108	129	99	88	101	121	84	10	52	18	22	34
12	110	125	99	92	99	110	86	9.5	59	16	23	39
13	110	129	98	92	99	110	82	14	67	14	28	38
14	110	133	93	90	96	110	78	28	80	14	31	36
15	111	129	87	93	93	105	80	28	88	12	41	55
16	117	125	101	99	93	105	65	27	80	19	40	78
17	121	127	90	101	96	105	63	19	86	35	40	70
18	110	131	82	101	96	100	59	18	78	38	38	64
19	110	133	98	96	96	100	57	22	60	22	48	84
20	103	119	96	94	94	95	57	33	58	17	47	70
21	98	123	94	98	81	95	54	86	51	34	46	84
22	92	104	98	96	90	95	55	337	52	43	30	92
23	99	111	98	101	103	95	67	131	52	37	30	82
24	104	111	96	101	100	90	68	96	42	31	33	74
25	99	110	96	96	100	85	58	86	44	18	37	77
26	99	99	96	90	95	85	54	87	30	27	44	93
27	93	111	99	100	90	85	100	73	15	31	39	131
28	87	108	96	105	85	95	115	54	16	35	31	117
29	93	108	93	110	85	85	66	53	19	31	35	115
30	121	90	99	108	---	90	71	75	22	27	47	113
31	121	---	86	104	---	88	---	90	---	28	42	---
TOTAL	3511	3641	3044	2878	2828	2956	2382	1831.5	1638	868	3388	1974
MEAN	113	121	98.2	92.8	97.5	95.4	79.4	59.1	54.6	28.0	109	65.8
MAX	177	135	115	110	110	121	115	337	88	47	1070	131
MIN	87	90	82	55	81	80	54	9.5	15	12	20	34
AC-FT	6960	7220	6040	5710	5610	5860	4720	3630	3250	1720	6720	3920

CAL YR 1975 TOTAL 50017.8 MEAN 137 MAX 1610 MIN 9.8 AC-FT 99210
WTR YR 1976 TOTAL 30939.5 MEAN 84.5 MAX 1070 MIN 9.5 AC-FT 61370

06752500 CACHE LA POUDRE RIVER NEAR GREELEY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1951 to September 1952, August 1954 to August 1956, December 1963 to September 1966, October 1967 to September 1968, October 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (Ca,Mg) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT									
08...	1445	94	1850	8.0	15.0	8.7	800	520	170
NOV									
08...	1300	132	1800	8.1	10.5	9.1	770	490	170
DEC									
09...	0815	99	--	7.7	5.5	8.7	780	470	170
JAN									
14...	1430	96	1800	8.0	5.0	11.9	840	530	190
FEB									
11...	1430	99	1750	8.1	9.0	11.7	770	500	170
MAR									
29...	1250	87	1800	8.2	7.5	12.4	850	570	180
APR									
13...	1445	84	1900	8.4	17.0	11.0	850	580	190
MAY									
04...	1450	38	1450	8.5	19.0	8.4	660	420	140
JUN									
16...	1350	80	1600	7.9	19.0	8.3	690	440	150
JUL									
15...	1145	13	1700	7.6	17.5	6.1	780	470	180
AUG									
10...	1445	23	1750	7.7	24.5	10.5	770	500	180
SEP									
21...	1125	92	1700	7.7	17.0	7.6	680	410	150

06752500 CACHE LA POUDRE RIVER NEAR GREELEY, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT									
08...	91	130	2.0	7.1	335	0	275	740	38
NOV									
08...	85	120	1.9	9.3	346	0	284	690	43
DEC									
09...	86	120	1.9	6.9	374	0	307	650	40
JAN									
14...	89	130	2.0	7.7	379	0	311	700	40
FEB									
11...	85	120	1.9	8.6	322	5	272	700	42
MAR									
29...	98	130	1.9	7.5	344	0	282	720	37
APR									
13...	92	140	2.1	9.4	331	0	271	790	42
MAY									
04...	76	130	2.2	9.2	293	3	245	610	36
JUN									
16...	77	120	2.0	7.5	310	0	254	600	39
JUL									
15...	80	120	1.9	9.8	382	0	313	630	46
AUG									
10...	79	120	1.9	8.8	337	0	276	650	47
SEP									
21...	73	110	1.8	7.4	323	0	265	580	37

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT									
08...	.6	8.8	1370	1.86	348	3.8	.52	20	120
NOV									
08...	.9	11	1320	1.80	470	4.9	.68	200	140
DEC									
09...	1.0	15	1300	1.77	347	5.2	.35	50	170
JAN									
14...	1.0	14	1390	1.89	360	6.2	.90	20	150
FEB									
11...	1.0	12	1330	1.81	356	5.0	1.1	20	160
MAR									
29...	.9	11	1380	1.88	324	5.8	.84	60	170
APR									
13...	.9	9.8	1460	1.99	331	4.9	.80	30	170
MAY									
04...	.9	7.5	1180	1.60	121	3.0	1.5	150	80
JUN									
16...	.8	10	1180	1.60	255	5.8	.57	10	160
JUL									
15...	.7	13	1300	1.77	45.6	5.7	.38	280	500
AUG									
10...	.8	12	1290	1.75	80.1	5.6	.35	10	280
SEP									
21...	1.0	14	1170	1.59	291	7.1	.79	20	120

06754000 SOUTH PLATTE RIVER NEAR KERSEY, CO

LOCATION.--Lat 40°24'44", long 104°33'46", in NW¼SW¼ sec.9, T.5 N., R.64 W., Weld County, Hydrologic Unit 10190003, on downstream side of bridge on State Highway 37, 1.9 mi (3.1 km) north of railroad in Kersey, and 2.5 mi (4.0 km) downstream from Cache la Poudre River.

DRAINAGE AREA.--9,598 mi² (24,859 km²).

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.

REVISED RECORDS.--WSP 1310: 1902, 1906, 1935(M). WSP 1730: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,575.77 ft (1,394.695 m) above mean sea level. See WSP 1710 or 1730 for history of changes prior to July 3, 1935.

REMARKS.--Records good. 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 (3,590 km²), and return flow from irrigated areas.

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

AVERAGE DISCHARGE.--73 years, 775 ft³/s (21.95 m³/s), 561,500 acre-ft/yr (692 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 31,500 ft³/s (892 m³/s) May 8, 1973, gage height, 11.73 ft (3.575 m); minimum daily, 28 ft³/s (0.79 m³/s) Apr. 30, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,570 ft³/s (101 m³/s) Aug. 2, gage height, 5.93 ft (1.807 m); minimum daily, 98 ft³/s (2.78 m³/s) May 13, 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	798	824	798	636	764	682	497	636	491	138	331	365
2	798	790	806	600	764	682	461	509	450	159	2910	428
3	790	790	765	600	781	682	438	335	433	174	2940	438
4	860	722	730	600	764	706	428	260	428	153	1880	438
5	772	730	764	650	714	682	422	223	385	150	887	438
6	658	730	798	690	706	690	433	180	365	153	580	428
7	615	714	756	710	722	747	428	150	360	156	428	450
8	594	698	747	730	764	772	411	141	320	156	355	528
9	615	714	730	750	790	764	411	129	260	156	455	722
10	622	878	772	760	790	781	406	120	223	171	380	738
11	650	896	756	730	730	781	390	123	201	159	268	706
12	643	772	764	756	756	747	380	115	310	144	260	730
13	636	722	764	756	738	738	375	98	350	138	278	690
14	615	698	756	682	730	738	360	100	305	153	330	722
15	615	706	674	738	730	730	370	98	235	153	350	972
16	615	674	747	756	722	730	375	98	180	156	375	1190
17	608	643	714	764	706	730	370	110	177	153	380	990
18	594	629	682	738	706	698	503	138	194	150	370	887
19	587	650	714	714	690	690	698	115	366	150	375	962
20	554	615	714	714	682	666	485	118	438	165	370	1420
21	574	567	706	747	629	650	385	295	273	338	370	1370
22	560	635	722	815	674	643	320	1580	184	574	360	1160
23	587	660	714	790	764	643	260	1870	180	491	340	1010
24	643	682	730	798	764	622	239	1030	238	350	315	1000
25	833	730	730	772	772	601	212	790	390	247	286	972
26	798	756	690	738	747	601	194	860	227	235	330	1160
27	833	785	666	747	714	601	215	722	147	434	305	1400
28	842	780	690	764	698	615	461	608	144	385	278	2080
29	851	785	650	806	690	580	503	534	141	264	291	1470
30	851	765	682	815	---	594	444	522	144	208	325	1200
31	851	---	698	772	---	560	---	534	---	180	315	---
TOTAL	21462	21740	22629	22638	21201	21146	11874	13141	8539	6793	18017	27064
MEAN	692	725	730	730	731	682	396	424	285	219	581	902
MAX	860	896	806	815	790	781	698	1870	491	574	2940	2080
MIN	554	567	650	600	629	560	194	98	141	138	260	365
AC-FT	42570	43120	44880	44900	42050	41940	23550	26070	16940	13470	35740	53680

CAL YR 1975 TOTAL 302170 MEAN 828 MAX 5200 MIN 118 AC-FT 599400
WTR YR 1976 TOTAL 216244 MEAN 591 MAX 2940 MIN 98 AC-FT 428900

06758500 SOUTH PLATTE RIVER NEAR WELDONA, CO

LOCATION.--Lat 40°19'19", long 103°55'17", in SW¼SW¼ sec.7, T.4 N., R.58 W., Morgan County, Hydrologic Unit 10190003, on left bank 400 ft (120 m) downstream from bridge on State Highway 144, 2.8 mi (4.5 km) southeast of Weldona, and 4.2 mi (6.8 km) upstream from Bijou Creek.

DRAINAGE AREA.--13,245 mi² (34,305 km²).

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 1952 to current year.

REVISED RECORDS.--WSP 1710: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,307.80 ft (1,313.017 m) above mean sea level.

REMARKS.--Records good except those for winter period, 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.

AVERAGE DISCHARGE.--24 years, 562 ft³/s (15.92 m³/s), 407,200 acre-ft/yr (502 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,800 ft³/s (759 m³/s) May 8, 1973, gage height, 11.68 ft (3.560 m), from rating curve extended above 16,000 ft³/s (453 m³/s); minimum daily, 39 ft³/s (1.10 m³/s) May 19, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,350 ft³/s (38.2 m³/s) Aug. 4, gage height, 5.25 ft (1.600 m); maximum gage height, 5.67 ft (1.728 m), Feb. 7 (backwater from ice); minimum daily discharge, 42 ft³/s (1.19 m3/s) June 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	719	229	368	260	215	320	338	418	46	125	222	330
2	777	187	348	270	194	307	372	464	43	147	290	334
3	797	159	617	340	162	316	368	348	43	320	1100	382
4	790	204	583	410	215	407	363	229	46	277	962	402
5	777	211	501	450	415	545	358	145	46	256	468	387
6	719	208	480	440	415	528	353	204	43	184	277	343
7	665	208	454	430	420	475	302	204	42	84	211	320
8	659	204	418	450	380	443	260	194	43	93	191	353
9	647	204	407	480	360	448	248	229	43	168	290	438
10	659	211	392	560	353	448	233	229	57	198	353	475
11	671	252	397	650	241	454	226	226	136	204	353	491
12	671	325	397	670	175	464	222	226	178	204	312	475
13	443	269	397	680	142	475	208	222	302	184	273	501
14	320	245	397	670	218	459	159	215	397	156	281	485
15	285	237	392	690	248	448	120	204	382	156	302	501
16	260	233	485	750	248	566	208	187	353	156	382	665
17	241	218	523	780	241	534	118	168	298	115	433	818
18	229	215	653	710	233	448	107	145	260	91	443	770
19	218	226	665	600	252	428	133	131	264	91	418	744
20	215	245	719	572	298	412	470	122	338	136	353	867
21	201	218	738	480	348	412	256	142	397	184	353	1010
22	201	237	758	438	343	387	156	331	252	290	312	825
23	168	358	659	407	330	372	120	962	165	485	237	659
24	150	348	600	363	372	368	88	638	178	387	229	523
25	156	372	572	338	372	363	75	233	187	256	218	523
26	241	407	491	312	348	334	73	136	302	204	320	512
27	307	382	454	418	338	325	93	100	229	252	316	629
28	215	392	459	330	334	307	187	54	165	252	320	811
29	181	397	392	252	330	290	363	49	150	181	298	1120
30	175	298	377	218	---	316	454	49	122	194	298	744
31	172	---	387	215	---	312	---	50	---	204	330	---
TOTAL	12929	7899	15480	14633	8540	12711	7031	7254	5507	6234	11145	17437
MEAN	417	263	499	472	294	410	234	234	184	201	360	581
MAX	797	407	758	780	420	566	470	962	397	485	1100	1120
MIN	150	159	348	215	142	290	73	49	42	84	191	320
AC-FT	25640	15670	30700	29020	16940	25210	13950	14390	10920	12370	22110	34590

CAL YR 1975 TOTAL 195999 MEAN 537 MAX 3630 MIN 58 AC-FT 388800
WTR YR 1976 TOTAL 126800 MEAN 346 MAX 1120 MIN 42 AC-FT 251500

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 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT									
31...	1535	172	2300	7.6	9.5	9.6	880	570	210
NOV									
18...	0950	218	2100	7.5	5.0	11.2	880	570	210
DEC									
18...	1030	659	1700	7.9	.0	12.4	660	390	160
JAN									
28...	1430	312	1750	8.0	5.5	10.6	670	390	160
FEB									
18...	1010	237	1850	7.6	5.0	--	730	440	180
MAR									
16...	0950	617	1600	7.5	4.0	11.0	630	380	150
APR									
14...	0805	168	1700	8.0	10.0	11.2	760	480	180
MAY									
26...	1100	136	2300	7.9	17.0	8.4	920	630	210
JUN									
22...	1250	248	1800	8.3	26.0	9.0	740	490	160
JUL									
28...	0900	241	2000	7.7	19.5	1.0	850	590	190
AUG									
31...	1015	338	2200	7.9	17.0	8.7	860	550	200
SEP									
22...	0845	1080	1600	8.1	15.0	8.0	690	450	130

PLATTE RIVER BASIN

06758500 SOUTH PLATTE RIVER NEAR WELDONA, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT									
31...	86	220	3.2	10	380	0	312	840	79
NOV									
18...	86	200	2.9	9.2	381	0	313	840	77
DEC									
18...	64	160	2.7	8.3	339	0	278	570	67
JAN									
28...	65	150	2.5	8.3	340	0	279	580	71
FEB									
18...	68	170	2.7	10	347	0	285	670	75
MAR									
16...	63	160	2.8	9.8	311	0	255	560	79
APR									
14...	75	190	3.0	8.9	334	0	274	720	72
MAY									
26...	97	220	3.2	11	362	0	297	910	82
JUN									
22...	83	180	2.9	8.7	306	0	251	760	71
JUL									
28...	91	210	3.1	11	310	0	254	790	82
AUG									
31...	88	200	3.0	9.9	379	0	311	850	83
SEP									
22...	88	140	2.3	8.0	287	0	235	520	61

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT									
31...	1.0	19	1670	2.27	776	4.7	.10	10	60
NOV									
18...	1.1	19	1650	2.24	971	4.9	.13	20	40
DEC									
18...	1.1	16	1250	1.70	2220	5.0	3.0	80	30
JAN									
28...	1.1	15	1240	1.69	1050	4.7	.44	30	40
FEB									
18...	1.0	16	1390	1.89	889	4.5	3.1	10	40
MAR									
16...	.9	11	1210	1.65	2020	4.3	.56	--	100
APR									
14...	1.0	12	1440	1.96	653	3.2	.17	60	70
MAY									
26...	.9	19	1750	2.38	643	4.8	1.2	30	130
JUN									
22...	1.2	14	1440	1.96	964	2.7	.17	20	40
JUL									
28...	1.1	19	1570	2.14	1020	4.5	.37	20	80
AUG									
31...	1.2	20	1670	2.27	1520	5.8	.10	120	80
SEP									
22...	1.1	15	1670	1.48	3180	4.1	.30	30	60

06760000 SOUTH PLATTE RIVER AT BALZAC, CO

LOCATION.--Lat 40°24'24", long 103°27'58", in NE¼NE¼ sec.13, T.5 N., R.55 W., Morgan County, Hydrologic Unit 10190012, on right bank just upstream from highway bridge at Balzac siding, 2.8 mi (4.5 km) northeast of Union and 7.0 mi (11.3 km) downstream from Beaver Creek.

DRAINAGE AREA.--16,852 mi² (43,647 km²).

PERIOD OF RECORD.--October 1916 to current year. Prior to October 1933 monthly discharge only, published in WSP 1310.

REVISED RECORDS.--WSP 1310: 1937*(M). WSP 1730: 1957, drainage area. WSP 1918: 1928 (monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 4,091.06 ft (1,246.955 m) above mean sea level. Since Oct. 1, 1936, supplementary water-stage recorder on secondary channel (600 ft (180 m) to the left; at datum 1.69 ft (0.515 m) lower prior to July 24, 1973, and at datum 0.09 ft (0.027 m) lower thereafter. See WSP 1710 or 1730 for history of changes prior to Aug. 21, 1947.

REMARKS.--Records good except those for winter period and those for period of no gage-height record, which are fair. Natural flow of stream affected by transmountain and transbasin diversions, storage reservoirs, power developments, groundwater withdrawals and diversions above station for irrigation of about 1,065,000 acres (4,310 km²), and return flow from irrigated areas.

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

AVERAGE DISCHARGE.--60 years, 399 ft³/s (11.30 m³/s), 289,100 acre-ft/yr (356 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 123,000 ft³/s (3,480 m³/s) June 18, 1965, gage height, 13.32 ft (4.060 m), from rating curve extended above 6,400 ft³/s (180 m³/s) on basis of contracted-opening measurement of peak flow; minimum daily, 1.3 ft³/s (0.037 m³/s) Jan. 25, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,540 ft³/s (71.9 m³/s) July 3, gage height, 6.94 ft (2.115 m); minimum daily, 12 ft³/s (0.34 m³/s), Nov. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	355	13	64	199	139	169	28	445	116	135	85	296
2	257	12	164	170	130	174	27	428	107	149	122	295
3	282	12	224	229	109	294	28	465	98	1060	345	307
4	260	12	283	329	103	473	28	339	95	419	956	237
5	229	13	201	369	83	494	26	191	65	277	734	127
6	174	17	155	389	92	608	27	114	27	223	287	116
7	137	25	144	356	174	608	26	111	22	104	130	96
8	121	22	132	367	529	577	27	115	24	62	100	94
9	117	18	118	395	714	583	78	214	70	49	105	104
10	130	18	108	423	560	575	129	253	71	53	152	115
11	101	19	97	539	291	559	176	273	70	77	190	146
12	103	22	103	572	212	554	153	255	102	75	193	176
13	76	30	98	594	152	562	157	250	163	62	172	174
14	48	28	91	585	127	538	151	227	254	56	151	204
15	38	27	199	580	130	463	167	209	348	55	153	211
16	38	26	249	628	102	456	200	183	333	50	182	251
17	36	26	440	682	56	587	269	182	334	42	253	427
18	36	26	353	716	52	526	384	135	305	37	258	562
19	33	34	331	589	51	484	368	101	238	72	273	535
20	34	52	345	509	43	456	412	96	225	87	247	604
21	34	68	344	490	100	458	505	101	293	94	209	586
22	34	40	346	402	90	312	350	157	309	109	222	484
23	29	35	360	375	64	151	235	273	225	143	240	396
24	27	118	305	325	55	103	222	359	172	262	187	86
25	26	138	294	279	68	54	180	153	172	191	180	55
26	19	88	268	268	63	54	139	97	182	151	168	50
27	24	75	345	302	128	42	148	72	252	87	233	49
28	22	72	425	320	183	35	156	53	189	91	256	58
29	14	132	376	214	179	32	188	86	170	85	241	119
30	13	87	331	193	---	29	371	115	145	62	204	133
31	13	---	295	148	---	29	---	135	---	62	243	---
TOTAL	2860	1305	7588	12536	4779	11039	5355	6187	5176	4481	7471	7093
MEAN	92.3	43.5	245	404	165	356	179	200	173	145	241	236
MAX	355	138	440	716	714	608	505	465	348	1060	956	604
MIN	13	12	64	148	43	29	26	53	22	37	85	49
AC-FT	5670	2590	15050	24870	9480	21900	10620	12270	10270	8890	14820	14070

CAL YR 1975 TOTAL 134855 MEAN 369 MAX 2900 MIN 12 AC-FT 267500
WTR YR 1976 TOTAL 75870 MEAN 207 MAX 1060 MIN 12 AC-FT 150500

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO

LOCATION.--Lat 40°58'46", long 102°15'15", in NW¼NE¼ and SE¼NE¼ (two channels) sec.33, T.12 N., R.44 W., Sedgwick County, Hydrologic Unit 10190018, on left bank of channel no. 4 (left channel) 215 ft (66 m) downstream from bridge, and on right bank of channel no. 2, 800 ft (244 m) downstream from bridge on U.S. Highway 385, 0.9 mi (1.4 km) southeast of Julesburg, 3.0 mi (4.8 km) upstream from Colorado-Nebraska State line, and 8 mi (13 km) downstream from Lodgepole Creek.

DRAINAGE AREA.--23,138 mi² (59,927 km²).

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. WSP 1730: Drainage area.

GAGE.--Two water-stage recorders. Datum of gages is 3,446.76 ft (1,050.572 m) above mean 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 (91 m) downstream at present datum. Channel no. 4: Oct. 1, 1956, to Dec. 10, 1958, at site 135 ft (41 m) downstream at present datum. Since May 11, 1973, supplementary water-stage recorder on channel no. 2 at bridge 800 ft (244 m) upstream at same datum.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of 1,200,000 acres (4,940 km²) above station, and return flow from irrigated areas.

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

AVERAGE DISCHARGE.--74 years, 482 ft³/s (13.65 m³/s), 349,200 acre-ft/yr (431 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,600 ft³/s (1,060 m³/s) June 20, 1965, gage height, 10.44 ft (3.182 m), from flood marks in gage well; no flow Aug. 18-20, 1902, July 25 to Aug. 7, 1903.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 985 ft³/s (27.9 m³/s) Jan. 20, gage height, 4.27 ft (1.301 m); minimum daily, 10 ft³/s (0.28 m³/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	187	101	260	436	642	361	305	140	140	27	24	13
2	208	101	259	167	594	370	257	124	105	28	25	12
3	236	102	367	172	537	362	246	107	94	30	29	12
4	204	99	454	176	513	431	222	97	86	26	26	11
5	188	100	495	235	355	430	185	97	82	26	29	13
6	193	100	530	275	280	570	173	89	72	23	22	10
7	184	140	521	350	350	660	165	77	69	24	17	11
8	178	192	468	380	410	710	178	68	60	25	17	12
9	162	214	432	390	605	765	158	65	58	26	20	12
10	141	225	406	390	684	738	136	62	56	25	21	11
11	135	231	393	415	727	744	134	48	45	23	20	11
12	133	232	357	455	681	717	124	45	33	26	20	12
13	131	239	366	540	578	691	123	38	29	28	22	14
14	122	244	353	623	520	695	111	35	28	26	18	21
15	122	244	286	666	481	704	106	34	28	25	15	27
16	121	247	255	700	435	651	107	35	27	25	16	36
17	130	254	261	756	425	548	119	34	26	24	12	39
18	113	244	193	870	432	547	118	32	25	20	11	43
19	110	255	219	952	382	490	110	31	24	20	17	47
20	108	180	273	942	365	466	104	36	24	24	19	60
21	102	136	339	910	321	442	102	35	27	24	19	59
22	104	138	425	868	340	416	124	54	30	25	18	71
23	102	162	495	875	361	414	131	116	98	20	16	111
24	102	199	557	853	366	389	139	127	50	14	16	143
25	105	233	617	670	356	326	137	147	43	12	18	140
26	105	256	647	547	357	321	118	162	42	12	16	128
27	103	231	647	520	331	362	115	183	36	11	14	102
28	101	259	656	578	325	340	130	200	34	19	14	88
29	101	299	584	715	327	328	136	188	30	24	11	85
30	101	272	639	783	---	291	141	200	28	25	11	76
31	101	---	630	676	---	300	---	172	---	26	11	---
TOTAL	4233	5929	13384	17885	13080	15579	4454	2878	1529	713	566	1430
MEAN	137	198	432	577	451	503	148	92.8	51.0	23.0	18.3	47.7
MAX	236	299	656	952	727	765	305	200	140	30	29	143
MIN	101	99	193	167	280	291	102	31	24	11	11	10
AC-FT	8400	11760	26550	35470	25940	30900	8830	5710	3030	1410	1120	2840

CAL YR 1975 TOTAL 134447 MEAN 368 MAX 2360 MIN 34 AC-FT 266700
WTR YR 1976 TOTAL 81660 MEAN 223 MAX 952 MIN 10 AC-FT 162000

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 current year.
WATER TEMPERATURES: Water years 1945-49, October 1950 to current year.

INSTRUMENTATION.--Water-quality monitor since July 12, 1973.

REMARKS.--Specific conductance and temperature data recorded on channel no. 2 (06763990). Daily maximum and minimum specific conductance data are available in the district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 3,270 micromhos Jan. 12, 1971; minimum daily, 348 micromhos Aug. 15, 1968.
WATER TEMPERATURES: Maximum, 35.0°C July 23, 1975; minimum, freezing point on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 2,730 micromhos Aug. 10; minimum, 1,390 micromhos June 23.
WATER TEMPERATURES: Maximum, 33.5°C July 29, 30; minimum, freezing point on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	FECAL COLI-FORM (COL. PER 100 ML)	STREP-TOCOCCI (COL-ONIES PER 100 ML)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)
OCT											
31...	1000	101	2100	8.2	9.5	10.4	860	810	8100	760	530
NOV											
18...	1600	244	2000	8.3	4.5	10.9	1700	420	190	780	520
DEC											
19...	0830	219	2170	7.9	.0	12.4	1100	75	68	830	550
JAN											
29...	0820	715	1960	7.7	.0	12.4	170	--	--	750	490
FEB											
19...	0815	382	2090	8.1	.0	12.7	856	827	140	800	530
MAR											
17...	0750	548	1850	7.5	4.0	10.8	8160	875	858	730	460
APR											
14...	1200	111	2000	8.1	15.0	9.8	835	810	140	740	530
MAY											
27...	0800	183	2100	8.2	13.5	9.0	160	140	260	770	540
JUN											
23...	0700	98	1350	7.5	17.5	6.5	84000	8400	12000	410	270
JUL											
28...	1300	19	1900	8.3	29.5	11.5	230	180	885	700	520
AUG											
31...	1400	11	2100	8.6	26.5	12.6	--	--	835	730	560
SEP											
22...	1400	71	2100	8.4	20.0	11.3	--	860	400	790	620

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED CALCIUM (CA) (MG/L)	DIS-SOLVED MAGNESIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DIS-SOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLORIDE (CL) (MG/L)	DIS-SOLVED FLUORIDE (F) (MG/L)
OCT											
31...	210	57	200	3.2	20	282	0	231	810	92	.6
NOV											
18...	210	62	210	3.3	19	315	0	258	860	85	.7
DEC											
19...	230	62	200	3.0	17	336	0	276	830	83	.8
JAN											
29...	190	66	180	2.9	--	317	0	260	700	79	1.1
FEB											
19...	210	67	190	2.9	15	332	0	272	780	83	.8
MAR											
17...	190	62	180	2.9	12	325	0	267	670	83	.8
APR											
14...	190	64	200	3.2	18	259	0	212	830	86	.7
MAY											
27...	200	66	210	3.3	18	288	0	236	910	94	.8
JUN											
23...	110	32	110	2.4	16	172	0	141	540	61	.6
JUL											
28...	180	61	190	3.1	19	218	0	179	750	94	.6
AUG											
31...	190	63	200	3.2	21	217	0	178	840	110	.6
SEP											
22...	200	70	220	3.4	20	209	0	171	910	93	.7

DATE	OIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJELDAHL NITROGEN (N) (MG/L)	TOTAL NITROGEN (N) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)	TOTAL PHYTOPLANKTON (CELLS PER ML)
OCT										
31...	23	1640	1550	2.23	447	1.6	1.2	2.8	.08	5500
NOV										
18...	23	1690	1630	2.30	1110	1.7	.97	2.7	.10	12000
DEC										
19...	25	1710	1610	2.33	1010	2.7	1.2	3.9	.16	760
JAN										
29...	19	1510	--	2.05	2920	3.3	1.6	4.9	.32	3800
FEB										
19...	21	1660	1530	2.26	1710	2.9	1.7	4.6	.33	6400
MAR										
17...	20	1540	1380	2.09	2280	3.6	1.4	5.0	.54	4200
APR										
14...	18	1600	1530	2.18	480	1.1	.86	2.0	.18	3300
MAY										
27...	22	1790	1660	2.43	884	.92	1.0	1.9	.14	27000
JUN										
23...	16	1070	970	1.46	283	1.5	5.0	6.5	.74	--
JUL										
28...	19	1490	1420	2.03	76.4	.00	.50	.50	.01	18000
AUG										
31...	22	1610	1550	2.19	47.8	.15	.54	.69	.02	3700
SEP										
22...	20	1680	1640	2.28	449	.00	1.1	1.1	.11	78000

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)
DEC 19...	2	2	10	1	0	0	50	0	20	1
MAR 17...	4	3	<10	1	0	0	<50	0	20	3
MAY 27...	--	--	--	--	--	--	--	--	--	--
JUN 23...	--	3	2	0	20	0	19	0	36	3
SEP 22...	2	2	<10	0	0	0	50	0	10	4

DATE	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)
DEC 19...	390	250	<100	5	70	30	--	.2	5	5
MAR 17...	3700	10	<100	3	220	10	.0	.0	5	4
MAY 27...	--	--	--	--	--	--	--	--	--	--
JUN 23...	24000	20	40	3	1400	20	.0	.0	--	2
SEP 22...	390	60	100	6	200	30	.2	.2	2	2

DATE	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (UG/L)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L)	SUS-PENDED GROSS BETA AS CS-137 (PC/L)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUS-PENDED GROSS BETA AS SR90 /Y90 (PC/L)	DIS-SOLVED RA-226 (RADON METHOD) (PC/L)	TOTAL ORGANIC CARBON (C) (MG/L)
DEC 19...	10	20	130	2.0	38	13	32	11	.06	6.3
MAR 17...	30	10	--	--	--	--	--	--	--	9.2
MAY 27...	--	--	100	3.2	33	6.4	27	5.3	.05	--
JUN 23...	120	20	--	--	--	--	--	--	--	26
SEP 22...	10	30	--	--	--	--	--	--	--	9.3

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL CHLORDANE (UG/L)	TOTAL DDD (UG/L)	DDD IN BOTTOM MATERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDT (UG/L)	DDT IN BOTTOM MATERIAL (UG/KG)	TOTAL DIAZINON (UG/L)
DEC 19...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 19...	ND	--	ND	ND	--	ND	--	ND	--	ND
JUN 23...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 31...	ND	--	ND	ND	--	ND	--	ND	--	ND

DATE	DIAZINON IN BOTTOM MATERIAL (UG/KG)	TOTAL DIELDRIN (UG/L)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ETHION (UG/L)	ETHION IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)
DEC 19...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 19...	--	ND	--	ND	--	ND	--	ND	--	ND
JUN 23...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 31...	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)	TOTAL LINDANE (UG/L)	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	MALATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHOXYCHLOR (UG/L)	TOTAL METHYL PARATHION (UG/L)	METHYL PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL TRITHION (UG/L)	METHYL TRITHION IN BOTTOM MATERIAL (UG/KG)
DEC 19...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 19...	--	ND	--	ND	--	ND	ND	--	ND	--
JUN 23...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 31...	--	ND	--	ND	--	ND	ND	--	ND	--

DATE	TOTAL PARATHION (UG/L)	PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4-D (UG/L)	TOTAL 2,4,5-T (UG/L)	TOTAL SILVEX (UG/L)
DEC 19...	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 19...	ND	--	ND	--	ND	--	ND	ND	ND
JUN 23...	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG 31...	ND	--	ND	--	ND	--	ND	ND	ND

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	17.0	7.5	14.5	6.5	1.0	0.0	1.0	-0.5	4.0	-0.5	4.0	1.5
2	18.0	8.5	13.0	7.0	1.0	0.0	-0.5	-0.5	4.5	0.5	3.5	-0.5
3	18.5	10.0	15.0	7.0	4.0	0.5	0.0	-0.5	6.0	2.0	-0.5	-0.5
4	18.0	11.0	16.5	8.0	3.0	0.0	0.0	-0.5	1.5	-0.5	-0.5	-0.5
5	18.5	11.5	15.5	7.0	3.5	0.0	-0.5	-0.5	0.0	-0.5	-0.5	-0.5
6	19.0	10.5	14.0	7.0	3.0	0.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
7	18.0	12.0	12.0	7.5	2.0	0.0	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
8	14.5	11.5	10.0	8.5	3.0	0.0	-0.5	-0.5	5.5	-0.5	-0.5	-0.5
9	15.0	9.0	8.5	6.0	5.0	1.5	-0.5	-0.5	4.5	0.0	7.0	-0.5
10	16.5	9.0	7.5	3.0	6.5	3.0	-0.5	-0.5	4.0	0.5	10.0	4.5
11	18.0	10.0	8.0	3.5	6.0	3.0	-0.5	-0.5	5.5	1.5	8.5	5.0
12	18.0	10.5	6.0	2.5	4.5	3.0	0.0	-0.5	6.5	2.0	4.5	0.0
13	16.0	10.5	6.5	1.0	3.0	2.0	0.0	-0.5	7.5	3.5	4.5	-0.5
14	15.0	7.5	7.5	2.0	2.0	0.5	0.0	-0.5	7.5	4.0	5.5	1.5
15	16.0	7.0	8.0	4.5	0.5	-0.5	0.5	-0.5	6.5	3.0	6.5	2.5
16	14.0	7.5	9.0	4.0	0.0	-0.5	1.0	0.0	7.0	2.5	7.5	2.0
17	15.0	5.5	8.5	4.5	0.5	-0.5	3.0	-0.5	6.0	3.0	9.5	4.0
18	16.5	6.0	8.5	4.5	0.0	-0.5	1.5	-0.5	5.5	1.0	13.5	6.0
19	17.5	8.0	5.0	0.0	1.0	-0.5	1.5	-0.5	6.0	-0.5	13.5	6.5
20	17.5	8.0	4.0	0.0	1.5	0.0	1.5	-0.5	3.5	-0.5	6.0	3.5
21	17.5	8.5	4.0	2.5	2.0	-0.5	2.5	-0.5	1.5	-0.5	7.0	2.5
22	17.5	9.0	3.0	1.5	1.5	-0.5	2.5	-0.5	4.5	-0.5	11.0	2.0
23	8.5	6.5	2.0	1.5	1.5	-0.5	3.0	-0.5	---	0.0	9.5	4.5
24	8.0	6.0	3.5	1.5	2.5	-0.5	0.0	-0.5	---	---	13.5	5.0
25	9.5	4.5	3.0	0.5	1.5	-0.5	1.5	-0.5	---	---	14.5	6.5
26	13.0	6.5	1.5	0.0	2.0	-0.5	0.5	-0.5	---	---	11.0	7.5
27	14.5	7.5	2.0	0.0	0.5	-0.5	1.0	-0.5	---	---	12.0	5.5
28	14.0	7.0	2.5	0.5	0.5	-0.5	3.5	-0.5	8.5	3.0	10.0	7.0
29	13.5	6.5	1.0	0.5	2.5	-0.5	3.5	-0.5	7.0	2.5	8.0	4.5
30	14.5	7.0	1.0	0.0	0.5	-0.5	2.0	-0.5	---	---	7.5	2.0
31	11.5	8.0	---	---	-0.5	-0.5	3.5	-0.5	---	---	13.5	2.5
MONTH	19.0	4.5	16.5	0.0	6.5	-0.5	3.5	-0.5	8.5	-0.5	14.5	-0.5

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	16.5	5.5	21.0	6.5	30.5	17.0	28.0	16.5	21.5	17.5	31.0	16.0
2	16.5	7.5	19.5	7.0	30.0	18.0	27.0	18.5	21.0	16.0	29.5	16.0
3	16.0	5.0	21.5	6.5	30.0	18.0	30.0	18.0	28.5	16.0	27.5	15.0
4	17.0	5.0	22.0	7.5	29.5	17.0	26.5	19.0	32.5	17.5	29.5	14.5
5	18.0	6.5	20.0	10.5	26.5	15.5	29.0	19.0	31.5	17.5	32.0	16.0
6	14.0	9.5	21.5	7.5	27.0	15.5	33.0	19.0	30.0	17.0	27.5	16.5
7	12.5	8.0	15.0	8.0	29.0	16.0	30.5	20.0	31.5	17.0	28.0	17.0
8	8.0	7.5	20.5	6.0	24.5	18.5	32.5	19.5	30.5	18.0	27.5	14.5
9	14.5	6.5	24.5	7.5	22.0	20.0	30.0	19.0	27.0	19.0	26.0	10.5
10	18.5	8.0	25.0	10.0	22.0	20.0	32.0	19.0	31.0	17.0	27.0	12.5
11	15.5	9.5	23.0	10.0	21.5	19.0	31.5	19.5	30.5	18.0	29.5	14.0
12	20.5	8.0	16.5	10.5	21.5	18.0	30.0	19.5	32.0	17.0	28.5	17.5
13	21.0	10.5	17.5	8.5	23.0	17.0	29.5	19.0	31.0	17.0	28.0	16.5
14	17.0	8.5	18.5	10.0	18.5	13.5	31.0	19.0	29.5	17.0	25.5	16.0
15	16.0	8.0	14.5	10.0	20.5	12.0	30.0	19.5	24.5	18.5	23.5	15.0
16	14.0	8.5	14.0	9.0	22.0	14.0	31.0	17.0	33.5	17.5	21.5	18.5
17	11.5	7.0	23.5	7.5	20.0	15.5	30.0	19.0	31.5	18.5	25.0	18.0
18	19.5	5.5	24.5	7.0	21.0	14.0	32.5	19.0	31.0	17.5	28.5	17.5
19	20.0	9.5	28.5	10.5	25.5	15.0	32.0	21.0	29.5	17.5	21.0	16.0
20	20.0	7.0	29.0	13.0	31.0	15.5	25.0	21.5	32.0	17.5	20.5	14.5
21	15.5	8.0	21.5	15.0	32.5	18.0	26.0	20.0	33.0	18.5	23.0	11.5
22	20.5	7.0	15.0	11.5	29.5	18.5	30.0	19.5	31.5	18.0	22.0	13.0
23	21.0	10.5	13.0	10.5	22.5	17.5	25.0	20.0	32.0	18.0	20.0	14.5
24	17.0	7.0	13.5	10.0	25.5	14.0	29.5	18.5	29.5	18.0	19.0	14.0
25	19.0	7.5	16.5	10.0	26.0	15.5	31.0	18.5	32.0	17.5	21.0	15.5
26	8.0	5.5	21.5	12.5	24.0	15.0	29.5	19.0	31.5	17.5	20.5	14.5
27	6.0	5.0	26.5	13.5	33.0	15.5	31.0	19.0	29.5	17.0	16.5	11.0
28	7.0	4.5	29.5	16.5	32.5	17.0	32.0	19.0	30.5	14.0	19.0	8.0
29	9.0	6.0	27.0	17.0	24.5	19.0	33.5	17.0	2050.0	15.0	20.5	8.5
30	16.0	5.5	23.5	16.0	28.5	18.5	33.5	18.5	28.5	15.0	21.5	10.0
31	---	---	28.5	15.5	---	---	25.5	19.5	28.0	16.5	---	---
MONTH	21.0	4.5	29.5	6.0	33.0	12.0	33.5	16.5	2050.0	14.0	32.0	8.0

DATE	TIME	DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT				
31...	1000	101	35	9.5
DEC				
18...	1500	--	98	--
JAN				
29...	0820	715	470	907
FEB				
18...	1515	--	246	--
MAR				
06...	1115	--	325	--
16...	1515	--	358	--
APR				
14...	1415	--	63	--
MAY				
27...	0800	183	96	47
JUN				
23...	0700	98	1940	513
JUL				
28...	1300	19	68	3.5
AUG				
31...	1400	11	14	.42
SEP				
22...	1400	71	315	60

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

OCT. 31, 1975
1000 HOURS

IDENTIFICATION OF PHYTOPLANKTON

5,500 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	COUNT
	CHLOROPHYTA	GREEN ALGAE			0
	.CHLOROPHYCEAE				0
	..CHLOROCOCCALES				0
	...SCENEDESMACEAE				0
	....SCENEDESMUS		290	5	4
	CHRYSOPHYTA				0
	.BACILLARIOPHYCEAE	DIATOMS			0
	..CENTRALES	CENTRIC			0
	...COSCINODISCACEAE				0
	....CYCLOTELLA		430	8	6
	..PENNALES	PENNATE			0
	...ACHNANTHACEAE				0
	....ACHNANTHES		140	3	2
	...DIATOMACEAE				0
	....DIATOMA		580	10	8
	...FRAGILARIACEAE				0
	....SYNEDRA		72	1	1
	...GOMPHONEMATACEAE				0
	....GOMPHONEMA		140	3	2
	...NAVICULACEAE	NAVICULOID			0
	....AMPHIPRORA		290	5	4
L	....CALONEIS				0
D	....NAVICULA		1,700	31	24
	...NITZSCHIACEAE				0
D	....NITZSCHIA		1,700	31	24
	...SURIRELLACEAE				0
	....SURIRELLA		140	3	2
	CYANOPHYTA	BLUE-GREEN ALGAE			0
	.MYXOPHYCEAE				0
	..OSCILLATORIALES	FILAMENTOUS			0
	...OSCILLATORIACEAE				0
L	....LYNGBYA				0
L	....OSCILLATORIA				0
	EUGLENOPHYTA	EUGLENOIDS			0
	.EUGLENOPHYCEAE				0
	..EUGLENALES				0
	...EUGLENACEAE				0
L	....EUGLENA				0

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

NOV. 18, 1975
1600 HOURS

IDENTIFICATION OF PHYTOPLANKTON

12,000 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER_CENT	COUNT
	CHLOROPHYTA	GREEN ALGAE			0
	.CHLOROPHYCEAE				0
	..CHLOROCOCCALES				0
	...OCCYSTACEAE				0
	....CHODATELLA		300	2	2
	...SCENEDESMACEAE				0
	....ACTINASTRUM		1,000	9	7
	....SCENEDESMUS		900	7	6
	..VOLVOCALES				0
	...CHLAMYDOMONADACEAE				0
	....CHLAMYDOMONAS		150	1	1
	CHRYSOPHYTA				0
	.BACILLARIOPHYCEAE	DIATOMS			0
	..CENTRALES	CENTRIC			0
	...COSCINODISCACEAE				0
	....CYCLOTELLA		300	2	2
	....MELOSIRA		1,200	10	8
	..PENNALES	PENNATE			0
	...ACHNANTHACEAE				0
	....ACHNANTHES		450	4	3
	...CYMBELLACEAE				0
	....CYMBELLA		150	1	1
	....EPITHEMIA		150	1	1
	...DIATOMACEAE				0
	....DIATOMA		450	4	3
	...GOMPHONEMATACEAE				0
	....GOMPHONEMA		150	1	1
	...NAVICULACEAE	NAVICULOID			0
D	....NAVICULA		4,000	33	27
	...NITZSCHIACEAE				0
D	....NITZSCHIA		2,500	21	17
	...SURIRELLACEAE				0
	....CYMATOPLEURA		150	1	1
	....SURIRELLA		150	1	1

JAN. 29, 1976
0820 HOURS

IDENTIFICATION OF PHYTOPLANKTON

3,800 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
L	....ANKISTRODESMUS			0
	...SCENEDESMACEAE			
L	....SCENEDESMUS			0
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		290	8
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		140	4
L	....RHOICOSPHENIA			0
	...CYMBELLACEAE			
	....AMPHORA		140	4
	...FRAGILARIACEAE			
L	....SYNEDRA			0
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		2,600	69
	...NITZSCHIACEAE			
L	....HANTZSCHIA			0
D	....NITZSCHIA		580	15

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

FEB. 19, 1976
0815 HOURS

IDENTIFICATION OF PHYTOPLANKTON

6,400 CELLS/ML

	_ORGANISM__NAME	_COMMON__NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...SCENEDESMACEAE			
	....SCENEDESMUS		450	7
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
L	....CYCLOTELLA			0
	..PENNALES	PENNATE		
	...DIATOMACEAE			
	....DIATOMA		230	4
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		230	4
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		4,500	71
	....NEIDIUM		230	4
	...NITZSCHIACEAE			
	....NITZSCHIA		680	11

MAR. 17, 1976
0750 HOURS

IDENTIFICATION OF PHYTOPLANKTON

4,200 CELLS/ML

	_ORGANISM__NAME	_COMMON__NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..VOLVOCALES			
	...CHLAMYDOMONADACEAE			
L	....CHLAMYDOMONAS			0
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
L	....COCCONEIS			0
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		150	4
	...NAVICULACEAE	NAVICULOID		
	....CALONEIS		150	4
L	....GYROSIGMA			0
D	....NAVICULA		2,100	50
	...NITZSCHIACEAE			
D	....NITZSCHIA		1,500	36
	...SURIRELLACEAE			
	....SURIRELLA		300	7
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
L	....OSCILLATORIA			0
L	....PHORMIDIUM			0

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

APR. 14, 1976
1200 HOURS

IDENTIFICATION OF PHYTOPLANKTON

3,300 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...SCENEDESMACEAE			
L	....SCENEDESMUS			0
	..VOLVOCALES			
	...CHLAMYDOMONADACEAE			
L	....CHLAMYDOMONAS			0
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		130	4
	..PENNALES	PENNATE		
	...DIATOMACEAE			
	....DIATOMA		67	2
	...GOMPHONEMATACEAE			
L	....GOMPHONEMA			0
	...NAVICULACEAE	NAVICULOID		
L	....AMPHIPRORA			0
L	....CALONEIS			0
L	....GYROSIGMA			0
D	....NAVICULA		1,300	39
L	....PINNULARIA			0
	...NITZSCHIACEAE			
D	....NITZSCHIA		1,500	45
	...SURIRELLACEAE			
	....SURIRELLA		270	8
	EUGLENOPHYTA	EUGLENOIDS		
	.EUGLENOPHYCEAE			
	..EUGLENALES			
	...EUGLENACEAE			
	....EUGLENA		67	2

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

MAY 27, 1976
0800 HOURS

IDENTIFICATION OF PHYTOPLANKTON

27,000 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...MICRACTINIACEAE			
	....GOLENKINIA		250	1
	....MICRACTINIUM		3,600	13
	...OCCYSTACEAE			
	....ANKISTRODESMUS		500	2
L	....CHODATELLA			0
	....DICTYOSPHAERIUM		2,200	8
L	....KIRCHNERIELLA			0
	...SCENEDESMACEAE			
	....ACTINASTRUM		920	3
	....SCENEDESMUS		3,000	11
	..VOLVOCALES			
	...CHLAMYDOMONADACEAE			
	....CHLAMYDOMONAS		920	3
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		2,000	7
	....MELOSIRA		580	2
	..PENNALES	PENNATE		
	...CYMBELLACEAE			
L	....CYMBELLA			0
	...DIATOMACEAE			
	....DIATOMA		170	1
	...FRAGILARIACEAE			
	....SYNEDRA		500	2
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		170	1
	...NAVICULACEAE	NAVICULOID		
L	....AMPHIPRORA			0
	....NAVICULA		2,200	8
	...NITZSCHIACEAE			
	....NITZSCHIA		2,200	8
	...SURIRELLACEAE			
	....SURIRELLA		250	1
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....OSCILLATORIA		6,800	26

06764000 SOUTH PLATTE RIVER AT JULESBURG, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

AUG. 31, 1976
1400 HOURS

IDENTIFICATION OF PHYTOPLANKTON

3,700 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...HYDRODICTYACEAE			
D	....PEDIASTRUM		730	20
	...OOCYSTACEAE			
	....ANKISTRODESMUS		68	2
	...SCENEDESMACEAE			
	....SCENEDESMUS		180	5
	....TETRASTRUM		91	2
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		180	5
	....MELOSIRA		46	1
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		91	2
	...CYMBELLACEAE			
	....CYMBELLA		46	1
	...FRAGILARIACEAE			
	....SYNEDRA		180	5
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		110	3
	...NAVICULACEAE	NAVICULOID		
L	....GYROSIGMA			0
	....NAVICULA		360	10
	...NITZSCHIACEAE			
	....NITZSCHIA		180	5
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..CHROOCOCCALES	COCCOID		
	...CHROOCOCCACEAE			
D	....AGMENELLUM		730	20
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
D	....OSCILLATORIA		680	18
	EUGLENOPHYTA	EUGLENOIDS		
	.EUGLENOPHYCEAE			
	..EUGLENALES			
	...EUGLENACEAE			
	....EUGLENA		23	1

RESERVOIRS IN SOUTH PLATTE RIVER BASIN

06695500 ELEVENMILE CANYON RESERVOIR.--Lat 38°54'19", long 105°28'30", in N½SW¼ sec.20, T.13 S., R.72 W., Park County, Hydrologic Unit 10190001, at north end of dam on South Platte River, 8 mi (13 km) southwest of Lake George. DRAINAGE AREA, 963 mi² (2,494 km²). 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 twice daily. Datum of gage is at mean sea level (levels by Denver Board of Water Commissioners).

Reservoir is formed by concrete arch dam; storage began in October 1932; dam completed in November 1932. Spillway built 5.00 ft (1.524 m) higher Aug. 1, 1957. Capacity, 97,780 acre-ft (121 hm³) between elevations 8,488.25 ft (2,587.219 m), invert of outlet pipe, and 8,597.00 ft (2,620.366 m), crest of spillway. Dead storage is negligible. Figures given herein represent total contents. Water is for municipal use by city of Denver. Records furnished by Denver Board of Water Commissioners.

EXTREMES FOR PERIOD OF RECORD: Maximum contents observed, 111,200 acre-ft (137 hm³) Apr. 28, 1970, elevation, 8,600.82 ft (2,621.530 m); no contents at times in 1935.

EXTREMES FOR CURRENT YEAR: Maximum contents observed, 102,100 acre-ft (126 hm³) Aug. 5, elevation, 8,598.24 ft (2,620.744 m); minimum observed, 95,800 acre-ft (118 hm³) Sept. 30, elevation, 8,596.41 ft (2,620.186 m).

06701000 CHEESMAN LAKE.--Lat 39°12'26", long 105°19'18", in NW¼SW¼ sec.6, T.10 S., R.70 W., Douglas County, Hydrologic Unit 10190002, at dam on South Platte River, 4.1 mi (6.6 km) southwest of Deckers. DRAINAGE AREA, 1,752 mi² (4,538 km²). 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 twice daily. Datum of gage is at mean sea level, levels of Denver Board of Water Commissioners.

Reservoir is formed by masonry dam. Storage began September 1900. Dam completed about October 1902. Capacity, 79,060 acre-ft (97.5 hm³) at gage height 212 ft (64.4 m), spillway crest, above sill of lowest gate. No dead storage. Figures given herein represent total contents. Water is for municipal use by city of Denver. Records furnished by Denver Board of Water Commissioners.

EXTREMES FOR PERIOD OF RECORD: Maximum contents observed, 81,360 acre-ft (100 hm³) Apr. 29, 1970, gage height, 214.60 ft (65.410 m); minimum observed since appreciable storage was attained, 3,650 acre-ft (4.50 hm³) Apr. 20, 1933, gage height, 55.02 ft (16.770 m).

EXTREMES FOR CURRENT YEAR: Maximum contents observed, 53,640 acre-ft (66.1 hm³) Oct. 1, gage height, 179.42 ft (54.687 m); minimum observed, 21,710 acre-ft (26.8 hm³) July 11, gage height, 120.72 ft (36.795 m).

06709600 CHATFIELD LAKE.--Lat 39°33'26", long 105°03'27", in NW¼SE¼ 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 (7.6 km) southwest of courthouse in Littleton. DRAINAGE AREA, 3,018 mi (7,817 km²). PERIOD OF RECORD, May 1975 to current year. GAGE, water-stage recorder. Datum of gage is at mean sea level, datum of 1929 (levels by Corps of Engineers).

Reservoir is formed by an earthfill dam. Storage began May 29, 1975. Capacity, 235,000 acre-ft (290 hm³) at elevation 5,500 ft or 1,676.400 m (crest of spillway). No dead storage. Figures given herein represent total contents. Reservoir is for flood control and recreation. Records furnished by Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD: Maximum contents observed, 11,700 acre-ft (14.4 hm³) Apr. 20, 1976, elevation, 5,418.57 ft (1,651.580 m); no contents prior to May 29, 1975.

EXTREMES FOR CURRENT YEAR: Maximum contents observed, 11,700 acre-ft (14.4 hm³) Apr. 20, elevation, 5,418.57 ft (1,651.580 m); minimum observed, 6,210 acre-ft (7.66 hm³) Oct. 1, elevation, 5,411.61 ft (1,649.459 m).

06712990 CHERRY CREEK LAKE.--Lat 39°09'03", long 104°51'13", in NW¼NE¼ sec.2, T.55 S., R.67 W., Arapahoe County, Hydrologic Unit 10190003, 0.8 mi (1.3 km) southwest from intersection of Interstate Highway 225 and Parker Road, 0.2 mi (1.4 km) from right end of dam, 1.6 mi (2.6 km) northwest of intersection of Parker and Airline Roads, and 11.5 mi (18.5 km) upstream from mouth. DRAINAGE AREA, 385 mi² (997 km²). PERIOD OF RECORD, October 1960 to current year. GAGE, Water-stage recorder. Datum of gage is at mean sea level, datum of 1929 (levels by Corps of Engineers).

Reservoir is formed by an earthfill dam. Storage began May 15, 1957; dam completed in June 1950. Capacity, 92,820 acre-ft (114 hm³), revised, at elevation 5,598.00 ft (1,706.270 m), crest of spillway. No dead storage. Figures given herein represent total contents. Reservoir is for flood control and recreation. Records furnished by Corps of Engineers. NOTE: Capacity revised on basis of new capacity table dated January 1975.

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 31,120 acre-ft (38.4 hm³) June 3, 1973, elevation, 5,565.82 ft (1,696.462 m); minimum, 10,380 acre-ft (12.8 hm³) Sept. 30, 1964, elevation, 5,544.04 ft (1,689.823 m).

EXTREMES FOR CURRENT YEAR: Maximum contents, 13,120 acre-ft (16.2 hm³) May 2-8, elevation, 5,549.87 ft (1,691.600 m); minimum observed, 12,250 acre-ft (15.1 hm³) Sept. 11, elevation, 5,548.83 ft (1,691.283 m).

RESERVOIRS IN SOUTH PLATTE RIVER BASIN--Continued

MONTHEND ELEVATION OR GAGE HEIGHT AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)	Elevation or gage height (feet)	Contents (acre-feet)	Change in contents (acre-feet)
	06695500 ELEVENMILE CANYON RESERVOIR			06701000 CHEESMAN LAKE		
Sept. 30	8,597.41	99,190	-	179.83	53,920	-
Oct. 31	8,597.43	99,260	+70	174.20	50,110	-3,810
Nov. 30	8,597.32	98,880	-380	177.10	52,050	+1,940
Dec. 31	8,597.23	98,570	-310	175.63	51,060	-990
CAL YR 1975	-	-	+2,300	-	-	+7,700
Jan. 31	8,597.20	98,470	-100	171.82	48,540	-2,520
Feb. 29	8,497.24	98,600	+130	167.76	45,940	-2,600
Mar. 31	8,597.35	98,980	+380	169.38	46,970	+1,030
Apr. 30	8,597.39	99,120	+140	162.50	42,690	-4,280
May 31	8,497.33	98,910	-210	150.88	36,020	-6,670
June 30	8,597.50	99,500	+590	123.66	22,920	-13,100
July 31	8,597.78	100,500	+1,000	132.35	26,720	+3,800
Aug. 31	8,596.85	97,280	-3,220	135.88	28,370	+1,650
Sept. 30	8,596.41	95,800	-1,480	133.08	27,060	-1,310
WTR YR 1976	-	-	-3,390	-	-	-26,860

MONTHEND ELEVATION OR GAGE HEIGHT AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	06709600 CHATFIELD LAKE			06712990 CHERRY CREEK LAKE		
Sept. 30	5,411.49	6,130	-	5,549.49	12,800	-
Oct. 31	5,414.46	8,260	+2,130	5,549.20	12,560	-240
Nov. 30	5,416.80	10,150	+1,890	5,549.27	12,610	+50
Dec. 31	5,415.33	8,940	-1,210	5,549.35	12,680	+70
CAL YR 1975	-	-	-	-	-	+40
Jan. 31	5,417.39	10,660	+1,720	5,549.47	12,780	+100
Feb. 29	5,418.14	11,310	+650	5,549.53	12,830	+50
Mar. 31	5,418.13	11,300	-10	5,549.65	12,930	+100
Apr. 30	5,416.73	10,090	-1,210	5,549.85	13,100	+170
May 31	5,416.48	9,880	-210	5,549.80	13,060	-40
June 30	5,416.51	9,910	+30	5,549.42	12,740	-320
July 31	5,416.13	9,590	-320	5,549.23	12,580	-160
Aug. 31	5,416.50	9,900	+310	5,548.94	12,340	-240
Sept. 30	5,416.42	9,830	-70	5,548.94	12,340	0
WTR YR 1976	-	-	+3,700	-	-	-460

06823000 NORTH FORK REPUBLICAN RIVER AT COLORADO-NEBRASKA STATE LINE

LOCATION.--Lat 40°04'10", long 102°03'05", in sec.10, T.1 N., R.42 W., Dundy County, Ne., Hydrologic Unit 10250002, on right bank 100 ft (30 m) east of Colorado-Nebraska State line and 9.5 mi (15.3 km) upstream from confluence with Arikaree River.

DRAINAGE AREA.--1,360 mi² (3,520 km²), approximately, of which about 100 mi² (260 km²) 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 (1,016.840 m) above mean sea level. Prior to Oct. 17, 1934, nonrecording gage at present site and datum.

REMARKS.--Records good. Natural flow affected by diversion in Pioneer Canal for irrigation of about 2,700 acres (10.9 km³) in Colorado and Nebraska.

AVERAGE DISCHARGE.--46 years, 48.5 ft³/s (1.374 m³/s), 35,140 acre-ft/yr (43.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,110 ft³/s (59.8 m³/s) Apr. 28, 1947, gage height, 5.92 ft (1.804 m), from rating curve extended above 800 ft³/s (22.7 m³/s) on basis of slope-area measurement of peak flow; no flow Aug. 25, 26, 1932.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 83 ft³/s (2.35 m³/s) Dec. 3, gage height, 1.60 ft (0.488 m); no peak above base of 130 ft³/s (3.68 m³/s); maximum gage height, 2.26 ft (0.689 m) Nov. 22, backwater from ice; minimum daily discharge, 5.4 ft³/s (0.15 m³/s) July 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	31	74	60	61	60	51	31	42	5.4	12	6.7
2	14	31	78	58	61	60	52	31	35	6.0	13	6.5
3	13	31	77	55	63	58	51	31	28	9.9	12	8.2
4	11	29	76	55	61	59	51	29	27	12	10	8.1
5	12	20	73	60	56	58	51	15	33	12	9.6	7.6
6	12	18	68	61	59	61	53	14	25	10	9.0	8.8
7	9.8	19	65	58	58	65	53	15	26	8.7	7.6	8.8
8	10	28	66	56	60	67	59	23	24	6.4	7.9	10
9	8.2	28	66	58	63	66	62	24	22	6.4	7.9	10
10	9.3	27	67	60	65	64	53	24	11	6.4	10	11
11	8.6	27	66	64	62	64	51	21	9.5	6.8	8.6	10
12	10	21	64	68	61	59	51	12	10	8.6	7.1	9.9
13	12	34	64	67	60	57	49	12	9.5	7.3	7.3	7.2
14	13	30	62	64	63	60	49	12	9.5	7.9	7.7	7.7
15	13	29	60	64	66	61	41	12	9.2	7.4	8.8	7.6
16	17	30	59	67	62	60	35	11	9.3	6.0	7.8	12
17	25	28	60	71	61	61	20	11	8.4	7.0	7.8	14
18	26	26	60	71	60	59	24	8.7	8.9	7.0	9.2	8.4
19	31	23	60	68	58	58	27	6.6	7.7	6.8	7.8	8.3
20	29	45	62	65	61	57	24	6.9	9.6	9.8	7.2	8.6
21	27	55	62	65	56	55	21	8.5	8.3	11	7.1	7.9
22	22	70	64	66	65	58	21	42	8.9	9.6	6.8	8.1
23	17	70	65	66	66	58	13	53	14	9.9	8.0	8.1
24	17	66	64	66	66	57	15	53	11	9.9	8.2	8.1
25	21	60	65	66	65	59	15	54	12	8.5	9.6	8.7
26	28	60	66	65	61	55	17	48	11	10	9.0	10
27	20	62	66	64	61	53	15	23	9.3	10	9.7	16
28	20	62	66	62	60	51	20	24	10	8.9	11	17
29	16	64	66	62	61	50	31	28	13	9.6	8.5	18
30	22	66	66	61	---	50	31	51	6.3	9.0	7.0	19
31	31	---	67	61	---	51	---	54	---	11	7.0	---
TOTAL	538.9	1190	2044	1954	1782	1811	1106	788.7	468.4	265.2	270.2	300.3
MEAN	17.4	39.7	65.9	63.0	61.4	58.4	36.9	25.4	15.6	8.55	8.72	10.0
MAX	31	70	78	71	66	67	62	54	42	12	13	19
MIN	8.2	18	59	55	56	50	13	6.6	6.3	5.4	6.8	6.5
AC-FT	1070	2360	4050	3880	3530	3590	2190	1560	929	526	536	596

CAL YR 1975 TOTAL 14359.7 MEAN 39.3 MAX 188 MIN 5.4 AC-FT 28480
WTR YR 1976 TOTAL 12518.7 MEAN 34.2 MAX 78 MIN 5.4 AC-FT 24830

06825500 LANDSMAN CREEK NEAR HALE, CO

LOCATION.--Lat 39°34'32", long 102°15'06", in SE¼ sec.35, T.5 S., R.44 W., Yuma County, Hydrologic Unit 10250003, on right bank 900 ft (270 m) upstream from bridge on U.S. Highway 385, 3.2 mi (5.1 km) upstream from mouth, 5.2 mi (8.4 km) southwest of Bonny Dam, and 7 mi (11 km) southwest of Hale.

DRAINAGE AREA.--268 mi² (694 km²).

PERIOD OF RECORD.--May 1950 to September 1976 (discontinued).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 3,720 ft (1,134 m), from topographic map. Prior to Aug. 3, 1965, at site 1,200 ft (370 m) downstream: at datum 0.68 ft (0.207 m) lower prior to Oct. 21, 1950, and June 6 to Aug. 10, 1951; at datum 0.79 ft (0.241 m) higher Oct. 21, 1950, to June 5, 1951; and at present datum subsequent to Aug. 10, 1951.

REMARKS.--Records poor. Small diversions above station for irrigation.

AVERAGE DISCHARGE.--26 years, 3.68 ft³/s (0.104 m³/s), 2,670 acre-ft/yr (3.29 hm³/yr).

EXIREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s (368 m³/s) June 20, 1975, gage height, 14.91 ft (4.545 m), by slope-area measurement of peak flow; maximum gage height, 15.78 ft (4.810 m) Aug. 23, 1969; no flow for several days in 1955 and 1965.

EXIREMES OUTSIDE PERIOD OF RECORD.--Outstanding flood of May 30, 31, 1935, reached a stage of about 10 ft (3.0 m), former site and present datum, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,520 ft³/s (43.0 m³/s) Sept. 15, gage height, 11.24 ft (3.426 m) above base of 350 ft³/s (9.9 m³/s), only peak above base; minimum daily, 0.06 ft³/s (0.002 m³/s) Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	.23	.34	.25	.25	.25	.32	.28	.12	.10	.19	.22
2	.26	.24	.30	.25	.25	.25	.32	.31	.11	.10	.20	.25
3	.25	.24	.26	.25	.25	.25	.29	.30	.11	10	.20	.29
4	.25	.26	.25	.25	.25	.25	.28	.28	.11	.17	.15	.31
5	.24	.28	.24	.25	.25	.25	.28	.27	.10	.11	.16	.37
6	.24	.28	.21	.25	.25	.25	.28	.24	.10	.09	.12	.37
7	.24	.28	.23	.25	.25	.25	.30	.22	.10	.09	.12	.41
8	.23	.30	.24	.25	.25	.25	.30	.19	.10	.09	.11	.42
9	.20	.32	.24	.25	.25	.23	.25	.19	.10	.09	.11	.46
10	.22	.32	.24	.25	.25	.25	.25	.18	.10	.09	.12	.43
11	.23	.32	.24	.25	.25	.28	.25	.20	.10	.09	.12	.48
12	.23	.32	.24	.25	.25	.23	.25	.20	.10	.10	.11	.43
13	.26	.32	.24	.25	.25	.27	.28	.20	.10	.10	.13	.46
14	.34	.32	.24	.25	.25	.34	.24	.24	.10	.11	.13	.47
15	.35	.33	.24	.25	.25	.43	.18	.20	.10	.13	.11	43
16	.34	.32	.24	.25	.25	.40	.17	.18	.10	.14	.11	83
17	.35	.33	.24	.25	.25	.41	.17	.18	.10	.17	.10	.12
18	.42	.33	.24	.25	.25	.42	.16	.17	.10	.20	.09	.10
19	.42	.33	.24	.25	.25	.37	.18	.17	.10	.18	.10	.11
20	.39	.33	.24	.25	.25	.34	.24	.17	.10	.17	.10	1.3
21	.40	.33	.24	.25	.25	.32	.20	.17	.10	.19	.10	.16
22	.36	.33	.24	.25	.25	.32	.28	.17	.10	.17	.10	.15
23	.18	.33	.24	.25	.25	.36	.29	.16	.10	.17	.09	.18
24	.21	.33	.24	.25	.25	.35	.27	.16	.10	.15	.09	.18
25	.24	.35	.24	.25	.25	.34	.27	.15	.10	.13	.08	.25
26	.25	.35	.24	.25	.25	.33	.31	.15	.10	.13	.07	.25
27	.22	.35	.24	.25	.25	.35	.33	.15	.10	.16	.08	.28
28	.21	.35	.24	.25	.25	.34	.27	.15	.10	.21	.08	.28
29	.21	.36	.24	.25	.25	.32	.25	.14	.10	.18	.06	.28
30	.23	.34	.24	.25	---	.32	.26	.13	.10	.19	.11	.28
31	.22	---	.24	.25	---	.33	---	.12	---	.21	.18	---
TOTAL	8.46	9.42	7.59	7.75	7.25	9.65	7.72	6.02	3.05	14.21	3.62	135.29
MEAN	.27	.31	.24	.25	.25	.31	.26	.19	.10	.46	.12	4.51
MAX	.42	.36	.34	.25	.25	.43	.33	.31	.12	10	.20	83
MIN	.18	.23	.21	.25	.25	.23	.16	.12	.10	.09	.06	.10
AC-FT	17	19	15	15	14	19	15	12	6.0	28	7.2	268

CAL YR 1975 TOTAL 1704.30 MEAN .67 MAX 779 MIN .01 AC-FT 3380
WTR YR 1976 TOTAL 220.03 MEAN .60 MAX 83 MIN .06 AC-FT 436

NOTE.--STAGE-DISCHARGE RELATION INDEFINITE DEC. 9 TO MAR. 6, MAY 18 TO JULY 4.

06826000 BONNY RESERVOIR NEAR HALE, CO

LOCATION.--Lat 39°37'24", long 102°10'26", in SE¼SE¼ 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 (2.7 km) west of Hale, and 3.0 mi (4.8 km) downstream from Landsman Creek.

DRAINAGE AREA.--1,820 mi² (4,710 km²), approximately.

PERIOD OF RECORD.--October 1950 to current year.

REVISED RECORDS.--WSP 1710: 1955.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Oct. 1, 1967, nonrecording gage at same 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 (210 hm³) below elevation 3,710 ft (1,130.8 m), crest of spillway, of which 128,300 acre-ft (159 hm³) is for flood control and 39,900 acre-ft (49.2 hm³) is for irrigation. Dead storage, 1,420 acre-ft (1.75 hm³) below elevation 3,635.0 ft (1,107.95 m), sill of trashrack at outlet conduit. Figures given herein represent total contents.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 55,030 acre-ft (67.9 hm³) May 17, 1957, elevation, 3,678.10 ft (1,121.085 m); minimum observed since appreciable contents was attained, 22,520 acre-ft (27.83 hm³) Oct. 6-14, 1952, elevation, 3,661.20 ft (1,115.934 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 42,220 acre-ft (52.1 hm³) Feb. 17, elevation, 3,672.43 ft (1,119.357 m); minimum, 35,410 acre-ft (43.7 hm³) Sept. 13, elevation, 3,668.95 ft (1,118.296 m).

Capacity table (elevation, in feet, and total contents, in acre-feet)
(Furnished by Bureau of Reclamation)

3,665.0	28,460
3,670.0	37,390
3,675.0	47,760

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37980	37660	38820	40280	41730	41340	41320	41600	41070	39740	37790	36100
2	37980	37690	38890	40280	41730	41300	41300	41560	41050	39800	37730	36020
3	37980	37730	38950	40320	41750	41300	41300	41540	41010	39780	37710	35960
4	37980	37750	39010	40380	41750	41340	41300	41520	41010	39880	37640	35910
5	37980	37770	39070	40420	41770	41340	41300	41480	41050	39820	37640	35850
6	37980	37810	39110	40420	41830	41340	41340	41420	41030	39780	37560	35780
7	37920	37830	39150	40440	41850	41380	41400	41400	41030	39700	37540	35710
8	37850	37870	39210	40480	41970	41400	41480	41360	41010	39640	37500	35620
9	37830	37920	39290	40520	42010	41420	41500	41380	41010	39570	37430	35580
10	37810	37980	39350	40540	42010	41420	41520	41340	40990	39470	37390	35540
11	37810	37940	39390	40600	42040	41440	41540	41320	40930	39390	37300	35480
12	37770	37940	39450	40670	42080	41420	41560	41260	40890	39250	37240	35450
13	37730	37960	39490	40710	42100	41440	41580	41190	40870	39210	37240	35410
14	37710	38020	39530	40750	42120	41420	41600	41170	40690	39150	37180	35500
15	37680	38040	39550	40810	42160	41440	41560	41090	40600	39050	37120	35890
16	37680	38060	39620	40890	42180	41460	41540	41050	40600	38990	37060	36610
17	37660	38090	39620	40950	42220	41460	41640	41050	40520	38910	36960	36740
18	37660	38110	39640	41030	42160	41480	41640	41030	40480	38820	36880	36780
19	37640	38370	39680	41110	41990	41460	41710	40990	40460	38720	36780	36760
20	37620	38350	39740	41130	41750	41440	41730	40950	40420	38660	36740	36820
21	37620	38390	39800	41170	41670	41440	41710	40950	40380	38620	36710	36840
22	37560	38430	39860	41240	41540	41440	41710	41010	40320	38560	36670	36840
23	37560	38460	39900	41300	41380	41460	41730	40990	40260	38500	36610	36800
24	37560	38520	39940	41360	41320	41480	41640	40990	40200	38440	36610	36800
25	37560	38540	39980	41400	41300	41440	41600	40990	40140	38370	36560	36780
26	37600	38580	40020	41420	41320	41420	41580	40990	40020	38290	36480	36780
27	37600	38620	40060	41480	41300	41380	41600	40990	39980	38230	36380	36800
28	37600	38700	40120	41540	41260	41340	41600	40990	39980	38170	36310	36800
29	37620	38720	40160	41580	41300	41320	41620	40910	39860	38130	36230	36800
30	37620	38760	40220	41620	---	41320	41600	41050	39760	38040	36210	36800
31	37620	---	40260	41670	---	41320	---	41070	---	37870	36140	---
MAX	37980	38760	40260	41670	42220	41480	41730	41600	41070	39880	37790	36840
MIN	37560	37660	38820	40280	41260	41300	41300	40910	39760	37870	36140	35410
†	3670.12	3670.71	3671.47	3672.16	3671.98	3671.99	3672.13	3671.87	3671.22	3670.25	3669.34	3669.69
‡	-380	+1,140	+1,500	+1,410	-370	+20	+280	-530	-1,310	-1,890	-1,730	+660

CAL YR 1975... +2,200
WTR YR 1976... -1,200

† ELEVATION, IN FEET, AT END OF MONTH.
‡ CHANGE IN CONTENTS, IN ACRE-FEET.

06826500 SOUTH FORK REPUBLICAN RIVER NEAR HALE, CO

LOCATION.--Lat 39°37'26", long 102°09'47", in SW¼NE¼ sec.15, T.5 S., R.43 W., Yuma County, Hydrologic Unit 10250003, on right bank 0.5 mi (0.8 km) downstream from Bonny Dam and 1.2 mi (1.9 km) west of Hale.

DRAINAGE AREA.--1,825 mi² (4,730 km²), approximately.

PERIOD OF RECORD.--October 1946 to September 1948, May 1951 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 3,610 ft (1,100 m), from topographic map. Oct. 1, 1946, to Sept. 30, 1948, at site 4 mi (6 km) downstream at different datum.

REMARKS.--Records excellent. Flow regulated by Bonny Reservoir since July 6, 1950 (see sta. 06826000). Many diversions above station for irrigation. Water diverted by Hale ditch from Bonny Reservoir bypasses station, 2,240 acre-ft (3.01 hm³) diverted during current year.

COOPERATION.--Hale ditch diversion records furnished by State Engineer.

AVERAGE DISCHARGE.--25 years (water years 1952-76), 22.4 ft³/s (0.634 m³/s), 16,230 acre-ft/yr (20.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,790 ft³/s (107 m³/s) May 28, 1947, gage height, 4.71 ft (1.436 m), site and datum then in use; maximum gage height, 4.84 ft (1.475 m) Apr. 28, 1947, site and datum then in use; no flow Aug. 11-13, 1947.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood known occurred May 31, 1935, stage and discharge not determined. A discharge of 103,000 ft³/s (2,920 m³/s) was determined at a site near Newton 5.5 mi (8.8 km) upstream, with a drainage area of approximately 1,270 mi² (3,290 km²).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 149 ft³/s (4.22 m³/s) Feb. 20, gage height, 4.70 ft (1.433 m); minimum daily, 4.7 ft³/s (0.13 m³/s) Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	6.1	6.1	6.4	5.8	23	8.1	6.5	6.2	5.8	5.8	4.8
2	5.8	5.8	6.3	6.0	5.8	24	8.1	6.4	6.2	6.2	6.1	4.8
3	5.8	5.9	6.3	5.9	5.8	21	8.1	6.4	6.2	6.5	6.1	4.7
4	5.8	6.2	6.3	6.0	5.7	19	8.2	6.4	6.2	6.2	6.0	4.8
5	5.8	6.2	6.2	6.1	5.7	19	8.3	6.3	7.0	6.2	5.8	4.8
6	5.8	6.2	6.5	6.0	5.7	19	7.9	6.2	6.2	6.2	5.7	4.8
7	5.7	6.2	6.5	5.9	5.8	19	6.6	6.3	6.2	6.2	5.7	5.2
8	5.7	6.2	6.5	5.9	5.8	19	6.3	6.4	6.2	6.2	5.6	5.2
9	5.9	6.3	6.8	6.0	5.8	19	6.2	6.4	5.8	6.2	5.6	5.2
10	5.8	6.2	6.7	6.0	5.8	19	6.2	6.4	5.8	6.2	5.6	5.2
11	5.8	6.1	6.6	5.9	5.8	20	6.2	6.4	5.8	6.2	5.5	5.2
12	5.8	5.9	6.6	6.0	5.8	19	6.4	6.4	5.8	6.2	5.4	5.3
13	5.8	6.0	6.5	6.0	5.8	19	6.3	6.3	5.8	6.2	6.1	5.3
14	5.8	6.2	6.5	5.9	5.9	19	6.3	6.3	5.5	6.2	6.0	5.8
15	5.8	6.2	6.5	6.0	5.9	19	6.4	6.3	5.2	5.8	5.7	6.9
16	5.8	6.2	6.5	6.1	5.9	19	6.7	6.3	5.2	5.5	5.6	7.6
17	5.8	6.4	6.5	6.1	6.0	19	7.2	6.2	5.5	5.5	5.4	5.8
18	5.8	6.4	6.4	6.2	65	19	6.8	5.8	5.5	5.5	5.4	5.8
19	5.8	7.3	6.4	6.1	140	19	7.1	5.8	5.2	5.5	5.4	5.8
20	5.7	6.9	6.5	6.1	142	19	7.0	6.2	4.8	5.5	5.4	5.8
21	5.4	6.2	6.5	6.2	143	19	6.9	6.2	4.8	5.8	5.5	6.2
22	5.6	6.2	6.5	5.9	143	19	7.1	6.5	4.8	5.5	5.2	6.2
23	6.2	6.2	6.4	5.9	144	19	7.5	6.5	4.8	5.5	5.1	6.2
24	6.1	6.1	6.5	5.8	95	19	7.2	5.8	4.8	5.5	5.1	6.2
25	6.0	6.1	6.5	5.8	43	19	7.0	6.2	4.8	5.5	5.1	6.5
26	6.1	6.1	6.5	5.7	22	17	7.4	6.2	4.8	5.5	5.1	6.5
27	6.1	6.0	6.7	5.8	20	17	7.0	6.2	4.8	5.8	5.1	6.5
28	6.0	6.0	6.5	5.8	19	11	6.9	6.2	4.8	5.7	5.2	6.2
29	6.0	6.2	6.1	5.9	19	10	6.7	6.2	4.8	5.7	5.1	6.2
30	5.9	5.9	6.2	5.9	---	9.3	6.5	6.2	4.8	5.7	5.0	6.2
31	5.8	---	6.2	5.8	---	8.1	---	6.5	---	5.7	4.8	---
TOTAL	181.0	185.9	199.8	185.1	1093.8	559.4	210.6	194.4	164.3	181.9	170.2	171.7
MEAN	5.84	6.20	6.45	5.97	37.7	18.0	7.02	6.27	5.48	5.87	5.49	5.72
MAX	6.2	7.3	6.8	6.4	144	24	8.3	6.5	7.0	6.5	6.1	7.6
MIN	5.4	5.8	6.1	5.7	5.7	8.1	6.2	5.8	4.8	5.5	4.8	4.7
AC-FT	359	369	396	367	2170	1110	418	386	326	361	338	341

CAL YR 1975 TOTAL 6641.1 MEAN 18.2 MAX 144 MIN 5.2 AC-FT 13170
WTR YR 1976 TOTAL 3498.1 MEAN 9.56 MAX 144 MIN 4.7 AC-FT 6940

ARKANSAS RIVER BASIN

07081200 ARKANSAS RIVER NEAR LEADVILLE, CO

LOCATION.--Lat 39°15'26", long 106°20'35", in NW¼NW¼ sec.21, T.9 S., R.80 W., Lake County, Hydrologic Unit 11020001, 500 ft (150 m) downstream from confluence of East Fork Arkansas River and Tennessee Creek, 0.5 mi (0.8 km) downstream from highway bridge, and 2.8 mi (4.5 km) west of Leadville.

DRAINAGE AREA.--97.2 mi² (251.7 km²).

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,730 ft (2,966 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Transmountain diversion from Colorado River basin to Arkansas River basin enters above this station (see elsewhere in this report). Small diversions upstream for irrigation and municipal use.

AVERAGE DISCHARGE.--9 years, 70.7 ft³/s (2.002 m³/s), 51,220 acre-ft/yr) 63.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 803 ft³/s (22.7 m³/s) June 12, 1973, gage height, 4.34 ft (1.323 m); minimum daily, 8.5 ft³/s (0.24 m³/s) Mar. 21 to Apr. 14, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 489 ft³/s (13.8 m³/s) June 10, gage height, 3.88 ft (1.183 m); minimum daily, 10 ft³/s (0.28 m³/s) Jan. 1-5, 10-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	20	14	10	16	18	30	62	234	140	86	34
2	24	20	14	10	16	18	32	64	320	140	108	33
3	24	20	15	10	16	16	35	72	315	125	138	31
4	23	20	16	10	16	14	35	83	390	123	95	29
5	23	20	16	10	16	13	35	85	415	117	78	28
6	23	19	16	11	14	13	35	86	435	115	67	29
7	23	18	17	11	13	13	35	83	370	108	62	26
8	23	20	18	11	13	13	35	86	425	106	64	27
9	22	20	18	11	13	15	40	88	435	104	72	30
10	22	19	18	10	15	17	45	90	415	104	63	24
11	22	18	18	10	16	17	50	100	375	102	72	24
12	21	18	17	10	16	17	55	108	292	100	72	31
13	22	18	16	10	16	15	55	93	226	98	62	27
14	21	17	16	10	16	15	55	113	206	92	60	38
15	20	17	16	10	16	15	55	160	165	85	54	35
16	20	17	14	14	14	15	55	180	160	77	51	40
17	20	17	14	15	13	15	55	195	160	76	47	35
18	20	17	14	15	13	15	55	230	142	77	47	32
19	19	17	14	18	13	18	55	242	130	95	48	32
20	19	17	14	19	13	18	55	246	140	95	47	29
21	19	16	16	19	12	18	58	288	174	102	52	26
22	20	14	16	19	12	16	60	234	195	85	47	29
23	20	14	16	19	12	16	60	186	223	77	44	32
24	20	15	15	19	14	16	60	168	160	74	42	32
25	20	16	14	16	17	19	60	174	138	70	40	34
26	20	16	14	12	18	22	60	162	136	70	38	44
27	20	16	14	12	18	22	60	186	140	76	42	53
28	20	15	12	12	18	22	60	234	148	67	40	46
29	20	14	12	13	18	22	60	266	148	60	38	40
30	20	14	12	15	---	22	60	284	134	58	38	32
31	20	---	12	16	---	25	---	234	---	58	37	---
TOTAL	654	519	468	407	433	530	1500	4882	7346	2876	1851	982
MEAN	21.1	17.3	15.1	13.1	14.9	17.1	50.0	157	245	92.8	59.7	32.7
MAX	24	20	18	19	18	25	60	288	435	140	138	53
MIN	19	14	12	10	12	13	30	62	130	58	37	24
AC-FT	1300	1030	928	807	859	1050	2980	9680	14570	5700	3670	1950

CAL YR 1975 TOTAL 24419 MEAN 66.9 MAX 465 MIN 10 AC-FT 48440
WTR YR 1976 TOTAL 22448 MEAN 61.3 MAX 435 MIN 10 AC-FT 44530

NOTE.--NO GAGE-HEIGHT RECORD DEC. 18 TO MAY 1.

07082400 TURQUOISE LAKE NEAR LEADVILLE, CO

LOCATION.--Lat 39°15'10", long 106°22'26", in SW¼NE¼ 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 (6.4 km) west of Leadville and 4.6 mi (7.4 km) upstream from mouth.

DRAINAGE AREA.--28.1 mi² (72.8 km²).

PERIOD OF RECORD.--April 1968 to current year.

GAGE.--Nonrecording gage read once daily. Datum of gage is 9,754.00 ft (2,973.019 m) above mean sea level (levels by Bureau of Reclamation); gage readings have been reduced to elevations above mean sea level.

REMARKS.--Reservoir formed by earthfill dam completed in 1909, capacity, 17,400 acre-ft (21.5 hm³). Enlargement of dam began Dec. 8, 1965, and closure was made Apr. 15, 1968. Enlarged capacity, 129,400 acre-ft (160 hm³) at elevation 9,869.4 ft (3,008.19 m), crest of spillway. Dead storage, 2,770 acre-ft (3.42 hm³) below elevation 9,765.90 ft (2,976.646 m), sill of lowest outlet. Figures given herein 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 furnished by Bureau of Reclamation.

EXTREMES (at 0800 of following day) FOR PERIOD OF RECORD.--Maximum contents, 104,900 acre-ft (129 hm³) July 25, 26, 1973, elevation, 9,855.28 ft (3,003.889 m); minimum since appreciable storage was attained, 14,510 acre-ft (17.9 hm³) Oct. 1, 1968, elevation, 9,782.85 ft (2,981.813 m).

EXTREMES (at 0800 of following day) FOR CURRENT YEAR.--Maximum contents, 77,560 acre-ft (95.6 hm³) July 10, elevation, 9,838.33 ft (2,998.723 m); minimum, 51,180 acre-ft (63.1 hm³) Apr. 30, elevation, 9,819.58 ft (2,993.008 m).

MONTHEND ELEVATION AND CONTENTS, AT 0800, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	9,837.30	75,990	
Oct. 31	9,834.93	72,420	-3,570
Nov. 30	9,827.09	61,180	-11,240
Dec. 31	9,827.12	61,220	+40
CAL YR 1975			+13,780
Jan. 31	9,827.18	61,310	+90
Feb. 29	9,825.57	59,100	-2,210
Mar. 31	9,821.99	54,310	-4,790
Apr. 30	9,819.58	51,180	-3,130
May 31	9,826.98	61,030	+9,850
June 30	9,837.51	76,310	+15,280
July 31	9,837.29	75,980	-330
Aug. 31	9,835.86	73,810	-2,170
Sept. 30	9,833.03	69,620	-4,190
WTR YR 1976			-6,370

07083000 HALFMOON CREEK NEAR MALTA, CO
(Hydrologic bench-mark station)

LOCATION.--Lat 39°10'20", long 106°23'19", in SE¼SE¼ sec.13, T.10 S., R.81 W., Lake County, Hydrologic Unit 11020001, on right bank 1.4 mi (2.3 km) upstream from culvert, 3.3 mi (5.3 km) upstream from mouth, and 4.3 mi (6.9 km) southwest of Malta.

DRAINAGE AREA.--23.6 mi² (61.1 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1946 to current year.

REVISED RECORDS.--WSP 2121: Drainage area at site 1.4 mi (2.3 km) downstream, 1967(M), 1967.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 9,830 ft (2,996 m), from topographic map. Prior to Oct. 19, 1966, at sites 1.4 mi (2.3 km) downstream at different datums.

REMARKS.--Records good except those for winter period, which are fair. No regulation or diversion above station.

AVERAGE DISCHARGE.--30 years, 28.4 ft³/s (0.804 m³/s), 20,580 acre-ft/yr (25.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 450 ft³/s (12.7 m³/s) June 30, 1957, gage height, 3.48 ft (1.061 m), site and datum then in use; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.2 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 2	2000	*200	5.66	3.15	0.960	June 20	2300	150	4.25	2.97	0.905

Minimum daily discharge, 1.5 ft (0.042 m³/s) Jan. 7-9, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	6.1	5.5	2.2	2.0	2.6	2.9	11	94	88	37	14
2	9.2	5.5	5.1	1.9	2.0	2.4	3.2	12	112	88	42	14
3	8.8	5.5	4.9	1.7	2.0	2.4	3.3	16	113	79	42	13
4	8.5	5.6	4.6	1.7	2.0	2.3	3.3	20	129	80	36	12
5	8.5	5.6	4.4	1.7	2.0	2.4	3.3	21	146	76	32	12
6	8.2	5.6	4.4	1.6	2.0	2.4	3.3	22	141	72	29	12
7	8.2	4.9	4.1	1.5	2.0	2.4	3.3	19	125	65	28	14
8	8.5	5.6	4.1	1.5	2.1	2.3	3.7	16	146	64	33	13
9	7.8	4.4	3.9	1.5	2.1	2.6	5.1	15	148	68	30	12
10	8.2	4.1	3.9	1.8	2.1	2.3	5.5	15	152	61	27	12
11	8.2	6.1	3.7	1.9	2.3	2.4	6.9	18	129	61	29	11
12	7.8	6.9	3.7	1.9	2.4	2.3	7.2	18	99	62	29	11
13	7.8	10	3.7	1.8	2.3	2.3	6.7	16	80	63	27	11
14	7.5	9.2	3.7	1.6	2.6	2.4	6.1	22	67	56	25	16
15	7.5	7.8	3.5	1.6	2.6	2.4	5.6	35	57	51	23	18
16	7.2	6.1	3.5	1.6	2.6	2.6	5.5	43	61	46	21	19
17	7.2	6.0	3.2	1.8	2.4	2.6	5.1	51	61	44	21	16
18	7.2	5.5	3.2	1.7	2.6	2.6	4.6	62	50	42	21	14
19	6.7	5.5	3.2	1.6	2.6	2.4	4.6	64	49	46	21	14
20	6.7	5.1	3.2	1.5	2.6	2.4	4.9	67	65	44	21	13
21	6.4	4.9	3.2	1.6	2.4	2.4	5.6	76	91	42	23	12
22	6.4	4.4	3.2	1.8	2.6	2.4	6.4	59	104	37	19	13
23	6.1	5.1	3.2	1.8	2.6	2.4	6.7	46	104	36	19	13
24	4.9	4.9	3.2	1.9	2.6	3.3	6.1	41	72	34	18	12
25	4.6	5.1	3.2	1.9	2.6	3.9	6.7	48	64	34	17	14
26	7.8	5.1	3.2	1.9	2.6	3.9	7.2	47	69	37	18	19
27	7.2	5.1	3.2	2.0	2.6	3.2	7.5	61	79	40	22	19
28	6.1	5.1	3.0	2.0	2.6	2.7	9.5	77	91	33	17	19
29	5.5	4.9	2.5	2.0	2.6	2.6	11	86	86	32	16	18
30	5.5	4.1	2.5	2.0	---	2.4	11	82	77	29	16	18
31	6.4	---	2.5	2.0	---	2.7	---	73	---	28	16	---
TOTAL	225.8	169.8	112.4	55.0	68.5	80.4	171.8	1259	2861	1638	775	428
MEAN	7.28	5.66	3.63	1.77	2.36	2.59	5.73	40.6	95.4	52.8	25.0	14.3
MAX	9.2	10	5.5	2.2	2.6	3.9	11	86	152	88	42	19
MIN	4.6	4.1	2.5	1.5	2.0	2.3	2.9	11	49	28	16	11
AC-FT	448	337	223	109	136	159	341	2500	5670	3250	1540	849

CAL YR 1975 TOTAL 10135.9 MEAN 27.8 MAX 185 MIN 2.3 AC-FT 20100
WTR YR 1976 TOTAL 7844.7 MEAN 21.4 MAX 152 MIN 1.5 AC-FT 15560

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 current year.

INSTRUMENTATION.--Water temperature recorder since May 23, 1967.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum, 17.0°C July 28, 1969, Aug. 13, 1972, Aug. 17, 1974; minimum, freezing point on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 15.5°C July 31; minimum, freezing point on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
OCT											
15...	1500	6.9	88	--	6.5	8.7	<1	<1	81	44	--
NOV											
19...	1015	4.3	90	--	.0	9.7	<1	<1	<1	41	0
DEC											
17...	1315	3.2	105	6.8	.0	10.0	--	--	--	44	7
JAN											
21...	1130	2.1	90	7.3	.0	10.2	B13	<1	<1	44	0
FEB											
18...	1145	2.5	100	6.8	.0	10.4	<1	<1	<1	47	2
MAR											
16...	1200	3.1	100	7.3	.0	13.0	<1	<1	<1	46	0
APR											
14...	1200	7.1	90	7.4	5.0	9.9	<1	<1	<1	45	3
MAY											
18...	1000	52	90	7.0	1.5	9.9	B2	<1	<1	19	3
JUN											
16...	1300	56	55	7.1	7.5	8.5	<1	<1	--	23	0
JUL											
13...	1300	60	50	6.9	9.0	8.0	--	B2	B1	26	2
AUG											
17...	1130	21	90	6.8	10.0	8.0	--	20	B7	36	7
SEP											
15...	1500	18	90	7.5	6.5	8.1	<1	<1	<1	35	5

DATE	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)
OCT											
15...	11	3.9	1.8	.1	.6	47	--	--	6.7	1.4	.2
NOV											
19...	10	3.8	1.5	.1	.6	50	--	41	5.7	.0	.1
DEC											
17...	11	4.1	1.6	.1	.6	45	0	37	5.5	.2	.1
JAN											
21...	11	4.1	1.9	.1	.8	55	0	45	5.6	.3	.3
FEB											
18...	11	4.7	1.4	.1	.7	55	0	45	9.1	.0	.2
MAR											
16...	11	4.6	1.5	.1	.8	57	0	47	6.8	.0	.2
APR											
14...	9.8	4.9	1.6	.1	.8	51	0	42	5.3	.3	.2
MAY											
18...	4.5	1.9	.8	.1	.5	20	0	16	3.3	.5	.2
JUN											
16...	6.1	1.9	.8	.1	.5	28	0	23	3.6	.0	.1
JUL											
13...	7.0	2.0	.6	.1	.4	29	0	24	3.7	.4	.1
AUG											
17...	8.7	3.4	1.0	.1	.6	35	0	29	5.2	.5	.1
SEP											
15...	8.9	3.1	1.0	.1	.5	37	0	30	5.8	.5	.1

07083000 HALFMOON CREEK NEAR MALTA, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO, PHOS-PHORUS (P) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
OCT 15...	.2	5.3	--	--	.89	.08	.00	50	10	--	--
NOV 19...	.1	5.6	53	.07	.63	.15	.00	70	10	--	--
DEC 17...	.1	6.2	52	.07	.46	.16	.01	40	10	--	--
JAN 21...	.3	9.7	62	.08	.35	.17	.00	30	0	--	--
FEB 18...	.2	6.3	62	.08	.43	.24	.00	40	10	--	--
MAR 16...	.2	7.0	61	.08	.52	.18	.00	30	10	--	--
APR 14...	.2	5.8	55	.07	1.05	.18	.00	90	0	--	--
MAY 18...	.2	3.6	25	.03	3.51	.07	.00	20	10	13	1.8
JUN 16...	.1	4.0	31	.04	4.69	.09	.00	30	0	11	1.7
JUL 13...	.1	3.0	32	.04	5.24	.10	.00	30	0	1	.16
AUG 17...	.1	3.5	41	.06	2.37	.10	.00	110	0	1	.06
SEP 15...	.1	4.2	43	.06	2.15	.11	.00	100	0	--	--

DATE	DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (UG/L)	SUS-PENDED GROSS BETA AS CS-137 (PC/L)	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUS-PENDED GROSS BETA AS SR90 /Y90 (PC/L)	DIS-SOLVED RA-226 (RADON METHOD) (PC/L)	DIS-SOLVED URANIUM (U) (UG/L)
NOV 19...	.9	.5	.4	1.5	<.4	.04	.30
MAY 18...	<.6	<.4	<.4	1.3	<.4	--	--

07083000 HALFMOON CREEK NEAR MALTA, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.5	1.5	---	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	10.5	1.5	---	---	---	---	---	---	---	---	---	---
3	9.5	2.0	---	---	---	---	---	---	---	---	---	---
4	10.0	2.0	---	---	---	---	---	---	---	---	---	---
5	10.5	3.0	---	---	---	---	---	---	---	---	---	---
6	11.0	3.0	---	---	---	---	---	---	---	---	---	---
7	9.5	3.5	---	---	---	---	---	---	---	---	---	---
8	8.5	3.0	---	---	---	---	---	---	---	---	---	---
9	9.0	1.5	0.0	0.0	---	---	---	---	---	---	---	---
10	9.0	3.0	---	---	---	---	---	---	---	---	---	---
11	10.0	3.5	---	---	---	---	---	---	---	---	---	---
12	10.0	3.5	---	---	---	---	---	---	---	---	---	---
13	8.0	4.5	---	---	---	---	---	---	---	---	---	---
14	5.5	4.0	---	---	---	---	---	---	---	---	---	---
15	8.0	---	---	---	---	---	---	---	---	---	---	---
16	6.5	---	---	---	---	---	---	---	---	---	---	---
17	9.0	---	---	---	---	---	---	---	---	---	---	---
18	9.0	---	---	---	---	---	---	---	---	---	---	---
19	8.5	---	---	---	---	---	---	---	---	---	---	---
20	8.0	---	---	---	---	---	---	---	---	---	---	---
21	8.0	---	---	---	---	---	---	---	---	---	---	---
22	8.5	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---

07083000 HALFMOON CREEK NEAR MALTA, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	0.0	0.0	10.0	1.0	10.5	2.0	11.5	5.0	11.5	9.5	13.5	6.0
2	0.0	0.0	10.0	1.0	7.0	2.5	11.5	5.5	10.0	8.5	13.5	5.0
3	0.0	0.0	10.0	1.0	8.5	2.0	13.0	5.0	11.5	6.5	14.0	5.0
4	0.0	0.0	8.0	1.5	9.0	2.5	13.5	5.5	13.5	6.0	11.5	6.0
5	1.0	0.0	11.0	1.5	9.5	2.5	14.0	5.0	13.5	5.5	14.0	5.5
6	1.5	0.5	5.5	2.0	6.0	3.5	10.0	6.0	14.0	5.5	10.0	6.0
7	2.5	0.5	7.0	1.0	10.0	2.5	9.5	6.0	12.5	5.5	10.0	7.0
8	2.5	0.5	6.0	2.5	8.0	3.5	13.0	5.5	10.5	6.5	11.5	6.0
9	4.0	0.5	10.0	1.5	10.0	3.0	11.5	6.5	14.5	6.5	13.5	7.0
10	4.5	0.5	10.5	1.5	10.0	3.5	11.5	6.0	11.0	6.0	11.0	6.5
11	5.0	0.5	8.0	2.5	9.0	3.5	14.5	6.5	11.0	6.0	12.0	7.5
12	3.5	0.5	10.5	1.5	9.5	2.5	13.0	6.5	14.5	6.0	12.5	6.5
13	4.5	1.0	11.0	1.0	9.0	3.0	11.0	7.0	11.0	6.5	12.5	5.5
14	5.0	0.5	13.0	2.5	7.5	3.0	12.5	6.0	14.5	6.5	12.5	7.0
15	5.0	1.0	12.0	2.0	11.0	3.0	12.0	6.0	14.5	6.5	8.5	6.5
16	6.5	0.5	10.5	1.5	9.5	3.0	12.0	6.5	14.0	6.5	11.5	4.5
17	2.0	1.0	11.0	1.5	6.5	3.5	11.0	6.0	12.0	8.0	11.5	6.5
18	3.5	1.0	10.5	1.0	10.5	3.5	12.0	7.0	12.0	8.0	12.5	6.0
19	4.5	0.5	5.5	1.5	12.0	3.0	10.0	7.5	11.0	7.5	10.5	6.0
20	7.5	0.5	6.5	1.5	12.5	3.5	12.0	6.0	10.0	6.0	11.5	6.5
21	8.0	1.0	4.0	2.0	12.5	4.0	13.0	7.5	11.0	5.5	11.0	5.0
22	9.0	1.0	7.5	1.5	11.0	4.5	12.0	7.0	15.0	6.0	10.5	7.0
23	5.0	1.5	6.0	2.0	9.5	4.0	11.0	6.5	11.0	8.0	12.0	5.0
24	8.5	1.0	9.0	1.5	10.5	3.0	13.5	6.0	13.0	6.0	7.5	5.5
25	8.0	1.0	6.0	1.5	11.5	3.0	13.5	6.5	14.0	6.0	7.5	6.5
26	8.5	1.5	8.5	1.5	11.5	3.5	11.0	7.0	12.5	6.0	7.0	5.0
27	9.0	1.0	10.5	1.5	12.5	3.5	11.5	6.5	14.0	6.5	5.5	4.5
28	10.5	2.5	7.5	1.5	12.5	3.5	12.0	6.0	13.5	6.5	9.0	3.0
29	9.5	2.5	8.5	1.0	8.5	4.0	12.5	6.0	12.0	6.5	9.5	2.5
30	7.0	2.0	5.5	1.5	8.5	4.0	14.0	7.5	12.0	5.0	9.5	3.0
31	---	---	9.0	1.5	---	---	15.5	7.5	10.5	5.0	---	---
MONTH	10.5	0.0	13.0	1.0	12.5	2.0	15.5	5.0	15.0	5.0	14.0	2.5

07083700 ARKANSAS RIVER NEAR MALTA, CO

LOCATION.--Lat 39°10'08", long 106°19'23", in NE¼NW¼ sec.22, T.10 S., R.80 W., Lake County, Hydrologic Unit 11020001, on left bank 40 ft (12 m) downstream and 30 ft (9 m) shorward of left end of bridge on U.S. Highway 24, 3.5 mi (5.6 km) downstream from Lake Fork (revised), 4.4 mi (7.1 km) southeast of Malta, and 5.7 mi (9.2 km) south of Leadville.

DRAINAGE AREA.--228 mi² (590 km²).

PERIOD OF RECORD.--October 1964 to September 1967, October 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,300 ft (2,835 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by Turquoise Lake (station 07082400) on Lake Fork 8 mi (13 km) upstream. Transmountain diversions from Colorado River basin to Arkansas River basin enter upstream from this station (see elsewhere in this report). Diversions for irrigation of about 5,600 acres (22.7 km²) above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,300 ft³/s (36.8 m³/s) June 16, 1965, gage height, 4.44 ft (1.353 m); minimum daily, 40 ft³/s (1.13 m³/s) Oct. 11, 12, 16-20, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 898 ft³/s (25.4 m³/s) June 10, gage height, 3.73 ft (1.137 m); maximum gage height, 4.39 ft (1.338 m) Feb. 5 (backwater from ice); minimum daily discharge, 50 ft³/s (1.42 m³/s) Jan. 5-15, 25-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	82	55	70	60	92	56	104	545	385	285	83
2	152	80	55	70	60	100	58	110	640	420	340	78
3	152	133	54	64	60	102	66	142	650	385	390	76
4	152	296	58	55	58	106	70	190	715	376	300	70
5	152	280	58	50	55	100	69	228	780	360	256	69
6	152	268	58	50	55	104	66	224	850	344	214	67
7	155	308	59	50	55	108	63	205	780	316	196	70
8	158	312	60	50	60	108	70	199	810	300	214	70
9	155	308	60	50	65	108	80	181	850	296	232	70
10	155	300	58	50	65	110	87	175	840	336	214	65
11	155	300	57	50	69	110	90	190	775	348	259	63
12	152	296	55	50	72	106	92	214	640	336	252	70
13	152	300	56	50	72	112	92	199	545	332	224	70
14	152	300	52	50	72	110	90	211	480	316	232	96
15	124	304	56	50	73	108	94	296	410	300	205	102
16	90	300	70	54	72	112	92	368	395	288	187	102
17	90	304	72	56	70	115	87	445	364	296	178	88
18	90	312	74	58	72	115	78	495	340	300	172	85
19	88	340	74	58	83	120	132	505	296	316	169	82
20	87	312	74	58	76	135	248	520	300	296	175	82
21	87	276	76	58	72	140	252	565	368	296	175	82
22	87	272	80	58	75	142	260	510	455	256	166	214
23	90	276	80	58	70	145	272	435	535	236	160	324
24	87	276	80	54	51	148	256	336	440	220	172	304
25	94	280	80	50	59	148	256	316	360	224	187	304
26	110	288	78	50	69	140	260	308	316	232	145	328
27	110	280	70	50	76	142	264	320	316	248	108	336
28	106	181	60	50	85	145	296	425	332	220	100	332
29	104	65	60	55	88	140	308	500	352	208	94	308
30	92	60	60	60	---	108	257	540	336	202	90	296
31	75	---	64	60	---	55	---	490	---	199	87	---
TOTAL	3786	7689	2003	1696	1969	3634	4461	9946	15815	9187	6178	4386
MEAN	122	256	64.6	54.7	67.9	117	149	321	527	296	199	146
MAX	181	340	80	70	88	148	308	565	850	420	390	336
MIN	75	60	52	50	51	55	56	104	296	199	87	63
AC-FT	7510	15250	3970	3360	3910	7210	8850	19730	31370	18220	12250	8700

CAL YR 1975 TOTAL 110376 MEAN 302 MAX 1040 MIN 48 AC-FT 218900
WTR YR 1976 TOTAL 70750 MEAN 193 MAX 850 MIN 50 AC-FT 140300

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 (1.9 km) upstream from water line of Twin Lakes Reservoir at elevation 9,200 ft (2,804.2 m) and 1.9 mi (3.1 km) southwest of village of Twin Lakes.

DRAINAGE AREA.--75 mi² (194 km²).

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. Altitude of gage is 9,310 ft (2,838 m), from topographic map. Prior to May 20, 1950, at site 190 ft (58 m) downstream at different datum. May 20, 1950, to Apr. 7, 1953, at site 10 ft (3 m) upstream at present datum.

REMARKS.--Records fair except those for period of no gage-height record, which are poor. No diversion above station. Records include inflow from Roaring Fork River in Colorado River basin through Twin Lakes tunnel (see elsewhere in this report).

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

AVERAGE DISCHARGE.--29 years, 170 ft³/s (4.814 m³/s), 123,200 acre-ft/yr (152 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,150 ft³/s (89.2 m³/s) June 10, 1952, gage height, 5.74 ft (1.750 m), from rating curve extended above 1,400 ft³/s (40 m³/s); minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,070 ft³/s (58.6 m³/s) June 5, gage height, 4.58 ft (1.396 m); minimum daily, 8.5 ft³/s (0.24 m³/s) Mar. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	19	16	12	12	13	12	33	676	515	159	61
2	25	18	18	10	11	13	13	53	952	503	159	57
3	24	18	18	11	12	11	15	63	1040	503	156	55
4	24	18	17	11	12	11	14	74	1220	491	146	52
5	24	22	18	12	12	9.5	13	100	1530	479	136	51
6	24	22	18	11	11	8.5	13	128	1470	380	119	51
7	23	20	17	9.0	10	9.0	13	114	1330	365	112	50
8	23	22	18	11	10	9.5	13	92	1340	360	128	39
9	22	20	17	11	11	9.5	13	89	1370	400	117	35
10	23	15	17	12	11	10	14	93	1520	380	108	33
11	22	14	17	12	10	11	16	146	1390	341	110	33
12	22	16	17	12	9.5	11	18	159	830	323	108	33
13	21	17	16	11	10	9.5	17	99	608	323	103	32
14	20	17	15	12	12	11	16	154	503	297	102	36
15	19	18	14	12	13	11	15	260	341	272	96	40
16	20	18	15	13	11	10	15	416	406	227	89	42
17	20	18	15	12	12	10	15	479	444	207	73	38
18	20	18	15	12	12	11	16	557	341	197	76	39
19	19	17	15	12	14	12	14	608	318	217	77	35
20	18	17	15	11	12	10	14	645	395	238	78	33
21	17	17	14	12	11	10	15	645	776	272	81	33
22	18	17	14	12	10	10	16	564	920	231	76	33
23	19	18	14	12	10	11	17	406	803	159	83	35
24	18	17	15	12	11	11	16	355	550	130	92	33
25	15	15	16	11	11	11	17	350	450	143	87	37
26	16	13	16	10	10	11	20	332	428	167	87	47
27	16	13	16	12	10	10	22	400	543	170	97	46
28	18	14	14	14	10	12	26	638	660	182	80	43
29	17	15	14	13	11	11	32	700	557	167	77	41
30	19	13	15	13	---	11	36	630	509	146	76	43
31	20	---	16	12	---	11	---	536	---	146	72	---
TOTAL	631	516	492	362.0	321.5	329.5	506	9918	24220	8931	3160	1236
MEAN	20.4	17.2	15.9	11.7	11.1	10.6	16.9	320	807	288	102	41.2
MAX	25	22	18	14	14	13	36	700	1530	515	159	61
MIN	15	13	14	9.0	9.5	8.5	12	33	318	130	72	32
AC-FT	1250	1020	976	718	638	654	1000	19670	48040	17710	6270	2450

CAL YR 1975 TOTAL 65621.5 MEAN 180 MAX 1520 MIN 8.0 AC-FT 130200
WTR YR 1976 TOTAL 50623.0 MEAN 138 MAX 1530 MIN 8.5 AC-FT 100400

NOTE.--NO GAGE-HEIGHT RECORD NOV. 10 TO APR. 8.

07086000 ARKANSAS RIVER AT GRANITE, CO

LOCATION.--Lat 39°02'34", long 106°15'55", in SE¼SW¼ sec.31, T.11 S., R.79 W., Chaffee County, Hydrologic Unit 11020001, on right bank at Granite, 100 ft (30 m) east of U.S. Highway 34, 100 ft (30 m) downstream from county bridge, and 200 ft (61 m) upstream from Cache Creek.

DRAINAGE AREA.--427 mi^2 (1,106 km^2).

PERIOD OF RECORD.--April to October 1895, May to December 1897, August to September 1898, March to October 1899, April to May 1902 (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.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1711: 1952, 1956(M).

GAGE.--Water-stage recorder. Datum of gage is 8,914.86 ft (2,717.249 km) above mean sea level. 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 (254 m) upstream at different datum. Oct. 26, 1917, to Oct. 26, 1960, water-stage recorder at site 168 ft (51 m) downstream at present datum.

REMARKS.--Records good except those for winter period, which are fair. Diversions above station for irrigation of about 6,700 acres (27.1 km^2). Turquoise Lake and Twin Lakes Reservoir, on tributaries above station, have a combined capacity of 182,700 acre-ft (225 hm^3). Transmountain diversions from Colorado River basin to Arkansas River basin enter above this station (see elsewhere in this report).

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

AVERAGE DISCHARGE.--66 years (water years 1911-76), 368 ft^3/s (10.42 m^3/s), 266,600 acre-ft/yr (329 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,360 ft^3/s (152 m^3/s) June 28, 1957, gage height, 7.20 ft (2.195 m); minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,750 ft^3/s (49.6 m^3/s) June 8, gage height, 4.39 ft (1.338 m); minimum daily, 70 ft^3/s (1.98 m^3/s) Jan. 12, 13, 20, 21, 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	173	105	85	95	138	152	370	1250	912	786	162
2	190	165	115	80	105	143	160	375	1360	957	795	155
3	190	188	114	80	115	143	162	408	1430	939	696	152
4	196	345	112	85	125	140	168	474	1490	921	660	168
5	196	315	109	85	135	135	168	524	1540	813	628	179
6	193	274	112	75	140	135	164	480	1700	741	531	176
7	187	355	112	75	140	140	160	420	1640	580	438	179
8	187	390	112	80	145	145	165	438	1630	565	450	176
9	179	390	111	80	145	150	182	396	1640	966	498	173
10	179	380	111	75	140	155	190	385	1680	984	492	168
11	176	385	114	75	130	157	193	390	1640	1010	510	165
12	176	375	107	70	130	145	202	420	1440	1000	498	168
13	176	380	105	70	135	148	199	408	1240	1030	462	165
14	179	380	100	80	140	145	196	380	984	1000	462	179
15	184	380	100	80	140	145	196	456	930	966	414	165
16	182	375	100	80	140	145	193	538	1040	921	380	179
17	182	380	100	80	140	145	187	628	1020	912	370	165
18	179	355	95	80	140	152	179	759	1000	912	350	157
19	179	380	90	75	140	152	182	867	948	921	315	155
20	176	360	90	70	130	168	320	975	939	903	315	160
21	176	345	85	70	125	170	330	1070	1010	858	310	152
22	176	350	90	75	130	179	335	1040	1110	831	282	253
23	179	355	85	75	140	179	345	948	1390	813	274	402
24	162	355	80	80	130	184	320	822	1410	795	274	385
25	160	340	85	80	130	208	545	732	1230	777	282	390
26	170	330	85	70	135	217	660	652	1000	804	262	438
27	173	345	80	70	140	223	644	705	921	867	226	444
28	170	290	75	80	145	226	644	777	596	858	217	450
29	162	145	80	90	150	229	580	921	580	813	211	420
30	162	100	90	85	---	211	538	1060	813	759	199	385
31	162	---	90	85	---	150	---	1050	---	705	176	---
TOTAL	5549	9680	3039	2420	3875	5102	8659	19868	36601	26813	12763	7065
MEAN	179	323	98.0	78.1	134	165	289	641	1220	865	412	236
MAX	211	390	115	90	150	229	660	1070	1700	1030	795	450
MIN	160	100	75	70	95	135	152	370	580	545	176	152
AC-FT	11010	19200	6030	4800	7690	10120	17180	39410	72600	53180	25320	14010

CAL YR 1975 TOTAL 186197 MEAN 510 MAX 2580 MIN 55 AC-FT 369300
WTR YR 1976 TOTAL 141434 MEAN 386 MAX 1700 MIN 70 AC-FT 280500

TRANSMOUNTAIN DIVERSIONS FROM ARKANSAS RIVER BASIN TO SOUTH PLATTE RIVER BASIN IN COLORADO

07086300 Aurora-Homestake pipeline diverts water from Arkansas River in sec.8, T.12 S., R.79 W., to Elevenmile Canyon Reservoir (South Platte River) in sec.29, T.13 S., R.72 W., in South Platte River basin. Diversion began Aug. 24, 1967. Pipeline is equipped with a discharge recorder and Venturi meter. Records furnished by Colorado Division of Water Resources. Diversions for water year October 1975 to September 1976 are given below.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Water year
1,430	0	0	0	1,530	0	0	0	774	2,390	1,980	0	8,110

07086500 CLEAR CREEK ABOVE CLEAR CREEK RESERVOIR, CO

LOCATION.--Lat 39°01'05", long 106°16'38", in SE¼ sec.12, T.12 S., R.80 W., Chaffee County, Hydrologic Unit 11020001, on right bank 0.5 mi (0.8 km) upstream from water line of Clear Creek Reservoir at elevation 8,875 ft (2,705.1 m), 1.5 mi (2.4 km) downstream from unnamed tributary, and 1.9 mi (3.1 km) southwest of Granite.

DRAINAGE AREA.--67.1 mi² (173.8 km²).

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.

GAGE.--Water-stage recorder. Altitude of gage is 8,885 ft (2,708 m), from topographic map. May 7, 1946, to Apr. 20, 1954, water-stage recorder at site 133 ft (41 m) upstream at different datum. Apr. 21, 1954, to May 28, 1958, water-stage recorder 333 ft (101 m) upstream at different datum. Datum raised 2.19 ft (0.668 m) Apr. 21, 1954.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Diversions for irrigation of about 250 acres (1.01 km²) above station.

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

AVERAGE DISCHARGE.--30 years, 68.2 ft³/s (1.931 m³/s), 49,410 acre-ft/yr (60.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,300 ft³/s (36.8 m³/s) June 29, 1957; maximum gage height recorded, 4.34 ft (1.323 m) site and datum then in use, June 16, 1952; minimum discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 489 ft³/s (13.8 m³/s) June 6, gage height, 2.69 ft (0.820 m) above base of 400 ft³/s (11 m³/s), no other peak above base; minimum daily, 9.0 ft³/s (0.25 m³/s) Mar. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	17	18	13	13	14	12	27	259	208	96	42
2	20	17	20	11	12	14	13	35	276	206	113	38
3	21	17	20	12	13	12	14	41	273	179	115	35
4	20	17	20	12	13	12	13	45	305	182	106	31
5	20	16	20	13	13	10	12	49	358	182	89	30
6	20	16	20	12	12	9.0	12	64	386	170	79	30
7	18	15	19	10	11	10	12	56	327	156	72	35
8	20	16	20	12	11	11	12	52	372	150	87	36
9	18	16	19	12	12	11	12	50	383	152	80	33
10	18	15	19	13	12	12	13	52	369	150	74	31
11	18	15	19	13	11	13	15	60	338	150	74	29
12	18	14	19	13	10	13	14	68	268	141	70	31
13	18	14	17	12	11	11	13	64	229	141	65	30
14	17	15	15	13	13	12	12	77	213	131	64	31
15	16	15	13	13	14	12	12	96	177	119	62	35
16	17	14	15	14	12	11	12	115	191	108	54	38
17	16	14	15	13	13	11	12	135	184	102	53	35
18	16	13	15	13	13	12	12	158	154	100	54	35
19	16	13	15	13	15	13	11	167	141	108	58	33
20	15	13	15	12	13	11	11	170	174	119	56	32
21	15	13	14	13	12	11	11	177	245	113	64	31
22	15	13	14	13	11	11	12	152	273	93	53	31
23	16	14	14	13	11	12	13	131	270	86	53	32
24	14	13	15	13	12	12	14	123	206	82	62	33
25	12	12	16	12	12	12	15	125	194	75	53	37
26	16	11	16	11	11	12	16	123	194	84	49	47
27	16	11	16	13	11	11	18	158	201	86	49	45
28	15	14	13	15	11	13	22	203	221	77	47	41
29	15	16	13	14	12	12	25	216	211	70	49	40
30	14	15	14	14	---	12	27	229	196	67	47	40
31	17	---	15	13	---	12	---	208	---	68	44	---
TOTAL	527	434	513	393	350	364.0	422	3426	7588	3855	2091	1047
MEAN	17.0	14.5	16.5	12.7	12.1	11.7	14.1	111	253	124	67.5	34.9
MAX	21	17	20	15	15	14	27	229	386	208	115	47
MIN	12	11	13	10	10	9.0	11	27	141	67	44	29
AC-FT	1050	861	1020	780	694	722	837	6800	15050	7650	4150	2080

CAL YR 1975 TOTAL 20654.5 MEAN 56.6 MAX 455 MIN 6.5 AC-FT 40970
WTR YR 1976 TOTAL 21010.0 MEAN 57.4 MAX 386 MIN 9.0 AC-FT 41670

NOTE.--NO GAGE-HEIGHT RECORD NOV. 20 TO APR. 21.

07087200 ARKANSAS RIVER AT BUENA VISTA, CO

LOCATION.--Lat 38°50'56", long 106°07'27", in NW¼NW¼ 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 1.1 mi (1.8 km) upstream from Cottonwood Creek.

DRAINAGE AREA.--611 mi² (1,582 km²).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,920 ft (2,414 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions (see elsewhere in this report), storage reservoirs having a combined capacity of 193,900 acre-ft (239 hm³), diversions above station for irrigation of 7,400 acres (29.9 km²), and return flow from irrigated areas.

AVERAGE DISCHARGE.--12 years, 516 ft³/s (14.61 m³/s), 373,800 acre-ft/yr (461 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,640 ft³/s (103 m³/s) July 13, 1965, gage height, 6.32 ft (1.926 m); minimum daily, 60 ft³/s (1.70 m³/s) Jan. 10, 11, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,970 ft³/s (55.8 m³/s) June 10, gage height, 4.64 ft (1.414 m); minimum daily, 85 ft³/s (2.41 m³/s) Feb. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	161	88	110	100	138	129	508	1300	1040	864	266
2	168	151	90	99	100	141	134	492	1490	1090	918	257
3	168	147	95	99	95	143	141	512	1610	1060	871	254
4	161	306	98	99	95	143	149	565	1670	1040	825	260
5	161	320	98	105	95	138	151	625	1740	966	795	278
6	161	303	100	108	100	138	145	632	1890	870	710	275
7	153	338	100	108	100	145	132	528	1840	780	601	278
8	153	359	104	117	100	141	140	555	1870	680	610	275
9	147	366	104	129	100	136	151	520	1890	1020	635	269
10	147	348	105	124	110	138	178	524	1920	1070	625	263
11	145	345	104	110	110	141	172	532	1910	1120	615	257
12	143	331	108	113	100	136	185	565	1740	1100	601	257
13	141	338	104	112	100	132	188	580	1530	1130	549	254
14	136	348	104	99	100	138	175	580	1310	1120	545	266
15	141	348	88	108	105	134	178	630	1150	1030	504	248
16	145	348	90	107	105	131	170	695	1280	996	464	272
17	140	352	100	105	105	136	168	775	1210	984	449	251
18	140	348	100	100	110	138	151	924	1170	966	428	239
19	134	356	107	99	120	136	140	1040	1090	996	395	236
20	132	331	105	94	112	132	269	1160	1060	1030	393	242
21	131	306	105	96	85	143	300	1310	1130	984	401	227
22	131	306	105	90	108	145	310	1280	1260	948	373	234
23	136	317	127	90	113	210	324	1200	1630	930	364	448
24	124	314	115	90	118	212	317	1060	1680	912	364	432
25	117	303	108	95	108	230	486	943	1480	870	371	436
26	134	282	117	95	117	260	665	790	1210	870	371	484
27	140	300	122	90	115	251	660	800	1070	924	349	484
28	132	293	108	95	125	269	690	894	891	930	331	496
29	127	129	105	100	136	269	710	1010	755	882	327	460
30	134	88	120	100	---	216	695	1150	924	835	317	440
31	147	---	120	100	---	131	---	1130	---	805	285	---
TOTAL	4469	8882	3244	3186	3087	5091	8403	24509	42700	29978	16231	9338
MEAN	144	296	105	103	106	164	280	791	1423	967	524	311
MAX	200	366	127	129	136	269	710	1310	1920	1130	918	496
MIN	117	88	88	90	85	131	129	492	755	680	285	227
AC-FT	8860	17620	6430	6320	6120	10100	16670	48610	84700	59460	32191	18520

CAL YR 1975 TOTAL 203862 MEAN 559 MAX 2570 MIN 60 AC-FT 404400
WTR YR 1976 TOTAL 159117 MEAN 435 MAX 1920 MIN 85 AC-FT 315600

07089000 COTTONWOOD CREEK BELOW HOT SPRINGS, NEAR BUENA VISTA, CO

LOCATION.--Lat 38°48'46", long 106°13'18", in SE¼SE¼ sec.21, T.14 S., R.79 W., Chaffee County, Hydrologic Unit 11020001, on left bank 0.2 mi (0.3 km) downstream from Cottonwood Hot Springs, 0.9 mi (1.4 km) downstream from confluence of Middle Cottonwood and South Cottonwood Creeks, 2.9 mi (4.7 km) upstream from North Cottonwood Creek, and 5.5 mi (8.8 km) southwest of Buena Vista.

DRAINAGE AREA.--65 mi² (168 km²).

PERIOD OF RECORD.--October 1910 to September 1923, August 1949 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1177: 1915, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 8,532 ft (2,600.6 m), from river-profile survey. Prior to Oct. 1, 1923, nonrecording gage near present site at different datum.

REMARKS.--Records good. Several small diversions above station for irrigation.

AVERAGE DISCHARGE.--40 years, 57.1 ft³/s (1.617 m³/s), 41,370 acre-ft/yr (51.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,180 ft³/s (33.4 m³/s) July 1, 1957, gage height, 4.52 ft (1,378 m), from floodmarks, from rating curve extended above 690 ft³/s (20 m³/s); minimum observed, 10 ft³/s (0.28 m³/s) Mar. 20-23, 25, Apr. 9, 19, 1914.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 224 ft³/s (6.34 m³/s) June 11, gage height, 2.64 ft (0.805 m), no peak above base of 300 ft³/s (8.5 m³/s); minimum daily, 16 ft³/s (0.45 m³/s) Feb. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	30	27	22	18	17	18	22	123	124	63	41
2	31	28	27	22	18	17	19	25	135	124	81	37
3	30	28	26	22	18	18	18	28	134	110	79	34
4	30	28	27	22	18	19	19	29	151	102	71	32
5	29	28	26	21	18	19	19	31	172	90	60	33
6	29	28	26	21	18	19	19	38	174	82	53	32
7	29	27	26	21	18	18	18	34	148	85	51	35
8	29	26	26	21	18	18	18	29	165	97	63	34
9	29	27	26	21	18	18	19	27	183	93	58	32
10	29	24	26	21	17	18	19	29	191	90	54	32
11	29	25	26	21	17	18	19	32	189	81	54	31
12	29	20	26	20	17	18	20	36	160	74	58	31
13	28	26	26	20	17	18	20	34	146	70	49	31
14	28	25	26	20	17	18	19	40	149	74	49	32
15	27	26	25	20	17	18	19	65	124	70	46	34
16	28	25	26	20	17	18	18	72	126	67	43	39
17	28	25	26	20	16	18	18	79	131	65	42	35
18	29	27	26	20	17	19	18	92	124	64	42	33
19	28	27	25	19	17	18	18	86	111	63	45	32
20	28	25	25	19	17	17	18	80	119	70	44	32
21	27	25	25	19	17	18	18	82	143	65	43	31
22	27	25	24	19	17	18	18	79	171	59	40	30
23	27	26	24	19	17	18	19	63	169	56	40	32
24	26	26	24	19	17	19	18	57	136	55	41	40
25	25	26	24	19	17	19	19	60	126	54	39	41
26	27	26	24	19	17	18	19	55	122	56	37	52
27	29	27	23	19	17	18	20	63	120	59	38	49
28	28	27	23	19	17	18	21	87	125	54	38	46
29	27	27	23	19	17	18	23	106	122	49	38	44
30	27	26	23	19	---	18	24	107	116	49	37	42
31	29	---	23	18	---	18	---	99	---	49	38	---
TOTAL	877	786	780	621	501	561	572	1766	4305	2300	1534	1079
MEAN	28.3	26.2	25.2	20.0	17.3	18.1	19.1	57.0	144	74.2	49.5	36.0
MAX	31	30	27	22	18	19	24	107	191	124	81	52
MIN	25	20	23	18	16	17	18	22	111	49	37	30
AC-FT	1740	1560	1550	1230	994	1110	1130	3500	8540	4560	3040	2140

CAL YR 1975 TOTAL 17273 MEAN 47.3 MAX 237 MIN 14 AC-FT 34260
WTR YR 1976 TOTAL 15682 MEAN 42.8 MAX 191 MIN 16 AC-FT 31110

07091200 ARKANSAS RIVER NEAR NATHROP, CO

LOCATION.--Lat 38°39'08", long 106°03'02", in SE¼SW¼ sec.23, T.51 N., R.8 E., Chaffee County, Hydrologic Unit 11020001, on right bank 300 ft (90 m) upstream from end of Chaffee County road 60, in Browns Canyon, 3.7 mi (5.9 km) downstream from Browns Creek, 6.7 mi (10.8 km) south of Nathrop, and 9 mi (14 km) north of Salida.

DRAINAGE AREA.--1,060 mi² (2,745 km²).

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,350 ft (2,240 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions (see elsewhere in this report), storage reservoirs, power developments, diversions for irrigation of about 15,000 acres (61 km²) and return flow from irrigated areas.

AVERAGE DISCHARGE.--12 years, 656 ft³/s (18.58 m³/s), 475,300 acre-ft/yr (586 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,480 ft³/s (127 m³/s) July 13, 1965, gage height, 7.79 ft (2.374 m); maximum gage height, 9.94 ft (2.725 m) Aug. 31, 1972 (backwater from unnamed tributary); minimum daily discharge, 110 ft³/s (3.12 m³/s) Dec. 31, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,290 ft³/s (64.9 m³/s) June 10, gage height, 7.16 ft (2.182 m); minimum daily, 180 ft³/s (5.10 m³/s) Jan. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	338	332	220	190	201	224	186	560	1400	1320	1020	380
2	310	320	220	190	201	226	189	512	1670	1380	1210	356
3	302	312	220	185	188	226	192	528	1790	1320	1180	342
4	295	411	225	185	190	226	199	580	1880	1280	1070	340
5	292	464	225	190	190	222	201	630	2020	1190	988	350
6	290	448	225	200	201	206	203	665	2180	1060	874	342
7	288	460	220	200	197	224	189	575	2020	982	715	353
8	282	492	220	185	197	224	190	610	2110	844	725	350
9	278	500	220	185	210	216	199	548	2160	1150	745	338
10	278	484	224	190	210	218	220	548	2240	1260	760	335
11	290	504	222	194	199	226	216	560	2220	1300	772	332
12	288	484	226	196	196	216	226	590	2040	1290	778	328
13	285	500	220	199	199	208	228	620	1850	1300	670	325
14	285	508	220	190	206	216	220	610	1670	1300	660	332
15	285	512	208	196	210	214	218	675	1360	1180	615	328
16	298	500	208	197	210	203	214	750	1510	1160	565	353
17	288	504	208	197	206	210	212	868	1450	1130	516	340
18	285	504	212	196	199	214	203	994	1410	1110	516	320
19	278	508	210	196	203	212	196	1090	1300	1130	484	388
20	275	484	203	188	205	199	259	1190	1260	1190	472	384
21	270	456	196	188	184	214	318	1340	1400	1160	476	325
22	270	437	196	189	197	216	325	1320	1590	1090	456	305
23	268	464	206	190	194	260	338	1260	1950	1050	448	525
24	275	456	205	192	210	270	328	1110	1950	1020	476	560
25	272	452	199	190	194	278	418	1010	1780	982	484	570
26	292	422	203	180	201	302	670	850	1510	1010	472	695
27	308	444	208	180	205	298	670	868	1300	1050	460	700
28	298	440	194	200	208	310	685	976	1160	1060	434	690
29	290	288	194	205	220	308	710	1110	922	1000	422	645
30	288	226	190	203	---	272	710	1260	1100	964	422	610
31	310	---	190	199	---	212	---	1220	---	946	395	---
TOTAL	8951	13316	6537	5965	5831	7270	9332	26027	50202	35208	20280	12541
MEAN	289	444	211	192	201	235	311	840	1673	1136	654	418
MAX	338	512	226	205	220	310	710	1340	2240	1380	1210	700
MIN	268	226	190	180	184	199	186	512	922	844	395	305
AC-FT	17750	26410	12970	11830	11570	14420	18510	51620	99580	69840	40230	24880

CAL YR 1975 TOTAL 256796 MEAN 704 MAX 3070 MIN 140 AC-FT 509400
WTR YR 1976 TOTAL 201460 MEAN 550 MAX 2240 MIN 180 AC-FT 399600

07091500 ARKANSAS RIVER AT SALIDA, CO

LOCATION.--Lat 38°32'45", long 106°00'36", in NE¼ sec.31, T.50 N., R.9 E., Chaffee County, Hydrologic Unit 11020001, on right bank at Salida, 450 ft (140 m) upstream from bridge on State Highway 291 and 2.7 mi (4.3 km) upstream from South Arkansas River.

DRAINAGE AREA.--1,218 mi² (3,155 km²).

PERIOD OF RECORD.--April to October 1895, May to December 1897, August 1898 to September 1899, April to October 1900, April 1901 to October 1903, October 1909 to current year. Monthly discharge only for some periods published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1311: 1899, 1900, 1914(M), 1921(M).

GAGE.--Water-stage recorder. Datum of gage is 7,050.45 ft (2,148.977 m) above mean sea level. See WSP 1711 or 1731 for history of changes prior to Dec. 6, 1957.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions (see elsewhere in this report), storage reservoirs having a combined capacity of 193,900 acre-ft (240 hm³), diversions for irrigation of about 18,000 acres (73 km³) above station, and return flow from irrigated areas.

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

AVERAGE DISCHARGE.--70 years (water years 1899, 1902-3, 1910-76), 632 ft³/s (17.90 m³/s), 457,900 acre-ft/yr (565 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,220 ft³/s (261 m³/s) June 29, 1957, gage height, 7.87 ft (2.384 m), present datum; minimum observed, 100 ft³/s (2.83 m³/s) Oct. 4, 6, 7, 1898.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,530 ft³/s (71.6 m³/s) June 10, gage height, 3.10 ft (0.945 m); minimum daily, 170 ft³/s (4.81 m³/s) Apr. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	325	332	249	230	232	238	170	569	1390	1230	1050	395
2	292	318	286	220	232	238	170	484	1690	1330	1230	367
3	280	312	280	220	222	244	175	500	1850	1270	1210	353
4	260	381	280	225	216	244	190	552	1970	1220	1080	346
5	254	475	273	230	210	249	205	605	2120	1150	1010	360
6	254	467	273	230	222	238	216	669	2370	1010	870	360
7	254	459	273	215	232	238	195	578	2180	960	660	367
8	254	500	266	225	230	244	195	587	2250	792	660	360
9	254	509	266	235	235	232	205	543	2320	1080	678	360
10	254	509	266	235	240	232	222	526	2430	1210	707	353
11	260	534	266	225	225	238	227	543	2420	1240	716	346
12	260	509	266	230	210	232	238	578	2080	1220	745	332
13	254	534	266	225	210	227	244	614	1780	1230	641	339
14	254	543	266	220	222	232	222	605	1550	1230	614	339
15	260	543	244	235	227	232	205	669	1250	1130	578	339
16	273	543	249	235	227	222	205	745	1370	1100	543	360
17	266	543	249	235	227	227	205	840	1320	1080	509	339
18	266	552	249	235	222	227	195	980	1300	1070	500	325
19	260	552	238	235	222	232	190	1060	1210	1100	475	349
20	260	534	232	225	227	210	227	1160	1150	1160	459	405
21	254	509	232	225	205	227	312	1320	1260	1130	475	312
22	254	500	227	232	195	232	318	1320	1450	1080	451	286
23	254	518	238	232	210	266	325	1270	1920	1050	443	443
24	266	518	232	238	227	280	325	1100	2040	1020	467	518
25	273	518	227	232	210	273	353	1010	1790	970	467	526
26	292	500	232	205	210	299	669	850	1450	1010	451	698
27	312	492	232	227	216	292	669	850	1230	1050	443	726
28	306	509	216	249	222	312	678	950	1140	1070	443	707
29	299	353	210	244	238	306	716	1060	860	1000	435	650
30	292	260	227	244	---	292	716	1250	1050	950	427	614
31	312	---	238	232	---	222	---	1230	---	950	411	---
TOTAL	8408	14326	7748	7125	6423	7677	9182	25617	50190	34092	19848	12574
MEAN	271	478	250	230	221	248	306	826	1673	1100	640	419
MAX	325	552	286	249	240	312	716	1320	2430	1330	1230	726
MIN	254	260	210	205	195	210	170	484	860	792	411	286
AC-FT	16680	28420	15370	14130	12740	15230	18210	50810	99550	67620	39370	24940

CAL YR 1975 TOTAL 258636 MEAN 709 MAX 3540 MIN 150 AC-FT 513000
WTR YR 1976 TOTAL 203210 MEAN 555 MAX 2430 MIN 170 AC-FT 403100

07093700 ARKANSAS RIVER NEAR WELLSVILLE, CO

LOCATION.--Lat 38°30'10", long 105°56'21", in SW¼NE¼ sec.14, T.49 N., R.9 E., Chaffee County, Hydrologic Unit 11020001, on right bank 50 ft (15 m) upstream from Chaffee-Fremont County line, 2.0 mi (3.2 km) northwest of Wellsville, 2.8 mi (4.5 km) downstream from South Arkansas River, and 3.5 mi (5.6 km) southeast of Salida.

DRAINAGE AREA.--1,485 mi² (3,846 km²).

PERIOD OF RECORD.--April 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,883.4 ft (2,098.06 m) above mean sea level (river-profile survey).

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, diversions for irrigation of about 26,000 acres (110 km²), and return flow from irrigated areas.

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

AVERAGE DISCHARGE.--15 years, 704 ft³/s (19.94 m³/s), 510,000 acre-ft/yr (629 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,390 ft³/s (124 m³/s) July 13, 1965, gage height, 7.36 ft (2.243 m); minimum daily, 110 ft³/s (3.12 m³/s) Jan. 12, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,480 ft³/s (70.2 m³/s) June 10, gage height, 5.91 ft (1.801 m); minimum daily, 198 ft³/s (5.61 m³/s) Apr. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	375	391	343	290	303	323	205	620	1380	1270	1070	436
2	347	379	395	280	299	315	198	540	1670	1340	1220	400
3	327	367	391	280	287	323	205	555	1840	1290	1180	387
4	311	432	387	285	283	323	212	600	1970	1250	1090	383
5	303	530	383	295	287	319	236	650	2120	1200	1020	404
6	299	521	379	295	287	303	247	686	2310	1080	914	404
7	299	526	379	270	295	311	226	630	2200	1030	758	408
8	295	565	367	290	295	319	219	635	2260	884	752	408
9	303	585	371	305	307	311	230	600	2310	1090	770	400
10	299	575	367	307	315	311	247	560	2410	1240	788	391
11	311	605	367	287	295	315	250	580	2380	1300	782	387
12	311	585	367	295	283	303	258	600	2090	1260	812	379
13	307	615	355	287	287	287	272	630	1860	1300	704	383
14	307	645	355	275	299	303	254	630	1670	1300	680	410
15	311	655	319	299	303	307	230	675	1340	1190	640	391
16	327	650	323	299	303	287	230	770	1470	1180	605	408
17	323	650	327	299	299	295	233	884	1420	1150	555	391
18	319	650	319	295	279	287	226	1000	1400	1140	545	367
19	315	650	310	295	299	272	208	1110	1320	1160	526	371
20	311	650	300	279	307	244	226	1190	1260	1220	508	475
21	307	640	300	275	264	264	351	1350	1360	1180	508	375
22	307	620	295	279	250	279	363	1360	1510	1140	498	347
23	303	645	305	279	287	311	371	1310	1850	1100	480	485
24	319	650	300	287	311	335	371	1150	1960	1070	503	560
25	323	655	295	272	287	327	387	1070	1770	1050	503	570
26	347	600	300	240	291	355	710	902	1480	1050	494	716
27	367	585	300	272	303	355	704	890	1280	1100	485	788
28	355	600	285	315	303	363	722	990	1210	1130	472	740
29	343	490	280	307	319	367	734	1090	941	1060	458	692
30	343	367	295	303	---	351	734	1280	1100	1020	449	660
31	359	---	305	299	---	272	---	1260	---	1020	444	---
TOTAL	9973	17078	10364	8935	8527	9637	10059	26797	51141	35794	21213	13916
MEAN	322	569	334	288	294	311	335	864	1705	1155	684	464
MAX	375	655	395	315	319	367	734	1360	2410	1340	1220	788
MIN	295	367	280	240	250	244	198	540	941	884	444	347
AC-FT	19780	33870	20560	17720	16910	19110	19950	53150	101400	71000	42080	27600

CAL YR 1975 TOTAL 282811 MEAN 775 MAX 3420 MIN 202 AC-FT 561000
WTR YR 1976 TOTAL 223434 MEAN 610 MAX 2410 MIN 198 AC-FT 443200

07094500 ARKANSAS RIVER AT PARKDALE, CO

LOCATION.--Lat 38°29'14", long 105°22'23", in NE¼NW¼ sec.18, T.18 S., R.71 W., Fremont County, Hydrologic Unit 11020001, on left bank at Parkdale, 100 ft (30 m) upstream from Bumback Gulch, 300 ft (90 m) upstream from bridge on U.S. Highway 50, and 0.9 mi (1.4 km) upstream from Copper Gulch.

DRAINAGE AREA.--2,548 mi² (6,599 km²).

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. Altitude of gage is 5,720 ft (1,473 m), from topographic map. Prior to Oct. 1, 1964, at site 600 ft (180 m) downstream at different datum.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, diversions for irrigation of about 35,000 acres (140 km²) above station, and return flow from irrigated areas.

AVERAGE DISCHARGE.--22 years, 780 ft³/s (22.09 m³/s), 565,100 acre-ft/yr (697 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,880 ft³/s (167 m³/s) June 22, 1947, gage height, 9.02 ft (2.749 m), site and datum then in use, from rating curve extended above 3,000 ft³/s (85 m³/s); minimum daily, 200 ft³/s (5.66 m³/s) Jan. 5-7, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,480 ft³/s (70.2 m³/s) June 6, gage height, 5.25 ft (1.600 m); minimum daily, 272 ft³/s (7.7 m³/s) Apr. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	395	444	395	367	345	346	291	722	1300	1210	1220	509
2	384	430	437	293	347	348	274	561	1550	1380	1310	468
3	355	406	447	284	344	345	273	551	1770	1310	1320	445
4	343	397	432	328	324	344	272	568	1880	1240	1170	435
5	332	550	433	390	323	339	282	614	2040	1210	1080	442
6	328	554	430	408	326	337	300	664	2240	1080	1010	452
7	321	531	430	360	344	341	291	741	2240	1030	872	453
8	321	567	421	327	335	355	278	653	2180	912	768	453
9	321	608	422	373	344	348	276	646	2230	908	811	452
10	324	602	418	382	357	343	283	595	2350	1180	814	441
11	328	615	420	356	340	347	307	582	2360	1230	808	437
12	332	602	420	356	329	342	308	588	2170	1230	836	425
13	328	612	422	359	327	325	329	618	1930	1270	795	438
14	330	638	415	320	330	331	321	631	1730	1290	714	485
15	335	652	382	352	334	338	305	626	1440	1210	709	480
16	350	651	383	362	338	328	292	707	1420	1160	647	448
17	350	648	400	374	333	321	312	819	1430	1120	609	458
18	339	647	373	373	323	320	310	955	1410	1110	577	420
19	335	656	393	360	328	316	301	1100	1340	1100	578	436
20	328	644	393	349	335	301	295	1190	1240	1170	565	509
21	324	640	381	354	322	291	350	1320	1300	1170	552	445
22	321	614	383	343	299	310	390	1410	1430	1120	560	438
23	328	628	388	353	314	307	397	1320	1710	1070	536	412
24	343	636	401	350	328	349	402	1170	1980	1050	574	578
25	339	646	388	339	339	343	393	1080	1840	1030	565	590
26	351	611	397	314	325	357	572	953	1560	1020	549	756
27	375	597	390	314	331	377	681	860	1320	1080	541	1010
28	384	638	382	363	332	370	691	920	1270	1110	526	905
29	371	608	349	382	339	391	710	1060	981	1060	531	798
30	363	429	349	358	---	392	758	1240	1020	1000	513	735
31	380	---	379	351	---	344	---	1300	---	988	511	---
TOTAL	10658	17501	12453	10894	9635	10546	11244	26764	50661	35048	23171	15753
MEAN	344	583	402	351	332	340	375	863	1689	1131	747	525
MAX	395	656	447	408	357	392	758	1410	2360	1380	1320	1010
MIN	321	397	349	284	299	291	272	551	981	908	511	412
AC-FT	21140	34710	24700	21610	19110	20920	22300	53090	100500	69520	45960	31250

CAL YR 1975 TOTAL 311238 MEAN 853 MAX 3920 MIN 213 AC-FT 617300
WTR YR 1976 TOTAL 234328 MEAN 640 MAX 2360 MIN 272 AC-FT 464800

07094600 SOUTH COLONY CREEK NEAR WESTCLIFFE, CO

LOCATION.--Lat 37°59'57", long 105°29'25", in NW¼NW¼ sec.6, T.24 S., R.72 W., Custer County, Hydrologic Unit 11020001, on left bank 500 ft (15 m) upstream from Middle Colony Creek, and 9.5 mi (15.3 km) south of Westcliffe.

DRAINAGE AREA.--6.5 mi² (16.8 km²).

PERIOD OF RECORD.--Aug. 1, 1974, to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,940 ft (2,725 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59 ft³/s (1.65 m³/s) June 8, 1976, gage height, 1.51 ft (0.460 m); minimum daily, 0.30 ft³/s (0.008 m³/s) Feb. 16, 21-23, Mar. 2-4, 16, 17, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 59 ft³/s (1.67 m³/s) June 8, gage height, 1.51 ft (0.460 m); minimum daily, 0.30 ft³/s (0.008 m³/s) Feb. 16, 21-23, Mar. 2-4, 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	1.2	.55	.60	.52	.37	.59	4.0	34	27	9.2	6.1
2	2.9	1.3	.65	.56	.52	.30	.65	3.2	45	27	9.4	5.5
3	2.9	1.1	.70	.55	.52	.30	.72	4.2	44	20	11	5.0
4	2.9	1.1	.72	.55	.50	.30	.85	6.1	44	18	12	4.6
5	2.7	.95	.72	.55	.43	.40	.95	7.3	46	16	10	4.4
6	2.6	.87	.72	.58	.36	.50	1.0	6.7	42	15	8.9	4.4
7	2.6	.69	.72	.58	.43	.50	1.1	5.4	39	14	7.8	4.5
8	2.5	.65	.72	.58	.36	.48	1.4	4.7	42	14	8.2	4.6
9	2.4	.64	.78	.56	.36	.43	1.6	4.4	48	13	8.1	4.4
10	2.4	.62	.80	.54	.31	.37	2.3	4.6	40	12	8.8	4.2
11	2.2	.57	.79	.54	.37	.37	2.4	6.2	32	11	8.1	4.0
12	2.3	.75	.79	.54	.37	.36	2.7	8.7	26	11	7.8	3.9
13	2.2	.75	.79	.52	.37	.45	2.8	7.7	23	11	7.1	3.8
14	1.9	.64	.79	.50	.37	.44	2.4	11	22	9.5	6.3	3.8
15	1.9	.69	.79	.50	.37	.31	2.2	16	19	9.5	5.6	3.6
16	2.2	.63	.79	.50	.30	.30	2.2	18	18	8.8	5.0	3.5
17	2.1	.54	.78	.52	.36	.30	2.2	21	17	8.0	4.5	3.3
18	2.2	.54	.77	.54	.36	.31	2.0	25	16	7.4	4.5	3.1
19	2.0	.53	.77	.54	.36	.37	1.7	26	17	6.9	5.6	3.1
20	2.0	.52	.77	.54	.35	.42	1.8	29	21	7.2	8.2	3.4
21	1.9	.52	.77	.54	.30	.44	1.7	32	25	6.8	16	3.1
22	1.8	.52	.77	.50	.30	.44	1.6	26	26	6.1	16	3.2
23	1.8	.52	.77	.50	.30	.44	1.9	22	23	5.9	14	2.9
24	1.7	.60	.77	.50	.35	.50	2.2	23	18	5.6	12	3.1
25	1.7	.60	.77	.48	.40	.63	2.6	22	16	6.0	11	3.6
26	1.8	.60	.76	.45	.40	.70	2.7	17	16	11	9.7	5.5
27	1.7	.52	.74	.45	.40	.67	2.5	20	15	19	8.6	7.2
28	1.4	.52	.74	.45	.37	.66	2.9	28	15	16	8.1	5.6
29	1.2	.52	.70	.48	.37	.60	3.6	33	15	13	7.6	5.2
30	1.2	.52	.65	.52	---	.60	3.3	32	18	9.9	6.7	5.6
31	1.3	---	.65	.52	---	.62	---	29	---	8.9	6.6	---
TOTAL	65.4	20.72	23.00	16.28	11.08	13.88	58.56	503.2	822	374.5	272.4	128.2
MEAN	2.11	.69	.74	.53	.38	.45	1.95	16.2	27.4	12.1	8.79	4.27
MAX	3.0	1.3	.80	.60	.52	.70	3.6	33	48	27	16	7.2
MIN	1.2	.52	.55	.45	.30	.30	.59	3.2	15	5.6	4.5	2.9
AC-FT	130	41	46	32	22	28	116	998	1630	743	540	254

CAL YR 1975 TOTAL 2538.59 MEAN 6.96 MAX 47 MIN .20 AC-FT 5040
WTR YR 1976 TOTAL 2309.22 MEAN 6.31 MAX 48 MIN .30 AC-FT 4580

NOTE.--NO GAGE-HEIGHT RECORD DEC. 18 TO FEB. 2.

07094900 MIDDLE TAYLOR CREEK NEAR WESTCLIFFE, CO

LOCATION.--Lat 38°06'30", long 105°36'03", in SW¼NE¼ sec.36, T.45 N., R.12 E., Custer County, Hydrologic Unit 11020001, on right bank 300 ft (90 m) downstream from Rainbow Trail crossing and 7.5 mi (12.1 km) west of Westcliffe.

DRAINAGE AREA.--3.2 mi² (8.3 km²).

PERIOD OF RECORD.--August 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 9,960 ft (3,036 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49 ft³/s (1.39 m³/s) July 10, 1975, gage height, 1.94 ft (0.591 m); minimum daily 0.40 ft³/s (0.011 m³/s) Dec. 26, 1974 to Apr. 18, 1975, Mar. 1-4, 14-22, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 32 ft³/s (0.91 m³/s) June 5, gage height, 1.81 ft (0.552 m) only peak above base of 30 ft³/s (0.85 m³/s); minimum daily, 0.40 ft³/s (0.011 m³/s) Mar. 1-4, 14-22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.0	.90	.75	.57	.40	.58	2.8	13	10	3.9	2.4
2	1.5	1.1	.90	.70	.57	.40	.60	3.0	16	8.8	5.2	2.2
3	1.4	1.3	.90	.65	.57	.40	.65	4.0	16	7.0	4.7	2.0
4	1.3	1.3	.95	.65	.57	.40	.68	6.0	18	6.6	4.2	1.9
5	1.3	1.3	1.0	.65	.57	.42	.70	5.7	23	6.2	3.9	1.7
6	1.2	1.1	1.0	.65	.57	.45	.80	5.0	22	5.8	3.4	1.7
7	1.2	1.2	1.0	.70	.57	.48	.90	5.2	23	5.6	3.1	1.7
8	1.2	1.1	1.0	.70	.57	.50	1.1	3.7	24	5.4	2.8	1.8
9	1.1	1.1	1.0	.70	.57	.50	1.2	3.5	24	5.2	3.1	1.8
10	1.2	1.0	1.0	.70	.57	.50	1.4	3.4	24	5.0	3.6	1.6
11	1.1	1.0	1.0	.65	.55	.50	1.5	3.9	22	4.9	3.4	1.5
12	1.2	1.0	.95	.63	.50	.45	1.7	4.5	16	4.3	3.2	1.5
13	1.1	1.0	.90	.60	.48	.42	2.0	4.8	14	4.6	3.0	1.5
14	1.0	.95	.85	.60	.45	.40	2.0	5.4	13	4.7	2.7	1.5
15	.96	.90	.85	.60	.45	.40	1.8	6.2	10	4.3	2.5	1.5
16	1.1	.90	.85	.60	.45	.40	1.7	6.2	9.2	4.2	2.2	1.5
17	1.2	.90	.85	.60	.45	.40	1.6	6.6	9.2	3.6	2.2	1.4
18	1.1	.90	.85	.65	.45	.40	1.5	7.8	8.5	3.4	2.2	1.3
19	1.1	.90	.85	.65	.45	.40	1.4	9.0	8.2	3.2	3.0	1.4
20	1.1	.90	.85	.65	.45	.40	1.4	9.5	10	3.4	4.1	1.6
21	1.0	.90	.85	.65	.45	.40	1.4	11	13	3.5	4.0	1.5
22	1.0	1.0	.85	.60	.45	.40	1.4	9.5	15	3.2	3.6	1.5
23	1.0	1.0	.83	.55	.45	.45	1.4	8.2	15	3.0	3.4	1.4
24	1.0	1.0	.80	.55	.45	.50	1.6	7.8	11	3.0	3.1	1.6
25	1.0	1.0	.80	.55	.45	.55	1.8	7.8	9.0	3.4	3.0	1.9
26	1.1	1.0	.80	.55	.45	.60	2.0	7.0	8.2	4.2	2.7	3.2
27	1.1	1.0	.80	.55	.45	.60	2.2	7.2	8.0	4.9	2.5	4.3
28	1.0	.95	.80	.57	.45	.58	2.4	9.8	8.0	4.3	2.5	3.7
29	1.0	.90	.80	.57	.42	.56	2.6	12	7.8	3.7	2.4	3.1
30	1.0	.90	.80	.57	---	.55	2.8	15	8.5	3.2	2.3	2.9
31	1.0	---	.78	.57	---	.55	---	12	---	3.1	2.4	---
TOTAL	35.06	30.50	27.36	19.36	14.40	14.36	44.81	213.5	426.6	145.7	98.3	58.6
MEAN	1.13	1.02	.88	.62	.50	.46	1.49	6.89	14.2	4.70	3.17	1.95
MAX	1.5	1.3	1.0	.75	.57	.60	2.8	15	24	10	5.2	4.3
MIN	.96	.90	.78	.55	.42	.40	.58	2.8	7.8	3.0	2.2	1.3
AC-FT	70	60	54	38	29	28	89	423	846	289	195	116

CAL YR 1975 TOTAL 1867.93 MEAN 5.12 MAX 38 MIN .40 AC-FT 3710
WTR YR 1976 TOTAL 1128.55 MEAN 3.08 MAX 24 MIN .40 AC-FT 2240

NOTE.--NO GAGE-HEIGHT RECORD NOV. 23 TO MAY 4.

07095000 GRAPE CREEK NEAR WESTCLIFFE, CO

LOCATION.--Lat 38°11'10", long 105°28'59", in NW¼NW¼ sec.31, T.21 S., R.72 W., Custer County, Hydrologic Unit 11020001, on left bank 0.5 mi (0.8 km) upstream from water line of De Weese Reservoir at elevation 7,665 ft (2,336.3 m), 0.5 mi (0.8 km) downstream from Swift Creek, and 3.6 mi (5.8 km) northwest of Westcliffe.

DRAINAGE AREA.--320 mi² (829 km²).

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 and concrete control. Altitude of gage is 7,690 ft (2,344 m), from topographic map. Prior to Mar. 17, 1939, at site 30 ft (9 m) upstream at same datum.

REMARKS.--Records good except those for winter period, which are poor. Diversions above station for irrigation of about 15,000 acres (60.7 km²).

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

AVERAGE DISCHARGE.--51 years, 32.2 ft³/s (0.912 m³/s), 23,330 acre-ft/yr (28.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,460 ft³/s (211 m³/s) Aug. 2, 1966, gage height, 8.45 ft (2.576 m), from rating curve extended above 320 ft³/s (9.1 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.1 ft³/s (0.003 m³/s) June 19-22, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 170 ft³/s (4.81 m³/s) Sept. 27, gage height, 1.49 ft (0.454 m), no peak above base of 250 ft³/s (7.1 m³/s); minimum daily 5.2 ft³/s (0.15 m³/s) July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	30	16	11	13	28	45	29	26	27	19	13
2	12	27	17	9.5	13	26	58	21	29	32	33	12
3	12	27	17	9.5	15	18	52	17	37	29	83	11
4	12	28	17	10	14	17	38	15	43	24	49	9.8
5	12	25	17	11	13	19	31	14	45	20	37	8.9
6	12	22	18	12	15	22	37	19	60	13	30	8.0
7	12	19	18	9.0	17	22	29	52	82	9.8	26	8.0
8	11	18	19	10	17	30	27	35	78	8.9	24	9.8
9	11	19	20	11	27	31	25	28	81	6.9	25	11
10	11	17	20	11	27	31	22	20	79	6.9	30	12
11	11	14	19	10	17	32	20	14	59	6.4	29	11
12	9.8	11	18	11	18	26	19	12	43	5.2	27	9.8
13	8.9	15	16	10	20	23	32	12	30	6.9	21	9.8
14	8.9	12	12	9.5	22	26	21	11	19	16	16	12
15	9.8	15	12	12	20	26	20	12	13	11	13	12
16	9.8	14	15	11	18	24	20	9.8	15	8.9	12	12
17	11	15	13	12	16	27	18	13	14	8.0	9.8	11
18	11	16	12	13	17	28	30	12	14	8.0	11	9.8
19	11	13	11	12	21	27	56	19	15	8.0	12	18
20	11	10	10	12	12	17	51	24	12	8.9	28	18
21	11	12	10	12	10	20	31	43	12	14	26	12
22	11	13	11	12	14	18	25	50	16	12	27	9.8
23	12	16	12	12	20	20	20	29	12	6.4	21	8.9
24	13	20	12	12	22	20	18	18	12	5.8	21	8.0
25	12	16	11	11	22	21	18	21	7.4	6.4	32	9.8
26	13	8.0	12	9.0	19	19	17	21	6.9	21	22	64
27	12	15	12	12	25	19	15	12	6.9	41	17	130
28	12	17	11	14	29	20	14	6.9	6.4	34	14	112
29	12	16	9.5	13	29	19	14	12	6.4	25	13	84
30	14	15	11	13	---	21	30	20	9.8	19	13	45
31	21	---	13	12	---	27	---	27	---	14	12	---
TOTAL	362.2	515.0	441.5	348.5	542	724	853	648.7	889.8	463.4	752.8	710.4
MEAN	11.7	17.2	14.2	11.2	18.7	23.4	28.4	20.9	29.7	14.9	24.3	23.7
MAX	21	30	20	14	29	32	58	52	82	41	83	130
MIN	8.9	8.0	9.5	9.0	10	17	14	6.9	6.4	5.2	9.8	8.0
AC-FT	718	1020	876	691	1080	1440	1690	1290	1760	919	1490	1410

CAL YR 1975 TOTAL 17231.3 MEAN 47.2 MAX 600 MIN 4.7 AC-FT 34180
WTR YR 1976 TOTAL 7251.3 MEAN 19.8 MAX 130 MIN 5.2 AC-FT 14380

07096000 ARKANSAS RIVER AT CANON CITY, CO

LOCATION.--Lat 38°26'02", long 105°15'24", in SE¼SE¼ sec.31, T.18 S., R.70 W., Fremont County, Hydrologic Unit 11020002, on right bank 800 ft (240 m) upstream from Sand Creek, 0.7 mi (1.1 km) downstream from Grape Creek, and 0.7 mi (1.1 km) upstream from First Street Bridge in Canon City.

DRAINAGE AREA.--3,117 mi² (8,073 km²).

WATER DISCHARGE RECORDS

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. Datum of gage is 5,342.13 ft (1,628.281 m) above mean 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 (0.454 m) higher.

REMARKS.--Records good, except those for winter period and those in April, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, diversions for irrigation of about 56,000 acres (227 km²), and return flow from irrigated areas.

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

AVERAGE DISCHARGE.--88 years, 720 ft³/s (20.39 m³/s), 521,600 acre-ft/yr (643 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft³/s (538 m³/s) Aug. 2, 1921, gage height, 10.7 ft (3.26 m), site and datum then in use, from floodmark, from rating curve extended above 5,000 ft³/s (140 m³/s); minimum daily, 69 ft³/s (1.95 m³/s) May 13, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,310 ft³/s (93.7 m³/s) Aug. 2, gage height, 7.92 ft (2.414 m); minimum daily, 151 ft³/s (4.28 m³/s) Apr. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	278	342	398	311	284	304	223	578	1190	1140	1240	346
2	274	332	398	300	288	304	189	408	1460	1320	1480	300
3	255	315	398	290	288	311	199	386	1750	1260	1470	271
4	249	307	381	290	274	328	205	425	1890	1190	1270	265
5	247	414	381	295	268	315	205	473	2200	1150	1120	271
6	238	437	386	300	292	319	218	524	2490	1030	1010	284
7	244	437	381	300	304	311	212	592	2480	968	852	284
8	236	511	376	280	300	323	177	511	2380	834	735	292
9	228	564	376	290	304	319	151	511	2430	792	767	296
10	228	578	365	300	315	311	151	455	2520	1100	759	292
11	233	592	376	311	311	319	165	437	2540	1150	751	265
12	241	585	370	296	307	319	179	443	2360	1160	759	268
13	238	564	376	300	288	300	197	473	2040	1200	703	283
14	236	571	361	292	296	300	203	485	1840	1250	599	418
15	233	592	351	300	307	278	197	485	1520	1150	592	342
16	236	592	342	304	304	247	191	578	1400	1100	524	304
17	244	592	356	304	304	241	203	703	1430	1080	473	311
18	244	585	342	311	292	241	205	818	1410	1060	449	281
19	241	606	346	304	292	230	199	959	1330	1060	449	332
20	238	592	328	288	315	218	176	1040	1230	1110	414	408
21	236	592	315	268	304	210	191	1130	1270	1120	403	346
22	236	571	315	258	262	216	241	1230	1410	1080	408	346
23	233	585	315	262	268	218	244	1200	1700	1030	370	315
24	241	599	323	265	281	230	244	1060	2000	1010	414	518
25	244	628	315	265	292	230	236	968	1850	1000	408	571
26	252	606	311	255	274	233	366	843	1560	977	392	826
27	258	592	319	252	284	244	524	727	1300	1050	370	1080
28	278	620	315	281	281	241	550	784	1230	1080	356	950
29	268	606	300	292	296	284	564	914	950	1030	365	800
30	258	524	296	288	---	307	606	1090	950	977	342	703
31	271	---	315	288	---	268	---	1190	---	950	342	---
TOTAL	7636	16031	10827	8940	8475	8519	7611	22420	52110	33408	20586	12568
MEAN	246	534	349	288	292	275	254	723	1737	1078	664	419
MAX	278	628	398	311	315	328	606	1230	2540	1320	1480	1080
MIN	228	307	296	252	262	210	151	386	950	792	342	265
AC-FT	15150	31800	21480	17730	16810	16900	15100	44470	103400	66260	40830	24930

CAL YR 1975 TOTAL 301639 MEAN 826 MAX 4370 MIN 205 AC-FT 598300
WTR YR 1976 TOTAL 209131 MEAN 571 MAX 2540 MIN 151 AC-FT 414800

07096000 ARKANSAS RIVER AT CANON CITY, CO--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1963 to September 1965, January 1966 to September 1968, October 1970 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
OCT									
17...	1240	247	320	8.4	9.5	9.5	140	16	41
NOV									
21...	1020	592	222	--	.0	11.7	99	13	29
JAN									
23...	1100	258	300	7.6	.0	11.9	130	16	38
FEB									
20...	0930	315	300	--	2.0	11.2	130	17	39
MAR									
18...	0900	244	305	7.7	6.5	10.8	130	12	37
APR									
16...	1030	193	310	8.3	10.0	9.1	120	8	34
MAY									
21...	1230	361	140	7.9	12.5	8.4	57	12	17
JUN									
21...	1230	1210	160	7.6	17.0	7.6	64	15	19
JUL									
15...	1030	1180	160	8.1	18.0	7.5	66	7	20
AUG									
20...	0900	431	250	7.5	17.5	7.8	110	19	31
SEP									
23...	0930	288	320	7.6	14.0	8.3	140	17	40

DATE	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT									
17...	10	13	.5	2.1	153	1	127	35	9.3
NOV									
21...	6.5	7.9	.3	1.4	105	--	86	21	2.5
JAN									
23...	9.6	12	.5	1.5	144	0	118	33	6.5
FEB									
20...	8.2	12	.5	1.8	139	--	114	29	6.5
MAR									
18...	8.9	12	.5	1.9	143	0	117	34	6.6
APR									
16...	9.2	13	.5	2.3	140	0	115	33	9.4
MAY									
21...	3.6	5.0	.3	1.1	55	0	45	19	2.7
JUN									
21...	4.1	4.8	.3	1.0	60	0	49	19	2.8
JUL									
15...	4.0	4.7	.3	1.1	72	0	59	19	2.5
AUG									
20...	7.5	9.5	.4	1.7	109	0	89	30	5.7
SEP									
23...	9.5	12	.4	2.1	149	0	122	32	8.0

07096000 ARKANSAS RIVER AT CANON CITY, CO—Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO, PHOS-PHORUS (P) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT									
17...	.5	11	199	.27	133	.01	.09	40	20
NOV									
21...	.4	8.7	130	.18	208	.14	.00	30	20
JAN									
23...	.7	12	186	.25	130	.37	.01	10	0
FEB									
20...	.5	9.9	176	.24	150	.16	.01	90	30
MAR									
18...	.4	9.8	181	.25	119	.06	.00	0	40
APR									
16...	.4	9.3	180	.24	93.8	.03	.00	30	20
MAY									
21...	.4	7.3	84	.11	81.9	.11	.00	10	20
JUN									
21...	.3	7.6	88	.12	287	.05	.00	20	0
JUL									
15...	.3	6.9	94	.13	299	.04	.01	30	0
AUG									
20...	.5	9.6	149	.20	173	.02	.00	10	10
SEP									
23...	.6	12	191	.26	149	.23	.02	10	30

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS, SED, SIEVE DIAM, % FINER THAN .062 MM
OCT					
02...	1040	--	9	--	--
17...	1240	247	7	4.7	--
NOV					
21...	1020	592	7	11	--
DEC					
08...	1045	--	6	--	--
JAN					
23...	1100	258	32	22	--
FEB					
04...	1240	--	4	--	--
20...	0930	315	23	20	--
MAR					
18...	0900	244	54	36	--
29...	1130	--	18	--	53
APR					
16...	1030	193	27	14	33
30...	1200	--	93	--	28
MAY					
23...	1200	--	296	--	67
JUN					
15...	1300	1560	85	358	33
21...	1230	1210	15	49	98
30...	1345	--	13	--	77
JUL					
15...	1030	1180	142	452	68
AUG					
13...	1325	680	30	55	67
20...	0900	431	19	22	61
SEP					
23...	0930	288	127	99	--

07096500 FOURMILE CREEK NEAR CANON CITY, CO

LOCATION.--Lat 38°26'11", long 105°11'27", in NE¼SW¼ sec.35, T.18 S., R.70 W., Fremont County, Hydrologic Unit 11020002, on right bank 1,000 ft (300 m) downstream from railroad bridge, 0.6 mi (1.0 km) upstream from mouth, and 2.8 mi (4.5 km) east of courthouse in Canon City.

DRAINAGE AREA.--434 mi² (1,124 Km²).

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.

GAGE.--Water-stage recorder. Concrete control since Oct. 1, 1974. Altitude of gage is 5,254 ft (1,601 m), from topographic map. April to October 1910, nonrecording gage at site 1,200 ft (370 m) upstream at different datum. October 1948 to September 1953, water-stage recorder at site 0.6 mi (1.0 km) upstream at different datum.

REMARKS.--Records good. Diversions for irrigation of about 500 acres (2.02 km²) above station. Water imported to basin from Arkansas River for irrigation of a few small orchards above station.

AVERAGE DISCHARGE.--10 years (water years 1949-53, 1972-76), 16.8 ft³/s (0.476 m³/s), 12,170 acre-ft/yr (15.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,260 ft³/s (121 m³/s) July 11, 1951, gage height, 9.25 ft (2.819 m), from floodmarks, site and datum then in use, from rating curve extended above 96 ft³/s (2.7 m³/s) on basis of slope-area measurement of peak flow; no flow Sept. 3-10, 1950, Sept. 23, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 185 ft³/s (5.24 m³/s) Aug. 2, gage height, 3.72 ft (1.134 m), no peak above base of 300 ft³/s (8.5 m³/s); minimum daily, 0.78 ft³/s (0.002 m³/s) Mar. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	40	12	22	3.5	1.4	5.3	13	11	14	19	18
2	14	31	12	21	2.8	1.1	6.2	11	12	15	71	19
3	14	31	22	20	2.5	.98	4.8	12	10	14	57	19
4	16	31	21	20	2.4	.93	4.6	13	12	14	35	18
5	16	33	27	21	2.4	.88	5.4	11	16	15	21	18
6	14	35	28	21	2.3	.83	5.6	15	18	14	20	16
7	14	35	27	21	6.9	.82	5.8	19	15	14	19	16
8	16	19	27	21	13	.82	5.1	15	12	16	19	16
9	16	19	28	21	13	.82	5.7	12	12	14	16	16
10	13	19	27	21	13	.82	5.4	8.7	10	15	15	18
11	16	20	28	21	13	.82	9.0	13	8.8	15	14	15
12	20	20	28	21	13	.80	8.1	12	10	16	17	12
13	24	22	30	20	13	.78	8.3	9.8	13	12	15	13
14	21	27	30	20	13	.98	8.8	10	8.4	12	13	10
15	22	25	26	20	12	5.1	8.3	10	7.0	12	14	13
16	25	24	26	21	10	21	8.9	12	13	12	14	13
17	27	25	26	21	11	16	17	10	13	14	12	16
18	25	25	23	21	11	9.0	21	9.8	13	15	16	15
19	26	27	21	21	12	9.6	19	9.6	12	15	20	18
20	21	26	22	20	11	7.2	13	9.0	12	15	36	20
21	20	27	22	20	10	6.5	10	13	13	16	24	16
22	19	27	22	20	8.6	7.5	9.7	18	13	16	22	16
23	24	23	22	20	9.1	8.5	9.2	18	12	30	20	16
24	18	18	22	20	11	6.2	8.1	14	13	20	16	17
25	19	18	23	20	11	8.3	13	12	13	20	13	20
26	19	14	23	20	5.6	7.1	12	9.6	10	20	12	35
27	20	11	22	19	8.2	5.6	12	11	11	20	13	71
28	22	19	21	19	3.1	5.7	12	11	11	15	13	47
29	24	18	21	20	1.8	10	11	11	12	14	12	39
30	30	16	21	17	---	11	14	13	14	12	15	35
31	37	---	23	6.5	---	8.1	---	14	---	9.5	16	---
TOTAL	626	725	733	616.5	249.2	165.18	286.3	379.5	360.2	475.5	639	631
MEAN	20.2	24.2	23.6	19.9	8.59	5.33	9.54	12.2	12.0	15.3	20.6	21.0
MAX	37	40	30	22	13	21	21	19	18	30	71	71
MIN	13	11	12	6.5	1.8	.78	4.6	8.7	7.0	9.5	12	10
AC-FT	1240	1440	1450	1220	494	328	568	753	714	943	1270	1250

CAL YR 1975 TOTAL 6379.55 MEAN 17.5 MAX 47 MIN .05 AC-FT 12650
WTR YR 1976 TOTAL 5886.38 MEAN 16.1 MAX 71 MIN .78 AC-FT 11680

07097000 ARKANSAS RIVER AT PORTLAND, CO

LOCATION.--Lat 38°23'18", long 105°00'56", in NE¼NE¼ sec.20, T.19 S., R.68 W., Fremont County, Hydrologic Unit 11020002, on right bank at bridge on Colorado Highway 120 at Portland and 1 mi (1.6 km) downstream from Hardscrabble Creek.

DRAINAGE AREA.--4,024 mi² (10,422 km²).

PERIOD OF RECORD.--May 1939 to September 1952, October 1974 to September 1976.

GAGE.--Water-stage recorder. Datum of gage is 5,021.59 ft (1,530.581 m) above mean sea level, datum of 1929. Prior to Oct. 1, 1974, at site 400 ft (120 m) downstream at datum 0.03 ft (0.009 m) lower.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, diversions above station for irrigation of about 60,000 acres (243 km²) and return flow from irrigated areas.

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

AVERAGE DISCHARGE.--15 years, 749 ft³/s (21.21 m³/s), 542,700 acre-ft/yr (669 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,100 ft³/s (598 m³/s) June 5, 1949, gage height, 12.12 ft (3.712 m), from rating curve extended above 5,300 ft³/s (150 m³/s); minimum daily, 71 ft³/s (2.01 m³/s) Apr. 2, 1945.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,800 ft³/s (362 m³/s) Aug. 2, gage height, 11.26 ft (3.42 m), from HWM in well, from rating curve extended above 4,200 ft³/s (120 m³/s); minimum daily, 130 ft³/s (3.68 m³/s) Apr. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	293	376	325	300	256	256	204	653	1240	1090	1380	400
2	286	356	322	250	259	259	153	470	1540	1320	3460	340
3	259	336	352	194	259	266	155	420	1840	1270	1960	289
4	237	322	336	219	256	296	155	447	1960	1180	1330	283
5	225	416	333	296	225	272	151	475	2260	1130	1130	279
6	219	470	333	318	247	283	194	525	2590	1040	1000	293
7	207	456	329	300	266	276	188	626	2590	944	847	296
8	199	480	360	237	263	286	155	515	2460	847	699	318
9	204	535	340	286	272	289	133	520	2510	729	735	344
10	204	530	333	289	293	272	130	447	2600	1100	729	344
11	207	540	364	279	279	283	143	424	2570	1150	723	310
12	228	530	336	259	269	283	158	447	2390	1190	741	286
13	225	525	344	269	250	259	175	452	2070	1180	711	313
14	225	545	329	228	256	247	180	447	1840	1280	598	482
15	231	582	314	256	269	253	180	438	1530	1180	592	368
16	231	582	296	269	263	250	172	520	1380	1120	520	322
17	253	576	307	276	256	228	225	620	1440	1090	480	344
18	240	565	293	283	247	225	231	735	1430	1060	460	307
19	225	604	333	272	253	204	222	899	1350	1070	470	329
20	207	587	320	256	259	194	191	997	1230	1140	456	452
21	199	587	300	240	243	165	180	1130	1240	1230	434	372
22	202	545	293	237	202	172	253	1320	1390	1150	447	336
23	213	555	296	243	225	183	259	1290	1620	1120	404	289
24	247	570	310	256	250	199	250	1150	2010	1050	447	447
25	250	592	303	253	259	216	231	1040	1870	1020	438	515
26	247	560	279	237	237	225	276	944	1610	1010	434	808
27	263	520	280	210	243	247	515	795	1340	997	384	1260
28	279	560	280	269	247	240	570	802	1220	1010	384	1020
29	276	582	256	283	253	310	598	932	970	958	396	866
30	259	380	318	269	---	322	675	1110	899	880	376	747
31	286	---	296	272	---	293	---	1270	---	873	400	---
TOTAL	7326	15364	9810	8105	7356	7753	7302	22860	52989	33408	23565	13359
MEAN	236	512	316	261	254	250	243	737	1766	1078	760	445
MAX	293	604	364	318	293	322	675	1320	2600	1320	3460	1260
MIN	199	322	256	194	202	165	130	420	899	729	376	279
AC-FT	14530	30470	19460	16080	14590	15380	14480	45340	105100	66260	46740	26500

CAL YR 1975 TOTAL 292835 MEAN 802 MAX 4300 MIN 150 AC-FT 580800
WTR YR 1976 TOTAL 209197 MEAN 572 MAX 3460 MIN 130 AC-FT 414900

07099100 BEAVER CREEK NEAR PORTLAND, CO

LOCATION.--Lat 38°22'27", long 104°57'49", in NW¼NE¼ sec.26, T.19 S., R.68 W., Fremont County, Hydrologic Unit 11020002, on right bank 80 ft (24 m) downstream from bridge on State Highway 120, 1,500 ft (460 m) upstream from mouth, and 3.4 mi (5.5 km) southeast of Portland.

DRAINAGE AREA.--214 mi² (554 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 4,993 ft (1,522 m) above mean sea level, from topographic map.

REMARKS.--Records good except those above 300 ft³/s (8.50 m³/s), which are fair. Storage and diversions above station for municipal supply of city of Colorado Springs. Water exported above station for irrigation of a few hundred acres in adjacent basin.

AVERAGE DISCHARGE.--5 years (water years 1972-76), 8.67 ft³/s (0.246 m³/s), 6,280 acre-ft/yr (7.74 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,800 ft³/s (136 m³/s) Sept. 9, 1973, gage height, 7.56 ft (2.304 m) in gage well, 8.79 ft (2.679 m), from floodmarks, from rating curve extended above 17 ft³/s (0.5 m³/s) on basis of slope-area measurement at gage height 4.36 ft (1.329 m); no flow for several days in 1971, 1974, and 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,080 ft³/s (58.9 m³/s) Aug. 2, gage height, 5.5 ft (1.68 m) from floodmarks, from rating curve extended as explained above; minimum daily, 0.02 ft³/s (0.001 m³/s) July 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	.28	.21	.14	.14	.10	.33	.30	.04	.06	1.9	.10
2	.09	.19	.20	.14	.13	.10	.32	.24	.04	.05	215	.10
3	.08	.22	.20	.14	.13	.08	.28	.24	.04	.13	257	.09
4	.08	.22	.15	.14	.11	.08	.29	.24	.04	.05	103	.09
5	.07	.21	.15	.14	.08	.08	.28	.24	.04	.04	58	.07
6	.08	.18	.13	.16	.08	.30	.27	.30	.08	.04	32	.10
7	.07	.19	.15	.16	.11	.34	.28	.30	19	.03	27	.08
8	.10	.14	.14	.14	.08	.30	.28	.30	1.2	.03	18	.09
9	.08	.22	.15	.14	.08	.27	.27	.24	.69	.02	10	.09
10	.10	.18	.14	.17	.08	.22	.28	.24	.98	.02	2.9	.08
11	.10	.18	.15	.20	.08	.22	.28	.24	.88	.02	1.7	.07
12	.11	.19	.18	.18	.08	.21	.22	.30	.78	.04	1.3	.08
13	.12	.18	.18	.19	.08	.20	.14	.30	.60	.05	1.2	6.9
14	.08	.13	.19	.19	.08	.18	.17	.24	.52	.06	.98	1.1
15	.08	.13	.20	.19	.08	.17	.18	.24	.30	.04	.78	.60
16	.08	.13	.20	.16	.04	.17	.17	.24	.18	.05	.58	.52
17	.10	.13	.20	.14	.06	.17	.24	.18	.13	.04	.37	.44
18	.12	.14	.20	.15	.08	.18	.13	.15	.10	.03	.30	.44
19	.13	.14	.20	.15	.09	.24	.13	.16	.05	.04	.18	.37
20	.08	.14	.20	.18	.10	.34	.13	.17	.04	.03	.08	.30
21	.07	.14	.20	.20	.12	.35	.13	.17	.03	2.0	.11	.24
22	.07	.14	.19	.20	.13	.37	.13	.16	.03	2.2	.12	.18
23	.15	.18	.18	.18	.08	.36	.13	.13	.04	.43	.12	.12
24	.16	.18	.16	.18	.07	.35	.08	.13	.04	1.1	.14	.15
25	.18	.17	.13	.16	.08	.34	.08	.13	.03	.37	.11	.20
26	.13	.16	.15	.14	.08	.41	.08	.13	.06	.32	.09	2.4
27	.16	.16	.19	.13	.08	.36	.13	.08	.06	.55	.10	13
28	.18	.21	.18	.13	.07	.36	.13	.08	.05	.61	.10	3.8
29	.21	.22	.18	.14	.08	.36	.24	.08	.06	.77	.10	.91
30	.22	.22	.18	.13	---	.35	.37	.08	.07	.21	.11	.76
31	.29	---	.16	.15	---	.36	---	.04	---	.15	.11	---
TOTAL	3.66	5.30	5.42	4.94	2.58	7.92	6.17	6.07	26.20	9.58	733.48	33.47
MEAN	.12	.18	.17	.16	.089	.26	.21	.20	.87	.31	23.7	1.12
MAX	.29	.28	.21	.20	.14	.41	.37	.30	19	2.2	257	13
MIN	.07	.13	.13	.13	.04	.08	.08	.04	.03	.02	.08	.07
AC-FT	7.3	11	11	9.8	5.1	16	12	12	52	19	1450	66

CAL YR 1975 TOTAL 470.13 MEAN 1.29 MAX 145 MIN 0 AC-FT 933
WTR YR 1976 TOTAL 844.79 MEAN 2.31 MAX 257 MIN .02 AC-FT 1680

07099200 ARKANSAS RIVER NEAR PORTLAND, CO

LOCATION.--Lat 38°20'14", long 104°56'18", in NW¼SW¼ sec.6, T.20 S., R.67 W., Pueblo County, Hydrologic Unit 11020002, 1.4 mi (2.3 km) downstream from Willow Creek and 5.4 mi (8.7 km) southeast of Portland.

DRAINAGE AREA.--4,280 mi² (11,085 km²).

PERIOD OF RECORD.--October 1964 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)
OCT												
17...	1430	259	580	8.4	12.0	--	11.8	270	110	71	23	31
NOV												
21...	1315	592	412	--	2.0	--	12.0	170	61	46	13	17
JAN												
23...	1330	243	520	8.2	4.0	--	12.2	250	100	68	19	28
FEB												
20...	1130	243	520	--	3.0	--	11.6	220	81	59	18	26
MAR												
18...	1400	219	560	7.8	12.0	--	11.8	230	100	60	20	26
APR												
17...	0945	191	725	8.4	7.5	1	10.7	300	150	76	27	39
20...	1700	196	720	8.9	17.0	2	--	270	130	68	25	37
MAY												
23...	0900	1300	220	7.6	12.5	--	8.3	99	36	27	7.7	11
JUN												
15...	1330	1510	230	7.8	16.0	10	8.5	87	35	24	6.6	7.8
21...	0900	1250	250	7.8	17.5	--	7.6	110	45	30	7.9	10
JUL												
13...	1230	1210	203	8.2	21.0	2	7.7	100	34	29	7.3	10
19...	1230	1080	240	8.5	22.5	--	8.3	120	41	33	7.9	11
AUG												
17...	1215	495	475	8.1	21.5	9	8.5	190	79	51	14	19
20...	1400	460	500	7.8	22.5	--	7.1	210	93	59	16	23
SEP												
14...	1030	592	535	7.7	19.0	330	6.5	210	93	59	16	24
23...	1400	293	560	7.7	18.0	--	7.3	260	110	71	20	27

DATE	SODIUM ADSORPTION RATIO	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	ALKALINITY AS CACO3 (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)
OCT											
17...	.8	3.0	194	0	159	170	9.1	.6	9.7	414	--
NOV											
21...	.6	1.9	131	--	107	82	4.4	.4	9.1	239	--
JAN											
23...	.8	2.7	180	0	148	150	10	.8	12	382	--
FEB											
20...	.8	2.7	171	--	140	130	8.8	.6	9.8	341	--
MAR											
18...	.7	2.6	160	0	131	140	8.5	.5	9.1	347	--
APR											
17...	1.0	3.5	188	0	154	200	13	.5	8.3	462	--
20...	1.0	--	141	19	147	190	12	--	8.5	429	.26
MAY											
23...	.5	1.5	77	0	63	54	3.4	.4	7.7	152	--
JUN											
15...	.4	--	64	0	53	43	2.5	--	7.6	123	.13
21...	.4	1.4	76	0	62	53	3.6	.5	8.4	153	--
JUL											
13...	.4	--	84	0	69	55	3.8	--	7.5	154	.09
19...	.4	1.4	90	0	74	57	3.7	.4	7.8	167	--
AUG											
17...	.6	--	129	0	106	110	6.9	--	10	275	.17
20...	.7	2.7	147	0	121	120	7.8	.6	10	313	--
SEP											
14...	.7	--	147	0	121	130	7.6	--	9.8	319	.44
23...	.7	3.4	178	0	146	170	9.6	.6	12	404	--

07099200 ARKANSAS RIVER NEAR PORTLAND, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	TOTAL AMMONIA NITRO-GEN (N) (MG/L)	TOTAL ORGANIC NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
OCT											
17...	.10	--	--	--	--	--	.04	--	0	--	50
NOV											
21...	.21	--	--	--	--	--	.01	--	30	--	30
JAN											
23...	.66	--	--	--	--	--	.05	--	10	--	50
FEB											
20...	.38	--	--	--	--	--	.04	--	70	--	60
MAR											
18...	.25	--	--	--	--	--	.03	--	0	--	50
APR											
17...	.34	--	--	--	--	--	.04	--	60	--	80
20...	--	.04	.53	.57	.83	.09	--	--	--	--	--
MAY											
23...	.22	--	--	--	--	--	.02	--	20	--	20
JUN											
15...	--	.03	.31	.34	.47	.12	--	2000	40	110	20
21...	.13	--	--	--	--	--	.01	--	30	--	10
JUL											
13...	--	.04	.16	.20	.29	.05	--	--	--	--	--
19...	.08	--	--	--	--	--	.02	--	20	--	10
AUG											
17...	--	.00	2.9	2.9	3.1	.06	--	--	--	--	--
20...	.20	--	--	--	--	--	.01	--	10	--	30
SEP											
14...	--	.02	4.4	4.4	4.8	.66	--	57000	70	2100	10
23...	.59	--	--	--	--	--	.06	--	10	--	20

DATE	TOTAL ALUM-INUM (AL) (UG/L)	DIS-SOLVED ALUM-INUM (AL) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL SILVER (AG) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	PHENOLS (UG/L)
JUN									
15...	900	10	1	0	--	2	0	0	1
SEP									
14...	36000	10	<10	0	5	3	<10	0	1

DATE	TIME	INSTAN-TANEOUS DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM
OCT					
02...	1250	--	10	--	--
17...	1430	259	16	11	--
NOV					
21...	1315	592	37	59	--
DEC					
08...	0930	--	9	--	--
23...	1230	--	46	--	--
JAN					
23...	1330	243	34	22	--
FEB					
04...	1400	--	51	--	--
20...	1130	243	741	486	73
MAR					
18...	1400	219	1400	828	50
29...	1320	--	1460	--	68
APR					
17...	0945	191	1060	547	57
MAY					
05...	1130	--	960	--	68
JUN					
15...	1330	1510	187	762	31
21...	0900	1250	117	395	30
30...	1200	886	20	48	65
JUL					
19...	1230	1080	225	656	18
AUG					
13...	1445	789	119	254	24
20...	1400	460	97	120	94
SEP					
03...	1225	303	75	61	93

07099350 PUEBLO RESERVOIR NEAR PUEBLO, CO

LOCATION.--Lat 38°16'15", long 104°43'30", in NE¼ sec.36, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, at dam on Arkansas River 7 mi (11 km) west of Pueblo.

DRAINAGE AREA.--4,669 mi² (12,093 km²).

PERIOD OF RECORD.--January 1974 to current year.

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

REMARKS.--Reservoir is formed by concrete and earthfill dam. Storage began Jan. 9, 1974; dam completed in August 1975. Capacity, 357,000 acre-ft (440 hm³) at elevation 4,898.74 ft (1,493.136 m), crest of spillway. Dead storage, 3,400 acre-ft (4.19 hm³) below elevation 4,764.00 ft (1,452.067 m), 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 for irrigation requirements in the Arkansas Valley. Figures given are total contents.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 72,810 acre-ft (89.8 hm³) Apr. 1, 1976, elevation, 4,822.15 ft (1,469.791 m); minimum since appreciable storage was attained, 22,680 acre-ft (28.0 hm³) Nov. 13, 1974, elevation, 4,790.50 ft (1,460.144 m).

EXTREMES FOR CURRENT YEAR.--Maximum contents, 72,810 acre-ft (89.8 hm³) Apr. 1, elevation, 4,822.15 ft (1,469.791 m); minimum, 30,705 acre-ft (37.9 hm³) Oct. 30, elevation, 4,797.25 ft (1,462.201 m).

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	4,798.27	32,100	-
Oct. 31	4,797.27	30,770	-1,330
Nov. 30	4,804.70	41,280	+10,510
Dec. 31	4,811.80	52,840	+11,560
CAL YR 1975	-	-	+29,150
Jan. 31	4,817.26	62,950	+10,110
Feb. 29	4,821.79	72,060	+9,110
Mar. 31	4,822.11	72,730	+670
Apr. 30	4,812.89	54,770	-17,960
May 31	4,806.53	44,110	-10,660
June 30	4,805.42	42,390	-1,720
July 31	4,802.89	38,580	-3,810
Aug. 31	4,800.32	34,900	-3,680
Sept. 30	4,801.35	36,350	+1,450
WTR YR 1976	-	-	+4,250

07099400 ARKANSAS RIVER ABOVE PUEBLO, CO

LOCATION.--Lat 38°16'17", long 104°43'06", in NE¼NE¼ sec.36, T.20 S., R.66 W., Pueblo County, Hydrologic Unit 11020002, on left bank 450 ft (140 m) downstream from headgate of West Pueblo ditch, 0.4 mi (0.6 km) downstream from Pueblo Dam, and 7 mi (11 km) west of Pueblo.

DRAINAGE AREA.--4,670 mi² (12,095 km²).

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,740 ft (1,445 m), from topographic map. Prior to Mar. 23, 1967, at site 730 ft (220 m) upstream at datum 1.23 ft (0.375 m) higher. May 24, 1974 to Feb. 24, 1975, at site 2,000 ft (610 m) downstream at different datum.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, diversions above station for irrigation of about 88,000 acres (356 km²) 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.

AVERAGE DISCHARGE.--8 years, 643 ft³/s (18.21 m³/s), 465,900 acre-ft/yr (574 hm³/yr), prior to completion of Pueblo Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,100 ft³/s (286 m³/s) Aug. 1, 1966, gage height, 9.4 ft (2.87 m), from floodmarks, present site and datum, from rating curve extended above 1,600 ft³/s (45 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 28 ft³/s (0.79 m³/s) May 11, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,440 ft³/s (126 m³/s) Aug. 5, gage height, 5.49 ft (1.673 m); minimum daily, 82 ft³/s (2.32 m³/s) Jan. 3-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	260	208	239	101	103	264	122	618	1130	992	963	328
2	264	208	164	94	103	218	138	520	1340	1290	1690	356
3	260	268	160	82	103	198	180	540	1760	1530	1650	288
4	264	310	160	82	105	202	195	555	1790	1350	2820	244
5	212	252	133	82	105	202	286	575	1780	1270	2880	250
6	170	223	120	84	105	202	376	625	2030	1230	794	215
7	158	226	120	86	105	202	336	656	2300	1060	535	215
8	140	229	120	86	103	200	306	646	2280	1010	545	232
9	124	235	120	86	103	195	333	673	2140	811	476	218
10	120	247	120	86	101	195	450	646	2160	865	559	274
11	122	250	120	87	103	195	481	580	2250	1050	668	271
12	122	235	122	86	101	208	535	620	2180	1110	967	238
13	122	226	122	86	101	218	560	630	1780	1110	913	208
14	146	250	124	87	101	218	570	668	1480	1160	871	625
15	182	271	124	87	101	198	570	695	1480	1160	778	709
16	190	271	124	87	101	170	555	695	1110	1020	739	288
17	185	285	124	87	101	162	545	700	1440	1020	684	271
18	185	299	115	87	101	146	540	841	1250	973	684	292
19	185	320	99	87	101	158	520	1000	1260	992	695	274
20	180	372	101	87	103	164	510	1030	1150	1000	690	316
21	152	372	101	89	103	158	490	1020	1090	1010	722	384
22	144	360	105	89	103	150	490	1110	1160	1060	535	254
23	146	360	108	89	103	148	490	1240	1400	823	372	254
24	162	364	108	87	103	142	505	1160	1790	662	316	247
25	175	360	110	87	105	118	476	937	1930	610	332	250
26	180	356	108	87	105	105	372	841	1640	595	352	507
27	188	360	106	87	105	103	762	678	1320	565	316	1020
28	218	348	106	87	105	96	783	722	1160	656	282	1260
29	241	340	105	87	145	84	728	800	949	744	270	727
30	257	340	99	94	---	84	700	985	734	937	270	510
31	232	---	99	103	---	101	---	1120	---	829	270	---
TOTAL	5686	8745	3786	2723	3027	5204	13904	24126	47263	30494	24653	11525
MEAN	183	292	122	87.8	104	168	463	778	1575	984	795	384
MAX	264	372	239	103	145	264	783	1240	2300	1530	2881	1260
MIN	120	208	99	82	101	84	122	520	734	565	270	208
AC-FT	11280	17350	7510	5400	6000	10320	27580	47850	93750	60480	48910	22860

CAL YR 1975 TOTAL 251377 MEAN 689 MAX 4270 MIN 99 AC-FT 498600
WTR YR 1976 TOTAL 181141 MEAN 495 MAX 2880 MIN 82 AC-FT 359300

07103700 FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO

LOCATION.--Lat 38°51'17", long 104°52'39", in SE¼SW¼ sec.3, T.14 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on left bank 200 ft (61 m) upstream from diversion to city of Colorado Springs, 0.5 mi (0.8 km) east of bridge on U.S. Highway 24 near west city limits of Colorado Springs, and 1.0 mi (1.6 km) downstream from Sutherland Creek.

DRAINAGE AREA.--103 mi² (267 km²), revised.

PERIOD OF RECORD.--April 1958 to current year.

GAGE.--Water-stage recorder and Parshall flume with overflow weirs. Altitude of gage is 6,110 ft (1,862 m), from topographic map.

REMARKS.--Records good. 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.

AVERAGE DISCHARGE.--18 years, 12.0 ft³/s (0.340 m³/s), 8,690 acre-ft/yr (10.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,630 ft³/s (74.5 m³/s) Aug. 4, 1964, gage height, 5.27 ft (1.606 m), from rating curve extended above 190 ft³/s (5.4 m³/s) on basis of slope-area measurements at gage heights 3.87, 4.52, and 5.27 ft (1.180, 1.378, and 1.606 m); minimum daily, 2.0 ft³/s (0.057 m³/s) Jan. 24, 1969.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 408 ft³/s (11.6 ft³/s) Aug. 2, gage height, 4.06 ft (1.237 m); minimum daily, 3.0 ft³/s (0.085 m³/s) Jan. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	6.4	7.9	3.0	5.6	6.6	6.3	9.8	6.1	5.0	31	5.8
2	5.3	6.0	7.8	3.0	5.4	7.0	6.3	12	6.3	5.4	167	5.8
3	5.5	5.7	7.3	3.0	5.3	6.3	5.8	11	7.2	6.3	70	5.7
4	5.3	5.7	6.7	3.0	4.8	4.6	6.3	10	6.0	3.7	45	5.7
5	5.1	5.7	6.5	4.0	3.9	5.9	6.1	8.3	7.2	3.7	34	5.4
6	5.2	5.6	6.4	3.5	5.7	6.9	6.4	10	9.3	5.7	27	5.7
7	5.3	5.4	6.4	3.3	6.7	7.7	5.8	8.8	12	6.6	25	6.0
8	5.1	5.9	6.3	3.3	5.8	7.7	5.9	8.0	8.0	6.6	23	9.6
9	5.7	9.0	6.1	3.3	5.8	7.1	5.9	7.8	7.5	7.2	21	9.2
10	6.0	6.2	6.7	3.6	6.1	6.9	5.8	7.2	6.2	6.7	16	8.0
11	5.7	6.4	6.2	3.9	5.9	6.7	5.6	6.7	6.8	7.0	14	6.4
12	5.1	4.7	6.3	4.0	5.8	6.4	6.4	6.6	5.8	8.0	11	5.9
13	4.4	6.2	6.2	4.0	5.9	8.7	7.8	6.4	5.1	8.0	9.5	5.7
14	4.1	7.3	5.0	4.0	5.7	20	6.8	5.8	5.3	6.1	8.0	6.5
15	4.9	6.8	4.3	4.5	5.7	14	8.6	7.8	5.0	5.7	8.0	7.2
16	4.9	6.4	5.3	5.6	6.2	6.0	7.7	9.7	5.1	6.4	8.5	7.7
17	5.2	6.8	4.7	4.9	5.9	6.1	9.4	7.2	8.3	6.4	8.0	8.1
18	5.2	11	4.2	5.5	5.2	10	11	6.4	14	7.0	7.5	10
19	5.5	9.7	5.6	5.4	5.9	6.0	9.4	6.3	12	27	17	11
20	5.9	6.9	6.2	5.0	5.2	5.7	11	5.1	9.0	15	6.9	10
21	5.0	5.8	6.4	5.3	4.4	5.8	10	12	5.2	9.9	6.0	8.9
22	4.9	8.9	6.9	5.6	6.2	5.9	9.0	18	7.6	7.0	6.3	8.5
23	6.2	12	6.1	5.6	6.9	6.7	10	14	8.4	10	5.0	7.7
24	6.0	7.4	5.8	5.4	6.2	6.6	10	12	7.1	12	6.3	8.1
25	5.9	6.8	5.5	4.7	6.5	6.9	10	8.5	5.9	12	17	11
26	6.5	3.8	5.5	3.8	6.2	6.6	11	8.5	4.4	13	7.3	29
27	6.3	7.0	5.5	6.5	6.1	6.2	10	7.2	5.3	9.7	8.1	32
28	6.0	7.6	4.4	6.2	6.0	6.6	9.1	6.9	5.5	14	5.0	20
29	5.7	7.5	4.9	5.9	6.1	6.3	10	6.4	7.0	8.0	5.7	18
30	5.8	3.9	6.1	5.5	---	6.1	11	6.4	6.1	6.7	5.7	16
31	6.3	---	5.1	5.6	---	5.8	---	6.9	---	5.6	5.7	---
TOTAL	169.6	204.5	184.3	139.9	167.1	225.8	244.4	267.7	214.7	261.4	635.5	304.6
MEAN	5.47	6.82	5.95	4.51	5.76	7.28	8.15	8.64	7.16	8.43	20.5	10.2
MAX	6.5	12	7.9	6.5	6.9	20	11	18	14	27	167	32
MIN	4.1	3.8	4.2	3.0	3.9	4.6	5.6	5.1	4.4	3.7	5.0	5.4
AC-FT	336	406	366	277	331	448	485	531	426	518	1260	604

CAL YR 1975 TOTAL 3193.8 MEAN 8.75 MAX 51 MIN 3.4 AC-FT 6330
WTR YR 1976 TOTAL 3019.5 MEAN 8.25 MAX 167 MIN 3.0 AC-FT 5990

07103750 MONUMENT CREEK AT MONUMENT, CO

LOCATION.--Lat 39°05'47", long 104°53'06", in SW¼NW¼ sec.15, T.11 S., R.76 W., El Paso County, Hydrologic Unit 11020003, on right bank at downstream side of bridge 0.3 mi (0.5 km) upstream from Monument Lake, 0.8 mi (1.3 km) northwest of Monument and 2.1 mi (3.4 km) downstream from North Monument Creek.

DRAINAGE AREA.--28.5 mi² (73.8 km²).

PERIOD OF RECORD.--January to September 1976.

GAGE.--Water-stage recorder. Altitude of gage is 6,925 ft (2,111 m), from topographic map.

REMARKS.--Records good except those for winter period and those for period of no gage-height record, which are poor. Storage and diversions above station for municipal supply at Palmer Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge during period January to September, 13 ft³/s (0.37 m³/s) Apr. 23, gage height, 0.93 ft (0.283 m); no flow most of July through Sept.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				.20	.43	1.0	2.0	8.6	2.5	.16	0	
2				.20	.45	.90	2.8	8.8	2.3	.13	.21	
3				.20	.35	.90	3.2	8.6	2.1	.11	.29	
4				.25	.19	.60	3.3	8.6	1.9	.06	.18	
5				.30	.19	.65	3.5	8.6	2.1	.05	.14	
6				.20	.19	.75	2.8	8.6	2.0	.04	.13	
7				.20	.36	.90	2.2	8.0	1.8	.02	.13	
8				.30	.72	1.0	2.2	7.6	1.6	0	.19	
9				.40	.57	1.2	2.4	7.1	1.5	0	.14	
10				.45	.69	1.1	2.7	6.9	1.3	0	.14	
11				.40	.72	.95	3.1	6.7	1.0	0	.15	
12				.40	.53	.80	3.6	6.8	.82	0	.12	
13				.35	.59	1.0	3.9	6.0	.63	0	.10	
14				.35	.62	.90	3.6	5.0	.82	0	.08	
15				.38	.63	.80	3.0	6.0	.50	0	.05	
16				.40	.84	1.0	4.0	5.4	.39	0	.04	
17				.43	.80	1.1	3.1	4.8	.52	0	0	
18				.45	.80	1.2	4.6	4.5	1.5	0	0	
19				.30	.80	1.2	7.0	4.4	1.8	0	0	
20				.35	.50	1.1	9.0	4.1	1.6	0	0	
21				.40	.60	1.1	10	4.2	1.1	.34	0	
22				.45	1.0	1.0	11	4.4	.87	.03	0	
23				.30	1.2	1.0	12	5.0	.89	0	0	
24				.25	1.1	1.0	9.9	3.5	.97	0	0	
25				.20	1.1	1.0	9.6	2.8	.73	0	0	
26				.18	.94	.90	9.2	3.8	.54	0	0	
27				.21	.68	.80	9.4	3.5	.47	0	0	
28				.61	.82	.80	7.3	3.2	.31	0	0	
29				1.1	.85	.80	7.9	3.0	.20	0	0	
30				.81	---	1.0	9.4	3.0	.21	0	0	
31				1.6	---	1.5	---	2.6	---	0	0	---
TOTAL				12.62	19.26	29.95	167.7	174.1	34.97	.94	2.09	0
MEAN				.41	.66	.97	5.59	5.62	1.17	.030	.067	0
MAX				1.6	1.2	1.5	12	8.8	2.5	.34	.29	0
MIN				.18	.19	.60	2.0	2.6	.20	0	0	0
AC-FT				25	38	59	333	345	69	1.9	4.1	0

NOTE.--NO GAGE-HEIGHT RECORD MAR. 6 TO APR. 6.

07103800 WEST MONUMENT CREEK AT U.S. AIR FORCE ACADEMY, CO

LOCATION.--Lat 38°58'14", long 104°54'08", in SW¼SW¼ sec.28, T.12 S., R.67 W., El Paso County, Hydrologic Unit 11020003, on left bank 500 ft (150 m) upstream from diversion to city of Colorado Springs water treatment plant, 2.7 mi (4.3 km) south of U.S. Air Force Academy chapel, and 4.4 mi (7.1 km) upstream from mouth.

DRAINAGE AREA.--14.9 mi² (38.6 km²).

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 7,180 ft (2,188 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions from Colorado River basin, storage reservoirs, and operation of a water-supply system.

AVERAGE DISCHARGE.--6 years, 3.43 ft³/s (0.097 m³/s), 2,490 acre-ft/yr (3.07 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47 ft³/s (1.33 m³/s) May 20, 1970, gage height, 2.69 ft (0.820 m); maximum gage height, 2.78 ft (0.847 m) Jan. 1, 1973, backwater from ice; no flow on many days in 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39 ft³/s (1.10 m³/s) Aug. 2, gage height, 2.42 ft (0.738 m); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	.14	.28	.16		0	.03	.28	.12	0	5.4	.75
2	.07	.11	.28	.15		.03	.03	.28	.11	0	22	.58
3	.08	.11	.28	.15		0	.03	.28	.08	0	27	.46
4	.07	.11	.29	.15		0	.03	.25	.07	0	17	.40
5	.07	.11	.31	.15		0	.03	.25	.08	0	12	.40
6	.07	.12	.31	.15		0	.07	.28	.08	.11	8.1	.35
7	.05	.11	.30	.15		0	.04	.25	.08	0	4.9	.40
8	.05	.13	.29	.17		0	.06	.22	.06	0	4.0	.52
9	.06	.19	.30	.20		0	.06	.22	.05	0	5.2	.52
10	.06	.17	.29	.20		.02	.07	.19	.04	0	5.2	.46
11	.06	.18	.29	.20		0	.07	.19	0	0	4.5	.40
12	.06	.30	.31	.20		0	.09	.16	0	0	4.0	.35
13	.06	.24	.30	.15		0	.11	.14	0	0	3.4	.31
14	.07	.15	.30	.15		0	.09	.14	0	0	3.1	.35
15	.09	.15	.30	.15		0	.07	.16	0	0	2.8	.31
16	.09	.19	.30	.15		.03	.09	.17	0	0	2.5	.31
17	.09	.19	.25	.12		0	.09	.14	0	0	2.2	.35
18	.10	.22	.25	.12		.02	.25	.14	.09	0	2.0	.46
19	.07	.22	.30	.12		.03	.25	.13	.05	.14	2.4	.35
20	.07	.20	.30	.10		0	.28	.15	0	.49	1.9	.35
21	.08	.20	.30	.09		0	.40	.19	0	.24	1.5	.35
22	.07	.20	.30	.09		0	.46	.26	0	.17	1.3	.31
23	.11	.25	.30	.08		0	.46	.28	0	.12	1.3	.27
24	.14	.28	.30	.07		.01	.35	.24	0	.09	2.0	.29
25	.11	.28	.30	.07		.04	.31	.23	0	.14	1.9	.38
26	.11	.28	.30	.06		.03	.31	.19	0	.17	1.2	1.0
27	.11	.28	.30	.06		.01	.35	.16	0	.13	1.1	1.3
28	.11	.28	.25	.05		.02	.31	.14	0	.14	1.0	1.0
29	.11	.28	.23	0		.02	.31	.12	0	.12	.98	.82
30	.11	.28	.22	0	---	.01	.31	.15	.02	.08	.95	.64
31	.11	---	.22	0	---	.02	---	.13	---	.07	.82	---
TOTAL	2.60	5.95	8.85	3.66	0	.29	5.41	6.11	.93	2.21	153.65	14.74
MEAN	.084	.20	.29	.12	0	.009	.18	.20	.031	.071	4.96	.49
MAX	.14	.30	.31	.20	0	.04	.46	.28	.12	.49	27	1.3
MIN	.05	.11	.22	0	0	0	.03	.12	0	0	.82	.27
AC-FT	5.2	12	18	7.3	0	.6	11	12	1.8	4.4	305	29

CAL YR 1975 TOTAL 156.25 MEAN .43 MAX 3.8 MIN .03 AC-FT 310
WTR YR 1976 TOTAL 204.40 MEAN .56 MAX 27 MIN 0 AC-FT 405

07103950 KETTLE CREEK NEAR BLACK FOREST, CO

LOCATION.--Lat 39°00'14", long 104°44'21", in NE¼SE¼ sec.14, T.12 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on right bank 13 ft (4 m) downstream from bridge on Milan Road, 1.2 mi (1.9 km) downstream from Burgess Creek, and 2.2 mi (3.5 km) southwest of Black Forest.

DRAINAGE AREA.--9.01 mi² (23.34 km²).

PERIOD OF RECORD.--May to September 1976.

GAGE.--Water-stage recorder. Altitude of gage is 6,980 ft (2,130 m), from topographic map.

REMARKS.--Records good. No diversion above station.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period May to September, 5.5 ft³/s (0.16 m³/s) June 6, gage height, 1.23 ft (0.375 m), only peak above base of 5.0 ft³/s (0.14 m³/s); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								.16	.20	0	.34	0
2								.12	.21	0	.48	0
3								.11	.05	0	.54	0
4								.11	.61	0	.10	0
5								.11	.50	0	.01	0
6								.18	1.3	0	0	0
7								.15	.82	0	0	0
8								.11	.53	0	0	0
9								.09	.35	0	0	0
10								.17	.19	0	0	0
11								.07	.10	0	0	0
12								.06	.06	0	0	0
13								.05	.05	0	0	0
14								.05	.04	0	0	0
15								.07	.03	0	0	0
16								.08	.03	0	0	0
17								.07	.11	0	0	0
18								.06	.17	0	0	0
19								.06	.07	0	0	0
20								.06	.04	.11	0	0
21								.90	.02	.02	0	0
22								2.4	.01	0	.05	0
23								.62	.03	0	0	0
24								.17	.04	0	0	0
25								.11	.03	0	0	0
26								.06	.01	0	0	.07
27								.05	0	0	0	.24
28								.09	0	0	0	.05
29								.11	0	0	0	.03
30								.05	0	0	0	.02
31								.03	---	0	0	---
TOTAL				---				6.53	5.60	.13	1.53	.41
MEAN				---				.21	.19	.004	.049	.014
MAX				---				2.4	1.3	.11	.54	.24
MIN				---				.03	0	0	0	0
AC-FT				---				13	11	.3	3.0	.8

NOTE.--NO GAGE-HEIGHT RECORD JUNE 6, 7.

07104000 MONUMENT CREEK AT PIKEVIEW, CO

LOCATION.--Lat 38°55'04", long 104°49'05", in NW¼SE¼ sec.18, T.13 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on right bank at downstream side of abandoned bridge at northeast edge of Pikeview, 600 ft (180 m) upstream from unnamed tributary, 1,200 ft (370 m) upstream from bridge on I-25, and 0.7 mi (1.1 km) downstream from Dry Creek.

DRAINAGE AREA.--204 mi² (528 km²), revised.

PERIOD OF RECORD.--October 1938 to September 1949, January to September 1976.

GAGE.--Water-stage recorder. Datum of gage is 6,203.26 ft (1,890.754 m) above mean sea level. September 1938 to October 1949, nonrecording gage at same site at datum 0.10 ft (0.030 m) lower.

REMARKS.--Records good except those for winter period, 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.

AVERAGE DISCHARGE.--11 years (water years 1939-49), 26.5 ft³/s (0.750 m³/s), 19,200 acre-ft/yr (23.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 1,190 ft³/s (33.7 m³/s) May 11, 1947; maximum gage height, 4.05 ft (1.234 m) site and datum then in use, June 29, 1942; no flow July 24, 1939.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 30, 1935, reached a stage of about 14 ft (4.3 m) present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period January to September, 389 ft³/s (11.0 m³/s) July 28, gage height, 3.17 ft (0.966 m); minimum daily, 0.40 ft³/s (0.011 m³/s) July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	9.7	8.9	8.1	25	6.5	3.3	38	3.8
2				---	8.9	8.9	8.1	28	6.5	1.9	141	3.8
3				---	6.5	8.1	8.9	18	8.1	1.2	135	3.8
4				---	6.5	5.0	8.9	17	7.3	1.0	70	3.8
5				---	6.5	7.0	8.9	26	6.5	.90	42	3.8
6				---	6.5	10	8.9	25	20	.80	30	3.8
7				---	10	11	8.9	33	18	.85	17	3.8
8				---	6.5	10	8.9	26	5.3	.70	8.9	4.3
9				---	4.8	8.1	8.9	17	3.3	.55	8.1	4.3
10				---	4.8	8.1	8.9	12	1.9	.51	7.3	4.3
11				---	5.9	8.1	10	10	2.2	.43	6.5	4.3
12				---	6.5	7.3	8.1	10	3.8	.40	6.5	3.8
13				---	6.5	8.0	8.9	9.7	3.3	.47	5.9	3.8
14				---	5.9	8.0	10	9.7	2.2	.70	5.9	3.8
15				---	8.1	8.0	12	7.3	2.2	.70	5.9	3.8
16				7.3	9.7	10	16	7.3	2.2	.65	5.9	3.8
17				7.3	6.5	8.9	20	12	2.9	.51	5.3	6.4
18				7.3	4.3	8.9	14	12	5.3	.51	5.3	4.7
19				7.3	3.8	8.1	14	14	5.3	4.9	5.3	4.3
20				8.1	3.8	12	12	14	3.8	5.4	5.3	4.3
21				8.9	3.8	12	6.5	14	1.9	5.7	5.3	4.8
22				6.5	14	12	5.3	17	1.2	1.9	4.8	3.8
23				6.5	18	10	7.3	22	2.2	1.2	4.8	3.8
24				7.3	14	8.1	7.3	9.7	4.8	1.0	5.8	3.8
25				7.3	8.9	8.1	12	5.3	6.5	1.8	5.9	18
26				6.5	9.7	8.9	31	5.9	6.5	1.8	4.3	30
27				6.5	14	12	17	8.1	4.3	1.9	4.3	19
28				8.1	9.7	12	10	12	3.3	27	4.3	12
29				8.1	9.7	12	14	12	3.8	8.4	3.8	8.9
30				8.8	---	12	26	6.5	4.8	2.6	3.8	5.9
31				11	---	12	---	8.1	---	2.2	3.8	---
TOTAL				---	233.5	291.5	348.8	453.6	155.9	81.88	606.0	192.5
MEAN				---	8.05	9.40	11.6	14.6	5.20	2.64	19.5	6.42
MAX				---	18	12	31	33	20	27	141	30
MIN				---	3.8	5.0	5.3	5.3	1.2	.40	3.8	3.8
AC-FT				---	463	578	692	900	309	162	1200	382

07104500 TEMPLETON GAP FLOODWAY AT COLORADO SPRINGS, CO

LOCATION.--Lat 38°53'17", long 104°49'01", in SE¼ sec.30, T.13 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on left bank 75 ft (23 m) upstream from head of concrete flume, 400 ft (120 m) upstream from bridge on U.S. Highways 85 and 87, and 0.8 mi (1.3 km) north of Colorado Springs.

DRAINAGE AREA.--8.73 mi² (22.61 km²), revised.

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

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,200 ft (1,890 m), from topographic map.

REMARKS.--Records good except those above 125 ft³/s (3.54 m³/s), which are fair. This is an artificial channel constructed to divert flood flows from normally dry channels around Colorado Springs during periods of heavy rainfall.

AVERAGE DISCHARGE.--25 years, 0.39 ft³/s (0.011 m³/s), 283 acre-ft/yr (349,000 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,090 ft³/s (30.9 m³/s) July 24, 1970, gage height, 3.45 ft (1.052 m), from rating curve based on computation of flow at critical depth at gage heights 1.3, 1.4, 1.8, and 3.0 ft (0.40, 0.43, 0.55, and 0.91 m); no flow most of time.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 760 ft³/s (21.5 m³/s) Sept. 17, gage height, 3.21 ft (0.978 m), from rating curve extended above 130 ft³/s (3.7 m³/s); no flow for most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							0	0	0	0	56	0
2							0	0	0	0	70	0
3							0	0	.01	.04	24	0
4							0	0	0	0	.01	0
5							0	0	0	0	0	0
6							0	0	33	0	0	0
7							0	.01	3.7	0	0	0
8							0	0	0	0	0	.02
9							0	0	0	0	0	0
10							0	0	0	0	0	0
11							0	0	.54	0	0	0
12							0	0	0	0	0	0
13							0	0	0	0	0	0
14							0	0	0	0	0	0
15							0	0	0	0	0	0
16							0	0	0	0	0	0
17							3.1	0	0	0	0	49
18							.46	0	.01	0	0	5.0
19							.02	0	0	5.9	0	.35
20							0	0	0	8.2	0	0
21							0	.06	0	21	0	0
22							0	.26	0	.01	0	0
23							0	.02	1.1	0	0	0
24							0	0	0	0	3.9	0
25							0	0	0	0	2.4	.13
26							0	0	0	0	0	13
27							0	0	0	0	0	21
28							0	0	0	1.2	0	.01
29							.01	0	0	.01	0	0
30					---		.59	0	0	0	0	0
31		---			---		---	0	---	0	0	---
TOTAL	0	0	0	0	0	0	4.18	.35	38.36	36.36	156.31	88.51
MEAN	0	0	0	0	0	0	.14	.011	1.28	1.17	5.04	2.95
MAX	0	0	0	0	0	0	3.1	.26	33	21	70	49
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	8.3	.7	76	72	310	176

CAL YR 1975 TOTAL 114.62 MEAN .31 MAX 26 MIN 0 AC-FT 227
WTR YR 1976 TOTAL 324.07 MEAN .89 MAX 70 MIN 0 AC-FT 643

07105500 FOUNTAIN CREEK AT COLORADO SPRINGS, CO

LOCATION.--Lat 38°48'59", long 104°49'20", in NE¼SW¼ sec.19, T.14 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on left bank 31 ft (9.4 m) upstream from bridge on Nevada Avenue in Colorado Springs, 100 ft (30 m) downstream from mouth of Cheyenne Creek, and 1.3 mi (2.1 km) downstream from Monument Creek.

DRAINAGE AREA.--392 mi² (1,015 km²), revised.

PERIOD OF RECORD.--October 1921 to September 1924, January to September 1976. Monthly discharge only for some periods, published in WSP 1311.

GAGE.--Water-stage recorder. Altitude of gage is 5,900 ft (1,800 m), from topographic map. Prior to October 1, 1972, nonrecording gage at same site at different datum.

REMARKS.--Records good except those for periods of no gage-height record, which are poor. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation and municipal use, and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,550 ft³/s (43.9 m³/s) Aug. 2, 1976, gage height, 3.47 ft (1.058 m); maximum gage height, 6.5 ft (1.98 m) May 27, 1922, datum then in use; minimum daily discharge, 4.0 ft³/s (0.11 m³/s) May 26, 1922.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period January to September, 1,550 ft³/s (43.9 m³/s) Aug. 2, gage height, 3.47 ft (1.058 m); minimum daily, 6.1 ft³/s (0.17 m³/s) June 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	14	13	13	22	17	7.0	300	10
2				---	14	14	13	15	16	7.0	540	10
3				---	15	13	14	14	16	7.5	384	9.7
4				---	9.9	8.4	14	11	13	7.0	179	9.0
5				---	10	15	14	11	14	7.0	94	8.6
6				---	13	22	17	12	69	7.5	62	8.6
7				---	21	16	14	12	48	7.5	43	12
8				---	21	14	14	12	12	7.5	36	17
9				---	21	13	13	14	9.2	7.0	28	17
10				---	20	12	11	13	12	7.0	16	9.7
11				---	18	11	11	14	11	7.0	13	8.7
12				---	14	9.4	11	16	12	7.0	14	8.3
13				---	15	10	13	16	12	6.5	14	8.1
14				---	20	10	15	16	14	6.5	10	8.7
15				---	20	9.7	16	13	13	6.5	10	9.5
16				---	18	8.8	15	24	12	6.5	11	9.2
17				---	16	9.4	76	18	20	6.5	10	33
18				---	14	9.1	35	17	28	6.5	9.2	39
19				12	15	9.2	19	19	17	10	24	23
20				11	13	8.6	16	28	14	50	16	23
21				14	11	9.5	16	39	8.9	35	10	22
22				14	16	10	13	66	9.8	40	13	21
23				14	20	9.2	12	68	14	15	10	21
24				14	17	7.9	12	56	17	11	19	22
25				9.1	17	7.9	12	47	16	11	23	35
26				9.9	12	8.2	12	40	14	11	11	121
27				16	11	15	12	21	10	11	9.3	140
28				20	11	12	12	19	7.0	30	8.2	57
29				15	13	12	28	19	6.1	20	8.9	43
30				15	---	14	25	18	7.0	15	10	33
31				14	---	12	---	18	---	15	9.4	---
TOTAL				---	449.9	353.3	518	728	489.0	399.0	1945.0	797.1
MEAN				---	15.5	11.4	17.3	23.5	16.3	12.9	62.7	26.6
MAX				---	21	22	76	68	69	50	540	140
MIN				---	9.9	7.9	11	11	6.1	6.5	8.2	8.1
AC-FT				---	892	701	1030	1440	970	791	3860	1580

NOTE.--NO GAGE-HEIGHT RECORD JUNE 27 TO AUG. 2.

07105800 FOUNTAIN CREEK AT SECURITY, CO

LOCATION.--Lat 38°43'46", long 104°44'00", in SW¼ sec.24, T.15 S., R.66 W., El Paso County, Hydrologic Unit 11020003, on right bank 980 ft (300 m) downstream from Carson Road bridge, 1.0 mi (1.6 km) southwest of South Security School, 3.5 mi (5.6 km) northeast of Fountain, and 5.0 mi (8.0 km) upstream from Jimmy Camp Creek.

DRAINAGE AREA.--495 mi² (1,282 km²), revised.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,640 ft (1,719 m), from topographic map. Prior to Oct. 26, 1966, at site 1,040 ft (320 m) upstream at datum 6.00 ft (1.829 m) higher. Oct. 26, 1966, to July 18, 1972, at site 980 ft (300 m) upstream at datum 6.00 ft (1.829 m) higher.

REMARKS.--Records good except those above 3,000 ft³/s (85.0 m³/s), which are fair. Natural flow of stream affected by storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation of about 5,100 acres (21 km²) and municipal use, and return flow from irrigated areas.

AVERAGE DISCHARGE.--12 years, 55.5 ft³/s (1.572 m³/s), 40,210 acre-ft/yr (49.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft³/s (708 m³/s) July 24, 1965, gage height, 11.30 ft (3.444 m), site and datum then in use, from floodmarks, from rating curve extended above 2,900 ft³/s (82 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 1.9 ft³/s (0.054 m³/s) Mar. 1, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,590 ft³/s (215 m³/s) Aug. 1, gage height, 5.32 ft (1.622 m), from rating curve extended above 2,900 ft³/s (82 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 8.7 ft³/s (0.25 m³/s) Jan. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	36	25	14	12	46	29	32	32	36	465	31
2	35	30	23	14	13	48	29	25	34	36	828	31
3	35	28	19	12	19	48	29	37	37	35	760	30
4	29	28	19	14	25	50	32	37	34	46	230	30
5	28	32	18	17	26	56	33	36	31	34	166	28
6	29	30	18	13	32	63	34	48	100	32	130	28
7	28	29	19	15	35	50	35	48	175	35	116	22
8	27	32	19	15	46	53	36	47	91	38	104	47
9	28	54	19	15	68	52	36	46	54	40	89	47
10	29	32	19	12	58	53	36	46	36	32	83	32
11	29	30	18	14	49	53	34	46	28	17	77	32
12	25	27	17	14	53	47	35	46	28	24	70	30
13	25	24	17	12	62	45	38	47	30	40	66	25
14	25	24	17	12	55	48	35	46	32	26	56	22
15	25	25	17	13	56	48	33	41	29	20	48	20
16	26	26	18	10	53	44	32	37	24	20	53	18
17	25	28	18	9.3	53	45	87	39	32	18	52	27
18	25	27	17	10	48	43	53	36	72	15	45	68
19	24	26	17	11	49	36	75	36	46	55	5[illegible]	62
20	22	27	17	10	43	42	44	39	44	72	75	44
21	22	27	17	9.3	47	40	40	42	28	97	65	42
22	21	27	17	9.1	49	36	37	42	21	63	64	45
23	27	24	17	9.1	49	32	37	38	56	55	65	40
24	29	24	17	8.7	49	33	36	32	44	29	64	31
25	25	23	16	8.7	47	30	33	36	28	18	71	40
26	25	23	16	8.9	47	32	32	34	24	31	53	199
27	32	23	16	13	46	34	32	32	18	40	43	219
28	28	22	16	12	46	30	35	32	18	52	3[illegible]	98
29	28	24	16	10	46	34	49	31	28	66	3[illegible]	87
30	30	23	16	11	---	35	70	31	36	47	33	89
31	33	---	16	12	---	32	---	29	---	35	33	---
TOTAL	855	835	551	368.1	1281	1338	1196	1194	1290	1204	412[illegible]	1564
MEAN	27.6	27.8	17.8	11.9	44.2	43.2	39.9	38.5	43.0	38.8	133	52.1
MAX	36	54	25	17	68	63	87	48	175	97	82[illegible]	219
MIN	21	22	16	8.7	12	30	29	25	18	15	3[illegible]	18
AC-FT	1700	1660	1090	730	2540	2650	2370	2370	2560	2390	818[illegible]	3100

CAL YR 1975 TOTAL 15428.0 MEAN 42.3 MAX 788 MIN 14 AC-FT 30600
WTR YR 1976 TOTAL 15802.1 MEAN 43.2 MAX 828 MIN 8.7 AC-FT 31340

07105900 JIMMY CAMP CREEK AT FOUNTAIN, CO

LOCATION.--Lat 38°41'04", long 104°41'17", in NW¼SE¼ 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 (300 m) east of Fountain and 1.5 mi (2.4 km) upstream from mouth.

DRAINAGE AREA.--65.6 mi² (169.9 km²).

PERIOD OF RECORD.--January to September 1976.

GAGE.--Water-stage recorder. Altitude of gage is 5,530 ft (1,686 m), from topographic map.

REMARKS.--Records fair except those for periods of no gage-height record, which are poor.

EXTREMES FOR CURRENT YEAR.--Maximum discharge during period January to September, 1,930 ft³/s (54.7 m³/s) Aug. 1, gage height, 4.14 ft (1.262 m) from floodmarks; minimum daily, 1.1 ft³/s (0.031 m³/s) June 28, July 11, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	1.8	2.0	1.6	2.6	2.3	1.2	91	3.1
2				---	1.9	1.4	1.6	2.7	2.4	1.3	5.8	2.8
3				---	1.8	1.5	1.6	2.7	2.5	1.4	4.6	2.7
4				---	1.6	2.2	1.6	2.7	1.7	1.5	6.2	3.0
5				---	1.6	2.3	1.6	2.6	3.6	1.4	4.9	2.8
6				---	1.6	2.5	1.6	2.4	4.6	1.3	4.5	2.9
7				---	1.6	2.5	1.6	2.4	3.4	1.4	5.5	2.8
8				---	2.1	2.1	1.7	2.5	2.8	1.3	5.6	3.0
9				---	2.1	2.0	1.7	2.5	2.0	1.2	5.3	2.8
10				---	2.4	2.0	1.7	2.4	1.9	1.2	4.1	2.4
11				---	2.1	2.0	1.6	2.3	1.7	1.1	4.0	2.8
12				---	1.6	1.4	1.6	2.2	1.8	1.2	3.7	3.1
13				---	1.9	1.4	1.7	2.5	1.7	1.1	4.2	3.2
14				---	1.5	1.6	1.6	2.0	1.8	1.2	3.8	2.7
15				---	1.5	2.0	1.5	2.2	1.6	1.2	3.5	2.8
16				1.6	1.7	2.2	1.5	1.9	1.6	1.2	3.5	2.6
17				1.7	1.5	2.2	1.5	1.8	1.7	1.2	3.5	3.2
18				1.5	2.3	2.2	2.8	1.6	2.1	1.3	3.2	4.0
19				1.8	2.0	2.2	2.4	1.5	2.0	1.4	3.0	10
20				1.8	2.0	2.1	2.1	1.5	1.6	1.7	3.0	3.2
21				1.4	2.0	2.0	2.2	34	1.5	2.3	3.0	2.8
22				2.0	2.0	2.0	2.2	3.7	1.5	2.0	2.9	2.5
23				2.0	2.0	2.0	2.1	3.9	1.7	2.4	2.8	2.5
24				1.5	2.0	1.8	2.2	1.9	1.9	1.5	2.8	2.4
25				1.4	2.0	1.6	2.9	1.8	1.3	44	2.6	2.2
26				1.4	2.5	1.6	2.7	1.7	1.3	4.9	2.7	2.5
27				1.4	2.5	1.6	2.7	1.8	1.3	4.6	3.2	2.4
28				1.8	2.4	1.6	3.0	1.8	1.1	2.4	3.6	2.2
29				1.8	2.3	1.6	2.5	1.9	1.2	2.3	3.9	2.2
30				1.7	---	1.6	2.5	2.1	1.2	2.3	3.3	2.0
31				1.6	---	1.6	---	2.3	---	2.2	3.0	---
TOTAL				---	56.3	58.8	59.6	101.9	58.8	96.7	206.7	89.6
MEAN				---	1.94	1.90	1.99	3.29	1.96	3.12	6.67	2.99
MAX				---	2.5	2.5	3.0	34	4.6	44	91	10
MIN				---	1.5	1.4	1.5	1.5	1.1	1.1	2.6	2.0
AC-FT				---	112	117	118	202	117	192	410	178

NOTE.--NO GAGE-HEIGHT RECORD FEB. 28 TO APR. 5.

07106300 FOUNTAIN CREEK NEAR PINON, CO

LOCATION.--Lat 38°26'50", long 104°35'28", in NE¼NE¼ sec.31, T.18 S., R.64 W., Pueblo County, Hydrologic Unit 11020002, near left bank on downstream side of county road bridge, 1.2 mi (1.9 km) northeast of Pinon and 3.2 mi (5.1 km) upstream from Steele Hollow Creek.

DRAINAGE AREA.--846 mi² (2,191 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 5,005 ft (1,526 m), from topographic map. Prior to Apr. 23, 1976, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period Oct. 1 to Apr. 21, which are fair, and those above 1,800 ft³/s (51.0 m³/s), which are poor. Natural flow of stream affected by storage reservoirs, power developments, transbasin and transmountain diversions for municipal use, diversions above station for irrigation of about 10,000 acres (40 km²) and for municipal use, and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,680 ft³/s (133 m³/s) Aug. 3, 1976, gage height, 6.06 ft (1.847 m), from rating curve extended above 1,650 ft³/s (47 m³/s); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,680 ft³/s (133 m³/s) Aug. 3, gage height 6.06 ft (1.847 m), from rating curve extended above 1,650 ft³/s (47 m³/s); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	5.0	50	50	49	32	2.2	13	.54	0	4.1	0
2	0	4.0	45	45	45	16	.50	6.0	0	0	1180	0
3	0	3.0	49	35	45	21	.20	4.0	0	0	2090	0
4	0	1.2	41	27	45	21	.10	4.4	0	4.8	523	0
5	0	.50	55	25	40	28	0	4.0	8.5	7.3	301	0
6	0	.20	44	25	40	35	0	12	88	0	220	0
7	0	.10	55	30	60	60	0	8.3	264	0	100	0
8	0	0	41	40	110	90	.30	.66	12	0	49	0
9	0	29	49	50	76	68	.70	0	6.0	0	45	0
10	0	76	52	60	76	55	.70	0	1.5	0	24	0
11	0	39	45	90	68	100	.70	0	1.2	0	11	0
12	0	16	58	80	80	68	1.8	0	0	0	2.8	0
13	0	16	52	72	111	68	.70	0	0	0	2.8	0
14	0	5.6	44	68	76	72	.30	0	0	0	.30	0
15	0	2.2	44	90	129	58	.30	0	0	0	0	0
16	0	5.6	61	68	90	44	.30	0	0	0	0	0
17	0	7.0	52	72	111	41	5.6	0	0	0	0	0
18	0	3.6	45	58	68	22	149	0	5.4	0	0	147
19	0	3.6	40	44	72	18	85	0	15	0	0	253
20	0	3.6	40	39	76	13	9.3	0	8.1	12	0	39
21	0	7.0	45	26	70	16	7.5	5.3	3.5	55	0	5.5
22	0	13	45	28	80	18	6.0	69	0	.15	0	0
23	0	21	52	16	111	5.2	2.8	73	2.2	.38	0	0
24	5.0	32	45	19	149	2.8	1.0	32	24	0	0	0
25	3.0	26	45	28	76	1.5	.30	18	2.2	0	30	0
26	3.0	11	52	14	149	.95	.10	8.7	0	43	4.2	278
27	3.0	8.7	58	19	30	2.5	1.6	2.2	0	1.0	0	512
28	4.0	1.2	52	22	32	5.2	3.2	0	0	0	0	172
29	3.0	36	52	26	30	8.7	2.5	0	0	11	0	68
30	2.0	40	65	28	---	11	19	0	0	0	0	100
31	2.0	---	61	39	---	9.3	---	.04	---	0	0	---
TOTAL	25.0	417.10	1534	1333	2194	1011.15	301.70	260.60	442.14	134.63	4587.20	1574.5
MEAN	.81	13.9	49.5	43.0	75.7	32.6	10.1	8.41	14.7	4.34	148	52.5
MAX	5.0	76	65	90	149	100	149	73	264	55	2090	512
MIN	0	0	40	14	30	.95	0	0	0	0	0	0
AC-FT	50	827	3040	2640	4350	2010	598	517	877	267	9100	3120

CAL YR 1975 TOTAL 11118.00 MEAN 30.5 MAX 1200 MIN 0 AC-FT 22050
WTR YR 1976 TOTAL 13815.02 MEAN 37.7 MAX 2090 MIN 0 AC-FT 27400

07106500 FOUNTAIN CREEK AT PUEBLO, CO

LOCATION.--Lat 38°18'27", long 104°36'09", in NE¼SW¼ sec.18, T.20 S., R.64 W., Pueblo County, Hydrologic Unit 11020003, on left bank at downstream side of bridge on State Highway 47 at Pueblo and 4.0 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--920 mi² (2,383 km²).

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.

GAGE.--Water-stage recorder. Datum of gage is 4,725.30 ft (1,440.271 m) above mean sea level. See WSP 1711 or 1731 for history of changes prior to Oct. 1, 1940. October 1, 1940, to Apr. 6, 1965, water-stage recorder at site 2.4 mi (3.9 km) downstream at datum 4,663.45 ft (1,421.420 m) above mean sea level (unadjusted). Apr. 7 to Sept. 30, 1965, water-stage recorder at site 2.3 mi (3.7 km) downstream at datum 4,668.4 ft (1,422.93 m) above mean sea level (unadjusted).

REMARKS.--Records fair. 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 (57 km²) above station and municipal use and return flow from irrigated areas.

AVERAGE DISCHARGE.--33 years (water years 1923-25, 1941-65, 1972-76), 54.0 ft³/s (1.529 m³/s), 39,120 acre-ft/yr (48.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,000 ft³/s (1,330 m³/s) June 17, 1965, gage height, 19.0 ft (5.79 m), from floodmarks, site and datum then in use, from rating curve extended above 400 ft³/s (11 m³/s), on basis of contracted-opening measurement of peak flow; no flow at times many years.

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 (963 m³/s), by slope-area measurement. Flood of May 30, 1935, reached a discharge of 35,000 ft³/s (991 m³/s) by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,870 ft³/s (166 m³/s) Aug. 3, gage height, 5.11 ft (1.558 m); on basis of rating curve extended above 3,400 ft³/s (96.0 m³/s); minimum daily, 0.31 ft³/s (0.009 m³/s) Oct. 26-30, Aug. 30, 31, Sept. 1, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.55	10	28	41	43	30	11	6.6	2.3	1.2	5.4	.31
2	.55	8.0	46	34	43	22	10	3.8	2.3	1.2	1290	.42
3	.55	5.7	44	25	40	22	10	3.5	2.3	1.2	2430	.31
4	.55	6.6	49	20	43	22	10	3.2	2.1	1.0	369	.55
5	.70	7.5	43	25	42	22	9.5	2.9	9.3	1.0	180	.70
6	.70	9.5	43	30	40	30	9.5	2.3	109	1.0	111	.42
7	.55	9.5	46	20	45	41	9.5	2.6	186	1.4	81	3.4
8	.70	9.5	46	20	53	48	9.0	2.6	14	1.6	55	2.6
9	.86	9.6	46	25	65	63	11	2.6	11	1.6	46	1.2
10	.70	43	41	30	77	58	10	3.3	9.0	1.6	38	1.2
11	.70	40	43	35	69	55	9.5	2.6	8.0	1.6	30	1.2
12	.70	29	46	40	73	38	9.5	2.9	7.5	1.6	20	1.4
13	.70	21	46	35	69	40	9.5	2.6	6.6	8.4	13	1.6
14	.70	22	41	40	69	46	9.5	2.9	6.1	1.6	8.0	4.6
15	.70	16	41	43	65	41	9.5	2.6	5.7	1.0	3.0	1.4
16	.70	16	41	43	65	35	9.0	2.3	5.7	1.0	2.0	1.2
17	.70	19	40	43	65	35	9.5	2.6	5.7	1.0	1.6	2.0
18	.70	17	40	43	60	34	98	2.6	4.5	1.0	1.2	3.2
19	.70	16	40	38	55	28	73	2.9	3.5	.86	1.1	100
20	.86	16	48	35	58	21	38	2.9	3.2	1.0	1.0	30
21	.86	24	53	40	53	22	9.5	2.9	2.9	3.7	.90	5.0
22	.86	26	41	43	53	16	6.1	8.2	2.1	2.6	.90	2.0
23	.70	28	40	43	58	16	6.1	10	30	2.3	.80	1.8
24	.42	28	41	40	65	16	5.7	16	1.6	2.1	.80	2.6
25	.42	25	40	30	60	13	4.9	29	1.2	1.8	5.0	25
26	.31	35	40	35	58	11	4.9	16	1.2	9.8	3.0	132
27	.31	34	38	42	51	11	4.9	9.0	1.2	4.2	1.6	430
28	.31	26	40	43	40	11	4.9	4.9	1.2	3.2	1.0	253
29	.31	28	38	40	35	11	4.9	4.2	1.0	2.7	.40	288
30	.31	29	41	41	---	11	5.8	3.5	1.0	2.6	.31	270
31	6.2	---	43	40	---	11	---	3.5	---	1.8	.31	---
TOTAL	24.58	613.9	1313	1102	1612	880	432.2	167.5	447.2	68.66	4701.32	1567.11
MEAN	.79	20.5	42.4	35.5	55.6	28.4	14.4	5.40	14.9	2.21	152	52.2
MAX	6.2	43	53	43	77	63	98	29	186	9.8	2430	430
MIN	.31	5.7	28	20	35	11	4.9	2.3	1.0	.86	.31	.31
AC-FT	49	1220	2600	2190	3200	1750	857	332	887	136	9330	3110

CAL YR 1975 TOTAL 12714.29 MEAN 34.8 MAX 1000 MIN .02 AC-FT 25220
WTR YR 1976 TOTAL 12929.47 MEAN 35.3 MAX 2430 MIN .31 AC-FT 25650

07107900 GREENHORN CREEK NEAR RYE, CO

LOCATION.--Lat 37°55'14", long 104°57'21", Pueblo County, Hydrologic Unit 11020002, in midstream, 15 ft (5 m) upstream from road bridge in Rye Park and 1.4 mi (2.3 km) west of Post Office in Rye.

DRAINAGE AREA.--11 mi² (28 km²), approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 7,220 ft (2,201 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 340 ft³/s (9.63 m³/s) July 10, 1975, gage height, 3.90 ft (1.189 m) from floodmark, from rating curve extended above 25 ft³/s (0.7 m³/s) on basis of slope-area measurement of peak discharge; minimum daily, 0.90 ft³/s (0.025 m³/s) Feb. 24, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 20 ft³/s (0.57 m³/s) and maximum(*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 15	1630	44	1.25	1.26	0.384	Aug. 2	1930	*103	2.92	2.03	0.619

Minimum daily discharge, 0.90 ft³/s (0.025 m³/s) Feb. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	3.0	1.8	1.4	1.3	1.5	2.9	8.1	10	7.4	11	4.5
2	4.0	3.0	1.6	1.4	1.3	1.5	2.9	10	11	7.7	18	3.4
3	3.9	2.5	1.9	1.4	1.3	1.4	2.5	9.9	12	6.0	9.8	3.2
4	3.8	2.5	2.2	1.4	1.3	1.2	2.8	9.5	12	9.7	6.8	3.0
5	3.8	3.0	2.2	1.8	1.2	1.2	2.7	10	12	9.1	5.6	2.8
6	3.8	3.0	2.2	2.0	1.2	1.2	2.5	11	11	5.2	4.8	2.7
7	2.7	2.5	2.0	1.8	1.2	2.0	2.3	11	12	4.7	4.2	2.9
8	2.6	3.0	2.0	1.5	1.2	2.0	2.3	11	11	4.5	4.0	3.1
9	2.6	3.0	2.1	1.4	1.2	1.5	2.6	11	11	4.0	4.0	3.3
10	2.5	2.5	2.2	1.4	1.4	1.5	3.3	9.8	10	3.6	3.7	3.0
11	2.2	2.2	2.2	1.4	2.0	1.7	3.9	10	9.0	3.4	3.5	2.6
12	2.2	2.2	2.2	1.4	2.0	1.7	4.9	12	8.2	3.2	3.3	2.5
13	2.2	2.2	2.0	1.4	1.6	1.8	5.3	11	7.4	5.0	3.0	2.5
14	2.2	2.5	1.8	1.4	1.5	2.0	4.0	12	6.7	6.8	3.5	4.4
15	1.8	1.8	1.6	1.8	1.5	2.0	3.2	15	5.8	4.8	4.1	4.8
16	2.2	1.6	1.6	1.8	2.0	1.9	2.6	16	6.5	4.3	3.9	3.9
17	2.2	1.4	1.6	1.8	2.3	1.5	1.8	14	7.0	3.6	4.0	2.9
18	2.5	1.4	1.6	1.8	2.3	1.6	3.7	14	7.0	3.2	4.2	2.1
19	2.2	1.4	1.8	1.8	2.1	1.7	3.0	11	7.6	3.4	4.3	4.4
20	2.2	1.4	2.0	1.8	1.4	1.8	3.2	12	8.1	5.3	5.9	6.0
21	2.2	1.4	2.0	1.8	1.8	1.8	4.2	14	7.6	11	6.3	4.1
22	2.2	1.4	2.0	1.8	1.6	1.8	5.0	14	6.7	7.4	4.6	3.4
23	2.5	1.4	2.0	1.7	1.0	1.6	5.5	14	7.1	5.9	4.5	2.8
24	1.8	1.4	2.0	1.5	.90	1.7	6.0	15	6.6	8.2	4.6	2.5
25	1.8	1.4	1.8	1.5	1.0	1.7	6.1	13	5.9	7.6	4.2	4.1
26	2.2	1.4	1.8	1.5	1.0	3.0	5.9	10	5.4	12	3.7	8.6
27	2.5	1.4	1.8	1.5	1.1	1.7	5.7	11	5.0	10	3.6	8.6
28	2.2	1.4	1.8	1.5	1.4	1.6	6.3	12	4.7	7.4	3.6	7.8
29	2.2	2.2	1.8	1.5	1.2	1.6	7.5	11	5.1	6.3	3.4	7.8
30	2.2	2.1	1.8	1.5	---	2.0	7.9	10	5.1	5.5	3.1	7.9
31	3.0	---	1.6	1.4	---	3.7	---	9.7	---	5.3	3.8	---
TOTAL	80.1	61.6	59.0	49.1	42.30	54.9	122.5	362.0	244.5	191.5	157.0	125.6
MEAN	2.58	2.05	1.90	1.58	1.46	1.77	4.08	11.7	8.15	6.18	5.06	4.19
MAX	4.0	3.0	2.2	2.0	2.3	3.7	7.9	16	12	12	18	8.6
MIN	1.8	1.4	1.6	1.4	.90	1.2	1.8	8.1	4.7	3.2	3.0	2.1
AC-FT	159	122	117	97	84	109	243	718	485	380	311	249

CAL YR 1975 TOTAL 2319.50 MEAN 6.35 MAX 69 MIN 1.0 AC-FT 4600
WTR YR 1976 TOTAL 1550.10 MEAN 4.24 MAX 18 MIN .90 AC-FT 3070

07108050 GREENHORN CREEK NEAR COLORADO CITY, CO

LOCATION.--Lat 37°57'06", long 104°47'42", Pueblo County, Hydrologic Unit 11020002, on right bank 15 ft (5 m) upstream from county road crossing, 1.3 mi (2.1 km) upstream from Graneros Creek, and 2.3 mi (3.7 km) east of fire station in Colorado City.

DRAINAGE AREA.--32 mi² (83 km²), approximately.

PERIOD OF RECORD.--February 1974 to current year.

REVISED RECORDS.--WDR CO-75-1: 1974(M).

GAGE.--Water-stage recorder. Altitude of gage is 5,630 ft (1,716 m), from topographic map.

REMARKS.--Records good except those for winter periods, which are fair, and those above 30 ft³/s (0.85 m³/s), which are poor. Diversions for irrigation of about 4,300 acres (17.4 km²) above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,220 ft³/s (34.6 m³/s) Aug. 2, 1976, gage height not determined, result of slope-area measurement of peak flow; minimum daily, 0.03 ft³/s (0.001 m³/s) Sept. 8, 9, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,220 ft³/s (34.6 m³/s) Aug. 2, gage height not determined, result of slope-area measurement of peak flow; minimum daily, 0.26 ft³/s (0.007 m³/s) Feb. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	.93	1.2	.40	.36	.29	1.6	1.4	2.9	1.3	15	3.0
2	2.5	.65	.62	.40	.35	.35	1.2	1.7	2.9	3.0	200	2.0
3	2.2	.70	.61	.40	.33	.39	1.0	2.0	3.4	1.7	50	1.0
4	2.1	.65	.58	.50	.36	.96	1.0	1.3	6.6	2.3	7.0	.90
5	2.2	.56	.67	.60	.30	.58	1.2	1.8	6.2	3.3	5.0	.80
6	1.9	.62	.64	.50	.30	.53	1.0	3.0	5.7	1.0	4.0	.70
7	1.8	.60	.66	.40	.54	.46	.80	3.7	6.2	.56	3.0	.70
8	1.8	.48	.66	.40	.36	.51	.60	2.7	7.1	.52	2.5	.80
9	1.3	.59	.64	.80	.35	.48	.60	3.0	5.1	.45	2.0	1.2
10	1.1	.59	.64	.76	.33	.51	.50	7.0	3.3	.43	1.6	1.0
11	1.1	.45	.68	.54	.35	.41	.50	6.5	2.1	.46	1.4	.70
12	1.2	.51	.65	.42	.34	.43	2.5	6.0	2.0	.45	1.2	.70
13	1.1	.48	.61	1.2	.35	.40	3.0	7.0	1.3	.51	1.0	1.0
14	1.4	.51	.60	.67	.35	.40	2.5	8.0	.88	1.2	.90	5.0
15	1.5	.48	.60	.36	.35	.34	2.0	9.0	.98	.50	.80	3.0
16	.74	.41	.60	.30	.35	.34	1.6	8.0	1.4	1.3	.70	2.5
17	.68	.49	.79	.30	.74	.34	1.2	7.0	1.1	.49	.70	2.0
18	.56	.51	.80	.31	.31	.34	1.0	6.5	1.6	.47	3.0	1.0
19	.55	.50	.80	.33	.26	.32	.80	6.0	1.4	.45	2.0	3.0
20	.52	.55	.78	.35	.29	.32	.80	5.5	1.5	.50	2.0	6.0
21	.48	.60	.65	.33	.40	.34	.76	9.2	1.2	5.0	2.5	4.0
22	.46	1.1	.52	.36	.47	.35	.71	9.0	.40	12	2.0	3.0
23	.59	1.1	.50	.38	.32	.33	.70	7.4	.38	7.0	1.4	2.5
24	.52	.81	.42	.34	.27	.35	.72	10	.40	8.0	1.0	1.0
25	.53	.61	.40	.36	.31	.31	.70	7.6	.35	6.0	.90	3.0
26	.53	.60	.39	.30	.32	.44	.88	4.2	.36	11	.80	20
27	.49	1.0	.40	.40	.33	.40	.98	2.6	.37	9.0	.70	15
28	.57	1.0	.40	.56	.34	.37	.89	3.0	.44	8.0	.70	12
29	.48	.70	.40	.36	.33	.42	.91	3.5	.38	7.0	.70	11
30	.62	1.0	.46	.35	---	.42	1.9	2.3	.44	6.0	.70	10
31	.89	---	.41	.35	---	2.0	---	2.0	---	20	2.0	---
TOTAL	34.91	19.78	18.78	14.03	10.36	14.43	34.55	157.9	68.38	119.89	317.20	118.50
MEAN	1.13	.66	.61	.45	.36	.47	1.15	5.09	2.28	3.87	10.2	3.95
MAX	2.5	1.1	1.2	1.2	.74	2.0	3.0	10	7.1	20	200	20
MIN	.46	.41	.39	.30	.26	.29	.50	1.3	.35	.43	.70	.70
AC-FT	69	39	37	28	21	29	69	313	136	238	629	235

CAL YR 1975 TOTAL 1401.62 MEAN 3.84 MAX 70 MIN .26 AC-FT 2780
WTR YR 1976 TOTAL 928.71 MEAN 2.54 MAX 200 MIN .26 AC-FT 1840

NOTE.--NO GAGE-HEIGHT RECORD JULY 20 TO SEPT. 30.

07109500 ARKANSAS RIVER NEAR AVONDALE, CO

LOCATION.--Lat 38°14'53", long 104°23'55", in NE¼SW¼ sec.1, T.21 S., R.63 W., Pueblo County, Hydrologic Unit 11020002, on right bank 15 ft (5 m) downstream from bridge on Sixmile Rd., 0.3 mi (0.5 km) upstream from Sixmile Creek, and 2.6 mi (4.2 km) west of Avondale.

DRAINAGE AREA.--6,327 mi² (16,387 km²).

PERIOD OF RECORD.--May 1939 to September 1951, February 1965 to current year.

REVISED RECORDS.--WSP 1087: 1942. WSP 1311: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 4,509.53 ft (1,374.505 m) above mean sea level. Prior to February 1965 at site 550 ft (170 m) downstream at datum 1.37 ft (0.418 m) lower.

REMARKS.--Records good. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation of about 123,000 acres (498 km²) and municipal use, and return flow from irrigated areas. Flow partly regulated by Pueblo Reservoir (station 07099350) since Jan. 9, 1974.

AVERAGE DISCHARGE.--20 years (water years 1940-51, 1966-73), 867 ft³/s (24.55 m³/s), 628,100 acre-ft/yr (774 hm³/yr), prior to completion of Pueblo Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 50,000 ft³/s (1,416 m³/s) June 18, 1965, gage height, 9.77 ft (2.978 m), from rating curve extended above 6,700 ft³/s (190 m³/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; minimum daily, 50 ft³/s (1.42 m³/s) Apr. 2, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,810 ft³/s (193 m³/s) Aug. 3, gage height, 6.35 ft (1.935 m); minimum daily, 190 ft³/s (5.38 m³/s) Mar. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	320	385	439	240	254	330	220	795	1120	854	900	339
2	346	341	333	228	255	369	228	614	1220	1080	2430	384
3	351	353	324	225	257	370	246	604	1490	1440	4610	357
4	348	411	333	223	259	350	276	612	1680	1370	3320	301
5	335	409	327	227	260	370	301	618	1760	1260	3540	282
6	297	353	299	232	261	380	550	669	2180	1190	1190	276
7	274	346	298	227	275	400	538	736	2240	1040	742	258
8	262	345	301	220	293	420	424	742	2300	975	666	321
9	256	364	299	231	290	410	377	730	2010	821	602	317
10	247	380	298	242	284	390	560	747	1940	703	612	344
11	243	403	300	246	275	380	613	679	2000	923	620	335
12	241	383	297	250	249	390	658	669	1950	991	977	315
13	241	382	293	248	245	380	708	692	1720	1110	961	284
14	251	374	292	236	246	380	705	711	1350	1160	911	588
15	285	413	287	230	244	390	695	734	1370	1120	827	1000
16	308	402	288	244	241	400	684	773	1080	1000	750	387
17	310	407	292	245	241	390	676	757	1210	933	682	328
18	308	448	288	244	234	370	758	880	1170	916	666	337
19	308	464	271	243	235	330	759	998	1190	901	700	377
20	309	530	266	244	239	310	678	1140	1100	932	691	475
21	309	566	269	241	257	280	613	1190	993	960	698	489
22	289	536	272	245	274	260	574	1200	1050	980	642	391
23	281	537	275	242	287	240	574	1340	1420	900	455	354
24	293	561	272	237	286	230	586	1370	1680	636	403	345
25	316	545	260	240	274	210	558	1190	1920	564	390	354
26	317	525	260	238	254	200	468	1000	1650	574	398	778
27	326	527	256	231	243	195	728	820	1340	537	380	2050
28	328	529	259	236	231	190	969	788	1140	576	359	1830
29	382	507	254	245	225	195	903	779	996	582	323	1070
30	399	489	260	246	---	199	944	940	707	867	327	739
31	472	---	258	245	---	207	---	1110	---	808	333	---
TOTAL	9552	13215	9020	7371	7468	9915	17571	26627	44976	28703	31105	16005
MEAN	308	441	291	238	258	320	586	859	1499	926	1003	534
MAX	472	566	439	250	293	420	969	1370	2300	1440	4610	2050
MIN	241	341	254	220	225	190	220	604	707	537	323	258
AC-FT	18950	26210	17890	14620	14810	19670	34850	52810	89210	56930	61700	31750

CAL YR 1975 TOTAL 298393 MEAN 818 MAX 3980 MIN 241 AC-FT 591900
WTR YR 1976 TOTAL 221528 MEAN 605 MAX 4610 MIN 190 AC-FT 439400

07111000 HUERFANO RIVER AT MANZANARES CROSSING, NEAR REDWING, CO

LOCATION.--Lat 37°43'40", long 105°21'03", in sec.5, T.27 S., R.71 W., Huerfano County, Hydrologic Unit 11020006, on left bank at Manzanares Crossing, 500 ft (150 m) downstream from private bridge, 0.2 mi (0.3 km) downstream from Manzanares Creek, and 3.5 mi (5.6 km) southwest of Redwing.

DRAINAGE AREA.--73 mi² (189 km²).

PERIOD OF RECORD.--July 1923 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1311: 1945(M). WSP 1921: 1957.

GAGE.--Water-stage recorder. Altitude of gage is 8,270 ft (2,521 m), from topographic map. Apr. 26, 1946, to Sept. 30, 1972, at datum 1.00 ft (0.305 m) higher. See WSP 1711 or 1731 for history of changes prior to Apr. 26, 1946.

REMARKS.--Records good except those for periods of no gage-height record, which are poor. Diversions above station for irrigation of about 1,800 acres (7.28 km²).

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

AVERAGE DISCHARGE.--53 years, 31.4 ft³/s (0.889 m³/s), 22,750 acre-ft/yr (28.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft³/s (289 m³/s) Aug. 2, 1951, gage height, 8.14 ft (2.481 m), from rating curve extended above 270 ft³/s (7.6 m³/s) on basis of slope-area measurement of peak flow; minimum daily determined, 3.5 ft³/s (0.099 m³/s) Mar. 30, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 112 ft³/s (3.17 m³/s) July 27, gage height, 2.19 ft (0.669 m), no peak above base of 200 ft³/s (5.7 m³/s); minimum daily, 6.0 ft³/s (0.17 m³/s) Jan. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	10	7.0	9.5	14	13	18	65	40	49	18
2	16	15	11	6.0	9.5	13	12	18	70	40	65	17
3	16	14	12	6.5	9.0	12	13	18	70	35	55	16
4	16	14	12	8.0	8.5	11	14	19	75	35	47	16
5	16	14	12	9.0	8.5	8.0	16	20	75	35	40	15
6	16	14	10	9.0	8.5	9.0	16	24	80	33	36	16
7	16	14	10	8.0	9.0	9.0	16	24	85	32	32	15
8	15	14	10	8.5	10	10	17	25	90	30	33	16
9	15	13	11	9.5	11	10	17	26	90	29	32	18
10	15	11	12	9.5	11	11	18	26	95	29	29	18
11	14	10	13	9.0	10	12	18	26	95	29	28	18
12	14	9.5	11	9.5	11	11	20	28	85	29	27	17
13	14	10	11	8.5	10	11	21	26	75	35	26	17
14	15	11	9.0	8.5	10	12	18	28	65	35	25	16
15	14	12	7.5	9.5	12	11	18	30	65	33	24	16
16	14	11	9.0	9.5	11	11	16	36	60	31	24	16
17	14	12	8.5	10	11	12	14	51	55	29	23	15
18	14	12	8.5	11	11	13	16	60	55	30	27	14
19	14	11	9.5	10	10	14	16	59	55	28	33	15
20	14	10	11	9.5	9.5	13	16	57	50	28	32	16
21	14	8.5	11	9.5	9.0	12	16	74	50	28	29	16
22	14	9.5	11	10	10	11	16	66	50	26	25	15
23	15	11	11	11	11	12	17	57	50	33	23	14
24	14	10	10	10	12	12	17	56	50	36	23	15
25	14	10	10	9.0	12	12	18	56	45	66	24	20
26	15	8.0	11	8.5	12	12	18	55	45	87	21	24
27	15	9.0	11	9.0	13	12	18	54	45	100	19	21
28	15	10	10	10	13	12	18	63	43	75	19	20
29	14	10	9.0	10	13	11	19	68	40	60	18	20
30	14	9.5	9.5	9.5	---	12	23	72	40	47	18	19
31	16	---	9.5	9.0	---	14	---	67	---	41	18	---
TOTAL	458	343.0	321.0	281.5	305.0	359.0	505	1307	1913	1244	924	509
MEAN	14.8	11.4	10.4	9.08	10.5	11.6	16.8	42.2	63.8	40.1	29.8	17.0
MAX	16	16	13	11	13	14	23	74	95	100	65	24
MIN	14	8.0	7.5	6.0	8.5	8.0	12	18	40	26	18	14
AC-FT	908	680	637	558	605	712	1000	2590	3790	2470	1830	1010

CAL YR 1975 TOTAL 10359.5 MEAN 28.4 MAX 100 MIN 3.5 AC-FT 20550
WTR YR 1976 TOTAL 8469.5 MEAN 23.1 MAX 100 MIN 6.0 AC-FT 16800

NOTE.--NO GAGE-HEIGHT RECORD NOV. 23 TO MAR. 24, JUNE 1 TO JULY 6.

07114000 CUCHARAS RIVER AT BOYD RANCH, NEAR LA VETA, CO

LOCATION.--Lat 37°25'12", long 105°03'08", in SE¼NE¼SE¼ sec.24, T.30 S., R.69 W., Huerfano County, Hydrologic Unit 11020006, on left bank at Boyd Ranch, 29 ft (9 m) downstream from private bridge, 1.4 mi (2.3 km) downstream from Chaparral Creek, and 6.5 mi (10.5 km) southwest of La Veta.

DRAINAGE AREA.--56 mi² (145 km²).

PERIOD OF RECORD.--October 1934 to current year.

REVISED RECORDS.--WSP 827: 1936. WSP 1007: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 7,781 ft (2,371.6 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Diversions for irrigation of about 500 acres (2.02 km²) above station.

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

AVERAGE DISCHARGE.--42 years, 22.6 ft³/s (0.640 m³/s), 16,370 acre-ft/yr (20.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 444 ft³/s (12.6 m³/s) May 23, 1955, gage height, 4.05 ft (1.234 m); minimum daily, 2 ft³/s (0.057 m³/s) for several days November 1934 to January 1935, Sept. 29, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 63 ft³/s (1.78 m³/s) June 12, gage height, 1.54 ft (0.469 m), no peak above base of 150 ft³/s (4.2 m³/s); minimum daily, 4.5 ft³/s (0.13 m³/s) Jan. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	12	7.5	5.0	6.5	8.5	10	17	34	26	17	10
2	12	11	8.0	4.5	6.5	8.0	10	17	35	26	15	9.2
3	12	10	8.5	5.0	6.0	7.0	10	16	38	24	16	7.8
4	12	11	8.5	6.0	5.5	6.5	12	17	42	23	14	7.4
5	12	11	8.5	7.0	5.5	5.0	12	18	43	23	13	7.1
6	12	11	7.5	7.0	5.5	5.5	11	18	45	21	12	7.1
7	12	10	7.5	5.5	6.0	5.5	12	20	51	20	12	7.1
8	11	10	7.5	6.5	7.0	6.0	12	21	55	20	12	7.8
9	11	10	8.0	7.5	7.5	6.0	14	22	57	21	12	11
10	11	9.2	8.5	7.5	7.5	6.5	15	25	60	18	12	8.8
11	11	9.6	9.0	6.5	6.5	7.0	15	27	62	17	11	8.2
12	10	7.8	7.5	7.0	7.5	6.0	16	30	60	17	11	7.8
13	10	8.5	7.5	6.0	7.0	6.0	16	27	55	16	10	8.2
14	10	8.5	6.0	6.0	7.0	7.0	15	27	52	16	10	8.2
15	10	8.5	5.5	7.0	8.0	6.5	15	30	51	16	10	8.2
16	10	8.2	7.0	7.0	7.5	6.5	14	32	45	16	10	8.5
17	10	8.2	6.5	7.5	7.5	7.5	14	30	42	15	10	8.2
18	9.6	8.2	6.5	8.0	7.5	8.0	13	30	41	15	11	8.2
19	9.6	8.0	7.5	7.0	7.0	8.5	14	32	38	14	11	8.2
20	9.2	7.5	8.5	6.5	6.5	8.0	13	32	34	18	12	11
21	9.2	6.5	8.5	6.5	6.0	8.0	14	35	34	17	12	10
22	9.2	7.0	8.5	7.0	6.5	7.5	14	36	35	16	11	8.5
23	9.2	8.0	8.5	7.5	7.0	8.5	14	36	37	16	11	8.2
24	8.5	7.0	8.0	7.0	7.5	9.0	15	37	34	19	11	8.5
25	9.2	7.0	8.0	6.0	7.5	9.6	16	38	32	16	11	9.6
26	10	6.0	8.5	5.5	7.5	9.2	16	38	30	18	10	12
27	9.6	7.0	8.5	6.0	8.0	8.5	16	34	28	18	9.6	13
28	9.2	7.5	8.0	7.0	8.0	8.2	17	33	28	17	9.6	12
29	9.2	7.5	7.5	7.0	8.0	8.0	18	34	28	16	9.6	11
30	9.2	7.0	7.5	6.5	---	7.5	18	36	27	14	9.6	10
31	10	---	7.5	6.0	---	9.0	---	35	---	15	10	---
TOTAL	318.9	258.7	240.5	202.0	201.5	228.5	421	880	1253	564	355.4	270.8
MEAN	10.3	8.62	7.76	6.52	6.95	7.37	14.0	28.4	41.8	18.2	11.5	9.03
MAX	12	12	9.0	8.0	8.0	9.6	18	38	62	26	17	13
MIN	8.5	6.0	5.5	4.5	5.5	5.0	10	16	27	14	9.6	7.1
AC-FT	633	513	477	401	400	453	835	1750	2490	1120	705	537

CAL YR 1975 TOTAL 8185.9 MEAN 22.4 MAX 100 MIN 4.0 AC-FT 16240
WTR YR 1976 TOTAL 5194.3 MEAN 14.2 MAX 62 MIN 4.5 AC-FT 10300

NOTE.--NO GAGE-HEIGHT RECORD NOV. 20 TO MAR. 24.

07117000 ARKANSAS RIVER NEAR NEPESTA, CO

LOCATION.--Lat 38°11'03", long 104°10'22", in SW¼SE¼ sec.25, T.21 S., R.61 W., Pueblo County, Hydrologic Unit 11020005, on right bank 0.7 mi (1.1 km) upstream from headgate of Oxford Farmers Co. canal, 1.9 mi (3.1 km) northwest of Nepesta, 2.7 mi (4.3 km) upstream from Kramer Creek, and 6.6 mi (10.6 km) downstream from Huerfano River.

DRAINAGE AREA.--9,345 mi² (24,204 km²), of which 54 mi² (140 km²) is probably noncontributing.

PERIOD OF RECORD.--April to October 1903, April to November 1912, October 1913 to current year. Monthly discharge only for some periods, published in WSP 1311. Records originally published for October 1933 to June 1936 did not include diversion to Oxford Farmers Co. canal, but monthly figures only for this period have been adjusted for diversion and published in WSP 1311.
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 1911 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.

GAGE.--Water-stage recorder. Altitude of gage is 4,385 ft (1,337 m), from topographic map. Prior to June 5, 1921, nonrecording gages or water-stage recorders at various sites within 4.5 mi (7.2 km) upstream and 3.0 mi (4.8 km) 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 (1.1 km) downstream at various datums.

REMARKS.--Records fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation of about 230,000 acres (931 km²), 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.

AVERAGE DISCHARGE.--60 years (water years 1914-73), 684 ft³/s (19.37 m³/s), 495,600 acre-ft/yr (611 hm³/yr), prior to completion of Pueblo Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 180,000 ft³/s (5,100 m³/s) June 4, 1921, gage height not determined, by slope-area measurement of peak flow at a point 8 mi (13 km) upstream; no flow at times in 1902, 1910, 1931, and 1934.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,880 ft³/s (251 m³/s) Aug. 3, gage height, 7.44 ft (2.269 m); minimum daily, 67 ft³/s (1.90 m³/s) May 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	220	359	359	272	311	164	88	288	978	639	1280	225
2	220	256	300	245	311	230	103	155	1040	998	1970	261
3	235	230	256	250	305	215	103	67	1340	1460	5260	278
4	245	288	250	240	300	235	140	76	1660	2030	2170	215
5	256	353	288	266	311	240	155	86	1710	1320	2330	173
6	230	300	317	272	300	272	250	125	2530	1160	1620	178
7	186	261	294	272	278	288	294	215	1910	1070	767	178
8	148	266	294	240	305	317	278	250	1810	916	538	220
9	133	305	311	261	317	323	250	220	1560	821	500	196
10	133	300	311	294	311	294	288	240	1840	583	465	235
11	115	311	311	261	294	300	384	164	1910	417	486	230
12	100	305	311	272	256	294	424	100	1820	444	530	186
13	91	300	311	288	240	283	500	129	1660	525	493	140
14	94	317	317	288	240	294	508	129	1380	868	458	592
15	106	335	311	283	240	300	515	148	1360	599	404	706
16	144	378	317	305	245	294	515	168	1190	545	300	621
17	168	430	311	294	245	256	515	164	1050	444	230	250
18	196	458	288	288	235	240	522	178	925	417	182	240
19	196	486	305	283	220	215	591	639	906	384	215	261
20	191	103	283	294	215	196	552	946	868	451	220	665
21	205	97	278	294	210	186	458	925	732	599	230	458
22	191	94	283	300	256	173	410	1040	631	568	266	437
23	178	94	288	278	272	160	410	1100	698	664	378	317
24	178	100	294	272	288	140	424	1160	1180	740	300	256
25	178	106	294	283	305	118	417	1040	1460	552	261	245
26	186	97	288	272	288	118	365	812	1260	493	278	364
27	196	100	288	272	261	106	288	655	998	515	261	1360
28	205	79	272	272	235	100	317	515	794	515	250	2390
29	235	81	278	283	220	103	311	472	583	538	225	1560
30	283	225	283	294	---	86	365	615	538	522	215	840
31	311	---	283	305	---	88	---	878	---	444	250	---
TOTAL	5753	7414	9174	8593	7814	6628	10740	13699	38321	22241	23332	14277
MEAN	186	247	296	277	269	214	358	442	1277	717	752	476
MAX	311	486	359	305	317	323	591	1160	2530	2030	5260	2390
MIN	91	79	250	240	210	86	88	67	538	384	182	140
AC-FT	11410	14710	18200	17040	15500	13150	21300	27170	76010	44120	46280	28320

CAL YR 1975 TOTAL 231507 MEAN 634 MAX 4380 MIN 65 AC-FT 459200
WTR YR 1976 TOTAL 167986 MEAN 459 MAX 5260 MIN 67 AC-FT 333200

07119500 APISHAPA RIVER NEAR FOWLER, CO

LOCATION.--Lat 38°05'28", long 103°58'52", in SE¼NW¼ sec.35, T.22 S., R.59 W., Otero County, Hydrologic Unit 11020007, near right bank on downstream side of county highway bridge, 3.5 mi (5.6 km) southeast of Fowler and 5.4 mi (8.7 km) upstream from mouth.

DRAINAGE AREA.--1,125 mi² (2,914 km²).

PERIOD OF RECORD.--April 1922 to September 1925, May 1939 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 957: 1939, 1941. WSP 1117: Drainage area. WSP 1241: 1923(M). WRD Colo. 1974: 1973(M).

GAGE.--Water-stage recorder. Datum of gage is 4,317.05 ft (1,315.837 m) above mean sea level. Prior to Aug. 29, 1923, at site 3 mi (5 km) downstream at different datum. Aug. 29, 1923, to Sept. 30, 1925, at present site at different datum.

REMARKS.--Records good except those above 50 ft³/s (1.42 m³/s) and those for winter period, which are fair. Waste water from Oxford Farmers Co. and Rocky Ford Highline canals enters river above station. Diversions above station for irrigation of about 4,700 acres (19.0 km²).

AVERAGE DISCHARGE.--40 years, 31.1 ft³/s (0.881 m³/s), 22,530 acre-ft/yr (27.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 83,000 ft³/s (2,350 m³/s) Aug. 22, 1923, by slope-area measurement 2 mi (3 km) upstream from present station, caused by failure of Apishapa Dam 31 mi (50 km) upstream; no flow Feb. 5, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,420 ft³/s (68.5 m³/s) Aug. 2, gage height, 8.10 ft (2.469 m), no peak above base of 3,000 ft³/s (85 m³/s); minimum daily, 1.6 ft³/s (0.045 m³/s) several days during February to April.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	5.4	2.9	2.7	2.1	1.6	2.0	2.3	2.0	2.3	323	3.6
2	7.1	11	2.9	2.7	2.1	10	1.8	2.1	2.0	2.5	695	3.6
3	5.0	7.3	2.9	2.5	2.1	17	1.6	2.1	3.9	3.3	130	3.6
4	5.0	4.2	2.9	2.5	2.1	31	1.6	2.3	3.6	163	51	3.9
5	5.4	3.1	2.9	2.5	2.1	60	1.8	2.0	2.3	61	27	3.6
6	6.2	2.9	2.9	2.5	2.1	21	2.1	1.8	2.3	10	21	3.6
7	5.8	3.1	2.9	2.5	2.1	12	2.1	1.8	4.6	3.6	4.2	3.6
8	9.4	3.1	2.9	2.5	2.1	17	2.1	2.0	3.1	3.1	4.2	3.6
9	8.6	5.7	2.9	2.5	2.1	10	1.6	2.0	6.2	2.7	3.9	3.6
10	5.8	13	3.1	2.5	2.0	3.1	1.6	2.1	3.3	2.5	3.1	3.6
11	3.9	14	2.9	2.5	2.0	2.3	1.8	2.1	3.6	2.5	3.1	3.3
12	4.6	5.0	2.9	2.5	2.0	2.7	2.0	2.3	3.6	2.1	3.1	3.9
13	4.2	3.6	2.9	2.5	1.8	3.9	1.8	2.1	2.5	2.3	3.3	3.9
14	4.2	8.0	2.7	2.5	1.8	3.9	1.8	2.3	5.7	2.5	3.3	210
15	4.6	12	2.7	2.5	1.8	4.2	1.8	2.0	2.7	2.1	3.3	60
16	4.6	16	2.9	2.5	1.8	3.1	2.1	2.1	2.7	69	2.9	8.0
17	4.6	29	2.9	2.5	1.8	2.3	2.0	2.8	2.7	20	2.9	5.0
18	4.2	29	2.7	2.5	1.8	2.1	2.0	2.0	2.7	3.1	2.9	4.2
19	4.2	31	2.7	2.5	1.8	2.0	2.0	2.0	2.5	2.1	2.9	4.2
20	5.4	8.1	2.7	2.3	1.8	1.8	2.0	2.3	2.3	2.3	2.7	4.2
21	5.4	5.8	2.7	2.3	1.6	1.8	2.0	2.7	2.1	46	2.7	3.9
22	4.6	4.2	2.7	2.3	1.6	2.5	2.3	2.5	2.5	5.4	3.3	3.9
23	4.2	3.9	2.7	2.3	1.6	2.9	2.7	2.7	2.3	3.3	3.8	3.9
24	14	3.1	2.7	2.1	1.6	2.5	2.3	2.5	2.3	2.9	3.9	3.9
25	12	3.1	2.7	2.1	1.6	2.0	2.1	4.9	3.1	2.7	3.3	3.9
26	5.4	2.9	2.7	2.0	1.6	2.1	1.8	9.8	2.1	2.3	3.3	3.9
27	4.1	2.9	2.7	2.0	1.6	2.5	2.0	2.1	2.0	35	3.3	5.3
28	7.6	2.9	2.7	2.0	1.6	2.3	2.1	1.8	2.1	29	3.6	34
29	7.1	2.9	2.7	2.0	1.6	2.3	2.5	1.8	2.3	4.6	3.3	4.7
30	2.7	2.9	2.7	2.1	---	3.3	3.1	1.8	2.5	2.7	3.3	3.9
31	2.7	---	2.9	2.1	---	1.8	---	2.0	---	2.3	3.3	---
TOTAL	182.2	249.1	87.1	73.5	53.7	237.0	60.5	77.1	87.6	498.2	1329.9	414.3
MEAN	5.88	8.30	2.81	2.37	1.85	7.65	2.02	2.49	2.92	16.1	42.9	13.8
MAX	14	31	3.1	2.7	2.1	60	3.1	9.8	6.2	163	695	210
MIN	2.7	2.9	2.7	2.0	1.6	1.6	1.6	1.8	2.0	2.1	2.7	3.3
AC-FT	361	494	173	146	107	470	120	153	174	988	2640	822

CAL YR 1975 TOTAL 2787.5 MEAN 7.64 MAX 244 MIN 1.2 AC-FT 5530
WTR YR 1976 TOTAL 3350.2 MEAN 9.15 MAX 695 MIN 1.6 AC-FT 6650

07119700 ARKANSAS RIVER AT CATLIN DAM, NEAR FOWLER, CO

LOCATION.--Lat 38°07'33", long 103°54'41", in NW¼NW¼ sec.21, T.22 S., R.58 W., Otero County, Hydrologic Unit 11020005, 600 ft (180 m) downstream from gage on Catlin Canal, on right bank 2.2 mi (3.5 km) downstream from diversion dam for Catlin Canal, 2.3 mi (3.7 km) downstream from Apishapa River and 6.0 mi (9.7 km) east of Fowler.

DRAINAGE AREA.--10,901 mi² (28,234 km²), of which 54 mi² (140 km²) is probably noncontributing.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorders on river and on Catlin Canal. Datum of river gage is 4,245.92 ft (1,294.156 m) above mean sea level. Datum of canal gage is 4,257.87 ft (1,297.799 m) above mean sea level. Prior to May 13, 1971, river gage at site 2.2 mi (3.5 km) upstream at datum 24.08 ft (7.340 m) higher and canal gage at site 1.7 mi (2.7 km) upstream at datum 3.26 ft (0.994 m) higher.

REMARKS.--Records good. 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.

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

AVERAGE DISCHARGE.--12 years (water years 1965-73), 636 ft³/s (18.01 m³/s), 460,800 acre-ft/yr (568 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,200 ft³/s (1,220 m³/s) June 18, 1965, gage height, 7.95 ft (2.423 m), site and datum then in use, from rating curve extended above 13,000 ft³/s (370 m³/s) on basis of flow-over-dam computation of peak flow; minimum daily, 30 ft³/s (0.850 m³/s) Sept. 12, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,400 ft³/s (210 m³/s) Aug. 3, gage height, 6.40 ft (1.951 m); minimum daily, 84 ft³/s (2.38 m³/s) Mar. 31 to Apr. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189	359	367	320	310	267	84	393	903	531	835	205
2	201	316	394	296	310	292	84	315	982	759	1920	199
3	209	251	315	232	315	289	92	176	1090	1140	4220	236
4	239	264	292	260	280	299	96	111	1380	1820	3130	246
5	232	324	284	315	272	343	117	108	1510	1320	2890	187
6	220	332	335	330	284	310	142	106	2220	1060	2960	170
7	175	285	340	268	320	326	232	128	1900	1080	1430	175
8	139	268	340	236	340	362	274	195	2260	858	827	195
9	123	290	340	276	340	337	255	222	1790	791	641	205
10	119	305	325	366	330	305	236	217	2220	644	521	215
11	117	310	310	411	325	288	280	231	2280	418	486	231
12	108	310	310	378	320	292	330	178	2200	375	481	207
13	100	303	300	350	292	290	371	145	2020	386	512	160
14	104	296	296	315	288	295	418	148	1610	721	451	413
15	111	305	292	315	284	297	440	160	1260	599	402	608
16	126	320	296	320	288	285	459	173	1380	653	328	934
17	148	353	292	330	288	250	459	181	990	505	243	316
18	173	363	296	305	280	229	459	173	1080	412	185	227
19	205	408	310	292	268	205	528	272	926	393	150	289
20	213	279	325	292	272	175	518	783	919	377	160	422
21	219	178	310	292	268	165	470	902	745	617	140	520
22	217	157	315	288	276	162	415	1040	590	474	140	366
23	203	194	315	296	320	152	395	1050	600	482	218	283
24	199	187	340	288	350	138	399	1210	1070	609	258	228
25	201	173	345	288	350	122	414	1100	1440	506	204	216
26	205	168	340	292	330	117	407	868	1410	402	239	279
27	215	162	340	296	320	111	350	699	1240	390	305	1010
28	222	160	335	292	315	98	337	515	874	438	242	2220
29	243	152	320	305	296	92	352	485	630	403	217	1580
30	281	152	320	310	---	90	377	491	496	402	202	998
31	321	---	315	305	---	84	---	674	---	363	195	---
TOTAL	5777	7924	9954	9459	8831	7067	9790	13449	40015	19928	25132	13540
MEAN	186	264	321	305	305	228	326	434	1334	643	811	451
MAX	321	408	394	411	350	362	528	1210	2280	1820	4220	2220
MIN	100	152	284	232	268	84	84	106	496	363	140	160
AC-FT	11460	15720	19740	18760	17520	14020	19420	26680	79370	39530	49850	26860

CAL YR 1975 TOTAL 221333 MEAN 606 MAX 4080 MIN 85 AC-FT 439000
WTR YR 1976 TOTAL 170866 MEAN 467 MAX 4220 MIN 84 AC-FT 338900

07121500 TIMPAS CREEK AT MOUTH, NEAR SWINK, CO

LOCATION.--Lat 38°00'11", long 103°39'20", in NW¼SW¼ sec.35, T.23 S., R.56 W., Otero County, Hydrologic Unit 11020005, on left bank 40 ft (12 m) shoreward and 125 ft (38 m) upstream from left end of 20th Road Bridge, 1.7 mi (2.7 km) southwest of Swink, and 2.9 mi (4.7 km) upstream from mouth.

DRAINAGE AREA.--496 mi² (1,285 km²).

PERIOD OF RECORD.--January 1922 to September 1925, March 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,120 ft (1,256 m), from topographic map. Prior to May 29, 1975, at site 140 ft (43 m) downstream at datum 0.13 ft (0.040 m) lower.

REMARKS.--Records good except those above 250 ft³/s (7.08 m³/s), which are fair. Natural flow of stream affected by minor diversions above station for irrigation, water imported from Arkansas River and Crooked Arroyo for irrigation above station, and return flow from irrigated areas.

AVERAGE DISCHARGE.--11 years, 70.6 ft³/s (1.999 m³/s), 51,150 acre-ft/yr (63.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, probably occurred June 8, 1923 discharge, 11,200 ft³/s (317 m³/s), at site 6 mi (10 km) upstream; minimum daily, 6.0 ft³/s (0.17 m³/s) Dec. 27-31, 1974, Jan. 1-4, 11-13, 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1922, 21,400 ft³/s (606 m³/s) June 17, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,930 ft³/s (83.0 m³/s) Aug. 1, gage height, 11.32 ft (3.45 m), from floodmarks; minimum daily, 9.5 ft³/s (0.27 m³/s) Feb. 17, 19, 29.

REVISIONS.--Revised daily discharges, in cubic feet per second, are given below. These figures supersede those published in the report for 1975.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	41	56	6.0	11	37	30	12	8.4	19	20	23
2	26	39	54	6.0	11	36	34	12	22	19	30	18
3	22	46	42	6.0	11	33	19	9.7	20	21	25	18
4	18	49	19	6.0	11	32	16	8.8	16	23	30	19
5	16	44	16	6.5	10	34	15	8.2	14	30	70	21
6	30	41	29	7.0	11	42	15	7.9	12	21	50	20
7	34	38	23	8.0	10	62	22	8.2	12	42	35	22
8	21	36	13	8.0	10	42	29	11	20	25	25	27
9	23	43	16	7.5	11	46	13	10	20	36	20	29
10	21	49	15	6.5	11	45	12	10	28	35	20	34
11	23	44	9.7	6.0	11	40	15	9.2	40	56	25	29
12	35	42	8.8	6.0	12	34	12	12	40	75	23	39
13	42	42	7.0	6.0	11	37	16	25	43	39	23	50
14	47	44	6.7	6.5	13	33	14	12	50	73	27	39
15	40	38	8.2	7.5	13	29	12	10	60	56	37	70
16	31	38	14	9.5	10	25	12	12	60	48	41	41
17	39	40	7.9	10	11	47	10	8.7	50	37	46	28
18	29	38	7.0	9.7	13	25	15	8.3	49	34	40	33
19	37	36	6.7	11	17	26	12	7.3	42	26	34	28
20	43	34	7.3	7.9	20	24	11	7.0	45	19	35	30
21	37	32	8.5	7.3	15	24	30	6.9	35	33	35	15
22	27	31	11	7.0	13	28	12	15	35	24	40	28
23	35	31	13	7.3	15	32	18	19	22	51	30	32
24	36	27	8.5	7.6	13	22	14	19	22	77	21	23
25	36	28	7.6	7.6	36	17	11	24	19	40	42	26
26	32	30	6.5	8.2	40	28	11	27	16	30	20	28
27	48	30	6.0	9.4	40	69	13	25	16	25	18	32
28	49	29	6.0	10	36	66	12	21	20	50	20	30
29	45	27	6.0	10	---	30	11	34	17	35	21	26
30	44	27	6.0	11	---	38	11	29	39	30	23	24
31	42	---	6.0	11	---	31	---	23	---	25	20	---
TOTAL	1031	1114	451.4	244.0	446	1114	477	452.2	892.4	1154	946	882
MEAN	33.3	37.1	14.6	7.87	15.9	35.9	15.9	14.6	29.7	37.2	30.5	29.4
MAX	49	49	56	11	40	69	34	34	60	77	70	70
MIN	16	27	6.0	6.0	10	17	10	6.9	8.4	19	18	15
AC-FT	2040	2210	895	484	885	2210	946	897	1770	2290	1880	1750

WTR YR 1975 TOTAL 9204.0 MEAN 25.2 MAX 77 MIN 6.0 AC-FT 18260

07121500 TIMPAS CREEK AT MOUTH, NEAR SWINK, CO—Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	30	17	24	12	20	11	20	55	24	650	26
2	23	48	17	18	12	50	11	19	30	31	516	25
3	40	28	17	16	13	111	11	28	31	39	100	26
4	41	21	18	16	15	133	12	29	30	23	80	29
5	37	22	20	16	13	65	13	16	33	31	70	28
6	47	45	19	17	12	40	16	15	70	59	56	22
7	25	42	19	16	11	32	15	15	55	27	45	25
8	18	24	19	14	11	30	13	22	52	22	40	29
9	26	33	18	14	11	50	15	30	58	24	35	29
10	28	49	18	13	11	40	12	20	46	23	33	32
11	25	43	18	13	11	30	12	22	46	23	32	32
12	30	48	19	13	28	40	23	22	45	22	31	19
13	33	120	18	13	14	32	13	17	21	23	30	33
14	28	101	18	13	9.8	27	15	16	56	28	30	34
15	25	86	20	13	9.8	25	17	16	30	28	30	30
16	20	91	19	13	9.8	24	21	15	34	84	30	40
17	29	63	19	13	9.5	23	30	36	31	61	29	48
18	36	60	18	15	9.6	22	22	21	35	36	29	38
19	51	80	21	18	9.5	22	28	20	33	22	29	20
20	44	51	19	20	9.8	22	27	26	32	22	29	40
21	35	36	15	20	10	25	19	38	33	48	28	41
22	33	18	22	20	10	30	18	39	27	42	28	48
23	33	19	25	19	10	22	18	35	28	47	27	42
24	36	21	24	19	10	19	20	32	29	61	32	40
25	26	19	24	19	9.8	16	18	32	30	30	26	40
26	43	18	24	17	9.8	16	25	41	29	70	31	20
27	33	18	27	15	9.8	13	22	37	29	43	30	23
28	34	20	28	13	9.6	12	19	38	28	36	30	47
29	66	18	27	13	9.5	11	24	27	24	34	18	79
30	62	17	27	12	---	12	35	25	24	33	22	76
31	56	---	27	12	---	11	---	28	---	33	23	---
TOTAL	1086	1289	641	487	330.3	1025	555	797	1104	1129	2219	1061
MEAN	35.0	43.0	20.7	15.7	11.4	33.1	18.5	25.7	36.8	36.4	71.6	35.4
MAX	66	120	28	24	28	133	35	41	70	84	650	79
MIN	18	17	15	12	9.5	11	11	15	21	22	18	19
AC-FT	2150	2560	1270	966	655	2030	1100	1580	2190	2240	4400	2100

CAL YR 1975 TOTAL 9623.6 MEAN 26.4 MAX 120 MIN 6.0 AC-FT 19090
WTR YR 1976 TOTAL 11723.3 MEAN 32.0 MAX 650 MIN 9.5 AC-FT 23250

NOTE.--NO GAGE-HEIGHT RECORD JULY 28 TO AUG. 1.

07122400 CROOKED ARROYO NEAR SWINK, CO

LOCATION.--Lat 37°58'56", long 103°35'52", in SW¼SW¼ sec.5, T.24 S., R.55 W., Otero County, Hydrologic Unit 11020005, on right bank 54 ft (16 m) downstream from bridge on State Highway 10, 2.0 mi (3.2 km) upstream from mouth, and 2.8 mi (4.5 km) southeast of Swink.

DRAINAGE AREA.--108 mi² (280 km²).

PERIOD OF RECORD.--February 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,100 ft (1,250 m), from topographic map.

REMARKS.--Records good except those above 3.0 ft (0.91 m), which are poor. Natural flow of stream affected by minor diversions above station for irrigation, water exported above station to Timpas Creek, water imported from Arkansas River for irrigation above station, and return flow from irrigated areas.

AVERAGE DISCHARGE.--8 years, 12.1 ft³/s (0.343 m³/s), 8,770 acre-ft/yr (10.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,200 ft³/s (34.0 m³/s) Aug. 7, 1971, gage height, 7.91 ft (2.411 m), from rating curve extended above 87 ft³/s (2.5 m³/s); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 395 ft³/s (11.2 m³/s) July 20, gage height, 5.67 ft (1.728 m), result of slope-area measurement; minimum daily, 0.02 ft³/s (0.001 m³/s) Feb. 26.

REVISIONS.--Revised daily discharges, in cubic feet per second, are given below. These figures supersede those published in the report for 1975.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1974 TO SEPTEMBER 1975
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	7.1	9.4	1.3	.94	.72	3.8	0	5.5	6.3	6.4	6.6
2	0	3.6	9.7	1.3	.94	.68	1.8	0	8.5	4.3	17	7.2
3	0	4.0	7.5	1.3	.94	.67	1.3	0	6.5	6.7	10	14
4	0	24	7.1	1.6	.94	.65	.74	0	5.3	7.6	8.6	6.0
5	0	13	11	1.2	.94	10	.54	0	5.5	10	11	11
6	0	7.0	6.1	1.1	.88	35	.50	0	3.9	13	10	9.7
7	0	7.3	5.0	1.1	.94	35	.46	0	3.8	13	9.2	7.5
8	0	12	4.4	1.1	.88	10	.44	0	7.3	9.2	5.6	10
9	0	13	3.6	1.1	.88	7.5	.49	0	7.2	12	5.1	9.2
10	0	22	2.8	1.1	.94	11	.53	0	12	18	4.9	7.4
11	0	24	2.7	1.0	.88	2.4	.65	0	18	11	5.4	5.3
12	0	22	2.2	1.0	.82	7.4	.61	0	14	10	4.5	16
13	0	18	2.4	1.1	.82	7.3	.65	0	15	22	3.9	17
14	0	28	3.8	1.1	.82	5.8	.41	0	24	18	5.5	18
15	0	20	2.9	1.0	.82	4.2	.40	0	28	12	6.7	18
16	0	28	3.3	.97	.82	13	.57	.09	28	9.6	10	13
17	.24	31	2.4	.94	.82	11	.52	.07	24	10	8.2	9.2
18	.36	22	2.5	.98	.82	11	.55	.05	15	10	8.6	7.2
19	.52	15	2.6	1.2	.82	5.6	2.1	.02	15	8.3	8.5	6.1
20	.58	9.7	2.3	1.3	.88	2.5	4.6	0	13	8.1	8.0	5.9
21	.58	10	2.7	1.2	.82	2.0	2.2	0	8.2	15	5.5	5.8
22	.64	12	2.2	1.3	.75	1.6	2.7	.98	15	19	7.9	5.1
23	.70	16	1.8	1.4	.79	1.1	1.5	2.2	14	44	5.9	5.0
24	.70	15	1.6	1.3	.82	1.1	2.0	.57	11	27	8.0	5.8
25	.76	11	1.6	1.2	.78	.88	7.9	2.4	4.8	19	7.0	5.8
26	.76	4.6	1.6	1.1	.78	1.0	4.2	3.3	5.2	15	5.4	5.3
27	.76	3.8	1.4	1.0	.80	.91	.12	3.8	7.1	10	5.7	4.5
28	.82	18	1.4	1.0	.73	2.1	.01	5.1	7.7	11	6.5	4.5
29	3.2	33	1.4	.94	---	4.6	0	11	9.3	9.5	6.8	4.5
30	7.1	31	1.4	1.0	---	4.4	0	14	7.4	6.6	5.7	4.6
31	9.1	---	1.3	1.0	---	2.4	---	6.4	---	6.6	6.8	---
TOTAL	26.82	485.1	112.1	35.23	23.81	203.51	42.29	49.98	349.2	401.8	228.3	255.2
MEAN	.87	16.2	3.62	1.14	.85	6.56	1.41	1.61	11.6	13.0	7.36	8.51
MAX	9.1	33	11	1.6	.94	35	7.9	14	28	44	17	18
MIN	0	3.6	1.3	.94	.73	.65	0	0	3.8	4.3	3.9	4.5
AC-FT	53	962	222	70	47	404	84	99	693	797	453	506

WTR YR 1975 TOTAL 2213.34 MEAN 6.06 MAX 44 MIN 0 AC-FT 4390

07122400 CROOKED ARROYO NEAR SWINK, CO--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	10	2.3	1.4	.90	.09	1.0	1.2	2.6	3.1	11	1.8
2	5.6	11	2.3	1.4	1.1	.12	1.0	1.6	2.2	3.1	19	1.7
3	5.6	7.7	2.2	1.4	1.1	.20	1.0	3.9	2.8	7.5	30	1.7
4	5.7	9.8	2.2	1.4	.91	.20	1.1	2.9	4.3	4.5	32	1.6
5	8.9	11	2.1	1.4	.75	2.0	1.4	1.4	8.8	6.4	30	1.7
6	5.4	11	2.2	1.4	.67	4.0	1.4	1.1	7.8	7.0	37	1.8
7	4.7	13	2.2	1.4	.63	6.8	1.2	1.0	17	7.4	30	1.8
8	7.2	14	2.1	1.5	.59	9.9	7.6	1.1	17	3.2	24	1.8
9	8.2	27	2.2	1.6	.65	15	5.1	1.1	11	2.4	21	1.9
10	7.4	40	2.4	1.7	.66	7.0	1.6	1.1	8.1	2.9	9.6	1.9
11	4.0	35	2.4	1.7	.66	5.6	1.5	.96	7.6	3.7	5.6	1.9
12	4.1	35	2.4	1.6	.77	9.3	1.7	.95	7.8	2.4	5.1	1.9
13	4.2	16	3.0	1.5	.57	3.5	1.6	.93	9.0	2.3	6.9	1.9
14	4.4	14	2.4	1.5	.45	2.1	1.4	.95	9.0	2.1	6.7	2.0
15	4.7	24	2.2	1.5	.44	1.8	1.4	.93	8.5	2.5	7.3	14
16	5.0	24	2.2	1.5	.51	1.4	2.2	.93	6.3	3.6	6.8	27
17	5.1	32	2.2	1.6	.27	1.1	2.8	.87	4.8	4.1	6.0	28
18	5.2	28	2.2	1.8	.19	.98	1.4	.86	4.3	4.0	4.5	21
19	4.8	7.1	2.3	1.8	.08	1.3	1.7	.84	4.3	5.4	4.1	9.1
20	4.1	5.0	2.4	1.6	.09	2.0	1.6	5.4	4.0	48	3.6	5.1
21	4.1	4.2	2.3	1.2	.17	1.5	1.5	5.4	3.5	36	3.0	3.2
22	5.8	4.2	2.4	1.3	.26	1.1	2.3	2.4	4.0	13	3.1	10
23	8.1	3.9	2.4	1.4	.23	1.0	3.0	1.6	4.3	7.1	2.8	6.2
24	19	3.8	2.4	1.4	.16	1.1	2.7	2.0	2.2	13	2.6	3.6
25	8.5	3.6	2.2	1.3	.08	1.0	2.1	2.6	5.6	15	2.5	3.3
26	4.0	3.5	2.2	1.2	.02	.98	2.6	5.0	3.7	13	2.2	4.2
27	2.8	3.1	2.2	1.1	.05	1.0	2.8	3.1	4.4	8.6	2.1	8.0
28	2.7	2.8	2.1	.97	.07	1.2	2.6	2.3	3.5	6.0	2.1	28
29	2.5	2.7	2.1	1.0	.06	1.2	1.5	2.2	4.1	10	2.1	18
30	2.4	2.4	2.2	.84	---	1.1	1.5	2.6	3.3	8.2	2.0	11
31	3.9	---	2.2	.76	---	1.1	---	3.1	---	4.8	1.8	---
TOTAL	173.3	408.8	70.6	43.17	13.09	86.67	62.3	62.32	185.8	260.3	326.5	225.1
MEAN	5.59	13.6	2.28	1.39	.45	2.80	2.08	2.01	6.19	8.40	10.5	7.50
MAX	19	40	3.0	1.8	1.1	15	7.6	5.4	17	48	37	28
MIN	2.4	2.4	2.1	.76	.02	.09	1.0	.84	2.2	2.1	1.8	1.6
AC-FT	344	811	140	86	26	172	124	124	369	516	648	446

CAL YR 1975 TOTAL 2242.02 MEAN 6.14 MAX 44 MIN 0 AC-FT 4450
WTR YR 1976 TOTAL 1917.95 MEAN 5.24 MAX 48 MIN .02 AC-FT 3800

07123000 ARKANSAS RIVER AT LA JUNTA, CO

LOCATION.--Lat 37°59'26", long 103°31'55", in SE¼NE¼ 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 (140 m) upstream from King Arroyo.

DRAINAGE AREA.--12,210 mi² (31,624 km²), of which 115 mi² (298 km²) 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.

REVISED RECORDS.--WSP 1341: Drainage area. WSP 1731: 1922.

GAGE.--Water-stage recorder, and nonrecording gage read twice daily. Datum of gage is 4,039.60 ft (1,231.270 m) above mean 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 (90 m) upstream at present datum.

REMARKS.--Records fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, groundwater withdrawals and diversions for irrigation of about 400,000 acres (1,620 km²), 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.

AVERAGE DISCHARGE.--64 years (water years 1913-73), 244 ft³/s (6.910 m³/s), 176,800 acre-ft/yr (218 hm³/yr), prior to completion of Pueblo Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 200,000 ft³/s (5,660 m³/s) June 4, 1921, gage height, 18.4 ft (5.61 m), site and datum then in use, from rating curve extended above 15,000 ft³/s (420 m³/s) on basis of slope-area measurement of peak flow; no flow Jan. 20-23, Mar. 20-22, 1915.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,790 ft³/s (221 m³/s) Aug. 3, gage height, 8.65 ft (2.637 m); minimum daily, 5.2 ft³/s (0.15 m³/s) Feb. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	56	19	10	7.4	5.6	9.6	67	322	147	347	75
2	42	49	20	10	7.2	19	9.6	62	402	144	1140	75
3	49	42	18	10	7.2	33	10	37	450	334	1920	72
4	64	36	18	10	7.2	51	21	20	588	837	989	72
5	58	35	16	12	7.2	27	45	14	782	680	234	75
6	40	58	16	13	7.2	20	45	13	826	553	255	67
7	25	54	16	14	9.0	19	47	12	572	396	632	75
8	23	56	15	13	7.6	39	47	14	306	356	610	75
9	20	56	14	13	6.8	62	51	15	408	222	306	43
10	18	64	14	12	6.4	51	39	21	651	158	217	21
11	15	60	14	11	6.4	27	40	15	651	51	151	18
12	15	60	14	11	6.4	20	43	16	771	23	116	20
13	14	58	13	9.3	6.2	21	45	14	588	23	97	23
14	14	56	13	9.6	6.6	23	45	8.8	680	56	100	26
15	14	64	13	9.0	6.2	22	45	8.6	615	277	72	301
16	14	62	13	8.6	6.2	21	42	10	615	136	43	280
17	16	64	13	8.4	5.6	23	42	10	615	236	26	351
18	22	67	13	8.4	5.6	18	43	7.6	485	113	22	80
19	37	236	13	8.4	5.6	14	43	6.8	536	25	26	32
20	49	372	11	8.4	5.4	15	75	20	402	63	33	74
21	32	306	11	8.4	6.2	13	75	317	389	144	54	154
22	30	236	11	8.0	6.4	11	45	436	231	171	49	130
23	29	195	11	8.0	5.8	11	30	544	162	69	54	88
24	36	183	11	8.0	5.6	11	30	570	162	94	69	33
25	29	77	12	8.0	5.6	10	27	680	510	255	88	20
26	29	36	12	7.8	5.6	10	19	651	760	151	67	26
27	37	28	11	7.6	5.4	9.9	18	478	690	46	62	87
28	37	23	10	7.6	5.4	10	16	334	570	21	62	855
29	39	21	11	7.4	5.2	10	16	170	350	53	60	760
30	47	20	11	7.2	---	9.9	42	191	227	26	67	690
31	49	---	10	7.4	---	9.9	---	208	---	20	78	---
TOTAL	975	2730	417	294.5	184.6	646.3	1105.2	4970.8	15316	5880	8046	4698
MEAN	31.5	91.0	13.5	9.50	6.37	20.8	36.8	160	511	190	260	157
MAX	64	372	20	14	9.0	62	75	680	826	837	1920	855
MIN	14	20	10	7.2	5.2	5.6	9.6	6.8	162	20	22	19
AC-FT	1930	5410	827	584	366	1280	2190	9860	30380	11660	15960	9320

CAL YR 1975 TOTAL 61495.9 MEAN 168 MAX 2020 MIN 5.6 AC-FT 122000
WTR YR 1976 TOTAL 45263.4 MEAN 124 MAX 1920 MIN 5.2 AC-FT 89780

07124000 ARKANSAS RIVER AT LAS ANIMAS, CO

LOCATION.--Lat 38°04'51", long 103°13'09", in SE¼NE¼ 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 (1.8 km) north of courthouse in Las Animas, and 4.2 mi (6.8 km) upstream from Purgatoire River.

DRAINAGE AREA.--14,417 mi² (37,340 km²), of which 441 mi² (1,142 km²) is probably noncontributing.

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.

REVISED RECORDS.--WSP 1341: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,883.97 ft (1,183.834 m) above mean 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 (0.6 km) downstream at datum 9.00 ft (2.743 m) lower.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 412,000 acres (1,670 km²), and return flow from irrigated areas. Flow partly regulated by Pueblo Reservoir (station 07099350) since Jan. 9, 1974.

AVERAGE DISCHARGE.--34 years (water years 1940-73), 203 ft³/s (5.749 m³/s), 147,100 acre-ft/yr (181 hm³/yr), prior to completion of Pueblo Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,000 ft³/s (1,250 m³/s) May 20, 1955, gage height, 15.03 ft (4.581 m), site and datum then in use, from rating curve extended above 24,000 ft³/s (680 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 0.9 ft³/s (0.025 m³/s) July 31, Aug. 1, 3, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,900 ft³/s (110 m³/s) Aug. 4, gage height, 5.88 ft (1.792 m); minimum daily, 8.0 ft³/s (0.23 m³/s) May 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	12	42	24	40	18	11	17	204	141	64	16
2	14	11	46	19	38	16	10	29	290	89	588	18
3	12	11	44	19	36	12	11	26	366	110	533	18
4	12	11	43	19	30	10	11	14	426	353	1690	17
5	11	11	43	35	19	12	11	11	604	492	278	17
6	11	11	42	30	24	15	11	11	548	444	101	17
7	12	11	42	28	39	18	11	11	520	345	118	17
8	12	10	42	25	40	17	11	11	504	320	564	19
9	12	10	39	25	22	17	11	11	248	248	320	18
10	12	11	37	40	21	19	11	9.8	335	177	168	14
11	12	11	36	70	19	18	12	9.8	432	126	102	14
12	12	11	32	60	18	19	12	9.8	492	52	59	13
13	12	11	30	55	19	19	12	8.9	468	29	46	11
14	12	11	27	65	20	16	11	8.9	462	24	38	14
15	12	11	21	38	20	16	12	8.5	492	29	34	33
16	12	11	19	32	20	16	12	8.5	492	149	25	129
17	12	11	19	29	19	16	11	8.5	504	81	20	150
18	12	11	19	28	20	17	10	8.5	390	126	18	91
19	12	10	29	26	19	19	11	8.5	408	49	18	20
20	12	10	33	27	20	18	11	8.0	295	24	17	12
21	12	10	32	27	18	19	11	20	270	76	16	18
22	12	10	33	28	17	16	11	208	244	46	15	55
23	11	12	33	25	20	16	12	285	177	52	14	30
24	12	12	33	24	20	16	11	378	138	23	15	23
25	12	10	33	24	19	16	11	534	204	40	14	12
26	12	10	34	30	18	17	11	612	498	135	14	9.8
27	12	30	31	46	19	14	11	432	528	69	13	9.8
28	11	40	26	50	19	12	11	320	486	22	12	371
29	11	30	25	50	19	12	12	224	315	16	12	652
30	11	25	26	48	---	12	14	165	216	15	12	528
31	11	---	28	44	---	12	---	184	---	14	14	---
TOTAL	383	406	1019	1090	672	490	338	3600.7	11556	3916	4952	2366.6
MEAN	12.4	13.5	32.9	35.2	23.2	15.8	11.3	116	385	126	160	78.9
MAX	28	40	46	70	40	19	14	612	604	492	1690	652
MIN	11	10	19	19	17	10	10	8.0	138	14	12	9.8
AC-FT	760	805	2020	2160	1330	972	670	7140	22920	7770	9820	4690

CAL YR 1975	TOTAL	46320.1	MEAN 127	MAX 1510	MIN 6.4	AC-FT	91880	
WTR YR 1976	TOTAL	30789.3	MEAN 84.1	MAX 1690	MIN 8.0	AC-FT	61070	

07124200 PURGATOIRE RIVER AT MADRID, CO

LOCATION.--Lat 37°07'46", long 104°38'20", in SW¼NE¼ sec.35, T.33 S., R.65 W., Las Animas County, Hydrologic Unit 11020010, on left bank 70 ft (21 m) downstream from county bridge, 0.3 mi (0.5 km) northeast of Madrid, and 1.0 mi (1.6 km) downstream from Burro Canyon.

DRAINAGE AREA.--550 mi² (1,420 km²), approximately.

PERIOD OF RECORD.--March 1972 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,261.61 ft (1,908.539 m) above mean sea level (Corps of Engineers bench mark).

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation of about 6,000 acres (24.3 km²) above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 ft³/s (405 m³/s) July 20, 1976, gage height, 12.80 ft (3.901 m) from floodmarks, from rating curve extended above 300 ft³/s (8.5 m³/s) on basis of drift-timed measurement of peak flow; minimum daily, 3.8 ft³/s (0.11 m³/s) Jan. 2, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,300 ft³/s (405 m³/s) July 20, gage height, 12.80 ft (3.901 m) from floodmarks, from rating curve extended above 300 ft³/s (8.5 m³/s) on basis of drift-timed measurement of peak flow, only peak above base of 2,500 ft³/s (71 m³/s); minimum daily, 3.8 ft³/s (0.11 m³/s) Jan. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	26	23	12	30	11	15	21	71	68	109	19
2	19	22	25	3.8	29	10	15	17	56	80	115	17
3	18	21	25	4.0	25	9.7	14	17	63	58	154	15
4	17	20	25	8.0	19	11	14	18	74	50	64	13
5	16	19	18	12	13	8.0	15	18	91	51	46	12
6	15	18	18	14	17	8.5	16	20	159	40	38	11
7	15	18	16	12	22	12	14	37	108	37	32	30
8	13	17	17	12	18	12	14	36	125	41	37	15
9	12	17	16	15	17	12	14	30	153	41	34	28
10	15	16	16	20	16	14	14	27	146	26	43	21
11	15	15	17	20	12	14	14	26	156	21	39	17
12	14	12	15	20	11	8.0	16	28	145	22	34	14
13	14	12	15	20	12	7.0	19	32	121	40	28	12
14	13	15	15	23	13	14	18	31	95	41	28	13
15	15	17	15	25	11	14	18	33	81	33	22	21
16	15	15	15	27	10	9.7	17	41	65	50	18	36
17	15	16	17	23	10	14	16	44	48	38	17	36
18	15	16	20	19	8.5	15	15	43	45	26	17	17
19	17	25	20	18	10	14	15	46	60	96	44	14
20	17	20	20	12	14	13	17	50	68	762	48	34
21	15	16	21	9.7	12	9.7	15	55	58	101	65	39
22	15	19	23	18	9.7	9.7	15	65	53	82	32	25
23	15	22	17	21	15	12	14	57	60	110	25	17
24	14	22	23	34	14	12	14	59	54	77	40	17
25	13	23	17	24	12	12	14	68	50	59	39	26
26	15	25	20	17	12	14	13	76	46	112	34	29
27	16	25	19	24	11	14	13	60	40	60	23	96
28	16	23	19	66	11	13	15	54	37	59	20	54
29	15	22	13	58	11	13	17	68	34	48	19	33
30	15	22	9.7	48	---	12	21	81	51	40	18	25
31	16	---	14	30	---	12	---	79	---	46	19	---
TOTAL	474	576	563.7	669.5	425.2	364.3	461	1337	2413	2415	1301	756
MEAN	15.3	19.2	18.2	21.6	14.7	11.8	15.4	43.1	80.4	77.9	42.0	25.2
MAX	19	26	25	66	30	15	21	81	159	762	154	96
MIN	12	12	9.7	3.8	8.5	7.0	13	17	34	21	17	11
AC-FT	940	1140	1120	1330	843	723	914	2650	4790	4790	2580	1500

CAL YR 1975 TOTAL 17851.0 MEAN 48.9 MAX 490 MIN 8.0 AC-FT 35410
WTR YR 1976 TOTAL 11755.7 MEAN 32.1 MAX 762 MIN 3.8 AC-FT 23320

07124300 LONG CANYON CREEK NEAR MADRID, CO

LOCATION.--Lat 37°06'53", long 104°36'17", in SE¼NW¼ sec.6, T.34 S., R.64 W., Las Animas County, Hydrologic Unit 11020010, on left bank 700 ft (210 m) upstream from private bridge, 1.4 mi (2.3 km) upstream from Oso Canyon, 2.2 mi (3.5 km) southeast of Madrid, and 2.3 mi (3.7 km) upstream from mouth.

DRAINAGE AREA.--100 mi² (260 km²), approximately.

PERIOD OF RECORD.--March 1972 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 6,259.09 ft (1,907.771 m) above mean sea level, Nov. 21, 22, Dec. 2-4, 1975, Feb. 26-28, Mar. 3, 1976.

REMARKS.--Records good. No diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,150 ft³/s (32.6 m³/s) Apr. 14, 1973, gage height, 4.7 ft (1.43 m), from floodmarks; minimum daily, 0.01 ft³/s (0.001 m³/s) Dec. 9-16, 1972, Nov. 21, 22, Dec. 2-4, 1975, Feb. 26-28, Mar. 3, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 50 ft³/s (1.4 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
June 6	0145	56	1.59	2.54	0.774	July 23	2000	402	11.4	3.73	1.137
July 16	1430	78	2.21	2.69	0.820	July 31	2330	1,230	34.8	5.20	1.585
July 19	2300	*2,480	70.2	6.88	2.097	Aug. 3	1830	1,220	34.6	5.19	1.582

Minimum daily discharge, 0.01 ft³/s (0.001 m³/s) Nov. 21, 22, Dec. 2-4, Feb. 26-28, Mar. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.07	.02	.03	.02	.02	.04	.04	.12	.15	20	.02
2	.02	.07	.01	.03	.03	.02	.03	.06	.12	.12	2.2	.02
3	.02	.07	.01	.03	.03	.01	.03	.06	.12	.11	92	.02
4	.03	.06	.01	.03	.03	.02	.03	.06	.13	.11	2.4	.02
5	.03	.06	.02	.03	.03	.02	.04	.07	.15	.07	.13	.02
6	.03	.05	.02	.04	.03	.02	.05	.06	3.3	.04	.04	.02
7	.02	.05	.02	.04	.03	.02	.05	.06	.10	.05	.04	.02
8	.03	.04	.02	.04	.02	.02	.03	.06	.09	.05	.04	.02
9	.03	.03	.02	.04	.04	.02	.04	.06	.10	.05	.04	.04
10	.04	.03	.02	.04	.04	.02	.03	.06	.09	.05	.04	.04
11	.03	.03	.02	.03	.04	.03	.03	.07	.09	.05	.04	.04
12	.02	.02	.03	.03	.04	.02	.04	.06	.09	.05	.04	.04
13	.02	.02	.03	.02	.04	.03	.05	.07	.06	.03	.04	.04
14	.03	.02	.02	.02	.04	.03	.05	.06	.03	.04	.04	.04
15	.03	.02	.02	.02	.04	.03	.05	.06	.05	.06	.04	.61
16	.04	.02	.02	.02	.04	.03	.06	.06	.08	4.7	.04	.09
17	.04	.02	.02	.03	.04	.03	.04	.07	.08	.15	.02	.04
18	.04	.02	.02	.03	.03	.04	.05	.06	.08	.17	.03	.04
19	.04	.29	.02	.03	.02	.04	.06	.08	.09	158	.09	.04
20	.05	.05	.03	.02	.10	.05	.06	.09	.08	41	.02	.04
21	.05	.01	.03	.02	.06	.04	.05	.09	.07	.37	.02	.04
22	.06	.01	.03	.02	.03	.04	.04	.10	.06	3.9	.02	.04
23	.05	.02	.03	.02	.03	.04	.04	.09	.08	28	.02	.04
24	.05	.02	.03	.02	.03	.04	.03	.09	.09	5.8	.02	.04
25	.05	.04	.03	.02	.02	.03	.03	.09	.12	.37	.02	.04
26	.04	.03	.03	.02	.01	.03	.03	.09	.05	5.7	.02	.04
27	.03	.03	.03	.02	.01	.04	.03	.10	.04	1.6	.02	1.2
28	.04	.03	.03	.03	.01	.04	.02	.11	.05	.13	.02	.15
29	.04	.03	.03	.03	.03	.04	.02	.10	.05	.05	.02	.09
30	.05	.02	.03	.03	---	.04	.05	.37	.06	.05	.02	.13
31	.06	---	.03	.02	---	.05	---	.22	---	47	.02	---
TOTAL	1.14	1.28	.73	.85	.96	.95	1.20	2.72	5.72	298.02	117.55	3.07
MEAN	.037	.043	.024	.027	.033	.031	.040	.088	.19	9.61	3.79	.10
MAX	.06	.29	.03	.04	.10	.05	.06	.37	3.3	158	92	1.2
MIN	.02	.01	.01	.02	.01	.01	.02	.04	.03	.03	.02	.02
AC-FT	2.3	2.5	1.4	1.7	1.9	1.9	2.4	5.4	11	591	233	6.1

CAL YR 1975 TOTAL 100.21 MEAN .27 MAX 27 MIN .01 AC-FT 199
WTR YR 1976 TOTAL 434.19 MEAN 1.19 MAX 158 MIN .01 AC-FT 861

07124500 PURGATOIRE RIVER AT TRINIDAD, CO

LOCATION.--Lat 37°10'15", long 104°30'31", in SW¼SE¼ sec.13, T.33 S., R.64 W., Las Animas County, Hydrologic Unit 11020010, on left bank 90 ft (27 m) downstream from railroad bridge and 680 ft (210 m) downstream from Animas Street Bridge in Trinidad.

DRAINAGE AREA.--795 mi² (2,059 km²).

PERIOD OF RECORD.--October 1895 to September 1899, August to December 1905, November 1906 to March 1907, October 1907 to November 1908, May to August 1909 (gage heights and discharge measurements only), September 1909 to November 1912, October 1915 to September 1960, October 1961 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to October 1915, published as "Purgatory River."

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1311: 1935(M). WSP 1731: 1925(M), 1942(M).

GAGE.--Water-stage recorder. Datum of gage is 5,979.76 ft (1,822.631 m) above mean sea level. See WSP 1711 or 1731 for history of changes prior to Dec. 11, 1950. Dec. 11, 1950, to Sept. 30, 1960, water-stage recorder at site 180 ft (55 m) upstream at datum 2.00 ft (0.610 m) higher. Since May 30, 1955, supplemental nonrecording gage at site 90 ft (27 m) upstream on downstream side of railroad bridge; at datum 3.00 ft (0.914 m) lower prior to Oct. 1, 1962, and at present datum thereafter.

REMARKS.--Records good except those for winter period, which are fair. Diversions above station for irrigation of about 6,500 acres (26.3 km²). Peak flows regulated to some extent by Trinidad Dam, 3.8 mi (6.1 km) upstream, since January 1975.

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

AVERAGE DISCHARGE.--68 years (water years 1896-99, 1908, 1910-12, 1916-60, 1962-76), 83.3 ft³/s (2.359 m³/s), 60,350 acre-ft/yr (74.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/s (793 m³/s) May 19, 1955 (gage height, 14.35 ft (4.374 m), site and datum then in use, from rating curve extended above 2,800 ft³/s (79 m³/s) on basis of indirect measurements of peak flow above and below station; no flow for several days during summer of 1896, June 11, 1950, Sept. 20, 25, 28, 29, Oct. 3-5, 7, 8, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1859, 45,400 ft³/s (1,290 m³/s) Sept. 30, 1904 (gage height, 16.6 ft (5.06 m), at site 680 ft (210 m) upstream, by slope-area measurement of peak flow.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,330 ft³/s (94.3 m³/s) July 20, gage height, 5.90 ft (1.798 m); minimum daily, 7.0 ft³/s (0.20 m³/s) Feb. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	18	15	10	13	9.7	11	27	89	69	230	19
2	17	18	17	9.0	13	9.7	12	21	54	66	105	19
3	15	20	16	9.0	12	9.7	12	16	54	67	238	16
4	15	20	20	11	11	9.5	12	19	58	57	117	15
5	15	20	20	12	11	9.0	13	18	72	58	47	15
6	14	20	20	12	11	9.0	14	21	143	49	39	15
7	15	21	18	10	15	9.0	14	36	90	46	38	22
8	12	22	16	12	23	9.0	13	41	79	47	38	18
9	12	20	18	14	25	10	12	36	109	49	39	26
10	13	18	20	14	21	10	11	32	114	36	39	26
11	13	18	20	13	14	10	12	28	110	27	40	21
12	13	17	17	14	9.2	9.0	14	29	105	25	34	18
13	11	17	17	12	12	8.3	18	34	90	42	32	15
14	12	18	9.0	12	13	14	19	35	79	51	32	15
15	13	16	12	14	12	16	21	34	69	45	32	29
16	13	16	11	14	8.8	13	21	42	61	48	30	40
17	13	18	11	15	13	12	18	52	51	60	30	32
18	13	18	11	16	7.9	13	18	49	49	38	30	32
19	13	17	13	14	7.9	14	18	51	57	132	35	21
20	13	15	15	13	7.5	15	19	48	66	1130	46	29
21	13	12	15	13	7.0	11	16	54	56	659	47	36
22	12	11	15	14	7.5	9.2	12	66	54	88	33	32
23	11	12	15	15	10	9.7	13	60	58	124	28	19
24	10	11	14	13	14	10	13	60	56	133	37	20
25	12	11	14	11	12	9.7	12	67	53	95	39	28
26	14	10	15	10	10	14	11	77	51	134	32	35
27	15	11	15	12	11	18	11	66	46	114	22	84
28	16	12	14	14	11	11	17	52	45	67	18	56
29	17	12	13	14	9.7	16	21	58	40	56	21	40
30	18	11	13	13	---	17	28	83	47	47	21	37
31	19	---	13	12	---	12	---	85	---	50	19	---
TOTAL	431	480	472.0	391.0	352.5	356.5	456	1397	2105	3709	1588	830
MEAN	13.9	16.0	15.2	12.6	12.2	11.5	15.2	45.1	70.2	120	51.2	27.7
MAX	19	22	20	16	25	18	28	85	143	1130	238	84
MIN	10	10	9.0	9.0	7.0	8.3	11	16	40	25	18	15
AC-FT	855	952	936	776	699	707	904	2770	4180	7360	3150	1650

CAL YR 1975 TOTAL 17648.3 MEAN 48.4 MAX 595 MIN 6.0 AC-FT 35010
WTR YR 1976 TOTAL 12568.0 MEAN 34.3 MAX 1130 MIN 7.0 AC-FT 24930

NOTE.--NO GAGE-HEIGHT RECORD OCT. 14 TO DEC. 4.

07126100 LUNING ARROYO NEAR MODEL, CO

LOCATION.--Lat 37°18'16", long 104°00'54", in sec.33, T.31 S., R.59 W., Las Animas County, Hydrologic Unit 11020010, on right bank 600 ft (180 m) downstream from ford, 6 mi (10 km) upstream from mouth, 13.5 mi (21.7 km) east of Model, and 29 mi (47 km) northeast of Trinidad.

DRAINAGE AREA.--86 mi² (233 km²).

PERIOD OF RECORD.--July 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 5,150 ft (1,570 m), from topographic map.

REMARKS.--Records good.

AVERAGE DISCHARGE.--10 years, 1.10 ft³/s (0.031 m³/s), 797 acre-ft/yr (982,700 m³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,400 ft³/s (2.66 m³/s) Aug. 9, 1968, gage height, 12.46 ft (3.798 m), from rating curve extended above 32 ft³/s (0.91 m³/s) on basis of slope-area measurements at gage heights 8.78 and 11.39 ft (2.676 and 3.472 m); no flow for many days each year.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,100 ft³/s (31.2 m³/s) July 20, gage height, 8.87 ft (2.704 m), only peak above base of 500 ft³/s (14 m³/s); no flow most of year.

X DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								0	0	.52	4.8	0
2								0	0	0	2.6	0
3								0	0	0	.75	0
4								0	0	9.5	.21	0
5								0	0	5.2	0	0
6								0	0	.96	0	0
7								0	0	.03	0	0
8								0	0	0	0	0
9								0	0	0	0	0
10								0	0	0	0	0
11								0	0	0	0	0
12								0	0	0	0	0
13								0	0	0	0	0
14								0	0	0	0	0
15								0	0	0	0	0
16								0	0	0	0	0
17								0	0	0	0	0
18								0	0	0	0	0
19								0	0	0	0	0
20								0	0	186	0	0
21								4.7	0	30	.38	0
22								5.6	0	2.7	.10	0
23								.20	0	.75	0	0
24								0	0	3.5	0	0
25								11	0	3.9	0	0
26								6.5	0	.97	0	7.3
27								.77	0	.23	0	25
28								.03	0	0	0	12
29								0	0	0	0	2.2
30					---			0	9.5	0	0	.78
31		---			---		---	0	---	0	0	---
TOTAL	0	0	0	0	0	0	0	28.80	9.5	244.26	8.84	47.28
MEAN	0	0	0	0	0	0	0	.93	.32	7.88	.29	1.58
MAX	0	0	0	0	0	0	0	11	9.5	186	4.8	25
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	0	0	0	0	57	19	484	18	94

CAL YR 1975 TOTAL 201.02 MEAN .55 MAX 65 MIN 0 AC-FT 399
WTR YR 1976 TOTAL 338.68 MEAN .93 MAX 186 MIN 0 AC-FT 672

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 (5 km) upstream from mouth, 16 mi (26 km) east of Model, and 33 mi (53 km) northeast of Trinidad.

DRAINAGE AREA.--168 mi² (435 km²).

PERIOD OF RECORD.--July 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 4,960 ft (1,512 m), from topographic map.

REMARKS.--Records good except those above 40 ft³/s (1.133 m³/s), which are fair.

AVERAGE DISCHARGE.--10 years, 1.63 ft³/s (0.0462 m³/s), 1,180 acre-ft/yr (1.45 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,240 ft³/s (177 m³/s) May 26, 1967, gage height, 9.4 ft (2.87 m) from floodmarks; from rating curve extended above 65 ft³/s (1.8 m³/s) on basis of slope-area measurement of peak flow; no flow June 7-13, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,070 ft³/s (30.3 m³/s) July 20, gage height, 5.32 ft (1.622 m), only peak above base of 450 ft³/s (13 m³/s); minimum daily, 0.03 ft³/s (0.001 m³/s) Oct. 13, 14, 18, 19, Aug. 24-29, Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.06	.09	.18	.18	.18	.21	.15	.15	.21	.09	3.1	.06
2	.06	.09	.18	.18	.21	.18	.15	.12	.21	.09	33	.03
3	.06	.12	.18	.18	.21	.18	.15	.12	.21	.09	3.7	.06
4	.06	.12	.18	.18	.21	.21	.15	.12	.18	.09	.80	.06
5	.06	.12	.18	.18	.21	.21	.15	.12	.18	.09	.40	.06
6	.06	.12	.18	.18	.21	.18	.15	.12	.18	.09	.25	.06
7	.06	.12	.18	.18	.21	.18	.15	.12	.15	.09	.18	.09
8	.06	.12	.18	.18	.21	.18	.15	.12	.15	.09	.15	.09
9	.06	.15	.18	.18	.18	.18	.15	.12	.15	.09	.12	.09
10	.06	.15	.18	.18	.18	.18	.15	.12	.15	.09	.12	.09
11	.06	.12	.18	.18	.18	.18	.15	.12	.12	.09	.09	.06
12	.06	.12	.21	.18	.18	.18	.15	.12	.09	.09	.09	.06
13	.03	.09	.21	.18	.18	.18	.15	.12	.09	.09	.09	.06
14	.03	.09	.21	.18	.18	.18	.15	.12	.09	.09	.09	.06
15	.06	.09	.21	.18	.18	.18	.18	.12	.09	.09	.09	.09
16	.06	.09	.21	.18	.18	.18	.18	.12	.09	.09	.09	.09
17	.06	.09	.21	.18	.18	.18	.18	.12	.09	.09	.06	.09
18	.03	.09	.21	.18	.18	.18	.18	.12	.09	.09	.06	.09
19	.03	.30	.21	.18	.18	.18	.18	.12	.09	.12	.06	.09
20	.06	.25	.21	.18	.18	.18	.18	.12	.09	96	.15	.09
21	.06	.21	.18	.18	.57	.18	.18	.12	.09	20	.15	.09
22	.06	.21	.18	.18	.21	.18	.18	.12	.09	2.8	.09	.09
23	.09	.21	.18	.18	.21	.18	.15	.12	.09	.70	.06	.09
24	.09	.21	.18	.18	.21	.18	.18	.12	.06	.40	.03	.09
25	.09	.21	.18	.18	.21	.18	.15	6.4	.06	.25	.03	.15
26	.09	.21	.18	.18	.21	.18	.15	.90	.06	.25	.03	17
27	.06	.21	.18	.18	.21	.18	.15	.30	.06	.21	.03	16
28	.06	.18	.18	.15	.21	.18	.15	.25	.06	.18	.03	7.0
29	.09	.21	.18	.18	.21	.18	.15	.21	.06	.18	.03	.70
30	.09	.18	.18	.18	---	.18	.15	.21	.09	.15	.06	.25
31	.09	---	.18	.18	---	.18	---	.21	---	.15	.06	---
TOTAL	1.95	4.57	5.85	5.55	6.06	5.67	4.77	11.39	3.42	123.01	43.29	42.93
MEAN	.063	.15	.19	.18	.21	.18	.16	.37	.11	3.97	1.40	1.43
MAX	.09	.30	.21	.18	.57	.21	.18	6.4	.21	96	33	17
MIN	.03	.09	.18	.15	.18	.18	.15	.12	.06	.09	.03	.03
AC-FT	3.9	9.1	12	11	12	11	9.5	23	6.8	244	86	85

CAL YR 1975 TOTAL 374.71 MEAN 1.03 MAX 158 MIN .03 AC-FT 743
WTR YR 1976 TOTAL 258.46 MEAN .71 MAX 96 MIN .03 AC-FT 513

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 (76 m) downstream from county road bridge at gas line crossing, 1.2 mi (1.9 km) downstream from Van Bremer Arroyo, and 18 mi (29 km) southeast of Thatcher.

DRAINAGE AREA.--1,935 mi² (5,012 km²).

PERIOD OF RECORD.--July 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,790 ft (1,460 m), from topographic map.

REMARKS.--Records good except those for winter period and those above 1,800 ft³/s, which are fair. Diversions above station for irrigation of about 30,000 acres (120 km²). Peak flows regulated to some extent by Trinidad Dam, 52 mi (84 km) upstream, since January 1975.

AVERAGE DISCHARGE.--10 years, 37.9 ft³/s (1.073 m³/s), 27,460 acre-ft/yr (33.9 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,100 ft³/s (428 m³/s) June 17, 1967, gage height, 12.35 ft (3.764 m), from rating curve extended above 2,100 ft³/s (59 m³/s); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of July 22, 1954, and May 19, 1955, reached stages of 26.7 and 25.2 ft (8.14 and 7.68 m), respectively (from floodmarks). Flood of June 8, 1965, reached a stage of 23.5 ft (7.16 m), from floodmarks, discharge, 47,700 ft³/s (1,350 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,850 ft³/s (80.7 m³/s) July 21, gage height, 6.98 ft (2.128 m); no flow several days June through Sept.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	3.1	16	9.0	19	7.0	6.5	17	14	0	8.1	0
2	.10	4.5	22	9.0	16	6.6	5.4	11	11	0	82	0
3	.10	3.0	19	9.0	14	6.1	4.1	7.3	6.0	0	53	0
4	.10	3.4	18	9.5	12	6.5	3.9	5.4	4.1	0	41	0
5	.10	5.0	17	10	9.5	7.1	3.7	4.1	3.4	1.6	38	0
6	.05	5.7	17	10	9.1	6.3	4.5	3.2	106	2.8	15	0
7	.05	5.9	15	10	15	7.2	5.4	2.6	13	1.7	8.3	0
8	.47	6.1	16	10	14	9.2	4.3	2.2	10	.70	6.0	0
9	.90	6.3	15	11	20	9.5	4.0	1.9	5.3	.28	4.4	0
10	1.6	3.6	14	12	23	8.6	3.5	1.8	3.4	.10	3.1	0
11	.81	3.4	13	14	20	7.4	3.0	1.7	5.2	0	2.9	0
12	.30	2.8	12	16	16	6.6	2.4	1.5	5.8	0	3.4	0
13	.39	2.3	12	15	13	6.3	2.9	1.1	3.6	0	3.8	0
14	.72	6.5	12	15	12	5.8	3.4	.95	2.1	0	2.9	0
15	1.7	9.4	11	16	9.0	7.9	4.2	.74	1.3	1.4	2.0	0
16	1.3	9.5	10	15	8.0	7.6	4.5	.50	.98	2.4	1.6	4.4
17	1.0	9.4	11	15	7.6	6.5	4.3	.58	.84	.81	1.2	7.2
18	1.2	9.2	10	15	7.5	6.1	4.4	.44	.72	.84	.67	1.8
19	.90	9.0	9.6	14	6.8	5.7	4.1	.52	.84	.69	.43	.71
20	1.2	8.6	9.6	14	8.4	5.4	4.5	14	.83	185	.48	.41
21	1.9	7.8	9.0	20	8.0	5.0	4.8	12	.53	990	2.7	.29
22	1.9	7.5	9.0	19	8.4	5.0	5.2	22	.61	156	.41	.17
23	2.0	7.5	8.6	18	7.4	5.0	4.3	14	.46	41	.22	.13
24	2.8	7.5	10	18	10	5.3	3.8	6.0	.36	175	.17	.08
25	2.3	7.5	10	18	9.4	4.8	3.4	21	.23	27	.13	.14
26	2.7	7.5	10	17	8.1	4.6	2.8	23	.10	51	.09	10
27	2.9	7.5	10	16	7.2	4.0	2.7	6.9	.02	26	.07	93
28	2.9	10	10	16	6.9	2.7	2.8	3.3	0	20	.03	160
29	3.3	10	10	27	7.1	2.8	11	3.0	0	10	0	33
30	3.4	10	10	28	---	5.1	21	2.6	0	6.3	0	13
31	3.8	---	10	23	---	6.4	---	19	---	7.5	0	---
TOTAL	43.09	199.5	385.8	468.5	332.4	190.1	144.8	211.33	200.72	1708.12	282.10	324.33
MEAN	1.39	6.65	12.4	15.1	11.5	6.13	4.83	6.82	6.69	55.1	9.10	10.8
MAX	3.8	10	22	28	23	9.5	21	23	106	990	82	160
MIN	.05	2.3	8.6	9.0	6.8	2.7	2.4	.44	0	0	0	0
AC-FT	85	396	765	929	659	377	287	419	398	3390	560	643

CAL YR 1975 TOTAL 4392.75 MEAN 12.0 MAX 347 MIN .01 AC-FT 8710
WTR YR 1976 TOTAL 4490.79 MEAN 12.3 MAX 990 MIN 0 AC-FT 8910

07126500 PURGATOIRE RIVER AT NINEMILE DAM, NEAR HIGBEE, CO

LOCATION.--Lat 37°44'06", long 103°29'45", in NW¼ sec.7, T.27 S., R.54 W., Otero County, Hydrologic Unit 11020010, on left bank 850 ft (260 m) upstream from Ninemile Dam, 4 mi (6 km) southwest of Higbee, and 5.5 mi (8.8 km) upstream from Smith Canyon.

DRAINAGE AREA.--2,900 mi² (7,511 km²).

PERIOD OF RECORD.--October 1924 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1311: 1934(M), 1936(M), 1941-42(M), 1948-49(M). WSP 1731: 1929(M).

GAGE.--Water-stage recorder. Datum of gage is 4,240.59 ft (1,292.532 m) above mean sea level. See WSP 1711 or 1731 for history of changes prior to Dec. 6, 1956.

REMARKS.--Records poor. Diversions for irrigation of about 32,000 acres (130 km²) above station.

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

AVERAGE DISCHARGE.--52 years, 94.5 ft³/s (2.676 m³/s), 68,470 acre-ft/yr (84.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 105,000 ft³/s (2,970 m³/s) estimated, June 18, 1965, gage height, 19.6 ft (5.97 m), from floodmarks; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,930 ft³/s (83.0 m³/s) June 7, gage height, 5.93 ft (1.807 m), no peak above base of 3,000 ft³/s (85.0 m³/s); no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC.	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1		0	7.6	3.2	13	6.8	3.8	4.4	3.8	0	15	0
2		0	14	3.0	13	5.6	3.8	7.4	1.0	0	450	0
3		0	17	3.0	12	7.4	3.8	17	16	12	160	0
4		0	18	3.5	13	7.0	4.4	14	6.2	6.0	98	0
5		0	19	4.0	6.2	7.0	5.0	7.4	2.6	4.0	52	0
6		0	19	3.5	9.0	11	5.6	6.8	120	2.0	28	0
7		0	16	2.5	8.0	9.0	3.8	5.0	1470	1.0	42	0
8		0	14	2.0	15	6.8	3.2	3.8	163	0	24	0
9		0	13	4.0	10	7.4	2.6	3.2	43	0	14	0
10		0	15	6.0	4.4	6.2	1.4	1.8	22	0	9.0	0
11		0	13	7.0	11	6.8	1.4	1.4	11	0	13	0
12		0	13	8.5	23	7.4	1.6	.80	3.8	0	5.0	0
13		0	13	9.5	22	5.6	2.6	.11	1.0	0	4.0	0
14		0	11	8.0	23	5.6	1.4	0	0	0	2.0	0
15		0	1.4	9.0	20	2.6	1.2	0	0	0	1.0	0
16		0	4.4	13	16	2.0	1.0	0	0	0	0	0
17		0	1.8	18	12	2.0	.80	0	0	0	0	0
18		0	1.8	15	7.4	2.6	1.0	0	0	0	0	0
19		0	3.8	17	5.6	3.2	.80	0	0	0	0	0
20		0	2.6	14	3.8	2.6	1.8	0	0	0	0	0
21		0	1.8	11	4.4	3.2	2.6	0	0	0	0	0
22		0	6.8	8.0	6.8	3.8	2.0	0	0	550	0	0
23		0	8.0	10	10	3.8	1.6	0	0	160	0	0
24		0	10	9.0	11	3.8	1.4	13	0	105	0	0
25		0	10	10	6.2	4.4	1.4	18	0	100	0	0
26		0	6.8	6.2	4.4	2.6	1.4	149	0	70	0	0
27		0	8.0	6.2	7.4	3.2	1.2	105	0	44	0	0
28		0	12	13	6.8	3.8	1.8	36	0	30	0	0
29		.01	7.4	10	6.8	4.4	2.0	19	0	19	0	75
30		.05	8.0	10	---	5.0	12	11	0	14	0	45
31		---	9.0	9.0	---	5.0	---	9.0	---	9.0	0	---
TOTAL	0	.06	306.2	256.1	311.2	157.6	78.40	433.11	1863.4	1126.0	917.0	120
MEAN	0	.002	9.88	8.26	10.7	5.08	2.61	14.0	62.1	36.3	29.6	4.00
MAX	0	.05	19	18	23	11	12	149	1470	550	450	75
MIN	0	0	1.4	2.0	3.8	2.0	.80	0	0	0	0	0
AC-FT	0	.1	607	508	617	313	156	859	3700	2230	1820	238

CAL YR 1975 TOTAL 4309.76 MEAN 11.8 MAX 301 MIN 0 AC-FT 8550
WTR YR 1976 TOTAL 5569.07 MEAN 15.2 MAX 1470 MIN 0 AC-FT 11050

07128500 PURGATOIRE RIVER NEAR LAS ANIMAS, CO

LOCATION.--Lat 38°02'02", long 103°12'00", in NE¼SW¼ 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 (3.7 km) southeast of courthouse in Las Animas and 4.5 mi (7.2 km) upstream from mouth.

DRAINAGE AREA.--3,503 mi² (9,073 km²).

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.

REVISED RECORDS.--WSP 1241: 1927(M).

GAGE.--Water-stage recorder. Datum of gage is 3,874.94 ft (1,181.082 m) above mean 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 (0.914 m) higher. Supplementary water-stage recorder at site 1.6 mi (2.6 km) downstream at different datum July 12 to Nov. 17, 1966.

REMARKS.--Records fair except those above 1,000 ft³/s (28 m³/s), which are poor. Diversions for irrigation of about 36,000 acres (150 km²) above station.

AVERAGE DISCHARGE.--37 years (water years 1923-31, 1949-76), 116 ft³/s (3.285 m³/s) 84,040 acre-ft/yr (104 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,000 ft³/s (1,980 m³/s) May 20, 1955, gage height, 20.00 ft (6.096 m), present datum, from rating curve extended above 38,000 ft³/s (1,100 m³/s); no flow at times in 1924-25, 1927, 1949, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Greatest flood since at least 1860 occurred Oct. 1, 1904.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,670 ft³/s (161 m³/s) Aug. 2, gage height, 9.60 ft (2.926 m), from floodmarks, no peak above base of 6,000 ft³/s (170 m³/s); minimum daily, 0.18 ft³/s (0.005 m³/s) July 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.90	5.8	2.1	2.8	1.6	1.6	1.8	2.3	2.1	.50	2.1	.88
2	.90	2.2	2.2	2.2	1.5	1.5	1.8	2.3	2.0	.45	2270	.88
3	.80	2.2	2.1	2.4	1.6	2.7	1.7	2.8	2.2	.45	1370	.88
4	.80	1.5	2.1	2.2	1.7	16	1.8	2.6	2.0	.35	113	.88
5	.70	2.2	2.1	2.1	1.6	1.6	2.0	2.6	1.8	.35	38	.88
6	.70	2.8	2.2	2.3	1.6	1.3	2.1	2.4	2.2	.18	12	.88
7	.60	14	2.2	2.4	1.8	1.3	2.1	2.3	376	.18	4.0	.88
8	.60	2.2	2.2	2.3	1.8	11	2.2	3.3	224	.20	2.4	.88
9	.70	3.6	2.2	2.3	2.0	8.8	2.2	3.0	39	.30	1.7	.88
10	.70	2.8	2.3	2.3	1.8	1.5	2.3	2.6	6.6	.40	1.7	.97
11	.80	3.6	2.3	2.3	3.6	1.5	2.4	2.4	3.9	.45	1.5	.97
12	.90	4.4	2.3	2.4	1.7	1.7	2.3	2.4	2.3	.45	1.3	.97
13	1.0	4.4	2.3	2.8	1.5	1.7	2.4	2.3	2.0	.55	.88	.88
14	1.0	5.2	2.3	3.3	1.7	1.8	2.2	2.3	2.1	.55	.88	.88
15	1.2	6.0	2.3	5.5	1.6	2.0	2.3	2.6	2.0	.45	.79	.79
16	1.5	6.0	2.3	9.1	1.5	2.0	2.3	2.7	2.1	.40	.60	.88
17	1.5	3.6	2.3	12	1.6	2.0	2.1	2.8	2.1	.45	.79	.88
18	2.2	3.6	2.3	12	1.7	2.0	2.1	2.8	2.1	.60	.97	1.1
19	1.5	17	2.3	10	1.7	1.8	2.0	2.7	2.1	.60	.88	1.2
20	1.5	5.2	2.3	2.6	1.8	1.8	2.1	2.7	2.3	.88	.97	1.4
21	1.5	3.6	2.3	2.3	1.6	1.8	2.0	2.7	2.1	12	.70	1.2
22	1.5	2.8	2.3	2.2	1.3	1.8	2.1	2.7	2.6	105	.88	1.2
23	1.5	3.6	2.3	2.1	1.2	2.0	2.0	2.6	2.3	477	.88	.97
24	2.2	3.6	2.3	2.0	1.2	2.0	1.8	2.4	1.5	80	.88	.97
25	1.5	3.6	2.1	1.7	1.2	2.0	2.1	37	1.7	20	.97	.97
26	1.5	2.8	2.1	1.7	1.2	2.0	2.1	31	1.4	70	.79	1.1
27	1.5	3.6	2.1	1.7	1.3	2.0	2.0	20	1.2	9.8	.97	1.2
28	1.5	2.8	3.5	1.6	1.3	1.8	2.1	25	1.4	2.1	.97	1.4
29	1.5	2.8	6.5	1.7	1.3	1.8	2.1	3.1	.97	1.2	.88	1.5
30	.90	2.2	3.8	1.8	---	1.8	2.6	2.3	.60	1.1	.88	1.4
31	2.8	---	2.8	1.8	---	1.8	---	2.3	---	1.5	.88	---
TOTAL	38.40	129.7	76.8	105.9	47.0	86.4	63.1	183.0	696.67	788.44	3834.14	30.75
MEAN	1.24	4.32	2.48	3.42	1.62	2.79	2.10	5.90	23.2	25.4	124	1.03
MAX	2.8	17	6.5	12	3.6	16	2.6	37	376	477	2270	1.5
MIN	.60	1.5	2.1	1.6	1.2	1.3	1.7	2.3	.60	.18	.60	.79
AC-FT	76	257	152	210	93	171	125	363	1380	1560	7610	61

CAL YR 1975	TOTAL	2059.10	MEAN	5.64	MAX	121	MIN	.60	AC-FT	4080
WTR YR 1976	TOTAL	6080.30	MEAN	16.6	MAX	2270	MIN	.18	AC-FT	12060

07130000 JOHN MARTIN RESERVOIR AT CADDOA, CO

LOCATION.--Lat 38°04'05", long 102°56'13", in NE¼NW¼ sec.8, T.23 S., R.49 W., Bent County, Hydrologic Unit 11020009, at dam on Arkansas River at Caddoa, 3.2 mi (5.1 km) southeast of Hasty and 58 mi (93 km) upstream from Colorado-Kansas State line.

DRAINAGE AREA.--18,915 mi² (48,990 km²), of which 785 mi² (2,033 km²) is probably noncontributing.

PERIOD OF RECORD.--January 1943 to current year. Monthend contents only prior to November 1943, published in WSP 1311.

GAGE.--Water-stage recorder for elevations above about 3,785 ft (1,153.7 m) and nonrecording gage read once daily for those below. Datum of gage is 3,760.00 ft (1,146.048 m) above mean sea level (Corps of Engineers bench mark); gage readings have been reduced to elevations above mean sea level.

REMARKS.--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 1972 resurvey; new capacity table put into use Nov. 1, 1972), 621,300 acre-ft (766 hm³) at elevation 3,870.00 ft (1,179.576 m) top of spillway gates, of which 351,000 acre-ft (433 hm³) between elevations 3,764.20 ft (1,147.328 m), elevation of no contents, and 3,851.00 ft (1,173.785 m) is for conservation and 270,300 acre-ft (333 hm³) between elevations 3,851.00 ft (1,173.785 m) and 3,870.00 ft (1,179.576 m) is reserved for flood control. No dead storage. Figures given herein represent total contents.

COOPERATION.--Records of contents furnished by Corps of Engineers.

EXTREMES (AT 2400) FOR PERIOD OF RECORD.--Maximum contents, 429,600 acre-ft (530 hm³) Aug. 25, 1965, elevation, 3,856.16 ft (1,175.358 m); no contents at times most years.

EXTREMES (AT 2400) FOR CURRENT YEAR.--Maximum contents, 10,110 acre-ft (12.5 hm³) Apr. 1, 4, elevation, 3,793.24 ft (1,156.180 m); no contents Oct. 1 to Nov. 18, Apr 10 to Aug. 1, and Aug. 6 to Sept. 30.

CORRECTIONS.--The maximum contents for water year 1975 is 8,760 acre-ft (10.8 hm³) Apr. 7; the previously published figure of 87,860 acre-ft was a decimal error.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	-	0	-
Oct. 31	-	0	0
Nov. 30	3,786.77	2,250	+2,250
Dec. 31	3,790.15	5,560	+3,300
CAL YR 1975	-	-	-2,260
Jan. 31	3,791.77	7,780	+2,220
Feb. 29	3,792.71	9,240	+1,460
Mar. 31	3,793.23	10,090	+850
Apr. 30	dry	0	-10,090
May 31	-	-	0
June 30	-	-	0
July 31	-	-	0
Aug. 31	-	-	0
Sept. 30	-	-	0
WTR YR 1976	-	-	0

07130500 ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR, CO

LOCATION (REVISED).--Lat 38°03'59", long 102°55'55", in NW¼NE¼ sec.8, T.23 S., R.49 W., Bent County, Hydrologic Unit 11020009, on right bank 2.6 mi (4.2 km) upstream from Caddoa Creek, 0.2 mi (0.3 km) downstream from John Martin Dam, and 3.5 mi (5.6 km) southeast of Hasty.

DRAINAGE AREA.--18,915 mi² (48,990 km²), of which 785 mi² (2,033 km²) 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 and concrete control. Datum of gage is 3,765 ft (1,147.6 m) above mean sea level, from topographic map. Prior to Feb. 22, 1940, at site 3 mi (5 km) upstream at datum 22.83 ft (6.959 m) higher. Feb. 22, 1940, to Feb. 4, 1943, at site 700 ft (210 m) upstream at datum 3.64 ft (1.109 m) higher. Feb. 5, 1943, to Apr. 8, 1975, at site 1.5 mi (2.4 km) downstream at datum approximately 27.5 ft (8.38 m) lower.

REMARKS.--Records good. Storage and diversions above station for irrigation of about 438,000 acres (1,770 km²) and for flood control. Flow completely regulated by John Martin Reservoir (station 07130000) 0.2 mi (0.3 km) upstream.

AVERAGE DISCHARGE.--38 years, 306 ft³/s (8.666 m³/s), 221,700 acre-ft/yr (273 hm³/yr), adjusted for storage in John Martin Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,000 ft³/s (1,130 m³/s) Apr. 24, 1942, gage height, 10.46 ft (3.188 m), site and datum then in use, from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of flow-over-dam and critical-depth measurement of peak flow; no flow at times in 1945-47; minimum daily prior to construction of John Martin Reservoir, 5 ft³/s (0.14 m³/s) July 16, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,720 ft³/s (48.7 m³/s) June 8, gage height, 4.53 ft (1.381 m) from floodmark, from rating curve extended above 1,100 ft³/s (31.2 m³/s), on the basis of comparison with discontinued downstream station; minimum daily, 1.2 ft³/s (0.034 m³/s) Jan. 20 to Feb. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	23	1.8	1.6	1.2	13	13	33	172	208	23	14
2	37	25	2.0	1.6	1.2	13	13	36	211	144	371	22
3	28	25	1.6	1.8	1.2	13	13	48	256	111	1060	24
4	24	25	1.6	1.8	1.2	13	13	45	296	155	1120	24
5	22	25	1.6	1.8	1.2	13	565	34	399	368	1230	23
6	22	24	1.6	1.8	1.2	13	984	30	535	388	599	21
7	21	24	1.6	1.6	1.2	13	1000	27	490	368	162	19
8	19	26	1.6	1.6	1.2	13	1020	26	806	284	414	17
9	18	27	1.6	1.6	1.2	13	972	27	340	268	458	18
10	20	27	1.6	1.6	1.2	12	859	29	300	200	272	22
11	21	27	1.6	1.6	1.2	13	42	27	428	155	190	18
12	20	24	1.6	1.6	1.2	13	39	26	436	108	144	13
13	18	27	1.6	1.6	1.2	13	39	24	530	60	102	11
14	17	28	1.6	1.6	1.2	13	36	22	505	44	81	11
15	20	28	1.6	1.6	1.2	13	33	22	530	36	72	12
16	21	27	1.6	1.6	1.2	13	31	22	515	64	56	56
17	21	27	1.6	1.6	8.2	13	29	22	525	108	44	105
18	22	28	1.6	1.6	13	13	28	22	475	99	33	176
19	24	8.9	1.6	1.4	13	13	27	22	396	105	28	90
20	23	1.8	1.6	1.2	13	13	27	21	392	53	25	45
21	24	2.0	1.6	1.2	13	13	27	19	304	56	23	31
22	25	1.8	1.6	1.2	13	13	27	60	284	90	22	30
23	23	1.8	1.6	1.2	13	13	26	225	228	313	21	72
24	24	1.8	1.6	1.2	13	13	26	327	180	211	20	54
25	24	1.8	1.6	1.2	13	13	25	419	152	111	20	44
26	24	1.8	1.6	1.2	13	13	25	570	327	124	18	30
27	24	1.8	1.6	1.2	13	13	25	470	515	186	15	26
28	23	1.8	1.6	1.2	13	13	25	376	470	90	14	27
29	23	1.8	1.6	1.2	13	13	26	280	400	49	14	596
30	23	1.8	1.6	1.2	---	13	34	211	280	34	13	545
31	24	---	1.6	1.2	---	13	---	176	---	28	12	---
TOTAL	739	495.9	50.2	45.4	183.4	402	6049	3698	11677	4618	6676	2196
MEAN	23.8	16.5	1.62	1.46	6.32	13.0	202	119	389	149	215	73.2
MAX	60	28	2.0	1.8	13	13	1020	570	806	388	1230	596
MIN	17	1.8	1.6	1.2	1.2	12	13	19	152	28	12	11
AC-FT	1470	984	100	90	364	797	12000	7330	23160	9160	13240	4360

CAL YR 1975 TOTAL 46514.9 MEAN 127 MAX 1200 MIN 1.6 AC-FT 92260
WTR YR 1976 TOTAL 36829.9 MEAN 101 MAX 1230 MIN 1.2 AC-FT 73050

07130500 ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR, CO--Continued
(Irrigation Network Station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1942 to August 1943, October 1945 to July 1949, January 1951 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1951 to current year.
WATER TEMPERATURES: January 1951 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 5,180 micromhos Apr. 21, 1955; minimum daily, 476 micromhos June 18, 1965.
WATER TEMPERATURES: Maximum daily, 29.0°C Aug. 6, 1951; minimum, freezing point on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum daily, 4,000 micromhos Nov. 12, Apr. 26; minimum daily, 700 micromhos Aug. 3, 4.
WATER TEMPERATURES: Maximum daily, 25.0°C June 22; minimum daily, 2.0°C on many days during November and December.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)
NOV									
07...	0925	24	3250	--	6.5	12.5	1500	1300	360
DEC									
03...	1200	1.5	2750	7.6	4.0	12.6	1100	820	280
JAN									
09...	1115	1.6	3750	8.5	1.5	11.7	1500	1100	340
FEB									
06...	1120	4.1	3500	8.1	3.0	13.2	1500	1100	360
MAR									
11...	1300	1.2	3200	8.6	10.5	11.7	1300	1100	320
APR									
22...	1550	26	4000	8.2	19.5	--	1500	1300	350
MAY									
13...	1015	23	--	8.2	14.5	9.7	1600	1400	360
JUN									
10...	1200	316	1200	7.5	22.0	8.2	470	340	120
JUL									
09...	1045	272	1050	8.1	23.0	8.0	420	300	110
SEP									
02...	1200	22	3350	8.3	18.5	10.3	1300	1200	300

07130500 ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
NOV									
07...	150	390	4.4	6.6	285	--	234	1800	120
DEC									
03...	100	270	3.5	7.5	350	0	287	1200	82
JAN									
09...	160	370	4.1	7.7	488	0	400	1700	110
FEB									
06...	140	360	4.1	8.0	512	0	420	1700	110
MAR									
11...	130	340	4.1	8.2	330	5	279	1500	110
APR									
22...	160	440	4.9	8.0	290	0	238	2000	120
MAY									
13...	180	460	4.9	6.5	282	0	231	2100	130
JUN									
10...	42	100	2.0	5.5	159	0	130	510	32
JUL									
09...	35	81	1.7	4.8	149	0	122	410	34
SEP									
02...	140	390	4.7	7.6	213	0	175	1700	130

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO. PHOS-PHORUS (P) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)
NOV									
07...	1.0	9.3	2980	4.05	193	.95	.01	30	50
DEC									
03...	.8	12	2130	2.90	9.09	1.6	.01	0	930
JAN									
09...	.9	14	2950	4.01	12.7	1.2	.01	10	2400
FEB									
06...	1.0	14	2950	4.01	32.7	.79	.00	10	3200
MAR									
11...	.9	8.5	2590	3.52	8.95	.11	.01	20	260
APR									
22...	.9	7.8	3230	4.39	227	.45	.01	10	300
MAY									
13...	1.1	12	3390	4.61	211	.41	.01	30	260
JUN									
10...	.8	9.1	904	1.23	771	1.4	.02	70	0
JUL									
09...	.6	9.4	767	1.04	563	2.0	.08	70	10
SEP									
02...	.9	8.0	2780	3.78	165	.31	.00	20	100

07130500 ARKANSAS RIVER BELOW JOHN MARTIN RESERVOIR, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2300	3500	2500	---	---	3100	3100	3100	1600	1100	2200	3400
2	2750	---	2600	---	3400	3000	3000	3500	1500	1300	2200	3000
3	3000	3500	2600	---	3300	3000	3300	2800	1300	1600	700	2900
4	3200	3500	2500	---	3300	3000	3200	2800	1200	1700	700	2900
5	3200	3500	2600	---	3400	2900	3000	3000	1100	1000	800	2800
6	3200	3500	---	3000	3500	---	3800	3100	900	1000	950	2800
7	3200	3500	---	3000	---	---	3300	3400	900	900	1400	3200
8	3200	---	2750	3500	---	---	3500	3500	1200	1000	1500	3100
9	3500	---	2800	3500	3300	3200	3500	3500	1200	1000	875	2500
10	3500	3300	2600	---	3200	3500	3500	3300	1200	1100	1100	2800
11	3400	3500	2800	---	3100	3200	3000	---	900	1200	1400	2800
12	3300	4000	2800	3300	3200	3200	3600	3500	1000	1400	1500	2600
13	3300	3800	---	3200	3200	3000	3300	3700	800	1800	1800	2800
14	3200	3800	---	3400	---	---	3500	3500	850	2200	1950	3000
15	3500	---	2400	3300	---	2800	3500	3500	850	2400	2000	3000
16	3500	---	2600	3200	---	2700	3500	3600	800	2400	2100	2800
17	3400	3500	2800	---	3000	2800	3600	3500	1000	1200	2100	1300
18	3500	3500	3000	---	3000	3000	3600	3300	825	1600	2200	1300
19	3400	---	3100	3300	3100	3000	3600	3600	950	1400	2600	1200
20	3500	---	---	3300	3000	---	3500	3500	900	1700	2700	1500
21	3400	3000	---	3250	---	3400	3500	3500	1100	1900	2800	2000
22	3400	---	3000	3300	---	3400	3500	3400	1000	2000	2800	2400
23	3500	---	3000	3200	3000	3200	3500	1600	1200	1300	2800	1900
24	3500	---	3050	---	3000	3150	3500	1200	1200	1100	3000	1700
25	3300	---	---	---	3000	3000	3500	1200	1500	1200	3100	2000
26	3400	3000	---	3500	3100	3000	4000	1100	1700	1500	3000	2200
27	3400	---	---	3500	3000	3200	3500	1100	850	1000	2800	2400
28	3500	2800	---	3300	---	3000	3500	1150	750	1300	2800	2500
29	3500	---	2950	3000	---	3000	3300	1300	800	1800	3000	1000
30	3500	---	3000	3500	---	2800	3300	1400	900	2200	3000	900
31	3400	---	3000	---	---	2900	---	1600	---	2400	3000	---
MONTH	3320	---	---	---	---	3060	3430	2740	1070	1510	2090	2360

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
ONCE-DAILY

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.0	9.0	3.0	---	---	7.0	10.0	9.0	19.0	23.0	21.0	18.0
2	11.0	---	2.0	---	5.0	8.0	10.0	11.0	21.0	22.0	20.0	17.0
3	12.0	6.0	2.0	---	4.0	7.0	10.0	12.0	21.0	23.0	19.0	18.0
4	12.0	7.0	2.0	---	4.0	6.0	10.0	14.0	21.0	22.0	21.0	18.0
5	12.0	7.0	3.0	---	4.0	5.0	11.0	16.0	20.0	23.0	21.0	18.0
6	13.0	8.0	---	4.0	4.0	---	8.0	12.0	20.0	22.0	23.0	19.0
7	13.0	8.0	---	3.0	---	---	10.0	12.0	20.0	23.0	22.0	17.0
8	12.0	---	6.0	3.0	---	---	13.0	11.0	20.0	22.0	22.0	16.0
9	10.0	---	4.0	3.0	6.0	5.0	13.0	11.0	22.0	23.0	23.0	16.0
10	10.0	4.0	3.0	---	7.0	5.0	13.0	11.0	22.0	23.0	22.0	15.0
11	11.0	6.0	6.0	---	5.0	5.0	13.0	16.0	21.0	23.0	22.0	18.0
12	13.0	2.0	4.0	4.0	5.0	6.0	13.0	17.0	21.0	22.0	21.0	15.0
13	15.0	2.0	---	5.0	5.0	5.0	14.0	14.0	20.0	20.0	22.0	19.0
14	9.0	4.0	---	4.0	---	---	14.0	13.0	18.0	21.0	20.0	19.0
15	8.0	---	2.0	4.0	---	7.0	13.0	15.0	18.0	22.0	20.0	19.0
16	8.0	---	4.0	5.0	---	7.0	11.0	13.0	18.0	21.0	20.0	20.0
17	8.0	5.0	3.0	---	5.0	7.0	12.0	13.0	19.0	22.0	19.0	20.0
18	9.0	6.0	3.0	---	6.0	9.0	12.0	15.0	17.0	22.0	19.0	20.0
19	9.0	---	4.0	5.0	7.0	10.0	12.0	17.0	19.0	22.0	21.0	19.0
20	10.0	---	---	5.0	6.0	---	11.0	17.0	20.0	23.0	21.0	17.0
21	10.0	2.0	---	5.0	---	7.0	12.0	18.0	22.0	22.0	22.0	15.0
22	11.0	---	4.0	5.0	---	7.0	14.0	19.0	25.0	23.0	20.0	16.0
23	10.0	---	4.0	5.0	7.0	8.0	14.0	18.0	23.0	23.0	21.0	16.0
24	7.0	---	4.0	---	7.0	8.0	14.0	18.0	24.0	23.0	21.0	17.0
25	4.0	---	---	---	7.0	10.0	13.0	18.0	20.0	22.0	20.0	18.0
26	6.0	2.0	---	3.0	7.0	10.0	11.0	16.0	20.0	22.0	20.0	16.0
27	9.0	---	---	4.0	7.0	10.0	13.0	17.0	20.0	22.0	20.0	14.0
28	8.0	3.0	---	5.0	---	10.0	10.0	19.0	21.0	23.0	18.0	10.0
29	7.0	---	4.0	4.0	---	9.0	11.0	20.0	23.0	22.0	18.0	12.0
30	7.0	---	4.0	4.0	---	9.0	11.0	18.0	21.0	21.0	18.0	13.0
31	10.0	---	4.0	---	---	9.0	---	18.0	---	22.0	19.0	---
MONTH	10.0	---	---	---	---	7.5	12.0	15.0	20.5	22.0	20.5	17.0

07133000 ARKANSAS RIVER AT LAMAR, CO

LOCATION.--Lat 38°06'24", long 102°37'04", in SE¼ sec.30, T.22 S., R.46 W., Prowers County, Hydrologic Unit 11020009, on left bank at downstream side of bridge on U.S. Highways 50 and 287, 1.4 mi (2.3 km) north of courthouse in Lamar.

DRAINAGE AREA.--19,780 mi² (51,230 km²), of which 950 mi² (2,460 km²) is probably noncontributing.

PERIOD OF RECORD.--May 1913 to September 1955, April 1959 to current year. Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1341: 1921(M), 1945-46(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 3,602.23 ft (1,097.960 m) above mean 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 (140 m) upstream at datum 2.42 ft (0.738 m) lower.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by John Martin Reservoir (station 07130000) 21 mi (34 km) upstream. Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals and diversions for irrigation of about 487,000 acres (1,970 km²), and return flow from irrigated areas.

AVERAGE DISCHARGE.--59 years, 204 ft³/s (5.777 m³/s), 147,800 acre-ft/yr (182 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 130,000 ft³/s (3,680 m³/s) June 5, 1921, gage height, 14.55 ft (4.435 m), present datum, from rating curve extended above 10,000 ft³/s (280 m³/s); maximum gage height, 16.48 ft (5.023 m), present datum, from floodmarks, June 18, 1965; no flow at times in 1913-15, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,380 ft³/s (39.1 m³/s) May 26, gage height, 5.33 ft (1.625 m); minimum daily, 0.50 ft³/s (0.014 m³/s) Sept. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	9.2	9.2	11	9.8	6.2	4.4	13	8.6	42	13	1.9
2	36	9.2	11	8.6	9.8	6.8	3.4	13	8.2	52	14	2.2
3	24	9.2	11	8.0	9.2	7.4	2.4	13	8.2	51	349	1.9
4	18	9.8	13	7.4	6.5	6.8	2.4	17	12	30	388	1.1
5	12	9.9	13	7.4	5.0	5.0	8.3	15	33	70	544	.90
6	9.2	9.2	13	6.8	4.7	4.4	283	13	219	70	416	.90
7	6.8	8.6	13	4.4	6.0	5.6	375	13	88	66	183	.90
8	5.0	8.6	13	5.0	10	5.6	380	12	154	63	132	1.3
9	5.0	8.0	13	5.6	10	3.9	385	12	93	58	94	1.3
10	5.0	5.6	13	6.2	9.8	3.4	390	13	15	51	61	1.3
11	5.6	2.4	13	7.4	9.8	2.9	124	12	69	43	75	1.1
12	6.2	2.4	13	8.0	9.8	6.8	39	12	73	45	79	.90
13	4.4	1.9	13	9.2	9.8	6.2	42	12	76	42	46	.70
14	4.4	1.9	13	6.8	9.8	7.4	32	12	63	25	38	.50
15	3.9	1.4	9.2	8.0	9.8	7.4	27	12	61	12	47	.50
16	4.4	1.4	13	9.2	9.2	7.4	24	11	85	11	37	.70
17	3.9	1.4	10	8.6	9.2	7.4	20	11	73	17	22	.75
18	4.4	1.9	9.8	8.6	9.2	8.0	16	9.8	65	29	13	4.5
19	3.9	1.9	13	8.6	8.6	8.0	17	8.6	34	29	11	2.2
20	4.4	.90	13	5.6	8.6	7.4	18	8.6	21	30	10	2.8
21	4.4	.90	11	7.4	5.6	8.0	14	8.2	25	365	9.8	2.2
22	5.0	2.9	13	8.0	5.6	9.2	13	81	27	11	8.6	1.6
23	5.0	7.4	13	9.2	8.6	8.6	11	57	39	28	7.0	1.6
24	5.6	8.6	13	9.2	8.6	5.0	9.0	24	37	70	5.8	1.9
25	5.6	8.6	13	9.2	10	5.0	9.8	42	35	55	5.5	2.2
26	5.6	5.6	13	4.4	9.2	5.0	11	787	38	53	4.0	2.2
27	5.6	7.4	13	6.2	8.6	5.6	10	188	91	66	3.1	3.1
28	6.0	8.6	11	9.8	8.0	5.0	12	44	67	53	2.2	2.8
29	7.4	13	11	10	6.8	5.0	14	20	59	47	1.9	29
30	8.6	7.4	11	10	---	6.2	21	9.4	49	20	1.6	26
31	8.6	---	13	9.2	---	4.4	---	9.8	---	11	1.6	---
TOTAL	272.9	175.20	377.2	243.0	245.6	191.0	2317.7	1513.4	1726.0	1615	2623.1	100.95
MEAN	8.80	5.84	12.2	7.84	8.47	6.16	77.3	48.8	57.5	52.1	84.6	3.37
MAX	39	13	13	11	10	9.2	390	787	219	365	544	29
MIN	3.9	.90	9.2	4.4	4.7	2.9	2.4	8.2	8.2	11	1.6	.50
AC-FT	541	348	748	482	487	379	4600	3000	3420	3200	5200	200

CAL YR 1975 TOTAL 10306.70 MEAN 28.2 MAX 955 MIN .90 AC-FT 20440
WTR YR 1976 TOTAL 11401.05 MEAN 31.2 MAX 787 MIN .50 AC-FT 22610

07133050 WILLOW CREEK NEAR LAMAR, CO

LOCATION.--Lat 38°02'16", long 102°36'51", in SE¼NE¼ sec.19, T.23 S., R.46 W., Prowers County, Hydrologic Unit 11020009, on left bank 40 ft (12 m) downstream from bridge on U.S. Highway 287, and 3.5 mi (5.6 km) south of Lamar.

DRAINAGE AREA.--42 mi² (109 km²), approximately.

PERIOD OF RECORD.--April 1974 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,685 ft (1,123 m), from topographic map.

REMARKS.--Records good except those above 500 ft³/s (14.2 m³/s), which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,460 ft³/s (69.7 m³/s) June 27, 1975, gage height, 8.15 ft (2.484 m), from floodmark, from rating curve extended above 110 ft³/s (3.1 m³/s) on basis of slope-area measurements at gage heights 5.16 and 8.15 ft (1.573 and 2.484 m); no flow most of each year.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 25 ft³/s (0.71 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
May 25	1700	1,010	28.6	6.42	1.957	June 6	0500	*2,000	62.3	7.90	2.408

No flow most of year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				0	0	0	.01	0	.01			
2				0	0	0	.01	0	.01			
3				0	0	0	.01	0	.01			
4				0	0	0	.01	0	.01			
5				0	0	0	0	0	.01			
6				0	0	0	0	0	105			
7				0	0	0	0	0	.06			
8				0	0	0	0	0	.02			
9				0	0	0	0	0	.04			
10				0	.01	0	0	0	.02			
11				0	.01	0	0	0	.02			
12				0	.01	0	0	0	.02			
13				0	.01	0	0	0	.02			
14				0	.01	0	0	0	.02			
15				.01	0	0	0	0	.02			
16				.01	0	0	0	0	.02			
17				.01	0	0	0	0	.02			
18				.01	0	0	0	0	.02			
19				.01	0	0	0	0	.02			
20				.01	0	0	0	0	.02			
21				.01	0	0	0	0	.02			
22				.01	0	0	0	0	.02			
23				.01	0	0	0	0	.01			
24				.01	0	0	0	0	.01			
25				.01	0	0	0	112	.01			
26				.01	0	0	0	11	0			
27				.01	0	0	0	.06	0			
28				0	0	0	0	.01	0			
29				0	0	.01	0	.01	0			
30				0	---	.01	.01	.01	0			
31		---		0	---	.01	---	.02	---			---
TOTAL	0	0	0	.13	.05	.03	.05	123.11	105.46	0	0	0
MEAN	0	0	0	.004	.002	.001	.002	3.97	3.52	0	0	0
MAX	0	0	0	.01	.01	.01	.01	112	105	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0
AC-FT	0	0	0	.3	.10	.06	.10	244	209	0	0	0

CAL YR 1975 TOTAL 193.36 MEAN .53 MAX 123 MIN 0 AC-FT 384
WTR YR 1976 TOTAL 228.83 MEAN .63 MAX 112 MIN 0 AC-FT 454

07134100 BIG SANDY CREEK NEAR LAMAR, CO

LOCATION.--Lat 38°06'51", long 102°29'00", in SW¼SW¼ sec.21, T.22 S., R.45 W., Prowers County, Hydrologic Unit 11020009, on left bank 15 ft (5 m) upstream from State Highway 196, 950 ft (290 m) upstream from mouth, and 7.5 mi (12.1 km) east of Lamar.

DRAINAGE AREA.--3,248 mi² (8,412 km²).

PERIOD OF RECORD.--February 1968 to current year.

REVISED RECORDS.--WRD Colo. 1971: Drainage area.

GAGE.--Water-stage recorder and culvert control. Altitude of gage is 3,545 ft (1,080 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Natural flow of stream affected by diversions above station for irrigation and return flow from irrigated areas.

AVERAGE DISCHARGE.--8 years, 15.1 ft³/s (0.428 m³/s), 10,940 acre-ft/yr (13.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,520 ft³/s (71.4 m³/s) Sept. 16, 1976, gage height, 8.48 ft (2.585 m), on basis of measurment of peak flow through culvert and over road; no flow Aug. 13-18, Sept. 1-15, 1976.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 21, 1965, reached a stage of 9.93 ft (3.027 m) from floodmarks, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,520 ft³/s (71.4 m³/s) Sept. 16, gage height, 8.48 ft (2.585 m) on basis of peak flow through culvert and over road; no flow Aug. 13-18, Sept. 1-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	.60	2.1	.80	2.4	3.0	3.0	1.8	4.2	.30	.08	0
2	1.5	.69	2.4	.60	2.4	3.1	3.0	1.2	2.8	.40	.06	0
3	1.5	.77	1.8	.60	2.4	3.0	3.3	.90	3.5	.30	.04	0
4	1.5	.46	1.2	.70	2.4	2.8	4.2	.90	3.3	.23	.04	0
5	1.6	.60	1.2	.80	2.2	3.3	4.2	.90	3.0	.18	.03	0
6	1.5	.60	1.2	.60	1.5	3.3	4.2	.90	3.2	.16	.03	0
7	1.5	.60	1.2	.60	1.5	3.6	5.4	.60	5.9	.15	.03	0
8	.83	.60	1.2	1.0	2.1	4.5	2.7	.90	4.3	.15	.02	0
9	1.3	.60	.90	1.4	6.0	4.8	2.1	.90	4.2	.22	.02	0
10	1.6	1.2	.85	1.5	5.7	4.5	1.8	.90	3.1	.22	.02	0
11	1.3	.90	.80	1.7	2.4	4.8	1.8	.90	2.7	.32	.01	0
12	1.2	.60	.90	1.8	2.4	4.5	1.8	.91	2.7	.32	.01	0
13	1.1	.60	1.0	1.7	2.4	4.5	1.5	1.1	2.5	.32	0	0
14	1.2	.90	1.0	1.5	1.8	4.5	1.5	1.1	1.3	.32	0	0
15	1.5	.60	1.0	1.7	1.8	4.2	1.5	1.1	.90	.32	0	0
16	1.6	.90	1.0	1.9	1.5	4.2	1.5	1.1	.75	.75	0	619
17	1.4	.60	.70	2.0	1.8	4.2	1.5	.26	.60	.90	0	474
18	1.2	.60	.80	2.0	2.4	4.5	1.8	.26	.45	.75	0	69
19	.91	.60	.90	2.0	2.1	6.0	2.4	.28	.38	.90	.02	21
20	1.7	.30	1.0	2.0	2.4	6.4	2.7	.29	.32	1.1	.06	13
21	1.7	.30	1.0	2.0	12	6.8	1.8	.99	.29	1.3	.06	9.7
22	1.4	.30	1.0	2.0	3.7	4.8	1.5	5.8	.27	1.2	.05	7.1
23	1.2	.30	1.0	1.7	3.7	4.8	1.2	1.9	.26	.90	.05	5.5
24	1.7	.30	1.0	1.5	7.9	4.8	1.5	2.2	.25	.60	.04	4.9
25	1.6	.30	1.0	1.3	7.7	3.3	1.2	28	.25	.40	.04	4.8
26	2.1	.60	1.0	1.4	5.7	3.6	1.2	29	.25	.50	.04	4.5
27	1.8	1.2	1.0	2.0	4.4	3.6	1.2	9.0	.25	.40	.03	5.2
28	1.9	2.1	1.0	3.0	3.7	4.2	1.2	4.9	.25	.30	.02	5.7
29	1.7	2.1	1.0	2.5	3.3	4.8	.90	3.7	.50	.25	.01	4.8
30	1.3	1.8	1.0	2.4	---	5.1	1.8	4.1	.40	.20	.01	4.4
31	1.2	---	1.0	2.4	---	4.2	---	7.0	---	.12	.01	---
TOTAL	45.04	22.64	34.15	49.10	101.7	133.7	65.40	113.79	53.07	14.48	.83	1252.6
MEAN	1.45	.75	1.10	1.58	3.51	4.31	2.18	3.67	1.77	.47	.027	41.8
MAX	2.1	2.1	2.4	3.0	12	6.8	5.4	29	5.9	1.3	.08	619
MIN	.83	.30	.70	.60	1.5	2.8	.90	.26	.25	.12	0	0
AC-FT	89	45	68	97	202	265	130	226	105	29	1.6	2480

CAL YR 1975 TOTAL 1466.08 MEAN 4.02 MAX 147 MIN .30 AC-FT 2910
WTR YR 1976 TOTAL 1886.50 MEAN 5.15 MAX 619 MIN 0 AC-FT 3740

NOTE.--NO GAGE-HEIGHT RECORD DEC. 10 TO FEB. 5.

07137000 FRONTIER DITCH NEAR COOLIDGE, KS

LOCATION.--Lat 38°02'18", long 102°02'19", in NE¼ sec.21, T.23 S., R.43 W., Hamilton County, Hydrologic Unit 11030001, on left bank 0.3 mi (0.5 km) east of Colorado-Kansas State line, 0.5 mi (0.8 km) downstream from Holly drain diversion, 1.5 mi (2.4 km) west of Coolidge, and 2.3 mi (3.7 km) downstream from diversion from 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 3,353.14 ft (1,022.037 m) above mean sea level.

REMARKS.--Records good except those for periods when intakes were plugged, which are poor. This ditch diverts water from Arkansas River in Colorado for use in Kansas. These records and records for Arkansas River near Coolidge (station 07137500) represent total flow of Arkansas River at the Colorado-Kansas State line.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 84 ft³/s (2.38 m³/s) Aug. 1, 1975; no flow for many days each year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	10					6.2	19	5.6	18	16	7.4
2	18	12					12	17	3.5	21	10	7.4
3	18	13					13	17	5.2	27	.81	7.2
4	17	13					13	18	2.6	25	0	7.0
5	15	12					13	19	4.6	19	0	7.4
6	14	12					15	17	16	16	0	7.2
7	12	12					31	16	19	19	10	5.0
8	11	18					37	19	18	17	16	7.9
9	10	19					43	19	16	17	14	4.3
10	11	17					44	17	.92	17	12	4.8
11	10	16					51	16	.42	14	32	5.4
12	9.5	15					49	16	0	13	29	3.7
13	9.0	15					38	15	0	14	28	2.6
14	8.7	15					31	15	.39	15	24	2.5
15	9.0	15					28	15	4.6	14	20	.49
16	9.0	14					26	14	7.8	16	18	2.2
17	8.7	14					24	15	18	19	19	25
18	9.5	14					23	13	21	18	16	20
19	10	19					25	13	21	18	15	13
20	10	9.3					27	12	21	16	12	8.4
21	10	.56					26	13	19	30	15	8.7
22	9.5	.28					24	39	19	40	13	7.2
23	9.5	.07					20	24	18	19	11	6.1
24	9.2	0					18	21	20	14	9.2	5.8
25	9.2	0					19	13	22	12	8.5	6.1
26	10	0					20	29	19	13	5.9	5.4
27	12	0					20	21	18	27	9.0	6.5
28	11	0					22	22	18	22	12	6.3
29	11	0					20	13	19	21	9.5	5.0
30	11	0			---		23	9.2	17	22	5.7	4.8
31	10	---			---		---	7.7	---	16	9.6	---
TOTAL	347.8	285.21	0	0	0	0	761.2	533.9	374.63	589	400.21	210.79
MEAN	11.2	9.51	0	0	0	0	25.4	17.2	12.5	19.0	12.9	7.03
MAX	18	19	0	0	0	0	51	39	22	40	32	25
MIN	8.7	0	0	0	0	0	6.2	7.7	0	12	0	.49
AC-FT	690	566	0	0	0	0	1510	1060	743	1170	794	418

CAL YR 1975 TOTAL 4359.88 MEAN 11.9 MAX 84 MIN 0 AC-FT 8650
WTR YR 1976 TOTAL 3502.74 MEAN 9.57 MAX 51 MIN 0 AC-FT 6950

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS

LOCATION.--Lat 38°01'34", long 102°00'41", in NE¼NW¼ sec.26, T.23 S., R.43 W., Hamilton County, Hydrologic Unit 11030001, on right bank at downstream side of bridge, 1.0 mi (1.6 km) south of Coolidge, and 1.9 mi (3.1 km) downstream from Colorado-Kansas State line.

DRAINAGE AREA.--25,410 mi² (65,812 km²), of which 1,708 mi² (4,424 km²) is probably noncontributing.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--May to Ocober 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 (1,015.240 m) above mean 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 datums. Oct. 1, 1950, to Mar. 31, 1966, water-stage recorder at site 0.3 mi (0.5 km) upstream at datum 3.00 ft (0.914 m) higher.

REMARKS.--Records good except those for winter period, which are poor. Combined flow of river and Frontier ditch (station 07137000) represents entire flow that enters Kansas. Flow regulated by John Martin Reservoir (station 07130000). Natural flow of stream affected by transmountain diversions, storage reservoirs, power developments, ground-water withdrawals, diversions for irrigation of about 500,000 acres (2,020 km²), and return flow from irrigated areas.

AVERAGE DISCHARGE.--26 years, 200 ft³/s (5.664 m³/s), 144,900 acre-ft/yr (179 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 158,000 ft³/s (4,470 m³/s) June 17, 1965, gage height, 14.8 ft (4.51 m), present site and datum, from floodmarks, from rating curve extended above 13,000 ft³/s (370 m³/s) on basis of slope-area measurement of peak flow; no flow for many days in 1903, 1954, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,360 ft³/s (180 m³/s) Aug. 2, gage height, 7.14 ft (2.176 m); minimum daily, 3.8 ft³/s (0.11 m³/s) Sept. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	4.9	19	25	30	25	14	16	73	8.0	53	5.0
2	13	5.3	19	20	30	25	7.2	15	60	6.8	1800	4.2
3	19	5.3	19	20	30	25	7.6	12	55	25	197	4.0
4	22	4.9	16	20	29	26	7.6	12	49	24	169	4.0
5	19	5.3	19	20	27	24	8.0	11	41	9.0	208	4.0
6	16	5.7	19	23	27	22	7.6	10	60	10	252	3.8
7	7.8	6.2	19	22	26	29	15	9.0	98	15	214	3.8
8	6.2	6.2	19	22	24	28	78	7.6	81	12	130	4.5
9	6.2	6.7	22	20	29	28	115	7.2	72	7.2	98	5.8
10	5.7	6.7	24	20	29	26	152	7.2	88	5.0	71	5.2
11	6.2	6.7	24	25	26	25	162	6.8	51	5.0	30	5.2
12	7.2	6.7	24	32	29	25	104	9.5	46	5.0	25	5.5
13	5.7	7.2	24	32	26	22	54	11	41	5.0	22	5.8
14	5.7	7.8	26	32	26	22	34	11	42	7.6	22	8.2
15	7.8	8.6	23	29	24	22	26	10	28	5.2	16	25
16	6.2	8.6	22	29	24	24	25	8.5	24	6.4	15	8.5
17	5.7	8.6	22	26	26	26	20	7.2	33	5.2	10	187
18	5.7	9.3	22	26	24	30	17	6.8	18	5.0	9.5	99
19	5.7	10	22	26	22	26	17	6.1	15	5.2	8.5	16
20	5.7	10	24	26	31	25	18	6.8	12	5.0	8.0	9.5
21	6.7	10	24	26	37	20	16	9.5	11	71	6.4	7.6
22	6.4	10	24	29	20	21	14	71	9.5	161	7.2	7.2
23	6.0	15	24	29	22	20	16	29	10	29	10	5.5
24	5.8	24	26	29	25	20	18	20	10	18	9.5	5.0
25	5.8	45	26	29	25	21	15	15	12	15	9.5	5.5
26	6.0	57	26	25	25	20	12	1120	11	12	6.5	4.8
27	6.2	52	26	25	25	19	15	522	8.0	8.5	6.0	5.5
28	5.3	29	29	28	25	20	19	208	7.6	9.0	6.0	5.2
29	5.3	19	29	30	26	24	18	137	6.4	9.0	5.5	8.5
30	8.6	25	29	30	---	22	17	102	6.4	7.6	7.2	7.6
31	6.2	---	29	30	---	20	---	90	---	5.2	6.0	---
TOTAL	251.5	426.7	720	805	769	732	1049.0	2514.2	1078.9	521.9	3437.8	476.4
MEAN	8.11	14.2	23.2	26.0	26.5	23.6	35.0	81.1	36.0	16.8	111	15.9
MAX	22	57	29	32	37	30	162	1120	98	161	1800	187
MIN	5.3	4.9	16	20	20	19	7.2	6.1	6.4	5.0	5.5	3.8
AC-FT	499	846	1430	1600	1530	1450	2080	4990	2140	1040	6820	945

CAL YR 1975 TOTAL 18595.6 MEAN 50.9 MAX 2220 MIN 4.9 AC-FT 36880
WTR YR 1976 TOTAL 12782.4 MEAN 34.9 MAX 1800 MIN 3.8 AC-FT 25350

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1963 to September 1968, October 1969 to September 1973, April 1975 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1963 to September 1968, January 1976 to current year.
WATER TEMPERATURES: November 1963 to September 1968, January 1976 to current year.

INSTRUMENTATION.--Water-quality monitor since January 1976.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum daily, 5,510 micromhos Mar. 10, 1976; minimum daily, 454 micromhos June 18, 1965.
WATER TEMPERATURES: Maximum, 34.5°C July 20, 1976; minimum, freezing point on many days during winter months.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 5,510 micromhos Mar. 10; minimum, 475 micromhos Sept. 17.
WATER TEMPERATURES: Maximum, 34.5°C July 20; minimum, 0.5°C Mar. 13.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)	IMMEDIATE COLIFORM (COL. PER 100 ML)	FECAL COLIFORM (COL. PER 100 ML)	STREPTOCOCCI (COLONIES PER 100 ML)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)
NOV											
05...	1430	5.3	4500	--	17.5	12.4	250	B160	240	1700	1500
DEC											
04...	1200	16	4500	8.0	6.0	12.6	B3	B2	49	1800	1500
JAN											
08...	1200	24	5000	8.8	1.0	11.9	--	<1	22	1800	1600
FEB											
05...	1550	25	5000	8.4	.0	12.7	B10	<1	B12	--	--
MAR											
10...	1145	28	5500	8.5	10.5	11.4	<1	<1	B12	1800	1600
APR											
21...	1315	18	4600	8.3	25.0	10.4	--	--	--	1500	1300
MAY											
12...	1415	9.5	4400	8.3	21.0	10.2	--	56	84	1800	1600
JUN											
09...	1110	66	2960	8.0	24.5	7.5	2900	2500	3400	1100	910
JUL											
08...	1000	14	3380	8.1	24.0	8.1	1600	800	2400	1200	1000
AUG											
06...	1300	270	1250	7.9	26.0	6.5	49000	13000	7300	510	380
SEP											
02...	1500	4.2	4500	8.2	29.0	8.7	B80	<1	B30	1800	1600

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)
NOV											
05...	400	170	590	6.2	13	230	--	189	2400	200	.6
DEC											
04...	420	180	610	6.3	12	296	0	243	2600	180	.6
JAN											
08...	440	180	640	6.5	12	329	0	270	2500	200	.6
FEB											
05...	--	--	--	--	--	--	--	--	--	--	--
MAR											
10...	440	180	650	6.6	12	308	0	253	2600	180	.7
APR											
21...	380	130	600	6.8	14	270	0	221	2200	170	.7
MAY											
12...	400	190	590	6.1	12	249	0	204	2500	180	.9
JUN											
09...	250	120	360	4.7	11	256	0	210	1600	120	.9
JUL											
08...	270	130	400	5.0	11	218	0	179	1700	130	.8
AUG											
06...	140	39	110	2.1	7.9	161	0	132	550	32	.7
SEP											
02...	390	190	630	6.5	16	228	0	187	2500	220	.7

DATE	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M
NOV											
05...	11	3900	4240	5.77	60.7	1.0	.76	1.8	.00	4.10	4.80
DEC											
04...	14	4160	4330	5.89	193	--	--	--	--	--	--
JAN											
08...	15	4150	4510	6.13	292	2.3	.56	2.9	.03	--	--
FEB											
05...	--	--	--	--	--	2.3	.85	3.2	.03	--	--
MAR											
10...	14	4230	4610	6.27	349	2.2	1.2	3.4	.04	--	--
APR											
21...	15	3640	4250	5.78	207	2.7	.88	3.6	.07	--	--
MAY											
12...	16	4010	4250	5.78	109	3.0	.59	3.6	.03	.077	.231
JUN											
09...	13	2600	2750	3.74	490	1.6	2.1	3.7	.34	--	--
JUL											
08...	14	2760	2970	4.04	112	4.6	1.8	6.4	.20	6.38	6.69
AUG											
06...	9.3	968	1020	1.39	744	1.8	14	16	2.9	--	--
SEP											
02...	14	4070	4460	6.07	50.6	1.8	.64	2.4	.04	--	--

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)	DIS-SOLVED IRON (FE) (UG/L)
DEC												
04...	0	0	<10	0	20	20	50	1	10	0	32(	10
FEB												
05...	0	0	--	0	--	0	--	1	--	1	--	0
JUN												
09...	16	1	1	0	40	0	14	0	38	1	25000	30
AUG												
06...	150	0	20	0	250	0	260	0	340	1	240000	20

DATE	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)	TOTAL ORGANIC CARBON (C) (MG/L)
DEC											
04...	100	2	90	60	.1	.1	28	22	110	0	5.1
FEB											
05...	--	1	--	50	--	.3	22	21	--	0	40
JUN											
09...	40	0	800	10	2.3	2.3	--	21	180	10	--
AUG											
06...	400	0	6800	0	.0	.0	19	10	1400	20	55

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL CHLORDANE (UG/L)	TOTAL DDD (UG/L)	DDD IN BOTTOM MATERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDT (UG/L)	DDT IN BOTTOM MATERIAL (UG/KG)	TOTAL DIAZINON (UG/L)	DIAZINON IN BOTTOM MATERIAL (UG/KG)
DEC											
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB											
26...	ND	--	ND	ND	--	ND	--	ND	--	ND	--
JUN											
09...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG											
12...	ND	--	ND	ND	--	ND	--	ND	--	ND	--

DATE	TOTAL DIELDRIN (UG/L)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ETHION (UG/L)	ETHION IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)	TOTAL LINDANE (UG/L)
DEC											
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB											
26...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
JUN											
09...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG											
12...	ND	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	MALATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHOXYCHLOR (UG/L)	TOTAL METHYL PARATHION (UG/L)	METHYL PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL TRITHION (UG/L)	METHYL TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL PARATHION (UG/L)	PARATHION IN BOTTOM MATERIAL (UG/KG)
DEC										
04...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB										
26...	--	ND	--	ND	ND	--	ND	--	ND	--
JUN										
09...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG										
12...	--	ND	--	ND	ND	--	ND	--	ND	--

DATE	TOTAL TOXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4-D (UG/L)	2,4-D IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4,5-T (UG/L)	2,4,5-T IN BOTTOM MATERIAL (UG/KG)	TOTAL SILVEX (UG/L)	SILVEX IN BOTTOM MATERIAL (UG/KG)
DEC										
04...	ND	ND	ND	ND	NO	--	ND	--	NO	--
FEB										
26...	ND	--	ND	--	ND	--	ND	--	ND	--
JUN										
09...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG										
12...	ND	--	ND	--	ND	--	ND	--	ND	--

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1				---	4820	---	5100	4610		---	2480	4460
2				---	4830	---	5060	4790		---	1040	5030
3				---	4860	---	5020	4960		---	825	4740
4				---	4870	---	4980	5020		---	1340	4070
5				---	4900	---	4940	5010		---	1610	3990
6				---	4530	---	4930	4950		---	1220	3790
7				---	4280	---	4960	4790		---	1240	4240
8				4960	4250	---	4720	4800		2930	1480	4150
9				4900	4210	---	4530	4740		3180	1720	4440
10				4740	4290	5430	4500	5430		3420	2010	4580
11				4760	4280	5300	4330	4770		3390	2280	4810
12				4700	4270	5140	4290	4610		3360	2500	4540
13				4660	4270	5000	4510	---		3480	2800	4500
14				4660	4260	4930	4610	---		3480	3050	4420
15				4650	4260	4920	4690	---		3660	3290	4230
16				4630	4280	4910	4740	---		3820	3510	4740
17				4620	4260	4860	4770	---		3850	3720	900
18				4670	4220	4870	4830	---		3790	3810	1130
19				4690	5100	4940	4880	---		3810	3620	1250
20				4710	5310	4950	4900	---		3840	3610	1360
21				4740	4480	4990	4900	---		2650	3710	1480
22				4790	---	5020	4820	---		1480	3760	1730
23				4830	---	5060	4640	---		1770	3840	2020
24				4850	---	5070	4640	---		---	4000	2260
25				4810	---	5070	4720	---		---	4030	1890
26				4930	---	5080	4830	---		---	4130	2190
27				4890	---	5080	4630	---		---	4180	2570
28				4790	---	5100	4480	---		---	4250	3200
29				4780	---	5090	4520	---		---	4300	3800
30				4790	---	5100	4480	---		---	4330	3940
31				4810	---	5120		---		---	4470	---
MONTH				---	---	---	4730	---		---	2970	3350

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1							---	---	11.5	2.0	---	---
2							---	---	10.5	2.0	---	---
3							---	---	11.0	2.0	---	---
4							---	---	3.0	1.0	---	---
5							---	---	1.0	0.5	---	---
6							---	---	3.5	1.0	---	---
7							---	---	9.5	1.0	---	---
8							1.0	1.0	13.0	1.5	---	---
9							1.0	1.0	16.0	3.0	---	---
10							2.0	1.0	12.0	5.5	18.5	9.0
11							6.0	1.0	14.0	2.5	15.0	6.5
12							8.0	1.0	15.0	3.0	8.5	0.5
13							7.0	1.5	13.5	3.5	16.0	0.5
14							7.0	1.0	15.5	7.0	15.0	3.0
15							8.5	1.5	15.0	4.5	10.5	3.5
16							10.0	4.0	15.0	5.0	17.0	1.0
17							11.0	2.5	9.5	4.5	18.0	4.0
18							9.5	2.0	11.0	2.5	20.0	6.0
19							8.0	2.0	11.5	3.0	15.0	6.0
20							8.0	1.0	9.0	1.5	10.0	3.0
21							9.5	1.0	2.5	0.0	16.0	1.0
22							10.0	1.0	8.0	---	19.0	3.5
23							10.0	1.0	---	---	19.0	4.5
24							7.5	1.0	---	---	20.5	6.5
25							6.5	1.0	---	---	22.0	7.5
26							3.0	1.0	---	---	16.5	7.0
27							6.5	1.0	---	---	17.0	4.5
28							9.5	2.0	---	---	17.0	7.5
29							11.0	1.5	---	---	7.5	4.5
30							10.0	2.5	---	---	19.0	2.5
31							10.0	2.0	---	---	21.0	6.0
MONTH							---	---	---	---	---	---

07137500 ARKANSAS RIVER NEAR COOLIDGE, KS--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	23.0	6.5	22.5	6.5			---	---	21.5	19.0	25.0	18.0
2	22.0	8.0	21.5	8.5			---	---	19.0	17.5	26.5	15.0
3	23.0	7.0	21.5	7.5			---	---	27.0	18.0	27.5	14.5
4	22.0	7.5	24.5	8.0			---	---	29.5	19.0	29.0	15.5
5	24.5	8.5	17.0	11.5			---	---	27.0	21.5	26.0	15.5
6	23.5	11.5	22.0	7.5			---	---	28.5	21.5	26.0	16.5
7	23.0	8.5	22.5	8.5			---	---	30.5	20.5	27.0	17.0
8	18.5	12.0	22.5	7.5			31.0	19.0	29.5	20.5	22.0	15.0
9	20.0	11.0	25.5	9.0			32.0	16.5	32.0	20.0	23.5	14.0
10	22.5	12.5	28.5	14.0			28.5	17.5	31.5	20.5	24.0	12.0
11	20.5	13.5	26.0	13.0			31.0	18.0	33.0	19.0	30.0	14.0
12	21.5	14.0	18.0	13.0			28.5	18.0	33.5	18.5	31.5	17.0
13	24.0	14.5	---	---			29.0	17.5	31.5	19.5	29.5	16.5
14	23.5	13.0	---	---			34.0	18.5	33.0	18.5	27.5	17.5
15	17.5	13.0	---	---			28.0	19.0	32.0	19.0	23.0	17.0
16	22.0	10.0	---	---			31.0	18.0	31.5	19.5	24.0	17.5
17	22.5	10.5	---	---			33.0	18.5	31.5	19.0	20.5	15.5
18	23.5	9.5	---	---			30.5	17.5	32.5	19.5	22.0	19.0
19	16.5	11.5	---	---			32.5	18.0	32.5	19.0	20.0	17.0
20	22.0	9.5	---	---			34.5	19.0	29.0	20.0	21.0	16.0
21	24.5	9.5	---	---			29.0	19.5	28.0	20.5	21.5	15.0
22	23.5	8.5	---	---			29.0	21.0	32.5	20.0	20.5	15.5
23	27.5	9.0	---	---			25.5	22.0	32.0	21.0	19.0	14.0
24	20.5	7.5	---	---			25.0	21.5	32.0	20.0	18.0	15.0
25	20.0	6.5	---	---			23.5	21.0	32.0	19.5	17.5	16.0
26	10.0	6.5	---	---			25.0	20.5	29.5	20.0	16.5	15.0
27	11.0	7.0	---	---			25.5	21.5	23.5	20.0	14.5	11.0
28	11.5	6.5	---	---			24.0	21.5	28.5	16.5	13.5	9.0
29	12.5	8.5	---	---			24.0	21.5	27.5	17.0	16.5	9.5
30	18.0	9.0	---	---			23.5	20.5	31.5	17.5	17.5	10.5
31	---	---	---	---			23.5	21.0	26.5	20.0	---	---
MONTH	27.5	6.5	---	---			---	---	33.5	16.5	31.5	9.0

DATE	TIME	INSTANTANEOUS DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
NOV 05...	1430	5.3	367	5.3
JAN 08...	1200	24	912	59
JUN 09...	1110	66	603	107
JUL 08...	1000	14	1940	73
AUG 06...	1300	270	10300	7510
SEP 02...	1500	4.2	66	.75

RIO GRANDE BASIN

08213500 RIO GRANDE AT THIRTYMILE BRIDGE, NEAR CREEDE, CO

LOCATION.--Lat 37°43'29", long 107°15'18", in NE¼ sec.13, T.40 N., R.4 W., Hinsdale County, Hydrologic Unit 13010001, on right bank 70 ft (21 m) downstream from bridge, 500 ft (150 m) upstream from Squaw Creek, 0.8 mi (1.3 km) downstream from Rio Grande Reservoir, and 20 mi (32 km) southwest of Creede.

DRAINAGE AREA.--163 mi² (422 km²).

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. Altitude of gage is 9,300 ft (2,835 m), from topographic map. See WSP 1712 or 1732 for history of changes prior to Oct. 1, 1934.

REMARKS.--Records good. Flow regulated by Rio Grande Reservoir, capacity, 51,110 acre-ft (63.0 hm³) since 1912. Natural flow of stream affected by transmountain diversions from Colorado River basin to drainage area above station through Weminuche Pass and Pine River-Weminuche Pass ditches (see elsewhere in this report). No known diversions above station.

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

AVERAGE DISCHARGE.--63 years (water years 1911-23, 1927-76), 213 ft³/s (6.032 m³/s), 154,300 acre-ft/yr (190 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,500 ft³/s (212 m³/s) June 28, 1927, gage height, 7.03 ft (2.143 m), present datum, from rating curve extended above 1,200 ft³/s (34 m³/s); minimum daily, 0.10 ft³/s (0.003 m³/s) Nov. 2-4, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,390 ft³/s (39.4 m³/s) June 6, gage height, 3.62 ft (1.103 m); minimum daily, 6.2 ft³/s (0.18 m³/s) Nov. 10-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	290	6.6	7.2	7.5	7.7	8.3	191	988	810	138	127
2	55	360	6.6	7.2	7.5	7.7	8.3	191	1150	834	138	115
3	38	360	6.6	7.2	7.5	7.7	8.3	229	1170	826	138	95
4	38	365	6.6	7.2	7.5	7.7	8.3	282	1320	842	138	95
5	38	380	6.6	7.2	7.5	7.7	8.3	298	1370	842	138	95
6	38	355	6.7	7.2	7.5	7.8	8.4	298	1270	922	138	71
7	38	109	6.7	7.2	7.5	7.8	8.4	346	1230	906	106	63
8	38	6.8	6.7	7.2	7.5	7.8	8.4	332	1230	770	92	70
9	38	6.5	6.7	7.2	7.5	7.8	8.4	263	1300	655	95	71
10	39	6.2	6.7	7.2	7.5	7.8	8.7	246	1230	599	95	71
11	39	6.2	6.8	7.3	7.5	7.9	9.1	246	1110	585	115	82
12	39	6.2	6.8	7.3	7.5	7.9	9.1	246	914	613	125	86
13	39	6.2	6.8	7.3	7.5	7.9	9.1	246	858	655	125	80
14	39	6.2	6.8	7.3	7.5	7.9	9.1	246	818	655	125	77
15	39	6.2	6.8	7.3	7.5	7.9	9.1	314	715	592	125	77
16	39	6.3	6.9	7.3	7.6	8.0	9.1	533	670	526	125	77
17	39	6.3	6.9	7.3	7.6	8.0	9.1	655	620	490	107	77
18	39	6.3	6.9	7.3	7.6	8.0	28	754	546	427	94	77
19	39	6.3	6.9	7.3	7.6	8.0	40	922	526	395	94	77
20	39	6.3	6.9	7.3	7.6	8.0	55	1090	572	238	95	77
21	114	6.4	7.0	7.4	7.6	8.1	62	1020	670	180	97	70
22	170	6.4	7.0	7.4	7.6	8.1	62	834	762	150	99	66
23	162	6.4	7.0	7.4	7.6	8.1	62	678	826	140	119	66
24	162	6.4	7.0	7.4	7.6	8.1	69	641	786	123	129	66
25	162	6.4	7.0	7.4	7.6	8.1	100	641	655	115	127	67
26	162	6.5	7.1	7.4	7.6	8.2	113	641	546	117	127	67
27	162	6.5	7.1	7.4	7.6	8.2	113	648	655	125	127	69
28	162	6.5	7.1	7.4	7.6	8.2	113	648	730	138	127	69
29	162	6.5	7.1	7.4	7.6	8.2	113	700	738	138	127	69
30	213	6.5	7.1	7.4	---	8.2	157	1020	738	138	127	83
31	242	---	7.1	7.4	---	8.2	---	938	---	138	127	---
TOTAL	2684	2365.5	212.6	226.4	218.9	246.7	1234.5	16337	26713	14684	3679	2352
MEAN	86.6	78.9	6.86	7.30	7.55	7.96	41.2	527	890	474	119	78.4
MAX	242	380	7.1	7.4	7.6	8.2	157	1090	1370	922	138	127
MIN	38	6.2	6.6	7.2	7.5	7.7	8.3	191	526	115	92	63
AC-FT	5320	4690	422	449	434	489	2450	32400	52990	29130	7300	4670

CAL YR 1975 TOTAL 95896.6 MEAN 263 MAX 1400 MIN 2.9 AC-FT 190200
WTR YR 1976 TOTAL 70953.6 MEAN 194 MAX 1370 MIN 6.2 AC-FT 140700

NOTE.--NO GAGE-HEIGHT RECORD NOV. 13 TO APR. 9.

08214500 NORTH CLEAR CREEK BELOW CONTINENTAL RESERVOIR, CO

LOCATION.--Lat 37°53'18", long 107°12'10", in NE¼SW¼ sec.21, T.42 N., R.3 S., Hinsdale County, Hydrologic Unit 13010001, on left bank 100 ft (30 m) downstream from bridge, 1,000 ft (300 m) downstream from Continental Reservoir, and 15 mi (24 km) west of Creede.

DRAINAGE AREA.--51.7 mi² (134 km²).

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 and concrete control. Altitude of gage is 10,200 ft (3,109 m), from topographic map. Prior to Oct. 2, 1951, at site 150 ft (46 m) upstream at different datum.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Continental Reservoir, capacity, 26,720 acre-ft (32.9 hm³). No diversion above station.

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

AVERAGE DISCHARGE.--47 years, 30.6 ft³/s (0.867 m³/s), 22,170 acre-ft/yr (27.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 362 ft³/s (10.3 m³/s) May 8, 1952, gage height, 3.66 ft (1.116 m), from rating curve extended above 120 ft³/s (3.4 m³/s); no flow June 22, 23, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 278 ft³/s (7.87 m³/s) July 6, gage height, 2.54 ft (0.774 m); minimum daily, 0.40 ft³/s (0.12 m³/s) Sept. 13-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	5.9	1.1	1.1	1.1	1.1	1.1	80	110	161	17	.70
2	13	1.1	1.1	1.1	1.1	1.1	1.1	96	110	173	18	.70
3	13	1.1	1.1	1.1	1.1	1.1	1.1	90	112	171	19	.70
4	13	1.1	1.1	1.1	1.1	1.1	1.1	75	110	171	21	.70
5	13	1.1	1.1	1.1	1.1	1.1	1.1	63	101	209	22	.55
6	13	1.1	1.1	1.1	1.1	1.1	1.1	71	96	259	21	.55
7	13	1.1	1.1	1.1	1.1	1.1	1.1	93	94	259	20	.55
8	13	1.1	1.1	1.1	1.1	1.1	1.1	86	93	267	42	.55
9	13	1.1	1.1	1.1	1.1	1.1	1.1	66	91	238	33	.55
10	12	1.1	1.1	1.1	1.1	1.1	1.1	68	90	207	22	.55
11	11	1.1	1.1	1.1	1.1	1.1	1.3	79	84	195	23	.55
12	11	1.1	1.1	1.1	1.1	1.1	1.3	85	64	193	22	.55
13	11	1.1	1.1	1.1	1.1	1.1	1.3	86	53	137	18	.40
14	10	1.1	1.1	1.1	1.1	1.1	1.3	99	51	41	16	.40
15	9.7	1.1	1.1	1.1	1.1	1.1	1.3	124	52	21	15	.40
16	8.1	1.1	1.1	1.1	1.1	1.1	1.3	171	51	28	14	.40
17	7.5	1.1	1.1	1.1	1.1	1.1	1.3	157	49	28	14	.40
18	8.1	1.1	1.1	1.1	1.1	1.1	8.4	171	47	26	16	.40
19	9.0	1.1	1.1	1.1	1.1	1.1	14	201	41	26	16	.40
20	12	1.1	1.1	1.1	1.1	1.1	14	131	38	26	25	.40
21	12	1.1	1.1	1.1	1.1	1.1	15	105	46	26	23	.40
22	12	1.1	1.1	1.1	1.1	1.1	15	117	63	25	20	11
23	12	1.1	1.1	1.1	1.1	1.1	16	122	80	36	19	18
24	12	1.1	1.1	1.1	1.1	1.1	18	128	76	31	19	18
25	12	1.1	1.1	1.1	1.1	1.1	19	129	86	22	13	18
26	12	1.1	1.1	1.1	1.1	1.1	21	116	109	22	7.2	18
27	12	1.1	1.1	1.1	1.1	1.1	25	110	109	22	.55	18
28	12	1.1	1.1	1.1	1.1	1.1	34	128	126	21	.55	18
29	12	1.1	1.1	1.1	1.1	1.1	49	144	133	21	.55	18
30	13	1.1	1.1	1.1	---	1.1	70	126	150	20	.55	18
31	14	---	1.1	1.1	---	1.1	---	110	---	19	.55	---
TOTAL	360.4	37.8	34.1	34.1	31.9	34.1	338.5	3427	2515	3101	517.95	165.80
MEAN	11.6	1.26	1.10	1.10	1.10	1.10	11.3	111	83.8	100	16.7	5.53
MAX	14	5.9	1.1	1.1	1.1	1.1	70	201	150	267	42	18
MIN	7.5	1.1	1.1	1.1	1.1	1.1	1.1	63	38	19	.55	.40
AC-FT	715	75	68	68	63	68	671	6800	4990	6150	1030	329

CAL YR 1975 TOTAL 13618.00 MEAN 37.3 MAX 261 MIN 1.1 AC-FT 27010
WTR YR 1976 TOTAL 10597.65 MEAN 29.0 MAX 267 MIN .40 AC-FT 21020

NOTE.--NO GAGE-HEIGHT RECORD NOV. 5 TO APR. 8.

08216500 WILLOW CREEK AT CREEDE, CO

LOCATION.--Lat 37°51'22", long 106°55'37", in SE¼ sec.25, T.42 N., R.1 W., (projected), Mineral County, Hydrologic Unit 13010001 on left bank at north city limits of Creede, 8 ft (2 m) upstream from entrance to paved channel just downstream from Windy Gulch, 0.5 mi (0.8 km) downstream from confluence of East and West Willow Creeks, and 2.6 mi (4.2 km) upstream from mouth.

DRAINAGE AREA.--35.3 mi² (91.4 km²).

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

REVISED RECORDS.--WSP 1712: 1955, 1956(M).

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 8,880 ft (2,707 m), from topographic map. Prior to Sept. 2, 1953, at site 17 ft (5 m) upstream at same datum.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Diversions above station for municipal supply of Creede.

AVERAGE DISCHARGE.--25 years, 22.0 ft³/s (0.623 m³/s), 15,940 acre-ft/yr (19.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 430 ft³/s (12.2 m³/s) June 5, 1957, gage height, 4.14 ft (1.262 m); maximum gage height, 4.16 ft (1.268 m) May 23, 1958; minimum daily discharge, 0.2 ft³/s (0.006 m³/s) Mar. 25, 1956, probably caused by snowslide upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 165 ft³/s (4.67 m³/s) June 4, gage height, 3.05 ft (0.930 m) above base of 120 ft³/s (3.4 m³/s), no other peak above base; minimum daily, 3.0 ft³/s (0.085 m³/s) Jan. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	7.4	4.2	3.6	3.6	4.8	6.2	23	104	46	21	16
2	8.3	6.5	4.4	3.6	3.6	4.6	7.0	27	100	36	26	16
3	8.3	6.5	4.6	3.4	3.6	4.2	7.8	30	110	33	22	14
4	7.8	6.5	4.8	3.2	3.6	3.8	9.2	29	118	30	20	14
5	7.0	6.5	5.0	3.2	3.6	3.4	8.3	32	118	29	18	14
6	7.8	6.2	4.8	3.2	3.8	3.4	7.4	36	108	28	18	14
7	7.8	6.2	4.6	3.0	3.8	3.6	7.8	32	105	27	17	14
8	7.4	5.9	4.6	3.2	4.0	3.5	8.8	30	102	25	19	14
9	7.4	5.6	4.6	3.2	4.6	3.5	11	28	106	25	22	14
10	7.0	6.0	4.8	3.4	5.0	3.8	12	29	104	23	25	14
11	7.0	5.0	5.0	3.4	4.6	3.8	17	31	86	23	23	16
12	7.0	5.1	4.8	3.6	4.4	3.5	18	33	75	22	21	14
13	7.4	5.3	4.8	3.6	4.6	3.5	16	34	72	23	20	12
14	6.5	5.3	4.6	3.4	4.6	3.8	14	42	62	24	18	12
15	5.9	5.9	4.0	3.2	4.4	4.1	14	65	55	21	18	14
16	6.5	5.9	3.6	3.2	4.0	4.4	12	86	54	20	17	12
17	6.5	5.9	3.4	3.4	3.8	4.4	11	105	49	20	16	12
18	7.0	5.6	3.4	3.6	3.4	4.7	11	110	47	18	21	12
19	6.5	5.6	3.6	3.6	3.6	4.7	9.6	100	46	18	18	11
20	7.0	5.0	3.8	3.6	3.6	4.4	9.6	93	47	18	2[illegible]	11
21	6.5	4.8	3.8	3.6	3.2	4.1	10	96	49	18	2[illegible]	10
22	6.5	4.4	3.8	3.6	3.2	5.0	12	86	51	16	2[illegible]	11
23	6.5	4.2	4.0	3.4	3.4	5.0	12	86	48	18	23	10
24	5.9	4.4	4.0	3.6	3.4	5.6	15	93	41	17	2[illegible]	10
25	6.5	4.8	4.2	3.4	3.4	5.6	18	83	38	18	21	12
26	7.4	4.4	4.2	3.4	3.6	5.3	20	81	36	24	21	16
27	7.8	4.0	4.2	3.6	3.8	5.3	20	108	33	26	19	17
28	6.5	4.2	4.0	3.4	4.2	5.3	22	120	33	20	18	16
29	5.9	4.4	4.0	3.4	4.4	4.7	25	118	32	18	18	16
30	5.9	4.4	3.8	3.6	---	4.7	24	101	35	18	18	14
31	7.4	---	3.8	3.6	---	5.3	---	94	---	18	17	---
TOTAL	217.7	161.9	131.2	106.2	112.8	135.8	395.7	2061	2064	720	633	402
MEAN	7.02	5.40	4.23	3.43	3.89	4.38	13.2	66.5	68.8	23.2	20.4	13.4
MAX	8.8	7.4	5.0	3.6	5.0	5.6	25	120	118	46	2[illegible]	17
MIN	5.9	4.0	3.4	3.0	3.2	3.4	6.2	23	32	16	16	10
AC-FT	432	321	260	211	224	269	785	4090	4090	1430	126[illegible]	797

CAL YR 1975 TOTAL 10232.7 MEAN 28.0 MAX 231 MIN 2.6 AC-FT 20300
WTR YR 1976 TOTAL 7141.3 MEAN 19.5 MAX 120 MIN 3.0 AC-FT 14160

NOTE.--NO GAGE-HEIGHT RECORD NOV. 21 TO MAR. 7.

08217500 RIO GRANDE AT WAGONWHEEL GAP, CO

LOCATION.--Lat 37°46'01", long 106°49'51", in NW¼NE¼ sec.35, T.41 N., R.1 E., Mineral County, Hydrologic Unit 13010001, on right bank 250 ft (76 m) upstream from private bridge, 0.4 mi (0.6 km) upstream from Goose Creek, and 0.4 mi (0.6 km) west of town of Wagonwheel Gap.

DRAINAGE AREA.--780 mi² (2,020 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 8,431.26 ft (2,569.848 m) above mean sea level.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by Santa Maria, Rio Grande and Continental Reservoirs, combined capacity, 121,400 acre-ft (150 hm³). Diversions above station for irrigation. Transmountain diversions to drainage area above station from Colorado River basin (see elsewhere in this report).

AVERAGE DISCHARGE.--25 years, 507 ft³/s (14.36 m³/s), 367,300 acre-ft/yr (453 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,870 ft³/s (138 m³/s) July 26, 1957, gage height, 5.38 ft (1.640 m); maximum gage height, 5.84 ft (1.780 m) Sept. 6, 1970; minimum daily discharge, 46 ft³/s (1.30 m³/s) Dec. 9, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,030 ft³/s (85.8 m³/s) June 5, gage height, 4.68 ft (1.426 m); minimum daily, 95 ft³/s (2.69 m³/s) Jan. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	201	488	110	100	100	120	144	572	2200	1590	405	338
2	201	597	110	95	100	120	171	674	2440	1540	454	329
3	192	611	120	100	100	110	205	786	2420	1470	420	306
4	177	611	120	100	110	100	258	858	2620	1420	442	275
5	174	618	120	110	110	100	218	917	2790	1390	400	266
6	171	625	120	100	110	100	174	1040	2740	1460	375	258
7	171	536	120	100	110	100	180	998	2640	1520	356	254
8	171	193	120	100	110	110	232	989	2520	1410	334	232
9	171	144	120	110	120	110	275	842	2580	1260	390	229
10	168	124	110	110	120	110	329	730	2560	1120	400	232
11	163	126	110	110	110	110	347	762	2280	1060	390	236
12	166	124	120	100	110	110	380	866	2000	1050	410	245
13	166	126	120	100	120	100	320	842	1870	1160	375	241
14	163	121	120	100	120	100	271	989	1790	1220	365	225
15	161	126	110	100	120	100	249	1360	1600	1050	342	225
16	163	123	110	100	110	100	222	1780	1510	998	329	236
17	166	126	110	100	110	110	198	2130	1440	953	320	232
18	166	121	100	100	110	110	186	2180	1300	908	338	241
19	166	128	100	100	110	120	215	2210	1270	802	338	225
20	163	124	110	100	110	130	222	2280	1320	746	570	215
21	166	117	110	100	110	120	266	2200	1470	578	560	215
22	328	121	110	100	100	130	293	1980	1580	488	482	218
23	375	120	110	100	100	130	311	1760	1640	448	437	229
24	360	120	110	100	100	140	311	1760	1500	390	512	236
25	306	120	100	100	100	150	347	1750	1340	370	459	258
26	375	118	100	100	100	160	410	1600	1210	380	432	324
27	390	110	100	110	110	150	426	1740	1180	390	405	356
28	380	120	100	110	110	140	442	2000	1320	360	395	334
29	370	120	100	110	110	134	530	2110	1330	356	390	306
30	365	110	110	100	---	121	506	2270	1350	356	385	288
31	476	---	110	100	---	126	---	2220	---	360	360	---
TOTAL	7331	6968	3440	3165	3160	3671	8638	45195	55810	28603	12570	7804
MEAN	236	232	111	102	109	118	288	1458	1860	923	405	260
MAX	476	625	120	110	120	160	530	2280	2790	1590	570	356
MIN	161	110	100	95	100	100	144	572	1180	356	320	215
AC-FT	14540	13820	6820	6280	6270	7280	17130	89640	110700	56730	24930	15480

CAL YR 1975 TOTAL 250178 MEAN 685 MAX 3590 MIN 60 AC-FT 496200
WTR YR 1976 TOTAL 186355 MEAN 509 MAX 2790 MIN 95 AC-FT 369600

NOTE.--NO GAGE-HEIGHT RECORD DEC. 17 TO JAN. 29.

08218500 GOOSE CREEK AT WAGONWHEEL GAP, CO

LOCATION.--Lat 37°45'07", long 106°49'46", in SW¼SE¼ sec.35, T.41 N. R.1 E. Mineral County, Hydrologic Unit 13010001, on left bank 0.2 mi (0.3 km) downstream from Pierce Creek, 1.0 mi (1.6 km) upstream from mouth, 1.0 mi (1.6 km) south of Wagonwheel Gap, and 8.8 mi (14.2 km) southeast of Creede.

DRAINAGE AREA.--90 mi² (230 km²), approximately.

PERIOD OF RECORD.--June 1954 to current year.

REVISED RECORDS.--WSP 1712: 1955, 1956(M).

GAGE.--Water-stage recorder. Altitude of gage is 8,460 ft (2,579 m), from topographic map.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. Several small diversions above station for irrigation. Lake Humphreys, capacity, 842 acre-ft (1.04 hm³), with a fixed spillway and no gates has slight effect on flow.

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

AVERAGE DISCHARGE.--22 years, 59.8 ft³/s (1.694 m³/s), 43,330 acre-ft/yr (53.4 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 879 ft³/s (24.9 m³/s) Sept. 14, 1970, gage height, 4.52 ft (1.378 m) from recorded range in stage, from rating curve extended above 480 ft³/s (14 m³/s); minimum daily, 9.6 ft³/s (0.27 m³/s) Nov. 15, 16, Dec. 5, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in June 1927 exceeded all other observed floods at this location including those in October 1911 and June 18, 1949. Flood of October 1911 probably exceeded that of June 18, 1949, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 451 ft³/s (12.8 m³/s) June 10, gage height, 3.82 ft (1.164 m), only peak above base of 200 ft³/s 5.7 m³/s); minimum daily, 12 ft³/s (0.34 m³/s) Nov. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	25	17	17	18	23	36	81	268	181	54	37
2	24	21	20	16	18	23	42	96	288	149	53	36
3	23	21	21	16	18	23	49	108	272	136	5[illegible]	34
4	24	21	20	17	18	22	58	110	309	123	49	34
5	21	20	17	17	18	22	48	116	345	108	44	35
6	21	20	17	18	18	23	41	133	354	101	40	67
7	21	20	17	17	18	24	40	110	345	94	39	96
8	20	20	18	17	18	25	46	106	340	92	44	65
9	20	20	18	17	19	26	58	96	368	87	62	35
10	21	16	18	18	19	26	72	96	368	81	5[illegible]	35
11	21	19	18	18	18	27	77	113	318	76	51	34
12	20	12	18	18	19	27	81	126	268	74	45	34
13	20	15	18	17	19	27	58	120	260	74	42	34
14	19	18	18	17	19	27	49	146	250	74	41	34
15	19	20	17	17	19	27	49	184	232	64	39	35
16	20	19	17	18	19	25	46	218	222	61	3[illegible]	31
17	20	20	17	18	19	27	42	239	211	64	3[illegible]	25
18	20	19	17	17	18	30	39	253	172	59	40	26
19	20	20	17	17	19	34	39	242	190	54	42	29
20	19	18	17	17	19	30	36	225	211	52	7[illegible]	29
21	19	13	18	17	17	26	40	232	228	56	54	30
22	19	14	18	17	18	27	45	222	232	51	48	30
23	22	15	19	17	18	32	49	200	228	49	52	31
24	16	18	19	17	19	36	54	211	184	48	7[illegible]	34
25	21	20	18	16	20	45	68	211	166	56	64	35
26	25	14	18	15	20	43	76	187	160	59	45	39
27	28	15	19	15	21	40	79	211	155	56	40	45
28	23	18	19	16	21	40	90	250	146	48	42	56
29	20	17	18	17	22	33	96	268	138	44	42	56
30	21	13	17	18	---	30	81	272	146	42	41	54
31	28	---	17	18	---	28	---	250	---	45	39	---
TOTAL	659	541	557	527	546	898	1684	5432	7374	2358	149[illegible]	1195
MEAN	21.3	18.0	18.0	17.0	18.8	29.0	56.1	175	246	76.1	48.1	39.8
MAX	28	25	21	18	22	45	96	272	368	181	7[illegible]	96
MIN	16	12	17	15	17	22	36	81	138	42	3[illegible]	25
AC-FT	1310	1070	1100	1050	1080	1780	3340	10770	14630	4680	2960	2370

CAL YR 1975 TOTAL 31481 MEAN 86.2 MAX 484 MIN 12 AC-FT 62440
WTR YR 1976 TOTAL 23261 MEAN 63.6 MAX 368 MIN 12 AC-FT 46140

NOTE.--NO GAGE-HEIGHT RECORD NOV. 20 TO APR. 1.

08219500 SOUTH FORK RIO GRANDE AT SOUTH FORK, CO

LOCATION.--Lat 37°39'25", long 106°38'55", in SW¼NE¼ sec.3, T.39 N., R.3 E., Rio Grande County, Hydrologic Unit 13010001, on left bank near U.S. Highway 160, 700 ft (210 m) downstream from Church Creek, 0.8 mi (1.3 km) southwest of village of South Fork, and 1.4 mi (2.3 km) upstream from mouth.

DRAINAGE AREA.--216 mi² (559 km²).

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. Datum of gage is 8,221.79 ft (2,506.002 m) above mean 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 (1.6 km) downstream at different datums.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Transmountain diversions from Colorado River basin to drainage area above station through Treasure Pass ditch (see elsewhere in this report). Natural flow of stream affected by a few small diversions for irrigation, slight regulation by Beaver Creek Reservoir, capacity, 4,760 acre-ft (5.87 hm³), and several smaller storage reservoirs.

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

AVERAGE DISCHARGE.--52 years, 210 ft³/s (5.947 m³/s), 152,100 acre-ft/yr (188 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,000 ft³/s (227 m³/s) Oct. 5, 1911, gage height, 9.7 ft (2.96 m) from flood marks, present site and datum, from rating curve extended above 1,500 ft³/s (42 m³/s); minimum daily, 14 ft³/s (0.40 m³/s) Nov. 28, 29, 1960.

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 (0.3 m) lower than that of Oct. 5, 1911, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,690 ft³/s (47.9 m³/s) June 5, gage height, 5.17 ft (1.576 m), only peak above base of 900 ft³/s (25 m³/s); minimum daily, 31 ft³/s (0.88 m³/s) Nov. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	47	39	35	40	62	90	364	1240	464	111	42
2	39	43	44	34	40	62	120	431	1330	364	143	42
3	39	45	46	35	40	62	160	496	1300	316	120	67
4	38	49	41	37	40	60	192	532	1380	283	124	69
5	37	54	39	39	40	60	178	550	1470	260	99	88
6	36	49	39	39	40	64	158	610	1430	238	85	137
7	36	46	39	38	40	68	141	572	1370	222	79	141
8	39	47	40	38	40	70	158	509	1380	220	85	160
9	39	45	41	39	43	72	210	419	1400	208	101	158
10	39	37	40	39	43	74	265	391	1330	178	115	158
11	38	43	41	39	42	76	310	447	1180	165	148	158
12	38	32	41	39	43	75	325	545	990	158	137	156
13	39	37	41	38	45	75	278	554	870	160	120	148
14	38	41	41	38	45	75	230	695	800	165	113	148
15	38	44	39	39	45	75	202	942	715	141	84	148
16	39	44	38	39	45	76	180	1130	655	135	54	143
17	38	43	39	39	45	82	160	1260	605	143	58	143
18	37	41	39	39	46	90	148	1390	554	129	66	150
19	37	43	39	39	47	100	141	1330	550	122	74	145
20	36	36	38	39	47	85	135	1190	572	126	85	176
21	37	32	39	39	45	75	148	1240	605	128	78	220
22	36	34	39	39	46	80	173	1190	630	116	70	89
23	42	37	40	39	48	95	208	1090	625	111	69	53
24	34	41	40	38	49	105	238	1160	522	103	79	42
25	38	42	39	37	50	130	298	1150	443	99	78	64
26	47	36	39	35	52	124	316	966	395	115	75	158
27	48	37	40	35	54	116	340	1070	364	126	74	129
28	48	40	38	38	56	104	391	1300	344	110	79	96
29	45	40	37	40	58	87	439	1400	328	98	81	79
30	45	31	36	40	---	78	383	1370	334	93	79	70
31	56	---	36	40	---	74	---	1150	---	95	65	---
TOTAL	1240	1236	1227	1181	1314	2531	6715	27443	25711	5391	2828	3577
MEAN	40.0	41.2	39.6	38.1	45.3	81.6	224	885	857	174	91.2	119
MAX	56	54	46	40	58	130	439	1400	1470	464	148	220
MIN	34	31	36	34	40	60	90	364	328	93	54	42
AC-FT	2460	2450	2430	2340	2610	5020	13320	54430	51000	10690	5610	7090

CAL YR 1975 TOTAL 99844 MEAN 274 MAX 1880 MIN 25 AC-FT 198000
WTR YR 1976 TOTAL 80394 MEAN 220 MAX 1470 MIN 31 AC-FT 159500

NOTE.--NO GAGE-HEIGHT RECORD NOV. 30 TO MAR. 24.

08220000 RIO GRANDE NEAR DEL NORTE, CO

LOCATION.--Lat 37°41'22", long 106°27'38", in NW¼ sec.29, T.40 N., R.5 E., Rio Grande County, Hydrologic Unit 13010001, on right bank 20 ft (6 m) downstream from county highway bridge, 6.0 mi (9.7 km) west of Del Norte, and 6.8 mi (10.9 km) upstream from Pinos Creek.

DRAINAGE AREA.--1,320 mi² (3,419 km²), approximately.

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. Datum of gage is 7,980.25 ft (2,432.380 m) above mean sea level. Prior to May 16, 1908, nonrecording gage at site 4 mi (6 km) downstream at different datum. May 16, 1908, to Nov. 8, 1910, nonrecording gages on bridge at present site and datum.

REMARKS.--Records good except those for winter period, which are fair. Small diversions above 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 (155 hm³), and by several smaller reservoirs. Transmountain diversions to drainage area above 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.

AVERAGE DISCHARGE.--87 years, 903 ft³/s (25.57 m³/s), 654,200 acre-ft/yr (807 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,000 ft³/s (510 m³/s) Oct. 5, 1911, gage height, 6.80 ft (2.073 m), from rating curve extended above 12,900 ft³/s (365 m³/s); minimum daily, 69 ft³/s (1.95 m³/s) Aug. 21, 1902.
Maximum stage since at least 1873, that of Oct. 5, 1911, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,120 ft³/s (145 m³/s) June 6, gage height, 4.52 ft (1.378 m); minimum daily, 134 ft³/s (3.79 m³/s) Nov. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	302	641	185	160	170	230	330	1020	3820	2290	554	431
2	296	704	217	150	170	225	407	1200	4280	2110	688	413
3	291	754	221	155	170	225	488	1390	4200	1970	603	413
4	275	762	208	160	170	215	596	1460	4470	1860	611	383
5	269	779	170	170	170	215	547	1560	4800	1800	554	371
6	264	779	175	170	175	230	474	1770	4760	1780	488	419
7	258	745	175	165	170	240	425	1700	4560	1890	462	481
8	264	478	180	165	170	250	468	1650	4470	1780	443	468
9	269	308	185	165	180	250	540	1440	4520	1650	494	413
10	264	253	180	170	180	255	680	1310	4470	1450	574	413
11	258	253	185	170	170	265	762	1370	3970	1350	581	407
12	253	212	185	170	175	255	848	1570	3460	1300	588	407
13	248	189	185	165	180	255	737	1560	3120	1380	540	401
14	242	248	185	165	180	260	611	1780	2930	1530	514	389
15	237	264	170	170	180	258	540	2480	2610	1330	468	389
16	248	258	165	175	180	242	488	3230	2430	1240	419	383
17	253	253	175	175	170	275	449	3840	2300	1200	413	359
18	253	242	175	170	175	296	419	4090	2080	1140	419	371
19	253	258	175	170	180	335	419	4050	2000	1030	449	371
20	242	203	170	170	180	286	425	4010	2080	1000	588	371
21	242	147	175	170	165	253	462	4030	2300	839	696	425
22	308	153	175	170	170	275	507	3740	2450	713	641	341
23	449	162	180	170	180	318	561	3290	2630	656	568	280
24	425	198	180	165	185	359	603	3340	2320	574	656	302
25	395	221	175	160	190	443	696	3360	2000	534	618	324
26	431	145	175	150	195	437	813	2930	1800	561	588	455
27	494	159	180	150	200	401	857	3140	1660	588	534	507
28	494	194	175	160	205	401	928	3720	1810	534	527	474
29	481	185	170	170	210	330	1080	4010	1780	500	527	437
30	474	134	165	170	---	296	1000	4220	1810	481	520	413
31	588	---	165	170	---	280	---	3950	---	488	488	---
TOTAL	10020	10281	5581	5135	5195	8855	18160	82210	91890	37548	16813	12011
MEAN	323	343	180	166	179	286	605	2652	3063	1211	542	400
MAX	588	779	221	175	210	443	1080	4220	4800	2290	696	507
MIN	237	134	165	150	165	215	330	1020	1660	481	413	280
AC-FT	19870	20390	11070	10190	10300	17560	36020	163100	182300	74480	33350	23820

CAL YR 1975 TOTAL 407395 MEAN 1116 MAX 5970 MIN 115 AC-FT 808100
WTR YR 1976 TOTAL 303699 MEAN 830 MAX 4800 MIN 134 AC-FT 602400

08220500 PINOS CREEK NEAR DEL NORTE, CO

LOCATION.--Lat 37°35'30", long 106°26'58", in SW¼SE¼ sec.29, T.39 N. R.5 E., Rio Grande County, Hydrologic Unit 13010002, on left bank 90 ft (27 m) downstream from Bennett Creek and 8.0 mi (12.9 km) southwest of Del Norte.

DRAINAGE AREA.--53 mi² (140 km²), approximately.

PERIOD OF RECORD.--April 1919 to September 1924, May 1936 to current year. No winter records prior to 1950 except water years 1941, 1944-47. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1922(M), 1941(M). WSP 1923: 1960(M).

GAGE.--Water-stage recorder and rectangular box flume. Altitude of gage is 8,480 ft (2,585 m), from topographic map. May 1, 1919, to Sept. 30, 1924, nonrecording gages at sites about 1,000 ft (300 m) downstream at different datum.

REMARKS.--Records good except those for periods of no gage-height record, which are poor. One small diversion above station.

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

AVERAGE DISCHARGE.--32 years (water years 1941, 1944-47, 1950-76), 24.4 ft³/s (0.691 m³/s), 17,680 acre-ft/yr (21.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge not determined, occurred June 3, 1922, caused by failure of private fish-lake dam; maximum discharge determined, 720 ft³/s (20.4 m³/s) Aug. 3, 1936, gage height, 4.19 ft (1.277 m), by slope-area measurement of peak flow; minimum daily recorded, 1.8 ft³/s (0.051 m³/s) Sept. 26-28, 1951.

Flood of June 3, 1922, exceeded all other observed floods at this location since at least 1903, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 197 ft³/s (5.58 m³/s) May 29, gage height, 2.04 ft (0.622 m), only peak above base of 120 ft³/s (3.4 m³/s); minimum daily, 3.5 ft³/s (0.099 m³/s) Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	9.1	7.0	6.0	6.0	7.0	10	41	143	57	23	11
2	8.3	8.3	7.5	5.5	6.0	7.0	12	51	146	48	37	10
3	7.9	8.7	7.5	5.5	6.0	7.0	14	66	146	44	21	9.6
4	7.9	8.7	7.0	6.0	6.0	7.0	19	69	156	41	23	9.6
5	7.1	8.3	6.5	6.0	6.0	6.5	18	72	165	38	17	9.1
6	7.1	8.3	6.0	6.0	6.0	7.0	16	69	161	35	15	9.1
7	6.7	7.9	6.0	6.0	6.0	7.4	16	65	157	34	14	9.1
8	6.7	8.3	6.0	6.0	6.0	7.8	18	60	157	32	15	8.7
9	6.7	7.1	6.5	6.0	6.5	8.0	23	55	150	30	18	10
10	7.5	6.8	6.5	6.0	6.5	8.5	28	56	143	28	17	10
11	7.9	7.9	6.5	6.0	6.0	8.5	34	67	134	26	21	9.1
12	7.9	5.5	6.5	6.0	6.0	8.5	38	78	120	26	17	8.7
13	8.3	6.5	6.5	6.0	6.5	8.5	32	78	112	30	15	8.9
14	7.5	7.5	6.5	6.0	6.5	8.5	26	99	101	32	14	8.3
15	8.3	8.5	6.0	6.0	6.5	8.5	23	122	92	26	12	8.7
16	9.1	8.3	6.0	6.5	6.5	8.0	21	139	84	25	12	9.1
17	9.6	8.3	6.0	6.5	6.0	9.0	18	146	78	28	14	8.3
18	9.6	8.3	6.0	6.0	6.5	10	18	140	77	23	18	7.9
19	9.6	7.1	6.0	6.0	6.5	11	18	131	74	22	16	7.9
20	9.1	6.4	6.0	6.0	6.5	10	16	122	73	22	18	7.9
21	9.1	5.5	6.0	6.0	6.0	9.5	18	135	74	24	16	7.9
22	8.7	5.5	6.0	6.0	6.0	10	21	142	74	22	12	8.3
23	8.7	6.0	6.5	6.0	6.0	11	25	139	73	21	12	7.9
24	3.5	7.0	6.5	5.5	6.5	12	28	147	64	21	14	8.3
25	7.9	7.5	6.5	5.5	6.5	14	36	142	56	22	14	14
26	8.7	6.0	6.5	5.0	6.5	13	41	120	54	22	12	14
27	8.7	6.0	6.5	5.0	6.5	12	42	126	50	23	12	13
28	7.5	7.0	6.5	5.0	6.5	11	49	151	51	18	12	12
29	6.4	7.0	6.0	5.5	6.5	10	54	168	50	16	12	11
30	7.5	6.0	6.0	6.0	---	9.5	45	165	54	15	12	10
31	9.6	---	6.0	6.0	---	9.0	---	142	---	15	12	---
TOTAL	247.4	219.3	197.5	181.5	181.5	284.7	777	3303	3069	866	497	287.4
MEAN	7.98	7.31	6.37	5.85	6.26	9.18	25.9	107	102	27.9	16.0	9.58
MAX	9.6	9.1	7.5	6.5	6.5	14	54	168	165	57	37	14
MIN	3.5	5.5	6.0	5.0	6.0	6.5	10	41	50	15	12	7.9
AC-FT	491	435	392	360	360	565	1540	6550	6090	1720	986	570

CAL YR 1975 TOTAL 11379.0 MEAN 31.2 MAX 188 MIN 3.5 AC-FT 22570
WTR YR 1976 TOTAL 10111.3 MEAN 27.6 MAX 168 MIN 3.5 AC-FT 20060

NOTE.--NO GAGE-HEIGHT RECORD NOV. 20 TO MAR. 18.

08221500 RIO GRANDE NEAR MONTE VISTA, CO

LOCATION.--Lat 37°36'34", long 106°08'54", in NW¼SW¼ sec.19, T.39 N., R.8 E., Rio Grande County, Hydrologic unit 13010002, on left bank 50 ft (15 m) downstream from bridge on U.S. Highway 285, 2.0 mi (3.2 km) north of Monte Vista, and 12 mi (19 km) downstream from San Francisco Creek.

DRAINAGE AREA.--1,590 mi² (4,120 km²), approximately.

PERIOD OF RECORD.--May 1926 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 928: Drainage area. WSP 1712: 1959.

GAGE.--Water-stage recorder. Datum of gage is 7,654.16 ft (2,322.988 m) above mean sea level (State Highway Department bench mark). See WSP 1712 or 1732 for history of changes prior to June 15, 1938. June 16, 1938, to Feb. 28, 1971, at site 50 ft (15 m) upstream at present datum.

REMARKS.--Records good except those for winter period, which are fair. Diversions above station for irrigation of about 90,000 acres (364 km²). Flow regulated by Beaver Creek, Santa Maria, Rio Grande, and Contirental Reservoirs, combined capacity, 126,100 acre-ft (155 hm³), and by several smaller reservoirs. Transmountain diversions to drainage area above 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.

AVERAGE DISCHARGE.--50 years, 328 ft³/s (9.289 m³/s), 237,600 acre-ft/yr (293 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,500 ft³/s (524 m³/s) June 30, 1927, gage height, 7.35 ft (2.240 m), present datum, from floodmarks; maximum gage height, 8.00 ft (2.438 m) June 19, 1949; minimum daily discharge, 1.5 ft³/s (0.042 m³/s) Apr. 14, 1959.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,140 ft³/s (60.6 m³/s) June 5, gage height, 5.54 ft (1.689 m); minimum daily, 67 ft³/s (1.90 m³/s) Sept. 23, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	213	610	200	165	170	280	312	280	1270	700	215	68
2	210	670	230	160	170	270	359	399	1600	630	280	74
3	207	731	230	160	170	270	431	548	1480	605	226	78
4	194	742	230	165	170	250	530	580	1570	534	194	78
5	188	753	205	165	170	235	538	610	1790	458	198	74
6	185	748	205	165	175	270	484	660	1720	371	164	85
7	185	736	205	160	180	260	423	645	1490	379	173	110
8	191	600	205	160	185	304	331	645	1480	315	182	115
9	188	351	210	160	185	298	229	610	1530	232	198	93
10	188	290	205	165	185	290	270	530	1530	185	259	87
11	188	252	205	160	195	287	284	538	1130	170	173	89
12	182	232	205	160	205	290	343	640	950	158	182	85
13	170	213	205	160	205	273	280	645	1020	173	130	80
14	155	229	200	160	210	270	138	753	1050	213	128	74
15	149	235	185	165	215	270	112	1020	962	138	102	76
16	158	242	180	170	215	266	110	1190	962	164	78	87
17	173	239	175	175	215	262	96	1200	992	188	76	87
18	176	232	180	175	210	280	98	1050	866	170	136	87
19	179	245	180	170	205	312	100	998	884	147	173	93
20	170	232	180	170	195	301	96	1100	980	155	164	93
21	164	194	180	170	205	284	85	1190	980	188	304	105
22	170	176	185	170	200	280	110	1130	1010	201	201	96
23	294	164	190	170	200	308	122	1020	998	210	152	67
24	359	198	190	165	210	339	125	1220	819	232	158	98
25	331	225	185	160	220	403	125	1400	819	232	179	115
26	355	150	180	155	230	431	161	1230	797	262	138	152
27	435	160	180	155	240	383	179	1330	780	284	112	229
28	431	205	185	160	260	391	213	1660	726	252	85	133
29	387	200	180	165	270	355	355	1640	605	216	82	78
30	379	150	170	165	---	312	347	1610	556	185	82	67
31	453	---	170	165	---	287	---	1390	---	194	80	---
TOTAL	7407	10404	6015	5090	5865	9311	7386	29461	33346	8541	5008	2848
MEAN	239	347	194	164	202	300	246	950	1112	276	162	94.9
MAX	453	753	230	175	270	431	538	1660	1790	700	304	229
MIN	149	150	170	155	170	235	85	280	556	138	76	67
AC-FT	14690	20640	11930	10100	11630	18470	14650	58440	66140	16940	9930	5650

CAL YR 1975 TOTAL 186622 MEAN 511 MAX 2650 MIN 115 AC-FT 370200
WTR YR 1976 TOTAL 130682 MEAN 357 MAX 1790 MIN 67 AC-FT 259200

08223000 RIO GRANDE AT ALAMOSA, CO

LOCATION.--Lat 37°28'53", long 105°52'46", in SE¼NE¼ sec.4, T.37 N., R.10 E., Alamosa County, Hydrologic Unit 13010002, on right bank 0.2 mi (0.3 km) northwest of city limits of Alamosa and 9 mi (14 km) upstream from Alamosa Creek.

DRAINAGE AREA.--1,710 mi² (4,430 km²), 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. Datum of gage is 7,532.66 ft (2,295.955 m) above mean 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 (1.6 to 4.0 km) downstream at different datums. Nov. 6, 1935, to June 30, 1942, water-stage recorder at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good except those for winter period, which are poor. 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.

AVERAGE DISCHARGE.--64 years, 251 ft³/s (7.108 m³/s), 181,800 acre-ft/yr (224 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s (396 m³/s) July 1, 1927, gage height, 8.37 ft (2.551 m), site and datum then in use; maximum gage height, 10.62 ft (3.237 m) June 20, 1949; minimum daily discharge, 1.0 ft³/s (0.028 m³/s) May 19, 1950.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in October 1911 with a stage, 0.2 ft (0.061 m) 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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 774 ft³/s (21.9 m³/s) Nov. 7, gage height, 4.92 ft (1.500 m); minimum daily, 28 ft³/s (0.79 m³/s) Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	209	499	210	170	165	334	320	117	316	217	142	50
2	202	607	250	170	165	324	338	114	256	206	168	40
3	190	667	240	165	165	318	382	125	408	184	222	36
4	190	724	250	165	165	316	440	157	352	278	190	34
5	189	749	245	160	165	254	523	144	422	270	168	33
6	189	760	220	160	170	294	526	146	556	266	160	31
7	184	770	225	155	180	278	480	181	529	268	133	28
8	182	752	225	155	190	294	438	144	425	284	134	38
9	187	610	230	155	200	278	338	107	395	233	146	49
10	179	430	235	160	200	286	274	126	418	199	166	45
11	181	370	230	155	200	290	296	113	432	146	220	34
12	189	328	235	155	215	278	310	114	268	118	169	36
13	189	302	235	155	240	278	328	144	161	108	166	36
14	187	276	220	160	240	272	258	120	181	106	134	34
15	174	290	205	160	240	274	165	150	211	129	125	30
16	152	294	195	165	245	274	132	176	194	100	108	29
17	166	298	195	175	250	276	123	254	211	90	88	30
18	181	294	185	175	250	292	114	230	276	108	74	29
19	190	300	185	175	250	306	113	141	245	112	111	30
20	194	294	185	170	235	326	112	77	294	96	176	31
21	182	268	185	165	210	314	106	99	345	94	171	31
22	176	200	200	170	220	298	86	144	378	106	250	31
23	189	170	200	175	235	298	88	127	310	130	194	32
24	296	205	200	170	235	326	94	78	300	137	152	32
25	336	230	195	165	240	350	94	198	213	173	146	39
26	336	160	190	160	250	405	96	288	243	213	154	55
27	365	165	185	155	260	425	118	262	278	232	107	91
28	430	220	190	160	290	398	108	360	320	241	93	157
29	425	210	185	165	322	405	102	508	302	209	71	111
30	408	170	175	165	---	370	137	496	252	171	62	71
31	412	---	175	165	---	338	---	448	---	142	55	---
TOTAL	7259	11612	6480	5075	6392	9769	7039	5888	9491	5366	4455	1353
MEAN	234	387	209	164	220	315	235	190	316	173	144	45.1
MAX	430	770	250	175	322	425	526	508	556	284	250	157
MIN	152	160	175	155	165	254	86	77	161	90	55	28
AC-FT	14400	23030	12850	10070	12680	19380	13960	11680	18830	10640	8840	2680

CAL YR 1975 TOTAL 117801 MEAN 323 MAX 1200 MIN 115 AC-FT 233700
WTR YR 1976 TOTAL 80179 MEAN 219 MAX 770 MIN 28 AC-FT 159000

CLOSED BASIN IN SAN LUIS VALLEY, CO

08224500 KERBER CREEK AT ASHLEY RANCH, NEAR VILLA GROVE, CO

LOCATION.--Lat 38°14'28", long 106°06'57", in SW¼NW¼ sec.17, T.46 N., R.8 E., Saguache County, Hydrologic Unit 13010003, on left bank at Ashley Ranch, 4.5 mi (7.2 km) upstream from Little Kerber Creek and 9 mi (14 km) west of Villa Grove.

DRAINAGE AREA.--38 mi² (98 km²), approximately.

PERIOD OF RECORD.--June 1923 to September 1926 (published as Kerber Creek near Villa Grove), May 1936 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1937-38. WSP 1512: 1943.

GAGE.--Water-stage recorder. Altitude of gage is 8,830 ft (2,691 m), from topographic map. Prior to Dec. 10, 1963, at site 150 ft (46 m) upstream at datum 1.50 ft (0.457 m) higher.

REMARKS.--Records good except those for period of no gage-height record, which are poor. No diversion above station.

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

AVERAGE DISCHARGE.--43 years, 12.6 ft³/s (0.357 m³/s), 9,130 acre-ft/yr (11.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 407 ft³/s (11.5 m³/s) May 14, 1941, gage height, 3.88 ft (1.183 m), site and datum then in use, from rating curve extended above 140 ft³/s (4.0 m³/s); maximum gage height, 5.04 ft (1.536 m), site and datum then in use, May 11, 1947 (backwater from beaver dam); minimum daily discharge, 0.20 ft³/s (0.006 m³/s) Sept. 3, 1950, July 30 to Aug. 2, 1963, but may have been less during periods of no gage-height record.
Maximum stage since at least 1872, that of May 14, 1941, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 94 ft³/s (2.66 m³/s) July 31, gage height, 1.24 ft (0.378 m), only peak above base of 70 ft³/s (2.0 m³/s); minimum daily, 2.0 ft³/s (0.057 m³/s) Jan. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	5.6	4.5	3.0	4.0	5.5	6.5	9.6	33	14	16	6.0
2	3.2	5.2	4.5	2.5	3.5	5.5	8.0	10	40	14	19	3.8
3	3.2	4.8	4.0	2.0	3.5	5.0	10	12	42	13	14	3.2
4	3.2	4.8	4.0	2.5	3.5	4.5	12	13	54	12	9.6	3.2
5	3.2	5.2	4.0	2.5	4.0	4.0	11	17	57	11	7.0	2.9
6	3.2	5.2	4.5	3.0	4.5	4.5	10	21	57	10	6.0	3.2
7	3.2	4.8	5.0	3.0	4.5	4.5	8.9	24	54	10	6.0	4.4
8	3.5	5.6	5.0	3.0	4.5	5.0	8.2	22	49	10	10	6.0
9	3.2	4.8	4.5	3.0	4.5	5.0	4.8	24	47	9.6	17	4.8
10	3.5	3.8	4.0	3.0	4.5	4.5	6.5	26	45	8.9	10	4.8
11	3.5	4.0	4.0	3.0	4.5	5.0	12	28	42	7.6	8.9	5.6
12	3.5	4.0	4.0	3.0	4.5	5.0	21	31	40	8.2	7.6	5.2
13	3.5	4.5	4.5	3.0	5.0	5.0	21	26	36	12	6.0	3.8
14	3.5	5.5	4.5	3.0	4.5	5.0	21	29	33	12	6.5	4.1
15	3.2	6.0	3.5	3.5	4.5	5.0	19	31	31	9.8	4.4	6.5
16	3.2	6.0	3.0	4.0	4.5	5.0	19	36	29	10	3.8	7.6
17	3.2	6.0	3.0	4.0	4.5	5.5	15	38	28	9.6	4.5	5.2
18	3.2	5.5	3.0	4.0	4.5	6.0	10	40	24	8.9	7.8	5.6
19	2.6	5.0	3.0	3.5	4.5	6.5	11	36	22	8.2	8.5	4.8
20	2.4	4.5	3.0	3.5	4.5	6.0	12	36	22	8.2	7.6	4.8
21	2.6	4.0	3.5	3.5	4.0	5.5	11	33	26	8.2	7.0	4.4
22	2.9	4.0	4.0	3.5	4.5	6.5	10	31	28	6.5	4.4	4.1
23	3.5	3.5	4.5	3.5	4.5	6.5	8.2	28	28	6.5	7.7	4.1
24	2.9	4.0	4.5	3.0	5.0	8.0	9.6	26	24	6.5	8.2	4.1
25	3.2	4.5	4.5	3.0	5.5	9.0	10	24	21	9.6	5.6	6.6
26	2.9	4.0	5.0	3.0	5.5	9.5	8.2	21	19	14	4.4	13
27	2.6	4.5	4.5	3.0	5.5	8.0	8.9	22	17	9.6	4.8	17
28	2.9	5.0	4.0	3.5	5.5	8.0	9.6	31	17	7.6	4.1	8.9
29	2.6	5.5	3.5	4.0	5.0	6.5	10	31	16	6.7	4.1	7.6
30	2.9	5.0	3.5	4.0	---	5.0	10	31	14	5.6	4.4	7.6
31	6.0	---	3.5	4.0	---	5.5	---	29	---	11	4.8	---
TOTAL	99.4	144.8	124.5	100.0	131.5	180.0	342.4	816.6	995	298.8	239.7	172.9
MEAN	3.21	4.83	4.02	3.23	4.53	5.81	11.4	26.3	33.2	9.64	7.73	5.76
MAX	6.0	6.0	5.0	4.0	5.5	9.5	21	40	57	14	19	17
MIN	2.4	3.5	3.0	2.0	3.5	4.0	4.8	9.6	14	5.6	3.8	2.9
AC-FT	197	287	247	198	261	357	679	1620	1970	593	475	343

CAL YR 1975	TOTAL	7334.5	MEAN	20.1	MAX	160	MIN	1.9
WTR YR 1976	TOTAL	3645.6	MEAN	9.96	MAX	57	MIN	2.0

AC-FT 14550
AC-FT 7230

NOTE.--NO GAGE-HEIGHT RECORD NOV. 20 TO APR. 6.

CLOSED BASIN IN SAN LUIS VALLEY, CO

08227000 SAGUACHE CREEK NEAR SAGUACHE, CO

LOCATION.--Lat 38°09'48", long 106°17'24", in SE¼SE¼ sec.10, T.45 N., R.6 E., Saguache County, Hydrologic Unit 13010004, on left bank 0.2 mi (0.3 km) downstream from Middle Creek, and 10 mi (16 km) northwest of Saguache.

DRAINAGE AREA.--595 mi² (1,541 km²).

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. Altitude of gage is about 8,030 ft (2,448 m), from topographic map. Prior to Apr. 9, 1934, at sites 0.8 mi (1.3 km) downstream at different datums. Apr. 10, 1934, to Nov. 20, 1966, at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good except those for winter period, which are poor. 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.

AVERAGE DISCHARGE.--64 years, 69.1 ft³/s (1.957 m³/s), 50,060 acre-ft/yr (61.7 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 790 ft³/s (22.4 m³/s) Aug. 3, 1964, gage height, 3.85 ft (1.173 m), present datum, from rating curve extended above 83 ft³/s (2.4 m³/s); maximum gage height, 3.94 ft (1.201 m) May 20, 1970; minimum daily discharge recorded, 8.2 ft³/s (0.23 m³/s) Dec. 22, 1950, Aug. 17, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 205 ft³/s (5.81 m³/s) June 8, gage height, 2.72 ft (0.829 m), no peak above base of 210 ft³/s (5.9 m³/s); minimum daily, 20 ft³/s (0.57 m³/s) Oct. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	48	32	28	31	36	34	47	145	85	58	48
2	30	42	33	26	30	37	41	48	152	101	83	45
3	30	37	34	23	29	36	50	53	157	90	102	40
4	30	37	33	26	29	32	71	62	162	72	81	38
5	30	38	32	26	31	28	62	67	169	65	68	38
6	31	38	34	29	33	30	48	90	180	59	59	37
7	34	37	36	28	32	32	38	119	191	57	54	42
8	35	38	37	28	32	33	40	98	197	61	61	48
9	35	38	35	28	32	35	51	92	194	61	71	44
10	35	31	32	30	32	30	60	81	189	56	79	47
11	35	31	33	28	32	34	62	80	166	52	79	49
12	34	31	35	28	33	36	60	87	144	50	74	46
13	32	32	36	28	34	35	62	80	131	56	67	41
14	31	38	38	27	33	35	49	79	122	62	67	38
15	30	44	30	29	31	34	46	92	113	61	57	41
16	32	44	25	32	31	33	42	115	107	57	53	50
17	34	42	26	32	31	36	38	122	105	53	53	43
18	35	40	27	31	31	41	40	120	106	50	91	40
19	35	38	26	30	31	44	51	127	97	53	69	40
20	34	34	27	29	31	40	54	143	95	61	63	38
21	33	33	28	29	28	35	50	148	96	58	72	36
22	33	30	30	29	30	41	47	168	102	53	61	36
23	36	28	33	29	33	39	48	148	114	50	56	36
24	31	30	34	28	36	46	44	133	110	49	63	36
25	20	34	35	27	36	48	45	131	93	52	62	41
26	30	31	38	27	36	51	48	131	85	69	56	60
27	40	33	36	27	38	42	42	124	80	80	53	92
28	38	35	33	29	37	42	44	133	75	77	47	68
29	35	38	32	31	34	35	53	147	74	61	47	53
30	34	34	31	32	---	31	53	170	78	53	48	48
31	44	---	30	32	---	32	---	156	---	53	47	---
TOTAL	1028	1084	1001	886	937	1139	1473	3391	3829	1917	2001	1359
MEAN	33.2	36.1	32.3	28.6	32.3	36.7	49.1	109	128	61.8	64.5	45.3
MAX	44	48	38	32	38	51	71	170	197	101	102	92
MIN	20	28	25	23	28	28	34	47	74	49	47	36
AC-FT	2040	2150	1990	1760	1860	2260	2920	6730	7590	3800	3970	2700

CAL YR 1975 TOTAL 25211 MEAN 69.1 MAX 298 MIN 18 AC-FT 50010
WTR YR 1976 TOTAL 20045 MEAN 54.8 MAX 197 MIN 20 AC-FT 39760

CLOSED BASIN IN SAN LUIS VALLEY, CO

D8227500 NORTH CRESTONE CREEK NEAR CRESTONE, CO

LOCATION.--Lat 38°00'49", long 105°41'32", Saguache County, Hydrologic Unit 13010003, on right bank in canyon, 1.5 mi (2.4 km) northeast of Crestone and 3.2 mi (5.1 km) upstream from South Crestone Creek.

DRAINAGE AREA.--10.7 mi² (27.7 km²).

PERIOD OF RECORD.--May 1936 to current year (no winter records prior to 1948).

GAGE.--Water-stage recorder. Altitude of gage is 8,360 ft (2,548 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, which are poor. No diversion above station.

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

AVERAGE DISCHARGE.--29 years (water years 1948-76), 11.0 ft³/s (0.312 m³/s), 7,970 acre-ft/yr (9.83 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 735 ft³/s (20.8 m³/s) Aug. 6, 1936, gage height, 4.33 ft (1.320 m), from rating curve extended above 160 ft³/s (4.5 m³/s) on basis of slope-area measurement of peak flow; minimum daily recorded, 0.4 ft³/s (0.011 m³/s) Apr. 3, 1945.
Stage and discharge of the flood of Aug. 6, 1936, are the greatest since October 1911, from information by local residents.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of October 1911 is the greatest probably since at least 1884.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 79 ft³/s (2.24 m³/s) June 4, gage height, 2.06 ft (0.628 m), only peak above base of 60 ft³/s (1.7 m³/s); minimum daily, 1.0 ft³/s (0.028 m³/s) Jan. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	3.3	3.0	2.0	2.0	2.0	2.8	6.8	45	30	15	6.4
2	3.9	3.3	3.0	1.5	1.5	2.5	2.4	8.8	50	27	20	6.0
3	3.9	3.3	3.0	1.0	1.5	2.5	2.8	14	52	23	22	5.7
4	3.9	3.3	3.0	1.5	1.5	2.5	3.6	16	62	22	21	5.4
5	3.6	3.3	3.0	1.5	2.0	2.0	3.6	17	62	21	18	5.4
6	3.6	3.6	3.0	1.5	2.0	2.5	3.3	18	58	18	15	5.4
7	3.6	3.3	3.5	1.5	2.0	2.5	2.8	14	51	18	14	5.7
8	3.3	3.3	3.5	1.5	2.0	2.5	3.3	12	51	18	12	5.7
9	3.0	3.0	3.5	1.5	2.0	2.0	4.8	11	54	16	14	5.7
10	2.8	2.5	3.5	1.5	2.0	2.0	5.7	12	54	15	15	5.7
11	2.8	3.0	3.5	1.5	2.0	2.0	8.4	16	51	14	14	5.4
12	2.6	3.0	3.5	1.5	2.0	2.0	8.0	20	42	13	12	5.4
13	2.6	3.0	3.5	1.5	2.5	2.5	6.4	20	36	13	11	5.1
14	2.6	3.5	3.5	1.5	2.5	2.6	5.7	27	33	12	10	5.1
15	2.6	4.0	3.0	1.5	2.0	2.4	5.1	36	27	11	9.2	4.8
16	2.8	3.0	2.5	2.0	2.0	2.8	4.5	42	26	11	8.4	4.8
17	2.8	2.8	3.0	2.0	2.0	2.0	6.4	52	25	10	8.0	4.8
18	2.8	2.8	3.0	2.0	2.5	2.2	6.0	56	22	9.2	8.0	4.8
19	2.6	2.8	3.0	1.5	2.5	2.4	4.2	55	22	8.8	9.0	4.5
20	2.6	2.8	3.0	1.5	2.0	2.4	4.2	54	26	8.4	15	4.8
21	2.4	2.5	3.0	1.5	1.5	2.4	4.5	51	31	8.4	13	4.8
22	2.4	2.5	3.0	1.5	1.5	2.4	4.8	38	31	8.0	12	4.8
23	2.8	2.5	3.5	1.5	2.0	2.4	4.8	35	29	8.0	12	4.8
24	2.8	3.0	3.5	1.5	2.0	2.2	4.8	35	24	8.0	12	4.5
25	2.8	3.5	3.5	1.5	2.0	2.4	5.4	38	22	10	11	5.7
26	2.8	3.0	3.5	2.0	2.0	2.4	5.4	32	21	18	9.2	9.2
27	2.8	3.0	3.5	2.0	2.0	2.6	5.4	38	20	27	7.6	10
28	2.8	3.5	3.0	2.0	2.0	2.2	6.0	47	20	21	7.2	9.2
29	3.3	3.5	3.0	2.0	2.0	2.2	8.0	50	19	18	7.2	11
30	3.3	3.0	2.5	2.0	---	2.0	8.0	47	22	15	7.2	12
31	3.3	---	2.5	2.0	---	2.6	---	45	---	14	6.8	---
TOTAL	93.8	92.9	98.0	51.0	57.5	72.1	151.1	963.6	1088	473.8	376.7	182.6
MEAN	3.03	3.10	3.16	1.65	1.98	2.33	5.04	31.1	36.3	15.3	12.2	6.09
MAX	3.9	4.0	3.5	2.0	2.5	2.8	8.4	56	62	30	22	12
MIN	2.4	2.5	2.5	1.0	1.5	2.0	2.4	6.8	19	8.0	6.8	4.5
AC-FT	186	184	194	101	114	143	300	1910	2160	940	747	362

CAL YR 1975 TOTAL 5348.6 MEAN 14.7 MAX 84 MIN 2.0 AC-FT 10610
WTR YR 1976 TOTAL 3701.1 MEAN 10.1 MAX 62 MIN 1.0 AC-FT 7340

NOTE.--NO GAGE-HEIGHT RECORD NOV. 26 TO MAR. 9.

CLOSED BASIN IN SAN LUIS VALLEY, CO

08230500 CARNERO CREEK NEAR LA GARITA, CO

LOCATION.--Lat 37°51'35", long 106°19'08", in SW¼NE¼ sec.28, T.42 N., R.6 E., (projected), Saguache County, Hydrologic Unit 13010004, on left bank 4.5 mi (7.2 km) northwest of La Garita and 6.6 mi (10.6 km) downstream from North Fork.

DRAINAGE AREA.--117 mi² (303 km²).

PERIOD OF RECORD.--April 1919 to current year. No winter records prior to water year 1945 except water years 1926, 1941. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1935 (monthly figures only).

GAGE.--Water-stage recorder. Altitude of gage is 8,150 ft (2,484 m), from topographic map. Prior to Aug. 6, 1925, nonrecording gage or water-stage recorder at site 300 ft (91 m) downstream at different datum. Aug. 6, 1925, to Apr. 20, 1929, nonrecording gage or water-stage recorder at present site at datum 1.00 ft (0.305 m) higher. Apr. 21, 1929, to Nov. 20, 1966, water-stage recorder at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Diversions above station for irrigation.

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

AVERAGE DISCHARGE.--34 years (water years 1926, 1941, 1945-76), 11.2 ft³/s (0.317 m³/s), 8,110 acre-ft/yr (10.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,600 ft³/s (45.3 m³/s) July 21, 1945, gage height, 6.75 ft (2.057 m), present datum, from rating curve extended above 160 ft³/s (4.5 m³/s); no flow for several days during summer months in 1951, 1955-56, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 104 ft³/s (2.95 m³/s) May 22, gage height, 2.26 ft (0.689 m), no peak above base of 110 ft³/s (3.1 m³/s); maximum gage height, 2.60 ft (0.792 m) Mar. 25 (backwater from ice); minimum daily discharge, 1.5 ft³/s (0.042 m³/s) Jan. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	7.3	4.0	3.0	3.0	5.5	11	16	44	13	6.2	5.0
2	4.2	6.8	4.5	2.5	2.5	5.0	13	17	42	14	10	4.8
3	4.2	6.5	4.5	1.5	2.5	4.5	15	18	39	14	14	3.4
4	4.0	6.2	4.0	2.0	3.0	4.5	22	20	38	11	11	2.8
5	4.0	6.2	4.5	2.0	3.5	3.5	19	21	37	10	7.6	2.8
6	4.0	6.0	4.5	2.5	4.0	4.0	14	27	37	8.8	6.2	2.8
7	3.8	6.0	5.0	2.0	3.5	4.5	11	36	39	9.1	5.5	3.2
8	3.8	6.0	5.0	2.0	3.5	5.0	13	36	38	8.8	5.8	3.8
9	4.2	5.8	5.5	2.0	3.0	4.5	16	32	40	7.9	6.8	5.0
10	4.0	5.5	5.5	2.5	3.5	4.5	17	42	35	7.3	8.8	5.8
11	4.2	6.0	5.0	2.0	3.5	4.5	18	45	32	6.5	9.4	5.8
12	4.0	5.5	5.5	2.0	3.5	4.0	19	45	30	6.2	9.4	5.0
13	4.0	6.0	5.5	2.0	4.0	4.0	16	41	30	6.2	7.6	4.0
14	4.0	6.0	5.5	2.0	4.0	4.5	14	42	27	9.4	6.5	3.6
15	3.8	7.0	4.5	2.0	3.5	4.5	13	47	26	7.9	5.8	4.0
16	3.8	8.0	4.0	2.5	3.5	4.5	10	50	25	6.8	4.8	5.5
17	3.8	8.0	4.5	3.0	3.5	5.5	9.7	51	24	6.8	4.8	5.2
18	3.8	7.0	4.5	2.5	4.0	7.0	10	53	25	6.2	5.5	4.5
19	4.0	7.0	4.5	2.5	4.0	8.0	10	53	23	6.0	8.2	4.0
20	3.8	6.0	4.5	2.0	3.5	7.0	9.7	53	19	6.2	10	4.2
21	3.8	5.0	4.5	2.0	3.0	6.5	13	64	19	7.9	11	4.0
22	3.8	4.0	5.0	2.0	3.0	8.0	18	85	20	7.6	7.9	4.0
23	4.2	3.5	5.0	2.0	3.0	8.5	16	67	21	6.8	6.5	4.0
24	3.6	4.0	5.0	2.0	3.5	8.0	16	62	18	7.0	7.6	4.0
25	3.8	5.0	5.5	2.0	3.5	10	16	61	15	6.8	6.8	4.5
26	5.5	4.0	5.5	2.0	3.5	10	18	56	14	7.9	6.2	6.5
27	6.2	4.0	5.5	2.5	4.0	10	17	55	14	9.7	5.0	14
28	5.5	5.0	5.0	2.5	4.5	10	17	52	12	7.6	4.2	12
29	5.2	5.0	5.0	3.0	5.0	9.0	19	47	11	6.0	4.2	7.6
30	5.8	4.0	4.5	3.0	---	8.0	17	46	12	5.8	4.5	6.0
31	6.8	---	4.0	3.0	---	9.0	---	46	---	5.5	4.2	---
TOTAL	133.8	172.3	149.5	70.5	102.0	196.0	447.4	1386	806	250.7	222.0	151.8
MEAN	4.32	5.74	4.82	2.27	3.52	6.32	14.9	44.7	26.9	8.09	7.16	5.06
MAX	6.8	8.0	5.5	3.0	5.0	10	22	85	44	14	14	14
MIN	3.6	3.5	4.0	1.5	2.5	3.5	9.7	16	11	5.5	4.2	2.8
AC-FT	265	342	297	140	202	389	887	2750	1600	497	440	301

CAL YR 1975 TOTAL 5257.9 MEAN 14.4 MAX 92 MIN 1.0 AC-FT 10430
WTR YR 1976 TOTAL 4088.0 MEAN 11.2 MAX 85 MIN 1.5 AC-FT 8110

NOTE.--NO GAGE-HEIGHT RECORD NOV. 22 TO MAR. 22.

CLOSED BASIN IN SAN LUIS VALLEY, CO

08231000 LA GARITA CREEK NEAR LA GARITA, CO

LOCATION.--Lat 37°48'48", long 106°19'04", in NW¼SE¼ sec.9, T.41 N., R.6 E., Saguache County, Hydrologic Unit 13010004, on right bank 4.5 mi (7.2 km) downstream from Little La Garita Creek and 4.5 mi (7.2 km) southwest of La Garita.

DRAINAGE AREA.--61 mi² (160 km²), approximately.

PERIOD OF RECORD.--April 1919 to current year. No winter records prior to water year 1948 except water years 1926, 1941, 1945-46. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1946(M).

GAGE.--Water-stage recorder. Altitude of gage is 8,030 ft (2,448 m), from topographic map. Apr. 1, 1919, to June 23, 1927, nonrecording gages and June 24, 1927, to Nov. 13, 1935, water-stage recorder, at sites within 0.2 mi (0.3 km) downstream at different datums. Nov. 14, 1935, to Nov. 16, 1966, water-stage recorder at present site at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Diversions above station for irrigation.

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

AVERAGE DISCHARGE.--33 years (water years 1926, 1941, 1945-46, 1948-76), 12.9 ft³/s (0.365 m³/s), 9,350 acre-ft/yr (11.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 530 ft³/s (15.0 m³/s) July 9, 1957, gage height, 4.00 ft (1.219 m), present datum, from rating curve extended above 140 ft³/s (4.0 m³/s); minimum daily recorded, 0.2 ft³/s (0.006 m³/s) Sept. 28, 29, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 73 ft³/s (2.07 m³/s) June 9, gage height, 2.26 ft (0.689 m), no peak above base of 80 ft³/s (2.3 m³/s); minimum daily, 2.5 ft³/s (0.071 m³/s) Jan. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	6.5	4.5	3.5	4.5	5.5	6.2	12	44	17	8.0	6.8
2	5.1	5.9	5.0	3.0	4.0	6.0	7.6	16	46	16	16	5.9
3	5.1	5.9	5.0	2.5	4.0	6.0	8.8	22	44	14	18	5.6
4	5.1	5.9	4.5	3.0	4.5	5.5	10	20	51	13	18	4.8
5	5.1	6.2	5.0	3.0	5.0	5.0	12	21	51	13	11	5.1
6	5.1	6.2	5.0	3.5	5.5	5.5	8.8	24	51	12	8.8	5.1
7	5.1	5.6	5.5	3.0	5.0	6.0	7.2	19	58	12	8.4	5.6
8	5.1	6.2	5.5	3.0	5.0	6.5	10	16	58	13	8.8	5.6
9	5.1	5.6	6.0	3.0	4.5	6.0	16	16	62	10	10	7.2
10	5.1	4.2	6.0	3.5	5.0	6.0	17	24	51	9.8	12	8.0
11	5.4	6.2	5.5	3.0	5.0	6.0	19	31	45	9.4	10	6.5
12	5.1	4.8	6.0	3.0	5.0	5.5	24	41	41	8.8	10	5.9
13	5.1	5.1	6.0	3.0	5.5	5.5	18	32	38	10	8.4	5.6
14	4.4	6.5	6.0	3.0	5.5	6.0	13	41	36	16	8.4	5.4
15	4.4	7.2	5.0	3.0	5.0	5.5	9.4	46	31	10	7.2	5.4
16	4.6	5.9	4.5	3.5	5.0	5.0	8.0	45	29	9.8	6.8	6.5
17	4.8	5.6	5.0	4.0	5.0	5.5	7.2	46	27	9.4	7.2	5.4
18	5.1	5.4	5.0	3.5	5.5	6.0	6.8	48	25	8.4	8.0	5.1
19	4.4	5.6	5.0	3.5	5.5	6.5	6.8	48	22	8.0	9.4	4.8
20	4.2	5.0	5.0	3.0	5.0	6.0	6.5	48	21	8.4	9.4	4.8
21	4.4	4.5	5.0	3.0	4.5	5.5	8.0	54	21	11	11	4.8
22	4.4	4.0	5.5	3.0	4.5	6.2	9.4	49	22	8.8	8.4	5.4
23	4.8	3.5	5.5	3.0	4.5	6.2	11	46	22	8.8	7.6	5.1
24	3.5	4.5	5.5	3.0	5.0	5.9	13	45	19	8.4	9.8	4.8
25	3.2	5.5	6.0	3.0	5.0	6.8	17	45	17	8.0	10	5.4
26	4.6	4.5	6.0	3.0	5.0	6.8	21	44	16	10	8.0	6.2
27	6.5	4.5	6.0	3.5	5.5	6.5	20	48	15	16	6.9	10
28	5.6	5.5	5.5	4.0	5.0	6.2	22	46	14	8.4	5.9	11
29	5.4	5.5	5.5	4.5	5.0	5.8	30	52	13	7.6	5.9	8.4
30	5.9	4.5	5.0	4.5	---	5.2	15	48	14	7.2	5.9	6.8
31	7.6	---	4.5	4.5	---	5.6	---	46	---	8.4	5.9	---
TOTAL	154.4	162.0	165.0	102.5	143.0	182.2	388.7	1139	1004	330.6	288.7	183.0
MEAN	4.98	5.40	5.32	3.31	4.93	5.88	13.0	36.7	33.5	10.7	9.31	6.10
MAX	7.6	7.2	6.0	4.5	5.5	6.8	30	54	62	17	18	11
MIN	3.2	3.5	4.5	2.5	4.0	5.0	6.2	12	13	7.2	5.9	4.8
AC-FT	306	321	327	203	284	361	771	2260	1990	656	573	363

CAL YR 1975 TOTAL 5541.3 MEAN 15.2 MAX 89 MIN 2.3 AC-FT 10990
WTR YR 1976 TOTAL 4243.1 MEAN 11.6 MAX 62 MIN 2.5 AC-FT 8420

NOTE.--NO GAGE-HEIGHT RECORD NOV. 21 TO MAR. 22.

08236000 ALAMOSA CREEK ABOVE TERRACE RESERVOIR, CO

LOCATION.--Lat 37°22'29", long 106°20'03", in NW¼NE¼ sec.17, T.36 N., R.6 E., Conejos County, Hydrologic Unit 13010002, on left bank 0.8 mi (1.3 km) upstream from high-water line of Terrace Reservoir at elevation 8,568 ft (2,611.5 m), 3.0 mi (4.8 km) downstream from French Creek, and 15 mi (24 km) northwest of Capulin.

DRAINAGE AREA.--107 mi² (277 km²).

PERIOD OF RECORD.--September 1911 to September 1912 (published as Rio Alamosa near Monte Vista), May to June 1914, April 1915 to September 1927, October 1934 to current year. No winter records water years 1919-23. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 898: 1911(M). WSP 1312: 1935(M), 1944(M).

GAGE.--Water-stage recorder. Altitude of gage is 8,600 ft (2,621 m), from topographic map. See WSP 1712 or 1732 for history of changes prior to Oct. 1, 1927.

REMARKS.--Records good except those for period of no gage-height record, which are poor. No diversion above station.

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

AVERAGE DISCHARGE.--50 years (water years 1912, 1916-18, 1924-27, 1935-76), 113 ft³/s (3.200 m³/s), 81,870 acre-ft/yr (101 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,200 ft³/s (147 m³/s) Oct. 5, 1911, gage height, 11.0 ft (3.353 m), site and datum then in use, from floodmark, from rating curve extended above 1,000 ft³/s (28 m³/s) on basis of computation of peak flow over dam about 8 mi (13 km) upstream; minimum not determined. Maximum stage since at least 1854, that of Oct. 5, 1911, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,080 ft³/s (30.6 m³/s) June 5, gage height, 3.17 ft (0.966 m), only peak above base of 670 ft³/s (19 m³/s); minimum daily, 9.0 ft³/s (0.25 m³/s) Jan. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	27	13	12	14	20	27	148	662	261	80	30
2	25	22	14	9.0	14	20	32	187	736	218	93	27
3	24	23	15	10	15	19	45	233	702	197	67	25
4	23	22	16	11	16	17	66	253	762	181	74	23
5	23	22	15	12	17	15	67	253	833	160	56	20
6	22	23	16	12	18	17	56	270	762	145	48	21
7	21	21	16	11	16	19	50	214	710	133	42	28
8	22	22	17	11	16	21	56	181	770	128	46	24
9	21	22	18	12	17	23	72	166	770	130	53	23
10	21	16	18	13	19	21	104	169	728	121	59	26
11	21	19	18	13	19	19	128	200	625	112	62	27
12	20	17	16	13	20	22	148	257	508	110	53	24
13	19	20	16	13	20	24	130	265	463	138	45	22
14	19	21	13	12	19	23	108	340	421	145	41	21
15	17	19	11	13	21	23	93	482	382	110	36	21
16	17	17	11	14	23	22	76	625	360	106	34	21
17	17	15	12	14	23	24	66	694	335	110	34	20
18	17	13	12	14	23	26	58	736	296	89	40	19
19	18	15	12	14	22	28	55	618	310	83	43	18
20	17	13	13	13	21	22	49	589	340	76	43	19
21	17	13	15	12	20	26	52	568	366	95	45	18
22	16	11	17	11	20	27	62	596	371	76	35	19
23	18	11	18	11	21	30	76	540	350	67	34	19
24	13	12	18	12	20	36	95	610	283	62	36	19
25	18	14	18	11	19	42	124	582	249	70	50	26
26	20	12	18	10	17	43	138	445	233	69	42	43
27	20	14	17	11	18	39	140	520	222	83	34	45
28	20	16	16	13	19	38	160	702	211	62	31	40
29	19	14	14	14	19	30	187	744	197	55	30	35
30	20	12	15	14	---	28	166	719	204	50	34	33
31	27	---	14	14	---	24	---	582	---	50	32	---
TOTAL	617	518	472	379.0	546	788	2686	13488	14161	3492	1452	756
MEAN	19.9	17.3	15.2	12.2	18.8	25.4	89.5	435	472	113	46.8	25.2
MAX	27	27	18	14	23	43	187	744	833	261	93	45
MIN	13	11	11	9.0	14	15	27	148	197	50	30	18
AC-FT	1220	1030	936	752	1080	1560	5330	26750	28090	6930	2880	1500

CAL YR 1975 TOTAL 50841.0 MEAN 139 MAX 1060 MIN 11 AC-FT 100800
WTR YR 1976 TOTAL 39355.0 MEAN 108 MAX 833 MIN 9.0 AC-FT 78060

NOTE.--NO GAGE-HEIGHT RECORD DEC. 17 TO MAR. 17.

08238000 LA JARA CREEK AT GALLEGOS RANCH, NEAR CAPULIN, CO

LOCATION.--Lat 37°12'32", long 106°11'16", in NE¼ sec.10, T.34 N., R.7 E., Conejos County, Hydrologic Unit 13010002, on left bank 2.7 mi (4.3 km) downstream from Canyon Del Rancho, 7 mi (11 km) southwest of Capulin, and 16.5 mi (26.5 km) downstream from La Jara Reservoir.

DRAINAGE AREA.--98 mi² (250 km²), approximately.

PERIOD OF RECORD.--April 1916 to November 1917, April 1919 to November 1923, May 1936 to current year. No winter records prior to 1950 except water year 1944. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1242: Drainage area. WSP 1732: 1952.

GAGE.--Water-stage recorder. Altitude of gage is 8,130 ft (2,478 m), from topographic map. Apr. 1, 1916, to Nov. 30, 1917, and Apr. 1, 1919, to Nov. 30, 1923, near present site at different datum.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Small diversions above station for irrigation. Flow regulated by La Jara Reservoir (capacity, 14,040 acre-ft or 17.3 hm³).

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

AVERAGE DISCHARGE.--28 years (water years 1944, 1950-76), 15.8 ft³/s (0.447 m³/s), 11,450 acre-ft/yr (14.1 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 653 ft³/s (18.5 m³/s) Apr. 22, 1919, gage height, 3.22 ft (0.981 m), site and datum then in use, Apr. 15, 1937, gage height, 5.94 ft (1.811 m); maximum gage height, 6.12 ft (1.865 m) Aug. 11, 1961; minimum daily discharge, 2.2 ft³/s (0.062 m³/s) Nov. 6, 1951.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 116 ft³/s (3.29 m³/s) July 25, gage height, 3.39 ft (1.033 m); minimum daily, 3.0 ft³/s (0.085 m³/s) Jan. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	7.0	5.0	4.5	6.0	9.0	8.5	36	24	46	68	6.4
2	7.2	7.0	5.5	3.0	6.0	9.0	9.8	37	24	46	65	6.4
3	7.2	7.0	6.0	4.0	6.5	8.5	14	49	30	45	58	5.8
4	7.2	7.0	6.5	5.0	7.0	7.5	20	52	30	44	56	5.4
5	7.2	7.0	6.0	5.0	7.5	6.5	20	52	29	43	54	5.4
6	7.2	7.0	6.5	4.5	8.0	7.5	17	66	29	50	52	5.4
7	7.2	7.0	6.5	4.5	7.5	8.5	15	64	31	50	53	6.0
8	7.2	7.0	7.0	5.0	7.5	8.0	17	53	40	51	52	5.8
9	7.2	7.0	7.5	5.5	8.0	8.5	22	52	39	50	48	5.8
10	7.2	6.0	7.5	5.5	8.5	7.5	32	45	37	50	43	6.6
11	7.2	6.5	7.5	5.5	8.5	7.0	40	45	37	49	39	7.0
12	7.2	6.0	7.0	5.5	9.0	7.5	46	52	50	49	26	6.6
13	7.2	6.5	7.0	5.5	9.0	8.0	40	48	51	50	15	6.2
14	7.2	7.0	6.0	5.0	8.5	7.5	33	52	51	59	12	6.6
15	7.2	6.5	5.0	5.5	9.0	7.5	26	57	51	60	12	8.2
16	7.2	6.0	5.0	6.0	10	7.0	22	60	51	60	7.8	8.5
17	7.5	5.5	5.5	6.0	10	7.5	21	59	50	60	7.5	8.2
18	7.5	5.0	5.5	6.0	10	8.0	21	50	50	59	7.5	8.0
19	7.8	5.5	5.5	6.0	9.5	8.5	22	44	50	58	8.0	8.0
20	7.8	5.0	6.0	5.5	9.0	7.5	20	42	49	61	8.5	8.2
21	8.0	5.0	6.5	5.0	8.5	8.0	21	42	48	61	8.8	9.0
22	8.0	4.0	7.0	4.5	8.5	8.0	25	39	48	60	8.2	8.8
23	8.5	4.0	7.5	4.5	9.0	8.2	30	34	48	59	8.0	8.5
24	6.0	4.5	7.5	5.0	8.5	8.8	36	33	47	58	8.0	8.2
25	7.0	5.0	7.5	4.5	7.5	9.2	40	31	46	60	7.5	8.2
26	7.0	4.5	7.5	4.0	8.0	10	41	34	45	60	6.8	8.5
27	7.0	5.0	7.0	4.5	8.5	9.0	38	31	45	63	6.8	8.2
28	7.0	5.5	6.5	5.5	8.5	8.5	40	27	45	62	6.4	9.0
29	7.0	5.0	6.0	6.0	9.0	7.8	47	25	45	60	6.4	7.8
30	7.0	4.5	6.5	6.0	---	8.0	44	24	45	59	6.4	7.2
31	8.5	---	6.0	6.0	---	8.0	---	24	---	60	6.4	---
TOTAL	226.8	175.5	199.5	158.5	241.0	250.0	828.3	1359	1265	1702	771.8	217.9
MEAN	7.32	5.85	6.44	5.11	8.31	8.06	27.6	43.8	42.2	54.9	24.9	7.26
MAX	8.5	7.0	7.5	6.0	10	10	47	66	51	63	68	9.0
MIN	6.0	4.0	5.0	3.0	6.0	6.5	8.5	24	24	43	6.4	5.4
AC-FT	450	348	396	314	478	496	1640	2700	2510	3380	1530	432

CAL YR 1975 TOTAL 7079.7 MEAN 19.4 MAX 145 MIN 4.0 AC-FT 14040
WTR YR 1976 TOTAL 7395.3 MEAN 20.2 MAX 68 MIN 3.0 AC-FT 14670

NOTE.--NO GAGE-HEIGHT RECORD OCT. 24 TO MAR. 21.

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 (0.3 km) upstream from Trinchera Creek, 3.2 mi (5.1 km) north of Lasauses, and 13 mi (21 km) southeast of Alamosa.

DRAINAGE AREA.--5,740 mi² (14,900 km²), approximately, includes 2,940 mi² (7,610 km²) in closed basin in northern part of San Luis Valley, Colo.

PERIOD OF RECORD.--May 1936 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,500 ft (2,286 m) estimated from nearby level lines.

REMARKS.--Records good except those for winter period, which are poor. 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.

AVERAGE DISCHARGE.--40 years, 243 ft³/s (6.882 m³/s), 176,100 acre-ft/yr (217 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,470 ft³/s (155 m³/s) June 21, 1949, gage height, 9.50 ft (2.896 m), from rating curve extended above 3,600 ft³/s (100 m³/s); minimum daily, 0.4 ft³/s (0.011 m³/s) July 4, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 784 ft³/s (22.2 m³/s) Nov. 8, gage height, 4.54 ft (1.384 m); minimum daily, 29 ft³/s (0.82 m³/s) Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	233	435	275	175	160	453	398	164	513	340	164	58
2	224	531	285	180	160	480	385	149	352	305	179	60
3	218	614	260	175	160	441	412	156	352	285	199	50
4	205	690	255	165	160	412	468	161	459	300	224	49
5	209	734	275	155	165	345	534	188	438	330	203	46
6	201	757	275	150	170	348	618	154	510	340	186	44
7	201	770	275	150	185	370	603	203	658	330	163	44
8	194	780	275	145	205	362	554	222	630	322	141	34
9	195	757	275	150	215	370	501	177	592	318	139	29
10	201	578	280	150	215	355	382	151	592	263	154	34
11	199	453	280	145	230	362	360	149	600	222	190	36
12	201	392	280	145	255	358	370	135	572	177	218	34
13	207	365	275	150	285	340	368	138	432	151	170	35
14	195	345	270	155	295	342	382	163	400	136	158	37
15	190	330	255	155	295	340	285	151	392	114	139	36
16	177	340	230	160	305	335	224	177	385	128	124	33
17	164	342	215	175	310	338	195	195	355	122	97	31
18	179	342	195	180	310	342	186	258	375	114	84	33
19	192	328	195	175	310	358	171	226	410	122	74	34
20	201	335	195	170	285	362	161	192	370	124	105	34
21	199	318	195	165	255	370	151	168	420	135	149	34
22	192	210	215	170	270	360	141	190	456	120	164	30
23	195	190	220	175	280	352	132	242	450	136	203	35
24	226	230	220	175	275	362	130	256	425	158	171	44
25	320	240	220	170	285	385	133	228	360	163	138	40
26	352	190	210	165	300	415	127	330	320	186	136	44
27	360	210	210	160	310	471	127	378	350	226	135	60
28	392	300	200	160	340	477	139	375	390	224	103	107
29	420	280	200	165	415	459	136	474	410	224	85	133
30	400	245	195	165	---	456	141	596	360	188	71	100
31	405	---	180	165	---	415	---	603	---	163	63	---
TOTAL	7447	12631	7385	5040	7405	11935	8914	7349	13328	6466	4529	1418
MEAN	240	421	238	163	255	385	297	237	444	209	146	47.3
MAX	420	780	285	180	415	480	618	603	658	340	224	133
MIN	164	190	180	145	160	335	127	135	320	114	63	29
AC-FT	14770	25050	14650	10000	14690	23670	17680	14580	26440	12830	8980	2810

CAL YR 1975 TOTAL 137175 MEAN 376 MAX 1440 MIN 110 AC-FT 272100
WTR YR 1976 TOTAL 93847 MEAN 256 MAX 780 MIN 29 AC-FT 186100

08240500 TRINCHERA CREEK ABOVE TURNERS RANCH, NEAR FORT GARLAND, CO

LOCATION.--Lat 37°22'29", long 105°17'40", Costilla County, Hydrologic Unit 13010002, in Sangre de Cristo Grant, on right bank 0.9 mi (1.4 km) downstream from North Fork, 1.0 mi (1.6 km) upstream from Turners Ranch and 8.3 mi (13.4 km) southeast of Fort Garland.

DRAINAGE AREA.--45 mi² (120 km²), approximately.

PERIOD OF RECORD.--April 1923 to current year. No winter records prior to 1935 except water year 1928. Monthly discharge only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder. Altitude of gage is 8,520 ft (2,597 m), from topographic map. Prior to Apr. 12, 1929, at site 200 ft (60 m) upstream at different datum.

REMARKS.--Records good except those for period of no gage-height record, which are fair. No regulation or diversion above station.

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

AVERAGE DISCHARGE.--43 years (1927-28, 1934-76), 22.6 ft³/s (0.640 m³/s), 16,370 acre-ft/yr (20.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 689 ft³/s (19.5 m³/s) May 27, 1942, gage height, 3.32 ft (1.012 m), from rating curve extended above 240 ft³/s (6.8 m³/s); maximum gage height, 3.73 ft (1.137 m) May 10, 1947; minimum daily discharge recorded, 3.0 ft³/s (0.085 m³/s) Oct. 3, 1942.

EXTREMES OUTSIDE PERIOD OF RECORD.--Outstanding floods occurred in 1886 and in October 1911. The flood in 1886 probably exceeded that in October 1911 and the flood in October 1911 probably exceeded all subsequent floods, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 59 ft³/s (1.67 m³/s) June 9, gage height, 1.98 ft (0.604 m), only peak above base of 50 ft³/s (1.4 m³/s); minimum daily, 5.0 ft³/s (0.14 m³/s) Jan. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	9.6	7.0	7.0	8.0	10	8.6	16	46	37	16	9.6
2	9.6	9.6	7.5	6.0	8.5	9.0	8.2	17	48	34	16	9.0
3	9.0	9.3	7.0	6.0	9.0	8.0	7.9	19	51	28	15	8.2
4	9.0	9.3	7.0	6.5	9.5	6.5	8.2	20	54	25	14	7.9
5	8.6	9.3	7.6	7.5	9.5	6.5	8.6	21	54	23	13	7.6
6	9.0	9.3	7.6	6.0	8.0	7.0	8.2	23	56	20	12	8.2
7	8.6	9.0	7.6	5.0	8.0	7.5	8.2	21	56	18	12	8.6
8	8.6	9.0	7.6	6.0	8.0	8.0	9.0	19	57	18	12	8.2
9	8.6	8.6	7.6	7.0	8.5	6.8	9.6	18	58	16	12	9.0
10	9.0	7.9	7.6	8.0	7.5	6.8	11	19	55	17	12	9.3
11	8.6	7.2	7.6	8.0	7.5	5.9	12	21	55	17	12	9.0
12	8.6	5.9	7.2	9.0	8.0	6.5	14	24	54	16	12	8.6
13	8.6	8.6	7.6	8.0	8.0	6.5	13	24	53	16	11	8.2
14	8.6	10	6.8	8.0	9.0	7.0	12	28	50	16	11	8.2
15	8.6	9.0	6.5	9.0	8.0	6.5	12	32	48	15	9.3	8.6
16	9.0	8.6	6.5	9.5	8.0	6.5	11	34	45	15	9.3	8.6
17	9.0	8.6	6.5	9.5	7.5	6.5	10	40	44	15	9.6	8.2
18	9.3	8.6	6.5	9.5	8.0	7.0	11	46	42	14	10	8.2
19	9.0	7.6	6.5	9.0	9.0	6.5	10	45	39	14	12	7.9
20	9.0	7.5	7.5	8.0	7.0	6.0	10	44	37	14	12	7.9
21	9.0	6.5	8.5	8.0	7.0	6.0	10	48	35	14	13	7.9
22	9.0	6.5	8.5	8.0	7.5	7.0	11	49	35	14	9.6	7.9
23	9.0	6.5	8.5	9.0	8.0	7.5	12	46	34	13	9.3	7.9
24	6.5	7.5	8.0	9.0	8.5	7.5	13	46	32	18	10	8.2
25	7.4	7.0	8.0	7.5	9.0	8.0	14	47	31	16	9.6	10
26	9.3	8.0	8.0	7.5	9.5	8.6	14	46	29	18	9.6	11
27	9.3	8.5	8.0	7.5	9.5	8.2	15	44	28	19	8.6	12
28	9.0	9.0	8.0	8.0	10	8.2	17	46	27	18	9.3	11
29	8.6	7.5	7.5	8.0	10	7.6	19	47	25	16	9.3	10
30	9.0	6.5	7.5	8.0	---	8.2	17	47	33	14	9.3	9.3
31	9.6	---	7.5	8.0	---	8.6	---	46	---	14	9.6	---
TOTAL	273.6	246.0	231.3	241.0	243.5	226.4	344.5	1043	1311	562	349.4	264.2
MEAN	8.83	8.20	7.46	7.77	8.40	7.30	11.5	33.6	43.7	18.1	11.3	8.81
MAX	9.6	10	8.5	9.5	10	10	19	49	58	37	16	12
MIN	6.5	5.9	6.5	5.0	7.0	5.9	7.9	16	25	13	8.6	7.6
AC-FT	543	488	459	478	483	449	683	2070	2600	1110	693	524

CAL YR 1975 TOTAL 7570.5 MEAN 20.7 MAX 101 MIN 5.0 AC-FT 15020
WTR YR 1976 TOTAL 5335.9 MEAN 14.6 MAX 58 MIN 5.0 AC-FT 10580

NOTE.--NO GAGE-HEIGHT RECORD DEC. 16 TO MAR. 8.

08241500 SANGRE DE CRISTO CREEK NEAR FORT GARLAND, CO

LOCATION.--Lat 37°25'30", long 105°24'52", Costilla County, Hydrologic Unit 13010002, in Sangre de Cristo Grant, on left bank at road bridge, 2,200 ft (670 m) upstream from Garland Canal, 1.0 mi (1.6 km) east of Fort Garland, and 6.3 mi (10.1 km) upstream from Ute Creek.

DRAINAGE AREA.--190 mi² (490 km²), approximately.

PERIOD OF RECORD.--March to October 1916, May 1923 to September 1930, October 1931 to current year. No winter records prior to 1946 except water year 1941. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1935(M), 1950(M).

GAGE.--Water-stage recorder. Altitude of gage is 7,900 ft (2,408 m), from topographic map. Mar. 15 to Oct. 9, 1916, nonrecording gage and Cippoletti weir at site 1,400 ft (430 m) downstream at different datum. May 7, 1923, to Feb. 29, 1964, water-stage recorder at site 1.0 mi (1.6 km) upstream at different datum.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Diversions above station by Sangre de Cristo-Trinchera canal for irrigation below station. Diversion above station from West Indian Creek to Mountain Home Reservoir on Trinchera Creek.

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

AVERAGE DISCHARGE.--32 years (water years 1941, 1946-76), 18.5 ft³/s (0.524 m³/s), 13,400 acre-ft/yr (16.5 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,520 ft³/s (43.0 m³/s) Aug. 31, 1936, gage height, 6.10 ft (1.859 m), site and datum then in use, from rating curve extended above 280 ft³/s (7.9 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, 7.82 ft (2.384 m) site and datum then in use June 4, 1957; no flow at times in many years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Outstanding floods occurred in 1886 and in October 1911. The flood in 1886 probably exceeded that in October 1911 and the flood in October 1911 probably exceeded all subsequent floods, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 55 ft³/s (1.56 m³/s) May 22, gage height, 1.45 ft (0.442 m); minimum daily, 0.38 ft³/s (0.011 m³/s) Sept. 3-6, 21-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	8.3	6.5	5.5	6.5	13	14	31	35	5.4	2.0	.75
2	4.8	8.8	7.5	4.5	7.0	12	16	30	33	4.8	2.0	.50
3	4.8	7.8	7.0	4.5	8.0	9.6	16	30	30	5.1	3.7	.30
4	4.8	7.8	7.4	5.5	9.0	7.0	18	31	29	4.0	3.4	.30
5	4.4	7.8	7.0	7.5	9.0	9.2	20	35	28	4.0	2.2	.30
6	4.4	7.8	7.4	5.5	8.0	11	21	38	28	4.8	1.8	.30
7	4.4	7.4	7.4	4.5	8.0	14	20	43	28	4.0	1.2	.50
8	4.0	7.4	7.4	4.0	8.0	12	22	40	25	3.7	1.2	.50
9	4.0	7.4	7.8	5.5	9.0	10	23	39	23	3.4	1.2	.75
10	4.0	6.5	7.0	6.5	7.5	11	23	39	22	2.8	1.2	.75
11	4.4	6.2	7.4	6.5	7.5	12	25	39	20	2.2	1.2	1.0
12	4.0	5.1	7.4	7.0	8.0	9.2	26	40	18	2.0	1.2	.75
13	3.7	4.8	8.3	6.5	8.0	9.2	32	41	17	1.8	1.2	.75
14	3.7	4.8	8.3	6.5	9.0	11	30	41	16	2.0	1.0	.75
15	4.0	5.8	6.2	7.0	8.0	12	28	43	15	2.0	1.0	.75
16	4.4	6.5	6.2	7.5	8.0	11	26	46	14	1.8	.75	.75
17	4.8	7.0	6.5	7.5	7.0	12	23	46	13	2.0	.75	.75
18	5.1	7.0	6.5	7.5	7.5	13	20	48	13	1.2	1.0	.75
19	5.1	5.0	6.5	7.0	8.0	15	27	50	12	.75	1.0	.50
20	5.4	5.0	7.0	6.5	5.5	12	23	50	11	1.0	.75	.75
21	5.4	4.5	7.5	6.5	5.5	11	25	51	10	1.2	.75	.30
22	5.4	4.5	7.5	6.5	6.0	14	26	53	9.6	2.5	.75	.30
23	5.4	4.5	7.5	7.0	6.5	14	26	49	8.3	3.0	.75	.30
24	5.1	5.5	7.0	7.0	7.0	16	26	47	7.8	2.0	.75	.30
25	4.8	5.0	7.0	6.0	7.5	16	27	47	7.8	3.4	.75	.75
26	5.1	5.5	7.0	6.0	8.0	18	28	48	7.0	6.2	.75	.75
27	6.2	6.0	7.0	6.0	8.3	16	28	43	5.8	7.4	.75	2.5
28	6.2	6.5	7.0	6.5	10	16	29	40	5.4	7.8	.50	6.2
29	5.8	6.0	6.5	6.5	11	14	30	38	4.8	4.8	.75	4.8
30	6.2	5.5	6.5	6.5	---	14	33	37	5.4	3.0	.75	3.7
31	7.4	---	6.5	6.5	---	14	---	37	---	2.2	.75	---
TOTAL	152.0	187.7	219.7	194.0	226.3	388.2	731	1290	501.9	102.25	37.75	32.35
MEAN	4.90	6.26	7.09	6.26	7.80	12.5	24.4	41.6	16.7	3.30	1.22	1.08
MAX	7.4	8.8	8.3	7.5	11	18	33	53	35	7.8	3.7	6.2
MIN	3.7	4.5	6.2	4.0	5.5	7.0	14	30	4.8	.75	.50	.30
AC-FT	301	372	436	385	449	770	1450	2560	996	203	75	64

CAL YR 1975 TOTAL 7543.10 MEAN 20.7 MAX 132 MIN 1.0 AC-FT 14960
WTR YR 1976 TOTAL 4063.15 MEAN 11.1 MAX 53 MIN .30 AC-FT 8060

NOTE.--NO GAGE-HEIGHT RECORD DEC. 18 TO FEB. 25.

08242500 UTE CREEK NEAR FORT GARLAND, CO

LOCATION.--Lat 37°26'50", long 105°25'30", Costilla County, Hydrologic Unit 13010002, in Sangre de Cristo Grant, on left bank 2,300 (700 m) upstream from Newton ditch, 1.4 mi (2.3 km) north of Fort Garland, and 5.7 mi (9.2 km) upstream from mouth.

DRAINAGE AREA.--32 mi² (83 km²), approximately.

PERIOD OF RECORD.--March to October 1916, May 1923 to current year. Monthly discharge only for some periods, published in WSP 1312.

GAGE.--Water-stage recorder. Altitude of gage is 8,045 ft (2,452 m), from topographic map. Mar. 18 to Oct. 9, 1916, nonrecording gage and Cippoletti weir at different datum.

REMARKS.--Records good except those for period of no gage-height record, which are fair. A few diversions above station for irrigation.

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

AVERAGE DISCHARGE.--53 years, 20.1 ft³/s (0.569 m³/s), 14,560 acre-ft/yr (18.0 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 630 ft³/s (17.8 m³/s) May 15, 1941; no flow July 28-31, Sept. 6-29, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Outstanding floods occurred in 1886 and in October 1911. The flood in 1886 probably exceeded that in October 1911 and the flood in October 1911 probably exceeded all subsequent floods, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 111 ft³/s (3.14 m³/s) July 25, gage height, 2.68 ft (0.817 m), only peak above base of 100 ft³/s (2.8 m³/s); minimum daily, 2.5 ft³/s (0.071 m³/s) Jan. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	7.3	4.5	3.5	4.0	7.0	5.9	15	47	25	22	9.3
2	6.6	6.8	5.0	3.0	4.5	6.5	6.4	16	61	25	24	8.4
3	6.4	6.8	4.5	3.0	5.0	6.0	6.8	17	75	24	24	7.5
4	6.1	6.8	4.5	3.5	5.5	5.0	8.7	19	75	22	21	7.0
5	10	6.6	5.0	4.0	5.5	5.0	9.6	20	80	23	18	6.6
6	7.8	6.6	5.0	3.0	4.5	5.5	9.0	23	80	21	16	6.8
7	7.5	6.4	5.0	2.5	4.5	6.0	8.4	24	63	18	14	7.8
8	7.3	6.6	5.0	3.0	4.5	6.0	9.9	21	77	16	14	7.8
9	7.3	6.1	5.0	3.5	5.0	4.8	10	20	77	15	13	9.6
10	7.3	5.2	5.0	4.0	4.0	5.0	11	22	74	13	14	20
11	6.8	5.0	5.0	4.0	4.0	4.7	13	22	62	12	13	16
12	6.6	4.5	5.0	4.5	4.5	3.0	16	26	57	15	12	13
13	6.6	5.0	5.5	4.0	4.5	3.5	17	25	48	24	11	11
14	6.6	5.5	4.5	4.0	5.0	4.5	14	25	43	25	10	10
15	6.6	5.5	4.0	4.5	4.5	4.8	13	31	36	20	9.6	10
16	6.8	5.9	4.0	5.0	4.5	5.0	10	35	35	21	9.0	9.3
17	7.0	5.9	4.0	5.0	4.0	5.4	6.8	41	32	20	9.0	8.7
18	6.8	5.9	4.0	5.0	4.5	5.9	11	53	29	18	10	9.3
19	6.8	3.6	4.0	4.5	5.0	5.9	11	48	32	16	18	8.1
20	6.6	3.5	4.5	4.0	3.5	5.5	10	47	33	16	15	8.4
21	6.6	3.0	5.0	4.0	3.5	6.0	10	56	40	20	14	8.1
22	6.6	3.0	5.0	4.0	4.0	6.1	12	44	41	18	11	9.0
23	6.8	3.0	5.0	4.5	4.5	6.6	13	40	38	17	10	8.4
24	5.9	4.0	4.5	4.5	5.0	6.6	14	37	29	20	10	8.1
25	5.7	3.5	4.5	3.5	5.5	7.5	15	38	25	59	11	10
26	7.0	4.5	4.5	3.5	6.0	7.8	15	33	22	54	9.6	18
27	7.0	5.0	4.5	3.5	6.0	5.2	14	33	22	71	9.0	21
28	6.6	5.5	4.5	4.0	6.5	6.1	15	44	24	40	8.7	16
29	5.9	4.5	4.0	4.0	7.0	4.0	17	51	24	30	9.0	16
30	6.4	4.0	4.0	4.0	---	4.7	17	56	23	26	9.0	15
31	7.0	---	4.0	4.0	---	4.5	---	48	---	22	9.0	---
TOTAL	212.5	155.5	142.5	121.0	139.0	170.1	349.5	1030	1404	766	406.9	324.2
MEAN	6.85	5.18	4.60	3.90	4.79	5.49	11.7	33.2	46.8	24.7	13.1	10.8
MAX	10	7.3	5.5	5.0	7.0	7.8	17	56	80	71	24	21
MIN	5.7	3.0	4.0	2.5	3.5	3.0	5.9	15	22	12	8.7	6.6
AC-FT	421	308	283	240	276	337	693	2040	2780	1520	807	643

CAL YR 1975 TOTAL 8688.2 MEAN 23.8 MAX 117 MIN 2.1 AC-FT 17230
WTR YR 1976 TOTAL 5221.2 MEAN 14.3 MAX 80 MIN 2.5 AC-FT 10360

NOTE.--NO GAGE-HEIGHT RECORD NOV. 21 TO MAR. 8.

08243500 TRINCHERA CREEK BELOW SMITH RESERVOIR, NEAR BLANCA, CO

LOCATION.--Lat 37°23'10", long 105°33'02", in sec.4, T.31 S., R.73 W. (unsurveyed), Costilla County, Hydrologic Unit 13010002, on right bank 150 ft (46 m) downstream from bridge, 0.6 mi (1.0 km) downstream from Smith Reservoir, and 4.0 mi (6.4 km) southwest of Blanca.

DRAINAGE AREA.--396 mi² (1,026 km²).

PERIOD OF RECORD.--October 1928 to current year. No winter records prior to 1944 except water years 1931, 1934-36, 1938. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1512: 1937, 1950(M).

GAGE.--Water-stage recorder. Altitude of gage is 7,700 ft (2,347 m), estimated from nearby U.S. Coast and Geodetic Survey level lines. Prior to Oct. 12, 1964, at site 200 ft (61 m) downstream. Prior to Apr. 19, 1943, at datum 1.00 ft (0.305 m) higher, and at present datum thereafter.

REMARKS.--Records good. Diversions above station for irrigation. Flow regulated by Smith Reservoir (capacity, 5,335 acre-ft or 6.58 hm³).

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

AVERAGE DISCHARGE.--38 years (1930-31, 1933-36, 1937-38, 1943-76), 10.3 ft³/s (0.292 m³/s), 7,460 acre-ft/yr (9.20 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,340 ft³/s (37.9 m³/s) May 11, 1942; no flow Sept. 13, 14, 16, 17, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Outstanding floods occurred in 1886 and October 1911. The flood in 1886 probably exceeded that in October 1911 and the flood in 1911 probably exceeded all subsequent floods, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 43 ft³/s (1.22 m³/s) Sept. 3, gage height, 2.78 ft (0.847 m); minimum daily, 0.80 ft³/s (0.023 m³/s) Jan. 6-18, Mar. 5-7, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	1.4	1.0	1.0	1.4	1.0	4.6	11	18	4.2	3.0	14
2	6.6	1.4	1.0	1.0	1.4	1.0	7.0	11	17	3.0	3.9	27
3	6.6	1.6	1.0	1.0	1.2	1.0	6.6	11	16	2.2	5.5	39
4	6.6	1.6	1.0	1.0	1.2	1.0	6.6	11	16	2.0	5.8	32
5	6.6	1.6	1.0	1.0	1.2	.80	6.6	13	16	2.0	6.2	2.5
6	6.6	1.6	1.0	.80	1.2	.80	6.6	15	16	2.2	7.0	1.6
7	6.2	2.0	1.0	.80	1.2	.80	6.6	14	16	2.2	7.4	2.2
8	6.2	2.2	1.0	.80	1.2	1.0	6.6	16	16	2.2	7.0	2.2
9	5.8	2.2	1.0	.80	1.2	1.4	6.6	16	16	2.2	12	3.0
10	5.8	2.2	1.0	.80	1.2	1.6	7.4	16	16	2.2	15	3.0
11	5.8	2.2	1.0	.80	1.2	1.8	7.4	16	16	2.2	15	3.3
12	5.8	2.2	1.0	.80	1.2	1.8	7.8	15	16	2.2	15	5.8
13	3.6	2.0	1.0	.80	1.2	1.8	9.0	15	16	2.2	14	2.2
14	2.2	1.8	1.0	.80	1.2	1.8	9.5	16	16	2.2	14	1.4
15	2.2	1.2	1.0	.80	1.2	1.8	10	16	16	2.0	14	1.6
16	2.2	1.2	1.0	.80	1.2	1.6	10	15	16	2.0	14	1.6
17	2.2	1.0	1.0	.80	1.2	.80	10	15	16	2.0	14	1.6
18	2.2	1.0	1.0	.80	1.2	1.0	10	15	16	2.0	14	1.6
19	2.2	1.0	1.0	1.0	1.2	1.2	10	17	16	2.0	14	1.6
20	2.2	1.0	1.0	1.0	1.2	1.0	10	17	16	2.0	12	1.6
21	2.2	1.0	1.0	1.0	1.2	1.0	10	17	17	2.5	12	1.6
22	3.0	1.0	1.0	1.0	1.2	1.2	10	18	17	3.3	12	1.3
23	3.9	1.0	1.0	1.0	1.2	1.2	10	18	17	3.3	12	1.2
24	2.8	1.0	1.0	1.2	1.2	1.2	10	18	16	3.0	11	1.2
25	1.6	1.0	1.0	1.2	1.2	1.2	10	18	15	3.0	10	1.2
26	1.8	1.0	1.0	1.2	1.0	1.2	10	18	11	3.0	10	1.2
27	1.6	1.0	1.0	1.2	1.0	1.2	13	18	7.8	3.0	10	1.2
28	1.4	1.0	1.0	1.2	1.0	1.2	14	18	7.8	3.0	10	1.2
29	1.2	1.0	1.0	1.2	1.0	1.2	12	18	7.4	3.0	10	1.2
30	1.2	1.0	1.0	1.4	---	1.2	12	18	5.8	3.0	10	1.2
31	1.2	---	1.0	1.4	---	1.2	---	18	---	3.0	9.5	---
TOTAL	116.1	42.4	31.0	30.40	34.4	38.00	269.9	488	444.8	78.3	329.3	161.3
MEAN	3.75	1.41	1.00	.98	1.19	1.23	9.00	15.7	14.8	2.53	10.6	5.38
MAX	6.6	2.2	1.0	1.4	1.4	1.8	14	18	18	4.2	15	39
MIN	1.2	1.0	1.0	.80	1.0	.80	4.6	11	5.8	2.0	3.0	1.2
AC-FT	230	84	61	60	68	75	535	968	882	155	653	320

CAL YR 1975 TOTAL 3140.75 MEAN 8.60 MAX 34 MIN .50 AC-FT 6230
WTR YR 1976 TOTAL 2063.90 MEAN 5.64 MAX 39 MIN .80 AC-FT 4090

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 (120 m) downstream from Platoro Dam on Conejos River and 0.7 mi (1.1 km) west of Platoro.

DRAINAGE AREA.--40 mi² (104 km²), approximately.

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

GAGE.--Nonrecording gage. Datum of gage is 9,911.5 ft (3,021.03 m) above mean sea level (Bureau of Reclamation bench mark). Gage readings have been reduced to elevations above mean sea level. 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 (3,023.92 m) 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 (73.4 hm³) between elevations 9,911.5 ft (3,021.03 m), sill of trashrack at outlet, and 10,034.0 ft (3,058.36 m), crest of spillway. No dead storage. Reservoir is used for irrigation and flood control. Figures given are usable contents.

COOPERATION.--Records furnished by Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 61,420 acre-ft (75.7 hm³) June 9, 11, 1958, elevation, 10,035.5 ft (3,058.82 m); no contents for long periods in 1952-56.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 36,680 acre-ft (45.2 hm³) Oct. 20-29, elevation, 10,007.7 ft (3,050.35 m); minimum contents, 14,200 acre-ft (17.5 hm³) Nov. 22, elevation, 9,972.0 ft (3,039.47 m).

MONTHEND ELEVATION AND CONTENTS AT 0800, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	10,007.6	36,600	-
Oct. 31	10,007.6	36,600	0
Nov. 30	9,972.0	14,200	-22,400
Dec. 31	(a)	-	-
CAL YR 1975	-	-	-
Jan. 31	-	-	-
Feb. 29	-	-	-
Mar. 31	-	-	-
Apr. 30	9,974.6	15,490	+1,290
May 31	9,974.8	15,590	+100
June 30	9,976.3	16,360	+770
July 31	9,976.5	16,470	+110
Aug. 31	9,976.5	16,470	0
Sept. 30	9,976.8	16,630	+160
WTR YR 1976	-	-	-19,970

a Operation of reservoir suspended on Nov. 22 resumed on Apr. 19.

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 (340 m) downstream from valvehouse for Platoro Reservoir and 0.7 mi (1.1 km) northwest of Platoro.

DRAINAGE AREA.--40 mi² (100 km²), approximately.

PERIOD OF RECORD.--May 1952 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 9,866.60 ft (3,007.340 m) above mean sea level (levels by Bureau of Reclamation).

REMARKS.--Records good except those for period of no gage-height record, which are fair. No diversion above station. Flow completely regulated by Platoro Reservoir (see sta. 08244500).

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

AVERAGE DISCHARGE.--24 years, 88.8 ft³/s (2.515 m³/s), 64,340 acre-ft/yr (79.3 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,160 ft³/s (32.9 m³/s) Nov. 1, 1957, gage height, 4.02 ft (1.225 m); maximum gage height, 4.29 ft (1.308 m) June 15, 1958; no flow Oct. 16-20, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, is the greatest since at least 1854, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 750 ft³/s (21.2 m³/s) June 11, gage height, 3.37 ft (1.027 m); minimum daily, 5.7 ft3/s (0.16 m³/s) Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	550	10	10	10	10	10	121	396	233	61	30
2	6.2	546	10	10	10	10	10	121	558	263	81	22
3	6.2	550	10	10	10	10	10	179	710	275	70	9.6
4	6.2	550	10	10	10	10	10	257	651	257	65	9.2
5	6.2	546	10	10	10	10	10	260	602	182	55	9.2
6	6.2	542	10	10	10	10	10	227	592	102	27	9.2
7	6.2	546	10	10	10	10	10	141	638	96	9.6	15
8	6.2	546	10	10	10	10	10	84	725	106	9.6	19
9	5.7	542	10	10	10	10	10	82	745	116	23	13
10	6.2	546	10	10	10	10	10	81	745	133	34	18
11	6.2	554	10	10	10	10	10	82	725	116	36	27
12	6.2	550	10	10	10	10	10	98	534	106	39	27
13	6.2	546	10	10	10	10	10	116	442	78	47	27
14	6.2	546	10	10	10	10	10	246	462	64	54	27
15	6.2	546	10	10	10	10	10	333	414	86	54	27
16	6.2	538	10	10	10	10	10	312	368	104	30	20
17	6.2	538	10	10	10	10	10	382	403	92	10	15
18	6.2	534	10	10	10	10	10	490	293	75	7.0	15
19	6.2	530	10	10	10	10	10	478	293	50	7.0	15
20	7.8	522	10	10	10	10	16	396	392	37	7.0	16
21	9.2	514	10	10	10	10	16	333	438	58	7.0	15
22	9.2	284	10	10	10	10	18	333	450	72	7.0	15
23	9.2	10	10	10	10	10	36	330	426	51	14	15
24	9.2	10	10	10	10	10	41	330	296	28	18	12
25	9.2	10	10	10	10	10	39	330	296	24	23	12
26	9.2	10	10	10	10	10	44	347	296	24	44	12
27	9.2	10	10	10	10	10	60	368	266	85	32	37
28	9.2	10	10	10	10	10	80	538	236	92	12	56
29	9.2	10	10	10	10	10	76	610	227	46	12	56
30	9.2	10	10	10	---	10	96	530	215	34	12	56
31	289	---	10	10	---	10	---	446	---	34	17	---
TOTAL	506.1	11746	310	310	290	310	712	8981	13834	3119	924.2	656.2
MEAN	16.3	392	10.0	10.0	10.0	10.0	23.7	290	461	101	29.8	21.9
MAX	289	554	10	10	10	10	96	610	745	275	81	56
MIN	5.7	10	10	10	10	10	10	81	215	24	7.0	9.2
AC-FT	1000	23300	615	615	575	615	1410	17810	27440	6190	1830	1300

CAL YR 1975 TOTAL 47411.1 MEAN 130 MAX 815 MIN 5.7 AC-FT 94040
WTR YR 1976 TOTAL 41698.5 MEAN 114 MAX 745 MIN 5.7 AC-FT 82710

NOTE.--NO GAGE-HEIGHT RECORD NOV. 23 TO APR. 19.

08246500 CONEJOS RIVER NEAR MOGOTE, CO

LOCATION.--Lat 37°03'14", long 106°11'13", in SE¼SE¼ sec.34, T.33 N., R.7 E., Conejos County, Hydrologic Unit 13010005, on right bank 25 ft (8 m) upstream from bridge on State Highway 174, 0.4 mi (0.6 km) downstream from Fox Creek, 5.3 mi (8.5 km) west of Mogote, and 10 mi (16 km) west of Antonito.

DRAINAGE AREA.--282 mi² (730 km²).

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 (8.8 km) upstream and May 1903 to September 1911 (some missing periods most years) at site 3.2 mi (5.1 km) upstream not equivalent to present site owing to inflow.

REVISED RECORDS.--WSP 898: 1911(M). WSP 1312: 1903-5, 1913. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder. Datum of gage is 8,271.54 ft (2,521.156 m) above mean sea level (State Highway Department bench mark). Apr. 17, 1903, to Oct. 31, 1905, nonrecording gage 500 ft (150 m) downstream at different datum. Oct. 5, 1911, to early 1915, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation of about 500 acres (2.0 km²) of hay meadows above station. Some regulation by Platoro Reservoir (see sta. 08244500).

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

AVERAGE DISCHARGE.--67 years, 334 ft³/s (9.459 m³/s), 242,000 acre-ft/yr (298 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,000 ft³/s (255 m³/s) Oct. 5, 1911, gage height, 8.50 ft (2.591 m), from floodmarks, present site and datum, from rating curve extended above 3,100 ft³/s (88 m³/s); minimum daily determined, 10 ft³/s (0.28 m³/s) July 18, 1904.
Maximum stage since at least 1854, that of Oct. 5, 1911, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,100 ft³/s (59.5 m³/s) May 29, gage height, 4.38 ft (1.335 m); minimum daily, 40 ft³/s (1.13 m³/s) Jan. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	445	58	42	48	70	101	460	1360	484	18[illegible]	64
2	60	548	60	40	48	66	125	530	1530	512	20[illegible]	68
3	59	561	60	41	48	62	148	633	1820	502	18[illegible]	66
4	59	574	60	42	50	62	201	740	1830	476	18[illegible]	53
5	55	574	55	43	52	62	212	805	1850	436	15[illegible]	51
6	55	574	57	44	52	64	184	820	1840	344	131	48
7	51	570	57	42	50	64	161	690	1650	285	101	55
8	48	574	57	42	55	66	187	525	1790	292	8[illegible]	53
9	48	570	57	43	57	64	236	460	1840	285	8[illegible]	55
10	48	561	56	45	62	70	306	464	1790	282	9[illegible]	59
11	48	574	56	45	62	72	368	534	1650	271	109	60
12	48	566	56	45	59	68	416	652	1390	250	106	64
13	48	566	58	45	60	68	376	690	1060	250	96	59
14	48	570	56	45	64	75	282	820	1030	229	98	59
15	48	574	52	46	64	70	229	1180	965	201	98	59
16	46	570	50	48	64	72	194	1300	860	222	98	60
17	48	570	50	48	60	77	174	1400	820	240	84	59
18	48	570	50	48	59	84	154	1710	785	198	72	50
19	48	570	50	49	57	91	154	1720	665	177	72	48
20	46	556	50	47	60	91	139	1500	770	151	77	48
21	46	543	51	46	57	93	174	1360	860	145	72	48
22	48	530	52	45	55	96	198	1400	920	167	6[illegible]	57
23	53	148	54	46	55	109	236	1280	945	164	62	55
24	50	84	52	47	59	122	288	1290	755	136	66	51
25	48	77	50	46	64	134	344	1320	638	125	7[illegible]	59
26	59	60	49	44	60	131	364	1210	610	128	8[illegible]	84
27	66	77	47	44	59	125	372	1250	570	148	9[illegible]	86
28	64	79	47	46	60	119	444	1540	516	208	8[illegible]	122
29	59	60	44	47	64	98	520	1960	494	164	6[illegible]	131
30	57	55	44	48	---	93	484	1810	476	128	6[illegible]	122
31	68	---	44	48	---	86	---	1440	---	119	6[illegible]	---
TOTAL	1637	12950	1639	1397	1664	2624	7771	33493	34079	7719	311[illegible]	1953
MEAN	52.8	432	52.9	45.1	57.4	84.6	259	1080	1136	249	10[illegible]	65.1
MAX	68	574	60	49	64	134	520	1960	1850	512	20[illegible]	131
MIN	46	55	44	40	48	62	101	460	476	119	6[illegible]	48
AC-FT	3250	25690	3250	2770	3300	5200	15410	66430	67600	15310	6180	3870

CAL YR 1975 TOTAL 149584 MEAN 410 MAX 2120 MIN 36 AC-FT 296700
WTR YR 1976 TOTAL 110041 MEAN 301 MAX 1960 MIN 40 AC-FT 218300

08247500 SAN ANTONIO RIVER AT ORTIZ, CO

LOCATION.--Lat 36°59'35", long 106°02'17", in NE¼SE¼ sec.24, T.32 N., R.8 E., Rio Arriba County, Hydrologic Unit 13010005, New Mexico, on left bank 800 ft (240 m) south of Colorado-New Mexico State line, 0.4 mi (0.6 km) southeast of Ortiz, and 0.4 mi (0.6 km) upstream from Los Pinos River.

DRAINAGE AREA.--110 mi² (280 km²), 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. Altitude of gage is 7,970 ft (2,429 m), 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 (60 m) downstream at present datum.

REMARKS.--Records good except those for winter period, which are fair. A few small diversions above station for irrigation.

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

AVERAGE DISCHARGE.--36 years (1940-76), 24.8 ft³/s (0.702 m³/s), 17,970 acre-ft/yr (22.2 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,750 ft³/s (49.6 m³/s) Apr. 15, 1937, gage height, 5.38 ft (1.640 m), from rating curve extended above 1,100 ft³/s (31 m³/s); no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, is the greatest since at least 1854, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 290 ft³/s (8.21 m³/s) Apr. 11, gage height, 2.85 ft (0.869 m), no peak above base of 330 ft³/s (9.3 m³/s); no flow July 6-31, Aug. 19, 20, Sept. 5-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	4.5	2.8	2.3	2.6	6.0	21	126	16	.10	3.6	.15
2	1.4	4.2	2.9	2.3	2.6	5.8	29	130	14	.30	2.4	.05
3	1.6	3.2	3.0	2.3	2.8	5.5	33	174	12	.08	2.4	.15
4	1.8	3.0	3.1	2.3	3.3	5.5	68	178	11	.02	1.6	.03
5	1.8	3.0	2.9	2.4	3.5	5.5	84	180	10	.02	1.2	0
6	1.8	2.8	3.0	2.4	3.5	6.0	77	168	9.3	0	.90	0
7	1.6	2.8	3.0	2.3	3.4	6.5	80	138	13	0	.50	0
8	1.4	2.4	3.1	2.3	3.5	7.0	108	121	15	0	.20	0
9	1.4	2.6	3.1	2.3	4.0	7.0	128	106	12	0	.15	0
10	1.4	2.4	3.0	2.4	4.4	7.5	138	101	8.9	0	.10	0
11	2.2	1.4	3.0	2.4	4.4	8.0	158	111	7.5	0	.05	0
12	2.2	1.0	3.1	2.4	4.2	8.0	178	126	6.4	0	.02	.29
13	2.2	1.2	3.2	2.4	4.2	8.0	164	101	5.8	0	1.1	.90
14	2.2	1.3	2.8	2.4	4.5	10	120	96	5.0	0	.90	.50
15	2.2	1.8	2.3	2.5	4.5	14	89	93	4.5	0	.60	.30
16	2.4	2.2	2.2	2.6	4.5	16	71	87	4.0	0	.30	.20
17	2.4	2.8	2.2	2.6	4.3	20	57	80	4.0	0	.10	.15
18	2.4	3.0	2.3	2.6	4.2	22	52	73	3.2	0	.03	.10
19	2.0	3.0	2.3	2.7	4.1	25	55	66	2.8	0	0	.15
20	2.0	3.0	2.3	2.6	4.4	25	45	77	2.6	0	0	.30
21	1.6	2.6	2.4	2.5	4.2	27	49	63	2.0	0	1.4	.20
22	1.6	2.4	2.6	2.5	4.0	30	71	53	1.4	0	2.2	.20
23	1.6	2.4	2.7	2.5	4.0	34	104	46	1.2	0	4.6	.15
24	1.4	2.5	2.6	2.5	4.3	36	138	39	1.0	0	2.4	.10
25	1.4	2.8	2.5	2.4	4.5	42	164	36	1.0	0	7.2	.04
26	1.6	2.0	2.4	2.4	4.7	43	166	32	.80	0	1.8	.24
27	2.2	2.4	2.4	2.4	4.9	49	164	29	.60	0	.90	1.8
28	2.0	3.0	2.5	2.6	5.0	41	166	25	.40	0	.60	3.6
29	2.0	3.4	2.3	2.6	5.2	35	218	22	.20	0	.30	4.8
30	2.0	2.8	2.4	2.6	---	25	180	20	.15	0	.20	2.8
31	2.6	---	2.5	2.6	---	20	---	18	---	0	.30	---
TOTAL	57.8	77.9	82.9	76.1	117.7	600.3	3175	2715	175.75	.52	38.05	17.20
MEAN	1.86	2.60	2.67	2.45	4.06	19.4	106	87.6	5.86	.017	1.23	.57
MAX	2.6	4.5	3.2	2.7	5.2	49	218	180	16	.30	7.2	4.8
MIN	1.4	1.0	2.2	2.3	2.6	5.5	21	18	.15	0	0	0
AC-FT	115	155	164	151	233	1190	6300	5390	349	1.0	75	34

CAL YR 1975 TOTAL 13351.55 MEAN 36.6 MAX 570 MIN .10 AC-FT 26480
WTR YR 1976 TOTAL 7134.22 MEAN 19.5 MAX 218 MIN 0 AC-FT 14150

NOTE.--NO GAGE-HEIGHT RECORD NOV. 22 TO MAR. 22.

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, Hydrologic Unit 13010005, New Mexico, on left bank 0.9 mi (1.4 km) south of New Mexico-Colorado State line, 2.1 mi (3.4 km) southwest of Ortiz, and 2.9 mi (4.7 km) upstream from mouth.

DRAINAGE AREA.--167 km² (433 km²).

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. Altitude of gage is 8,040 ft (2,451 m), from topographic map. Prior to Apr. 15, 1955, at site 350 ft (110 m) upstream at datum 2.52 ft (0.768 m) higher.

REMARKS.--Records good except those for winter period, which are fair. Diversions above station for irrigation.

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

AVERAGE DISCHARGE.--57 years, 120 ft³/s (3.398 m³/s), 86,940 acre-ft/yr (107 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,160 ft³/s (89.5 m³/s) May 12, 1941, gage height, 5.77 ft (1.759 m), site and datum then in use, from rating curve extended above 1,600 ft³/s (45 m³/s); minimum observed, 4.0 ft³/s (0.11 m³/s) Dec. 17, 1945 (discharge measurement) but may have been less during periods of no gage-height record.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, is the greatest since at least 1854, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,060 ft³/s (30.0 m³/s) May 15, gage height, 4.73 ft (1.442 m), only peak above base of 900 ft³/s (25 m³/s); minimum daily, 9.0 ft³/s (0.25 m³/s) Nov. 22, 26, Dec. 16, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	20	11	10	12	22	36	362	353	66	27	15
2	16	18	12	9.5	12	21	45	438	372	62	28	14
3	16	18	12	10	13	19	55	534	365	56	25	14
4	16	18	12	10	14	19	82	538	359	50	25	13
5	15	18	11	11	15	19	107	582	372	48	22	12
6	15	18	12	11	15	20	107	595	376	41	20	13
7	15	16	12	10	14	22	107	494	353	39	20	14
8	15	17	12	10	15	23	147	435	338	38	20	14
9	15	17	13	10	15	22	205	396	332	38	21	14
10	15	13	12	11	16	23	268	486	305	33	23	16
11	15	13	12	11	16	24	347	600	270	28	24	17
12	14	11	12	11	15	22	390	690	238	27	23	14
13	14	11	14	11	15	22	359	631	210	28	20	13
14	14	12	12	11	16	26	260	690	185	28	18	12
15	14	12	10	11	16	24	212	755	163	27	18	12
16	14	13	9.0	12	16	20	171	770	151	26	16	13
17	14	14	9.5	12	15	22	153	740	137	31	16	12
18	14	14	9.0	12	15	24	139	745	128	26	18	12
19	15	13	9.5	12	14	28	128	676	119	25	22	11
20	15	11	10	12	15	27	112	604	114	24	37	11
21	15	10	10	11	14	29	117	572	114	25	22	11
22	15	9.0	11	11	14	30	133	554	119	26	19	13
23	16	9.5	12	11	14	34	173	486	128	26	18	14
24	12	10	12	12	15	41	222	470	112	23	20	13
25	13	11	11	12	16	45	272	446	98	23	22	14
26	18	9.0	11	11	17	49	299	407	86	25	20	21
27	19	10	11	11	18	49	317	404	78	27	18	26
28	19	12	11	12	18	47	372	438	72	27	16	31
29	18	11	10	12	19	39	456	442	70	23	17	25
30	16	10	10	12	---	35	432	428	69	21	16	20
31	20	---	11	12	---	33	---	359	---	21	15	---
TOTAL	478	398.5	346.0	344.5	439	880	6223	16767	6186	1008	646	454
MEAN	15.4	13.3	11.2	11.1	15.1	28.4	207	541	206	32.5	20.8	15.1
MAX	20	20	14	12	19	49	456	770	376	66	37	31
MIN	12	9.0	9.0	9.5	12	19	36	359	69	21	15	11
AC-FT	948	790	686	683	871	1750	12340	33260	12270	2000	1280	901

CAL YR 1975	TOTAL	51603.5	MEAN 141	MAX 1440	MIN 9.0	AC-FT	102400	
WTR YR 1976	TOTAL	34170.0	MEAN 93.4	MAX 770	MIN 9.0	AC-FT	67780	

NOTE.--NO GAGE-HEIGHT RECORD DEC. 1 TO MAR. 11.

08248500 SAN ANTONIO RIVER AT MOUTH, NEAR MANASSA, CO

LOCATION.--Lat 37°10'37", long 105°52'39", in SE¼NE¼ sec.21, T.34 N., R.10 E., Conejos County, Hydrologic Unit 13010005, on right bank 0.3 mi (0.5 km) downstream from bridge on State Highway 142, 2.2 mi (3.5 km) upstream from mouth, and 3.3 mi (5.3 km) east of Manassa.

DRAINAGE AREA.--348 mi² (901 km²).

PERIOD OF RECORD.--April 1923 to current year. Monthly discharge only for some periods, published in WSP 1312.

REVISED RECORDS.--WSP 1312: 1936(M). WSP 1732: 1957.

GAGE.--Water-stage recorder. Altitude of gage is 7,650 ft (2,332 m), from topographic map. Prior to Apr. 23, 1936, at former bridge site 200 ft (60 m) upstream at same datum.

REMARKS.--Records good except those for period of no gage-height record, which are poor. Natural flow of stream affected by diversions to Cove Lake Reservoir (capacity, 9,700 acre-ft or 12.0 hm³) and diversions for irrigation above station.

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

AVERAGE DISCHARGE.--53 years, 79.2 ft³/s (2.243 m³/s), 57,380 acre-ft/yr (70.8 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,620 ft³/s (74.2 m³/s) May 14, 1941, gage height, 6.26 ft (1.908 m), from rating curve extended above 2,200 ft³/s (62 m³/s); maximum gage height, 6.42 ft (1.957 m) May 6, 1952; no flow at times in most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1854 occurred Oct. 5, 1911, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 720 ft³/s (20.4 m³/s) May 16, gage height, 4.90 ft (1.494 m), only peak above base of 500 ft³/s (14 m³/s); no flow July 29 to Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	17	2.6	5.0	8.0	16	41	326	266	20		
2	7.6	17	2.0	4.5	9.0	16	41	288	254	25		
3	7.6	14	1.4	4.0	10	16	44	386	244	20		
4	5.9	13	2.0	3.5	10	16	64	452	243	17		
5	5.1	12	2.0	3.0	11	16	92	482	261	13		
6	5.1	12	2.0	3.0	12	16	109	568	279	9.8		
7	3.5	12	2.0	2.5	13	17	93	522	285	6.4		
8	3.5	9.8	2.5	2.5	15	17	124	402	284	5.1		
9	3.0	12	2.5	2.0	16	17	148	364	304	3.7		
10	2.8	13	2.5	2.0	17	17	201	380	260	2.6		
11	2.8	9.8	3.0	2.0	17	17	288	430	216	2.2		
12	3.5	8.3	3.0	1.5	17	16	358	510	183	1.8		
13	3.9	7.0	3.5	1.0	17	17	358	458	151	1.6		
14	4.4	5.9	3.5	1.0	17	18	266	462	127	1.4		
15	5.9	7.6	4.0	1.5	16	18	204	515	104	1.0		
16	4.7	9.0	4.0	2.0	16	16	152	578	102	.85		
17	5.5	9.8	4.3	2.0	16	20	120	532	84	.70		
18	7.0	12	4.5	2.5	16	21	104	508	55	.70		
19	7.6	15	4.5	2.5	16	36	100	482	38	.50		
20	6.4	13	4.5	3.0	16	36	78	432	40	.34		
21	5.9	6.4	5.0	3.0	16	32	64	422	35	.39		
22	6.4	4.1	5.0	3.5	15	32	64	414	28	.34		
23	5.5	4.4	5.0	4.0	15	36	72	354	32	.77		
24	5.9	3.9	5.5	4.5	15	43	114	327	37	.56		
25	8.3	3.5	5.5	4.5	15	50	161	336	33	.44		
26	7.0	3.5	6.0	5.1	15	56	213	327	36	.39		
27	7.6	3.7	6.0	5.5	16	55	248	318	34	.26		
28	12	3.7	6.0	6.0	16	62	302	346	25	.04		
29	12	3.7	6.3	6.5	16	53	400	344	19	0		
30	11	3.2	6.0	7.0	---	46	432	332	15	0		
31	13	---	5.5	7.5	---	43	---	310	---	0		---
TOTAL	197.4	269.3	122.1	108.1	424.0	887	5055	12907	4074	136.88	0	0
MEAN	6.37	8.98	3.94	3.49	14.6	28.6	169	416	136	4.42	0	0
MAX	13	17	6.3	7.5	17	62	432	578	304	25	0	0
MIN	2.8	3.2	1.4	1.0	8.0	16	41	288	15	0	0	0
AC-FT	392	534	242	214	841	1760	10030	25600	8080	272	0	0

CAL YR 1975 TOTAL 45157.18 MEAN 124 MAX 1250 MIN .50 AC-FT 89570
WTR YR 1976 TOTAL 24180.78 MEAN 66.1 MAX 578 MIN 0 AC-FT 47960

NOTE.--NO GAGE-HEIGHT RECORD DEC. 3 TO MAR. 11.

08249000 CONEJOS RIVER NEAR LASAUSES, CO

LOCATION.--Lat 37°18'01", long 105°44'47", in SW¼SW¼ sec.2, and SE¼NE¼ sec.10 (two channels), T.35 N., R.11 E., Conejos County, Hydrologic Unit 13010005, on left bank of main channel 125 ft (38 m) downstream from bridge on State Highway 158 and on left bank of secondary channel 230 ft (70 m) upstream from bridge on State Highway 158, 1.0 mi (1.6 km) upstream from mouth, 2.1 mi (3.4 km) north of Lasauses, and 13 mi (21 km) southeast of Alamosa.

DRAINAGE AREA.--887 mi² (2,297 km²).

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 Sauses."

REVISED RECORDS.--WSP 1312: 1934(M).

GAGE.--Two water-stage recorders. Datum of gage on main (north) channel is 7,495.02 ft (2,284.482 m), and on secondary (south) channel is 7,496.89 ft (2,285.052 m), above mean sea level (levels by 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 (70 m) downstream at datum 0.56 ft (0.171 m) lower; Oct. 23, 1934, to May 3, 1936, at site 250 ft (76 m) downstream, and May 4, 1936, to Oct. 13, 1965, at site 280 ft (85 m) downstream, at datum 1.00 (0.305 m) lower.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation of about 75,000 acres (300 km²) above station.

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

AVERAGE DISCHARGE.--55 years, 182 ft³/s (5.154 m³/s), 131,900 acre-ft/yr (163 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,890 ft³/s (110 m³/s) May 15, 1941; no flow at times some years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 5, 1911, is the greatest since at least 1854, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 822 ft³/s (23.3 m³/s) May 17; no flow Aug. 17 to Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	116	52	56	68	122	108	404	498	183	2.3	
2	41	426	58	52	68	141	118	319	445	200	2.8	
3	39	470	62	54	70	131	130	384	417	197	3.0	
4	38	503	70	56	70	122	151	464	445	176	.86	
5	34	524	66	58	74	98	189	489	456	159	.61	
6	31	530	66	60	79	100	214	528	503	137	.31	
7	30	531	66	55	79	111	179	596	499	119	.15	
8	28	540	64	54	86	128	166	446	465	90	.07	
9	26	546	64	56	95	116	200	400	500	80	.15	
10	26	555	62	60	108	116	255	353	490	70	.23	
11	26	550	66	60	111	116	339	385	428	64	.23	
12	26	549	62	60	108	111	454	382	352	58	.15	
13	26	545	64	62	116	95	480	416	309	54	.15	
14	28	554	66	62	122	98	382	362	317	52	.07	
15	31	554	54	66	125	105	301	425	259	44	.07	
16	41	564	52	68	116	105	235	612	251	41	.04	
17	49	572	54	62	111	103	189	744	271	58	0	
18	52	583	56	62	108	108	166	680	308	66	0	
19	56	607	56	64	100	121	152	749	283	46	0	
20	58	591	58	72	100	142	133	678	336	31	0	
21	58	570	58	77	108	136	111	561	354	28	0	
22	56	590	58	77	98	130	95	517	303	38	0	
23	56	488	60	72	88	142	95	478	295	42	0	
24	58	152	60	72	90	171	113	402	247	44	0	
25	60	100	58	70	90	202	179	424	180	38	0	
26	58	80	58	68	96	221	234	498	226	32	0	
27	62	90	58	68	99	225	262	482	250	23	0	
28	68	93	59	70	106	221	303	570	222	8.0	0	
29	70	86	56	66	112	214	367	696	193	3.2	0	
30	68	55	56	64	---	152	452	713	176	1.5	0	
31	72	---	60	65	---	133	---	591	---	1.5	0	---
TOTAL	1416	12714	1859	1968	2801	4236	6752	15748	10278	2184.2	11.19	0
MEAN	45.7	424	60.0	63.5	96.6	137	225	508	343	70.5	.36	0
MAX	72	607	70	77	125	225	480	749	503	200	3.0	0
MIN	26	55	52	52	68	95	95	319	176	1.5	0	0
AC-FT	2810	25220	3690	3900	5560	8400	13390	31240	20390	4330	22	0

CAL YR 1975 TOTAL 97298.00 MEAN 267 MAX 1450 MIN 26 AC-FT 193000
WTR YR 1976 TOTAL 59967.39 MEAN 164 MAX 749 MIN .00 AC-FT 118900

08250000 CULEBRA CREEK AT SAN LUIS, CO

LOCATION.--Lat 37°11'02", long 105°25'31", Costilla County, Hydrologic Unit 13010002, in Beaubien Grant, on left bank at bridge, 1.0 mi (1.6 km) south of San Luis and 1.0 mi (1.6 km) upstream from Rito Seco.

DRAINAGE AREA.--220 mi² (570 km²).

PERIOD OF RECORD.--April 1927 to current year. Monthly discharge only for some periods, published in WSP 1312. Records for January 1910 to December 1911, published as Culebra River at San Luis in WSP 288 and 308, have been found to be unreliable and should not be used.

REVISED RECORDS.--WSP 1312: 1940. See also PERIOD OF RECORD.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 8,000 ft (2,438 m), from topographic map. Prior to May 23, 1931, water-stage recorder at present site at different datum.

REMARKS.--Records good. Diversions above station for irrigation. Flow regulated by Sanchez Reservoir on Ventero Creek (capacity, 103,000 acre-ft or 130 hm³).

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

AVERAGE DISCHARGE.--49 years, 46.6 ft³/s (1.320 m³/s), 33,760 acre-ft/yr (41.6 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 654 ft³/s (18.5 m³/s) July 1, 1947, gage height, 5.09 ft (1.551 m), from rating curve extended above 300 ft³/s (8.5 m³/s); minimum daily, 4.6 ft³/s (0.13 m³/s) Oct. 31, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 113 ft³/s (3.20 m³/s) May 29, gage height, 1.53 ft (0.466 m); minimum daily, 8.8 ft³/s (0.25 m³/s) Sept. 5, 7, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	12	11	13	11	20	14	10	75	33	35	27
2	15	12	11	13	11	19	13	11	76	34	55	27
3	14	11	11	12	11	17	13	10	73	33	38	26
4	14	11	11	13	12	12	13	18	73	32	34	22
5	14	11	11	12	12	16	13	32	71	31	32	8.8
6	13	11	11	12	12	18	13	36	83	30	30	9.6
7	12	10	11	14	12	21	13	31	92	28	31	8.8
8	12	10	11	13	12	21	14	11	93	30	31	9.2
9	12	10	11	13	19	19	15	11	94	31	33	8.8
10	16	10	11	13	19	19	16	11	97	30	36	10
11	16	10	11	14	17	18	16	14	97	31	32	10
12	15	10	11	13	18	14	15	15	74	34	32	10
13	16	11	11	13	19	16	14	18	70	41	32	10
14	16	11	11	12	20	17	13	29	73	56	32	11
15	16	12	11	12	18	18	13	27	72	63	30	12
16	17	12	11	13	16	17	12	37	70	74	29	14
17	18	12	11	13	13	21	12	37	65	81	23	11
18	18	12	11	13	14	23	14	47	59	72	16	9.2
19	16	12	12	13	16	22	14	42	59	68	14	9.6
20	14	12	12	12	14	20	12	28	62	62	18	10
21	14	11	13	12	14	19	12	30	66	54	13	9.6
22	14	11	14	12	14	18	11	35	71	42	12	10
23	15	11	14	12	15	16	12	66	76	29	18	9.6
24	14	11	14	12	16	16	12	81	67	32	25	10
25	16	12	14	12	16	15	11	86	52	31	25	14
26	16	11	14	12	16	14	10	105	34	39	22	16
27	11	12	14	12	18	13	10	104	32	38	22	29
28	10	10	13	12	19	14	10	106	32	32	22	21
29	10	10	13	11	21	13	10	107	35	28	22	16
30	10	11	13	11	---	13	10	106	34	29	26	18
31	12	---	12	11	---	14	---	98	---	28	26	---
TOTAL	442	332	370	385	445	533	380	1399	2027	1276	846	417.2
MEAN	14.3	11.1	11.9	12.4	15.3	17.2	12.7	45.1	67.6	41.2	27.3	13.9
MAX	18	12	14	14	21	23	16	107	97	81	55	29
MIN	10	10	11	11	11	12	10	10	32	28	12	8.8
AC-FT	877	659	734	764	883	1060	754	2770	4020	2530	1680	828

CAL YR 1975 TOTAL 12039.0 MEAN 33.0 MAX 182 MIN 9.2 AC-FT 23880
WTR YR 1976 TOTAL 8852.2 MEAN 24.2 MAX 107 MIN 8.8 AC-FT 17560

08251500 RIO GRANDE NEAR LOBATOS, COLO.

LOCATION.--Lat 37°04'42", long 105°45'22", in sec.22, T.33 N., R.11 E., Conejos County, Hydrologic Unit 13010002, on right bank at highway bridge, 6 mi (10 km) north of Colorado-New Mexico State line, 7 mi (11 km) downstream from Culebra Creek, 10 mi (16 km) east of Lobatos, and 14 mi (23 km) east of Antonito.

DRAINAGE AREA.--7,700 mi^2 (19,900 km^2), approximately (includes 2,940 mi^2 or 7,610 km^2 in closed basin in northern part of San Luis Valley, Colo.).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1889 to current year. Monthly discharge only for some periods, published in WSP 1312. Published as "at Cenicero" 1899-1901, and as "near Cenicero" 1902-4.

REVISED RECORDS.--WSP 210: Drainage area. WSP 1312: 1919 (monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 7,427.63 ft (2,263.942 m) above mean sea level. Prior to Nov. 8, 1910, nonrecording gages at same site and datum.

REMARKS.--Records good except those for winter period, 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.

AVERAGE DISCHARGE.--77 years, 587 ft^3/s (16.62 m^3/s), 425,300 acre-ft/yr (524 hm^3/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 13,200 ft^3/s (374 m^3/s) June 8, 1905, gage height, 9.1 ft (2.77 m), from rating curve extended above 8,000 ft^3/s (230 m^3/s); no flow at times in 1950-51, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1828, that of June 8, 1905.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,450 ft^3/s (41.1 m^3/s) May 31, gage height, 3.23 ft (0.985 m); maximum gage height, 3.40 ft (1.036 m) Nov. 27 (backwater from ice); minimum daily discharge, 31 ft^3/s (0.88 m^3/s) Sept. 10, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	286	470	325	235	230	515	547	563	1160	555	183	64
2	280	623	355	230	230	550	508	498	932	551	178	57
3	264	938	330	230	230	570	519	438	810	519	186	50
4	258	1050	330	230	235	520	567	555	880	487	213	46
5	249	1170	350	220	245	490	648	615	950	487	225	42
6	243	1220	360	215	250	470	738	653	986	490	204	41
7	237	1240	360	210	255	487	795	720	1180	456	186	41
8	234	1260	360	205	260	490	734	730	1250	421	169	41
9	228	1270	360	205	285	504	694	611	1190	398	152	38
10	228	1200	360	210	315	484	658	504	1200	368	152	31
11	228	1010	360	210	325	476	627	487	1180	314	166	31
12	222	915	360	205	350	484	730	504	1130	280	204	36
13	225	875	360	210	380	473	830	494	938	237	213	38
14	234	855	355	215	405	445	825	508	810	207	180	34
15	222	835	330	215	425	462	680	508	785	183	155	34
16	222	840	300	220	430	459	527	611	725	149	138	38
17	216	850	290	230	430	456	435	860	716	160	125	34
18	216	850	275	235	430	459	388	944	707	163	108	30
19	237	885	265	240	430	462	359	974	775	155	103	29
20	249	860	265	240	415	515	330	956	752	149	92	30
21	258	820	270	240	385	531	295	835	785	143	106	30
22	255	743	275	245	380	523	264	748	820	201	138	30
23	243	600	285	245	385	515	240	761	800	155	157	29
24	258	400	295	245	380	531	231	734	752	163	189	29
25	308	345	290	245	380	567	252	666	671	204	160	35
26	388	285	285	240	390	619	302	748	547	189	130	38
27	404	315	285	235	415	662	356	885	595	213	128	35
28	418	395	280	230	450	702	381	910	603	237	125	48
29	452	380	270	230	490	698	431	1080	623	219	97	86
30	459	310	265	230	---	653	515	1300	611	213	84	115
31	448	---	260	230	---	599	---	1350	---	183	76	---
TOTAL	8669	23809	9710	7025	10210	16371	15406	22750	25863	8849	4722	1260
MEAN	280	794	313	227	352	528	514	734	862	285	152	42.0
MAX	459	1270	360	245	490	702	830	1350	1250	555	225	115
MIN	216	285	260	205	230	445	231	438	547	143	76	29
AC-FT	17190	47230	19260	13930	20250	32470	30560	45120	51300	17550	9370	2500

CAL YR 1975 TOTAL 229884 MEAN 630 MAX 2440 MIN 145 AC-FT 456000
WTR YR 1976 TOTAL 154644 MEAN 423 MAX 1350 MIN 29 AC-FT 306700

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1975 to September 1976.
WATER TEMPERATURES: October 1975 to September 1976.

INSTRUMENTATION.--Water-quality monitor since October 1975.

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

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 580 micromhos Sept. 10; minimum, 170 micromhos Nov. 20.
WATER TEMPERATURES: Maximum, 28.5°C July 30; minimum, freezing point on many days during November to March.

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)	IMME-DIATE COLI-FORM (COL. PER 100 ML)	FECAL COLI-FORM (COL. PER 100 ML)	STREP-TOCOCCI (COL-ONIES PER 100 ML)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)
OCT												
31...	1200	601	225	8.0	6.0	10.0	25	--	100	66	3	20
NOV												
28...	1200	410	275	7.6	.0	11.7	97	82	52	98	12	30
JAN												
05...	1200	215	275	7.6	.0	10.3	89	<1	88	96	9	30
30...	1200	230	242	7.8	.0	9.7	34	34	60	79	1	24
FEB												
27...	1330	425	275	8.2	.5	10.8	82	<1	89	86	7	26
MAR												
30...	1200	636	218	7.2	4.0	9.8	822	81	40	76	12	23
MAY												
04...	1300	594	203	7.8	11.5	8.6	--	68	160	59	4	18
25...	1300	678	370	8.4	14.0	9.7	819	813	48	120	46	36
JUL												
02...	1200	562	340	8.1	19.0	9.2	--	77	824	100	31	31
AUG												
02...	1200	188	400	7.9	21.0	7.5	200	58	26	110	11	34
30...	1330	85	380	8.2	20.0	8.0	<1	<1	<1	120	7	35
SEP												
30...	1400	118	325	8.4	18.0	12.0	--	44	310	110	12	31

DATE	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	SODIUM AD-SORP-TION RATIO	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	ALKA-LINITY AS CACO3 (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT												
31...	4.0	11	.6	2.7	77	0	63	25	2.7	.2	22	141
NOV												
28...	5.5	18	.8	3.1	104	0	85	48	4.2	.3	30	187
JAN												
05...	5.2	15	.7	3.4	106	0	87	33	3.1	.2	33	172
30...	4.6	14	.7	2.9	95	0	78	30	3.3	.3	29	158
FEB												
27...	5.2	19	.9	3.3	97	0	80	48	5.5	.3	25	180
MAR												
30...	4.5	12	.6	2.7	78	0	64	37	3.1	.2	24	145
MAY												
04...	3.5	12	.7	2.4	67	0	55	32	3.5	.2	20	131
25...	6.4	23	.9	4.0	86	0	71	85	6.3	.3	23	246
JUL												
02...	6.4	23	1.0	3.5	89	0	73	68	6.1	.4	21	206
AUG												
02...	6.3	42	1.7	5.2	122	0	100	88	8.9	.6	23	273
30...	6.8	29	1.2	4.5	132	0	108	69	8.0	.4	21	231
SEP												
30...	6.7	32	1.4	5.1	113	0	93	75	7.0	.5	22	239

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	TOTAL NITRITE PLUS NITRATE (N) (MG/L)	TOTAL NITRO-GEN (N) (MG/L)	TOTAL KJEL-DAHL NITRO-GEN (N) (MG/L)	TOTAL PHOS-PHORUS (P) (MG/L)	TOTAL ORGANIC CARBON (C) (MG/L)	TOTAL PHYTO-PLANK-TON (CELLS PER ML)	PERI-PHYTON BIOMASS ASH WEIGHT G/SQ M	PERI-PHYTON BIOMASS TOTAL DRY WEIGHT G/SQ M	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
OCT											
31...	126	.02	.87	.85	.07	--	3700	23.0	24.0	24	3
NOV											
28...	190	.29	.59	.30	.06	3.5	740	--	--	45	5
JAN											
05...	175	.35	.75	.40	.09	--	830	--	--	18	10
30...	155	.39	.88	.49	.06	--	1800	--	--	4	2.5
FEB											
27...	180	.25	.54	.29	.10	2.9	2700	--	--	39	21
MAR											
30...	145	.16	.61	.45	.14	--	3800	--	--	55	9
MAY											
04...	125	.02	.77	.75	.19	--	16000	50.4	53.7	115	187
25...	227	.07	.72	.65	.11	26	7100	--	--	48	8
JUL											
02...	203	.03	.16	.13	.12	--	5300	5.00	6.69	27	51
AUG											
02...	268	.01	.56	.55	.24	6.0	23000	3.38	4.62	54	3
30...	239	.00	.15	.15	.11	--	21000	1.92	2.69	29	8.0
SEP											
30...	235	.00	.55	.55	.16	--	24000	--	--	13	4.4

DATE	TOTAL ARSENIC (AS) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	TOTAL CAD-MIUM (CD) (UG/L)	DIS-SOLVED CAD-MIUM (CD) (UG/L)	TOTAL CHRO-MIUM (CR) (UG/L)	DIS-SOLVED CHRO-MIUM (CR) (UG/L)	TOTAL COBALT (CO) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	TOTAL COPPER (CU) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	TOTAL IRON (FE) (UG/L)
NOV											
28...	1	1	<10	0	0	0	<50	1	<10	1	420
FEB											
27...	2	1	<10	1	0	0	<50	0	10	1	340
MAY											
25...	3	2	0	0	20	0	0	0	10	1	1400
AUG											
02...	3	2	<10.	0	0	0	<50	0	30	1	2500

DATE	DIS-SOLVED IRON (FE) (UG/L)	TOTAL LEAD (PB) (UG/L)	DIS-SOLVED LEAD (PB) (UG/L)	TOTAL MAN-GANESE (MN) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	TOTAL MERCURY (HG) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	TOTAL SELE-NIUM (SE) (UG/L)	DIS-SOLVED SELE-NIUM (SE) (UG/L)	TOTAL ZINC (ZN) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
NOV											
28...	30	<100	1	50	30	.0	.0	0	0	90	0
FEB											
27...	60	<100	2	50	20	.0	.0	1	0	30	10
MAY											
25...	100	5	0	100	40	.3	.3	--	1	40	0
AUG											
02...	30	<100	0	200	20	.1	.0	0	0	40	0

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

DATE	TOTAL ALDRIN (UG/L)	ALDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL CHLORDANE (UG/L)	TOTAL DDD (UG/L)	DDD IN BOTTOM MATERIAL (UG/KG)	TOTAL DDE (UG/L)	DDE IN BOTTOM MATERIAL (UG/KG)	TOTAL DDT (UG/L)	DDT IN BOTTOM MATERIAL (UG/KG)	TOTAL DIAZINON (UG/L)	DIAZINON IN BOTTOM MATERIAL (UG/KG)
NOV											
28...	ND	--	ND	ND	--	ND	--	ND	--	ND	--
FEB											
27...	ND	--	ND	ND	--	ND	--	ND	--	ND	--
MAY											
25...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG											
02...	ND	--	ND	ND	--	ND	--	ND	--	ND	--

DATE	TOTAL DIELDRIN (UG/L)	DIELDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ENDRIN (UG/L)	ENDRIN IN BOTTOM MATERIAL (UG/KG)	TOTAL ETHION (UG/L)	ETHION IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR (UG/L)	HEPTACHLOR IN BOTTOM MATERIAL (UG/KG)	TOTAL HEPTACHLOR EPOXIDE (UG/L)	HEPTACHLOR EPOXIDE IN BOTTOM MATERIAL (UG/KG)	TOTAL LINDANE (UG/L)
NOV											
28...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
FEB											
27...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
MAY											
25...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG											
02...	ND	--	ND	--	ND	--	ND	--	ND	--	ND

DATE	LINDANE IN BOTTOM MATERIAL (UG/KG)	TOTAL MALATHION (UG/L)	MALATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHOXYCHLOR (UG/L)	TOTAL METHYL PARATHION (UG/L)	METHYL PARATHION IN BOTTOM MATERIAL (UG/KG)	TOTAL METHYL TRITHION (UG/L)	METHYL TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL PARATHION (UG/L)	PARATHION IN BOTTOM MATERIAL (UG/KG)
NOV										
28...	--	ND	--	ND	ND	--	ND	--	ND	--
FEB										
27...	--	ND	--	ND	ND	--	ND	--	ND	--
MAY										
25...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG										
02...	--	ND	--	ND	ND	--	ND	--	ND	--

DATE	TOTAL TDXAPHENE (UG/L)	TOXAPHENE IN BOTTOM MATERIAL (UG/KG)	TOTAL TRITHION (UG/L)	TRITHION IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4-D (UG/L)	2,4-D IN BOTTOM MATERIAL (UG/KG)	TOTAL 2,4,5-T (UG/L)	2,4,5-T IN BOTTOM MATERIAL (UG/KG)	TOTAL SILVEX (UG/L)	SILVEX IN BOTTOM MATERIAL (UG/KG)
NOV										
28...	ND	--	ND	--	ND	--	ND	--	ND	--
FEB										
27...	ND	--	ND	--	ND	--	ND	--	ND	--
MAY										
25...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AUG										
02...	ND	--	ND	--	ND	--	ND	--	ND	--

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225	240	277	269	238	260	262	250	316	341	325	409
2	225	265	267	272	227	250	279	230	343	335	378	455
3	225	226	275	276	233	245	284	220	356	335	381	490
4	225	227	277	279	221	235	283	209	357	336	392	490
5	225	226	267	283	210	230	269	235	350	334	341	489
6	225	220	258	287	202	230	252	254	349	320	380	430
7	225	214	252	287	205	230	248	275	337	309	398	433
8	225	207	252	286	207	230	274	331	335	318	394	433
9	225	203	254	282	204	230	286	346	346	321	400	400
10	220	202	253	285	196	230	298	350	364	317	391	400
11	215	206	251	284	201	230	311	355	389	346	385	400
12	205	205	248	282	211	230	285	331	385	373	376	400
13	200	202	247	281	210	230	260	315	392	381	343	400
14	200	203	247	273	204	230	258	324	421	411	346	400
15	200	205	247	272	202	230	273	323	444	408	360	400
16	200	208	247	267	210	230	312	299	460	430	390	400
17	200	206	251	256	220	230	340	269	459	442	425	400
18	200	205	257	246	220	230	358	259	451	393	405	400
19	200	194	265	239	220	230	386	255	428	394	414	400
20	200	173	272	233	220	230	401	256	406	387	452	400
21	205	182	273	231	220	230	401	292	386	372	497	400
22	210	189	270	232	220	230	413	309	348	322	417	400
23	225	187	265	236	230	230	421	328	349	355	360	400
24	225	194	261	237	245	230	395	341	328	381	316	400
25	225	245	259	239	255	230	370	373	339	371	313	100
26	225	270	260	241	265	230	345	375	359	377	332	385
27	225	285	259	244	275	230	325	358	348	363	351	365
28	225	276	261	245	270	230	305	360	347	353	347	355
29	225	271	262	244	260	220	285	338	346	323	348	335
30	225	273	264	243	---	224	265	301	342	305	377	325
31	226	---	267	242	---	239	---	294	---	322	385	---
MONTH	216	220	260	260	224	232	315	302	373	357	378	396

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	6.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---
2	---	---	7.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	---	---
3	---	---	7.5	3.5	0.5	0.0	0.0	0.0	0.0	0.0	---	---
4	---	---	8.0	4.5	0.5	0.0	0.0	0.0	0.0	0.0	---	---
5	---	---	8.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	---	---
6	---	---	7.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	---	---
7	---	---	7.0	3.5	0.0	0.0	0.0	0.0	0.0	0.0	---	---
8	---	---	7.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---
9	---	---	7.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	---	---
10	---	---	5.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	---	---
11	---	---	4.5	1.0	0.0	0.0	0.0	0.0	0.0	0.0	---	---
12	---	---	3.5	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	---	---
13	---	---	3.0	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	---	---
14	---	---	3.5	-0.5	0.0	0.0	0.0	0.0	0.5	0.0	---	---
15	---	---	5.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	---	---
16	---	---	5.5	1.0	0.0	0.0	0.0	0.0	---	---	---	---
17	---	---	5.5	1.5	0.0	0.0	0.0	0.0	---	---	---	---
18	---	---	5.0	2.0	0.0	0.0	0.0	0.0	---	---	---	---
19	---	---	3.0	-0.5	0.0	0.0	0.0	0.0	---	---	---	---
20	---	---	2.0	-0.5	0.0	0.0	0.0	0.0	---	---	---	---
21	---	---	0.0	-0.5	0.0	0.0	0.0	0.0	---	---	---	---
22	---	---	0.0	-0.5	0.0	0.0	0.0	0.0	---	---	---	---
23	---	---	0.0	-0.5	0.0	0.0	0.0	0.0	---	---	---	---
24	---	---	0.0	-0.5	0.0	0.0	0.0	0.0	---	---	---	---
25	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---	---
26	---	---	0.5	0.0	0.0	0.0	0.0	0.0	---	---	---	---
27	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---	---
28	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---	---
29	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	---	---
30	---	---	0.0	0.0	0.0	0.0	0.0	0.0	---	---	8.5	5.0
31	6.0	4.0	---	---	0.0	0.0	0.0	0.0	---	---	11.0	2.5
MONTH	---	---	8.5	-0.5	0.5	0.0	0.0	0.0	---	---	---	---

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.5	4.5	---	---	19.5	13.5	22.0	16.0	25.5	19.5	22.0	12.5
2	11.0	5.0	---	---	19.0	15.0	21.5	17.5	24.5	18.5	23.0	12.5
3	12.5	5.0	---	---	17.5	14.0	24.0	17.5	21.0	17.5	24.0	13.5
4	11.0	7.0	13.0	11.0	18.5	13.5	25.0	18.5	24.0	15.0	24.0	14.0
5	11.5	7.0	14.0	9.0	18.5	13.5	24.0	18.0	25.0	16.0	24.5	14.0
6	9.5	5.0	13.0	10.5	18.0	14.5	24.0	18.5	23.5	16.0	19.5	14.0
7	11.5	5.0	12.0	9.0	19.5	14.0	25.0	18.5	23.0	16.5	22.5	13.0
8	11.5	6.5	10.0	7.0	20.0	15.5	26.0	18.5	23.0	16.0	22.5	12.5
9	12.0	6.0	11.5	6.0	21.0	15.5	25.5	18.5	19.5	16.5	20.0	11.5
10	14.0	7.0	17.5	9.0	19.5	16.5	25.5	20.0	23.0	14.5	19.0	11.0
11	14.5	9.0	17.5	11.0	18.5	14.5	25.0	19.0	23.5	16.0	21.5	11.5
12	12.0	9.0	15.0	9.5	18.0	13.0	26.5	18.0	24.5	15.0	21.5	12.5
13	10.5	8.0	15.0	8.0	18.0	13.0	26.0	17.0	24.0	16.5	22.5	12.5
14	8.5	6.5	18.0	9.5	18.5	13.0	26.0	18.5	24.5	16.0	21.0	14.5
15	8.0	5.5	19.5	12.0	19.0	12.0	25.5	18.5	23.0	15.5	19.0	13.0
16	8.5	3.5	17.0	10.5	16.5	13.0	25.0	17.0	23.5	14.5	19.5	13.0
17	5.0	2.0	17.5	10.0	17.0	12.0	27.0	17.5	25.0	16.0	21.5	12.5
18	9.5	1.5	16.5	11.5	20.0	14.0	27.5	19.0	24.0	17.5	23.0	11.5
19	10.0	5.0	17.0	11.0	22.0	15.0	24.5	17.5	24.0	17.0	23.0	11.0
20	14.5	4.0	15.5	10.5	23.0	17.0	24.5	18.0	25.0	16.0	21.5	11.5
21	15.5	6.5	14.5	12.0	23.0	17.5	25.5	18.5	27.0	17.5	21.0	11.0
22	15.0	7.5	15.5	10.0	21.5	18.0	25.0	17.0	26.5	18.5	20.5	11.5
23	9.0	7.5	16.5	10.5	21.0	16.5	25.5	18.0	25.0	19.5	21.5	9.5
24	---	---	17.0	11.5	21.5	15.5	22.0	17.5	26.0	17.0	16.5	12.5
25	---	---	15.0	11.5	21.5	15.0	21.0	16.5	26.5	17.0	17.0	12.5
26	---	---	16.0	10.0	21.0	15.0	23.5	16.5	25.5	18.0	16.5	11.0
27	---	---	18.0	11.5	22.5	16.0	27.0	18.0	26.5	17.0	14.5	9.0
28	---	---	19.0	13.0	24.0	17.5	26.0	20.0	27.0	18.0	19.0	9.0
29	---	---	18.0	13.0	23.0	19.0	27.5	19.0	27.0	16.5	20.5	8.0
30	---	---	16.5	12.5	20.5	17.5	28.5	20.0	23.5	17.0	20.5	9.5
31	---	---	17.0	11.0	---	---	27.5	20.0	21.5	14.0	---	---
MONTH	---	---	19.5	6.0	24.0	12.0	28.5	16.0	27.0	14.0	24.5	8.0

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

OCT. 31, 1975
1200 HOURS

IDENTIFICATION OF PHYTOPLANKTON

3,700 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT	COUNT
	CHLOROPHYTA	GREEN ALGAE			0
	.CHLOROPHYCEAE				0
	..CHLOROCOCCALES				0
	...CHAPACIACEAE				0
L	....SCHROEDERIA				0
	...HYDRODICTYACEAE				0
L	....PEDIASTRUM				0
	...OOCYSTACEAE				0
	....ANKISTRODESMUS		46	1	1
	...SCENEDESMACEAE				0
L	....SCENEDESMUS				0
	CHRYSOPHYTA				0
	.BACILLARIOPHYCEAE	DIATOMS			0
	..CENTRALES	CENTRIC			0
	...COSCINODISCACEAE				0
	....CYCLOTELLA		46	1	1
	....MELOSIRA		46	1	1
	..PENNALES	PENNATE			0
	...ACHNANTHACEAE				0
	....ACHNANTHES		180	5	4
	....COCCONEIS		180	5	4
	....RHOICOSPHENIA		46	1	1
	...CYMBELLACEAE				0
L	....AMPHORA				0
	....CYMBELLA		230	6	5
	....EPITHEMIA		46	1	1
	...DIATOMACEAE				0
	....DIATOMA		280	7	6
	...FRAGILARIACEAE				0
	....FRAGILARIA		510	14	11
	...GOMPHONEMATACEAE				0
	....GOMPHONEMA		93	2	2
	...NAVICULACEAE	NAVICULOID			0
D	....NAVICULA		560	15	12
L	....NEIDIUM				0
	....PINNULARIA		46	1	1
	...NITZSCHIACEAE				0
D	....NITZSCHIA		1,400	38	31

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

NOV. 28, 1975
1200 HOURS

IDENTIFICATION OF PHYTOPLANKTON

740 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		150	21
	....MELOSIRA		57	8
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		19	3
	....COCCONEIS		38	5
	...DIATOMACEAE			
	....DIATOMA		76	10
	...FRAGILARIACEAE			
	....FRAGILARIA		38	5
	....SYNEDRA		19	3
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		19	3
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		110	15
	...NITZSCHIACEAE			
D	....NITZSCHIA		190	26
	...SURIRELLACEAE			
L	....SURIRELLA			0
	.CHRYSOPHYCEAE	YELLOW-BROWN ALGAE		
	..CHRYSOMONADALES			
	...OCHROMONADACEAE			
	....OCHROMONAS		19	3
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..CHROOCOCCALES	COCCOID		
	...CHROOCOCCACEAE			
L	....ANACYSTIS			0

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

JAN. 5, 1976
1200 HOURS

IDENTIFICATION OF PHYTOPLANKTON

830 CELLS/ML

	_ORGANISM__NAME	_COMMON__NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OOCYSTACEAE			
	....OOCYSTIS		65	8
	...SCENEDESMACEAE			
	....ACTINASTRUM		65	8
	..VOLVOCALES			
	...CHLAMYDOMONADACEAE			
	....CHLAMYDOMONAS		16	2
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....COCCONEIS		16	2
	...CYMBELLACEAE			
	....CYMBELLA		16	2
	....EPITHEMIA		16	2
	...DIATOMACEAE			
	....DIATOMA		16	2
	...FRAGILARIACEAE			
D	....FRAGILARIA		210	25
	....SYNEDRA		16	2
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		210	25
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		160	20
	...NITZSCHIACEAE			
	....NITZSCHIA		16	2

JAN. 30, 1976
1200 HOURS

IDENTIFICATION OF PHYTOPLANKTON

1,800 CELLS/ML

	_ORGANISM__NAME	_COMMON__NAME	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...SCENEDESMACEAE			
	....CRUCIGENIA		110	6
L	....SCENEDESMUS			0
	..VOLVOCALES			
	...CHLAMYDOMONADACEAE			
	....CHLAMYDOMONAS		110	6
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		72	4
	....MELOSIRA		36	2
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		36	2
	....COCCONEIS		36	2
	....RHOICOSPHENIA		36	2
	...CYMBELLACEAE			
	....CYMBELLA		72	4
	....EPITHEMIA		36	2
	...DIATOMACEAE			
	....DIATOMA		140	8
	...FRAGILARIACEAE			
	....HANNAEA			
	.....HANNAEA ARCUS		36	2
D	....SYNEDRA		360	20
	...GOMPHONEMATACEAE			
D	....GOMPHONEMA		400	22
	...NAVICULACEAE	NAVICULOID		
D	....NAVICULA		320	18
	...NITZSCHIACEAE			
L	....DENTICULA			0
	....HANTZSCHIA		36	2

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

FEB. 27, 1976
1330 HOURS

IDENTIFICATION OF PHYTOPLANKTON

2,700 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...HYDRODICTYACEAE			
L	....PEDIASTRUM			0
	...SCENEDESMACEAE			
	....SCENEDESMUS		140	5
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		70	3
	....MELOSIRA		35	1
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		35	1
	....COCCONEIS		110	4
	...CYMBELLACEAE			
L	....AMPHORA			0
L	....CYMBELLA			0
L	....EPITHEMIA			0
L	....HOPALODIA			0
	...DIATOMACEAE			
	....DIATOMA		140	5
	...FRAGILARIACEAE			
D	....FRAGILARIA		980	36
	....HANNAEA		70	3
L	....SYNEDRA			0
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		350	13
	...MERIDIONACEAE			
L	....MERIDION			0
	...NAVICULACEAE	NAVICULOID		
L	....GYROSIGMA			0
	....NAVICULA		140	5
L	....PINNULARIA			0
	...NITZSCHIACEAE			
D	....NITZSCHIA		560	21
	...SURIRELLACEAE			
	....SURIRELLA		70	3
	...ACHNANTHACEAE			
	....RHOICOSPHENIA		35	1
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..OSCILLATORIALES	FILAMENTOUS		
	...OSCILLATORIACEAE			
L	....LYNGBYA			0

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

MAR. 30, 1976
1200 HOURS

IDENTIFICATION OF PHYTOPLANKTON

3,800 CELLS/ML

	ORGANISM NAME	COMMON NAME	CELLS/ML	PER CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OOCYSTACEAE			
	....KIRCHNERIELLA		31	1
	...SCENEDESMACEAE			
	....SCENEDESMUS		120	3
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
	....CYCLOTELLA		520	14
	....MELOSIRA		62	2
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		120	3
	....COCCONEIS		180	5
	...CYMBELLACEAE			
	....AMPHORA		31	1
	....CYMBELLA		150	4
L	....EPITHEMIA			0
L	....RHOPALODIA			0
	...DIATOMACEAE			
	....DIATOMA		250	6
	...FRAGILARIACEAE			
D	....FRAGILARIA		800	21
	....HANNAEA		92	2
	....SYNEDRA		150	4
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		250	6
	...NAVICULACEAE	NAVICULOID		
L	....CALONEIS			0
	....GYROSIGMA		31	1
	....NAVICULA		490	13
	....PINNULARIA		31	1
	...NITZSCHIACEAE			
L	....DENTICULA			0
L	....HANTZSCHIA			0
	....NITZSCHIA		310	8
	...SURIRELLACEAE			
L	....CYMATOPLEURA			0
	....SURIRELLA		180	5
	...ACHNANTHACEAE			
	....RHOICOSPHENIA		31	1

08251500 RIO GRANDE NEAR LOBATOS, CO--Continued

BIOLOGICAL DATA, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

MAY 4, 1976
1300 HOURS

IDENTIFICATION OF PHYTOPLANKTON

16,000 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...SCENEDESMACEAE			
	....CRUCIGENIA		290	2
	....SCENEDESMUS		1,200	7
	..VOLVOCALES			
	...CHLAMYDOMONADACEAE			
	....CHLAMYDOMONAS		290	2
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		2,600	16
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....ACHNANTHES		290	2
	...DIATOMACEAE			
	....DIATOMA		290	2
	...FRAGILARIACEAE			
D	....FRAGILARIA		2,600	16
L	....HANNAEA			0
	....SYNEDRA		290	2
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		860	5
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		1,700	11
	....NEIDIUM		290	2
	...NITZSCHIACEAE			
D	....NITZSCHIA		4,900	31
	...SURIRELLACEAE			
	....SURIRELLA		290	2

AUG. 2, 1976
1200 HOURS

IDENTIFICATION OF PHYTOPLANKTON

23,000 CELLS/ML

	_ORGANISM__NAME_____	_COMMON__NAME_____	CELLS/ML	PER_CENT
	CHLOROPHYTA	GREEN ALGAE		
	.CHLOROPHYCEAE			
	..CHLOROCOCCALES			
	...OCCYSTACEAE			
	....ANKISTRODESMUS		200	1
	....SELENASTRUM		200	1
	...SCENEDESMACEAE			
	....CRUCIGENIA		810	4
D	....SCENEDESMUS		8,100	35
	CHRYSOPHYTA			
	.BACILLARIOPHYCEAE	DIATOMS		
	..CENTRALES	CENTRIC		
	...COSCINODISCACEAE			
D	....CYCLOTELLA		6,500	28
	....MELOSIRA		810	4
	..PENNALES	PENNATE		
	...ACHNANTHACEAE			
	....COCCONEIS		1,000	4
	...CYMBELLACEAE			
	....CYMBELLA		200	1
	....EPITHEMIA		200	1
	...DIATOMACEAE			
	....DIATOMA		200	1
	...GOMPHONEMATACEAE			
	....GOMPHONEMA		410	2
	...NAVICULACEAE	NAVICULOID		
	....NAVICULA		1,000	4
	...NITZSCHIACEAE			
	....NITZSCHIA		2,400	11
	CYANOPHYTA	BLUE-GREEN ALGAE		
	.MYXOPHYCEAE			
	..CHROOCOCCALES	COCCOID		
	...CHROOCOCCACEAE			
	....AGMENELLUM		810	4

08252000 RIO GRANDE AT COLORADO-NEW MEXICO STATE LINE

LOCATION.--Lat 37°00'03", long 105°43'19", Costilla County, Hydrologic Unit 13010002, in Sangre de Cristo Grant, on left bank 0.6 mi (1.0 km) upstream from Colorado-New Mexico State line, 1.7 mi (2.7 km) upstream from Costilla Creek, and 5.5 mi (8.8 km) west of Jarosa.

PERIOD OF RECORD.--October 1953 to current year.

REVISED RECORDS.--WSP 1732: 1954(M).

GAGE.--Water-stage recorder. Altitude of gage is 7,390 ft (2,252 m), from topographic map.

REMARKS.--Records good except those for winter period, 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.

AVERAGE DISCHARGE.--23 years, 334 ft³/s (9.456 m³/s), 242,000 acre-ft/yr (298 hm³/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,150 ft³/s (118 m³/s) May 29, 1958, gage height, 7.07 ft (2.155 m); no flow at times in 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 8, 1950 reached a daily discharge of 13,100 ft³/s (371 m³/s) at station near Lobatos 5.8 mi (9.3 km) upstream, was probably the greatest since at least 1828, based on information from area residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,440 ft³/s (40.8 m³/s) May 31, gage height, 4.57 ft (1.393 m); maximum gage height, 4.88 ft (1.487 m) Nov. 23 (ice jam); minimum daily discharge 29 ft³/s (0.82 m³/s) Sept. 19, 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	274	466	330	230	225	520	532	594	1140	574	192	65
2	266	706	360	225	230	562	502	496	925	562	188	62
3	254	1040	325	235	230	574	520	466	800	538	206	58
4	246	1140	330	225	240	570	568	594	925	496	234	46
5	238	1240	355	215	245	500	664	664	961	514	238	44
6	226	1290	360	210	250	475	776	685	1040	502	206	43
7	226	1330	360	205	255	500	800	792	1240	466	192	41
8	223	1340	360	200	265	495	728	760	1270	425	164	40
9	209	1350	360	205	295	505	706	622	1220	400	145	33
10	212	1240	360	210	320	490	629	508	1250	360	151	31
11	216	1070	360	205	330	502	636	508	1230	302	167	34
12	212	970	360	205	355	490	760	514	1150	266	212	44
13	220	934	360	210	390	460	864	514	925	230	202	40
14	216	907	350	215	410	450	832	520	808	198	174	38
15	212	898	325	215	430	460	657	526	760	174	151	40
16	212	907	295	225	430	455	514	671	699	154	133	43
17	209	916	285	230	430	450	425	943	699	170	115	34
18	212	916	270	235	430	455	380	1020	692	170	105	33
19	234	952	265	240	430	484	350	1060	768	164	90	32
20	254	925	265	240	410	502	320	1020	736	157	80	33
21	258	916	270	240	375	508	290	856	792	190	120	34
22	254	792	275	245	380	502	266	776	824	184	139	34
23	246	671	290	245	385	502	242	792	816	170	181	31
24	258	375	295	245	375	514	238	736	752	192	184	36
25	325	340	290	240	380	574	278	678	671	216	157	44
26	395	274	285	235	395	615	345	792	550	209	130	37
27	405	320	285	230	425	671	375	916	636	242	142	44
28	425	410	275	230	460	699	410	943	636	250	120	62
29	450	370	270	230	500	685	455	1110	657	238	102	118
30	455	295	265	230	---	636	574	1320	643	223	85	118
31	440	---	255	230	---	587	---	1340	---	184	73	---
TOTAL	8482	25300	9690	6980	10275	16392	15636	23736	26215	9120	4778	1392
MEAN	274	843	313	225	354	529	521	766	874	294	154	46.4
MAX	455	1350	360	245	500	699	864	1340	1270	574	238	118
MIN	209	274	255	200	225	450	238	466	550	154	73	31
AC-FT	16820	50180	19220	13840	20380	32510	31010	47080	52000	18090	9480	2760

CAL YR 1975 TOTAL 235271 MEAN 645 MAX 2400 MIN 145 AC-FT 466700
WTR YR 1976 TOTAL 157996 MEAN 432 MAX 1350 MIN 31 AC-FT 313400

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 furnished by Colorado Division of Water Resources. The locations of these diversions are given in the following list.

09010000 Grand River ditch diverts water from tributaries of Colorado River to La Poudre Pass Creek (tributary to Cache la Poudre River) in NW¼ 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.

09012000 Eureka ditch diverts water from tributaries of Tonahutu Creek between headgate in sec.7, T.4 N., R.74 W., and Sprague Pass, in Colorado River basin, to Spruce Creek (tributary to Big Thompson River) in sec.16, T.4 N., R.74 W., in Platte River basin.
REVISIONS (WATER YEARS).--WSP 1313: 1949.

09013000 Alva B. Adams tunnel diverts water from Grand Lake and Shadow Mountain Lake in NW¼ 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.

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.

09022500 Moffat water tunnel diverts water from tributaries of Williams Fork (via August P. Gumlick and Vasquez tunnels, beginning in 1959) between headgates (in secs.20 and 29, T.3 S., R.76 W.) and west portal of August P. Gumlick tunnel (in sec.28, T.3 S., R.76 W.) and from the main stem and tributaries of Fraser River between headgates (in sec.8, T.2 S., R.76 W., and sec.24, T.1 S., R.75 W.) and west portal of Moffat tunnel (in sec.11, T.2 S., R.75 W.), in Colorado River basin, to South Boulder Creek, in sec.2, T.2 S., R.74 W., in Platte River basin. (See sta. 09036000 for diversions by August P. Gumlick tunnel.)

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 SE¼ 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 SW¼NE¼ sec.2, T.8 S., R.78 W., left bank of Bemrose Creek in SW¼SW¼ sec.6, T.8 S., R.77 W., and intercepting intermediate tributaries, transport diversions to north portal of the tunnel.

09046000 Boreas Pass ditch diverts water from tributaries of Blue River between headgate in sec.26, T.7 S., R.77 W., and Boreas Pass, in Colorado River basin, to Tarryall Creek in sec.26, T.7 S., R.77 W., in Platte River basin.
REVISIONS (WATER YEARS).--WSP 1733: 1958.

09047300 Vidler tunnel diverts water from tributaries of Peru Creek (tributary to Snake River) in sec.9, T.5 S., R.75 W., in Blue River basin, to Leavenworth Creek (tributary to South Clear Creek) in sec.10, T.5 S., R.75 W., in Platte River basin.

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 SW¼SW¼ 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.

09061500 Columbine ditch diverts water from tributaries of Eagle River in sec.5, T.8 S., R.79 W., in Colorado River basin to Chalk Creek (tributary to East Fork Arkansas River) in NW¼ sec.9, T.8 S., R.79 W., in Arkansas River basin.

09062000 Ewing ditch diverts water from Piney Creek in sec.11, T.8 S., R.80 W., in Eagle River basin, to Thayer Gulch (tributary to Tennessee Creek) in sec.11, T.8 S., R.80 W., in Arkansas River basin.

TRANSMOUNTAIN DIVERSIONS FROM COLORADO RIVER BASIN IN COLORADO--Continued

09062500 Wurtz ditch diverts water from tributaries of Eagle River between headgate in sec.32, T.7 S., R.80 W., and Tennessee Pass, in Colorado River basin, to West Tennessee Creek (tributary to Tennessee Creek) in sec.17, T.8 S., R.80 W., in Arkansas River basin.

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.

09073000 Twin Lakes tunnel diverts water from tributaries of Roaring Fork River between headgates (in sec.21, T.11 S., R.83 W., and sec.2, T.11 S., R.83 W.), and west portal of Twin Lakes tunnel (in sec.24, T.11 S., R.83 W), in Colorado River basin, to North Fork Lake Creek in sec.22, T.11 S., R.82 W., in Arkansas River basin.

09077160 Charles H. Boustead 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.

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.

09115000 Larkspur ditch diverts water from tributaries of Tomichi Creek between headgates (in sec.11, T.48 N., R.6 E., and sec.1, T.47 N., R.6 E.), and Marshall Pass, in Gunnison River basin, to Poncha Creek (tributary to South Arkansas River) in SE¼ sec.24, T.48 N., R.6 E., in Arkansas River basin.

09118200 Tarbell ditch diverts water from Lake Fork Cochetopa Creek (tributary to Cochetopa Creek), in NW¼ sec.18, T.43 N., R.2 E., in Gunnison River basin, to Lake Fork Saguache Creek (tributary to Middle Fork Saguache Creek) in NE¼ sec.18, T.43 N., R.2 E., in Rio Grande Basin. All records available prior to October 1960 published in WSP 1733.
REVISIONS (WATER YEARS).--WSP 1733: 1949-51.

09121000 Tabor ditch diverts water from tributaries of Cebolla Creek in secs.29 and 36, T.43 N., R.3 W., in Gunnison River basin, to Big Spring Creek (tributary to North Clear Creek) in sec.35, T.43 N., R.3 W., in Rio Grande basin.

09341000 Treasure Pass diversion ditch diverts water from tributaries of Wolf Creek between headgates (in sec.31, T.38 N., R.2 E., and sec.6, T.37 N., R.3 E.), and Wolf Creek Pass, in San Juan River basin, to tributary of South Fork Rio Grande in sec.31, T.38 N., R.2 E., in Rio Grande basin.

09347000 Don La Font ditches 1 and 2 divert water from tributaries of Piedra River between headgates in NW¼ sec.4, T.38 N., R.1 W., and SW¼ sec.33, T.39 N., R.1 W.), and Piedra Pass, in San Juan River basin, to South River in sec.4, T.38 N., R.1 W., in Rio Grande basin.

09348000 Williams Creek-Squaw Pass ditch diverts water from Williams Creek (tributary to Piedra River) in sec.13, T.39 N., R.3 W., in San Juan River basin, to Squaw Creek in sec.10, T.39 N., R.3 W., in Rio Grande basin.

09351000 Pine River-Weminuche Pass ditch diverts water from North Fork Los Pinos River (tributary to Los Pinos River) in sec.4, T.39 N., R.4 W., in San Juan River basin, to Weminuche Creek in sec.33, T.40 N., R.4 W., in Rio Grande basin.

09351500 Weminuche Pass ditch diverts water from left bank of Rincon la Vaca Creek (tributary to Los Pinos River) in sec.5, T.39 N., R.4 W., in San Juan River basin, to Weminuche Creek in sec.33, T.40 N., R.4 W., in Rio Grande basin.

DIVERSIONS, IN ACRE-FEET, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976

Diversion	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Water year
TO PLATTE RIVER BASIN													
09010000 Grand River ditch...	0	0	0	0	0	0	0	1,390	7,910	6,540	2,070	435	18,350
09012000 Eureka ditch.....	0	0	0	0	0	0	0	0	0	5.4	1.1	0	6.5
09013000 Alva B. Adams tunnel	22,300	24,030	29,890	30,870	21,530	23,060	11,770	12,150	9,670	24,020	19,970	26,810	256,100
09021500 Berthoud Pass ditch.	0	0	0	0	0	0	0	0	60	214	80	4.8	359
09022500 Moffat water tunnel.	2,840	2,050	966	700	554	558	922	9,390	25,060	11,030	5,290	3,590	62,950
09046000 Boreas Pass ditch...	0	0	0	0	0	0	0	0	16	37	16	0	68
09047300 Vidler tunnel.....	0	0	0	0	0	0	0	0	31	0	0	0	31
09050590 Harold D. Roberts tunnel.....	1,740	2,820	3,320	3,320	3,140	2,000	0	0	33	22,620	17,770	6,270	63,050
Total.....	26,880	28,900	34,180	34,890	25,220	25,620	12,690	22,930	42,780	64,470	45,200	37,110	400,900
TO ARKANSAS RIVER BASIN													
09042000 Hoosier Pass tunnel.	485	0	0	0	0	0	0	1,030	4,410	2,010	1,570	1,240	10,750
09061500 Columbine ditch.....	0	0	0	0	0	0	0	180	1,020	280	132	50	1,660
09062000 Ewing ditch.....	4.7	0	0	0	0	0	0	226	368	149	93	62	904
09062500 Wurtz ditch.....	0	0	0	0	0	0	0	860	1,310	271	104	41	2,590
09063700 Homestake tunnel....	0	0	0	0	0	0	0	0	0	0	0	0	0
09073000 Twin Lakes tunnel...	74	240	178	141	148	142	204	9,550	21,210	7,490	2,210	270	41,850
09077160 Charles H. Boustead Tunnel.....	0	0	0	0	0	0	0	9,310	14,340	3,190	97	0	26,940
09077500 Busk-Ivanhoe tunnel.	74	0	0	0	0	0	0	968	2,840	632	183	94	4,800
09115000 Larkspur ditch.....	16	0	0	0	0	0	0	23	79	40	41	0	199
Total.....	654	240	178	141	148	142	204	22,150	45,580	14,060	4,430	1,760	89,690
TO RIO GRANDE BASIN													
09118200 Tarbell ditch.....	0	0	0	0	0	0	0	0	262	175	133	92	662
09121000 Tabor ditch.....	0	0	0	0	0	0	0	160	277	93	10	0	540
09341000 Treasure Pass diversion ditch.....	0	0	0	0	0	0	0	45	207	26	0	0	278
09347000 Don La Font ditches No. 1 and 2.....	0	0	0	0	0	0	0	5.9	201	32	0	0	239
09348000 Williams Creek-Squaw Pass ditch.....	0	0	0	0	0	0	0	0	11	75	0	0	86
09351000 Pine River-Weminuche Pass ditch.....	0	0	0	0	0	0	0	0	216	11	0	0	227
09351500 Weminuche Pass ditch	0	0	0	0	0	0	0	536	1,630	49	0	0	2,210
Total.....	0	0	0	0	0	0	0	747	2,800	461	143	92	4,240
Grand Total.....	27,530	29,140	34,360	35,030	25,370	25,760	12,890	45,830	91,160	78,990	49,770	38,960	494,800

NOTE: Due to method of computing water year figures and rounding procedures, totals do not agree.

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in three tables. The first is a table of discharge measurements at low-flow partial-record stations; the second is a table of annual maximum stage and discharge at crest-stage stations, and the third is a table containing storm precipitation and related runoff from storm-runoff partial-record stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a fourth table.

LOW-FLOW PARTIAL-RECORD STATIONS

Measurements of streamflow in the area covered by this report made at low-flow, partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of the stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

DISCHARGE MEASUREMENTS MADE AT LOW-FLOW PARTIAL-RECORD STATIONS DURING WATER YEAR 1976

Station Discharge no.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements Date	Measurements (ft³/s)
		ARKANSAS RIVER BASIN				
07093980	Lake Creek near Hillside, CO	Lat 38°15'49", long 105°39'41", Custer County, in Lake Creek Campground 400 ft (120 m) below road bridge, 0.5 mi (0.8 km) downstream from confluence of North Lake Creek and South Lake Creek, and 2.7 mi (4.3 km) west of Hillside.	9.07	1974-76	10- 7-75	5.56
					11-11-75	4.54
					12-23-75	4.22
					2- 3-76	2.78
					3- 9-76	2.29
					4- 8-76	1.67
					5- 5-76	1.62
					6-11-76	19.9
					6-30-76	9.32
					8-13-76	6.51
					9-17-76	4.60
07094530	Grape Creek near Bradford, CO	Lat 37°57'03", long 105°27'03", Custer County, at unnamed ditch headgate 250 ft (76 m) downstream from road crossing, 1.0 mi (1.6 km) upstream from Crystal Falls Creek, and 7.9 mi (12.7 km) northwest of Bradford.	6.72	1974-76	10- 7-75	0.65
					11-11-75	.54
					12-23-75	.40
					2- 3-76	.39
					3- 9-76	.40
					4- 8-76	1.49
					5- 5-76	7.42
					6-11-76	8.32
					6-30-76	2.66
					8-13-76	.50
					9-17-76	.28
07094700	Antelope Creek near Rosita, CO	Lat 38°01'18", long 105°21'43", Custer County, at downstream end of culvert 50 ft (15 m) downstream from Lapin Creek, and 5.5 mi (8.8 km) south of Rosita.	35.3	1974-76	10- 7-75	0
					11-11-75	<.01
					12-23-75	0
					2- 3-76	.06
					3- 9-76	.28
					4- 8-76	.15
					5- 5-76	.25
					6-11-76	.21
					6-30-76	.01
					8-13-76	e
					9-17-76	e
07094800	Venable Creek near Westcliffe, CO	Lat 38°05'02", long 105°33'52", Custer County, at Rainbow Trail footbridge crossing 500 ft (150 m) north of Abbotts Lodge, and 6.5 mi (10.5 km) southwest of Westcliffe.	2.55	1974-76	10- 7-75	0.73
					11-11-75	.36
					12-23-75	.16
					2- 3-76	.13
					4- 8-76	.04
					5- 5-76	1.01
					6-11-76	13.3
					6-30-76	5.71
					8-13-76	5.19
					9-17-76	.74

CREST-STAGE PARTIAL-RECORD STATIONS

The following table contains annual maximum discharge for crest-stage stations. A crest-stage gage is a device which 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.

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976

Station number	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft³/s)
		PLATTE RIVER BASIN					
06710200	Big Dry Creek tributary at Littleton, Colo.	Lat 39°35'46", long 104°57'06", in SE¼SW¼ sec.24, T.5 S., R.68 W., Arapahoe County, 500 ft (150 m) upstream from S. Clayton St., 1 mi (2 km) east of Littleton.	a1.0	1969-76	8- 3-76	12.13	156
06710250	South Platte River tributary at Englewood, Colo.	Lat 39°38'05", long 104°59'39", in SW¼NE¼ sec.10, T.5 S., R.68 W., Arapahoe County, at culvert at intersection of Fox and Stanford Sts., in Englewood.	1.00	1971-73, 1975-76	9- 7-76	11.29	94
06711450	Bear Creek tributary at Denver, Colo.	Lat 39°39'14", long 105°02'46", in SE¼SW¼ sec.31, T.4 S., R.68 W., Denver County, at culvert at W. Hampden Ave. (U.S. Highway 285), 400 ft (120 m) upstream from mouth, 1,800 ft (550 m) east of S. Sheridan Blvd. in Denver.	a.2	1971-76	7-25-76	10.87	6.1
06711580	Harvard Gulch tributary at Englewood, Colo.	Lat 39°39'34", long 104°58'16", in NE¼SW¼ sec.35, T.4 S., R.68 W., Arapahoe County, 400 ft (120 m) south of E. Dartmouth Ave., 470 ft (140 m) east of S. Downing St. in Englewood.	.98	1971-76	9-13-76	12.21	101
06711600	Sanderson Gulch tributary at Lakewood, Colo.	Lat 39°41'19", long 105°04'54", in NE¼SW¼ sec.23, T.4 S., R.69 W., Jefferson County, 300 ft (91 m) upstream from S. Wadsworth Blvd., 300 ft (91 m) south of W. Florida Ave. in Lakewood.	.42	1969-76	9-13-76	13.16	161
06711650	Lakewood Gulch tributary at Lakewood, Colo.	Lat 39°42'17", long 105°06'33", in SE¼NE¼ sec.16, T.4 S., R.69 W., Jefferson County, at culvert at S. Kipling St. and W. Exposition Ave., in Lakewood.	a.3	1971-76	9-13-76	10.75	13
06711700	Dry Gulch at Lakewood, Colo.	Lat 39°44'29", long 105°06'43", in SE¼SE¼ sec.33, T.3 S., R.69 W., Jefferson County, 800 ft (240 m) upstream from storm drain at Kipling St., 500 ft (150 m) east of intersection of Miller St. and W. 15th Pl. in Lakewood.	.58	1971-76	9-13-76	15.17	220
06714210	South Platte River tributary at Denver, Colo.	Lat 39°47'18", long 104°56'32", in NE¼SE¼ sec.13, T.3 S., R.68 W., Denver County, 350 ft (110 m) north of intersection of Jackson St. and E. 50th Ave., 3,000 ft (910 m) northwest of intersection of Interstate Highway 70 and Colorado Blvd. in Denver.	a.5	1971-76	8- 1-76	13.43	61
06714230	Toll Gate Creek tributary at Aurora, Colo.	(RELOCATED) Lat 39°44'15", long 104°48'40", in NE¼NE¼ sec.6, T.4 S., R.66 W., Arapahoe County, 800 ft (244 m) downstream from intersection of 13th Ave. and Granby St. in Aurora.	.47	1970-76	9-15-76	11.16	35

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--Continued

Station number	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft³/s)
		PLATTE RIVER BASIN--Continued					
06714240	Sand Creek tributary at Aurora, Colo.	Lat 39°45'41", long 104°49'36", in NW¼SW¼ sec.30, T.3 S., R.66 W., Adams County, at culvert at Interstate Highway 225, 300 ft (91 m) west of intersection of E. 32d Av. and Zion St. in Aurora.	a0.3	1971-76	8- 1-76	11.29	38
06714300	Concourse D Storm Drain at Stapleton Airport, at Denver, Colo.	Lat 39°46'08", long 104°53'12", in NE¼NE¼ sec.28, T.3 S., R.67 W., Denver County, in storm sewer 125 ft (38 m) south of Stapleton Airport Firehouse, at Denver.	.12	1970-76	8- 1-76	16.07	2?5
06714310	Sand Creek tributary at Denver, Colo.	Lat 39°47'07", long 104°50'31", in SW¼SW¼ sec.13, T.3 S., R.67 W., Denver County, in median of Andrews Drive Parkway, 50 ft (15 m) downstream from Troy St. in Denver.	.30	1971-76	8- 1-76	12.50	196
06719530	Apex Gulch at Golden, Colo.	Lat 39°43'03", long 105°12'27", in NW¼SE¼ sec.10, T.4 S., R.70 W., Jefferson County, on right bank at bridge on county road, 1,700 ft (518 m) northeast of Heritage Square, 1.1 mi (1.8 km) southwest of intersection of U.S. Highways 6 and 40 in Golden.	a1.5	1974-76	4-30-76	11.15	120
06719540	Lena Gulch tributary at Golden, Colo.	Lat 39°43'30", long 105°10'38", in NE¼NW¼ sec.12, T.4 S., R.70 W., Jefferson County, at culvert on 6th Ave. service road 0.4 mi (0.6 km) west of entrance to Jefferson County Fairgrounds and 0.7 mi (1.1 km) west of Indiana St. in Golden.	---	1975-76	9- 7-76	12.27	49
06719630	Lena Gulch at Lakewood, Colo.	Lat 39°44'28", long 105°08'45", in SW¼SW¼ sec.32, T.3 S., R.69 W., Jefferson County, on right bank at culvert on Alkire St., 1,600 ft (488 m) from Youngfield St. and 2,600 ft (792 m) southwest of intersection of W. 20th Ave. and Youngfield St. in Lakewood.	a9.0	1974-76	9- 7-76	11.84	238
06719750	Ralston Creek tributary at Arvada, Colo.	(RELOCATED) Lat 39°48'55", long 105°08'31", in SE¼SW¼ sec.5, T.3 S., R.69 W., Jefferson County, 300 ft (91 m) upstream from Yank St. and 600 ft (180 m) north of Ralston Rd. in Arvada.	---	1970-76	9-26-76	10.63	(*)
06719760	Van Bibber Creek at Arvada, Colo.	Lat 39°47'54", long 105°08'20", in SE¼SW¼ sec.8, T.3 S., R.69 W., Jefferson County, 300 ft (91 m) upstream (revised) from culvert at Ward Rd., 1,300 ft (400 m) south of W. 58th Ave. in Arvada.	.71	1970-76	9-27-76	10.99	37
06719770	Clear Creek tributary at Arvada, Colo.	Lat 39°49'20", long 105°03'11", in SE¼NE¼ sec.1, T.3 S., R.69 W., Jefferson County, at culvert at Sheridan Blvd., 100 ft (30 m) north of W. 69th Ave. in Arvada.	1.18	1970-76	9-14-76	11.79	126
06719880	Clear Creek tributary No. 1 at Westminster, Colo.	Lat 39°49'54", long 105°00'24", in NE¼SW¼ sec.33, T.2 S., R.68 W., Adams County, at culvert at entrance ramp from Pecos St. to westbound U.S. Highway 36 in Westminster.	.83	1971-76	6-23-76	13.12	109
06719960	Clear Creek tributary No. 2 at Westminster, Colo.	Lat 39°49'50", long 104°58'59", in NW¼SE¼ sec.34, T.2 S., R.68 W., Adams County, on west side of Interstate Highway 25 right-of-way, 500 ft (150 m) north of W. 73d Ave. in Westminster.	.41	1971-76	9-14-76	11.30	114

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--Continued

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft^3/s)
		PLATTE RIVER BASIN--Continued					
06720100	Tuck Drain at Northglenn, Colo.	Lat 39°52'35", long 104°59'16", in NE¼SW¼ sec.15, T.2 S., R.68 W., Adams County, 145 ft (44 m) downstream from intersection of Belford and Melody Sts. in Northglenn.	a0.07	1968-76	6-23-76	12.63	74
06720200	South Platte River tributary No. 2 at Northglenn, Colo.	Lat 39°51'57", long 105°00'27", in SE¼NW¼ sec.21, T.2 S., R.68 W., Adams County, at culvert at Holiday Terrace 50 ft (15 m) south of Holiday Parkway, in Holiday Hills Trailer Park in Northglenn.	.53	1968-76	5-24-76	b17.94	155
06720300	Hillcrest Drain at Northglenn, Colo.	Lat 39°52'57", long 104°59'41" (revised), in NW¼NW¼ sec.15, T.2 S., R. 68 W., Adams County, 180 ft (55 m) upstream from Tuck lateral at Northglenn High School.	.28	1968-76	6-23-76	12.36	209
06720400	Kennedy Drive Drain at Northglenn, Colo.	Lat 39°53'25" revised), long 104° 59'12", in NE¼SW¼ sec.10, T.2 S., R.68 W., Adams County, below culvert at Interstate Highway 25, 0.3 mi (0.5 km) north of 104th Ave. in Northglenn.	.10	1968-71, 1973-76	5-24-76	15.36	113
06720800	Big Dry Creek tributary at Westminster, Colo.	Lat 39°52'03", long 105°02'12", in NE¼NE¼ sec.19, T.2 S., R.68 W., Adams County, at culvert at intersection of W. 94th Ave. and Newton St. in Westminster.	a.4	1972-76	6-23-76	14.69	135
06728200	Skunk Creek at Boulder, Colo.	Lat 39°59'28", long 105°16'07", in NE¼SW¼ sec.6, T.1 S., R.70 W., Boulder County, 900 ft (270 m) northeast of Kohler Reservoir, 2,000 ft (610 m) upstream from Anderson Extension Ditch crossing in Boulder.	a.7	1970-76	7-19-76	10.84	23
06728300	Twomile Canyon at Boulder, Colo.	Lat 40°02'59", long 105°18'16", in NE¼SE¼ sec.14, T.1 N., R.71 W., Boulder County, at culvert at Linden Dr. 1 mi (2 km) northwest of intersection of 4th St. and Kalmia Ave. in Boulder.	a.8	1970-76	1976	(c)	14
06728350	Goose Creek at Boulder, Colo.	Lat 40°01'35", long 105°16'19", in NW¼NE¼ sec.30, T.1 N., R.70 W., Boulder County, 30 ft (9 m) downstream from 19th St., 150 ft (46 m) south of Balsam Ave. in Boulder.	.64	1971-76	7-25-76	12.44	137
06728400	Boulder Creek tributary at Boulder, Colo.	Lat 39°58'48", long 105°14'41", in SE¼NE¼ sec.8, T.1 S., R.70 W., Boulder County, at culvert at State Highway 93 (Broadway), 2,400 ft (730 m) southeast of intersection of Broadway and Table Mesa Drive in Boulder.	.08	1970-76	6-23-76	13.19	80
06730450	Rock Creek tributary at Broomfield, Colo.	Lat 39°54'52", long 105°06'51", in SW¼SE¼ sec.33, T.1 S., R.69 W., Boulder County, at culvert at State Highway 128 (W. 120th Ave.), 5,000 ft (1,520 m) west of Wadsworth Blvd. in Broomfield.	a.2	1971-76	8- 4-76	11.39	11
06753800	Dwl Creek tributary near Rockport, Colo.	Lat 40°55'07", long 104°46'01", in SW¼ sec.15, T.11 N., R.66 W., Weld County, 1,300 ft (400 m) upstream from county road bridge, 2 mi (3 km) east of Rockport.	4.56	1969-76	1976	(c)	50

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--Continued

Station number	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft³/s)
		PLATTE RIVER BASIN--Continued					
06756200	Geary Creek tributary near Rockport, Colo.	Lat 40°58'00", long 104°33'50", in NE¼ sec.32, T.12 N., R.64 W., Weld County, 0.4 mi (0.6 km) upstream from mouth, 13 mi (21 km) northeast of Rockport.	5.70	1969-76	6- 8-76	10.75	147
06758150	Kiowa Creek tributary near Elbert, Colo.	Lat 39°12'06", long 104°30'14", in NW¼NE¼ sec.12, T.10 S., R.64 W., Elbert County, at culvert on county road, 2.2 mi (3.5 km) southeast of Elbert.	.62	1970-76	1976	(c)	<1.0
06758250	Kiowa Creek tributary near Bennett, Colo.	Lat 39°36'47", long 104°27'01", in NW¼SW¼ sec.16, T.5 S., R.63 W., Arapahoe County, 3,500 ft (1,070 m) downstream from bridge on county road, 10 mi (16 km) south of Bennett.	6.41	1970-76	1976	(c)	<38
06758400	Goose Creek near Hoyt, Colo.	Lat 40°02'10", long 104°13'06", in NE¼SW¼ sec.21, T.1 N., R.61 W., Weld County, 500 ft (150 m) upstream from bridge on county road, 7.7 mi (12.4 km) west of Hoyt.	3.75	1969-76	7- 4-76	12.35	29
06758700	Middle Bijou Creek tributary near Deer Trail, Colo.	Lat 39°29'33", long 104°09'46", in SE¼SE¼ sec.25, T.6 S., R.61 W., Elbert County, 300 ft (91 m) downstream from gas line crossing, 10.4 mi (16.7 km) southwest of Deer Trail.	2.27	1970-76	5-21-76	10.92	19[illegible]
06759700	Sand Creek tributary near Lindon, Colo.	Lat 39°43'54", long 103°21'18", in NE¼ sec.6, T.4 S., R.53 W., Washington County, 0.5 mi (0.8 km) upstream from bridge on U.S. Highway 36, 3 mi (5 km) east of Lindon.	2.35	1969-76	9-15-76	11.31	83
06759900	Antelope Draw near Union, Colo.	Lat 40°25'57", long 103°36'15", in NW¼NE¼ sec.2, T.5 N., R.56 W., Morgan County, 0.5 mi (0.8 km) upstream from bridge on State Highway 71, 6.5 mi (10.5 km) northwest of Union. Prior to Jan. 15, 1975, at site 0.3 mi (0.5 km) downstream.	1.45	1969-76	1976	(c)	<12
06760200	Igo Creek tributary near Keota, Colo.	Lat 40°47'24", long 103°57'18", in SW¼SW¼ sec.34, T.10 N., R.59 W., Weld County, 0.3 mi (0.5 km) upstream from bridge on county road, 8.5 mi (13.7 km) northeast of Keota.	1.38	1969-76	1976	(c)	<5.0
06760300	Darby Creek near Buchanan, Colo.	Lat 40°52'48", long 103°19'12", in SW¼ sec.32, T.11 N., R.53 W., Logan County, 1.2 mi (1.9 km) north of section road, 8.8 mi (14.2 km) northwest of Buchanan.	7.39	1969-76	7- 5-76	11.95	2[illegible]
06760430	Spring Canyon Creek near Peetz, Colo.	Lat 40°58'12", long 103°00'34", in NW¼SE¼ sec.36, T.12 N., R.51 W., Logan County, 500 ft (150 m) downstream from access road to windmill, 5 mi (8 km) east of Peetz.	d22.3	1969-76	1976	(c)	<7.0

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--Continued

Station number	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft³/s)
		KANSAS RIVER BASIN					
06821300	North Fork Arikaree River tributary near Shaw, Colo.	Lat 39°31'12", long 103°26'35", in NE¼ sec.21, T.6 S., R.54 W., Lincoln County, 800 ft (240 m) upstream from section road, 5 mi (8 km) southwest of Shaw.	5.72	1969-76	9-15-76	11.02	172
06821400	North Fork Black Wolf Creek near Vernon, Colo.	Lat 39°54'24", long 102°16'08", in SW¼SE¼ sec.2, T.2 S., R.44 W., Yuma County, 50 ft (15 m) downstream from unnamed tributary, 4 mi (6 km) southeast of Vernon.	e17.1	1969-76	1976	(c)	<79
06822600	Patent Creek near St. Petersburg, Colo.	Lat 40°29'50", long 102°46'30", in SW¼ sec.7, T.6 N., R.48 W., Logan County, 0.2 mi (0.3 km) downstream from fence line, 4.5 mi (7.2 km) southeast of St. Petersburg.	2.79	1969-76	8-22-76	10.57	19
06825000	South Fork Republican River near Idalia, Colo.	Lat 39°36'59", long 102°14'32", in SE¼SW¼ sec.13, T.5 S., R.44 W., Yuma County, 0.7 mi (1.1 km) east of U.S. Highway 385 and 6.5 mi (10.5 km) southeast of Idalia.	a1,300	1950-71, 1972-76	9-19-76	12.08	f11,000
06825100	Landsman Creek tributary near Stratton, Colo.	Lat 39°06'43", long 102°10'25", in NE¼NE¼ sec.9, T.11 S., R.47 W., Kit Carson County, 800 ft (240 m) upstream from county road, 14 mi (23 km) southwest of Stratton.	5.41	1972-76	5-22-76	11.83	99
06826900	Sand Creek near Hale, Colo.	Lat 39°41'50", long 102°10'37", in SW¼NW¼ sec.22, T.4 S., R.43 W., Yuma County, 1,000 ft (300 m) downstream from bridge, 5 mi (8 km) northwest of Hale.	g17.8	1969-76	9- 4-76	13.58	136
06834200	Spring Creek tributary near Amherst, Colo.	Lat 40°45'09", long 102°16'12", in Sedgwick County, 800 ft (240 m) upstream from road and 7.5 mi (12.1 km) northwest of Amherst.	h47.8	1969-76	1976	(c)	<4.5
06857500	Big Timber Creek tributary near Arapahoe, Colo.	Lat 38°59'18", long 102°16'50", in NE¼ sec.24, T.12 S., R.44 W., Cheyenne County, 800 ft (240 m) upstream from unnamed tributary, 11.5 mi (18.5 km) northwest of Arapahoe.	7.84	1969-76	9-14-76	11.62	239
		ARKANSAS RIVER BASIN					
07099250	Soda Creek near Livesey, Colo.	Lat 38°11'46", long 104°50'44", in SW¼NW¼ sec.25, T.21 S., R.67 W., Pueblo County, 500 ft (150 m) south of Red Creek Rd., 6.6 mi (10.6 km) southwest of Livesey.	8.35	1970-76	9-13-76	b16.62	3,340
07107600	St. Charles River tributary near Goodpasture, Colo.	Lat 38°04'05", long 104°46'33", in NE¼NE¼ sec.9, T.23 S., R.66 W., Pueblo County, 600 ft (180 m) upstream from bridge on Burnt Mill Rd., 8 mi (13 km) southeast of Goodpasture.	2.87	1970-76	8- 1-76	14.09	967
07112700	Butte Creek near Delcarbon, Colo.	Lat 37°42'24", long 104°51'58", in SE¼SE¼ sec.10, T.27 S., R.67 W., Huerfano County, 1,200 ft (370 m) downstream from culvert at State Highway 69, 7.0 mi (11.3 km) northwest of Walsenburg.	3.20	1970-76	7-22-76	14.88	1,540

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--Continued

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft^3/s)
		ARKANSAS RIVER BASIN--Continued					
07120600	Timpas Creek tributary near Thatcher, Colo.	Lat 37°34'18", long 104°06'10", in NE¼ sec.34, T.28 S., R.60 W., Las Animas County, 150 ft (46 m) downstream from county road, 1.5 mi (2.4 km) north of Thatcher.	j6.98	1970-76	10- 4-75	10.96	94
07123700	Mustang Creek near Karvel, Colo.	Lat 38°33'54", long 103°31'18", in SW¼ sec.13, T.17 S., R.55 W., Lincoln County, 0.3 mi (0.5 km) upstream from bridge on county road, 12 mi (19 km) south of Karvel.	4.74	1969-76	7-13-76	10.45	67
07124700	Gray Creek near Engleville, Colo.	Lat 37°09'36", long 104°25'38", in NW¼ sec.23, T.33 S., R.63 W., Las Animas County, 1,000 ft (300 m) downstream from bridge on county road, 2.8 mi (4.5 km) northeast of Engleville.	4.95	1970-76	1976	(c)	50
07125050	Tingley Canyon Creek near Ludlow, Colo.	Lat 37°16'48", long 104°32'04", in SW¼SW¼ sec.2, T.32 S., R.64 W., Las Animas County, 400 ft (120 m) upstream from county road crossing, 4.5 mi (7.2 km) southeast of Ludlow.	6.49	1970-76	7-25-76	10.74	121
07126400	Red Rock Canyon Creek near Bloom, Colo.	Lat 37°33'24", long 103°50'20", in SE¼SE¼ sec.36, T.28 S., R.58 W., Las Animas County, 1,000 ft (300 m) upstream from county road crossing, 11 mi (18 km) southeast of Bloom.	k3.62	1970-76	7-22-76	b16.20	1,100
07126450	Tobe Arroyo near Tobe, Colo.	Lat 37°11'43", long 103°36'33", in sec.5, T.33 S., R.55 W., Las Animas County, 550 ft (170 m) upstream from county road, 1.6 mi (2.6 km) south of Tobe.	8.45	1970-76	10- 7-75	10.04	24
07129100	Rule Creek near Ninaview, Colo.	Lat 37°33'57", long 103°10'26", in sec.31, T.28 S., R.51 W., Las Animas County, 100 ft (30 m) downstream from farm access road, 1.3 mi (2.1 km) south of county road, 6.7 mi (10.8 km) southeast of Ninaview.	7.69	1970-76	8- 3-76	10.94	112
07129200	Muddy Creek tributary near Ninaview, Colo.	Lat 37°35'56", long 103°19'48", in SE¼SE¼ sec.15, T.28 S., R.53 W., Las Animas County, 0.2 mi (0.3 km) upstream from bridge on county road, 5.8 mi (9.3 km) southwest of Ninaview.	2.73	1970-76	1976	(c)	32
07133200	Clay Creek tributary near Deora, Colo.	Lat 37°43'27", long 102°44'24", in NW¼ sec.6, T.27 S., R.47 W., Prowers County, 1,000 ft (300 m) upstream from mouth, 13 mi (21 km) northeast of Deora.	1.60	1969-76	1976	(c)	15
07134300	Wolf Creek near Carlton, Colo.	Lat 37°52'30", long 102°28'54", in NW¼NW¼ sec.21, T.25 S., R.45 W., Prowers County, 0.3 mi (0.5 km) upstream from road to windmill, 15 mi (24 km) southwest of Carlton.	15.7	1969-76	7-19-76	b14.55	1,250

ANNUAL MAXIMUM DISCHARGE AT CREST-STAGE PARTIAL-RECORD STATIONS DURING WATER YEAR 1976--Continued

Station number	Station name	Location	Drainage area (mi²)	Period of record	Annual maximum Date	Gage height (feet)	Discharge (ft³/s)
		ARKANSAS RIVER BASIN--Continued					
D71358DD	Wild Horse Creek tributary near Hartman, Colo.	Lat 38°15'45", long 102°09'42", in NE¼ sec.5, T.21 S., R.42 W., Prowers County, 0.2 mi (0.3 km) upstream from bridge on county road, 10.5 mi (16.9 km) northeast of Hartman.	7.35	1969-76	1976	(c)	<21
07138520	Little Bear Creek tributary near Lycan, Colo.	Lat 37°37'48", long 102°07'30", in SW¼ sec.2, T.28 S., R.42 W., Baca County, 1,100 ft (340 m) downstream from bridge on State Highway 89, 5 mi (8 km) north of Lycan.	16.6	1969-76	8- 2-76	11.36	131
07153450	Longs Canyon Creek near Tobe, Colo.	Lat 37°05'24", long 103°41'09", in SW¼ sec.10, T.34 S., R.56 W., Las Animas County, 1,500 ft (460 m) upstream from bridge on county road, 10 mi (16 km) southwest of Tobe.	5.16	1970-76	9-15-76	11.43	42
07154800	Cimarron River tributary near Edler, Colo.	Lat 37°05'10", long 102°45'38", in NE¼ sec.13, T.34 S., R.48 W., Baca County, at culvert at county road, 6.3 mi (10.1 km) south of Edler.	3.11	1970-76	6- 5-76	10.03	1.5

* Discharge not determined.
a Approximately.
b From floodmarks.
c Peak stage did not reach bottom of gage.
d of which 12.3 mi² are probably noncontributing.
e of which 9.18 mi² are probably noncontributing.
f Estimated.
g of which 5.53 mi² are probably noncontributing.
h of which 29.3 mi² are probably noncontributing.
j of which 1.91 mi² are probably noncontributing.
k of which 0.22 mi² are probably noncontributing.

SUMMARY OF FLOOD STAGE AND DISCHARGE

The following table contains the record of peak flows at selected sites for floods which occurred during 1976. Some of the sites are gaging stations or former gaging stations where new peak discharges occurred. Indirect discharge measurements were made to determine peaks of the flood.

PEAK DISCHARGES AT SELECTED SITES

Station number	Location and station name	Drainage area (mi²)	Period of record	Maximum previously known			Maximum 1976		
				Date	Gage height (feet)	Discharge (ft³/s)	Day	Gage height (feet)	Discharge (ft³/s)
	PLATTE RIVER BASIN								
--------	Dry Gulch near Estes Park (lat 40°24'22", long 105°28'37")...	2.00					July 31		3,210
--------	Dry Gulch at Estes Park (lat 40°22'42", long 105°29'15")...	6.12					--do---		4,460
--------	Big Thompson River below Estes Park (lat 40°22'59", long 105°28'11")...	164					--do---		4,330
--------	Big Thompson River tributary below Loveland Heights (lat 40°23'44", long 105°27'34")...	1.37					--do---		8,700
--------	Oark Gulch at Glen Comfort (lat 40°23'44", long 105°26'17")...	1.00					--do---		7,210
--------	Noels Draw at Glen Comfort (lat 40°23'25", long 105°26'00")...	3.37					--do---		6,910
--------	Rabbit Gulch near Drake (lat 40°24'23", long 105°24'17")...	3.41					--do---		3,540
--------	Long Gulch near Drake (lat 40°23'46", long 105°24'04")...	1.99					--do---		5,500
--------	Big Thompson River above Drake (lat 40°25'39", long 105°20'37")...	189					--do---		28,200
--------	North Fork Big Thompson River at Glen Haven (lat 40°27'17", long 105°27'05")...	18.5					--do---		888
--------	Fox Creek at Glen Haven (lat 40°27'17", long 105°27'13")...	7.18					--do---		1,300
--------	West Creek near Glen Haven (lat 40°26'32", long 105°27'40")...	23.1					--do---		2,320
--------	Devils Gulch near Glen Haven (lat 40°26'24", long 105°27'31")...	.91					--do---		2,810
--------	North Fork Big Thompson River tributary near Glen Haven (lat 40°27'14", long 105°26'04")...	1.38					--do---		9,670
--------	Black Creek near Glen Haven (lat 40°27'04", long 105°25'28")...	3.17					--do---		1,990
--------	Miller Fork near Glen Haven (lat 40°27'47", long 105°25'13")...	13.9					--do---		2,060
--------	North Fork Big Thompson River tributary near Drake (lat 40°26'55", long 105°24'11")...	1.26					--do---		3,240
06736000	North Fork Big Thompson River at Drake (lat 40°26'00", long 105°20'18")...	85.1	a1940-76	1965	5.66	1,290	--do---	9.21	8,710
--------	Big Thompson River below Drake (lat 40°25'52", long 105°19'37")...	276					--do---		30,100
--------	Big Thompson River below Green Ridge Glade (lat 40°25'05", long 105°12'02")...	311					--do---		27,000
--------	Redstone Creek near Masonville (lat 40°30'19", long 105°11'49")...	29.1					--do---		2,640
--------	Little Thompson River near Estes Park (lat 40°20'06", long 105°25'48")...	2.77					--do---		1,940
--------	Dale Creek tributary at Virginia Dale (lat 40°57'36", long 105°21'39")...	.68					--do---		727
--------	Deadman Creek near Virginia Dale (lat 40°55'50", long 105°20'57")...	23.7					--do---		7,400
--------	Stonewall Creek near Livermore (lat 40°48'37", long 105°15'01")...	31.9					--do---		3,470
--------	Lone Pine Creek near Livermore (lat 40°47'44", long 105°17'24")...	86.3					--do---		2,590
06751490	North Fork Cache la Poudre River at Livermore (lat 40°47'15", long 105°15'08")...	539	1904, 1929-31, 1947-62	b1904	----	20,000	--do---		9,460
--------	Rist Canyon near Bellvue (lat 40°37'43", long 105°12'44")...	5.27					--do---		2,710

a Record not published; available from State Engineer's Office.
b Site and datum then in use.

DISCHARGE MEASUREMENTS MADE AT MISCELLANEOUS SITES DURING WATER YEAR 1976

Stream	Tributary to	Location	Drainage area (mi²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft³/s)
		PLATTE RIVER BASIN				
Grizzly Creek near Coalmont	North Platte River	Lat 40°32'46", long 106°24'06"	-----	-------	5-20-76	85
					8-26-76	4.3
Little Grizzly Creek above Chedsey Creek, near Coalmont	Grizzly Creek	Lat 40°34'25", long 106°31'15"	-----	-------	5-19-76	66
					8-26-76	4.0
Little Grizzly Creek near Coalmont	Grizzly Creek	Lat 40°34'40", long 106°27'00"	-----	-------	5-19-76	111
					8-26-76	3.7
North Platte River near Hebron	Platte River	Lat 40°38'32", long 106°25'06"	-----	-------	5-20-76	334
					8-26-76	14
Roaring Fork River below Beaver Creek, near Walden	North Platte River	Lat 40°40'59", long 106°27'38"	-----	-------	5-19-76	62
					8-27-76	62
Hell Creek near mouth, near Walden	North Fork North Platte River	Lat 40°43'51", long 106°27'12"	-----	-------	5-19-76	17
					8-27-76	11
North Fork North Platte River near Walden	North Platte River	Lat 40°44'06", long 106°25'10"	-----	-------	5-19-76	48
					8-27-76	70
North Platte River below North Fork North Platte River, near Walden	Platte River	Lat 40°43'46", long 106°23'53"	-----	-------	5-19-76	480
					8-27-76	127
North Fork Michigan River below Seven Utes Mountain, near Gould	Michigan River	Lat 40°29'53", long 106°58'10"	-----	-------	5-18-76	26
					8-24-76	8.9
Michigan River below Gould	North Platte River	Lat 40°36'47", long 106°05'04"	-----	-------	5-18-76	130
					8-25-76	17
Illinois River near Larand	Michigan River	Lat 40°36'57", long 106°16'50"	-----	-------	5-20-76	65
					8-26-76	1.0
Illinois River near Walden	Michigan River	Lat 40°43'35", long 106°17'23"	-----	-------	5-18-76	17
					8-26-76	.16
Willow Creek below Rand	Illinois River	Lat 40°29'18", long 106°12'56"	-----	-------	5-20-76	30
					8-24-76	3.3
Michigan River near Walden	North Platte River	Lat 40°43'46", long 106°15'48"	-----	-------	5-18-76	21
					8-25-76	15
Canadian River above Muddy Creek	North Platte River	Lat 40°41'43", long 106°03'57"	-----	-------	5-18-76	30
					8-25-76	6.9
Canadian River at Dunaways Bridge	North Platte River	Lat 40°48'28", long 106°14'13"	-----	-------	5-18-76	20
					8-26-76	8.4
Pinkham Creek near Northgate	North Platte River	Lat 40°54'47", long 106°17'26"	-----	-------	5-17-76	2.6
			-----	-------	8-25-76	2.3
South Fork Big Creek near Pearl	Big Creek	Lat 40°57'50", long 106°34'06"	-----	-------	5-17-76	27
					8-25-76	12
Fall River near mouth	Clear Creek	Lat 39°45'22", long 105°33'21"	23.5	-------	6-21-76	35
Clear Creek below Idaho Springs	South Platte River	Lat 39°44'32", long 105°29'51"	259	-------	6-28-76	406

07081200 - ARKANSAS RIVER NEAR LEADVILLE, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			MAY		
15...	250	.5	18...	160	4.0
NOV			JUN		
18...	190	.0	16...	85	6.5
DEC			JUL		
18...	90	.0	13...	115	10.5
JAN			AUG		
21...	300	.0	17...	190	10.0
FEB			SEP		
18...	280	.0	16...	220	12.0
MAR					
16...	280	.5			

07083700 - ARKANSAS RIVER NEAR MALTA, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			MAY		
14...	130	9.0	18...	225	7.5
NOV			JUN		
19...	70	3.5	09...	80	5.5
DEC			16...	90	8.0
16...	255	.0	JUL		
JAN			14...	105	9.0
22...	220	.0	AUG		
FEB			17...	160	14.5
18...	90	.0	SEP		
MAR			16...	220	7.0
17...	125	.5			
APR					
15...	165	3.5			

07087200 - ARKANSAS RIVER AT BUENA VISTA, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			APR		
16...	120	4.5	15...	150	7.0
NOV			MAY		
19...	85	1.0	19...	200	4.5
DEC			JUN		
18...	205	.0	17...	75	5.5
JAN			JUL		
22...	200	.0	14...	100	9.5
FEB			AUG		
19...	140	.5	18...	110	14.0
MAR			SEP		
17...	125	3.5	17...	155	12.5

07089000 - COTTONWOOD C BL HOT SPRINGS, NR BUENA VISTA, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			MAY		
16...	130	5.0	19...	140	5.5
NOV			JUN		
17...	130	5.5	09...	60	4.0
DEC			17...	80	4.0
18...	145	3.0	JUL		
JAN			14...	90	12.0
22...	140	2.5	AUG		
FEB			18...	110	10.5
19...	135	2.5	SEP		
MAR			17...	140	8.5
17...	140	8.5			
APR					
15...	135	7.0			

07091200 - ARKANSAS RIVER NEAR NATHROP, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			APR		
16...	175	7.0	13...	160	9.0
NOV			MAY		
20...	122	.0	20...	360	3.0
DEC			JUN		
19...	195	.0	17...	95	8.0
JAN			JUL		
19...	210	1.5	14...	90	16.0
FEB			AUG		
17...	175	2.5	18...	140	14.0
MAR			SEP		
15...	160	4.0	17...	190	12.5

07094500 - ARKANSAS RIVER AT PARKDALE, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			APR		
17...	320	7.5	16...	300	9.5
NOV			MAY		
20...	220	2.0	20...	500	9.5
DEC			JUN		
19...	335	1.0	18...	100	8.0
JAN			JUL		
19...	285	1.0	15...	115	16.0
FEB			AUG		
17...	285	4.5	19...	220	19.0
MAR			SEP		
15...	275	6.0	17...	300	18.5

07094600 - SOUTH COLONY CREEK NEAR WESTCLIFFE, CO.

DATE	SPF-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPF-CIFIC CON-DUCT-ANCF (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT			JUN		
07...	100	6.5	11...	70	8.0
NOV			JUL		
11...	--	.0	12...	70	13.5
DEC			AUG		
23...	--	.0	13...	90	8.5
FEB			SEP		
03...	--	.5	17...	105	10.5
MAY					
05...	--	3.5			

07094900 - MIDDLE TAYLOR CREEK NEAR WESTCLIFFE, CO.

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCF (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT			JUN		
07...	215	10.0	11...	105	10.5
16...	218	7.0	30...	155	17.0
DEC			JUL		
23...	220	.0	12...	50	12.0
FEB			AUG		
03...	--	.0	13...	185	13.0
APR			SEP		
08...	215	.5	17...	210	10.0
MAY					
05...	150	6.0			
11...	125	7.5			

07099100 - BEAVER CREEK NEAR PORTLAND, CO.

DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)	DATE	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	TEMPER-ATURE (DEG C)
OCT			APR		
10...	2020	20.0	16...	2800	12.0
NOV			MAY		
17...	1800	12.5	21...	2400	14.0
DEC			JUN		
19...	2350	8.0	18...	2500	17.0
JAN			JUL		
23...	2000	10.0	19...	2600	27.0
FEB			AUG		
20...	2100	2.5	05...	--	25.0
MAR			SEP		
18...	2700	21.0	23...	1600	22.0

07096500 - FOURMILE CREEK NEAR CANON CITY, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			APR		
10...	1320	17.5	16...	1300	8.5
NOV			JUN		
17...	540	11.5	18...	520	16.0
DEC			JUL		
19...	600	12.5	15...	1250	20.0
JAN			AUG		
23...	540	4.0	20...	1100	14.0
FEB			SEP		
19...	510	14.5	23...	950	21.0
MAR					
18...	700	12.5			

07103700 - FOUNTAIN CREEK NEAR COLORADO SPRINGS, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			APR		
01...	150	9.5	07...	380	10.0
29...	415	7.0	29...	390	8.0
NOV			MAY		
03...	400	8.0	18...	380	13.5
25...	360	.0	JUN		
DEC			04...	400	17.0
30...	410	5.0	24...	318	16.0
JAN			30...	345	17.0
27...	430	.0	JUL		
28...	355	2.0	27...	335	18.5
FEB			AUG		
10...	358	7.0	04...	222	16.5
25...	362	5.0	SEP		
MAR			03...	545	17.5
04...	460	.5	29...	260	13.0
25...	383	11.0			

07103750 - MONUMENT CREEK AT MONUMENT, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
JAN			MAY		
15...	180	.0	14...	118	20.5
FEB			JUN		
09...	140	4.5	03...	130	21.5
MAR			JUL		
03...	165	.0	01...	180	26.5
25...	--	15.5			
APR					
06...	125	12.5			

07103800 - WEST MONUMENT CREEK AT AIR FORCE ACADEMY, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			MAY		
02...	100	7.5	14...	95	15.5
NOV			JUN		
03...	110	4.0	03...	100	15.0
DEC			JUL		
02...	110	3.5	28...	120	16.0
JAN			SEP		
02...	90	.0	02...	118	14.0
28...	98	.0	29...	160	7.0
APR					
06...	80	3.5			

07103950 - KETTLE CREEK NEAR BLACK FOREST, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
JAN			MAY		
15...	222	1.0	14...	260	15.0
FEB			JUN		
09...	180	1.5	03...	255	19.0
MAR			08...	240	24.5
03...	220	.5	SEP		
APR			29...	280	7.0
07...	230	14.0			

07104000 - MONUMENT CR. AT PIKEVIEW

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
29...	312	8.0
NOV		
25...	330	.0
DEC		
30...	300	.0
JAN		
16...	310	.0
27...	340	.0
FEB		
10...	245	7.0
25...	308	5.0
MAR		
04...	240	.5
25...	305	15.0
APR		
07...	290	15.5
29...	230	10.0
MAY		
17...	240	23.0
JUN		
03...	250	20.5
24...	223	23.0
JUL		
01...	340	17.5
28...	320	22.0
SEP		
02...	300	26.0
29...	340	18.5

07105500 - FOUNTAIN CREEK AT COLORADO SPRINGS, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
28...	720	11.0
NOV		
25...	740	1.5
DEC		
30...	700	3.5
JAN		
16...	700	2.0
26...	1200	2.5
FEB		
10...	610	6.5
24...	900	10.5
MAR		
04...	1050	5.5
26...	950	9.5
APR		
29...	484	9.0
MAY		
17...	560	16.5
27...	580	15.0
JUN		
04...	800	21.0
24...	179	23.0
29...	800	25.0
JUL		
27...	750	23.0
AUG		
04...	320	23.0
SEP		
03...	875	22.0
27...	260	9.0
28...	500	16.5

07105800 - FOUNTAIN CREEK AT SECURITY, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
NOV		
04...	925	12.0
DEC		
02...	950	8.5
JAN		
16...	1000	8.0
FEB		
10...	680	13.0
MAR		
04...	820	6.5
APR		
08...	820	12.5
MAY		
12...	890	20.0
JUN		
04...	950	19.5
23...	690	17.5
29...	1010	26.0
30...	1020	28.5
JUL		
28...	890	28.0
AUG		
04...	440	20.0
27...	950	26.0
SEP		
28...	750	18.5

07105900 - JIMMY CAMP CREEK AT FOUNTAIN, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
FEB		
12...	2880	7.0
MAR		
04...	2100	3.5
APR		
06...	3400	15.5
MAY		
13...	3500	15.0
JUN		
01...	3000	27.0
04...	3500	29.0
30...	3800	28.5
JUL		
27...	1880	27.0
AUG		
27...	2000	27.0
SEP		
28...	3500	23.0

07106500 - FOUNTAIN CREEK AT PUEBLO, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
02...	3000	17.5
10...	2100	16.0
15...	3000	16.5
NOV		
04...	2100	17.0
12...	1800	8.5
21...	2000	2.0
DEC		
02...	--	10.0
08...	1800	9.0
26...	1700	5.0
JAN		
28...	1520	7.5
FEB		
11...	1280	2.0
17...	1700	4.5
26...	1450	13.0
MAR		
02...	1600	15.5
15...	1700	9.0
29...	2000	13.5
APR		
06...	2000	9.5
17...	2000	9.5
19...	1520	17.5
APR		
26...	2900	7.5
MAY		
11...	2400	24.0
20...	2100	17.5
25...	1950	21.0
JUN		
01...	2500	22.0
07...	975	15.5
18...	2350	20.0
29...	2400	21.0
JUL		
02...	2700	26.0
14...	--	22.5
20...	3200	23.0
26...	1100	22.0
AUG		
05...	1000	21.5
27...	2350	18.0
SEP		
03...	2400	27.0
08...	1800	18.0
24...	2500	15.0
28...	1200	11.5

07107900 - GREENHORN CREEK NEAR RYE, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
08...	100	7.0
NOV		
14...	105	2.0
DEC		
24...	105	.5
JAN		
22...	100	.0
FEB		
21...	105	.0
MAR		
16...	82	2.0
MAY		
20...	70	8.5
JUN		
22...	70	11.0
JUL		
20...	80	13.0
AUG		
17...	90	15.0
SEP		
10...	93	13.0

07108050 - GREENHORN CREEK NEAR COLORADO CITY, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			MAY		
08...	900	12.0	20...	670	13.0
NOV			JUN		
14...	1600	3.0	17...	1220	16.0
DEC			22...	1100	22.0
24...	1850	2.0	JUL		
JAN			16...	1180	20.0
22...	1850	1.0	20...	1150	20.0
FEB			AUG		
21...	2000	.5	17...	1140	22.5
MAR			20...	888	16.5
16...	1750	10.5	SEP		
APR			16...	1310	23.0
19...	--	14.5	20...	780	15.0
23...	1490	18.5			

07109500 - ARKANSAS RIVER NEAR AVONDALE, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
JAN			JUN		
29...	925	6.5	18...	425	16.0
FEB			21...	540	22.0
11...	900	10.5	23...	420	21.0
MAR			JUL		
02...	760	8.5	02...	378	20.5
31...	960	11.0	14...	420	25.0
APR			23...	--	22.5
02...	--	15.0	AUG		
08...	580	15.0	06...	690	24.0
22...	740	13.5	11...	640	23.5
MAY			18...	548	25.0
04...	640	10.5	SEP		
12...	775	15.5	08...	1000	19.5
26...	725	20.0	15...	650	20.5

07119500 - APISHAPA RIVER NEAR FOWLER, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			MAY		
10...	1900	13.0	19...	2750	27.0
NOV			JUN		
13...	3000	9.5	07...	2000	24.0
DEC			23...	2800	24.0
19...	3250	7.5	JUL		
JAN			27...	2500	25.0
21...	3200	7.5	AUG		
MAR			01...	780	20.0
19...	3000	13.0	23...	2700	22.5
APR			SEP		
16...	3200	15.5	15...	830	16.0

07121500 - TIMPAS CREEK AT MOUTH NEAR SWINK, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			APR		
10...	2200	14.0	16...	2500	15.0
NOV			MAY		
12...	1850	7.5	19...	2400	24.0
DEC			JUN		
23...	2800	5.5	07...	1500	24.0
JAN			23...	1200	24.0
21...	2600	6.0	JUL		
FEB			27...	1800	24.5
20...	3750	6.0	AUG		
MAR			23...	2000	25.0
19...	2250	10.0			

07122400 - CROOKED ARROYO NEAR SWINK, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			APR		
10...	1900	10.5	16...	3200	15.0
NOV			MAY		
12...	1350	7.0	19...	2900	21.5
DEC			JUN		
19...	3300	9.0	07...	1100	21.5
JAN			23...	1500	23.0
20...	3400	8.5	AUG		
FEB			23...	3200	24.5
20...	3500	4.0	SEP		
MAR			14...	--	19.5
18...	3000	17.0			

07124000 - ARKANSAS RIVER AT LAS ANIMAS, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			MAY		
28...	3500	18.0	11...	2800	25.0
NOV			28...	1140	23.5
04...	3500	19.0	JUN		
DEC			07...	830	25.0
03...	2450	9.0	23...	1200	25.0
JAN			JUL		
07...	3500	.5	01...	1400	31.0
FEB			09...	1000	28.0
06...	3500	.0	24...	2850	24.5
18...	3800	9.0	AUG		
24...	2850	16.5	04...	1150	21.5
MAR			05...	1000	28.5
09...	3500	18.0	17...	2650	29.0
APR			31...	3000	23.0
04...	3900	23.5	SEP		
10...	3750	22.0	15...	2900	30.5
23...	4000	26.5	29...	840	15.0

07124200 - PURGATOIRE RIVER AT MADRID, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			MAY		
08...	380	17.0	18...	290	18.0
NOV			JUN		
11...	420	8.0	22...	280	23.0
DEC			JUL		
22...	400	.0	20...	200	12.0
JAN			21...	300	14.0
19...	375	.0	AUG		
FEB			19...	350	26.0
17...	415	5.5	SEP		
MAR			09...	300	15.0
17...	400	14.5			
APR					
15...	390	11.5			

07124300 - LONG CANYON CREEK NEAR MADRID, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
APR			AUG		
15...	560	14.0	18...	600	21.0
JUL			SEP		
20...	250	16.0	09...	550	14.5

07126100 - LUNING ARROYO NEAR MODEL, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
JUL 21...	595	19.0

07126200 - VAN BREMER ARROYO NEAR MODEL, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 09...	1700	13.5	APR 16...	1800	12.0
NOV 12...	1750	5.0	MAY 19...	1850	16.0
DEC 23...	2100	3.5	JUN 22...	1800	25.0
JAN 20...	2000	3.5	JUL 21...	380	20.0
FEB 18...	1820	6.0	AUG 20...	1520	26.0
MAR 18...	1850	11.0	SEP 10...	1580	16.0

07126300 - PURGATOIRE RIVER NEAR THATCHER, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT 09...	1950	16.0	MAR 18...	4000	13.0
NOV 12...	5000	4.0	APR 16...	4100	12.5
DEC 23...	6000	.0	MAY 19...	3400	20.0
JAN 20...	4400	.5	JUN 22...	3500	25.0
FEB 18...	3750	6.0	AUG 20...	2400	30.0

07128500 - PURGATOIRE RIVER NEAR LAS ANIMAS, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
29...	3200	12.0
NOV		
04...	3300	12.0
DEC		
05...	4200	7.5
JAN		
06...	4500	.5
FEB		
06...	4600	3.0
18...	4500	9.0
24...	3000	7.5
MAR		
09...	3300	9.5
APR		
04...	4750	17.0
20...	5800	19.0
MAY		
11...	4900	22.0
28...	4000	25.0
JUN		
07...	3800	29.5
08...	1050	22.5
16...	2550	24.0
JUL		
09...	4000	31.0
AUG		
18...	3250	27.0
SEP		
01...	4400	21.0
15...	5500	24.0

07133000 - ARKANSAS RIVER AT LAMAR, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
01...	--	9.0
07...	3500	20.0
28...	4500	8.0
30...	4000	14.0
NOV		
05...	4500	8.0
07...	4300	6.0
13...	4400	6.0
DEC		
03...	4500	5.5
FEB		
06...	5500	.0
18...	5600	9.5
MAR		
11...	5700	8.0
APR		
04...	4000	17.0
06...	3400	11.0
07...	3300	11.0
09...	3300	12.0
10...	2700	14.0
APR		
12...	4300	21.0
21...	5000	22.0
MAY		
12...	3100	14.0
26...	560	15.0
27...	940	18.0
28...	2100	20.5
JUN		
09...	1400	19.0
16...	1300	24.5
JUL		
07...	1280	29.0
22...	1900	23.0
AUG		
04...	900	19.5
05...	900	22.0
18...	3250	20.0
31...	4000	24.5
SEP		
16...	4500	22.5

07133050 - WILLOW CREEK NEAR LAMAR, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
MAY		
26...	320	14.5

07134100 - BIG SANDY CREEK NEAR LAMAR, CO.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)	DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT			MAY		
07...	4000	21.0	07...	5500	12.0
NOV			12...	3900	15.0
05...	5000	7.0	JUN		
DEC			10...	3700	22.5
04...	5200	3.0	JUL		
JAN			08...	4900	33.5
09...	5000	.5	SEP		
MAR			17...	500	18.0
10...	4600	14.0	18...	1150	20.5
APR			30...	4300	22.0
07...	4800	18.0			

07137000 - FRONTIER DITCH NEAR COOLIDGE, KANS.

DATE	SPECIFIC CONDUCTANCE (MICROMHOS)	TEMPERATURE (DEG C)
OCT		
27...	4500	12.0

ADAMS COUNTY

395727N1040717.1. SC1-60-17DCC. Carl Sanden. Drilled irrigation water-table well in alluvium. Diameter, 18 in (0.5 m). Depth, 87 ft (26.5 m). MP, 1.30 ft (0.4 m) above lsd. Altitude of land surface, 4,830.8 ft (1,472.4 m) above msl. Records available: 1942-76.

Highest water level, 25.09 ft (7.6 m) below lsd, Nov. 19, 1942; lowest water level, 46.6 ft (14.2 m) below lsd, Mar. 12, 1973.

Feb. 28, 1976 39.68

395643N1041833.2. SC 1-62-22DCA. Charles B. Nordloh. Drilled irrigation water-table well in alluvium. Diameter, 18 in (0.5 m). Depth, 82 ft (25.0 m). MP, 0.80 ft (0.2 m) below lsd. Altitude of land surface, 4,994 ft (1,522.2 m) above msl. Records available: 1946-76.

Highest water level, 44.21 ft (13.5 m) below lsd, Nov. 25, 1949; lowest water level, 61.9 ft (18.9 m) below lsd, Mar. 12, 1973.

Mar. 3, 1976 52.70

ALAMOSA COUNTY

372210N1055554.1. NA36- 9-13AAA. U.S. Geological Survey. Jetted observation water-table well in basin-fill deposits. Diameter, 3 in (0.08 m). Depth, 10 ft (3.0 m). MP, 2.30 ft (0.7 m) above lsd. Altitude of land surface, 7,558.1 ft (2,303.7 m) above msl. Records available: 1949-64, 1966-75.

Highest water level, 0.07 ft (0.02 m) below lsd, May 5, 1968; lowest water level, 6.17 ft (1.9 m) below lsd, Jan. 6, 1964.

1976 No measurement.

373512N1060212.1. NA39- 9-31CCC. U.S. Geological Survey. Jetted observation water-table well in basin-fill deposits. Diameter, 3 in (0.08 m). Depth, 10.0 ft (3.0 m). MP, 1.70 ft (0.5 m) above lsd. Altitude of land surface, 7,567.4 ft (2,306.5 m) above msl. Records available: 1948-64, 1966-75.

Highest water level, 1.42 ft (0.4 m) below lsd, June 26, 1962; lowest water level, 5.78 ft (1.8 m) below lsd, Jan. 27, 1969.

1976 No measurement.

BACA COUNTY

373058N1021515.1. SC29-43-15CCB. James Thompson. Drilled observation artesian well in Cheyenne Sandstone Member of Purgatoire Formation. Diameter, 1.25 in (0.4 m). Depth, 343 ft or 104.5 m (reported). MP, 1.40 ft (0.4 m) above msl. Altitude of land surface, 3,913 ft (1,192.7 m) above msl. Records available: 1955-76.

Highest water level, 48.60 ft 114.8 m) below lsd, Jan. 16, 1975; lowest water level, 67.00 ft (20.4 m) below lsd, Nov. 11, 1966.

Dec. 19, 1975 60.50

BENT COUNTY

380228N1031056.0. SC 23-52-13DDC. B. F. Owens. Drilled stock water-table well in valley-fill deposits. Diameter, 6 in (0.15 m). Depth, 19 ft (5.8 m). MP, 2.0 ft (0.6 m) above lsd. Altitude of land surface, 3,895 ft (1,187.2 m) above msl. Records available: 1959-75.

Highest water level, 8.6 ft (2.6 m) below lsd, Dec. 4, 1962; lowest water level, 16.6 ft (5.1 m) below lsd, Nov. 13, 1964.

1976 No measurement.

ELBERT COUNTY

391717N1034750.1. SC 9-57- 8ABB. J. C. Mattson. Drilled observation water-table well in alluvium. Diameter, 6 in (0.2 m). Depth, 28 ft (8.5 m). MP, 0.20 ft (0.06 m) above lsd. Altitude of land surface, 5,475 ft (1,668.8 m) above msl. Records available: 1945-76.

Highest water level, 5.00 ft (1.5 m) below lsd, July 2, 1947; lowest water level, 7.78 ft (2.4 m) below lsd, Mar. 14, 1972.

Jan. 21, 1976 7.50

EL PASO COUNTY

390442N1041850.1. SC11-62-22ADC. Anthony Eurich. Drilled irrigation water-table well in alluvium. Diameter, 24 in (0.6 m). Depth, 44 ft (13.4 m). MP, 0.80 ft (0.2 m) above lsd. Altitude of land surface, 6,364.8 ft (1,940.0 m) above msl. Records available: 1945-76.

Highest water level, 5.49 ft (1.7 m) below lsd, Aug. 9, 1947; lowest water level, 8.48 ft (2.6 m) below lsd, July 11, 1952.

Feb. 25, 1976 6.60

HUERFANO COUNTY

373922N1045014.1. SC27-67-36ACB. State of Colorado. Drilled stock water-table well in Trinidad Sandstone. Diameter, 7 in (0.17 m). Depth, 62 ft (18.9 m). MP, 2.2 ft (0.7 m) above lsd. Altitude of land surface, 6,282 ft (1,914.8 m) above msl. Records available: 1950-75.

Highest water level, 42.5 ft (13.0 m) below lsd, Jan. 10, 1975; lowest water level, 48.8 ft (14.9 m) below lsd, Apr. 26, 1955.

1976 No measurement.

KIOWA COUNTY

383230N1022741.1. SC 17-45-31ABA. U.S. Government. Bored observation water-table well in valley-fill deposits. Diameter, 1.25 in (0.03 m). Depth, 11 ft (3.4 m). MP, 1.5 ft (0.5 m) above lsd. Altitude of land surface, 3,954.4 ft (1,205.3 m) above msl. Records available: 1959-76.

Highest water level, 5.4 ft (1.6 m) below lsd, Apr. 23, 1974; lowest water level, 8.6 ft (2.6 m) below lsd, Nov. 10, 1960.

Jan. 19, 1976 5.6

KIT CARSON COUNTY

392230N1030520.0. SC 8-51-10ABB2. Drilled irrigation water-table well in alluvium and Meade Formation. Diameter, 18 in (0.5 m). Depth, 74 ft (22.6 m). MP, 0.1 ft (0.03 m) above lsd. Altitude of land surface, 4,870 ft (1,484.4 m) above msl. Records available: 1951-76.

Highest water level, 30.4 ft (9.3 m) below lsd, Jan. 15, 1952; lowest water level, 40.3 ft (12.3 m) below lsd, Jan. 5, 1976.

Jan. 5, 1976 40.3

391106N1020310.1. SC10-42-12DCD. U.S. Government. Drilled observation water-table well in Ogallala Formation. Diameter, 1.25 in (0.03 m). Depth, 273 ft (83.2 m). MP, 3.30 ft (1.0 m) above lsd. Altitude of land surface, 3,997.7 ft (1,218.5 m) above msl. Records available: 1955-76.

Highest water level, 101.67 ft (31.0 m) below lsd, Aug. 12, 1955; lowest water level, 119.30 ft (35.5 m) below lsd, Jan. 6, 1976.

Jan. 6, 1976 119.30

390610N1021112.1. SC11-43-12CCC. Floyd Powell. Drilled irrigation water-table well in Ogallala Formation. Diameter, 18 in (0.5 m). Depth, 233 ft (71.0 m). MP, 0.70 ft (0.2 m) above lsd. Altitude of land surface, 4,104.0 ft (1,250.9 m) above msl. Records available: 1950-75.

Highest water level, 78.83 ft (24.0 m) below lsd, May 28, 1952; lowest water level, 98.04 ft (29.9 m) below lsd, Jan. 10, 1975.

1976 No measurement.

LARIMER COUNTY

402426N1050130.1. SB 5-68-17AAB. George Peak. Drilled irrigation water-table well in alluvium. Diameter, 48 in (1.2 m). Depth, 24 ft (7.3 m). MP, 1.0 ft (0.3 m) above lsd. Altitude of land surface, 4,948 ft (1,508.1 m) above msl. Records available: 1941-76.

Highest water level, 5.43 ft (1.7 m) below lsd, Oct. 27, 1947; lowest water level, 14.45 ft (4.4 m) below lsd, Apr. 20, 1949.

Mar. 4, 1976 12.1

403333N1045850.1. SC 7-68-23CBB1. W. A. Scott. Drilled observation water-table well in alluvium. Diameter, 48 in (1.2 m). Depth, 52 ft (15.8 m). MP, 2.70 ft (0.8 m) above lsd. Altitude of land surface, 4,902 ft (1,494.1 m) above msl. Records available: 1941-76.

Highest water level, 6.1 ft (1.8 m) below lsd, Nov. 6, 1957; lowest water level, 10.5 ft (3.2 m) below lsd, Mar. 15, 1975.

Mar. 4, 1976 6.5

404517N1050142.1. SB 9-68-17BAA. Harlan Seaworth. Drilled irrigation water-table well in alluvium. Diameter, 20 in (0.5 m). Depth, 92 ft (28.0 m). MP, 0.40 ft (0.1 m) above lsd. Altitude of land surface, 5,329 ft (1,624.3 m) above msl. Records available: 1939-76.

Highest water level, 29.02 ft (8.8 m) below lsd, Apr. 3, 1959; lowest water level, 64.45 ft (19.6 m) below lsd, Nov. 9, 1956.

Mar. 2, 1976 38.40

LINCOLN COUNTY

385724N1031556.1. SC13-53- 1DDC. U.S. Government. Bored observation water-table well in alluvium. Diameter, 1.25 in (0.03 m). Depth, 8 ft (2.4 m). MP, 1.0 ft (0.3 m) above lsd. Altitude of land surface, 4,720 ft (1,438.6 m) above msl. Records available: 1959-76.

Highest water level, 3.5 ft (1.1 m) below lsd, Apr. 4, 1960; lowest water level, 5.2 ft (1.6 m) below lsd, Jan. 10, 1975.

Jan. 19, 1976 5.2

LOGAN COUNTY

404256N1030628.1. SB 9-51-31BBB. Frank Manuello. Drilled irrigation water-table well in alluvium. Diameter unknown. Depth, 106 ft (32.3 m). MP, 1.0 ft (0.3 m) above lsd. Altitude of land surface, 3,865 ft (1,178.0 m) above msl. Records available: 1947-75.

Highest water level, 2.89 ft (0.9 m) below lsd, Oct. 6, 1947; lowest water level, 7.16 ft (2.2 m) below lsd, Jan. 10, 1975.

1976 No measurement.

405209N1024817.1. SB10-49- 2CBC. G. E. Henery. Drilled irrigation water-table well in alluvium. Diameter, 18 in (0.5 m). Depth, 32 ft (9.8 m). MP, 1.50 ft (0.5 m) above lsd. Altitude of land surface, 3,711 ft (1,131.1 m) above msl. Records available: 1947-76.

Highest water level, 3.95 ft (1.2 m) below lsd, Apr. 7, 1958; lowest water level, 9.03 ft (2.8 m) below lsd, Nov. 6, 1964.

Mar. 10, 1976 5.90

MORGAN COUNTY

401452N1034802.1. SB 3-57- 6DCC. City of Fort Morgan. Dug and drilled observation water-table well in alluvium. Diameter, 12 in (0.3 m). Depth, 180 ft (54.8 m). MP, 5.0 ft (1.5 m) below lsd. Altitude of land surface, 4,325.6 ft (1,318.4 m) above msl. Records available: 1940-76.

Highest water level, 39.88 ft (12.2 m) below lsd, Jan. 20-21, 1955; lowest water level, 56.76 ft (17.3 m) below lsd, Sept. 5, 1965.

Mar. 2, 1976 50.20

401358N1035045.1. SB 3-58-11BCC. Alex Stark. Drilled irrigation water-table well in alluvium. Diameter, 16 in (0.4 m). Depth, 145 ft (44.2 m). MP, 0.8 ft (0.2 m) above lsd. Altitude of land surface, 4,366.2 ft (1,330.8 m) above msl. Records available: 1939-65, 1967, 1970-76.

Highest water level, 51.85 ft (15.8 m) below lsd, Nov. 19, 1942; lowest water level, 69.87 ft (21.3 m) below lsd, Nov. 5, 1964.

Mar. 3, 1976 60.90

401214N1040534.1. SC 3-60-22CCC. B. A. Holden. Drilled irrigation water-table well in alluvium. Diameter, 24 in (0.6 m). Depth, 120 ft (36.6 m). MP, 0.20 ft (0.1 m) above lsd. Altitude of land surface, 4,568.4 ft (1,392.4 m) above msl. Records available: 1936-76.

Highest water level, 49.44 ft (15.1 m) below lsd, Apr. 11, 1938; lowest water level, 88.10 ft (26.9 m) below lsd, Feb. 26, 1976.

Feb. 26, 1976 88.10

401915N1033211.1. SB 4-55- 9DCC. Rudolph and Schooley. Drilled irrigation water-table well in alluvium. Diameter, 14 in (0.3 m). Depth, 88 ft (26.8 m). MP, 2.0 ft (0.6 m) above lsd. Altitude of land surface, 4,175.2 ft (1,272.6 m) above msl. Records available: 1930, 1932-76.

Highest water level, 14.75 ft (4.5 m) below lsd, Oct. 19, 1949; lowest water level, 25.76 ft (7.8 m) below lsd, Mar. 11, 1969.

Mar. 4, 1976 19.70

402113N1035803.1. SB 5-59-34CAD. G. Williams. Dug domestic and stock water-table well in alluvium. Diameter, 36 in (0.9 m). Depth, 20 ft (6.1 m). MP, 2.20 ft (0.7 m) above lsd. Altitude of land surface, 4,362 ft (1,329.5 m) above msl. Records available: 1947-76.

Highest water level, 7.16 ft (2.2 m) below lsd, Sept. 9, 1948; lowest water level, 16.43 ft (5.0 m) below lsd, Apr. 7, 1956.

Mar. 2, 1976 14.60

OTERO COUNTY

380706N1035342.1. SC22-58-21DAA. C. Meyer. Drilled irrigation water-table well in alluvium. Diameter, 24 in (0.6 m). Depth, 56 ft (17.1 m). MP, 1.90 ft (0.6 m) above lsd. Altitude of land surface, 4,282 ft (1,305.2 m) above msl. Records available: 1928-31, 1933-76.

Highest water level, 25.54 ft (7.8 m) below lsd, Mar. 28, 1955; lowest water level, 36.58 ft (11.1 m) below lsd, Nov. 11, 1964.

Mar. 12, 1976 34.00

380334N1034347.1. SC23-57-12DAD. American Crystal Sugar Co. Drilled irrigation water-table well in alluvium. Diameter, 18 in (0.5 m). Depth, 27 ft (8.2 m). MP, 2.00 ft (0.6 m) above lsd. Altitude of land surface, 4,186 ft (1,275.9 m) above msl. Records available: 1944-76.

Highest water level, 8.87 ft (2.7 m) below lsd, Dec. 4, 1946; lowest water level, 15.78 ft (4.8 m) below lsd, Nov. 27, 1956.

Mar. 12, 1976 13.80

PHILLIPS COUNTY

403206N1020706.1. SB 7-43-35ABB. Harold Gerhardt. Drilled irrigation water-table well in Ogallala Formation. Diameter, 18 in (0.5 m). Depth, 200 ft (61.0 m). MP, 0.70 ft (0.2 m) above lsd. Altitude of land surface, 3,598.8 ft (1,096.9 m) above msl. Records available: 1950-76.

Highest water level, 37.27 ft (11.4 m) below lsd, Mar. 27, 1963; lowest water level, 53.90 ft (16.4 m) below lsd, Jan. 7, 1976.

Jan. 7, 1976 53.90

PROWERS COUNTY

380532N1023116.1. SC22-45-31CBB. U.S. Geological Survey. Driven observation water-table well in alluvium. Diameter, 1.25 in (0.03 m). Depth, 11 ft (3.4 m). MP, 3.5 ft (1.1 m) above lsd. Altitude of land surface, 3,567 ft (1,087.2 m) above msl. Records available: 1950-76.

Highest water level, 0.10 ft (0.03 m) below lsd, Aug. 24, 1967; lowest water level, 6.00 ft (1.8 m) below lsd, May 3, 1965.

Mar. 11, 1976 4.80

PUEBLO COUNTY

381340N1042056.1. SC21-62-9CCC. Susie C. Potestio. Drilled irrigation water-table well in alluvium. Diameter, 15 in (0.4 m). Depth, 28 ft (8.5 m). MP, 1.1 ft (0.3 m) above lsd. Altitude of land surface, 4,567 ft (1,392.0 m) above msl. Records available: 1929, 1934-75.

Highest water level, 13.90 ft (4.2 m) below lsd, Nov. 16, 1965; lowest water level, 20.28 ft (6.2 m) below lsd, Nov. 11, 1964.

1976 No measurement.

381443N1043207.1. SC21-64- 3DAC. Joseph Thomas. Drilled irrigation water-table well in alluvium. Diameter, 15 in (0.4 m). Depth, 35 ft (10.7 m). MP, 2.10 ft (0.6 m) above lsd. Altitude of land surface, 4,679 ft (1,426.2 m) above msl. Records available: 1934-75.

Highest water level, 12.20 ft (3.7 m) below lsd, Nov. 11, 1942; lowest water level, 23.50 ft (7.2 m) below lsd, Mar. 13, 1974.

1976 No measurement.

380817N1040434.1. SC22-60-13BBC. C. J. Sindig. Drilled irrigation water-table well in alluvium. Diameter, 4 ft (1.2 m). Depth, 39 ft (11.9 m). MP, 1.0 ft (0.3 m) above lsd. Altitude of land surface, 4,375 ft (1,333.5 m) above msl. Records available: 1952-76.

Highest water level, 28.70 ft (8.7 m) below lsd, Nov. 29, 1969; lowest water level, 36.16 ft (11.0 m) below lsd, Nov. 28, 1956.

Mar. 26, 1976 30.90

SEDGWICK COUNTY

404741N1020305.1. SB10-42-32DDD. U.S. Geological Survey. Drilled observation water-table well in Ogallala Formation. Diameter, 1.25 in (0.03 m)). Depth, 207 ft (63.1 m). MP, 2.80 ft (0.8 m) above lsd. Altitude of land surface, 3,609.2 ft (1,100.1 m) above msl. Records available: 1952-76.

Highest water level, 176.34 ft (53.7 m) below lsd, Jan. 16, 1969; lowest water level, 180.83 ft (55.1 m) below lsd, Aug. 27, 1952.

Jan. 5, 1976 180.70

405805N1022351.1. SB11-45- 5BBA. F. J. Hilderman. Drilled irrigation water-table well in alluvium. Diameter, 18 in (0.5 m). Depth, 52 ft (15.8 m). MP, 0.50 ft (0.2 m) above lsd. Altitude of land surface, 3,540 ft (1,079.0 m) above msl. Records available: 1947-76.

Highest water level, 11.23 ft (3.4 m) below lsd, Oct. 7, 1949; lowest water level, 20.70 ft (6.3 m) below lsd, Jan. 6, 1975.

Mar. 10, 1976 18.50

405435N1023643.1. SB11-47-28BBB. James Jankovsky. Drilled irrigation water-table well in alluvium. Diameter, 24 in (0.6 m). Depth, 52 ft (15.8 m). MP, 0.50 ft (0.2 m) above lsd. Altitude of land surface, 3,624 ft (1,104.6 m) above msl. Records available: 1948-76.

Highest water level, 2.51 ft (0.8 m) below lsd, June 24, 1948; lowest water level, 5.61 ft (1.7 m) below lsd, Oct. 17, 1954.

Mar. 10, 1976 4.70

WASHINGTON COUNTY

395706N1035259.1. SC 1-55-21BCB. A. Blake. Drilled irrigation water-table well in alluvium. Diameter, 18 in (0.5 m). Depth, 41 ft (12.5 m). MP, 1.50 ft (0.5 m) above lsd. Altitude of land surface, 4,487.3 ft (1,367.7 m) above msl. Records available: 1947-67, 1970-76.

Highest water level, 11.83 ft (3.6 m) below lsd, Dec. 9, 1947; lowest water level, 16.95 ft (5.2 m) below lsd, Oct. 20, 1960.

Jan. 21, 1976 13.40

394038N1024818.1. SC 4-49-25ADD. Cecil Williams. Drilled irrigation water-table well in alluvium. Diameter, 18 in (0.5 m). Depth, 17 ft (5.2 m). MP, 0.20 ft (0.1 m) above lsd. Altitude of land surface, 4,350 ft (1,325.9 m) above msl. Records available: 1950-69, 1971-72, 1975-76.

Highest water level, 7.42 ft (2.3 m) below lsd, Aug. 6, 1951; lowest water level, 14.50 ft (4.4 m) below lsd, Jan. 1, 1972.

Jan. 20, 1976 13.80

393902N1025618.1. SC 5-50- 2AAB. Lloyd McIrwin. Drilled irrigation water-table well in alluvium. Diameter, 24 in (0.6 m). Depth, 54 ft (16.5 m). MP, 2.00 ft (0.6 m) above lsd. Altitude of land surface, 4,514.6 ft (1,376.1 m) above msl. Records available: 1950-67, 1969-75.

Highest water level, 16.44 ft (5.0 m) below lsd, Nov. 8, 1962; lowest water level, 22.65 ft (6.9 m) below lsd, July 23, 1954.

1976 No measurement.

WELD COUNTY

400306N1041547.1. SB 1-62-13ADD. C. M. Roark. Drilled irrigation water-table well in alluvium. Diameter, 18 in (0.5 m). Depth, 76 ft (23.2 m). MP, 3.00 ft (0.9 m) above lsd. Altitude of land surface, 4,824.1 ft (1,470.1 m) above msl. Records available: 1947-75.

Highest water level, 18.29 ft (5.6 m) below lsd, Oct. 16, 1952; lowest water level, 47.7 ft (14.5 m) below lsd, Mar. 23, 1972.

1976 No measurement.

400427N1042448.1. SB 1-63- 2CCC. D. Trupp. Drilled irrigation water-table well in alluvium. Diameter, 20 in (0.5 m). Depth, 96 ft (29.3 m). MP, 0.30 ft (0.1 m) above lsd. Altitude of land surface, 4,822 ft (1,469.7 m) above msl. Records available: 1944-56, 1958-76.

Highest water level, 51.70 ft (15.8 m) below lsd, May 1, 1950; lowest water level, 75.90 ft (23.1 m) below lsd, Nov. 13, 1959.

Mar. 4, 1976 58.50

400055N1043703.1. SB 1-65-25CCD1. Fred Haffner, Sr. Drilled irrigation water-table well in alluvium. Diameter, 24 in (0.6 m). Depth, 69 ft (21.0 m). MP, 0.60 ft (0.2 m) above lsd. Altitude of land surface, 5,044 ft (1,537.4 m) above msl. Records available: 1940-76.

Highest water level, 30.29 ft (9.2 m) below lsd, Apr. 12, 1950; lowest water level, 43.19 ft (13.2 m) below lsd, Nov. 25, 1964.

Mar. 10, 1976 41.1

400129N1044838.1. SB 1-66-30ADA. G. J. Mancini. Dug irrigation water-table well in alluvium. Diameter, 8 ft (2.4 m). Depth, 31 ft (9.4 m). MP, 1.15 ft (0.4 m) above lsd. Altitude of land surface, 4,953 ft (1,509.6 m) above msl. Records available: 1929-75.

Highest water level, 10.29 ft (3.1 m) below lsd, Oct. 12, 1933; lowest water level, 20.64 ft (6.3 m) below lsd, Mar. 23, 1972.

1976 No measurement.

401727N1041330.1. SB 4-61-28BBB. K. Mori. Drilled irrigation water-table well in alluvium. Diameter, 18 in (0.5 m). Depth, 100 ft (30.5 m). MP, 0.80 ft (0.2 m) above lsd. Altitude of land surface, 4,482 ft (1,366.1 m) above msl. Records available: 1947-76.

Highest water level, 21.60 ft (6.6 m) below lsd, Oct. 9, 1947; lowest water level, 40.60 ft (12.4 m) below lsd, Mar. 1, 1976.

Mar. 1, 1976 40.60

401912N1043137.1. SB 4-64-10DDD. T. E. Dwyer. Drilled irrigation water-table well in alluvium. Diameter, 24 in (0.6 m). Depth, 60 ft (18.3 m). MP, 0.60 ft (0.2 m) above lsd. Altitude of land surface, 4,635 ft (1,412.7 m) above msl. Records available: 1940-76.

Highest water level, 6.43 ft (2.0 m) below lsd, Nov. 9, 1949; lowest water level, 23.64 ft (7.2 m) below lsd, Nov. 13, 1956.

Mar. 1, 1976 10.30

402753N1042809.1. SB 6-63-29BBB. H. L. Wells. Drilled irrigation water-table well in alluvium. Diameter, 4 ft (1.2 m). Depth, 37 ft (11.3 m). MP, 1.80 ft (0.5 m) above lsd. Altitude of land surface, 4,655 ft (1,418.8 m) above msl. Records available: 1932-76.

Highest water level, 7.19 ft (2.2 m) below lsd, Aug. 11, 1932; lowest water level, 22.85 ft (7.0 m) below lsd, Nov. 12, 1956.

Mar. 23, 1976 7.20

402930N1044143.1. SB 6-65-17BBC. H. W. Farr. Drilled irrigation water-table well in alluvium. Diameter, 18 in (0.5 m). Depth, 65 ft (19.8 m). MP, 0.80 ft (0.2 m) above lsd. Altitude of land surface, 4,761.9 ft (1,451.4 m) above msl. Records available: 1932-75.

Highest water level, 21.22 ft (6.5 m) below lsd, Aug. 1, 1932; lowest water level, 41.36 ft (12.6 m) below lsd, Nov. 12, 1956.

1976 No measurement.

403032N1045102.1. SB 6-67-12BBB. Fred Felte. Drilled irrigation water-table well in alluvium. Diameter, 24 in (0.6 m). Depth, 22 ft (6.7 m). MP, 0.50 ft (0.2 m) above lsd. Altitude of land surface, 4,859 ft (1,481.0 m) above msl. Records available: 1941-75.

Highest water level, 5.45 ft (1.7 m) below lsd, Mar. 21, 1962; lowest water level, 13.30 ft (4.1 m) below lsd, Nov. 12, 1956.

1976 No measurement.

403454N1044036.1. SB 7-65-16BBB. K. Akahoshi. Drilled irrigation water-table well in alluvium. Diameter, 4 ft (1.2 m). Depth, 18 ft (5.5 m). MP, 2.70 ft (0.8 m) above lsd. Altitude of land surface, 4,875.1 ft (1,485.9 m) above msl. Records available: 1942-48, 1950-76.

Highest water level, 4.09 ft (1.2 m) below lsd, Oct. 28, 1959; lowest water level, 7.42 ft (2.3 m) below lsd, Apr. 29, 1946.

Mar. 10, 1976 5.60

403914N1044518.1. SB 8-66-22AAA. Troy Jones. Dug irrigation water-table well in alluvium. Diameter, 12 ft (3.6 m). Depth, 31 ft (9.4 m). MP, 210 ft (0.6 m) above lsd. Altitude of land surface, 5,073.7 ft (1,546.5 m) above msl. Records available: 1929-76.

Highest water level, 16.20 ft (4.9 m) below lsd, Jan. 8, 1947; lowest water level, 22.68 ft (6.9 m) below lsd, Nov. 22, 1954.

Mar. 7, 1976 22.20

YUMA COUNTY

401059N1020642.1. SB 3-42-31BDD. U.S. Geological Survey. Drilled observation water-table well in Ogallala Formation. Diameter, 1.25 in (0.03 m). Depth, 92 ft (28 m). MP, 0.50 ft (0.2 m) above lsd. Altitude of land surface, 3,615.8 ft (1,102.1 m) above msl. Records available: 1952-76.

Highest water level, 21.25 ft (6.5 m) below lsd, Aug. 14, 1952; lowest water level, 38.40 ft (11.7 m) below lsd, Jan. 5, 1976.

Jan. 5, 1976 38.40

401410N1024150.0. SB 3-48-12CCC. C. Pagel. Drilled stock water-table well in Ogallala Formation. Diameter, 4 in (0.09 m). Depth, 184 ft (56.1 m). MP, 0.1 ft (0.03 m) above lsd. Altitude of land surface, 4,068.1 ft (1,240.0 m) above msl. Records available: 1956-76.

Highest water level, 171.4 ft (52.2 m) below lsd, Nov. 21, 1966; lowest water level, 177.4 ft (54.1 m) below lsd, Jan. 9, 1976.

Jan. 9, 1976 177.4

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August 6, 1976

FACTORS FOR CONVERTING ENGLISH UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the English units published herein to the International System of Units (SI). Subsequent reports will contain both the English and SI unit equivalents in the station manuscript descriptions until such time that all data will be published in SI units.

Multiply English units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	*hectares (ha)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	**liters (l)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons (10^6 gal)	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days [(ft^3/s) · d]	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (l/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (l/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day (mgal/d)	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	tonnes (t)

*The unit hectare is approved for use with the International System (SI) for a limited time. See NBS Special Bulletin 330, p.15, 1972 edition.

**The unit liter is accepted for use with the International System (SI). See NBS Special Bulletin 330, p. 13, 1972 edition.

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